



**Best-ReMaP**

Healthy Food for a Healthy Future

## **D5.2: FINAL GUIDELINES FOR A EUROPEAN HARMONISED AND SUSTAINABLE MONITORING SYSTEM OF THE PROCESSED FOOD SUPPLY**

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## 2. Abbreviations

Anses	Agence Nationale de Sécurité Sanitaire de l'Alimentation, de l'Environnement et du Travail
AGES	Austrian Agency for Health and Food Safety
BMASGK	Bundesministerium für Arbeit, Soziales, Gesundheit und Konsumenschutz (Austria)
CIPH	Hrvatski Zavod za Javno Zdravstvo (Croatia)
DGS	Ministerio da Saude – Republica Portuguesa (Portugal)
DoH	Department of Health (Ireland)
DVFA	Fodevarestyrelsen (Denmark)
EE	Estonia
FOP	Front of pack
FR	France
FSAI	Food Safety Authority of Ireland
GTIN	Global Trade Item Number
ICH	Institouton Ygeias tou Paidiou (Greece)
ISS	Instituto Superiore di Sanita (Italy)
MCA	Ministry of Civil Affairs (Bosnia and Herzegovina)
MFH	Ministry for Health – Government of Malta
MoH CY	Ministry of Health of the Republic of Cyprus
MoH-FR	The French Ministry of Solidarity and Health
MoSA	Sotsiaalministeerium (Estonia)
MRI	Max Rubner Institut Bundesforschungsinstitut für Ernährung und Lebensmittel (Germany)
MS	Member state
NCPHA	Natsionalen Centar Po Obshtestveno Zdrave i Analizi (Bulgaria)

NIJZ	Nacionalni Institut za Javno Zdravje (Slovenia)
NIPH	Institutul National de Sanatate Publica (Romania)
NIPN	National Institute of Pharmacy and Nutrition (Hungary)
NL	The Netherlands
PHI-FBH	Institute of Public Health of Federation of Bosnia and Herzegovina
PHI-RS	Public Health Institute of Republic of Srpska
RIVM	Rijksinstituut voor Volksgezondheid en Milieu (Netherlands)
SKU	Stock Keeping Unit
SU	Semmelweis Egyetem (Hungary)
SUM	Slaski Uniwersytet Medyczny w Katowicach (Poland)
THL	Finnish Institute of Health and Welfare (Finland)
WP	Work package

### 3.Glossary

Term	Definition
Composition data	Represents the nutrient content of food. It can be defined at two different levels : <ul style="list-style-type: none"> <li>- generic level for generic food like 'apple' or 'cola' ;</li> <li>- brand level for branded food like 'Coca Cola Light' or 'Kellogg's cornflakes'</li> </ul>
Consumption data	Represents the quantity of food eaten by an individual and by day for different food items.
Crowd-sourcing	Practice of using collaborative sources of information, usually provided by a large number of people or consumers. Generally used for marketing purposes, by gathering creativity skills and knowledge from the crowd, it can also be used for developing databases by calling for information supply from a multitude of people. With the help of the Internet or some specific applications, consumers are called upon to participate to sourcing campaigns, which allows a large variety of information sources.
Processed food	The term processed food means the product, resulting from the application of physical, chemical or biological processes or combinations of these to a "primary food commodity", intended for direct sale to the consumer, for direct use as an ingredient in the manufacture of food or for further processing <sup>1</sup>
Web scraping	Method which consists in extracting a large number of information from a website. This data can be structured and stored, in order to be used and analyzed in a second time.

<sup>1</sup> FAO/WHO (1993). Codex Alimentarius Volume 2 Pesticides residues in food. [consulted in May 2021]  
[http://www.fao.org/fao-who-codexalimentarius/sh-proxy/fr/?Ink=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252Fstandards%252FCXA%2B4-1989%252FCXA\\_004e.pdf](http://www.fao.org/fao-who-codexalimentarius/sh-proxy/fr/?Ink=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252Fstandards%252FCXA%2B4-1989%252FCXA_004e.pdf)

## 4. Executive summary

The Best-ReMaP Joint Action is a three-year project (October 2020 – September 2023), involving EU Member States on diet and nutrition with a special focus on children. The principal aim is to adapt, replicate and implement practices that have proven to work in the areas of food reformulation, food marketing and public procurement of foods in public settings (kindergartens, schools and hospitals).

According to the latest figures, one in four children in Europe are overweight or obese. Unhealthy diet is one of the main contributing factors to childhood obesity. It would be important for European Member States to implement nutrition policies to reduce obesity pandemic and to prevent obesity related diseases. Some examples of these policies may include reducing the impact of harmful marketing of food to children, improving the quality of food provided in public institutions and promoting processed food reformulation.

Within the Joint Action, an entire work package is dedicated to share and promote the best practices on how to implement a European sustainable and coordinated monitoring system for processed food reformulation : the work package 5 (WP5). The aim of this report is to share the methodology and the guidelines for the construction of a shared database that will allow to have an overview of the food offer on the European market and enable to monitor the nutritional quality of processed foods over time. It will be intended to the Best-Remap project participating countries, who will help implement the monitoring system, as well as voluntary countries at the end of the Joint Action, who would be interested in adding their data on the food offer in their own country.

Different steps are necessary to implement a coordinated processed food monitoring system:

- optimizing the system by prioritizing the food categories to monitor ;
- using common categories and subcategories for the data (pre-existing data and data to be collected during the project) in order to ensure comparisons of similar products and be able to identify room for reformulation;
- investigating alternative sources of data and gathering tools which can facilitate the data collection;
- establishing guidelines in order to explain the methodology and ensure that the involved partners collect and code the data the same way.

For the first step, the main objective was to set a focus on the food categories that are contributing the most to the nutrient intakes of European children populations. In that aim, the consumption data from the EFSA Food Comprehensive Database has been used. Also taking into account the preexisting data (including Janpa and Euremo), the possibility to reformulate the products and the interest of the participating countries, it has been decided to select the following food categories: bread products, breakfast cereals, delicatessen meats and similar, fresh dairy products and desserts and finally soft drinks. They will therefore be the five priority food categories included in the monitoring system.

The second step has involved the creation of the Best-ReMaP categories and subcategories by adapting to the European market the French Oqali classification, which aims to be a common classification system of the processed food across Europe. The recodification of pre-

existing data into these subcategories was done. In parallel, a comparison between data sources (on the market's food supply) was carried out: open data sources (Open Food Facts), web scraping and database gathering information provided by industrials (GS1). The conclusions are presented in this report.

In the end, the guidelines detailing the methodology for data collection and codification has been put in application during the first snapshots. According to the feedback from the partners, it has been updated. This document has also been completed with instructions for data treatment.

Webinars and trainings have been organized to share and explain the methodology to all the involved partners. For countries implementing this methodology after the Best-ReMaP Joint Action, we would recommend to follow the guidelines step by step and to use the different documents available in the annexes: all the important working documents have been gathered in this report.

## 5. Introduction

The Best-ReMaP joint action was commissioned by the European Commission with the aim of adapting, replicating and implementing effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings, thus contributing to increased offer of healthier options of processed foods (by reducing salt, sugars, fat and saturated fat in processed foods) available in EU supermarkets.

The Joint Action's main objective is to work on the implementation of a European Coordinated Monitoring system for the reformulation of processed food. At the same time, it will allow the development of a common EU approach to reduce unhealthy (digital) food marketing to children and adolescents and to use already developed tools for coordinated monitoring of (digital) marketing. Finally, the long-term overall objective is to contribute to improve food choices for children, by assuring a higher quality of menus and procured foods in public institutions (kindergartens, schools, retirement homes, hospitals). The Best-ReMaP Joint Action sets a special focus on children, in order to regulate their exposure to unhealthy food, which can affect their food preferences and have a direct effect on overall health, wellness and the risk of obesity.

In 2008, France implemented the French Food Observatory (Oqali) to monitor changes in processed food supply available on the French market by measuring nutritional quality evolution, over time (nutritional composition and labelling information) at a branded product level.

In 2015, as part of the European Union's Health Programme (2014-2020), the joint action on Nutrition and Physical activity (Janpa) has been launched in which the implementation of a common monitoring system on processed foods based on the French Oqali model was tested. This monitoring system has been tested in two countries (Romania and Austria) between 2015 and 2017 in two categories of processed foods: soft drinks and breakfast cereals. As a conclusion of this Joint Action, it has been shown that it is possible to transpose such a common monitoring system to a European level and to a larger number of categories of processed foods.

As a consequence of Janpa, the European Commission decided to collect data at a European level with the aim of obtaining a European database of processed foods. To do so, the commission dispatched a private company (ICF) which set up the Euremo project to collect data on processed foods in supermarkets in 15 European countries between 2019 and 2021. Following the starting of the Euremo project and the encouraging conclusions of Janpa, the European Commission decided to set up the Best-ReMaP Joint Action in 2020.

The Best-ReMaP Joint Action is divided into seven work packages and this document focuses on one of them: Work Package 5 (WP5), which main objective is to share and promote, in the different countries participating in the work package, the best practices on how to implement a European sustainable monitoring system for processed food reformulation. For that purpose, the WP5 will provide, for five high priority food groups, two snapshots of the nutritional quality of the food products at a brand product level.

The aim of this report is to share the work and outcomes that have been achieved at the time in order to implement the sustainable monitoring system for processed food reformulation across the participating countries.

The structure of this document is built on the basis of the different tasks and subtasks within the WP5, and the first part consists in presenting these different tasks, their objectives and scope.

The first step for the implementation of the monitoring system will be explained describing the optimization of the processed food monitoring system: the prioritization of the processed food categories to monitor, the recodification and standardization of the pre-existing data that will be included in the monitoring system, and the investigation of the best sources of data and gathering tool to improve the data collection.

To assess the nutritional quality of processed foods sold on the European market over time, data on food products will be collected at different time points. The methodology providing the detailed steps on how to carry out data collection will be described, as well as the methodology for data verifications and data treatment (statistical analyses). This version has been enriched with the feedbacks received from partners who have tested the temporary guidelines during their data collection

This section will represent the required Final guidelines for a European harmonized and sustainable monitoring system of the processed food supply (deliverable D5.2).

## 6. Context and description of the tasks

### 6.1. Scope of the project

To complete one of the objectives of the Best-ReMaP joint action, which is to build a coordinated and sustainable monitoring system at a branded product level, only processed foods have been considered. Raw products such as eggs, fruits, vegetables, flour, fresh cream, milk, etc. were not covered by the project, as there is no room for reformulations. The tool aims at gathering information provided on packaging to follow food supply over time.

### 6.2. Common classification: Best-ReMaP subcategories

In order to standardize the data into the monitoring system and to enable to compare results across countries, it was necessary to have a unique list of subcategories to classify processed foods.

Shared nomenclatures have already been deployed across European countries, as it is the case for the FoodEx2 classification system for example. However, it has been created to assess the contamination of raw food products and even if the nomenclature has been adapted to include processed food, it is not designed for the monitoring of manufactured food reformulation.

Therefore, on the basis of the Oqali subcategories, which has been designed specifically to be sufficiently detailed to identify room for reformulation among similar products in order to encourage manufacturers to reformulate (and discussed with French manufacturers and retailers), the Best-ReMaP subcategories has been established by taking into account Janpa's and Euremo's experiences. Moreover, the nomenclature has been sometimes adapted to comply with the European market during the project. Table 1 presents a list of food categories. Annex 1 regroupes the definitions and the scope of the Best-ReMaP categories.

**Table 1: List of the Best-ReMaP categories to classify processed food**

Best-ReMaP food categories	
Baby Food	Frozen snacking products
Bread products	Fruit juices and nectars
Breakfast cereals	Fruit purees, compotes and desserts
Cakes and biscuits	Hot sauces
Canned fruits	Ice creams and sorbets
Cereal bars	Infant milks
Cheeses	Jams



Best-ReMaP food categories	
Chocolate products	Margarines
Cold sauces	Processed potato products
Confectionery	Ready-to-eat canned meals
Crackers	Ready-to-eat fresh meals
Delicatessen meats and similar	Ready-to-eat frozen meals
Dessert mixes	Soft drinks
Fresh dairy products and desserts	Soups and broths
Fresh delicatessen products	Syrups
Frozen pastries and desserts	

Among these food categories, over 600 subcategories allow a homogeneous grouping of products according to regulatory definitions, recipe, ingredients, nutritional values, etc. Annex 2 gathers the Best-ReMaP nomenclature version from March 2023. All typical products from each country can of course not be cited in its corresponding subcategory but the aim of this classification is to compare products and monitor reformulation across Europe, not to classify very specific products that are not found in other countries. The codification in subcategories is crucial in order to ensure that similar products only are compared within and between countries. This enable to monitor food reformulation and room for progress among similar products over time.

### 6.3. Pre-existing data

Data on some of the processed food groups have already been collected in some countries prior to the beginning of the project. The pre-existing data is included in the project, which will enhance the shared database and allow a better overview in time of potential evolutions of the market.

During the Janpa project, in 2016 a Best-ReMaP pilot study was undertaken in two European countries, Austria and Romania. Data on breakfast cereals and soft drinks was collected to assess the nutritional profile of these food groups.

Euremo data has also been taken into account for the targeted countries: Austria, Belgium, Bulgaria, Denmark, Estonia, Finland, Greece, Hungary, Italy, Malta, Portugal, Romania and Slovenia. These dataset has been collected between 2020 and 2021 and covers a large part of the processed foods.

## 6.4. Tasks of the work package 5

The duration of the Best-ReMaP project is 3 years (October 2020-September 2023). Five main tasks were defined for Work Package 5 (Figure 1).

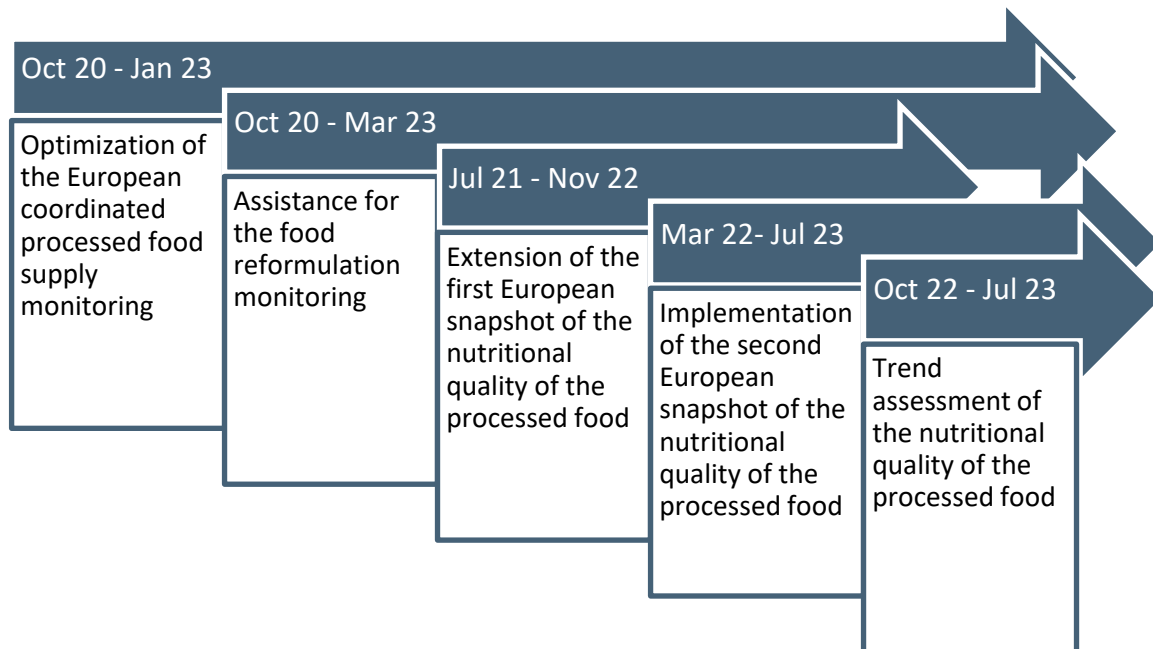


Figure 1 : Overview of the timeline for the WP5 five main tasks

Details of tasks, including timelines and the involved partners, are described in the following sections.

### 6.4.1. Optimization of the European coordinated processed food supply monitoring

The first task of the work package 5 is the optimization of the European coordinated processed food supply monitoring (Figure 2).

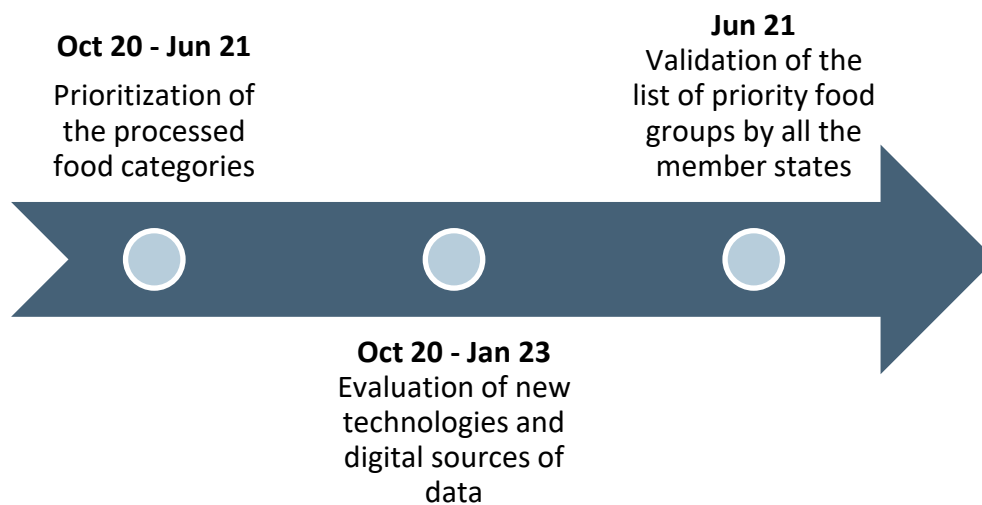


Figure 2 : Timeline for the optimization subtasks

It was first necessary to set a focus on the food categories that will need to be followed in priority, as only five food categories have been covered by Best-ReMaP. In that way, the food categories, which are the most contributive for the nutrient intakes (i.e. fat, saturated fat, sugars and salt) especially in children populations across Europe, have been selected for the project. This step has been accomplished by using the consumption data from the EFSA Food Comprehensive Database.

Secondly, as the processed food monitoring system requires to collect data on food products of the prioritized food categories directly on the market, an investigation on the new sources of data (crowdsourcing, open databases or GS1) as well as on new technologies (photos and text extraction) has been carried out. The aim was to improve efficiency and sustainability of monitoring efforts by identifying, if possible, easier ways to collect and encode data.

Partners involved in the subtasks are indicated in Table 2. France (Anses) has been in charge of the prioritization of the process food categories, meaning computing the consumption data and proposing a list of the most contributive food groups for nutrient intakes. This list was provided to all partners, discussed and the choice of the five food categories was then validated collegially.

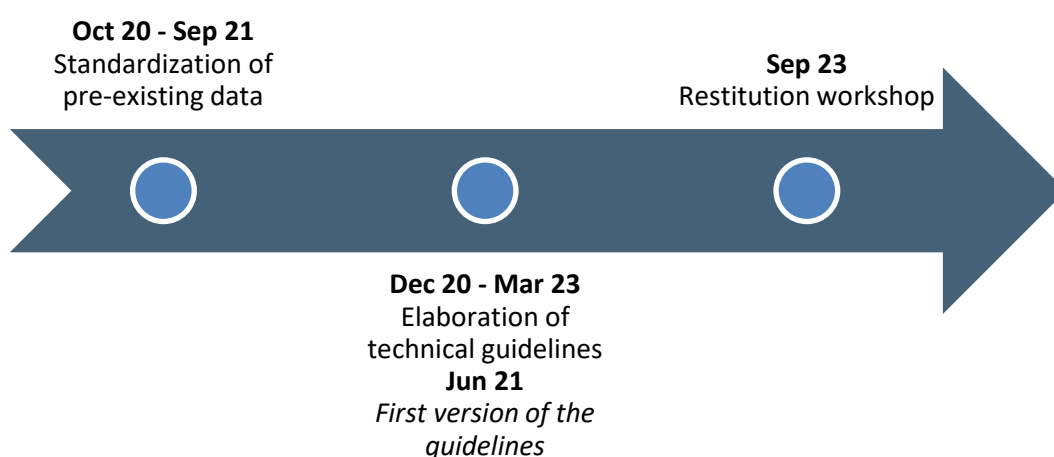
The investigation on new sources of data and new technologies was being led by Belgium (Sciensano), in bold in Table 2, and seven other partners were participating to this subtask.

**Table 2 : Involved partners in the subtasks for optimization of the European coordinated processed food supply monitoring**

Subtasks	Involved partners
<b>Prioritization of the processed food categories</b>	France (Anses)
<b>Validation of the list of priority food groups by all member states</b>	Austria (BMASGK/AGES) ; Belgium (Sciensano) ; Bosnia Herzegovina (MCA/PHI-FBH/PHI-RS) ; Bulgaria (NCPHA) ; Croatia (CIPH) ; Cyprus (MoH CY) ; Denmark (DVFA) ; Estonia (MoSA/NIHD) ; Finland (THL) ; <b>France (Anses)</b> ; Germany (MRI) ; Greece (ICH) ; Hungary (SU/NIPN) ; Ireland (DoH/FSAI) ; Italy (ISS) ; Malta (MFH) ; the Netherlands (RIVM) ; Poland (SUM) ; Portugal (DGS) ; Romania (NIPH) ; Slovenia (NIJZ)
<b>Improving efficiency and sustainability of monitoring efforts</b>	Austria (AGES) ; <b>Belgium (Sciensano)</b> ; Finland (THL) ; France (Anses) ; Greece (ICH) ; Hungary (SU/NIPN) ; Ireland (FSAI) ; the Netherlands (RIVM)

#### 6.4.2. Assistance for the food reformulation monitoring

For the implementation of the monitoring system, the principal aim of the work package 5 has been to develop a European template in order to gather in an harmonized way all data collected on food products on the market (i.e. packaging information as ingredient lists, nutritional values, etc) (Figure 3).



**Figure 3 : Timeline for the subtasks for assistance for the food reformulation monitoring**

Technical guidelines have been developed describing how to collect data and to treat gathered data. The first part, describing how to collect data, has been put into practice and evaluated

through data collection by the participating countries, in order to produce the final version of the guidelines (Table 3). Different subtasks that were being led by France, highlighted in bold (Table 3).

In parallel, a recodification step was planned for countries that had available composition data collected on their market prior to the project, in order to standardize the subcategories used. Seven countries with pre-existing data are represented in Table 3. For this purpose, a common classification system for food categories has been used, called thereafter the Best-ReMaP nomenclature/subcategories.

To complete this task, provisional food categories have been proposed by Anses and agreed by all partners at the beginning of the project. The following food categories have been identified: breakfast cereals, bread products, soft drinks, delicatessen meats and similar and fresh dairy products and desserts (commonly present in the available datasets and assumed as contributing to the intakes of the main nutrients).

**Table 3 : Involved partners in the subtasks for assistance for the food reformulation monitoring**

Subtasks	Involved partners
<b>Implementation of a European database</b>	Austria (BMASGK/AGES) ; Belgium (Sciensano) ; Bosnia Herzegovina (MCA/PHI-FBH/PHI-RS) ; Bulgaria (NCPHA) ; Croatia (CIPH) ; Cyprus (MoH CY) ; Denmark (DVFA) ; Estonia (MoSA/NIHD) ; Finland (THL) ; <b>France (Anses/MoH-FR)</b> ; Germany (MRI) ; Greece (ICH) ; Hungary (SU/NIPN) ; Ireland (DoH/FSAI) ; Italy (ISS) (in link with WP4) ; Malta (MFH) ; the Netherlands (RIVM) ; Poland (SUM) ; Portugal (DGS) ; Romania (NIPH) ; Slovenia (NIJZ)
<b>Standardization of pre-existing data</b>	Austria (AGES) ; Belgium (Sciensano) ; Estonia (NIHD) ; <b>France (Anses)</b> ; Germany (MRI) ; Hungary (NIPN) ; Ireland (FSAI)
<b>Elaboration of technical guidelines</b> <i>Reviewing, evaluating and putting into practice the first version</i>	France (Anses) Austria (BMASGK/AGES) ; Belgium (Sciensano) ; Bosnia Herzegovina (MCA/PHI-FBH/PHI-RS) ; Bulgaria (NCPHA) ; Croatia (CIPH) ; Cyprus (MoH CY) ; Denmark (DVFA) ; Estonia (MoSA/NIHD) ; Finland (THL) ; <b>France (Anses/MoH-FR)</b> ; Germany (MRI) ; Greece (ICH) ; Hungary (SU/NIPN) ; Ireland (DoH/FSAI) ; Italy (ISS) (in link with WP4) ; Malta (MFH) ; the Netherlands (RIVM) ; Poland (SUM) ; Portugal (DGS) ; Romania (NIPH) ; Slovenia (NIJZ)
<b>Restitution workshop</b>	Austria (BMASGK/AGES) ; Belgium (Sciensano) ; Bosnia Herzegovina (MCA/PHI-FBH/PHI-RS) ; Bulgaria (NCPHA) ; Croatia (CIPH) ; Cyprus (MoH CY) ; Denmark (DVFA) ; Estonia (MoSA/NIHD) ; Finland (THL) ; <b>France (Anses/MoH-FR)</b> ; Germany (MRI) ; Greece (ICH) ; Hungary (SU/NIPN) ; Ireland (DoH/FSAI) ; Italy (ISS) (in link with WP4) ; Malta (MFH) ; the Netherlands (RIVM) ; Poland (SUM) ; Portugal (DGS) ; Romania (NIPH) ; Slovenia (NIJZ)

Finally, a restitution workshop will be organized at the end of the project. It will allow all the partners to give a feedback of the tasks they were involved in and present their outcomes, based on observations of their own market.

#### 6.4.3. Extension of the first European snapshot of the nutritional quality of the processed food

Once the guidelines have been produced, a first snapshot of data collection has been established. Packaging information (legal name, ingredient lists, nutritional values, etc.) for all products belonging to those food categories have been gathered. Later, descriptive statistics have been computed in order to describe the nutritional quality of the food offer at a time T0 (Figure 4).

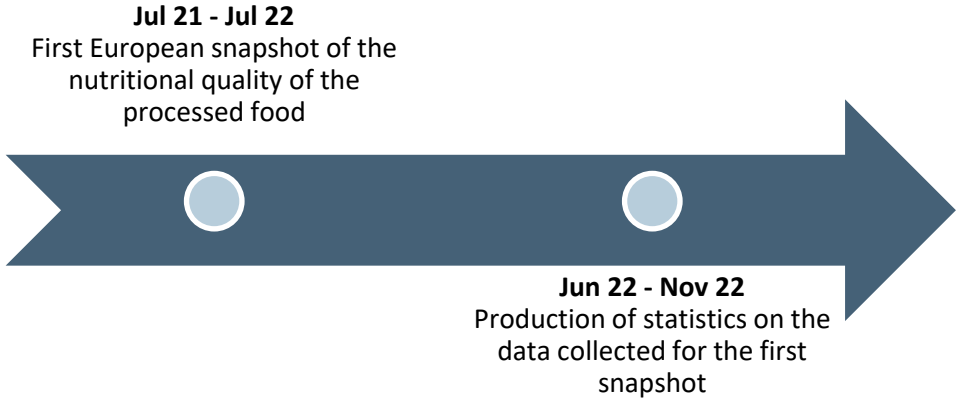


Figure 4 : Timeline for the first European snapshot subtasks

This first European snapshot have been dedicated to the countries that have not realized a first data collection prior to the project on all five priority food categories and that need to have a first overview of their market (Table 4). France, in bold in the table, has not participated to the data collection but has coordinated the task.

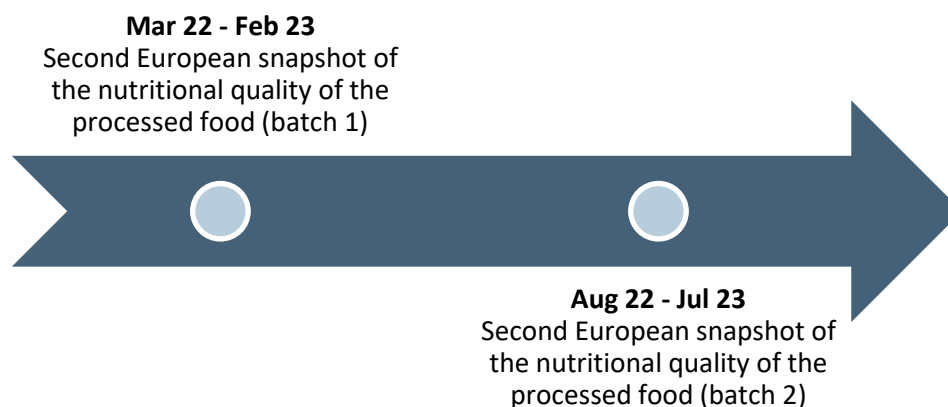
Table 4 : Involved partners in the subtasks for the first European snapshot

Subtasks	Involved partners
First European snapshot of the nutritional quality of the processed food	Bosnia Herzegovina (MCA/PHI-FBH) (including Republic of Srpska (PHI-RS)) ; Croatia (CIPH) ; Cyprus (MoH CY) ; Ireland (FSAI) ; Poland (SUM) <b>France (Anses)</b>
Production of statistics on the data collected for the first snapshot	Bosnia Herzegovina (MCA/PHI-FBH) (including Republic of Srpska (PHI-RS)) ; Croatia (CIPH) ; Cyprus (MoH CY) ; Ireland (FSAI) ; Poland (SUM) <b>France (Anses)</b>

Ireland has the pre-existing data on breakfast cereals (breakfast cereals food category) and yoghurts (part of fresh dairy products and desserts food category). The data collection realized during Best-Remap has been considered as T+1 for these food categories. Remaining food categories (delicatessen meats and similar, bread products, soft drinks and remaining products in fresh dairy products and desserts food category) have been considered as T0 as they have never been collected.

#### 6.4.4. Implementation of the second European snapshot of the nutritional quality of the processed food

The second European snapshot of the nutritional quality of the processed food has allowed to have an idea of the evolution of the market at two different times (Figure 5).



**Figure 5 : Timeline for the two batches of second European snapshot subtasks**

Concerned countries are those that have already pre-existing data (collected prior to the project) which constitute the T0, as the timeline of the project was not long enough to have much perspectives between the first and the second snapshot (Table 5). Two different batches have been organized depending on the pre-existing data collection year. France, in bold in the table, has not participated to the data collection but has coordinated the task.

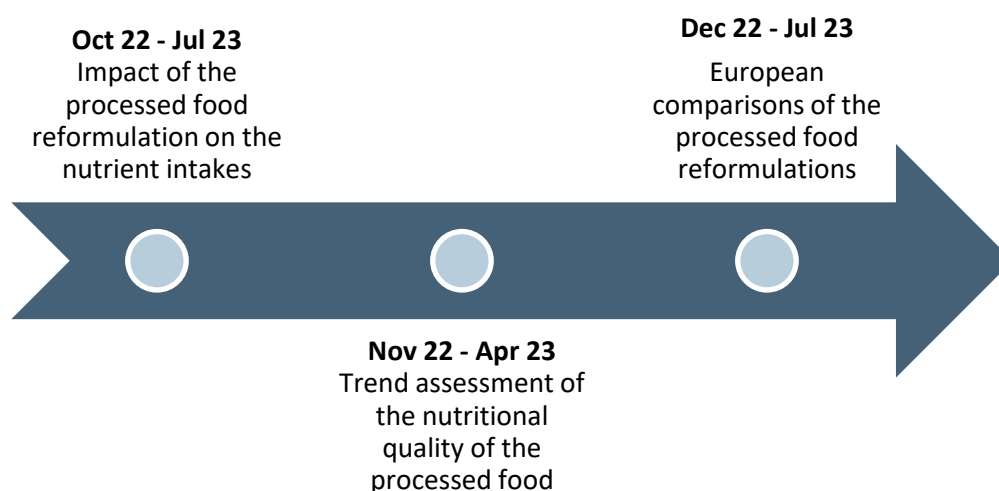
**Table 5 : Involved partners in the subtasks for the second European snapshot**

Subtasks	Involved partners
<b>Second European snapshot of the nutritional quality of the processed food (batch 1)</b>	Austria (AGES) ; Belgium (Sciensano), Estonia (NIHD) ; Germany (MRI), ; Hungary (NIPN) ; Romania (NIPH) ; <b>France (Anses)</b>
<b>Second European snapshot of the nutritional quality of the processed food (batch 2)</b>	Bulgaria (NCPHA) ; Denmark (DVFA) ; Finland (THL) ; Greece (ICH) Italy (ISS) ; Malta (MFH) ; Portugal (DGS) ; Slovenia (NIJZ) <b>France (Anses)</b>



#### 6.4.5. Trend assessment of the nutritional quality of the processed food

With the data collected during Best-ReMaP (first snapshot or first batch of the second snapshot) and also Euremo and pre-existing data, it will be then possible to assess the evolution of the nutritional quality over time and to identify the best formulations. Based on consumption data from the EFSA Food Comprehensive Database, the impact of the processed food reformulation on the nutrient intakes will be evaluated for some countries at the end of the project (Figure 6).



**Figure 6 : Timeline for the subtasks for trend assessment of the nutritional quality of the processed food**

Trend assessment of the nutritional quality of processed food will be done for countries that had two different snapshots of data collection over time, except for countries participating to the second batch of second European snapshot due to the overlapping of the tasks timelines (Table 6).

The final analyses that will be carried out will be comparisons between countries, using the same data as those included in the trend assessment of the nutritional quality of processed food.

Except for the trend assessment of the nutritional quality, which will be realized by each participating country, the subtasks will be carried out by France, using data from different countries (Table 6).

**Table 6 : Involved partners in the subtasks for trend assessment of the nutritional quality of the processed food**

Subtasks	Involved partners
<b>Impact of the processed food reformulation on the nutrient intakes</b>	<b>France (Anses)</b> with data from 2 or 3 countries, depending of available data
<b>Trend assessment of the nutritional quality of the processed food</b>	Austria (AGES) ; Belgium (Sciensano) ; Estonia (NIHD) ; <b>France</b> (Anses) ; Germany (MRI) ; Hungary (NIPN) ; Ireland (FSAI) ; Romania (NIPH)
<b>European comparisons</b>	<b>France (Anses)</b> with data from 2 or 3 countries, depending of available data

## 7. Prioritization of the processed food categories to monitor

Because of the duration of the project, it wouldn't have been possible to cover the 31 food categories defined by the Best-ReMaP nomenclature. It has been decided thus to set a focus on particular food categories and to retain five food categories which had an important impact on nutrient intakes for children, as a priority population. The number of five food groups has been retained as a compromise between the will to cover the largest part possible of the diet and the feasibility, taking into account the time and resources allowed to the project. The methodology applied for this prioritization is described in this section.

For countries that would implement the Best-ReMaP classification in the future, we would recommend to start with the five food categories that have emerged from this prioritization step.

### 7.1. Methodology

The main objective of the prioritization step was to set a focus on five food categories by analyzing each food group's contribution to the intakes of fat, saturated fatty acids, total sugars and salt within the children population across European countries. Priority population has been set on children from 3 to 9 years old as well as adolescents from 10 to 17 years old, but adults have also been taken into account. The food monitoring system will be based on information available on labeling. That is why total sugars will be studied (as added sugars are not labelled on pack), although reformulation affects only added sugars.

#### 7.1.1. Consumption data: EFSA Food Comprehensive Database

The food consumption data used has been extracted from the EFSA Food Comprehensive Database<sup>2</sup>. This database gathers information from consumption surveys carried out across the European Union, relevant for chronic consumption as well as for assessment of nutrient intakes of the EU population and codified with the 'FoodEx 2' food classification system<sup>3</sup>. When several surveys were available for the same country, it has been decided, with the member state's prior consent, to take into account the most recent available studies. Surveys that focused on children (3-9 year old), adolescents (10-17 year old) and/or adults (18-64 years old) were included (for the countries included in the work package) (Table 7).

However, no data was available for three countries participating in the work package: Bosnia and Herzegovina, Malta and Poland.

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<sup>2</sup> EFSA (2020). The EFSA Comprehensive European Food Consumption Database. [consulted in October 2020] <https://www.efsa.europa.eu/en/food-consumption/comprehensive-database>

<sup>3</sup> EFSA (2020). Standardised food classification and description FoodEx2. [consulted in October 2020] <https://www.efsa.europa.eu/en/data/data-standardisation>

**Table 7: List of the selected consumption surveys available in the EFSA Comprehensive Database for each participating country (November 05, 2020)**

Countries	Name of the selected surveys	Survey start year	Population group (age range)
Austria	AT-NATIONAL-2016 AT-ADOLESCENTS-2018-2	2014 2018	18-64 yo* 10-18 yo*
Belgium	National-FCS-2014	2014	3-74 yo*
Bulgaria	NUTRICHILD	2007	<5 yo*
Croatia	NIPHNOP-HAH-2011-2012	2011	18-64 yo*
Cyprus	CY 2014-2017-LOT2 CY 2014-2017-LOT1	2014	10-78 yo* 0-9 yo*
Denmark	DANSDA 2005-08	2005	4-75 yo*
Estonia	DIET-2014-EST-A DIET-2014-EST-C	2013 2013	11-75 yo* 0-10 yo*
Finland	FINDIET2012	2012	<74 yo*
France	INCA 3	2014	1-79 yo*
Germany	ESKIMO NATIONAL NUTRITION SURVEY II	2006 2007	6-11 yo* 14-80 yo*
Greece	Regional Crete GR-EFSA-LOT2 2014-2015	2004 2014	4-6 yo* 10-75 yo*
Hungary	National Repr Surv	2003	>18 yo*
Ireland	NANS 2012	2008	18-90 yo*
Italy	INRAN-SCAI 2005-06	2005	>1 month
Netherlands	FCS2016_CORE	2012	1-80 yo*
Portugal	IAN.AF 2015-2016	2015	0-80 yo*
Romania	DIETA PILOT ADULTS	2012	19-92 yo*
Slovenia	SI.MENU-2018	2017	0-74 yo*

\*years old

The data available in the EFSA comprehensive database is aggregated data (consumption averages by country, population group and food item according to the FoodEx2 classification) but this is sufficient to calculate the nutrient intakes for each food category. It is important to note that as data is aggregated, it is not possible to distinguish intakes of homemade foods from those of processed foods for instance. For the same reason, it is not possible to take into account socio economic parameters.

The comprehensive database uses the FoodEx2 nomenclature. In FoodEx2, each food item is described with a baseterm which corresponds to the generic name of the food item (example orange juice, pork ham...) completed by facets describing the source, the origin, the process, etc of the food. These baseterms are organized according to a hierarchy with seven levels (FoodEx2 classification), L1 representing the broadest food categories and L7 the most precise level with individual food items (Table 8). As the comprehensive database provides only term codes, the facets could not be taken into account for the identification of main contributors (which means that chilled, frozen or ambient products cannot be distinguished for instance).

**Table 8: Example of the FoodEx 2 hierarchy levels associated to one food item**

Hierarchy level	L1	L2	L3	L4	L5	L6	L7
Baseterms	A000J	A009T	A00AN	A00AP	A00AV	A00AR	A00AT
Wording	Grains and grain-based products	Fine bakery wares	Cakes	Plain cakes	Cream cakes	Cheese cake	Cheese cream sponge cake

### 7.1.2. Composition data

To estimate nutrient intakes, food consumption data needs to be associated with food composition data. As there is no food composition database at the European level described in FoodEx2 (the Comprehensive Database does not include composition data), it was decided to use national composition databases described in FoodEx2. First, from France (Ciqual database) and in a second time, to validate the first results and assess the robustness of the methodology, but also to cover the food not consumed in France, data from other European countries. For that purpose, a call for composition data described in FoodEx2 and without missing values was made to partner countries.

Following this call, two additional databases were identified as relevant for the calculation of intakes: the ENDS-2014 from Estonia and the NEVO database from the Netherlands. Consequently, intakes were calculated for four nutrients (total sugars, salt, fat and saturated fatty acids), and for each country and population according to three scenarios depending on the source of composition data used.

#### *7.1.2.1. Scenario 1: composition data from France*

The ANSES-CIQUAL French food composition table version 2020 is containing information for more than 3000 foods and for 67 components.

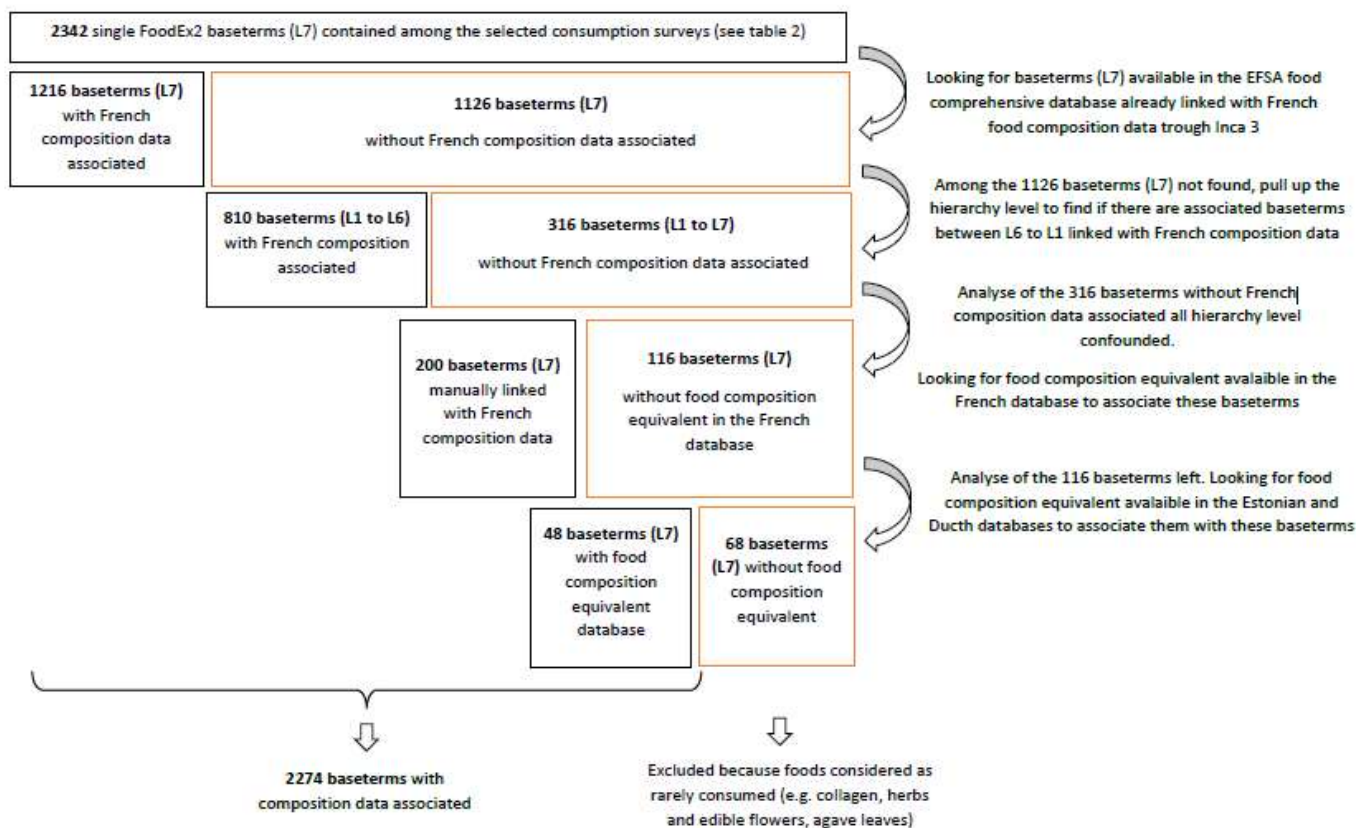
The Ciqual database is not encoded in FoodEx2 but it is linked with INCA3 (consumption survey carried out in France between 2014 and 2017 (Dubuisson et al. 2019), which is codified in FoodEx2. The link was therefore made indirectly, at the baseterm level, through INCA3.

The data from the French consumption survey do not cover some of the food items found in the Food Comprehensive Database at the finest level but it was possible to assign a composition for most of them by using the different levels of codification of FoodEx2. For example, if a baseterm corresponding to the level 7 had no nutritional data associated, it was checked if there was a nutritional data corresponding to a highest level (level 6, then level 5 if level 6 had no correspondence...). As soon as a nutritional data was found at a highest level, this data was associated to the food concerned.

For the last 116 food items for which no composition data could be assigned, the food composition tables from the Netherlands and from Estonia have been used and a correspondence has been found for 48 of them. The 68 remaining food items were ingredients or products rarely consumed (e.g. collagen, herbs and edible flowers, agave leaves) so it has been decided not to consider them.

However, because of the methodology and the absence of facets in the FoodEx2 description in the comprehensive database, a same baseterm of the consumption data could have been associated with several ones from the composition table used. In this case, mean values have been calculated for each nutrient taking into account the consumption frequency for each food items concerned (data from the French consumption survey INCA3).

In that way, the majority of items contained in the food consumption database has been associated with nutritional values (Figure 7).



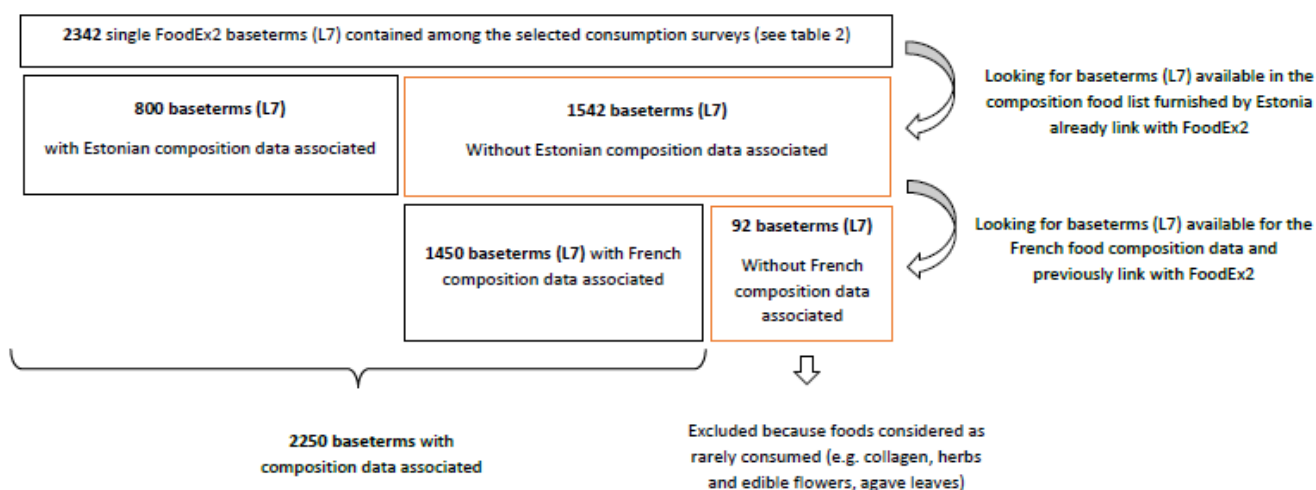
**Figure 7 : Establishment of the link between French food composition database and baseterms used in the Comprehensive Database**

#### 7.1.2.2. Scenario 2: composition data from Estonia

The Estonian food composition data provided for the project corresponds to generic food and was the one used for the consumption survey (ENDS-2014) included in the Food Comprehensive Database. These composition data were codified into FoodEx2. When several composition data were associated to the same FoodEx2 baseterm, the average value was calculated for the nutrients of interest in order to obtain a unique nutritional value per FoodEx2 baseterm.

In total, 800 unique FoodEx2 term codes were associated with a nutritional value coming from the Estonian dataset (among 2342 unique term code in the Food Comprehensive Database). To complete the 1542 baseterms without any nutritional value, it has been decided to use French composition data when available, as the association between consumption and composition data was already available (Figure 8). The 92 baseterms left (with no composition

data) were not considered because rarely consumed (e.g. collagen, herbs and edible flowers, agave leaves).

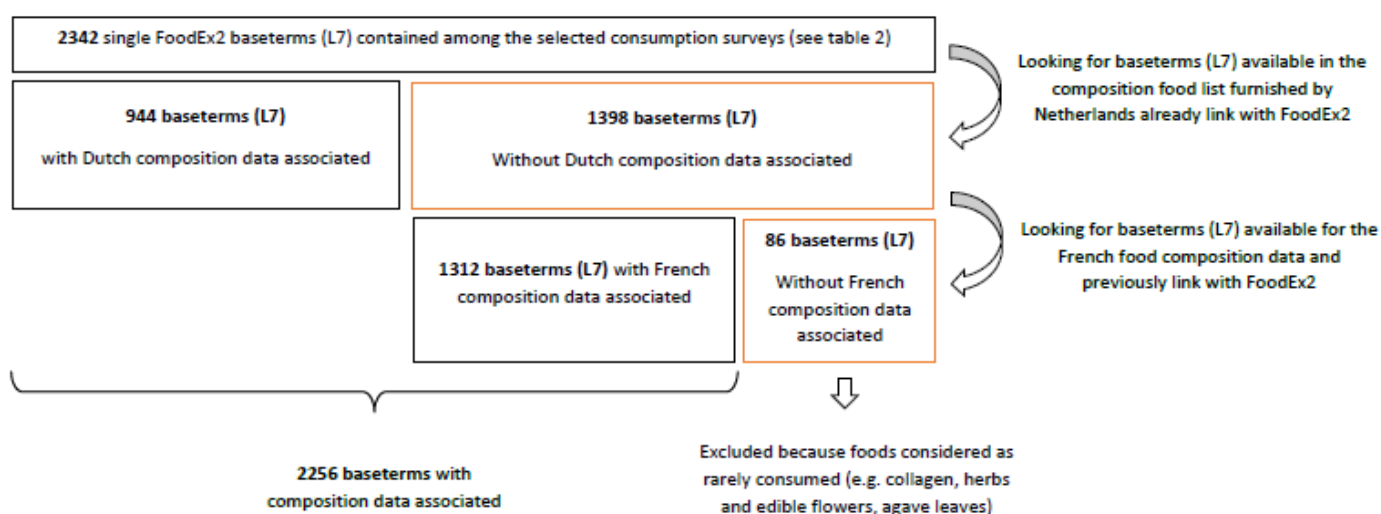


**Figure 8 : Establishment of the link between Estonian food composition database and baseterms used in the Comprehensive Database**

*7.1.2.3. Scenario 3: composition data from The Netherlands*

Dutch food composition data provided was also given per generic food and encoded in FoodEx2. As for Estonian data, when several composition data were associated to one baseterm, the average of the nutritional values by baseterm has been calculated.

Among the 2342 baseterms of the consumption data, 944 baseterms were associated to a unique average nutritional values coming from the Dutch dataset. For the 1398 baseterms left, it has been decided to use French composition data when they were available (Figure 9). 86 baseterms did not have food composition associated and because they were foods rarely consumed, as for French and Estonian data, they were not considered.



**Figure 9 : Establishment of the link between Dutch food composition database and baseterms used in the Comprehensive Database**



### 7.1.3. Correspondence between baseterms used in the Comprehensive Database and Best-ReMaP food categories

In order to identify which Best-ReMaP food categories countries have to monitor, it was necessary to link the baseterms used in the comprehensive database with Best-ReMaP food categories.

For that purpose, a table of correspondence between Best-ReMaP categories and FoodEx2 categories from L1 to L5 was manually made. Consequently, the links between the finest levels of codification were made automatically.

As describing facets about the foods were not available in the consumption data used (especially those regarding the preservation method), it was necessary to pool some food categories of the Best-ReMaP classification and to create, for the evaluation, new categories (Table 9).

One Best-ReMaP food category may have been linked to several baseterms, but one baseterm couldn't have been linked to several Best-ReMaP categories. So when this happened, a manual check was made to decide which Best-ReMaP category best fits the baseterm.

**Table 9 : List of the pooled Best-ReMaP categories and the corresponding new categories to fit with data available in the Comprehensive Database**

Original Best-ReMap categories	New categories
Ready-to-eat canned meals (17)	Ready to eat (100)
Ready-to-eat fresh meals (47)	
Ready-to-eat frozen meals (39)	
Fresh delicatessen products (15)	Sandwich, pizza and other stuffed bread-like cereal product (102)
Frozen snacking products (31)	
Salads can be both in Ready-to-eat canned meals" (17) and in "Fresh delicatessen products" (15)	Salads (102)

### 7.1.4. Assessment of the nutrient intakes and comparison of the outcomes

The calculation of the dietary intakes has been realized with the following formula:

$$intake \left( \frac{g}{day} \right) = \frac{\left[ nutritional\ value \left( \frac{g}{100g} \right) * consumption\ mean \left( \frac{g}{day} \right) \right]}{100}$$

Dietary intakes have been calculated for each country, population of interest (Children from 3 to 9 years old, Adolescents from 10 to 17 years old; Adults from 18 to 64 years old) and each nutrient (total sugars, fat, saturated fatty acids and salt) by using three scenarios depending on the composition data used (issued from the French, Estonian or Dutch composition database).

#### 7.1.5. Identification of the Best-ReMaP food categories contributing the most to the nutrient intakes

Intakes by Best-ReMaP food category have been calculated for each country, population and nutrient according to the three scenarios corresponding to the three sources of composition data (EE, FR, NL). Moreover no weighting according to the country was made, thus each country included had the same weight for the data analysis.

It has then been possible to obtain the contribution of each Best-ReMaP category and to make a ranking of the contributions by nutrient and by population for each country. As the category “Other Products” gathers food not monitored during the project (for instance raw foods...) this category was excluded after this first step. Table 10 gives an example of Best-ReMaP category ranking for intakes of salt for children in France.

**Table 10: Ranking of salt contributing by Best-ReMaP food categories among children in France with the French composition data**

Population	Best-ReMaP category	Ranking of contribution
Children (3-9 years)	Other products	1
	Bread products	2
	Delicatessen meats and similar	3
	Cheeses	4
	Cakes and biscuits	5
	Cold sauces	6
	Fresh delicatessen products	7
	Dessert mixes	8
	Breakfast cereals	9
	Fresh dairy products and desserts	10
	Hot sauces	11
	Crackers	12
	Processed potato products	13
	Soft drinks	14
	Confectionery	17
	Ice creams and sorbets	18
	Margarines	19
	Ready-to-eat	25
Sandwich, pizza and other stuffed bread-like cereal product	29	
Soups and broths	30	

The idea was then to compile the results from all the countries. To do so, a global ranking by nutrient and population for all countries has been made by creating a score for each food category that is summing the rank in the different countries. Table 11 gives an example of global ranking for intakes of salt for children with the French composition scenario.

The same exercise has been carried out with the three scenarios and all the data has been compiled.

The next step was to select the top ten categories the most contributory by nutrient (rank from 1 to 10, after “other products” exclusion) according to the three scenarios. The food categories

selected for the different nutrients were gathered to create a list of 19 food categories, which has been shared with countries involved in the project.

**Table 11 : Global ranking of Best-ReMaP food categories the most contributory for the intakes of salt among Children with French composition data**

Population Group	BestRemap category	Number of country concerned	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Sum of the ranks	Global ranking
Children (3-9 years)	Bread products	11	2	3	2	2	2	2	2	2	1	1	2	21	1
	Delicatessen meats and similar	11	3	2	4	3	3	3	3	9	3	3	3	39	2
	Cheeses	11	4	4	3	4	5	4	4	5	4	4	5	46	3
	Cakes and biscuits	11	5	6	6	9	7	5	7	8	5	6	4	68	4
	Breakfast cereals	11	8	9	5	5	4	9	5	11	9	11	6	82	5
	Cold sauces	11	6	14	11	6	6	6	6	15	13	5	8	96	6
	Crackers	11	14	5	10	13	10	12	9	10	8	8	9	108	7
	Processed potato products	11	10	28	8	8	26	13	11	7	11	7	11	140	8
	Fresh delicatessen products	11	11	27	16	15	8	7	10	20	7	16	12	149	9
Soft drinks	11	9	15	22	14	13	14	12	13	18	9	14	153	10	

The final step was the selection of five food categories, taking into account:

- the presence of pre-existing data in the countries involved in task 5.1.1. (including those gathered during Janpa and Euremo);
- a significant room for reformulation;
- the interest of partner countries.

All these criteria have been considered and countries were asked to vote for their list of five food categories to be retained for the data collection.

## 7.2. Results

### 7.2.1. List of food categories contributing the most to the nutrient intakes

The Table 12 summarizes the list of the 19 food categories resulting from the compilation of the ten first food categories for all populations, all nutrients and according to the three scenarios.

It can be observed that the results are quite comparable between the three scenarios, which demonstrates the robustness of the methods and that the use of the French dataset (or the Dutch or the Estonian dataset available for the project) is relevant for the identification of the food categories of interest in all the participating countries. However, it should be considered that the Dutch and the Estonian dataset were significantly completed with French data because some of the foods compositions were missing in the data submitted for the project, what could bias the results (as we compare French data to Estonian/French or Dutch/French data together).

It is important to note that as composite dishes had to be transmitted as disaggregated foods to EFSA, their contributions have been highly underestimated (e.g. ready-to-eat canned meals, ready-to-eat fresh meals, ready-to-eat frozen meals, soups and broths or fresh delicatessen products). This point constitutes an important bias especially because these foods could contribute significantly to the intakes of some nutrients. Therefore, the contribution of some food categories has been over-evaluated as ingredients of composite dishes may have been considered individually (e.g. cheese included in pizza would have been counted in cheese).

The contribution of the ten most contributory Best-ReMaP categories by nutrient and by population for each country by scenarios is given in Annex 3 with the French composition data scenario, in Annex 4 with Estonian composition data scenario and in Annex 5 with the Dutch composition data scenario.

**Table 12 : List of the food categories obtained after identification for each nutrient and population of the ten food categories the most contributory according to the three sources of composition data (FR; EE; NL)**

BestReMap_category	Sugars (Number of populations* for which the group is among the ten most contributors for the considered scenario)			Fat (Number of populations* for which the group is among the ten most contributors for the considered scenario)			Saturated fatty acid (Number of populations* for which the group is among the ten most contributors for the considered scenario)			Salt (Number of populations* for which the group is among the ten most contributors for the considered scenario)		
	French data	Estonian data	Dutch data	French data	Estonian data	Dutch data	French data	Estonian data	Dutch data	French data	Estonian data	Dutch data
Bread products	3	3	3	3	3	3	3	3	3	3	3	3
Breakfast cereals	3	3	3	1 (Ado.)*		1 (Ado. C.)*	3	1 (Adu.)*	3	3	3	3
Cakes and biscuits	3	3	3	3	3	3	3	3	3	3	3	3
Cheeses				3	3	3	3	3	3	3	3	3
Chocolate products	3	3	3	3	3	3	3	3	3		1 (C.)*	1 (C.)*
Cold sauces				3	2 (Ado. Adu.)*	3				3	3	3
Confectionery	3	3	3				1 (C.)	2 (Ado. C.)*				
Crackers				2 (Adu. C.)*	3	1 (Adu.)*	2 (Ado. Adu.)*	3	3	3	3	3
Delicatessen meats and similar				3	3	3	3	3	3	3	3	3
Dessert mixes											1 (Ado.)	
Fresh dairy products and desserts	3	3	3	1 (C.)*	2 (Adu. C.)*	2 (Adu. C.)*	3	3	3			
Fresh delicatessen products										3	2 (Ado. Adu.)*	3
Fruit juices and nectars	3	3	3									
Hot sauces												1 (Ado.)
Ice creams and sorbets	3	3	3	3	3	3	3	3	3			1 (C.)
Jams	3	3	3									
Margarines				3	3	3	3	3	3		2 (Adu. C.)*	1 (Adu.)*
Processed potato products				2 (Ado. Adu.)*	1 (Ado. C.)*	1 (Ado.)*				3	3	2 (Ado. Adu.)*
Soft drinks	3	3	3							3		

\* C= Children 3-9 years old; Ado = Adolescents 10-17 years old; Adu= Adults 18-64 years old

To facilitate the selection of the five final food categories, a summary of contribution, presence of pre-existing data and room for reformulation was gathered in a file and shared with the member states (Table 13). All partners included in the WP5 were consulted to give their own selection among the 19 food categories. All suggestions were compiled in a single table to select the five food categories according to the majority of the votes (Table 14).

**Table 13 : Compilation of the results by food categories, identification of corresponding preexisting data and room for reformulation**

BestReMaP category	Rank contribution to the intakes of salt/sugars/saturated fatty acids/fat (from 1 to 10)	Number of nutrients for which the group is within the main vectors for at least one population	Number of countries with preexisting data for at least a part of the category (16 countries in total)	Sources of preexisting data	Room for reformulation
Breakfast cereals	1 to 5	4	16	Euremo + Janpa Other	yes
Fresh dairy products and desserts	6 to 10	3	16	Euremo Other	yes
Bread products	1 to 5	4	15	Euremo Other	yes
Cakes and biscuits	1 to 5	4	15	Euremo Other	yes
Chocolate products	1 to 5	4	15	Euremo Other	limited
Delicatessen meats and similar	1 to 5	3	15	Euremo Other	yes
Cold sauces	1 to 5	2	15	Euremo Other	yes
Soft drinks	1 to 5	1	15	Euremo + Janpa Other	yes
Fruit juices and nectars	1 to 5	1	15	Euremo Other	only for nectars
Ice creams and sorbets	6 to 10	4	15	Euremo Other	yes
Crackers	6 to 10	3	15	Euremo Other	yes
Confectionery	6 to 10	2	15	Euremo Other	limited
Processed potato products	6 to 10	2	15	Euremo Other	yes
Fresh delicatessen products	6 to 10	1	15	Euremo Other	yes
Hot sauces	6 to 10	1	15	Euremo Other	yes
Cheeses	1 to 5	3	14	Euremo Other	limited (milk is the main contributor of fat and saturated fatty acids)
Margarines	1 to 5	1	4	Other	yes
Jams	6 to 10	1	4	Other	limited
Dessert mixes	6 to 10	1	3	Other	yes



Table 14 : Compilation of the votes from all the partners included in the WP5

Best-ReMaP food categories selected	Austria	Belgium	Bosnia and Herzegovina	Bulgaria	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Malta	Netherlands	Poland	Portugal	Romania	Slovenia	TOTAL
Breakfast cereals	X	X	X	X	X	X		X	X	X	X	X	X	X	X	-	X	X	X	X	X	<b>19</b>
Bread products	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	<b>20</b>
Delicatessen meats and similar	X	X	X	X	X	X	X	X	X	X	X		X	X	X	-	X	X	X	X	X	<b>19</b>
Soft drinks	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	<b>20</b>
Fresh dairy products and desserts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	<b>20</b>
Cakes and biscuits																-						<b>0</b>
Chocolate products																-						<b>0</b>
Cold sauces																-						<b>0</b>
Fruit juices and nectars																-						<b>0</b>
Ice creams and sorbets																-						<b>0</b>
Crackers																-						<b>0</b>
Confectionery							X									-						<b>1</b>
Processed potato products																-						<b>0</b>
Fresh delicatessen products												X				-						<b>1</b>
Hot sauces																-						<b>0</b>
Cheeses																-			X			<b>1</b>
Margarines																-						<b>0</b>
Jams																-						<b>0</b>
Dessert mixes																-						<b>0</b>

### 7.2.2. Final list of the five food categories to monitor

Regarding the votes, the five food categories to monitor as part of the project were the following:

- Breakfast cereals: 16 countries do have preexisting data for this category (including via Janpa and Euremo). Moreover, foods included in this category are participating to the intakes of sugars, salt and saturated fat among children and adolescents and are having an interesting room for reformulation;
- Soft drinks: 15 countries do have preexisting data for this category (including via Janpa and Euremo). The beverages included in soft drinks are consumed by the target populations, are contributing to the intakes of sugars and are giving the possibility to be reformulated ;
- Fresh dairy products and desserts: 16 countries do have preexisting data for this category (including via Janpa and Euremo). This group includes products that allow an interesting room for reformulation;
- Bread products: 15 countries do have preexisting data for this category (including via Janpa and Euremo). Foods included can be reformulated;
- Delicatessen meats and similar: 15 countries do have preexisting data for this category (including via Janpa and Euremo) and it appears as a main contributor to the intakes of the four nutrients of interest for the target population. In addition, the category allows a room for reformulation.

### 7.2.3. Percentage of the intakes covered by the five prioritized food categories

Table 15, Table 16 and Table 17 are showing the distribution (by countries) of the percentage of the intakes covered by the five prioritized food categories for each population and nutrient. The calculation has been done among all food groups monitored by Best-ReMaP, “Other products” excluded (raw products and other products not covered by Best-ReMaP are not considered in these calculations).

The part covered by the five food categories may be overestimated, because:

- the ingredients of composite dishes have been taken into account in the corresponding ingredient food categories (delicatessen meats and similar, bread products);
- homemade foods are also taken into account even if they won't be concerned by any reformulation.

**Table 15 : Distribution among the countries of the percentage of the intakes covered by the five prioritized food categories for children (3-9 years old) by nutrient (raw products and other products not covered by Best-ReMaP are not considered in these calculations)**

Nutrients	Mean (%)	Median (%)	Minimum (%)	Maximum (%)
Sugars	32.9	32.2	21.3	43.2
Salt	64.3	67.0	25.6	78.3
Fat	31.6	32.3	12.1	46.4
Saturated fatty acid	28.4	29.5	10.64	43.7

The five selected food categories represent (in average) between 28 and 33% of the intakes of sugars, fat and saturated fatty acids covered by the Best-ReMaP food categories, and 64% of the intakes of salt for children. However, the contribution may be much lower for some countries (minimum of 11% observed for saturated fatty acids).

The details of the percentages of the intakes covered by the five prioritized food categories by nutrients, population and for each country are given in Annex 6.

**Table 16 : Distribution among the countries of the percentage of the intakes covered by the five prioritized food categories for adolescents (10-17 years old) by nutrient (raw products and other products not covered by Best-ReMaP are not considered in these calculations)**

Nutrients	Mean (%)	Median (%)	Minimum (%)	Maximum (%)
Sugars	41.6	43.3	28.1	54.9
Salt	66.2	66.9	55.4	75.5
Fat	33.1	31.6	23.3	52.7
Saturated fatty acid	29.8	30.1	18.1	49.9

The percentage of intakes covered is higher for adolescents, with approximately 30% of the intakes of fat and saturated fatty acids, 42% for sugars and 66% for salt.

**Table 17 : Distribution among the countries of the percentage of the intakes covered by the five prioritized food categories for adults (18-64 years old) by nutrient (raw products and other products not covered by Best-ReMaP are not considered in these calculations)**

Nutrients	Mean (%)	Median (%)	Minimum (%)	Maximum (%)
Sugars	45.4	47.9	27.7	56.8
Salt	69.2	71.4	54.8	84.6
Fat	36.8	34.8	22.9	58.9
Saturated fatty acid	32.8	31.8	17.4	54.8

For adults, the coverage goes from 33% for saturated fatty acids to 71% for salt (and 48% for sugars).

These calculations are legitimating the choice of these food categories as they allow to cover a significant part of the intakes for the four nutrients of interest, in the three populations studied.

#### 7.2.4. Contribution to the intakes by food categories and education level

In order to evaluate if the food categories to consider would have been the same when taking into account socio economic parameters and as there was no socio economic parameters available in the Food Comprehensive Database (used at aggregated level), it has been decided to consider socio economic parameters for the French population only. Indeed, the education level was available in the French INCA 3 (Dubuisson et al. 2019) survey and it was possible to assess the impact of these parameters on the contribution to the nutrient intakes of the different food categories.

Four modalities were used to characterize the socio economic level of people participating to INCA 3 (level of education of the interviewee (or his representative)):

- Primary school diploma or lower secondary school diploma
- High-school leaving certificate
- One to three years of higher education
- Four or more years of higher education

Intakes per food category, nutrient, population and level of education were then calculated and the ranking of the different food categories was made.

It is important to note that the following results concern only French consumption data. Food groups including composite dishes are represented in the consumption data used for this exercise and are contributing to the intakes (as they are included in the INCA 3 source study).

Results are showing that some changes occurred between the contributing food categories among the different education levels. However, the selected five food categories are found in the ten first contributors to the intakes of fat (Table 18), saturated fatty acids (Table 19), sugars (Table 20) and salt (Table 21) regardless of the level of education, specifically:

- Bread products are classified in the six first vectors to the intakes of fat, saturated fatty acids, sugars and salt among children and adolescents for all socio economic levels;
- Breakfast cereals appear to be in the ten first contributors to the intakes of sugars among children and adolescents according to all socio-economic levels;
- Delicatessen meats and similar are classified among the eight main contributors to the intakes of salt, fat and saturated fatty acids for all populations and levels of education;
- Soft drinks are classified among the seven main contributors to the intakes of sugars among all populations and all socio-economic levels;
- Fresh dairy products and desserts are within the ten first categories that contribute to the intakes of fat, saturated fatty acids and sugars for all population and socio-economic levels.

Consequently, foods included in the five selected categories are consumed in significant amount by children and adolescents (target population) regardless of the socio-economic level. These results are supporting the relevance of the five food categories prioritized whatever the socio-economic status of the population.

**Table 18 : Ranking of the ten food categories (excluding “Other products”) that contribute the most to the intakes of fat in France by level of education among children, adolescents and adults according to French socio-economics parameters (INCA 3 study)**

Food categories main contributor in fat intakes	Children (3-9 years old)				Adolescents (10-17 years old)				Adults (18-64 years old)			
	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education
Cakes and biscuits	1	1	1	1	1	2	1	1	5	3	3	4
Ready-to-eat	2	2	2	2	2	3	2	2	1	2	1	3
Bread products	3	4	3	4	4	4	5	4	6	5	5	5
Sandwich, pizza and other stuffed bread-like cereal product	4	3	6	5	3	1	3	3	3	1	4	1
Cheeses	5	8	4	3	7	6	4	5	2	4	2	2
Delicatessen meats and similar	6	6	5	8	8	5	7	7	4	6	6	6
Processed potato products	7	5	8	9	5	7	8	8	8	8	8	10
Chocolate products	8	7	7	6	6	8	6	6			9	8
Fresh dairy products and desserts	9	9	9	7		9	9			9	10	9
Cold sauces	10	10	10		10	10	10	9	9	10		
Salads				10	9				7	7	7	7
Margarines									10			
Ice creams and sorbets							10					

**Table 19 : Ranking of the ten food categories (excluding “Other products”) that contribute the most to the intakes of saturated fatty acids in France by level of education among children, adolescents and adults according to French socio-economics parameters (INCA 3 study)**

Food categories contributor in saturated fatty acid intakes	Children (3-9 years old)				Adolescents (10-17 years old)				Adults (18-64 years old)			
	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education
Cakes and biscuits	1	1	1	1	1	2	2	1	4	4	4	4
Cheeses	2	3	2	2	4	4	1	3	1	1	1	1
Ready-to-eat	3	4	3	3	3	5	3	4	2	3	3	3
Bread products	4	2	4	4	5	3	5	5	6	5	5	5
Sandwich, pizza and other stuffed bread-like cereal product	5	7	5	5	2	1	4	2	3	2	2	2
Delicatessen meats and similar	6	5	6	8	7	6	6	7	5	6	6	6
Fresh dairy products and desserts	7	6	7	6	9	8	8	10	7	7	8	7
Chocolate products	8	8	8	7	6	7	7	6	8	10	7	8
Processed potato products	9	9	9	10	8	9	9	9	9	9		
Ice creams and sorbets	10	10			10	10	10	8				
Confectionery			10	9							10	
Salads									10	8	9	9
Margarines												
Soups and broths												10

**Table 20 : Ranking of the ten food categories (excluding “Other products”) that contribute the most to the intakes of sugars in France by level of education among children, adolescents and adults according to French socio-economics parameters (INCA 3 study)**

Food categories main contributors in sugars intakes	Children (3-9 years old)				Adolescents (10-17 years old)				Adults (18-64 years old)			
	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education
Cakes and biscuits	1	1	1	1	1	2	1	1	1	2	1	1
Fruit juices and nectars	2	2	3	2	3	3	2	2	3	3	2	3
Soft drinks	3	3	4	7	2	1	3	5	2	1	3	5
Fresh dairy products and desserts	4	4	5	4	6	6	6		6	5	6	6
Fruit purees, compotes and desserts	5	6	2	3	8	8	7	9	9			9
Bread products	6	5	6	5	5	4	5	3	4	4	4	4
Chocolate products	7	8	7	6	4	5	4	4	8	10	8	7
Confectionery	8	7	8	8	9	7	9	8		7	9	
Breakfast cereals	9	9		9	7	9	8	6				
Ice creams and sorbets	10	10										
Ready-to-eat			9	10	10	10	10	10	7	8	7	8
Jams			10						5	6	5	2
Sandwich, pizza and other stuffed bread-like cereal product									10	9	10	10

**Table 21 : Ranking of the ten food categories (excluding “Other products”) that contribute the most to the intakes of salt in France by level of education among children, adolescents and adults according to French socio-economics parameters (INCA 3 study)**

Food categories contributor in salt intakes	Children (3-9 years old)				Adolescents (10-17 years old)				Adults (18-64 years old)			
	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education	primary school diploma or Lower secondary school diploma	High-school leaving certificate	1 to 3 years of higher education	4 or more years of higher education
Bread products	1	1	1	1	1	1	1	1	1	1	1	1
Ready-to-eat	2	2	2	2	2	3	2	2	2	2	2	3
Sandwich, pizza and other stuffed bread-like cereal product	3	4	3	3	3	2	3	3	3	3	3	2
Delicatessen meats and similar	4	3	4	4	4	4	4	4	4	5	5	5
Cakes and biscuits	5	6	5	6	6	5	6	6	8	8	8	8
Soups and broths	6	5	6	5	5	8	5	5	5	4	4	4
Cheeses	7	7	7	7	7	6	7	7	6	7	6	6
Processed potato products	8	9	8	9	8	7	8		10			
Cold sauces	9	8	10		9		9	9	9	9	9	9
Salads	10	10	9	8	10	10	10	8	7	6	7	7
Fresh delicatessen products				10						10	10	10
Breakfast cereals							10					



### 7.2.5. Percentage of the intakes covered by the five prioritized food categories by education level

Table 22 is showing the average percentage of the intakes covered by the five prioritized food categories for each population and nutrient depending on the level of education of the interviewee (or his representative) according to French consumption survey (INCA 3 study). As for the part 7.2.3, the calculation has been done among all food categories monitored by Best-ReMaP, “Other products” being excluded (raw products and other products not covered by Best-ReMaP are not considered in these calculations).

**Table 22 : Average percentage of the intakes covered by the five prioritized food categories in France (INCA3) by population (children 3-9 years old; adolescents 10-17 years old; adults 18-64 years old) and nutrient and depending on the level of education of the interviewee (or his representative) (raw products and other products not covered by Best-ReMaP are not considered in these calculations)**

Average percentage of intakes covered by the prioritized food categories (French consumption survey)		Primary school diploma or lower secondary school diploma	High-school leaving certificate	One to three years of higher education	Four or more years of higher education
Sugars	Children	31.4	33.7	28.7	25.8
	Adolescent	35.5	36.9	34.0	28.0
	Adults	33.9	36.8	31.0	25.9
Salt	Children	35.5	37.6	36.3	34.0
	Adolescent	33.3	39.6	37.2	36.7
	Adults	38.4	34.9	36.1	35.9
Fat	Children	22.5	27.4	24.4	22.4
	Adolescent	20.6	24.4	21.8	21.8
	Adults	21.9	21.1	20.4	20.7
Saturated fatty acids	Children	25.2	29.6	26.4	25.3
	Adolescent	23.1	27.2	23.1	23.0
	Adults	22.9	24.1	21.2	21.1

The average intake coverage according to the level of education of the interviewee (or his representative) is for the four nutrients in the same order of magnitude. The difference between socio economic levels is more important for sugars (from 7.9% to 10.9% of variation between the lowest and the highest value) than for salt, fat and saturated fatty acids.

However, it can be observed that for almost all nutrients and populations, the intakes of the lowest socioeconomic levels populations (Primary school diploma or lower secondary school diploma; High-school leaving certificate) are better covered by the five selected food categories than the ones from people from the highest socioeconomic levels (One to three years of higher education; Four or more years of higher education).

These results, limited to the case of France, are supporting the relevance in the choice of the food categories even when a socioeconomic factor is taken into consideration.

## 8. Recodification of pre-existing data

The aim of the recodification of pre-existing data was to standardize the data already available by using the same classification among all participating countries for at least the five priority food categories. The implementation of the Best-ReMaP subcategories on the pre-existing databases has allowed the standardization of the information and is helping comparing similar products and identify room for reformulation among homogeneous products. Moreover, the standardization of the available data at branded level makes it compatible for comparison with a later data collection, scheduled during the project.

### 8.1. Definition of food categories and subcategories

To help classify every products in the correct Best-ReMaP food categories, classification guidelines have been created for the following food categories (selected after analyzing available preexisting data from partners): baby food, bread products, breakfast cereals, cakes and biscuits, delicatessen meats and similar, fresh dairy products and similar, infant milks and soft drinks (Annex 8 ; Annex 9 ; Annex 10 ; Annex 11 ; Annex 12 ; Annex 13 ; Annex 14 ; Annex 15).

The guidelines are constructed on the same basis for each food category:

- First a description of the food category's scope, specifying what is included or excluded from the food category;
- Then a global overview of the subcategories and how to distinguish them ;
- Finally, the codes, names and definitions of the subcategories, as well as examples of products that are classified into each of them.

They have been made exclusively for the classification of the data at branded level. The nomenclature is mainly based on the information contained in the ingredient lists or product description (commercial or legal name). With this information and with the help of the definitions, the products can be classified in the appropriate categories and then subcategories.

For the other food categories, as they were not focused on during the project, no guidelines have been produced but the nomenclature is shared in Annex 2.

### 8.2. Recodification per country

Among partners with pre-existing data on food products from the market, Austria, Belgium, Estonia, Germany, Hungary and Ireland have agreed to recodify it into the Best-ReMaP nomenclature. For France, the data from the Oqali database has been used.

The data is coming from different databases with different collection methodology and different classification systems. The details on these databases are available on the Annex 7.

At the beginning of the task which was prior to the five priority food categories identification, and after discussions with involved countries, the five food categories targeted were: breakfast cereals, bread products, soft drinks, delicatessen meats and similar as well as fresh dairy products and desserts. Finally, the choice of these five categories has been confirmed by the outcomes of the prioritization task. Depending on the number of products available and the

data collection years, each partner has decided to recodify some of the priority food categories or all of them (Table 23). However, it was highly recommended to work on the five priority food categories.

Other food categories than the five prioritized have been recodified for countries which are voluntary to standardize all their data to the Best-ReMaP nomenclature.

For Ireland, the baby food category is also part of the pre-existing data. Decision has been taken for them to recodify also this category specifically to allow the addition of the data into the common database.

**Table 23: Data recodified per country and food category in the scope of the task 5.2.2**

<b>Food category</b>	<b>Austria (data collection year / number of products recodified)</b>	<b>Belgium (data collection year / number of products recodified)</b>	<b>Estonia (data collection year / number of products recodified)</b>	<b>Germany (data collection year / number of products recodified)</b>	<b>Hungary (data collection year / number of products recodified)</b>	<b>Ireland (data collection year / number of products recodified)</b>
<b>Bread products</b>	-	2018 / 353	2018 / 286	2020 / 833	2018-2020 / 119	-
<b>Breakfast cereals</b>	2020-2021 / 643	2018 / 182	2018 / 323	2019 / 923	2018 – 2020 / 237	2016-2017 / 452
<b>Delicatessen meats and similar</b>	2020 / 1321	2018 / 530	2018 / 807	2020-2021 / 2512	2018-2019-2020 / 748	-
<b>Fresh dairy products and desserts</b>	2018-2019 / 940	2018/573	2018 / 531	2019 / 1499	2018-2020 / 183	2016-2017 / 577 (yoghurts)
<b>Soft drinks</b>	2020 / 970	2018/691	2018 / 821	2019 / 1933	2018-2019-2020 / 477	-
<b>Baby food</b>	-	-	-	-	-	2017 / 605 (baby and toddler foods)

In order to standardize and recodify the preexisting data into the Best-ReMaP nomenclature, a first training has been organized on November 20<sup>th</sup> 2020 to present the methodology and guidelines for each food category have been created. A template with appropriate fields for the recodification has been used to gather the same information on products from each database (as the name of the brand, the legal name, the ingredient list, nutrient content, etc.)

Annex 16). All countries did not have all requested information but each one has provided the template with available ones.

Throughout the recodification work, a constant contact has been established in order to help the participating partners and answer to any questions. According to some remarks, the Best-ReMaP nomenclature and its definitions can be adjusted and completed in order to be compliant with the food offer on the European market. Consequently, several updated versions of the guides have been created.

After data recodification, a verification step is being established by Anses to make sure the classification was compliant with the definition of Best-ReMaP subcategories and common between all partners. As the translation of data is very time consuming and the recodification task concerns data gathered before Best-ReMaP, the data was translated in English only when it is possible. For data provided in English or French, Anses has verified the recodification. All the gathered data have been then transferred to the JRC to be integrated in the shared database.

## 9. Optimization of the reformulation monitoring

### 9.1. Introduction

In order to be able to have an accurate and comprehensive picture of the food supply, some countries have set up initiatives, usually within the public health institutes, aiming at collecting reliable and comparable data on the healthiness of the food supply. Methodological approaches differ from country to country. The most common methodology consists of hiring collaborators that will collect data in all the supermarkets, or a number of supermarkets with the biggest market shares. All packaged food and drink products are considered and pictures are taken from the labels. Data collected is then entered in a software/platform and information on nutrients and ingredients is imputed from the pictures. At a later stage, data cleaning will help identify possible human error and adjustments or editions are made. The end result is a database with all the packaged food and drink products available in the food supply (for the specific market share of the chosen retailers), and information on several characteristics of the products including the nutritional content for mandatory nutrients, ingredients, portion size, etc. Food monitoring includes the collection, encoding and analyses of nutritional data (including the seven major nutrients: energy, proteins, carbohydrates, sugars, fat, saturated fat, and salt) with several snapshots over time. This allows for identifying trends of the nutritional quality of the food supply and can be an encouragement for producers to meet the demands for food reformulation towards healthier options.

This traditional and exhaustive way of collecting information on the food supply is considered the gold standard in this sub-task, and other methodologies or existing data sources have been compared against this standard. In fact, this approach is quite expensive and time consuming. In the long run, it might not be feasible for all countries to implement a monitoring program that collects such data often in a comprehensive manner, due to limited resources.

In this subtask we looked at alternative sources of nutritional information on packaged food and drink products within the food supply and study the feasibility of their use for future food monitoring in the EU. New digital sources of data (crowdsourcing, open databases, GS1, web scraping, etc.) and new technologies (photos and text extraction) have been explored. The representativeness and reliability of these new sources and technologies have been tested and analyzed, comparatively with the traditional sources (i.e., gold standard).

The countries that contributed to this task were Belgium, France, Austria, The Netherlands, Ireland and Finland. For the sake of time and also due to wider availability across partners, two food categories were pre-selected for this task: breakfast cereals and soft drinks. To enable comparisons that would otherwise be difficult at the product level, products both derived from traditional methods and alternative data sources have been classified into food groups according to the same food categorization system. The chosen food categories and their subcategories are recoded by each partner based on the Best-ReMaP food classification system (based on Oqali), guided by Anses. To enable fair comparisons, the collection year(s) and retailers where products were bought were taken into account.

The potential use of alternative sources of information was also identified. Possible comparisons were then defined for each country (Table 24).

**Table 24 : Mapping of the availability of data from different sources for validation purposes in countries across contributing partners**

Country	Food category	Pre-existing data	Euremo	Open Food Facts	Web scraping	GS1**
<b>Belgium</b>	Breakfast cereals	2018	2020/21	2012-2020	2018	No
	Soft drinks	2018	2020/21	2012-2020	2018	No
<b>France</b>	Breakfast cereals	2018	No	2012-2020	No	No
	Soft drinks	2009/13/19	No	2012-2020	No	No
<b>Austria</b>	Breakfast cereals	2016/18/20	2020/21	2012-2020	2020	No
	Soft drinks	2016/18/20	2020/21	2012-2020	2020	No
<b>Ireland</b>	Breakfast cereals	2016/17	No	2012-2020	2021	No
	Soft drinks	No	No	2012-2020	No	No
<b>The Netherlands</b>	Breakfast cereals	2018/20*	No	2012-2020	2018-2020*	2018/20*
	Soft drinks	2018/20*	No	2012-2020	2018-2020*	2018/20*
<b>Greece</b>	Breakfast cereals	2013	2020/21	Too few	No	No
	Soft drinks	2013	2020/21	Too few	No	No
<b>Finland</b>	Breakfast cereals	No	2020/21	Too few	No	2020/21
	Soft drinks	No	2020/21	Too few	No	2020/21
<b>Malta</b>	Breakfast cereals	No	2020/21	Too few	No	No
	Soft drinks	No	2020/21	Too few	No	No

\*Note: in The Netherlands, data is concentrated in two databases, and each combines different data sources: LEDA and Questionmark. LEDA includes data coming from: GS1, but also from Brandbank, PSinFood, directly from retailers (Albert Heijn, SIM – Jumbo and Superunie), and data manually entered by manufacturers, as well as data collected traditionally and manually entered in the database, and crowdsourced data (through an app named Eetmeter). The Questionmark database includes data from web scraping (from retailers websites), GS1 data, and databases from retailers. For this reason, comparisons are limited according to data sources.

\*\*GS1 data was available in more countries but not useful for the purpose of this study

## 9.2. Alternative sources of information

There are several databases available in the market that capture information on the food supply. Reliability and representativeness of this information may differ. A detailed description of the available sources, as well as their strengths and limitations in their use for food

monitoring are given. Some data sources were selected to be explored described in more detail and data retrieved from those used to compare against pre-existing data collected through traditional methodology.

The alternative sources of information that were selected to be evaluated in this project were the Open Food Facts (a crowdsourcing methodology) and web scraping. The experience with the use of GS1 was summarized as a case study for several countries. Five of the partners had comparable pre-existing data (collected through a traditional method) and data available in the Open Food Facts database: Belgium, France, The Netherlands, Austria and Ireland. Two partners had comparable pre-existing data and data collected through web scraping; Belgium and The Netherlands.

None of the partners have both preexisting data and data from GS1. That's why the two partners which have previously used GS1 (Finland and The Netherlands), have shared here their experiences through a case study, but GS1 data could not be evaluated. Other data sources (MINTEL GNDP, EUROMONITOR VIA DATABASE) are also described, but not evaluated in this subtask.

Crowdsourcing methodologies derives or sources data from a “crowd” of individuals or organizations that are not formally part of an organization, but an open and evolving group of participants with an interest in contributing to a specific project or goal. This sourcing model can be applied in many contexts, but in this project we focus on specific projects that use the contribution of an “informal” group of people to source data on the food supply. We investigated the use of Open Food Facts as an example of a crowdsourcing methodology, which is available worldwide and still growing. This allows for cross country comparisons using the same crowdsourcing tool among the partners with sufficient data available. This database has already been used for the development of research projects investigating different components of the food supply in the French and German markets (Chazelas et al. 2020, Julia et al. 2015, Szabo de Edelenyi et al. 2019).

Web scraping consists of harvesting data available on the web or extracting data from websites. In the context of this project, we looked at country-specific software or technologies that focus on extracting data available on retailers' websites about the food supply. In this project, we investigated the use of Daltix in Belgium, Questionmark in The Netherlands, web scraping by FSAI in Ireland. Web scraping has been used to investigate the impact of sugar taxes in the UK on the nutrient reformulation of soft drinks, among others, specifically through foodDB (Harrington et al. 2019, Scarborough et al. 2020, CPNP).

GS1 Europe consists of 47 non-profit organizations that represent around 400 000 companies in Europe. This includes also non-grocery suppliers and retailers. Many countries that are part of GS1 Europe have their own national commercial product databases. Databases include food product information including nutrient information. The available information, representativeness and reliability, as well as the conditions for use, depend on each country.

### 9.2.1.Crowdsourcing: Open Food Facts

#### 9.2.1.1. *The tool*

Open Food Facts is a non-profit collaborative endeavor, based on crowdsourced information on food products available in supermarkets worldwide. The creators of this tool aspire for Open



Food Facts to become the “Wikipedia of foods”, an open source and an open data project. It started in 2012 in France, and it picked up pace in the last five years including around six million products in this database, majority of which are from France. In January 2021 there was information for 182 countries but its representation in each country varies widely; while in France there were 758.976 products, there were only 229 in Malta (Table 25). Open Food Facts is most popular in countries such as France, Spain, Germany, Belgium, etc. To date there is a total of 1.605.522 products in the database (data retrieved in January 2021).

This is a dynamic database, updated daily, counting with around two million users/month worldwide (35% in France). Information is derived both from individual contributors (hence, “crowdsourced”; around 80.000) and directly from manufacturers (around 100), as well as some from open data sources (namely in the US). The project started with a bigger emphasis on data collected from individual contributors, but has shifted towards getting more data directly from the manufacturers. There are around 25.000 active contributors that continuously contribute to adding products to the database. Occasionally, Open Food Facts promotes “scan parties” to boost the inclusion of products from a specific geographical area. This could be on demand for specific projects, or to cover for the absence of needed information.

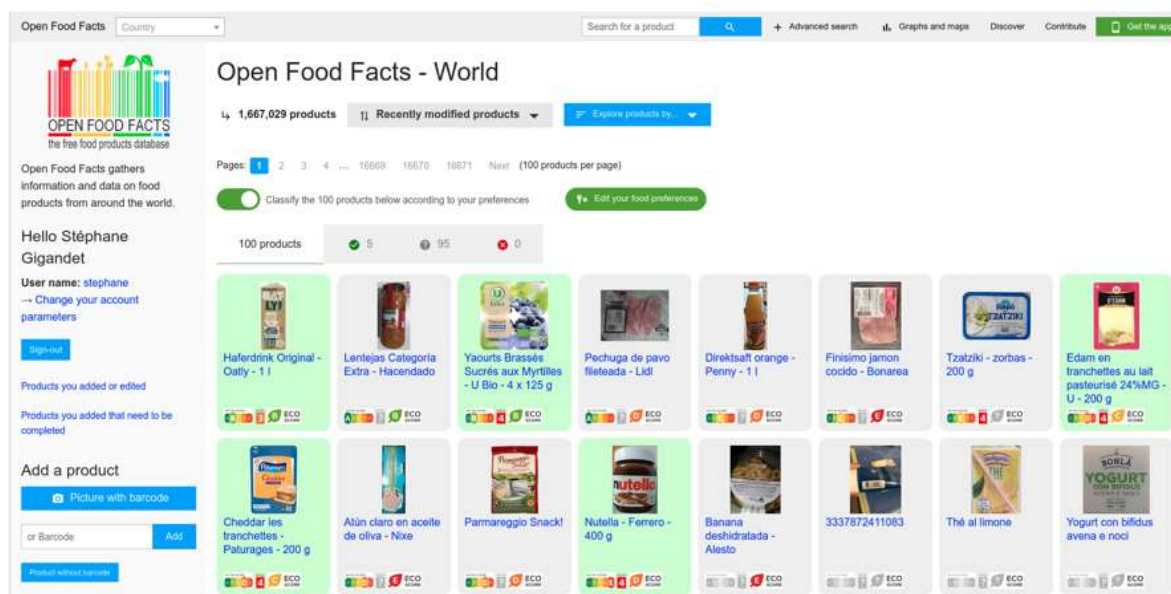


Figure 10 : The website interface for Open Food Facts

To contribute, users need to create an account in the website or app (Figure 10), and take pictures of food products they buy in supermarkets and food stores. Data on the label, such as bar code, commercial name, brand name, ingredients list, nutrition information panel, allergens, and nutrient profiles, is extracted from the pictures uploaded to the database using an Artificial Intelligence (AI) algorithm. The Nutriscore is imputed based on data available from the ingredients list and nutrition information panel, and co-exists with the one on label (if present). Other scores related to nutritional quality or the environment are also computed (Figure 11). The AI algorithm used to identify ingredients works well in three languages; French, English and German. More languages are expected to be added as the project grows in others countries and work is being done.

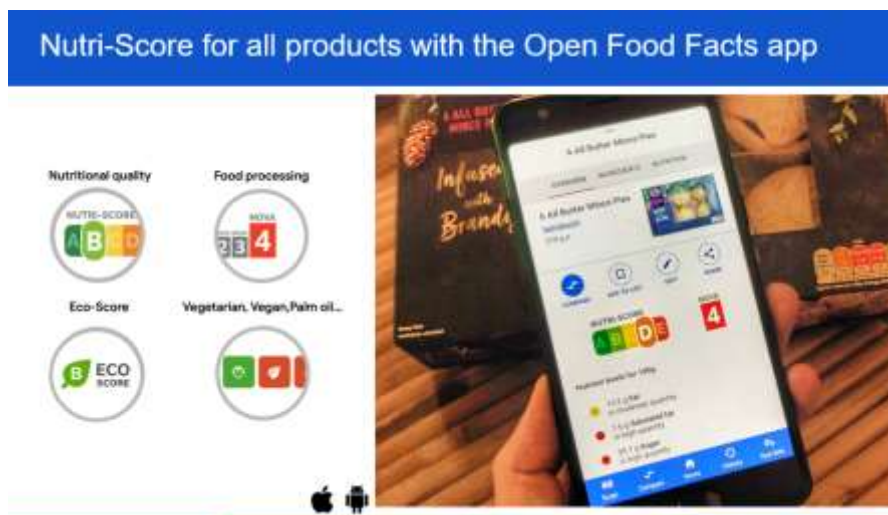


Figure 11 : Visualization of the different scores attached to a product

The Open Food Facts website (<https://world.openfoodfacts.org/>) is user friendly and all data about the products is displayed. People can search (and extract) data in various ways, including by plotting two variables against each other in graphic displays (Figure 12), using search criteria such as countries, year, food groups, and others to narrow down the selection. When users extract information in the database they will have access to a total of 172 variables. However, it is only possible to download 10.000 products (rows) at a time (and maximum using two criteria combined per search).



Figure 12 : Data visualization possible in Open Food Facts website (source: Open Food Facts presentation 16/03/2021)

Some control checks are applied by the Open Food Facts team to ensure the quality of data. It includes frequent automated tests on consumer data and producer data, of specific variables. First, checking if energy values correspond to the plausible unit (kJ or kcal). Then calculating energy from the macronutrients and checking against reported energy on label. Also using food categories to check the percentage of deviation against a “common profile” for the category.

The barcode is used as the key variable; i.e., unique values correspond to unique products. It enables the Open Food Facts to avoid duplication of products. Data can be edited by contributors when mistakes are found, or changes are noticed. When changes are made to product's nutritional information due to reformulation or not it is recorded under the same barcode, and previous information is kept behind the scenes (not publicly available, but possible to be traced and tracked with the help of Open Food Facts team) and only the latest version of the products are presented in the website. The date when the product was first entered into the database, as well as the date of last edit are publicly available. Duplicates in this database with different nutrition information, possibly corresponds to data entry mistakes.

It is possible to trace and track product changes over the course of nine years (both corresponding to correcting mistakes, and to product reformulation) but this can only be done by the Open Food Facts team in the backstage. While some users might be granted permission to access the page on the platform where changes are displayed, it can be difficult to identify whether the change was completed due to reformulation or due to correction of an error or a mistake. This needs to be addressed by the developers to enable monitoring of food reformulation in the future. It is thus unclear to date to what extent this is possible for the different countries and food product categories.

The country of the product is determined by the location of the person entering the product in the database. But for people living near the border, it can happen that the product is not sold in their country of residence. In order to distinguish the products sold on a given market, Open Food Facts also tracks the number of scans for each product in the different countries, to determine the real country of origin of the product, on the basis of the highest number of scans. However, that can be done only for countries with a sufficient number of scans for each products (like France).

### 9.2.1.2. Open Food Facts database

#### Description of Open Food Facts data

Among the partners for this project, Open Food Facts included the most data for France, Belgium, Ireland, The Netherlands, and Austria. For Ireland, there were too few products available in earlier years (same years as pre-existing data) and therefore Ireland was excluded from the validation part of the study.

**Table 25 : Updated total number of products by country**

European country	Total number of products
<b>France</b>	776.945
Spain	207.667
Germany	83.545
<b>Belgium</b>	59.853
Switzerland	58.549
United Kingdom	41.826
Italy	32.748
<b>Ireland</b>	11.441
<b>The Netherlands</b>	8.633
<b>Austria</b>	6.439
Poland	5.414
Portugal	4.355
Sweden	3.889
Finland*	2.080
Greece*	1.193
Malta*	229

Information retrieved from Open Food Facts presentation 16/03/2021; \*information retrieved on the 19/01/2021 from website search, covering the period 2012-2020; partners participating in the validation of Open Food Facts are highlighted in bold

### Selection and identification of data

To be able to compare products collected through retrieved from a traditional method with those by using Open Food Facts in a fair manner, the same years, supermarkets and food categories needed to be selected. The number of products available in Open Food Facts for each country varies by year, and has increased since the start of the project in 2012 (Table 26).

**Table 26 : Number of products in Open Food Facts in specific food categories (breakfast cereals and beverages) by country and by year\***

	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>France (total)</b>	3374	8525	9632	24290	32329	92083	288612	166140	127173
<b>Breakfast cereals</b>	64	174	141	401	508	859	1267	501	311
<b>Beverages</b>	445	738	798	1653	2034	6227	8107	2170	790
<b>Belgium (total)</b>	498	546	733	1371	2265	3764	7901	23588	15646
<b>Breakfast cereals</b>	11	29	24	43	90	67	95	108	64
<b>Beverages</b>	142	117	141	257	353	407	567	601	185
<b>The Netherlands (total)</b>	44	44	84	269	564	559	1165	3726	1906
<b>Breakfast cereals</b>	-	2	3	3	18	8	19	41	17
<b>Beverages</b>	16	13	15	46	88	61	104	168	56
<b>Austria (total)</b>	23	69	154	172	331	359	1002	1626	2145
<b>Breakfast cereals</b>	-	4	-	5	9	7	28	29	25
<b>Beverages</b>	7	12	38	13	24	37	72	91	107
<b>Ireland (total)</b>	4	6	16	52	142	87	376	810	8669
<b>Breakfast cereals**</b>	-	1	-	3	6	3	7	11	10
<b>Beverages</b>	3	-	2	13	9	8	18	31	883

\*retrieved 25/01/2021 from website search

\*\*In Ireland these products were found in “breakfast cereals” and “potato and cereals” categories

The extraction of products was realized from the website and later confirmed with an extraction by the Open Food Facts team by country for the specific categories: “breakfast cereals” and “beverages”, the latter including different subcategories of soft drinks, including all products from 2012 up to the latest date of extraction (April 2021). These two categories were selected by partners as the most likely to have collected information previously. Due to misclassification of breakfast cereals on Open Food Facts, Ireland has completed search in two categories: “breakfast cereals” and “potato and cereals”.

Food classification used to identify the food groups in the Open Food Facts was based on the “pnns” variables which refer to the French National Nutrition and Health Program’s dietary guidelines (*French: Guides nutrition du Programme national nutrition santé (PNNS)*). This includes nine major categories and 37 subcategories, which might not be directly transposed to the Best-ReMaP classification system. From pnns classification we were able to identify the 2 major categories “breakfast cereals” and “beverages”. Partners were asked to re-codify data in subcategories according to Best-ReMaP subcategories.

In the category “others”, subcategories such as alcohol and fruit juices are included, and these are not be included in the comparison with pre-existing data. However, some products seem to have been misclassified into this category, and so partners who were able to, made sure to check this category and the “unknown” category. The unknown category represents a considerable proportion of products in each country, but around half of those have enough information on nutrients and ingredients that would allow for a proper re-codification according to Best-ReMaP, and subsequent addition to the chosen categories.

Of the products available through the Open Food Facts database, it is important to note the completeness of data. This is especially important when the goal is to monitor changes in key nutrients. Therefore, the following table (Table 27) notes the number of missing values for each nutrient per category, as well as the percentage of those non-missing per total products in the category. To be able to capture a good shot of the nutritional quality of the food supply, it is important to have good completeness of the nutrition information. If data is missing, it should be mostly due to it being missing from the label, and not due to bad picture quality or from the algorithm not being able to capture the information present on the picture.

**Table 27 : Percentage of completeness and number of missing values for the major nutrients in Open Food Facts by categories for each country**

Country	Category	Energy*	Protein	Total Carbohydrates	Sugars	Fiber**	Total Fat	SFA	Sodium/Salt	Total
<b>Belgium</b>	Breakfast cereals	97.6% 13	97.4% 14	97.2% 15	97.4% 14	81.5% 100	97.2% 15	97.6% 13	96.3% 20	541
	Soft drinks	72.6% 769	71.5% 800	71.5% 801	71.9% 789	30.2% 1962	71.3% 806	71.8% 792	72.6% 771	2811
<b>France</b>	Breakfast cereals	96.9% 134	96.9% 134	96.6% 147	96.7% 142	72.2% 1189	96.7% 147	96.7% 143	95.5% 195	4273
<b>Austria</b>	Breakfast cereals	94.5% 6	93.6% 7	94.5% 6	94.5% 6	72.5% 30	94.5% 6	94.5% 6	90.8% 10	109
	Soft drinks	70.8% 118	65.6% 139	67.1% 133	67.3% 132	26.7% 296	65.8% 138	66.1% 137	64.9% 142	404
<b>Ireland</b>	Breakfast cereals	92.1% 3	86.8% 5	89.5% 4	89.5% 4	55.3% 17	92.1% 3	89.5% 4	89.5% 4	38
<b>The Netherlands</b>	Breakfast cereals	94.6% 6	94.6% 6	94.6% 6	94.6% 6	75.7% 27	94.6% 6	94.6% 6	92.8% 8	111
	Soft drinks	72.6% 156	70.5% 168	71.0% 165	71.0% 165	37.6% 355	71.0% 165	70.1% 170	71.2% 164	569

\* Energy is from variable "energy\_100g" which represents kj/100g, chosen out of three variables referring to energy due to being the most complete (i.e., less missing data) \*\* Fiber is not mandatory to be represented on labels, and therefore it is less indicative of the completeness of data retrieved from the pictures.

SFA, Saturated Fatty Acids. Data in this table was retrieved from the website (25/01/2021) using the filters "country"+"category", which was not the most reliable way to extract data as it was prone to misclassification. This includes all years since 2012 up to extraction, but until 2014 nutritional content was not mandatory.

Overall, the breakfast cereals category seemed to have a good proportion of products with nutrient information, whereas the soft drinks category had a bigger proportion of products that didn't have complete information on the major nutrients. Fiber is the nutrient missing the most from the data but it is not mandatory to be displayed on the labels, so it is hard to judge the number of real missing data. The information on the supermarkets or stores was not complete in the Open Food Facts, as roughly half of the products in each category didn't have that information.

#### Data treatment

As France had a much larger number of available products within OFF compared to the other countries (i.e. Belgium, Austria and The Netherlands), it was decided to study only breakfast cereals in France and breakfast cereals and soft drinks in all other countries (i.e. Belgium, Austria, and The Netherlands).

To evaluate the Open Food Facts data, four countries (France, Belgium, Austria and The Netherlands) have compared their pre-existing data to the corresponding Open Food Facts data to:

1. assess the representativeness, describe and compare products available or not available in both Open Food Facts (OFF) and pre-existing traditionally collected data
2. assess the reliability of OFF in collecting energy and nutrient content of food and beverage products, depending on the number of products available within OFF in a given country, different sub objectives under reliability were assessed. France had more products available within OFF than the three other countries hence they assessed more sub objectives. Sub-objectives per country were:
  - For Belgium, The Netherlands and Austria (for breakfast cereals and soft drinks);
    - Comparison of the energy and nutrient content for all paired products at the category (all breakfast cereals and soft drinks) or pooled subcategory levels within breakfast cereals and soft drinks (number of products too low to have a comprehensive analysis at the subcategory level);
    - Assessment of the percentage of products with exactly identical nutritional values.
  - For France (for breakfast cereals only):
    - Comparison of the energy and nutrient content for all paired products as well as for the whole dataset (all the 2018 OFF and Oqali breakfast cereals) at the subcategory level;
    - Assessment of the percentage of products with identical nutritional values;
    - Comparison of the available nutritional values product-by-product for the paired products.
3. derive potential strengths and limitations of OFF as a source for branded food monitoring in Europe based on the analyses conducted.

When a bar code is created in the Open Food Fact database, if the product is reformulated or modified, the nutritional content or any information, is erased by the new one, without possibility to know what was the previous one. In Open Food Facts, there is no field to identify when the product is available on the market or if it's still available. That's why a product marked as being introduced in 2016 can be sold in 2020 with or without modification. Partners agreed to include both previous and following years consecutively until reaching the representation available in the pre-existing data for the chosen year (i.e. 2016), using the barcodes for this identification and matching when possible. When not possible (for example for Austria), matching is done by product name and brand name. For purposes of this task and considering the available number of products, data from OFF was used over the period 2012-2021 for all retailers in Belgium, The Netherlands and Austria but only from 2018 for France.

The first step was to identify for each country and the selected food category (breakfast cereals/soft drinks), the corresponding data in Open Food Facts. To do that, extractions were made from the website. The raw extraction yielded 592, 113, 118 and 4567 breakfast cereal products for Belgium, the Netherlands, Austria and France respectively. For soft drinks, the raw extraction yielded 2926, 582 and 448 products for Belgium, the Netherlands and Austria



respectively. It appears that a huge number of products were obtained for some countries such as France and that a large number of products seemed to not correspond to products sold on the French market. Open Food Fact was then asked to work on the country variable. They worked on the number of scans to refine the selection of products (by comparing, by product, the number of scans in France to the total number of scans of the product). This enables to reduce the number of products for France by removing many products not sold on the French market (but which can be consumed by French people, for instance for those living on the border of two countries). This new extraction included 2704 breakfast cereal products and is the one used in the rest of the study. Out of these 2704 products, 1256 were scanned in 2018 (which means that at least one French OFF contributor scanned the product in 2018 but does not guarantee that the product was sold in 2018). Only these products were selected for the analysis because the pre-existing data used for France was collected in 2018.

Each partner then classified the selected food categories in OFF data according to the Best-ReMaP subcategories. The breakfast cereals were classified into 15 Best-ReMaP subcategories, while soft drinks were classified into 31 Best-ReMaP subcategories. The OFF variables that were used to classify products are: *product\_name*, *generic\_name*, *brands*, *ingredients\_text* and the nutritional values of the products. For France, out of the 1256 OFF breakfast cereals products scanned in 2018, 25 were outside the scope of the Best-ReMaP category of 'Breakfast cereals'. Finally, 1231 products were classified according to the Best-ReMaP nomenclature and were used for comparison with pre-existing French data (Oqali, 2018). These 1231 products represented only 27% of the raw OFF extraction that was available on the OFF website. This means that the field 'country' from OFF does not enable to identify which products were sold in France and when the products were or had been seen on the French market.

The pre-existing data from Belgium was collected through taking pictures on the market in 2018 for the retailers Carrefour, Lidl and Aldi. For the Netherlands, pre-existing data was obtained from the LEDA database (collected in 2018 and 2020). For the LEDA database, food label information is collected for as many foods as possible and covers 75% of the Dutch market share and data is provided by the food industry on a voluntary basis. However, LEDA includes data coming from GS1, but also from Brandbank, PSinFood, directly from retailers (Albert Heijn, SIM – Jumbo and Superunie), and data manually entered by manufacturers, as well as data collected traditionally and manually entered in the database, and crowdsourced data (through an app named Eetmeter). The Austrian pre-existing data included traditionally collected data collected in 2016, 2018 and 2020. For France, the Oqali database was used as the pre-existing data and contains 659 breakfast cereal products which represents 87% of the sales volumes in France for the year 2018. The number of pre-existing breakfast cereal products for Belgium, the Netherlands and Austria was 182, 635 and 1102, respectively. For the soft drinks category, this was 679, 3152 and 665 for Belgium, the Netherlands and Austria, respectively.

To compare the pre-existing data with the OFF data, both data sources were matched using barcodes for all partners with the exception of Austria where matching was done by product name and brand name as barcodes were not available for the pre-existing data.

For nutrient comparisons, we compared the major nutrients of interest i.e. energy, proteins, carbohydrates, sugars, fat, saturated fat, and salt. The comparisons were statistically

assessed using the Wilcoxon signed-rank non-parametric test for paired products and the Kruskal-Wallis non-parametric test for all breakfast cereal products (only for France). Furthermore, we presented the percentage of paired products with identical nutrient values (including decimals). Nutrient comparisons between data sources were also done for different subcategories of the breakfast cereal and soft drink food categories. However, except for France, which made nutrient comparisons at the Best-ReMaP subcategory levels without pooling, Austria, Belgium and The Netherlands pooled Best-ReMaP subcategories because of low numbers of products available in OFF per subcategory. For instance, for breakfast cereals products in Belgium, OFF data was compared with pre-existing data after all products under the subcategories muesli, cereal flakes and the other remaining subcategories were pooled. The soft drink category was divided into sweetened soft drinks (with the exception of sugar-sweetened alcohol-free beers) and non-sweetened soft drink products for Belgium and the Netherlands. Austria had too low numbers to perform subcategory comparisons. The sweetened category included products sweetened by sugar with or without artificial sweeteners. To assess the reliability of OFF data, only the energy and nutrient content were taken into account. Therefore, we cannot conclude on OFF's reliability based on other information such as ingredient lists.

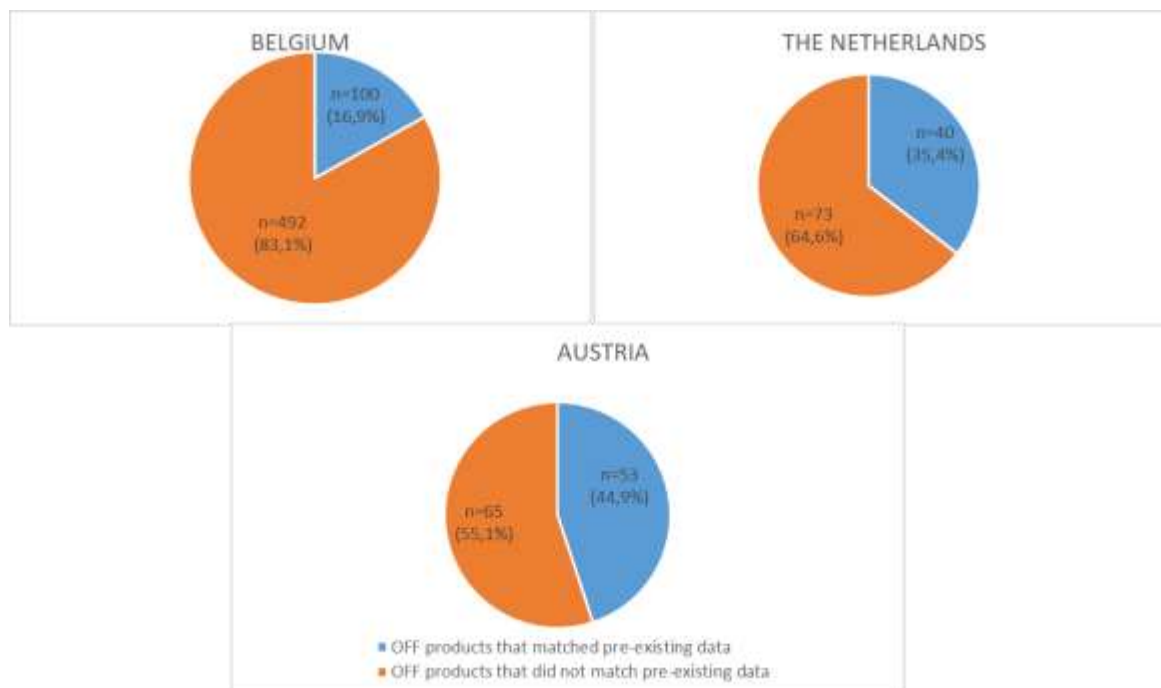
## Results

### Belgium, The Netherlands and Austria

#### Breakfast cereals

##### Representativeness of Open food facts data compared to pre-existing data

After matching by barcode, and looking at the number of products in the pre-existing data that were found in the OFF data, there were 100 products (16.9 %) out of 592 OFF products in common for Belgium. It was 40 (35.4%) out of 113 products for the Netherlands and 53 (44.9%) out of 118 products for Austria (Figure 13). Therefore, only 100 products (54.9%) from OFF were found in 182 pre-existing products for Belgium. This was 40 (6.3%) out of 635 pre-existing products for the Netherlands and 53 (4.8%) out of 1102 pre-existing products for Austria.



**Figure 13 : Percentage of OFF breakfast cereal products that matched and did not match with pre-existing data**

When comparing the unmatched OFF data to the unmatched pre-existing data for Belgium, the percentage of products within subcategories in the pre-existing data were higher compared to corresponding subcategories in the OFF data with the exception of other ready-to-eat cereals, crunchy muesli with nuts/seeds, cereal flakes with chocolate, cereal flakes with fruit and sweet cereal flakes with nuts. This indicates that the food offer differs when comparing OFF and pre-existing data in Belgium. As the pre-existing data has not been classified into Best-ReMaP subcategories for the Netherlands, and Austria classified the matched dataset only and not the entire pre-existing data, the same comparisons could not be performed for the Netherlands and Austria.

The majority of the brands represented in the unmatched pre-existing data are well-known national brands like Kellogg's and Nestlé, and hard discount brands such as Crownfield and Golden bridge for Belgium, the Netherlands and Austria. This might indicate a lack of national and hard discount brands in the OFF dataset.

When assessing the distribution of products by pooled subcategories of breakfast cereals, the pooled breakfast cereal subcategory `Mueslis` had the highest number of products in the matched file with 44.0%, 62.5% and 35.8% for Belgium, the Netherlands and Austria respectively.

#### **Reliability (comparison of energy and nutrient contents) of Open food facts data to pre-existing data**

We had less than 10% missing values for all the nutrients in the OFF data before and after matching for all the participating countries. The percentage of nutrients available in the pre-existing files and in the OFF were generally high (all product percentages >89%) for all the countries.

**Table 28: Comparison of median energy (Kj/100g) and nutrient content (g/100g) between pre-existing data and OFF for matched products at the category level**

<b>BREAKFAST CEREALS</b>						
	<b>Pre-existing data</b>		<b>Open Food Facts</b>			
<b>Belgium (N=100)</b>	<b>Median [IQR]</b>	<b>Min-Max</b>	<b>Median [IQR]</b>	<b>Min-Max</b>	<b>P-value<sup>1</sup></b>	<b>No Difference N(%)<sup>3</sup></b>
Energy (kJ)	1676 [1578 -1825]	1310-2142	1681 [1577-1825]	1400-2084	0.997	3 (3.0)
Protein	8.6 [7.8-10.3]	5.0-17.0	8.6 [7.9-10.3]	1.0-17.0	0.990	71 (71.0)
Carbohydrates	67.0 [61.5-74.3]	38.1-88.0	67.0 [61.5-74.0]	38.1-88.0	0.926	71 (71.0)
Sugar	20.0 [14.8-26.1]	0.7-45.0	19.8 [14.0-25.0]	0.7-45.0	0.868	70 (70.0)
Fat	8.0 [3.5-14.0]	0.3-29.6	8.0 [3.4-14.0]	0.5-29.6	0.909	72 (72.0)
SFA	2.3 [0.9-3.9]	0.1-12.0	2.1 [0.9-3.9]	0.1-12.0	0.985	68 (68.0)
Salt	0.3 [0.1-0.8]	0.0-1.8	0.3 [0.1-0.8]	0.0-1.9	0.982	66 (66.0)
<b>Austria (N=53)</b>						
Energy (kJ)	1604 [1573 -1763]	1413 -2016	1590 [1552-1741]	1402-2016	0.300	11 (20.7)
Protein	9.3 [8.0-11.0]	5.5-14.0	9.4 [8.3-11.0]	6.1-14.0	0.752	34 (64.2)
Carbohydrates	65.0 [60.0-75.0]	44.0-84.0	64.0 [60.0-73.9]	44.0-84.0	0.651	36 (67.9)
Sugar	17.0 [5.2-24.9]	0.3-34.0	17.0 [5.1-23.0]	0.3-29.0	0.580	35 (66.0)
Fat	6.9 [3.4-12.0]	0.8-22.0	6.9 [4.0-12.0]	0.9-22.0	0.730	38 (71.7)
SFA	1.3 [0.7-3.7]	0.2-11.0	1.1 [0.7-2.3]	0.2-11.0	0.518	31 (58.5)
Salt	0.2 [0.1-0.8]	0.0-2.7	0.3 [0.1-0.8]	0.0-9.7	0.913	31 (58.5)
<b>The Netherlands (N=40)</b>						
Energy (kJ)	1763 [1592 -1828]	1400-1940	1681 [1582-1827]	1400-1940	0.899	11 (27.5)
Protein	9.7 [8.2-11.6]	6.3-20.0	9.8 [8.5-11.7]	6.3-20.0	0.760	31 (77.5)
Carbohydrates	62.0 [57.8-67.0]	27.0-84.0	62.0 [57.0-67.0]	27.0-84.0	1.00	34 (85.0)
Sugar	12.6 [7.7-17.4]	0.8-27.0	13.2 [7.2-17.0]	0.8-27.0	0.862	33 (82.5)
Fat	9.7 [6.4-15.0]	0.9-23.0	11.3 [5.3-15.0]	0.9-23.0	0.822	34 (85.0)
SFA	1.6 [1.2-2.8]	0.2-6.8	1.5 [1.1-3.3]	0.2-6.8	0.972	31 (77.5)
Salt	0.1 [0.0-0.3]	0.0-1.1	0.1 [0.0-0.5]	0.0-1.1	0.818	23 (57.5)

<sup>1</sup> The p-values were calculated from a non-parametric test; The Wilcoxon signed-rank test.

<sup>3</sup> This is the number of products without any difference (difference=0) in nutrition value between pre-existing data and OFF.

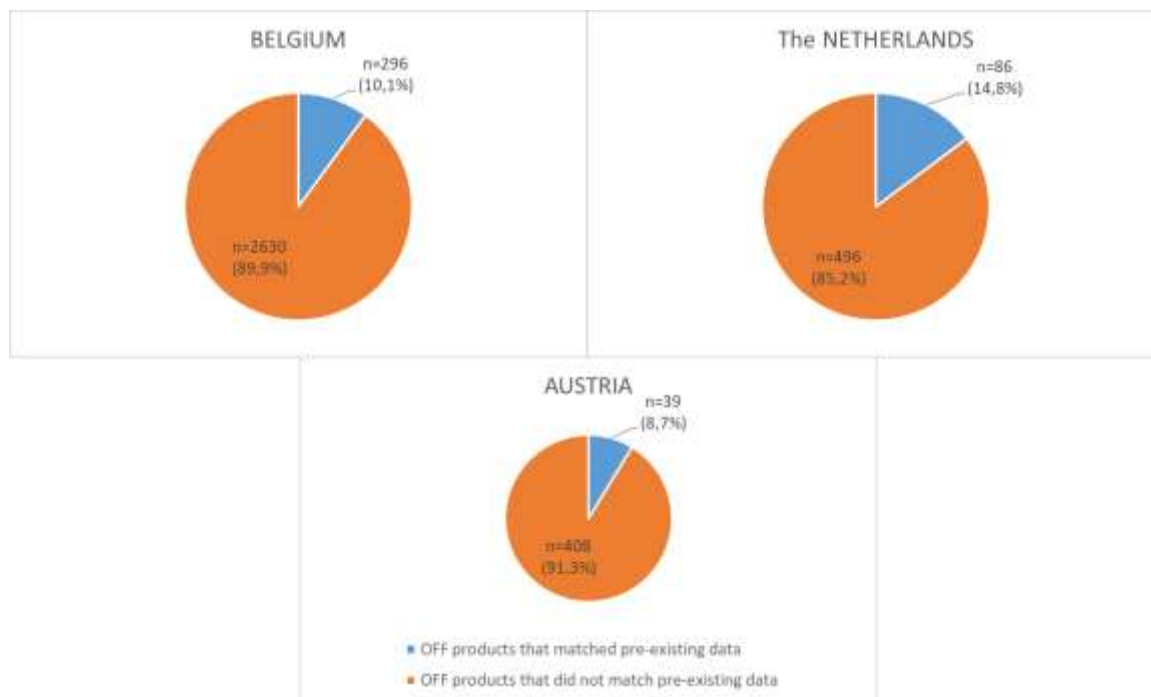
Table 28 indicates the comparison of nutrient values between the pre-existing data and the OFF data in the matched file by country. All nutrient comparisons were similar between the pre-existing and OFF data (all p-values > 0.05). We can, therefore, conclude that, at the category level, the median nutrient values are not significantly different between pre-existing and OFF data for matched products in Belgium, the Netherlands and Austria. The percentage of identical nutrient content, i.e. those with zero difference between OFF and pre-existing data, were higher than 58% for all nutrients with the exception of energy. This might be because energy (kJ) in the OFF data is calculated whereas it is taken directly from the pictures of the nutrient declarations in the traditional data for Belgium and Austria and this could lead to some discrepancies. Additionally, if energy in KJ was missing in either OFF or pre-existing data, we converted energy in Kcal if present.

After stratifying by pooled breakfast cereals subcategories, the nutrient values were all comparable between the pre-existing data and OFF data (all p-values > 0.05). We can, therefore, conclude that the median nutrient values are not significantly different between pre-existing and OFF data for matched products even after stratification by selected breakfast cereals pooled subcategories for Belgium, the Netherlands and Austria. However, due to the low number of food products assessed, and the broad spectrum of products pooled together, these results should be interpreted with caution.

### **Soft drinks**

#### **Representativeness of Open food facts data compared to pre-existing data**

After matching by barcode, and looking at the number of products in the pre-existing data that were found in the OFF data there were 296 products (10.1 %) out of 2926 OFF products in common for Belgium, 86 products (14.8%) out of 582 products for the Netherlands and 39 (8.7%) out of 448 products for Austria (Figure 14). Hence, only 296 OFF products (43.6%) were found among 679 pre-existing soft drink products for Belgium, 86 (2.7%) out of 3152 pre-existing products for the Netherlands and 39 (5.9%) out of 665 pre-existing products for Austria.



**Figure 14 : Percentage of OFF soft drink products that did/did not match with the pre-existing products**

When comparing the unmatched OFF data to the unmatched pre-existing data for Belgium, the percentage of products within the subcategories Flavoured milk beverages, Colas without added sugar, Sugar-sweetened fruit beverages and Sugar-sweetened tonics and bitters were generally higher in the pre-existing data compared to corresponding subcategories in the OFF data, while the subcategories Plant-based beverages without added sugar and Fruit beverages with fruit content > or = 50% were lower in the pre-existing data compared to corresponding subcategories in the OFF data (Figure 15). This suggests that the food offer differs when comparing OFF and pre-existing data in Belgium. The same comparisons could not be performed for the Netherlands and Austria because the pre-existing data has not been classified into Best-ReMaP subcategories for the Netherlands and Austria.

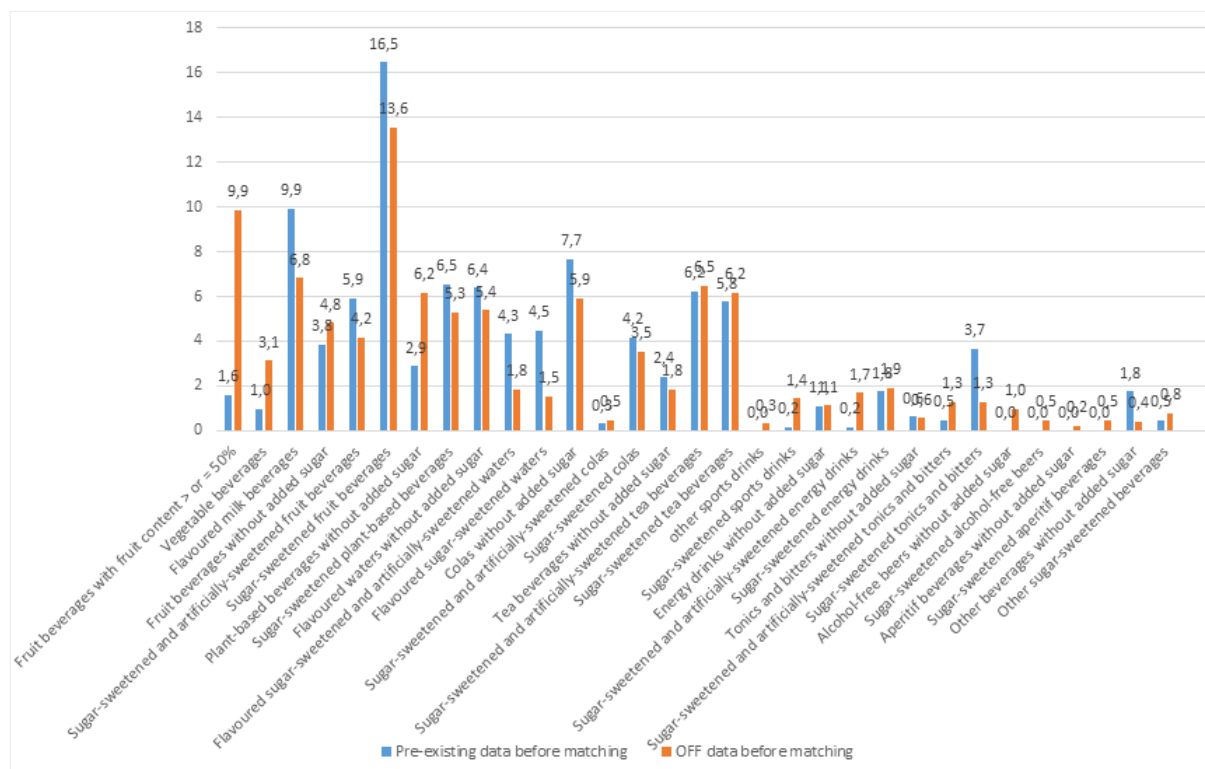


Figure 15 : Percentage of products by subcategories of unmatched soft drinks- Belgium

73, 36 and 29 brands were present in the matched data for Belgium, The Netherlands and Austria respectively. In general, at the category level, the brands Coca-Cola, Lipton and Spa were consistent as top brands in the matched data in both Belgium and the Netherlands. While VÖSLAUER, Arizona, Capri-sun and Alpro were the main brands in Austria.

**Reliability (comparison of energy and nutrient contents) of Open food facts data compared to pre-existing data**

There were less than 6% of missing values for all the nutrients in the pre-existing data before and after matching for Belgium, the Netherlands and Austria. For the OFF data, the percentage of missing values was lower than 36% before matching and lower than 16% after matching.

When assessing the distribution of products by Best Remap subcategories of soft drinks, only 22, 17 and 10 (out of 31) subcategories were found in Belgium, the Netherlands and Austria, respectively. The sugar-sweetened fruit beverages subcategory, had the highest number of products in the matched file with 15% for Belgium, 20% for the Netherlands and 38% for Austria. The other categories had less than 13% of the total products for each country.

Table 29: Comparison of median energy (kJ/100g) and nutrient content (g/100g) between pre-existing data and OFF data for matched products

<b>SOFT DRINKS</b>						
	<b>Pre-existing data</b>		<b>Open Food Facts</b>			
<b>Belgium (N=296)</b>	<b>Median [IQR]</b>	<b>Min-Max</b>	<b>Median [IQR]</b>	<b>Min-Max</b>	<b>P-value<sup>1</sup></b>	<b>No Difference N(%)<sup>3</sup></b>
Energy	126 [71 -185]	0-1373	120 [69 -189]	0-1423	0.849	170 (57.4)
Protein	0.1 [0.0-0.5]	0.0-3.8	0.1 [0.0-0.5]	0.0-3.8	0.768	253 (85.5)
Carbohydrates	6.4 [2.2-9.7]	0.0-80.0	5.7 [1.9-9.6]	0.0-83.0	0.604	209 (70.6)
Sugar	5.9 [1.7 -9.4]	0.0-80.0	4.9 [1.6-9.1]	0.0-83.0	0.567	213 (72.0)
Fat	0.0 [0.0-0.5]	0.0-4.2	0.0 [0.0-0.5]	0.0-4.2	0.952	268 (90.5)
SFA	0.0 [0.0 -0.1]	0.0-2.4	0.0 [0.0 -0.1]	0.0-2.4	0.852	265 (89.5)
Salt	0.0 [0.0 -0.1]	0.0-3.5	0.0 [0.0 -0.1]	0.0-0.7	0.432	206 (69.6)
<b>The Netherlands (N=86)</b>						
Energy	82 [20 -133]	0-252	84 [20 -130]	0-1054	1.00	27 (31.4)
Protein	0.0 [0.0-0.1]	0.0-1.0	0.0 [0.0-0.5]	0.0-5.0	0.409	66 (76.4)
Carbohydrates	4.7 [1.0 -7.8]	0.0-14.8	4.7 [1.0 -7.8]	0.0-14.8	0.938	57 (66.2)
Sugar	4.5 [1.0 -7.5]	0.0-14.5	4.5 [1.0 -7.4]	0.0-11.5	0.825	56 (65.1)
Fat	0.0 [0.0 -0.0]	0.0-0.5	0.0 [0.0 -0.0]	0.0-0.5	0.955	75 (87.2)
SFA	0.0 [0.0 -0.0]	0.0-0.5	0.0 [0.0 -0.0]	0.0-0.1	0.732	70 (81.4)
Salt	0.0 [0.0 -0.0]	0.0-0.2	0.0 [0.0 -0.0]	0.0-0.3	0.502	60 (69.8)
<b>Austria</b>						
Energy	141 [93 -177]	38-344	117 [71 -167]	38-343	0.29	6 (15.4)
Protein	0.1 [0.0 -3.1]	0.0-3.6	0.1 [0.0 -0.5]	0.0-3.5	0.73	17 (43.6)
Carbohydrates	7.9 [5.5 -9.2]	1.9-11.0	6.9 [4.2 -8.5]	1.9-10.6	0.21	21 (53.8)
Sugar	7.9 [4.8 -9.1]	1.8-10.6	6.8 [3.4 -8.4]	1.8-10.6	0.19	20 (51.3)
Fat	0.0 [0.0 -1.8]	0.0-3.6	0.1 [0.0 -0.4]	0.0-3.6	0.96	22 (56.4)
SFA	0.0 [0.0-0.3]	0.0-2.3	0.0 [0.0-0.1]	0.0-2.3	0.99	23 (59.0)
Salt	0.0 [0.0-0.1]	0.0-0.1	0.0 [0.0-0.0]	0.0-0.2	0.47	14 (35.9)

<sup>1</sup> The p-values were calculated from a non-parametric test; The Wilcoxon signed-rank test.

<sup>3</sup> This is the number of products without any difference (difference=0) in nutrition value between pre-existing data and OFF.



Table 29 indicates the comparison of nutrients between the pre-existing data and the OFF data in the matched file for all countries. At the category level, the median nutrient values are not significantly different between pre-existing and OFF data for matched products for Belgium, The Netherlands and Austria (all p-values > 0.05). The percentages of identical nutrient contents, i.e. those with zero difference were low (<15%) for energy for Belgium, The Netherlands and Austria. This might partly be because energy (kJ) in the OFF data is calculated whereas it is taken directly from the pictures with nutrient information in the traditional data for Belgium and Austria. Additionally, if energy in kJ was missing in both OFF and pre-existing data, we converted energy in kcal if present. For the other nutrients, apart from energy, the percentages of identical nutrients between OFF and pre-existing data, were higher than 65% for Belgium and the Netherlands and higher than 36% for Austria.

Nutrient comparisons were also done stratified by pooled subcategories of soft drinks. Unfortunately, only 2 products would be considered as non-sweetened in the Austrian data. Therefore, no analysis were done stratified by pooled subcategories of soft drinks for Austrian data. The nutrient values in the soft drinks pooled subcategories were all comparable between the pre-existing data and OFF data (all p-values > 0.05). We can, therefore, conclude that the median nutrient values are not significantly different between pre-existing and OFF data by pooled subcategories for Belgium and The Netherlands.

## France

### **Representativeness of Open food facts data compared to pre-existing data**

The proportion of products distributed in the Best-ReMaP subcategories of the 'Breakfast cereals' category is different between OFF and Oqali. When comparing the OFF data and the Oqali data, there is an overrepresentation of the subcategories Cereals without added sugar (OFF: 12.7%; Oqali: 2.3%) and Traditional muesli flakes (OFF: 15.7%; Oqali: 14.0%) in OFF (Figure 16). Conversely, there is an under-representation in the OFF data for the subcategories Crunchy chocolate muesli (OFF: 11.0%; Oqali: 14.3%), Chocolate-flavoured cereals (OFF: 10.4%; Oqali: 13.7%) and Honey/caramel cereals (OFF: 6.7%; Oqali: 8.5%) compared to the Oqali data. One hypothesis for this difference may be the existence of a bias in the contributors to the OFF database. Indeed, consumers who contribute to OFF are more concerned about the food they eat than the general population, and the products they consume are healthier than the average food offer on the market.

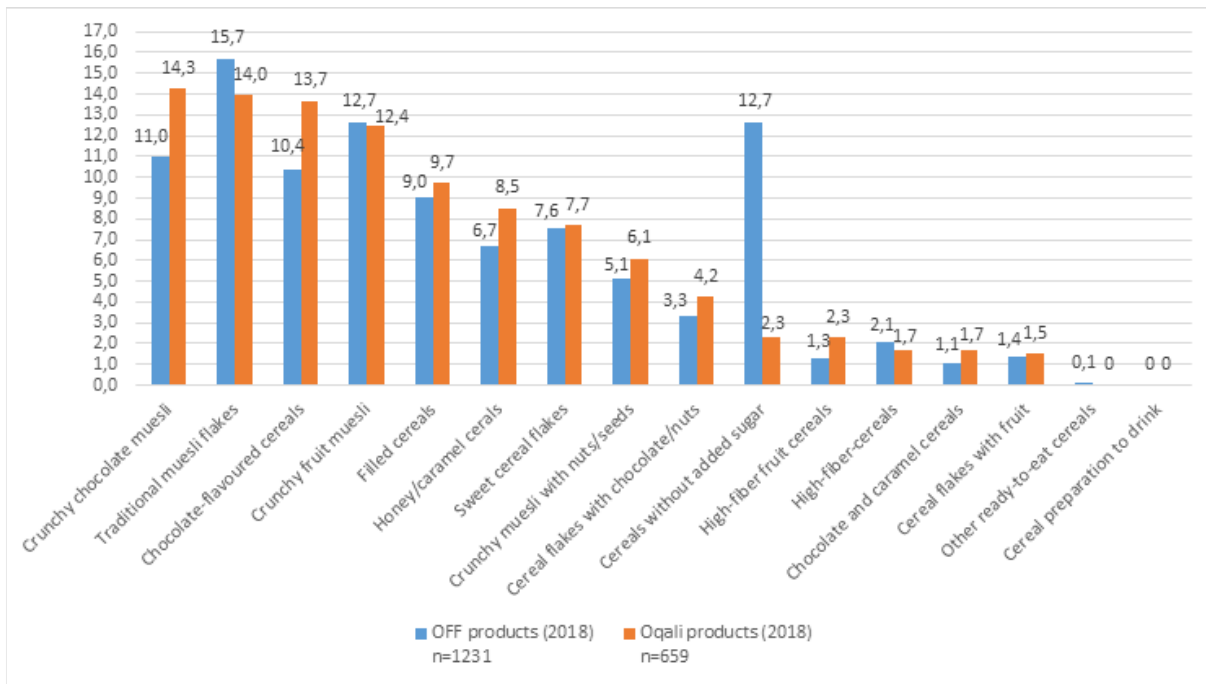


Figure 16 : Percentage of products in the different subcategories of the 'Breakfast cereals' category - France

After matching by barcode from OFF data to Oqali data, 36.5% (n=449) of the 1231 OFF products matched the Oqali products for the year 2018 (Figure 17). The 63.5% of OFF products that did not match with Oqali, were mostly from the subcategories *Cereals without added sugar* (18.2% of unmatched products; n=142) and *Traditional muesli flakes* (17.4% of unmatched products; n=136), which are the categories that are overrepresented in OFF (Figure 18).

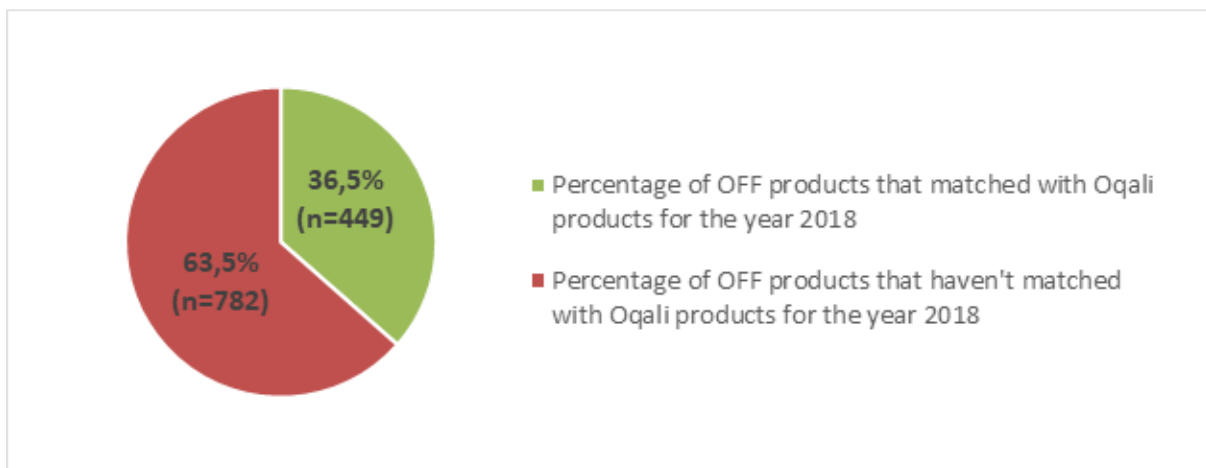


Figure 17 : Results of the matching from OFF data (2018) with Oqali data (2018) - France

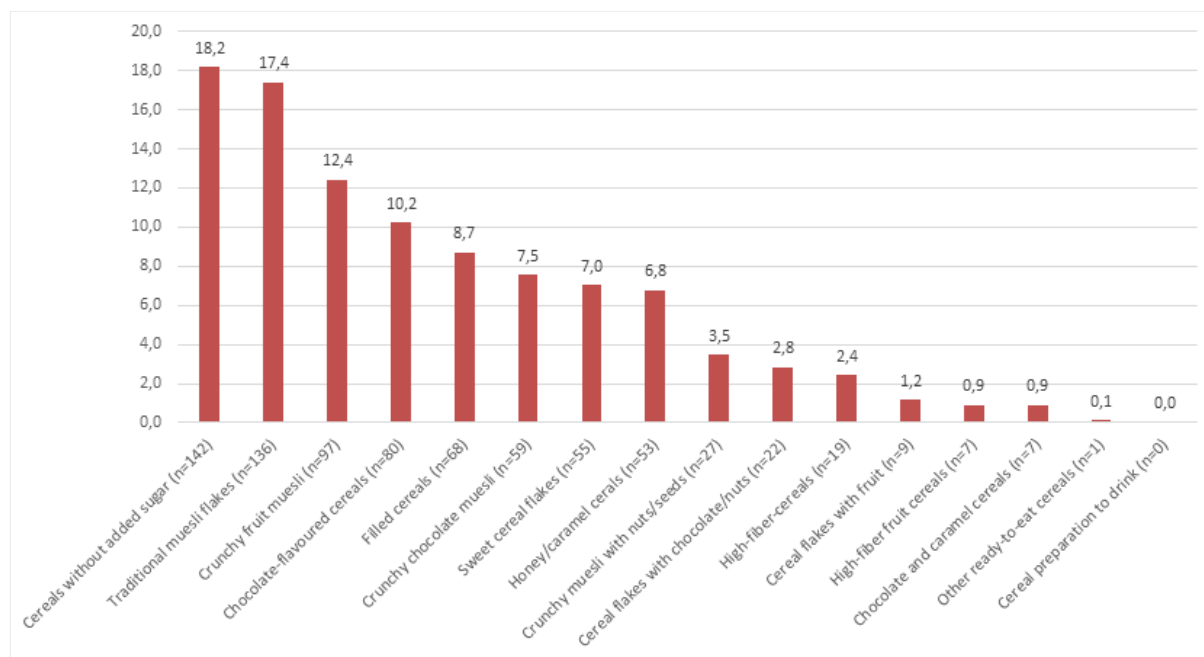


Figure 18 : Percentage of products in the different 'Breakfast cereals' subcategories for the OFF products that haven't matched with Oqali (n=782) - France

Looking at the brand types of the unmatched products, it appears that these products are most likely to come from little-known brands or from specialised organic retailer brands. Furthermore, 6% (44/782) of the non-matched products do not have a standard barcode, which may be due to an input error that may alter the matching.

Reciprocally, 67.5% (n=445) of Oqali products matched with the OFF products for the year 2018 (Figure 19). The number of products matched from OFF data with Oqali data and from Oqali data with OFF data is different (449 and 445 respectively) because different products can have the same barcode in the Oqali database.

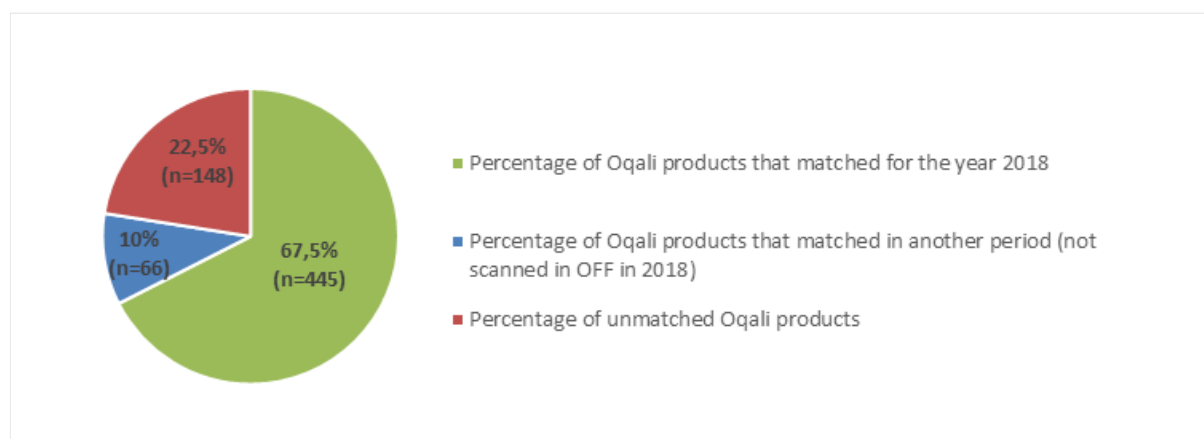
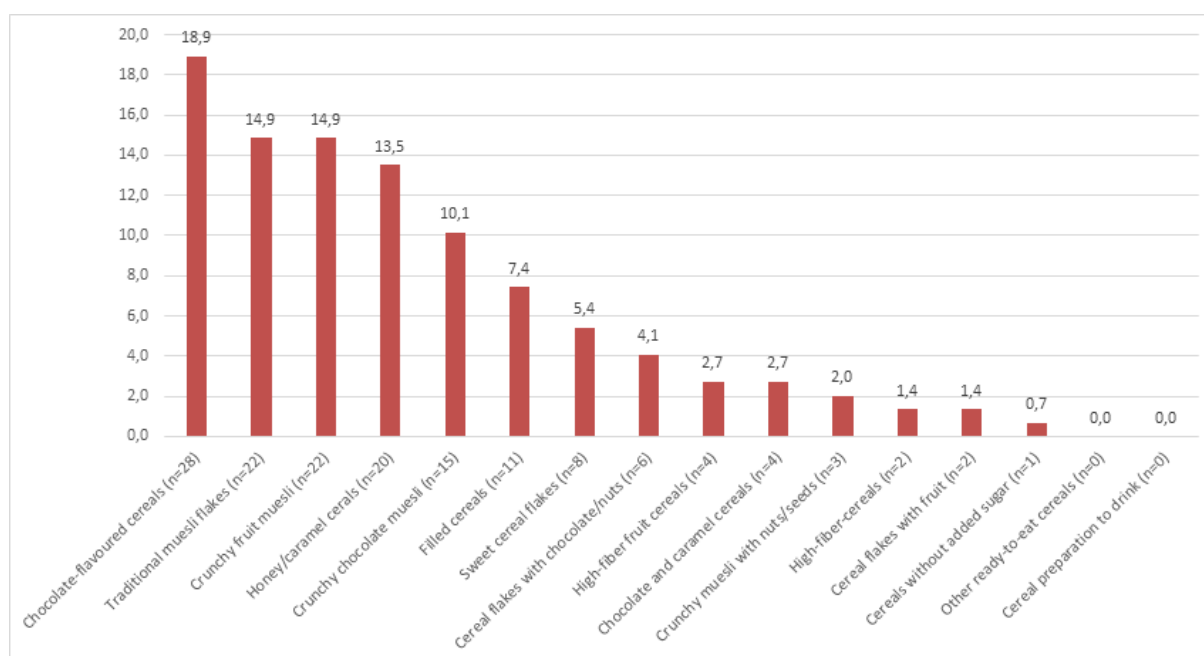


Figure 19 : Results of the matching from Oqali data (2018) with OFF data (2018) - France

The knowledge of the market shares of the products in the Oqali database makes it possible to estimate the market shares of the Oqali products that did not match the OFF products. The 32,5% of Oqali products collected on the market in 2018 which are not available in the 2018 OFF data correspond to 21% of the market shares in 2018.

When analyzing the 32,5% of Oqali products that did not match OFF, we observe that these products are mostly found in the subcategories *Chocolate-flavoured cereals* (18.9% of unmatched products; n=28), *Traditional muesli flakes* (14.9% of unmatched products; n=22), *Crunchy fruit muesli* (14,9% of unmatched products; n=22) and *Honey/caramel cereals* (13,5% of unmatched products; n=20) (Figure 20). Looking at the brand types of the unmatched products, it appears that these products are mostly from national brands (39,9% of unmatched products; n=59). Thus OFF may be missing a significant number of national brand products on the French market. The hypotheses put forward to explain these differences between the two databases are that little-known brands were not captured by Oqali but were available in OFF in 2018 but it is also possible that some products scanned in 2018 in OFF were not actually on the French market in 2018. Another hypothesis is that there is a significant bias in OFF contributors leading to the fact that OFF misses a large number of national brand products present on the market in 2018.



**Figure 20 : Percentage of products in the different 'Breakfast cereals' subcategories for the Oqali products that haven't matched with OFF (n=148) - France**

### Reliability (comparison of energy and nutrient contents) of Open food facts data compared to pre-existing data

To assess the reliability of OFF's data, a first analysis is based on the comparison of the average nutritional values for each nutrient between all OFF breakfast cereals scanned in France in 2018 (n=1231) and all Oqali breakfast cereals of 2018 (n=659) per subcategory. The Kruskal-Wallis test is used to define whether the differences in means between OFF and Oqali are significant or not. A p-value <0.05 indicates that the means are significantly different.

A summary table (Table 30) shows the differences (in absolute value and in percentage) between the OFF and Oqali mean values for each nutrient.

Table 30: Mean comparisons of OFF and Oqali nutritional contents for all 2018 breakfast cereals according to the Best-ReMaP subcategories – France

Best-ReMaP subcategory	Energy (kcal/100g)		Fat (g/100g)		Saturated fat (g/100g)		Carbohydrates		Sugars (g/100g)		Proteins (g/100g)		Fiber (g/100g)		Salt (g/100g)	
	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)
Cereal flakes with chocolate/nuts	4,0	1,0%	0,6	9,6%	0,4	13,2%	0,4	0,5%	1,5	7,7%	0,3	4,1%	0,6	10,9%	0,08	10,6%
Cereal flakes with fruit	10,4	2,8%	0,5	33,4%	0,3	104,4%	4,4	5,5%	1,7	12,6%	1,0	12,3%	0,3	5,6%	0,04	5,4%
Cereals without added sugar	6,5	1,8%	2,4	89,3%**	0,4	89,8%**	4,1	6,0%*	0,1	6,1%	1,1	10,3%	0,3	3,0%	0,61	85,2%**
Chocolate and caramel cereals	92,6	23,5%*	1,4	30,4%*	0,8	76,4%	5,0	6,5%**	1,6	5,7%	0,4	5,1%	0,8	12,3%	0,09	18,1%
Chocolate-flavoured cereals	7,3	1,9%	1,7	53,4%	0,7	59,7%	1,9	2,4%	1,7	6,4%*	0,0	0,5%	0,2	4,0%	0,02	4,7%
Crunchy chocolate muesli	5,1	1,1%	0,9	5,5%	0,2	2,9%	1,1	1,8%	0,4	1,8%	0,4	4,3%	0,2	2,6%	0,00	0,5%
Crunchy fruit muesli	4,1	0,9%	0,3	1,9%	0,2	5,4%	0,3	0,5%	1,1	5,2%	0,1	1,5%	0,2	3,0%	0,04	15,0%
Crunchy muesli with nuts/seeds	10,0	2,2%	1,7	10,8%	0,2	6,0%	2,6	4,1%	1,3	7,5%	0,9	10,0%*	0,5	7,1%	0,01	7,1%
Filled cereals	6,3	1,4%	0,6	4,4%	0,3	5,7%	0,0	0,0%	1,0	3,2%	0,2	2,1%	0,1	2,7%	0,02	3,1%
High-fiber cereals	0,3	0,1%	0,1	3,4%	0,2	23,7%	2,0	3,0%	3,2	22,8%	0,9	8,4%	2,6	18,1%	0,2	26,9%
High-fiber fruit cereals	0,3	0,1%	0,7	17,0%	0,2	8,7%	3,8	5,3%	0,8	3,9%	1,9	22,0%	0,1	0,8%	0,27	24,9%
Honey/caramel cereals	4,7	1,2%	1,2	54,6%	0,1	25,2%	1,8	2,2%	1,8	6,9%	0,8	11,0%	0,5	11,2%	0,02	4,4%
Sweet cereal flakes	1,9	0,5%	0,2	15,0%	0,0	3,3%	0,9	1,1%	0,5	3,1%	0,1	1,5%	0,2	5,1%	0,04	3,4%
Traditional muesli flakes	1,2	0,3%	0,1	1,4%	0,1	7,2%	0,6	1,0%	0,4	2,9%	0,8	7,8%	0,1	0,8%	0,0	2,8%

\*\*\* if p<0,001 ; \*\* if p<0,01 ; \*if p<0,05  
p-value < 0,05

The results show significant differences in average nutritional content between OFF and Oqali for 4 out of 14 subcategories:

- Cereals without added sugar- subcategory for which the number of products in OFF (n=148) is much higher than in Oqali (n=14) (fat, saturated fat, carbohydrates and salt);
- Chocolate and caramel cereals (energy, fat and carbohydrates);
- Chocolate-flavoured cereals (sugars);
- Crunchy muesli with nuts/seeds (proteins).

A second analysis is based on the comparison of the average nutritional values by subcategory and for each nutrient of paired products between OFF and Oqali breakfast cereals of 2018 (n=445). The Wilcoxon signed-rank test is used to define whether the differences in means between OFF and Oqali are significant or not. A p-value <0.05 indicates that the means are significantly different.

A summary table (Table 31) shows the difference (in absolute value and in percentage) for the mean values between the OFF and Oqali paired products for each nutrient.

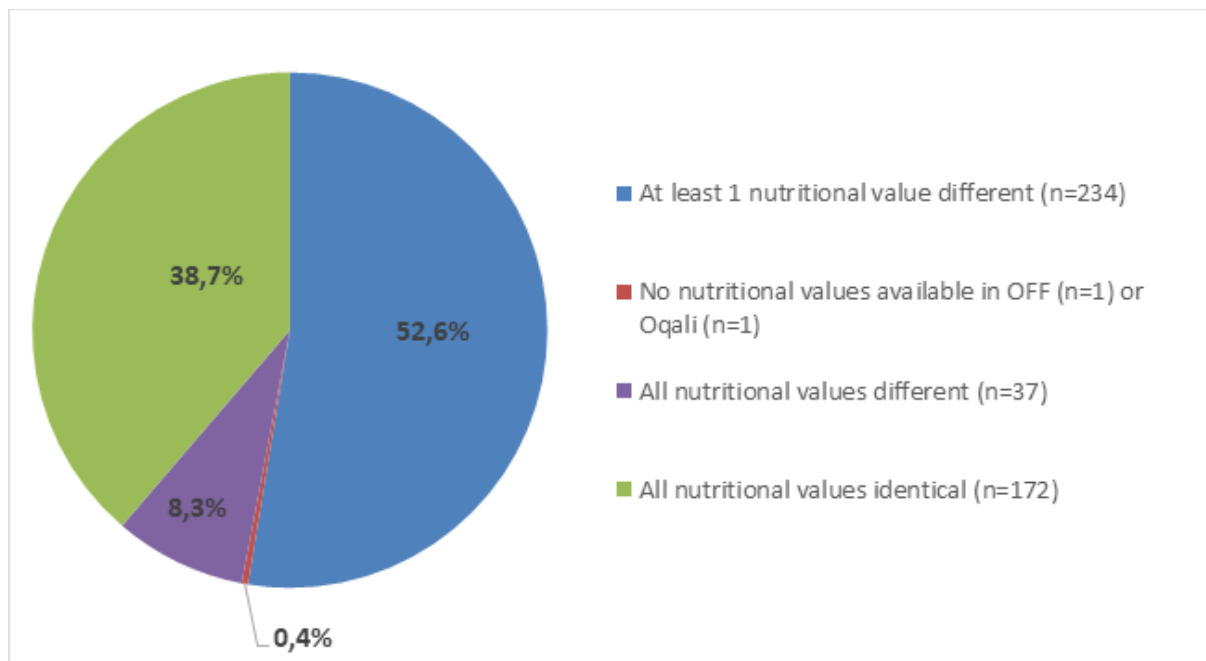
Table 31: Mean comparisons of OFF and Oqali nutritional contents for 2018 paired breakfast cereals according to Best-ReMaP subcategories - France

Best-ReMaP subcategory	Energy (kcal/100g)		Fat (g/100g)		Saturated fat (g/100g)		Carbohydrates		Sugars (g/100g)		Proteins (g/100g)		Fiber (g/100g)		Salt (g/100g)	
	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)	difference of means	difference of means (percentage)
Cereal flakes with chocolate/nuts	1,6	0,4%	0,2	2,3%	0,1	2,4%	0,1	0,1%	0,9	4%	0,1	1%	0,2	3,7%	0,02	2,4%
Cereal flakes with fruit	2,8	0,7%	0,7	45,2%	0,5	15,6%	2,3	2,9%	0,8	5,6%	0,0	0,5%	0,5	9,2%	0,1	12,2%
Cereals without added sugar	1,4	0,4%	0,1	2,2%	0,0	10,8%	0,4	0,6%	0,1	6,4%	0,2	2,3%	0,4	3,9%	0,41	52,6%
Chocolate and caramel cereals	1,3	0,3%	0,6	12,3%	0,2	19,4%	0,5	0,6%	2,4	8,1%	0,0	0,0%	1,1	17,8%	0,05	11,6%
Chocolate-flavoured cereals	1,4	0,4%**	0,1	2,0%	0,0	0,0%	0,3	0,4%	0,3	1,2%	0,1	0,9%	0,3	5,3%	0,00	0,6%
Crunchy chocolate muesli	3,8	0,8%**	0,2	1,2%	0,1	1,5%	0,2	0,4%	0,7	3,4%***	0,2	2,0%**	0,2	2,1%*	0,00	1,1%
Crunchy fruit muesli	1,1	0,2%	0,0	0,0%	0,2	4,8%	0,3	0,5%*	0,6	3%***	0,2	2,5%***	0,0	0,5%	0,00	0,8%
Crunchy muesli with nuts/seeds	9,9	2,2%***	1,2	7,6%*	0,1	2,5%	0,6	1,0%	0,0	0,0%	0,4	4,0%**	0,1	1,4%	0,00	2,8%
Filled cereals	2,6	0,6%	0,4	2,7%*	0,1	2,6%	0,8	1,2%**	0,3	0,9%	0,1	1,0%	0,3	6,0%	0,01	1,4%
High-fiber cereals	0,6	0,2%	0,0	1,2%	0,0	3,9%	0,1	0,2%	0,5	3,8%	0,0	0,2%	0,1	0,5%	0,01	0,9%
High-fiber fruit cereals	1,3	0,4%	0,0	0,0%	0,0	0,5%	0,0	0,0%	0,3	1,2%	0,1	1,3%	0,4	5,8%	0,04	4,9%
Honey/caramel cereals	2,2	0,6%	0,1	4,4%	0,0	1,8%	0,2	0,3%	0,1	0,4%	0,3	4,1%*	0,3	6,3%	0,00	0,7%
Sweet cereal flakes	0,8	0,2%	0,0	2,9%	0,0	0,8%	0,1	0,2%	0,3	2,4%	0,2	2,5%	0,0	1,0%	0,03	2,1%
Traditional muesli flakes	1,5	0,4%	0,1	0,9%	0,1	3,6%	0,3	0,5%	0,4	2,9%	0,1	0,6%	0,1	0,7%*	0,01	6,7%
*** if p<0,001 ; ** if p<0,01 ; *if p<0,05																
p-value < 0,05																

The results show significant differences in average nutritional content between OFF and Oqali paired products for 7 out of 14 subcategories:

- Chocolate-flavoured cereals (energy);
- Crunchy chocolate muesli (energy, sugars, proteins and fibre);
- Crunchy fruit muesli (carbohydrates, sugars and proteins);
- Crunchy muesli with nuts/seeds (energy, fat and proteins);
- Filled cereals (fat and carbohydrates);
- Honey/caramel cereals (proteins);
- Traditional muesli flakes (fiber).

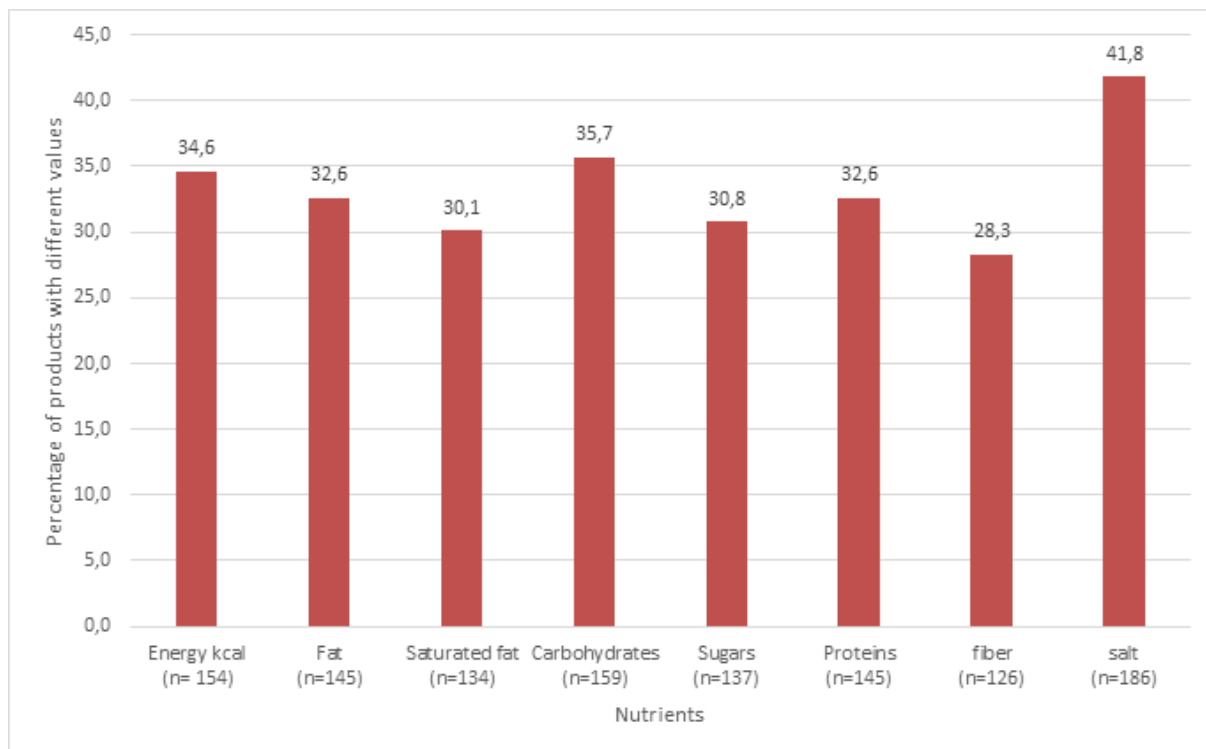
Then a comparison of the nutritional values between OFF and Oqali was done product-by-product for the paired products (n=445). The nutritional values taken into account in this comparison were: Energy (kcal), fat, saturated fat, carbohydrates, sugars, proteins, fiber and salt. Among the 445 paired products, 38.7% (n=172) have (exactly) the same nutritional values, 52.6% (n=234) have at least one different nutritional value and 8.3% (n=37) have completely different nutritional values (Figure 21). 0.4% of the products had no nutritional values available (OFF: n=1; Oqali: n=1). Finally, this means that 60.9% of the matched products have at least one nutritional value different between OFF and Oqali.



**Figure 21 : Overview of nutritional values available for 2018 paired products between OFF and Oqali - France**

The nutrient with the highest number of products with different nutritional values between OFF and Oqali was salt (41.8%; n=186) and the one with the lowest number of products with different nutritional values was fiber (28.3%; n=126) (Figure 22).

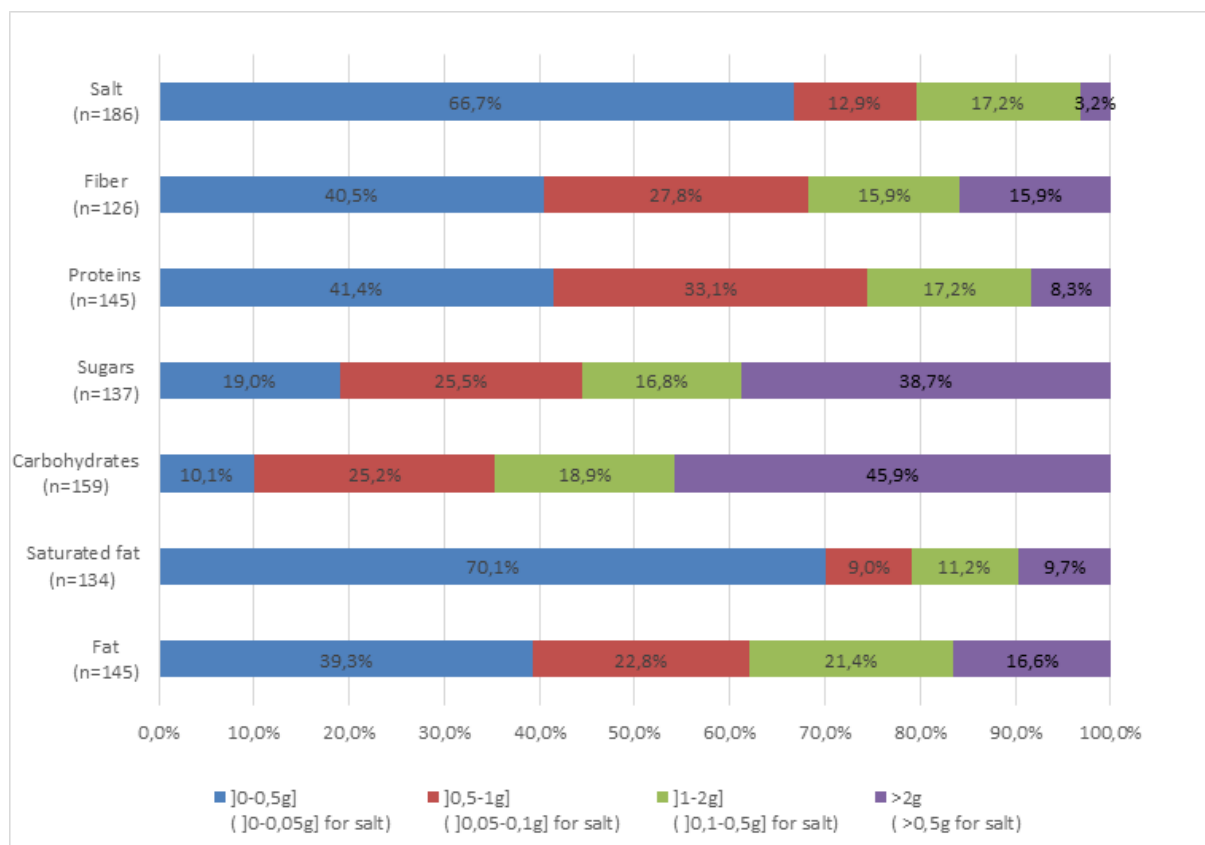




**Figure 22 : Percentage of products with nutritional values that are different among the paired products between Oqali and OFF (n=445) - France**

The difference in g (or kcal for energy) in the nutritional content between OFF and Oqali was calculated for each pair of products.

Figure 23 shows the percentage of products in each class of difference for each nutrient. The highest differences in product-by-product nutrient comparison occurs for carbohydrates and sugars. The majority of the matched products have therefore difference in nutritional values above 0,5g/100g.



**Figure 23 : Summary graph of percentages of paired products according to their difference in nutritional value for a given nutrient between OFF and Oqali values - France**

Some of the differences may be explained by the fact that the OFF data used for the comparison were products scanned in 2018 but the OFF database is usually continuously updated (meaning that the values can be the ones collected another year). The nutritional value data of a product scanned in 2018 could have been updated in 2020 or 2021 for example. Similarly, a product from the OFF database could have been scanned before 2018 and in 2018 without having its nutritional values updated in 2018. Another explanation of these differences may be that the OFF data is entered by citizen volunteers (contributors). Someone may enter the nutritional value incorrectly into the OFF database (nutritional values that do not match those on the picture) or someone may make a mistake and enter the nutritional values of a wrong column (e.g. column of nutritional values of the product + an added ingredient). The difference in salt can also be explained by the confusion between the salt and the sodium content for people who have entered the data in the OFF database. In addition, it is not clear how non-quantified data (e.g. "traces", "<0.01g") are entered into OFF. For some products only the symbol is removed and the value is kept and for other products a rounding to 0g is kept.

#### 9.2.1.3. Conclusions on crowdsourcing (based on the analysis of Open Food Facts data)

##### Strengths

The main strength of the OFF database is that it is freely available to provide information on branded food products for several European countries, data of which can be downloaded via the website. In addition, there are no conditions on the use of the data.

Among the studied products, the percentage of products with available nutrient information was high. Consequently, the proportion of products with missing data was acceptable for branded food monitoring purposes.

For Belgium, the Netherlands and Austria, and at the category level only, the median nutrient values were not statistically different between the OFF and the traditional data. However, it should be noted that branded food monitoring is more relevant at the food subcategory level (JANPA – Joint Action on Nutrition and Physical Activity).

### Limitations

#### **Representativeness**

Raw extracted data from the OFF website does not allow to identify easily which products are sold in a given country and when the products were seen on the market.

For Belgium, Austria and the Netherlands, the number of OFF products over an extended time period (2012-2021) were generally very low. This implies that currently, OFF has low representativeness and cannot be recommended for monitoring nutritional quality of the food supply especially at food subcategory levels (which is the gold standard (JANPA)). Efforts are, therefore, recommended to increase crowdsourcing in all countries where OFF has been launched to improve representativeness.

The food offer between OFF and pre-existing data is different for some countries. Some food categories are overrepresented in OFF data while others are underrepresented. These differences in the food supply between OFF and pre-existing data may be due to the sensitivities/tastes of the contributors to the OFF database which might not allow a good representativeness of the market.

#### **Reliability**

Data in the OFF database is entered by volunteers from the public without systematic verification of the validity of these entries. This, therefore, introduces the possibility of data entry mistakes.

For Belgium, the Netherlands and Austria (with low number of products), the percentage of paired products with identical nutritional information between the traditional data and the OFF were above 36% with the exception of energy (kJ). Therefore, we cannot safely say that the nutrient contents are exactly identical product-by-product. Nevertheless, at the category level and for Belgium, Austria and the Netherlands, all median nutrient values were not statistically significantly different between the OFF and the pre-existing data. As the analyses were made considering OFF products from 2012 to 2021, some products' nutritional information might have changed in the course of these years because of reformulation or correction of data entry mistakes which might influence the results of our study. This means that for monitoring the nutrition quality of the food supply at the category level, reliability of OFF data might be sufficient, but not so for assessing food reformulation.

For France (with a high number of products), the analysis were realized at the subcategory level and the results showed that for the 2018 paired products between Oqali and OFF, there were significant differences between the OFF and Oqali mean content for 7 out of 14 subcategories. In addition, 60,9% of the paired products have at least one nutritional value that is different between OFF and Oqali. Identifying the origin of these differences is very difficult

as it is not possible to know whether the error comes from an update of the data following a subsequent reformulation of the product or whether it is an error in the input of nutritional values.

### General conclusion on crowdsourcing

Based on the results, Open Food Facts representativeness and reliability differs from country to country and are not highly comparable to the traditional method.

The OFF database could be very useful in supporting the monitoring of reformulation if :

- access to information that identifies which products are available on the market at a given time is facilitated;
- the representativeness of most consumed products is improved ;
- the reliability of the collected information is increased for instance by higher verifications of data entry.

To achieve these goals, OFF should therefore encourage the public to take more pictures to improve its representativeness and systematize verifications of the data entry. Moreover, developments to enable the monitoring of the life of a given product (reformulation and not data entry corrections) over time could be very useful in order to monitor food reformulation.

### 9.2.2. Web scraping

The usefulness of web scraping for food monitoring was explored for Belgium and the Netherlands as these countries have web scraping data available to some extent for the same year(s) as the pre-existing data. A comparison was realized with pre-existing data in order to:

- describe products included or not included in both web scraped data and pre-existing traditionally collected data;
- compare the energy and nutrient content for all products by food categories before matching in both web scraped data and traditionally collected data;
- compare the energy and nutrient content for all paired products and note the percentage of products with identical nutritional values between the web scraped data and the traditionally collected data;
- derive potential strengths and limitations of web scraping as a source for food monitoring based on the analyses conducted.

In addition, Ireland explored a web scraping method in a pilot study in March 2021, using a freely available software (RStudio, version 1.4.1). Although Ireland did not have the pre-existing data collected in the same time period, such that the comparison analysis was not possible, this pilot highlighted important methodological learnings that are discussed here.

In the case of Belgium, web scraping data is retrieved via a commercial platform (Daltix; [www.daltix.com](http://www.daltix.com)) for the three biggest retailers in Belgium. For the discounters the use of web scraping is not possible. In 2018, data collection through traditional approaches as well as through web scraping for the same months was done for one retailer – Carrefour. Foods are classified according to the FoodSwitch classification system, which is used internationally in

other countries for this purpose. Hence, a comparison between pre-existing data and web scraping will be made for a broader range of food categories for the retailer Carrefour and for the year 2018 in Belgium.

The Netherlands selected only breakfast cereals and soft drinks categories, based on Best-ReMaP, for the year 2020, to compare with their pre-existing data

### 9.2.2.1. Belgium

#### The tool

Web scraping collects information from food, non-food, fresh fruit and vegetables etc., anything that is sold in the supermarket by extracting information from retailer's websites. Sciensano in Belgium, has used data from Daltix (<https://daltix.com/>), a commercial platform for web scraping information from the major retailers' websites (Figure 24).



Figure 24 : From Daltix provided deck of slides

Information on prices and promotions is also gathered into the database. Daltix uses the food classification system as it is implemented on the retailers' websites. There is no automated food categorization of products implemented and this still has to be conducted by the researchers afterwards.

#### The Daltix database

##### Description of data

In Belgium, web scraping is only possible for the bigger retailers (Carrefour, Colruyt, Delhaize) as the discounters (Lidl, Aldi) do not have sufficient information available online for web scraping to be useful. Sciensano has access to data web scrapped by Daltix for three consecutive years, for 3 of the major retailers (Carrefour and Colruyt and Delhaize). For the purposes of the validation study and due to data availability/ constraints (i.e. pre-existing data for 2018 only available for Carrefour), only the data from Carrefour for 2018 will be used (Table 32).

**Table 32 : Web scraping extracts of data for the different retailers in Belgium in different years**

Retailers with the biggest market share	2018	2019	2020
<b>Carrefour</b>	Yes + traditional	Yes	Yes
<b>Colruyt</b>	Yes	Yes	Yes
<b>Delhaize</b>	Yes + directly from retailer	Yes	Yes
<b>Lidl</b>	No	No	No
<b>Aldi</b>	No	No	No

Note: discounters such as Lidl and Aldi were not included in web scraping due to the lack of good quality product data available in their websites.

### Selection and identification of data

In this case, it is possible to compare with pre-existing data for Carrefour with web scraped data for the same retailer in 2018 (

Table 33). Data was collected for this particular retailer in 2018 by the two methods: the traditional way of taking pictures in the supermarket and via web scraping, allowing for a fair comparison. Data was only web scrapped for Colruyt in 2018 (and subsequent years), and so it is impossible to make a comparison with a traditional collection method. Data from Delhaize was also web scraped and received directly from the retailer in a excel file, through an agreement. However not all brands were included in the information the retailer provided, but only Delhaize labeled products were included. Therefore, it is also not possible to perform a direct comparison.

For the comparison for Carrefour in 2018, more than just the two priority food categories were chosen, breakfast cereals and soft drinks; but the food supply broader selection of categories will be investigated. However, and due to the burden of re-codifying everything according to the Best-ReMaP food classification system, a decision was taken to use the food system already implemented in the two databases in Belgium, the FoodSwitch in order to evaluate more data.

The total number of products Daltix web scraped in October 2018 across Carrefour, Colruyt and Delhaize was 65.151 products. Of those there are 22.639 products for Carrefour. Based on the food classification system incorporated into the Carrefour web shop, already some non-food, vitamin/supplements and alcohol categories can be excluded, leaving 13.045 products. It has been verified that these deleted products, except those that are alcohol do not have energy content values attached to them. Further product categories (fresh products) still need to be excluded. It is not as simple as just removing those without nutrient/ingredient data.

Preliminary analysis show the number of products with missing data, depending on the nutrient (

Table 33). Looking at the product categories with missing nutrition and ingredients data allow for further identification in nonfood products or fresh product categories, or tea/coffee.

**Table 33 : Number of products with missing data among products web scraped from Carrefour website in Belgium and selected with Carrefour categories (total number of products=13 045)**

Energy/nutrient	N missing
<b>Energy (KJ or kcal)</b>	4776
<b>Fats</b>	5067
<b>Saturated fats</b>	5221
<b>Carbohydrates</b>	4750
<b>Sugars</b>	4958
<b>Proteins</b>	4864
<b>Salt</b>	5117
<b>Missing data for all nutrients</b>	4464

There are 2243 products for which there are no ingredients entered, so ingredient list does not exist or is not available. The products with missing data for energy, all nutrients and missing ingredients are deleted from the database. These products mainly include alcohol (for which no categories were assigned through the web scraping, not previously identified), non-food (for which no categories were assigned through the web scraping, not previously identified), fresh or fresh packaged fruit and vegetables, fresh meat and cheese, hot drinks, waters, bakery products, etc.

After some exclusions of non-foods and alcohol products, and linking with the FoodSwitch food classification (data already codified before the Best-ReMaP project), 10.656 products were kept.

Out of 10.656 remaining products, there are 8.321 with data for all or some of the mandatory nutrients. For about half of those products (4.625) the barcode is available. For about 809 products, a food categorization through FoodSwitch is not available, mainly because there was no product name identified through the web scraping. For some of these products, through the barcode, the name and thus classification could still be identified.

### **Data treatment**

To verify whether branded food monitoring using web scraping or traditionally collected data gives similar results, comparisons between both data sources were done at food group level. Distribution of nutrient content by food category was compared between the pre-existing data and web scraped data. For this, a comparison will be performed using the FoodSwitch food classification system (already implemented in both databases), to enable comparisons for all food categories.

Furthermore, a more detailed comparison of the nutritional content was done for paired products matched by barcodes in both sources to verify accuracy of the web scraped nutrient data.

The traditionally collected data for 2018 (n=9857) and the web scraping data for 2018 (n=8321) was used for matching. Products with barcodes were 3696 and after matching by barcode, we had 3289 products that could be matched in both files, however 66 of them were duplicates and were excluded. This therefore left us with 3223 matched products.

#### *9.2.2.2. The Netherlands*

In the Netherlands the Questionmark (QM) database was used. The QM is a non-profit organization that contributes to changing the food system by pushing towards a market that is focused on health, sustainability and is ethically approved. The primary sources of information are the supermarket webshops. The database covers the following supermarket chains: Albert Heijn, Jumbo, Lidl, Plus, Aldi, Coop, Deen, Jan Linders, Dirk en EkoPlaza which cover approximately 80% of the market share in the Netherlands. For the supermarkets Albert Heijn, Jumbo, Plus, Coop, Deen, Jan Linders, Dirk and EkoPlaza data is collected via online product information of food products. As part of Questionmarks routine, quality checks are carried out on the combined product information. That comprises basic checks, like if the units of energy (kJ and kcal) values are consistent with each other as well as investigating presence of outliers in certain nutritional values in a product category. The entire database contains 44784 records. Most nutrient information is derived via web scraping. Of all products included in the QM database, 25957 were web scraped. The food classification of QM was used to identify soft drinks (n=1072), and breakfast cereals (n=430).

The selected soft drinks and breakfast cereals were linked using barcodes to LEDA database. A total of 1072 soft drinks and 430 breakfast cereals were identified in QM dataset and 3152 soft drinks and 635 breakfast cereals were identified in LEDA. Barcodes from QM and LEDA were matched resulting in 851 matching soft drinks and 179 matching breakfast cereals. 79% of the soft drinks identified in QM were included in LEDA while 42% of breakfast cereals in QM were included in LEDA.

#### *9.2.2.3. Ireland*

Due to Covid-19 restrictions, Ireland was unsure if in-store data collection would be possible to traditionally collect pre-existing data. Given this, Ireland explored web scraping as an alternative method to collect data. In March 2021, a web scraping pilot was carried out to collect data on breakfast cereals in a single major Irish retailer (~22% market share) using the *rvest* package within the R programming environment, a freely available software. This involved reading html code pages into RStudio, selecting elements from the webpages, and extracting the necessary data. In total, 197 breakfast cereals were web scraped and extracted. Data was cleaned, and after eliminating products with missing nutritional information or products not fitting the category breakfast cereals, 168 products were identified. Irish pre-existing data on breakfast cereals (N=452) (2016-2017) was accessed and manually matched where possible using brand name. In total, 81 pairs of products marketed under the same name were identified between the web scraped data (2021) and the pre-existing data (2016-2017).



#### 9.2.2.4. Results

##### Assessment of major food categories in the overall datasets in Belgium (before matching)

In Belgium, twenty food categories in the pre-existing data and 12 categories in the web scraped data had more than 200 products each and were considered as major food categories. The categories Biscuits, vegetables, cheese, chocolate and sweets and processed meat had the highest number of products in the pre-existing file (all higher than 600) while vegetables, chocolate and sweets and processed meat had the highest number of products in the web scraped data (all higher than 600).

##### Nutrient comparisons between web scraped data and pre-existing data by selected food categories in Belgium (before matching).

Protein content was generally comparable between the web scraped data and the pre-existing data in selected main Foodswitch categories with only 3 categories that have significant difference in medians ( $p$ -values  $< 0.05$ ) out of 10 categories. The other nutrients each had 5 or more categories that have significant difference in medians out of the 10 categories. Major differences in comparing the median nutrient contents between the web scraped data and the pre-existing data were witnessed in the categories: chocolate and processed fish (all  $p$ -values  $< 0.05$ ). The median nutrient contents in the soft drinks and biscuit category had the least significant differences when comparing the web scraped data and the pre-existing data (only 2 or less  $p$ -values  $< 0.05$ ).

##### Matching analyses for Belgium and The Netherlands

No comparison has been made at category level for Belgium. For the Netherlands, there were statistical differences in the medians ( $p$ -value  $< 0.001$ ) for protein and salt in the soft drinks category and only salt in the breakfast cereal category ( $p$ -value = 0.04) (Table 10). For the Netherlands, for soft drinks, there were no statistical median differences between LEDA and QM for energy, carbohydrates, sugar fat and SFA contents. For the breakfast cereals, there were no statistical median differences between LEDA and QM for energy, protein, carbohydrates, sugar, fat, SFA and fiber contents (Table 34).

**Table 34: Comparison of median energy (kJ/100g) and nutrient content (g/100g) between matched pre-existing data and web scraped data for all food categories combined for Belgium and for breakfast cereals and soft drinks for The Netherlands**

ALL FOOD GROUPS						
	Pre-existing data		Web scraped		P-value <sup>1</sup>	No Difference N(%)*
	Median [IQR]	Min-Max	Median [IQR]	Min-Max		
<b>Belgium (N=3289)</b>						
Energy	1067 [398-1683]	0-3766	1080 [391-1698]	0-3766	0.962	926 (28.2)
Protein	4.6 [1.4-8.5]	0.0-43.5	4.6 [1.4-8.5]	0.0-43.5	0.892	2766 (84.1)
Carbohydrates	18.0 [5.1-57.0]	0.0-100.0	18.3 [5.1-57.4]	0.0-100.0	0.777	2675 (81.3)
Sugar	5.5 [1.6-25.1]	0.0-100.0	5.3 [1.6-25.0]	0.0-99.0	0.674	2637 (80.2)
Fat	7.1 [1.1-21.2]	0.0-100.0	7.3 [1.0-22.0]	0.0-100.0	0.623	2760 (83.4)
SFA	2.1 [0.2-8.2]	0.0-57.0	2.2 [0.2-8.6]	0.0-57.0	0.456	2754 (83.7)
Salt	0.5 [0.1-1.2]	0.0-98.2	0.5 [0.1-1.2]	0.0-98.2	0.623	2633 (80.1)
<b>BREAKFAST CEREALS</b>						
<b>The Netherlands (N=179)</b>						
Energy	391.0 (73.0)	327.0-622.0	388.0 (72.0)	109.0-524.0	0.55	149 (83.2)
Sugar	12.8 (13.0)	0.6-37.0	12.8 (13.4)	0.7-37.0	0.14	156 (87.2)
Salt	0.1 (0.2)	0.0-1.2	0.1(0.2)	0.0-1.2	0.04	142 (79.3)
<b>SOFT DRINKS</b>						
<b>The Netherlands (N=851)</b>						
Energy	19 [27.0]	0.0 – 103.0	19 [26.0]	0.0 – 62.0	0.10	702 (82.5)
Protein	0.0 [0.0]	0.0 – 2.3	0.0 [0.0]	0 – 2.3	<0.001	722 (84.8)
Carbohydrates	4.4 [7.0]	0.0 – 25.0	4.5 [6.8]	0.0 – 15,2	0.09	744 (87.2)
Sugar	4.4 [7.0]	0.0 – 25.5	4.4 [6.9]	0.0 – 15.2	0.05	750 (88.1)
Salt	0.0 [0.03]	0.0 – 0.24	0.0 [0.03]	0.0 – 0.24	<0.001	700 (82.2)

<sup>1</sup> The p-values were calculated from a non-parametric test; The Wilcoxon signed-rank test.

\*This is the number of products without any difference (difference=0) in nutrition value between pre-existing data and OFF.

In both countries, when comparing the percentage of products with identical nutritional values i.e. products with zero difference between the web scraped data and the traditionally collected data, all nutrients had percentages higher than 79% with the exception of energy (kJ) with 28% for Belgium.

#### Ireland's experience in using RStudio to webscrape data

The pilot yielded methodological learnings listed below:

- Web scraping data using RStudio requires an advanced RStudio programmer who can also understand html code used in websites. It can take a significant amount of time even for an experienced programmer to locate elements needed on the retailer website.
- Considering that each website structure is different, the approach that may work for one retailer website will not work for another and so different code is needed for each website.
- It may not always be possible to scrape a given website in RStudio if it is complex e.g., if the website contains a dropdown menu that generates new contents in the website html code.
- Where websites are inconsistent due to individual variation when inputting product information (such as using a comma between nutrition declarations on one product and not on another), a code with several scraping strategies may need to be written in an attempt to cover as many variations as possible. Even by applying this method, some pages can be missed and need to be reviewed on an individual basis.

- The web scraping method is time bound and the scraping strategy may need to be changed if the structure of the website changes. Due to dynamic website environment and regular changes, it would be necessary to put timestamp when data is web scraped.
- Some websites set restrictions on web scraping on their site meaning permission must be obtained to scrape the data from the web page.
- It was initially envisaged to web scrape data from other major retailers, however due to the lack of resources and the web scraping complexity, it was decided to focus on a single retailer. When using RStudio to web scrape from retailer websites a different code is needed for each retailer.
- Due to the time gap between the datasets, and to correspond within the aims of the Best-ReMaP project task, the comparison analysis was not possible.
- The process of matching products highlighted the complexity of this undertaking where barcode information is not available (barcode data was unavailable in the pre-existing data).
- Subcategory analysis on the products marketed under the same name (matched pairs) may not be representative in a small sample.

In conclusion, this pilot found it is possible to web scrape data from a retailer website using a freely available software, RStudio. However, this method is complex and requires an experienced programmer with knowledge of html code and web scraping strategies in RStudio. An important observation from this pilot is that, for future exploration of the data representativeness using web scraping and for comparison analysis, it would be essential to ensure the barcodes are recorded when data collected manually by visiting stores.

#### 9.2.2.5. *Conclusions on web scraping*

##### Strengths of Web scraping

Web scraping is not as burdensome in terms of food supply data collection especially compared to traditional data collection but it may be complicated to implement when no specific tool are available. As the information is on websites, and everyone can access the data.

Differences for the nutrient content are observed for the categories breakfast cereals and soft drinks in the Netherlands (for proteins and salt).

The percentage of products with nutrient information in the pre-existing data present in the web scraped products and the number of paired products were considerably high for Belgium. This ensured enough power to perform statistical comparisons.

##### Limitations of web scraping

Barcodes were missing for almost half of the web scraped products leading to loss of information in the paired products and this will make assessing food reformulation difficult.

Food classification is very burdensome without automated programming and in some cases it might require the use of an experienced programmer.

When comparing median nutrient content by food categories for Belgium, many significant differences were highlighted.

The experience in Ireland showed that:

- Web scraping data using RStudio requires an advanced RStudio programmer who can also understand html code used in websites. It can take a significant amount of time even for an experienced programmer to locate elements needed on the retailer website.
- Considering that each website structure is different, the approach that may work for one retailer website will not work for another and so different code is needed for each website.
- It may not always be possible to scrape a given website in RStudio if it is complex e.g., if the website contains a dropdown menu that generates new contents in the website html code.
- Where websites are inconsistent due to individual variation when inputting product information (such as using a comma between nutrition declarations on one product and not on another), a code with several scraping strategies may need to be written in an attempt to cover as many variations as possible. Even by applying this method, some pages can be missed and need to be reviewed on an individual basis.
- The web scraping method is time bound and the scraping strategy may need to be changed if the structure of the website changes. Due to dynamic website environment and regular changes, it would be necessary to put timestamp when data is web scraped.
- Some websites set restrictions on web scraping on their site meaning permission must be obtained to scrape the data from the web page.

#### General conclusions on web scraping

In conclusion, it is possible to web scrape data from a retailer website using a freely available software, RStudio. However, this method is complex and requires an experienced programmer with knowledge of html code and web scraping strategies in RStudio.

Based on the studied websites, web scraping data seems to be comparable with the traditional method when assessing nutrients when all the categories are pooled together but not when stratified at the category level which indicates that it is not a good source to follow food reformulation and identify the margin of progress. Furthermore, monitoring food reformulation over time may be a challenge because of the absence of the bar code which can help to study food reformulation over time.

#### 9.2.3.GS1

Three countries will report on their experiences of using GS1 data: Finland, The Netherlands, and France. Due to a lack of comparable data (for Finland and The Netherlands) and time limitations, a decision was taken to not evaluate data comparing with pre-existing data, but that countries will explore the usefulness of GS1 based on their experience of previous use of this database in the format of case studies.

Finland and the Netherlands both make use of GS1 data. GS1 is an independent, non-for-profit organization that provides barcodes (EAN/GTIN codes) to products. GS1 is a global organisation but operates independently in countries. In addition, GS1 collects food label data.

In Finland GS1 data is stored in the Synkka GS1 database and in the Netherlands GS1 data is included in the LEDA database. Below a description is given on Finland's and the Netherlands' use of GS1 data. The last part of this chapter describes the strengths and limitations of GS1 data

#### *9.2.3.1. A case study by Finland*

In Finland the Synkka GS1 database is The Global Data Synchronisation Network (GSDN) certified data pool with 28 established data pool connections. Using pool connections data can be transferred with low effort from one data pool to another. Product information in the Synkka GS1 database is directly supplied by the manufactures.

Synkka GS1 database is accessible either via a web-based application (interface) or the integration system where supplier's systems are directly linked to Synkka GS1. THL has free access to the Synkka GS1 database, however, usually access is provided based on fees. The one-time fee to GS1 depends on type of service: the interface costs 1000€ per year and the integration 1400€ per year for the information receiver. However, establishing integration between GS1 and the customer demands investment which may be several thousand euros. Data can be used in accordance with terms of use. According to terms of use data cannot be published as such but average information of the data can be published (e.g. average protein content of a certain product group).

The biggest retailers in Finland use Synkka GS1. This includes S-group, K-group, other groups representing over 80% market share. Lidl in Finland does not with 9% market share. Synkka GS1 database/pool contains 70 274 products food/drink/cigarette -products (pool 9.2.2022). Not all data included in Synkka is accessible. If manufactures/importers, determine products as accessible they are open to all users (approximately 90% of products), but they may also determine products as accessible only to the trading partner, like the retailer for use of product information in e-commerce sites. Altogether 6894 products were defined inaccessible. They are mostly private label products.

Manufactures do not have to put all the products onto Synkka GS1 database. For example products that are sold only in a retailer outside Synkka GS1 (E.g. Lidl Finland) may not be put into the system. However, big retailers demand the use of Synkka GS1 and therefore it is widely used.

Mandatory or voluntary variables depend on which GPC nomenclature class the food item belongs to. Commonly demanded label information must be available in Synkka GS1. Details about which attributes are mandatory are found from Item information on Profile\_FMCG\_3.3.18.

Synkka GS1 data can be exported to Excel sheet format in interface web-service. The downloaded data represents the products in the system at that moment. Data can be filtered in certain ways like by supplier or GPC nomenclature Brick code (e.g. 10000284 Cereal products -ready to eat (Shelf stable). In addition, data can be separated into consumer products or food service products, and into retailer products and wholesale packaging products.

In Finland 2020 the market share of retailers using Synkka GS1 were altogether 86%. According to S-group 95% of the grocery suppliers were in Synkka GS1. Therefore, it can be

estimated that completeness of Synkka GS1 products would be around 82% ( $95\% \times 86\%$ ). Since 90% of food/drink/cigarette products in Synkka GS1 are accessible, the proportion of accessible products for monitoring would be around 74% ( $82\% \times 90\%$ ) from all the products in the market.

There are several check-up rules in the Synkka GS1 service that improve the quality of the data. If product information is missing on an advisable field (thus NOT mandatory) a warning notification is given. If mandatory information is missing an error notification is given and the information cannot be published. Logic rules are applied to verify nutritional information: e.g. if total fat is lower than saturated fat an error is given. Nevertheless, if there is an error in a value of a product and it flows into retailers' information system, retailer may charge supplier for the error. That is why there are negative consequences if the information is incorrect. However, in Finland retailers demand that products are filled in to Synkka GS1 database already 4 months before launching. This may increase sources of error, since all the information may not be correct so early before launching.

Synkka GS1 data is commonly used in retail, logistics, food service and health care. In Finland over 6000 companies and organizations use the GS1 but that also includes companies not involved in Food products. In research data has been used to assess nutritional values of Finnish Food database Fineli with individual and generic products.

#### *9.2.3.2. A case study by the Netherlands*

RIVM has access to GS1 data via the LEDA database. The LEDA database and GS1 data included is previously described by Westenbrink (Westenbrink et al. 2021) . The LEDA database is the branded food database from the Netherlands and is hosted at the Netherlands Nutrition Centre under the umbrella of the Netherlands Food Information Resource (NethFIR). For the LEDA database, food label information is collected for as many foods as possible. Data is provided by the food industry on a voluntary basis via data suppliers (manufacturers, intermediate organizations). GS1, as intermediate organisation, is one of the main sources of data.

In general, GS1 data is not publicly accessible. Data is accessible via LEDA database, for The Dutch Nutrition Centre and RIVM only. A license agreement and electronic exchange facilities were established with GS1. All data is automatically uploaded overnight, using Application Programme Interfaces (APIs). A research purpose license fee is applicable for RIVM. Conditions that apply are included in the license agreement: RIVM may only use the data for research purposes; no data sharing with third parties, unless necessary for specific research aims.

Not all GS1 data is available for RIVM. Suppliers and manufacturers need to provide access via opt out if GS1 may transfer their label information. Furthermore, not all label information is mandatory and therefore not all information is available for all products. Mandatory variables include variables that are necessary to identify the product (GTIN - Global Trade Item Number, brand name, product name) as well as variables that correspond to information that is mandatory on the food label such as net weight, nutrients (kJ, Kcal, protein, carbohydrates, sugars, fat, saturated fatty acids and salt) and ingredient list (except for fresh meat and fresh vegetables, for alcoholic beverages, coffee, tea and some condiments). In addition, information

is gathered on voluntary variables such as functional name, data of availability, serving size and many more. The source of the nutritional information (e.g. chemical analysis, calculated) or other label information is not provided for the GS1 data. GS1 does not provide private label information to LEDA (according to agreements made). GS1 collects more information, for instance of packaging materials and price, however, this is not available for the LEDA database and thus not for RIVM.

RIVM has access to the LEDA database, which is a large relational database. Data scientist extract purpose-specific data from the database into a user-friendly format such as Excel or SAS. Data from other suppliers is also included, which challenges the uniformity of the data. In the LEDA database itself at the Netherlands Nutrition Centres searches can be done on most variable directly or specified queries can be developed if needed.

The representativeness of the LEDA database is reasonably good. According to Westenbrink (Westenbrink et al. 2021), the LEDA database covers 75% of the Dutch market share of supermarket products. Approximately half (48%) of the products included in the LEDA database are delivered by GS1. Information is missing from Aldi and Lidl (discount supermarkets in the Netherlands), as well as from supermarkets aiming at specific population groups such as Polish or Turkish supermarkets.

GS1 data included in the LEDA database is evaluated multiple times. Firstly, GS1 performs quality controls, starting at the food producers when producing label information. GS1 has a quality assurance programs which they offer to producers to validate label data. This is country depended. Secondly, the Dutch Nutrition Centre performs quality checks. All data provided is subject to the automated checks before entering in the LEDA database. Branded data are the responsibility of data owners (= food producers), and therefore, no changes are made to the original data in the LEDA database.

The RIVM uses the LEDA database and thus GS1 data for: monitoring food environment and food product improvement (e.g. monitoring of pledges by food industry), the Dutch Food Composition Database (NEVO); the Dutch dietary supplements table (NES) (in development); assessing portion size; the collection of food consumption data using barcodes in the national food consumption survey; Nutri-Score calculations and related research and modelling studies to develop policies for food fortification. The Netherlands Nutrition Centre uses the data for other purposes such as educational purposes.

#### *9.2.3.3. The French experience*

In the frame of the Oqali project, France have discussions with GS1 France since 2009 to collect labelled nutritional value and ingredient lists at the level of the barcode. A trial was made in 2016 on two food sectors: cereals bars and margarines. It was not conclusive at all: only 33 products were gathered from two manufacturers.

The major difficulty was that, via GS1, manufacturers have to authorize the access to the information for each products, so that Oqali do have to contact each manufacturer and ask them to approve the request to access to their data. Another issue is that products from retailers and hard discounters are not included in GS1.

Since then a new project, supported by manufacturers and retailers, has been launched in France by GS1 (CodeOnline Food) to build an easiest standard to try to collect and share data for all manufactured products sold in France (including retailers products). The main objective is to build a reliable database in which all mandatory data from labelling will be gathered. Some issues were encountered: the quality of the available data has to date to be improved, and the number of manufacturers who are dropping their data into the database is still not large enough (around 20% of the French market shares).

To date, the project is not working and is discontinued by GS1.

#### 9.2.3.4. Conclusions on GS1

##### Strengths of GS1

- Data is provided directly from the manufacturers, who are responsible for the reliability of the information. In Finland, there may be negative consequences to the supplier by retailers if the data needs to be corrected afterwards. For instance, nutritional information is often provided into retailer's webpages, so incorrect information is visible for customers of the retailers' websites as well.
- The data is daily updated, so access to most recent grocery offer.
- In Finland, the biggest retailers demand that the product needs to be in GS1 Synkka. Public food procurement and food services are commonly using GS1 Synkka.
- Automatic warnings, errors and logical rules exist that prevent mistakes in Finland.
- In the Netherlands GS1 also collects information on the out-of-home sector (via wholesale), thus with GS1 data it might be possible to broaden the monitor and/or reformulate to other sectors, such as the out of home sector.

##### Limitations of GS1

- Coverage of the market is very variable from one country to another (74% in Finland but only 36% in the Netherlands);
- Even when the coverage of the market is high, the available information from GS1 may not be accessible, because manufactures can disable accessibility (each one of them has to allow a given organism to access its datasets). For instance, THL has access to 90% from all the food/drink/cigarette products in Synkka GS1. E.g., private label products are in GS1 Synkka but not accessible to THL. Access can be enhanced with co-operation with suppliers but demands time and resources;
- Data quality depends on manufactures/suppliers and GS1 themselves;
- Although GS1 is an international organization, they operate on data pool or country level. Therefore, there are differences in conditions and use of the data. This may limit the comparability between data from different countries;
- GS1 is not covering the whole market (for instance, it does not cover retailer brand and hard discount brands in France);
- The nomenclature used (Global Product Classification (GPC) system) is not specific enough and not consequent enough to monitor food reformulation;
- A new GTIN code needs to be assigned if any information from the label changes. This cannot be controlled and has implications for food reformulation monitoring;
- In Netherlands data are provided in step wise approach, from food producer to the intermediate organisation and then to LEDA. Could be a strength, since validation checks are done on the way and intermediate organizations take care of



communication with the food producers. It can also be a limitation because it limits transparency (e.g. it is not always clear who to address in case of mistakes/questions).

- Data from GS1 cannot be published at the branded product level in an open access database (terms of use).

### Conclusion on the use of GS1

GS1 is an interesting source of data because the data are directly provided and controlled by the industry but:

- Representativeness varies from one country to another
- The reliability of the data has not been evaluated
- Data cannot be used at the brand level and are therefore not relevant to constitute the basis of an open access database.

#### 9.2.4. Other tools

Other possible food monitoring tools are available on the market. However, because we could not evaluate all of them during this task (5.1.2), we choose to briefly describe them in this section.

#### MINTEL

MINTEL GNPD (Global New Products Database) is another potential source for food monitoring (<https://www.mintel.com/global-new-products-database>). A sample of new products on the market is taken every year.

MINTEL was founded in 1972 and it is a market intelligent agency, analyzing consumers, markets, new products and competitive landscapes on local and global economies. It provides product data on new products in the food, drink, beauty and personal care, health and hygiene, home care and pet markets. Globally there are about 400 000 product launches every month. When newly launched product is released, it is sent to Mintel, pictured and analyzed. That ensures the accuracy of the data.

Mintel GNPD combines expertise in 86 markets including global in-house analysts who provide additional levels of knowledge.

#### Limitations

As the tool is monitoring the launch of new products, it's not designed to monitor food reformulation over time.

#### FoodDB

FoodDB is a food composition database in the UK that has been operational since November 2017. It collects nutritional composition alongside price and promotional information on over 100 000 food and drink products per week. This information is only collected on products sold on the websites of six major supermarkets in the UK.

FoodDB consists of a custom-built software to collect, process and store data on food and drinks available for purchase online in the UK supermarkets. This process/ extraction software is automated with a codebase written in Python. The data collected, include the following main information, where available: product name; price; serving size; product size; promotion details; product image; front of-pack nutrition labelling data; nutrient declaration data; ingredients; storage information; brand; manufacturer; and the date and time of data collection

etc. The date and time of data collection is also stored and used for audit and data verification purposes.

### **Strengths**

- FoodDB collects data on a comprehensive sample of food and drink products, over 100 000 products per week, hence a more comprehensive and timely observations of product reformulation can be assessed.
- It has a greater temporal granularity than any other food composition database in the UK.
- In addition to collecting information on nutritional composition, it also collects price and promotional information.
- Extraction of information is also automated. Using a software that is object-oriented and modular.

### **Limitations**

- FoodDB has been implemented in some other countries but the initiative will not be sustained and data are not freely accessible
- FoodDB only collects food product information that is only sold on the websites of UK's major supermarkets.
- Only available in UK;
- It also does not account for geographical availability of foods within the individual online supermarkets in UK.
- Some analytical procedures like linking products of different brands or those sold in different sizes, still require to be performed manually, a process that can be tedious. Therefore, automatic mapping of categories and subcategories e.g. by employing machine learning techniques are warranted.

### **VIA DATABASE BY EUROMONITOR**

The Euromonitor Passport service has a nutrition section which estimates the sugar, salt or fat intake based on the most popular food products. This information is too scarce for monitoring purposes, but it is gained as an estimate from the more accurate Via Database system. This system has only been in operation since January 2018. The Via Database uses new SKU-Stock Keeping Unit (level datasets from different web shops/ e-commerce sites, which can possibly be used in product monitoring.

Via Database collects information on a daily basis from web shops or e-commerce sites using a fully automated process. The process involves the use of web data extraction tools, machine learning and artificial intelligence. This information includes nutrient information per 100 g and pricing data. Via Database extracts and organizes product assortment, product attributes and pricing data. Viewing and sorting is possible by SKU, product category, brand, supplier and retailer. Pack size and product weight monitoring is also possible in Via. Tracking of possible portion size/recommended serving size of the product is also performed, but is not readily available in the Via platform. However, this tracking can be achieved through additional searching and cleaning of the raw data.

The industries and topics Via Database is researching are alcoholic drinks, consumer health, fresh food, hot drinks, packaged food, soft drinks and other consumer goods: beauty and personal care, home care, tissue and hygiene and tobacco. Their research coverage is over 40 countries. In Europe, the countries involved are Austria, Belgium, Czech Republic,

Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### **Sales estimation in Euromonitor**

One of the advantages of Via Database usage is that, the intakes of nutrients can be linked to estimated sales by the analysts. However, sales estimates are not on SKU-level. Therefore, estimation about nutrient intake that is given in Euromonitor Passport service is too rough for monitoring purposes.

### **Validation process in Via Database**

E-commerce sites including nutrient information might have out-of-date or inaccurate information and therefore validation processes are necessary. In Via Database, validation is done with help of an algorithm that uses flags to mark the SKU e.g. data with suspicious information on nutrient information or whether a product is classified in a suitable category. SKUs flagged by the Machine Learning algorithm as low confidence are manually checked. Additionally, the algorithm may be tweaked.

### **Comprehensiveness and representativeness**

Comprehensiveness and representativeness might vary depending on the country in question and usually depends on the product information and representativeness on the e-commerce site. Additionally, not all nutrients information from SKUs can be web scraped hence affecting representativeness.

Comprehensiveness can be improved through improvements in interpretation of raw data via web scraping. As an example, in Finland, the coverage of nutrient information was only around 40% in December 2020 but after modifications to the bots by the research team, nutrient information coverage of SKU-data was improved to 70 – 80%.

### **Classification of the Via Database products**

Products are classified using advanced Machine Learning techniques, mainly Natural Language Processing (text recognition) and Neural Networks (image recognition). Furthermore, manual checks of the categorization is done. The main categories used are fresh food, hot drinks, soft drinks and packaged food. At the moment, there are no correlation tables to other classification systems like Best-ReMaP and FoodEx2. However, definitions of categories are clear enough so correlation with these classification systems can still be done.

### **Strengths and limitations of Via Database based reporting system**

#### **Strengths**

- Web scraping and analyzing of data is readily available in many European countries.
- Snapshots are available on package information that is extracted through an almost fully automated process.
- Analysts in Euromonitor have experience on sales volumes if ever linkage is needed.
- Data can be sorted on SKU, subcategory, category, brand, and at supplier level.
- Validation process is done with the help of machine learning.
- Validation algorithm can be tweaked.

### Limitations

- Validation process requires some manual checking which might be tedious.
- Data quality, comprehensiveness and representativeness is fully depended on e-commerce site.
  - Data is based on e-commerce sites which might not be accurate or up to date for all the countries. For instance, all retailers and hard discounter brands do not have e-commerce site.
  - This might possibly limit the coverage of products.
- Classification system is different from other systems like Best-ReMaP or FoodEx2, hence has to be linked.
- If costs are depended on one commercial information supplier there is a risk for uncontrolled price increase.
- Monitoring food reformulation over time may be a challenge because of the absence of the bar code in most of e-commerce websites which can help to study food reformulation over time.

### 9.2.5. Conclusion / recommendations

Several alternative sources of data have been examined, considering the workload to implement “classical” data collections. Unfortunately, none has been validated during the duration of the Joint Action. Crowdsourcing because problem of representativeness but also a lack of quality control leading to a poor reliability of the data, web scraping because of an incomplete coverage of the market, missing data (especially barcodes that are necessary to follow reformulation) and the need to develop specific tools to gather the data.

## 9.3. New technological tools

Other technological developments have been in place to aid the cumbersome activity that is to collect information about the food products available in the markets. This part aims to explore some of those developments. One of such tools that will be described in this report is the Euremo web app.

### 9.3.1. Euremo web app

#### 9.3.1.1. *Euremo app*

As part of Euremo, ICF invested in the development of new applications for the capture and automated extraction and processing of data from photos of food labels. The aim of these applications is to enable the structured collection of data.

An iOS and Android compatible app enables the collection of data from food products in shops and supermarkets using images and text extraction software. A web app works in parallel with this functionality, allowing collected product data to be viewed and edited by ICF analysts before exporting the data for analysis. The web app pushes the processed images to an intermediate database, which uses optical character recognition (OCR) ABBYY API to identify and extract text from images. A translation API then automatically translate any non-English text into English before it is stored. Translation of food composition data into English is necessary to enable the assessment of differences in food composition for same brand products. Extracted and translated text is displayed within the web app and members of the study team are able to quality assure and edit the information before extracting the database for analysis.

Text extraction focuses on the product's ingredients list and nutrition table. Other data that will be captured from product packaging, such as nutrition and health claims or other information presented in a less structured manner, need to be entered in the web app manually based on human analysis of the product and/or images.

The app does not require live internet data access within the shop in which data are being captured – images can be captured in-store, checked for quality in-store, and then further processed out of the store.

Care must be taken to ensure that every part of the packaging needed to complete the database is photographed. In the case of food products that have both food contact packaging and outer packaging (such as cardboard sleeves), the photographs will need to cover both packaging elements. For example, if a yoghurt multipack has an outer cardboard sleeve, a photograph must be taken of the sleeve and any information on this, as well as the area underneath the cardboard sleeve and any information featured there.

Photos will be taken while at the store, the country researchers working their way through the product list and the relevant sections of the store. Country researchers will be working offline, and the application on their smartphone will enable them to assess the quality of the picture taken before moving on to another product. Further processing of the photos will be carried out by the country researcher afterwards, while they are online.

The process of entering data automatically will involve reliance on a web application which will enable members of the study team to see on screen all the data extracted automatically from

the photos. Errors in the extraction of the data could then be corrected by comparing the text extracted automatically and the text as it appears on the photo. This tool for data checks will be accessible to country researchers and to a team of ICF staff undertaking QA check. Although a list of items is verified during the quality check (i.e. missing data, energy value corresponding to the energy of contributing nutrients etc.), these checks and validations are made manually and are thus time consuming.

#### *9.3.1.2. Appraisal*

For the data collection, it was estimated that around eight products can be collected per hour which most fieldworkers during the Euremo project have been able to meet and some have exceeded. Across four countries during Euremo data collection, fieldwork in Lidl stores took 58-79 hours (averaging 67 hours). Also, across four countries collecting all branded and own-brand products, the time taken was 149-263 hours (averaging 185 hours on average to collect data in a single supermarket for both branded and own-branded products across our 14 product categories). Regarding specific product types, it was suggested that scanning rounded objects (e.g. bottles, jars, etc.) can often be more challenging to capture all the information; confectionary and crisps can also be challenging to scan because of the glossy/shiny wrappers and very small text.

It was estimated that the number of days needed for data cleaning was around 27 days (where a day is eight hours) for a country with 3000 scans without a challenging language, or 31 days for a country with 3000 scans and a more challenging language, plus several hours of training time per data cleaner. The amount of time needed directly relates to the number of scans (i.e. if there were only 2000 scans, 21 days would be needed for data cleaning for a country without a challenging language). The proportion of scans with ingredients lists/nutrition tables that need any form of editing is estimated to be between 80% and 100% of scans, with most saying 90%+. In terms of the amount of editing required, it varies by scan, depending on factors such as the shape of the product, the font and the size of the font. Some scans only needed minor corrections, i.e. to the ingredient lists (amending spacing, changing the case of letters, manually editing words that have not been picked up correctly e.g. due to the angle of the image or a blur), while others require substantial manual edits to the producer name, ingredients list, and lots of changes to the nutrition table e.g. because multiple nutrients are on the same line and new lines have to be manually created. In terms of the differences by category, shiny or curved products labels were highlighted as needing lots of editing, including things like pastries, sweets, drinks in bottles, yoghurts and ice creams. For products with smooth packages, without reflections and good contrast of text and background colour, as well as for box-shaped products, only minimal editing was necessary.

It has been decided that the app cannot be used in the Best-ReMaP project for the following reasons:

- conditions and costs and licensing for future uses of the app and possibility to make any modifications if needed are not clear
- no access to the web app can be given to date and so no modification are possible
- the performance of the app is too poor and will likely be too time consuming for data collection and management across the Best-ReMaP countries

#### 9.3.2. Other options

No other tools could be identified for testing within the timeframe of the project.

#### 9.3.3. Conclusion / recommendations

Data collection and codification is a very burdensome task, and a tool developed to facilitate these steps could be of great help. Unfortunately, no viable tool could be identified during Best-ReMaP.

## 10. Methodology for the data collection

Data collection is a key step in WP5 and in the establishment of a European coordinated monitoring system for processed products. Collected data is the information available on products packaging (accessible for the consumer). No chemical analyses have been realized during the project.

Two snapshots for data collection are scheduled during the project:

- A first snapshot, considered as a state of play (T0), to have an initial overview of the market for countries without pre-existing data: it has taken place from July 2021 to July 2022 ;
- A second snapshot, divided into two batches, considered as a follow-up (T+1): the first batch from March 2022 to February 2023; the second batch from July 2022 to July 2023.

The methodology to use for the first and second snapshot of data collection will be presented through this section. It has as well been presented during the trainings organized by Anses in May 2021, January 2022 and June 2022: templates and guidelines for data collection (Annex 17) have been established and have been shared with the MS involved in the data collection. The methodology has been put into practice during the first snapshot and the first batch of the second snapshot and evaluated. The feedbacks received from the partners are summarized in part 12.

### 10.1. Choice of data sources and gathering tools

As the conclusions of the task 5.1.2 were not available at the beginning of the different snapshots, the data collections implemented during Best-ReMaP have been organized based on the traditional method, already used in Oqali and Janpa, meaning using pictures taken in supermarkets. This methodology takes time and requires manual data entry. However with data available to date, it enables to have a very good representativeness and data reliability, which is why it is recommended to proceed with it.

Oqali has developed collaborations with sector associations but also with retailers and industry members in order to obtain the pdf of the products' packaging. However, such collaborations take time to implement and are not conceivable in a project like Best-ReMaP (this option was envisaged for Janpa but the partners did not manage to implement it as the sector associations are not developed in all countries, and as industry members are too many, to contact all of them in a short period of time).

Even if the recommended gathering method is to go to the supermarkets and take pictures of the products directly from the shelves, other data sources have been used for countries that had already implemented collecting methods (countries with pre-existing data) or when the sanitary situation prevented going in supermarkets. An alternative data source may be web scraping as it allows to gather data on food products directly from retailer's websites. However, countries have all gathered the same information and codify their data in the same nomenclature.

For the Best-ReMaP project, the data entry has been made manually, as no gathering tool was available.



## 10.2. Selection of collection places

First of all, it was necessary to decide where to collect information on food products. As visiting several stores for several retailers was not feasible on a short data collection timeline, a brief preliminary study on the market shares for retailers in its own country has been carried out. This allowed determining how much different retailers needed to be selected in order to cover a maximum percentage of the market (at least 60% of the market share is a relevant target). Recommendation was to select and visit one store for each retailer identified as the biggest in the country. The list of selected shops to visit should include between five to ten stores (i.e. five to ten different retailers). The number of shops to visit should be adapted according to the total number of different retailers present in the country. If the number of retailers was too low regarding the total number, national brand products would have been overestimated and retailers brand products would have been underestimated, which could change drastically conclusions of the monitoring.

In order to have the best representativeness of the market, the biggest stores in terms of surface should be chosen.

Secondly, contact have been established with each selected retailer. Two steps have been followed:

- First contacting the head office or nutrition services of the retailers in order to request a written statement to allow the data collection in the chosen store. This statement has to allow taking pictures of the products directly on the shelves, without buying them. A presentation leaflet of the WP5 of the Best-ReMaP Joint Action has been produced (Annex 18), presenting the objectives and the expected outcomes of the work as well as the methodology to gather and treat the data. This tool has helped to agree on dates and times to carry out the data collection that would be convenient for retailers.
- In a second time, getting in contact with the chosen stores to schedule the visit.

## 10.3. Selection of products

For the five priority food categories, not all the products belonging to these categories have been collected, in order to facilitate the collection on a short period of time. The suggestion has indeed been made to exclude some subcategories from the collection, as they were considered as not consumed by children and/or were not covered by Euremo. According to the partner's feedback, the final list (Table 35) of subcategories to exclude from data collection has been validated.

**Table 35 : Products excluded from the data collection, by category**

<b>Bread products</b>	<b>Delicatessen meats and similar</b>	<b>Fresh dairy products and desserts</b>	<b>Soft drinks</b>
Bread crumbs (730)	Boudin, andouille and andouillette (630)	Fresh cakes (714)	Aperitif beverages without added sugar (670)
Croutons (729)	Cooked lamb (packaged) (1)	Fresh desserts with fruit (715)	Other sports drinks (659)
Other rusks (744)	Other delicatessen meats based on offal (741)	Fresh desserts without fruit (716)	Sugar-sweetened aperitif beverages (671)
Pancakes (626)		Other fresh desserts (717)	Sugar-sweetened sports drinks (660)
Plain rusks (117)			
Puffed cakes (288)			
Wholemeal cereal grains rusks (67)			

Before going to the selected stores, people responsible for data collection should be aware about the products included and excluded in each category to prepare the visits. For that purpose, they had to refer to the classification guidelines (Annex 8 ; Annex 9 ; Annex 10 ; Annex 11 ; Annex 12 ; Annex 13 ; Annex 14 ; Annex 15) that have been produced for each food category. In these classification guidelines, pages 3 and 4 explain which products are included or excluded from a food category in order to collect only the products of interest. A summarizing document has been produced to present specifically the definitions of the subcategories included or excluded, according to Table 35 (Annex 19).

In order to organize at best the data collection and to avoid the collection of similar products, it was necessary to start first with two of the largest shops in terms of surface in the list of retailers selected to be visited (except hard discount, specialized and specialized organic retailers). In these two largest shops, all the targeted products available from national brands and retailer brands should have been collected. By gathering information on national brands in two different shops, the biggest coverage of the food supply has been allowed and with the help of bar codes, duplicates of national brand products have been easily identified and deleted. For the rest of retailers that needed to be visited, only retailer brands or hard discount brands should have been collected to avoid a large number of duplicates regarding national brands and to have a better overview of the food supply at retailer's brand level.

As Best Remap data collections come at the same time as domestic data collections for Germany, the methodology has been adapted to stick to the constraints of the German database. The identification of manufacturers and brands to survey relied on the screening of databases (e.g. Statista), leaflets, online shops and test reports. The main data source for

product information was online research on manufacturers' websites. If the information on the websites was unavailable or incomplete, research was complemented with enquiries with manufacturers and on-site research in grocery stores.

## 10.4. Data collection

Data collection have been done by going to each identified store, i.e. one store per identified retailer. The collection has been made by taking pictures of each products present in the shelves of interest. The data collection has been carried out food category by food category to be sure not to miss any products from a food category.

For each product collected, it has been necessary to take a readable picture of the front of the product first and then to take readable pictures of each face of the product. Zooms on parts of interest as the ingredient list or nutritional values could be necessary for a better reading. Special attention should be paid for round or shiny products as reflections may hide important information.

When pictures of a product have been taken and before moving to another product, people performing the data collection needed to make sure that they have taken pictures of all the faces of the product and all the information needed for the next step (entering and codifying the data).

Pictures of different products should not be mixed. The order of the products when taking pictures will be useful for entering and codifying the data.

For the partners which were not able (or not authorized) to go in the shops, web scraping was possible but special attention should have been given to collect all the needed information for Best-ReMaP. The website of the targeted retailers should have been collected in priority.

As a last resort, when in-store collection or web scraping was not possible, partners were given the opportunity to purchase products to retrieve product information with part of the budget allocated to them for Work Package 5 activities. For this method, a detailed methodology (Annex 20) was shared with the partners who needed it in order to avoid buying duplicate products or wasting products.

## 10.5. Data entry and codification

When all the pictures for all food categories have been taken in all the stores, the data entry and codification could start. They have to be realized on a computer at an office after all the pictures have been uploaded on the computer. It was recommended to rename, order and classify the pictures before beginning the data entry in order to facilitate the task. It was also recommended to enter all the products of a given category at the same time (from all retailers) to save time. The data entry and codification is also more efficient with the use of a double screen (one to see the picture and the other to have the template to codify).

An excel template as well as an entry guide for the data collection (Annex 17) have been provided to facilitate data entry and codification. All the products collected should be included in the same template for a country, whatever the food category. The data codification needed

to be made store by store, in the same order as the pictures have been taken to avoid any confusion. In that way, national brand product's duplicates (collected in both biggest stores visited firstly) have been identified and handled appropriately.

The template is made of 51 fields (Table 36) to be filled (when possible) for each product using the information found on the product pictures. There are four types of fields:

- Unique number → number that has to be generated
- Automatic field → automatically generated information
- Closed list : codification → scrolling menu proposed in the template to enter data
- Data entry → data entered manually

The codification of the food products has enabled:

- The assignment of a unique code for every product which allowed the identification
- The classification in the Best-ReMaP subcategories by associating a category and a subcategory
- The linkage of paired products (i.e. same product collected at two different times) by associating a father product code to a product after investigating the bar code, commercial or legal names, etc. This step is very important for the implementation of the monitoring over time and was developed during the trainings for Batch 1 and 2 of the second snapshot because the partners had pre-existing data or Euremo data to link with their newly collected data. A detailed explanation of how to link paired products is available in the data entry guide for data collection (Annex 17).

These codification steps are crucial in order to ensure that similar products only (via subcategories) are compared within and between countries. This enable to monitor food reformulation and room for progress among similar products over time.

**Table 36 : Requested fields for collected data codification**

List of fields	Fields definition	Type of field
<b>Country</b>	The name of your country	closed list : codification
<b>Year</b>	Year of product collection	closed list : codification
<b>Product_code</b>	Unique code given to the product	unique number
<b>Father_product_code</b>	Unique code of the corresponding preexisting product (previous monitoring). One father_product_code can correspond to more than one product_code's	unique number
<b>Category_name</b>	The food category of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)	closed list : codification
<b>Subcategory_name</b>	The food subcategory of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)	closed list : codification
<b>Bar_code</b>	Bar code of the product	data entry
<b>Assortment</b>	Yes or no : to identify if the product is composed of several different products under a same bar code	data entry

List of fields	Fields definition	Type of field
	<p>IF YES : 2 cases :</p> <p>1. if several nutrient content are given (for each product of the assortment), then duplicates lines under the same bar code and indicate in the commercial name for which product/ flavor the line is corresponding),</p> <p>2. if an average nutrient content is given, use only one line and indicate "ASSORTMENT" in the name of the product</p>	
<b>Brand_name</b>	Commercial brand of the product (example: Kellogg's or Fanta).	data entry
<b>Brand_owner</b>	Whenever it's possible, indicate name of the group owning the brand. For instance : the COCA COLA COMPANY or ALDI or UNILEVER (be careful, it's not always the producer but the brand owner)	data entry
<b>Type_of_brand</b>	<p>National brands, Retailer brand, Entry level retailer brand or Hard discount</p> <ul style="list-style-type: none"> <li>- National brands: product that is distributed worldwide or nationally under a brand name owned by the producer, as opposed to private label brands (products that carry the brand of the retailer rather than the producer)</li> <li>- Retailer brand: private label brand (own brand of the retailer) like carrefour or Tesco</li> <li>- Entry level retailer brand: first price private label brand</li> <li>- Hard discount: private label from a hard discount (low price) retailer like Aldi or Lidl</li> <li>- Specialised retailer brands : correspond to frozen products sold in freezer centres and by home delivery suppliers »</li> <li>- Specialised organic retailer brands : correspond to the products carrying the brand of the organic retailer rather than the producer and sold only in their own organic supermarket chain</li> </ul>	closed list : codification
<b>Legal_name</b>	<p>Name as defined by the regulation or the uses (example : Toasted flakes of golden corn), usually comes just before the ingredient list</p> <p>In original language</p>	data entry
<b>Legal_name_english</b>	Translated legal_name in English	data entry
<b>Commercial_name</b>	Name freely chosen by the producer, mentioned on the front of the pack : all information on the front of pack product that defines a product, including flavor, product description such as "high fiber content" or "without added sugars" or "reduced in salt", or "organic" etc.	data entry

List of fields	Fields definition	Type of field
	Example : FANTA MANGO FLAVOR DRAGON FRUIT In original language	
<b>Commercial_name_english</b>	Translated commercial_name in english	data entry
<b>FOP_labeling_type</b>	Type of Front of pack Nutrition labeling present (not mandatory) among these only : Reference intake, traffic light, choices, nutriscore, keyhole, finnish heart, nutrinform battery	closed list : codification
<b>FOP_labeling_type_2</b>	Type of Front of pack Nutrition labeling present (not mandatory) among these only : Reference intake, traffic light, choices, nutriscore, keyhole, finnish heart, nutrinform battery  By default, these columns are filled with 'None from the list'.  If a product has more than one of these labels on its packaging, you have to replace 'None from the list' by the name of the different labels in the different columns.  You have to keep 'None from the list' in the remaining column(s) (if there is less than four labels)	closed list : codification
<b>FOP_labeling_type_3</b>		
<b>Fop_labeling_type_4</b>		
<b>Nutri_Score</b>	Letter of the Nutri-score if a Nutri-score is provided on the label	closed list : codification
<b>Ingredient_list</b>	Complete ingredient list as labeled on the product respecting the order of the ingredients and keeping all information (quantities, unit,...). If possible, not additional information that is often found on the packs, such as "can contain eggs"  In original language	data entry
<b>Net_weight</b>	Net quantity of the food: only number (total weight and not not drained weight)	data entry
<b>Net_weight_unit</b>	g or mL	closed list : codification
<b>Number_of_units</b>	The number of the smallest units in the pack (biscuits, yoghurt pot,...). For products to share, indicate 1	data entry
<b>Portion_size</b>	Value of the portion size (only numbers, not information such as "2 biscuits", "a spoon", "a cup of tea",...). It can either be clearly stated in a claim, guideline daily amounts, or consumption recommendations or mentioned via a nutrition labelling per serving.  Leave blank if there is no value	data entry
<b>Portion_size_unit</b>	g or mL	closed list : codification
<b>Portion_size_comments</b>	Portion when it's not a size (2 biscuits, a spoon, 1 bar,...)	data entry

List of fields	Fields definition	Type of field
<b>Preservation_method</b>	Ambient or Chilled or Frozen	closed list : codification
<b>Nutrient_content_expression_unit</b>	100 g or 100 mL	closed list : codification
<b>Energy_kJ</b>	Energy value in kJ for 100g or 100mL  Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Energy_kCal</b>	Energy value in kCal for 100g or 100mL  Only numbers except in 2 cases : when it's a less than value, indicate it in the field : "<0.5" or when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Fat</b>	Fat content in g for 100g or 100 mL  Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Saturated_fat</b>	Saturated fat content in g for 100g or 100mL  Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or  when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Carbohydrates</b>	Carbohydrates content in g for 100g or 100mL  Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or  when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Sugar</b>	Sugar content in g for 100g or 100mL  Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or  when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Protein</b>	Protein content in g for 100g or 100mL  Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or  when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Salt</b>	Salt content in g for 100g or 100mL	data entry

List of fields	Fields definition	Type of field
	<p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or</p> <p>when it's mentioned as "traces", indicate it also as "traces"</p>	
<b>Fibre</b>	<p>Fibre content in g for 100g or 100mL</p> <p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or</p> <p>when it's mentioned as "traces", indicate it also as "traces"</p>	data entry
<b>Nutrient_content_expression_unit_as_consumed</b>	<p>100g of product as consumed or 100mL of product as consumed or by reconstituted portion of product as consumed (in that case, the portion size needs to be the one of the reconstituted products)</p> <p>That applies only to products which need to be reconstituted first before they can be consumed. E.g. potato flakes, dehydrated soups,...</p> <p>Leave blank if not concerned (and also the nine following fields _as_consumed)</p>	closed list : codification
<b>Energy_as_consumed_kJ</b>	<p>Energy value in kJ for the product as consumed (for reconstituted products only)</p> <p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or</p> <p>when it's mentioned as "traces", indicate it also as "traces"</p> <p>Leave blank if not concerned</p>	data entry
<b>Energy_as_consumed_kCal</b>	<p>Energy value in kCal for the product as consumed (for reconstituted products only)</p> <p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or</p> <p>when it's mentioned as "traces", indicate it also as "traces"</p> <p>Leave blank if not concerned</p>	data entry
<b>Fat_as_consumed</b>	<p>Fat content in g for the product as consumed (for reconstituted products only)</p> <p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or</p> <p>when it's mentioned as "traces", indicate it also as "traces"</p> <p>Leave blank if not concerned</p>	data entry
<b>Saturated fat_as_consumed</b>	<p>Saturated fat content in g for the product as consumed (for reconstituted products only)</p>	data entry



List of fields	Fields definition	Type of field
	<p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or when it's mentioned as "traces", indicate it also as "traces"</p> <p>Leave blank if not concerned</p>	
<b>Carbohydrates_as_consumed</b>	<p>Carbohydrates content in g for the product as consumed (for reconstituted products only)</p> <p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or when it's mentioned as "traces", indicate it also as "traces"</p> <p>Leave blank if not concerned</p>	data entry
<b>Sugar_as_consumed</b>	<p>Sugar content in g for the product as consumed (for reconstituted products only)</p> <p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or when it's mentioned as "traces", indicate it also as "traces"</p> <p>Leave blank if not concerned</p>	data entry
<b>Protein_as_consumed</b>	<p>Protein content in g for the product as consumed (for reconstituted products only)</p> <p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or when it's mentioned as "traces", indicate it also as "traces"</p> <p>Leave blank if not concerned</p>	data entry
<b>Salt_as_consumed</b>	<p>Salt content in g for the product as consumed (for reconstituted products only)</p> <p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or when it's mentioned as "traces", indicate it also as "traces"</p> <p>Leave blank if not concerned</p>	data entry
<b>Fibre_as_consumed</b>	<p>Fibre content in g for the product as consumed (for reconstituted products only)</p> <p>Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "&lt;0.5" or "&lt;0,1") or when it's mentioned as "traces", indicate it also as "traces"</p> <p>Leave blank if not concerned</p>	data entry
<b>Comment</b>	<p>Any other information on the labeled product description which enable to distinguish the product among others or that the reconstituted portion is not written on the packaging,...</p>	data entry

List of fields	Fields definition	Type of field
<b>Category_code</b>	The code associated to the food category of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)	automatic field
<b>Subcategory_code</b>	The code associated to the food subcategory of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)	automatic field

The data have been collected and codified in the associated country language. The fields “legal name” and “commercial name” of the products were the only ones that needed to be translated in English by each country. The ingredient lists have not been translated by each country, as the translation in English will be handled by the JRC in a second time.

The procedure for data entry and codification is described step by step and more precisely in Annex 17 and will not be explained further in this report.

## 11. Methodology for the data treatment

The aim of the Best-ReMaP project is to implement a harmonized methodology to monitor and compare food reformulations. It is therefore necessary to produce indicators in the most standardized way for all the participating countries. This is why the software R and its interface Rstudio are being used for the task: it is a free software, therefore available for everyone. R programs have been developed by Anses and shared with all the partners. By running the same programs on the same R version, all data is treated identically among the countries and standardized indicators are produced.

Moreover, the use of work environments on Rstudio (R projects) allows all the partners to work with the same packages parameters, to control their version, and suppresses the bias of multiple R configuration. They ensure to work in a self-contained folder in which the scripts, the entry and output files as well as figures/outputs are stored into subfolders. Regardless of the computer on which the work environment is used, the programs will always use the path to the project's root folder to run properly. This way, the scripts can be used without being modified for adapting to each device.

Before realizing any indicator, data cleaning and verification has to be realized in order to allow strong reliability in the indicators generated. This has also been possible by developing R programs.

To summarize, the data treatment methodology consists in four important steps (Figure 25).

The data entry and encoding was made previously to the data treatment in the Excel template provided for the Best-ReMaP project.

Once the data encoding is completed, the next step is to use the verification programs in order to harmonize and review the data but also to correct the potential entry mistakes.

Afterwards, a program that allows the creation of graphs and figures is being used in order to generate the indicators on the data.

Finally, the outputs must be integrated into a report (one report per country) and analyzed.

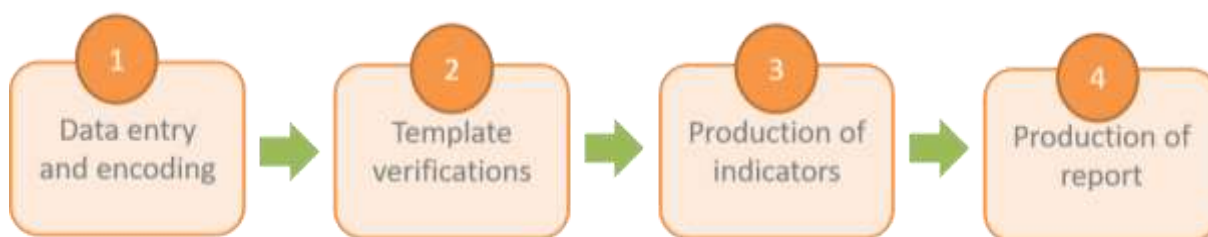


Figure 25 : Summary of the methodology for the data treatment

Associated guidelines for running all the programs have been developed and shared with the partners (see methodology in Annex 21 and Annex 22). The partners have been trained at the beginning of the task in order to manage the statistical work on their own.

It is important to note that all statistical treatments detailed in this report (and realized with R) are only possible when using the templates provided for Best-ReMaP. All fields must be filled

and codified according to the instructions and using the adapted classification (Best-ReMaP categories and subcategories) and terminologies. If using other tools or formats, the programs will need to be adapted consequently.

Since two different types of data collection were carried out for Best-ReMaP (T0 snapshot and T+1 snapshot), two different data analysis will be implemented :

- for a first snapshot (T0), the data analysis allows to create statistics/indicators to have a first overview of the market and describe the food offer in a given country;

- for a follow-up snapshot (T+1), the data analysis allows to monitor the evolution of indicators between T0 and T+1 data in a given country (only for countries of batch 1 according to the timeline of the project). For references collected at both times meaning available on the market both at T0 and T+1, the aim is to link them and monitor food reformulation.

**In both cases, the first step is to verify the datasets.**

## 11.1. Cleaning of the data entry and codification

In order to have reliable results, the programs for verification of the data are targeting the fields of interest and identifying potential entry and codification mistakes. Moreover, a common script being used for generating the indicators, all entered information must be strictly identical to the pre-defined options proposed in the template and the coding must be consistent. If not, these information cannot be recognized by the R software through the programs and induce bias in the statistical analysis of the data. Additional fields (country, commercial and legal names, net weight ...) are also verified even if not targeted afterwards for the generation of indicators, in order to harmonize the data among the countries for the integration into the shared database.

The general operating of these programs is the verification of the key fields and the identification of the lines (i.e. products) for which one or several field(s) must be corrected or checked. In that aim, an extra column named 'Problems' is generated through R in the data template. It is completed by the programs with simple wordings on each line referring to the fields that need to be verified, if any. The data with the additional column 'Problems' is exported from R after the programs running in order to be checked manually by the operator. In total, four programs have been written.

### 11.1.1. First verification program

The first program is focusing on the conformity checking of the information entered in the template : the values entered must be strictly identical to the ones allowed in the list of choices and in certain cases cannot be left empty. The list of problems which can be detected is detailed below :

**Table 37 : Wording and meaning of the outputted problems in the first verification program**

Problem wording	Meaning	
<b>Duplicate_code</b>	Different products have the same product code	'Product_code' is a mandatory field
<b>Empty_product_code</b>	The product does not have a unique product code	
<b>Country</b>	Incorrect country name (i.e. not contained in the closed list of the input template) or missing country name	'Country' is a mandatory field
<b>Year</b>	Year different from that/those indicated in the 'set parameters' part of the program	'Year' is a mandatory field
<b>Category_name</b>	Incorrect category name (i.e. not contained in the closed list of the input template) or missing category name	'Category_name' is a mandatory field
<b>Category_code</b>	Category code that does not exist or missing category code	'Category_code' is a mandatory field
<b>Subcategory_name</b>	Incorrect subcategory name (i.e. not contained in the closed list of the input template) or missing subcategory name	'Subcategory_name' is a mandatory field

<b>Problem wording</b>	<b>Meaning</b>	
<b>Subcategory_code</b>	Category code that does not exist or missing category code	'Subcategory_code' is a mandatory field
<b>Bar_code_length_or_empty</b>	The barcode does not have 8, 12, 13, 14, or 15 digits which is generally the format of a bar code in the European Union or is missing	
<b>Bar_code_chr</b>	The barcode contains characters that are unwanted (not numbers)	
<b>Brand_name</b>	Brand name is missing	
<b>Type_of_brand</b>	Incorrect type of brand (i.e. not contained in the closed list of the input template) or missing type of brand	'Type_of_brand' is a mandatory field
<b>Legal_name</b> <b>Legal_name_english</b>	Legal name is missing Legal name in english is missing	
<b>Commercial_name</b> <b>Commercial_name_english</b>	Commercial name is missing Commercial name in english is missing	
<b>FOP_labeling_type</b> FOP_labeling_type_2 FOP_labeling_type_3 FOP_labeling_type_4	Incorrect FOP labeling type (i.e. not contained in the closed list of the input template) or missing FOP labeling type	
<b>Nutri_score</b>	Incorrect nutri-score (not a letter between A and E) when Nutri-Score is available on the packaging	
<b>Ingredient_list</b>	Ingredient list is missing	
<b>Net_weight</b>	The net weight contains characters other than numbers that are unwanted	
<b>Net_weight_unit</b>	The net weight unit is different from « g » or « mL » (i.e. not contained in the closed list of the input template)	
<b>Number_of_units</b>	The number of units contains characters other than numbers that are unwanted	
<b>Portion_size</b>	The portion size contains characters other than numbers that are unwanted	
<b>Portion_size_unit</b>	The portion size unit is different from « g » or « mL »	
<b>Nutrient_content_expression_unit</b>	The nutrient content expression unit is different from « 100g » or « 100mL »	

Problem wording	Meaning	
<b>Energy_kCal</b> <b>Energy_kJ</b> <b>Fat</b> <b>Saturated_fat</b> <b>Carbohydrates</b> <b>Sugar</b> <b>Protein</b> <b>Salt</b> <b>Fibre</b>	The fields contain characters other than numbers (except "<" and "traces") that are unwanted.	
<b>Nutrient_content_expression_unit_as_consumed</b>	The nutrient content expression unit for products to be reconstituted is different from « 100g » or « 100mL »	
<b>Energy_as_consumed_kCal</b> <b>Energy_as_consumed_kJ</b> <b>Fat_as_consumed</b> <b>Saturated_fat_as_consumed</b> <b>Carbohydrates_as_consumed</b> <b>Sugar_as_consumed</b> <b>Protein_as_consumed</b> <b>Salt_as_consumed</b> <b>Fibre_as_consumed</b>	The fields contain characters other than numbers (except "<" and "traces") that are unwanted	

### 11.1.2. Second verification program

The second program is focusing on the consistency of the codification : it is important to verify that some rules were respected when the data was entered into the template. The list of problems which can be detected is described below :

**Table 38 : Wording and meaning of the outputted problems in the second verification program**

Problem wording	Meaning
<b>nomenclature</b>	Wrong association between 'Category_name', 'Category_code', 'Subcategory_name' and 'Subcategory_code'
<b>Net_weight_&amp;_units</b>	The net weight is filled but there is no associated net weight unit or The net weight unit is filled but there is no associated net weight
<b>Portion_size_&amp;_units</b>	The portion size is filled but there is no associated portion size unit or The portion size unit is filled but there is no associated portion size
<b>Nutritional_values_&amp;_units</b>	The nutrient content expression unit is filled but there are no associated nutritional values for the nutrients or There are nutritional values for the nutrients but there is no associated nutrient content expression unit

Problem wording	Meaning
<b>Nutritional_values_as_consumed_&amp;_units</b>	The nutrient content expression unit for products to be reconstituted is filled but there is no associated nutritional values for the nutrients as consumed <i>or</i> There are nutritional values for the nutrients as consumed but there is no associated nutrient content expression unit for products to be reconstituted
<b>Wrong_country</b>	This is not the name of the considered country
<b>Duplicate_bar_code</b>	Same bar code has been found for 2 or more products in the same snapshot
<b>Type_of_brand</b>	The same brand has been associated with several types of brand. (This problem appears for all products of a same brand if they have been associated with different types of brand)
<b>Carbohydrates_or_sugar_content</b>	The sugar content is greater than the carbohydrates content
<b>Carbohydrates_or_sugar_as_consumed_content</b>	The sugar as consumed content is greater than the carbohydrates as consumed content for products to be reconstituted
<b>Fat_or_saturated_fat_content</b>	The saturated fat content is greater than the fat content
<b>Fat_or_saturated_fat_as_consumed_content</b>	The saturated fat as consumed content is greater than the fat as consumed content for products to be reconstituted
<b>Verify_units_g_100g</b>	a unit in “g” appears for a product belonging to the 'Soft drinks' category
<b>Verify_units_mL_100mL</b>	a unit in “mL” appears for a product belonging to a category other than the 'Soft drinks' category
<b>Enter_Nutri_score</b>	The 'FOP labeling type' field indicates <i>Nutriscore</i> but there is no associated nutri-score in the 'Nutriscore' field
<b>Remove_Nutri_score</b>	A nutri score is filled in the 'Nutriscore' field but the 'FOP labeling type' does not indicate <i>Nutriscore</i>
<b>Incorrect_FOPs</b>	The first field 'FOP_labeling_type' indicates <i>None from the list</i> but not the other fields 'FOP_labeling_type2/3/4'. When the first field 'FOP_labeling_type' indicates <i>None from the list</i> , the other fields 'FOP_labeling_type2/3/4' must also indicate <i>None from the list</i> .

### 11.1.3. Third verification program

The third program allows checking the distribution of the nutrient content in every subcategory. It enables to analyze the distance from the first and third quartiles (25th and 75th percentiles, respectively), expressed in terms of interquartile range (IQR) (IQR=75th percentiles value - 25<sup>th</sup> percentiles value).



It distinguishes two thresholds:

- the lower fence : located at  $1.5 \times \text{IQR}$  below the 25th percentile;
- the upper fence : located at  $1.5 \times \text{IQR}$  above the 75th percentile;

For the data identified as outside the “normal” range (i.e. below or above the thresholds):

- the nutritional value that has been entered in the database must be checked by comparing it with the value visible on the pictures (it can be a mistake);
- if it is not an entry mistake of the nutritional value, the subcategory must be verified as the product may have been misclassified.

This step allows detecting eventual data entry mistakes or classification errors for products that are appearing as outliers for a certain nutritional value.

#### 11.1.4. Fourth verification program

The fourth program is only applied in case of a T+1 data collection: the consistency of the pairing between father and son products is being verified. The list of problems which can be detected is detailed below:

**Table 39 : Wording and meaning of the outputted problems in the fourth verification program**

<b>Problem wording</b>	<b>Meaning</b>
<b>Nonexistent_father_product_code</b>	The father_product_code associated with this product does not exist in the T0 data.
<b>Duplicated_code</b>	The product_code of this product is already assigned to a product in the T0 data.
<b>Not_paired_with_year_of_interest</b>	The father product does not belong to the T0 data collection year of interest chosen to make comparisons/indicators with T+1 data. This means that this pairing will not be taken into account for making the indicators.
<b>Verify_category_name</b> <b>Verify_category_code</b>	The product and its father product have different category names and codes
<b>Verify_subcategory_name</b> <b>Verify_subcategory_code</b>	The product and its father product have different subcategory names and codes

#### 11.1.5. Verification process

The verification programs are highlighting the fields that should be checked or corrected in order to have the cleanest data as possible (see methodology in Annex 21 and Annex 22).

The methodology requires to run the programs one at a time by respecting the order. After the first run of a program, the output file must be manually verified and the fields highlighted with the ‘Problems’ column must be corrected. It may be that the pictures of the products, used for the data entry and encoding, are being re-opened in order to verify the information entered and correct it if necessary for the given product. Once all errors have been reviewed, the corrected file should be re-imported into R and the same program of verification must be run

again, until no more new errors are appearing. Only then the next program for verification of the data can be used (see Figure 26).

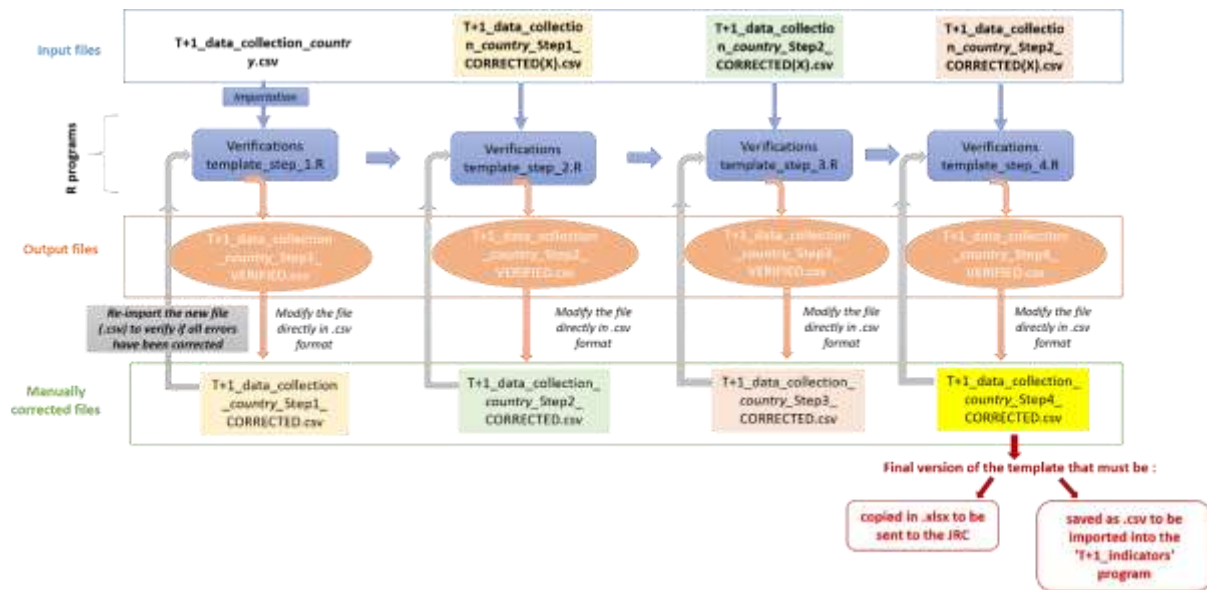


Figure 26 : Methodology for the cleaning of the data with help of verification programs

## 11.2. Production of indicators

### 11.2.1. Nutrients of interest

Not all the nutrients are of interest for all the categories. Therefore, a list of nutrient of interest on which the indicators are generated has been defined for each category (see Table 40).

**Table 40 : Summary of the nutrients of interest for the Best-ReMaP five priority food categories**

	<b>Fat</b>	<b>Saturated fat</b>	<b>Sugar</b>	<b>Protein</b>	<b>Fibre</b>	<b>Salt</b>
<b>Bread products</b>	X	X	X		X	X
<b>Breakfast cereals</b>	X	X	X		X	X
<b>Delicatessen meats and similar</b>	X	X	X	X		X
<b>Fresh dairy products and desserts</b>	X	X	X	X	X	
<b>Soft drinks</b>	X (only for milk and plant-based beverages)	X (only for milk and plant-based beverages)	X		X	X

### 11.2.2. Treatment of specific nutritional values

In some cases, the nutritional content stated on the product packaging is inferior to a value or only 'traces'. As these values are not only containing numerical items, they cannot be treated as such by the R software and would not be taken into account when producing the indicators. Therefore, it has been considered that:

- Inferior values are equal to the indicated number divided by two (for example "<0.5" is replaced by 0.25);
- 'Traces' are replaced by 0.0001.

Furthermore, only the nutritional values indicated on the products as sold have been considered in order to allow relevant comparisons. This means that the nutritional values indicated as consumed (for products to be reconstituted) have not been taken into account in the data analysis.

### 11.2.3. First snapshot : state of play (T0)

In the first snapshot, no preexisting data at the brand level was available in the involved countries on the five priority food categories. The data collected as part of Best-ReMaP represents a T0 and allows having a first overview of the market.

Various indicators are produced with the programs in order to have the best overview of the market at T0. Only a selection will be introduced in the reports from each partner, due to constraints on size of the deliverable and number of partners which will produce statistics.

Table 41 describes all indicators produced by the R programs and their usefulness. Examples of the outputted graphs can be seen in Annex 21.

Table 41 : Summary of the Best-ReMaP T0 indicators

State of play (T0)	Indicator	Usefulness / remarks
Food supply monitoring	Proportion of the types of brand collected (per category)	Describe precisely the food offer collected at T0 (e.g to have the number of products without added sugar compared to the number of products containing added sugar for each subcategory of soft drinks)
	Distribution of the references collected, by subcategory (in number of references)	
	Proportion of the different types of brand collected, by subcategory	
Labeling parameters monitoring	Front of pack labeling : Proportion of collected products with or without front of pack labeling, by category	Targeted FOP labeling: Choices, Finnish heart, Keyhole, Nutrinform battery, Nutriscore, Reference intake, Traffic light. 'Without FOP labeling' means either no FOP label on the product packaging or no label among the targeted ones
	Portion size : Distribution of products with or without quantified portion size (per subcategory)	
	Portion size : Proportion of the five most represented portion sizes among collected products, by category	Only the products with a quantified portion size have been considered. The five most represented portion sizes are highlighted and the rest (if any) are gathered in 'Other'
	Portion size : Proportion of the five most represented portion sizes among collected products, by subcategory	
Nutritional content monitoring	Labeling frequency, by nutrient and category	Only the products with a quantified value for the given nutrient are taken into account
	Nutrient content distribution among subcategories	Identify room for reformulation/margin of progress for a given subcategory (identify best in class products) and compare nutrient content among subcategories
	Nutrient content distribution among the types of brand, by subcategory	Identify room for reformulation/margin of progress for a given subcategory/type of brand (identify best in class products) and compare nutrient content for a given subcategory among type of brand <i>Relevant only if the types of brand are well covered</i>
	Descriptive statistics by subcategory	
	Descriptive statistics by type of brand and subcategory	

#### 11.2.4. Second snapshot : follow-up (T+1)

For the second snapshot, participating countries have collected data on the five prioritized food categories and have made a link with pre-existing data meaning products from the same categories collected during a first snapshot. The indicators produced allow monitoring the evolution in the food offer between two times. For paired products (same reference collected at both times), the monitoring of food reformulation is possible. As all the fields used for Best-ReMaP weren't necessarily covered during the first snapshot, it wasn't possible to generate indicators for all of them (types of brand, FOP labeling, etc).

##### 11.2.4.1. Food offer description

In most of the comparison indicators produced for Best-ReMaP, the five priority food categories are being displayed. For some countries, there is no preexisting data for one or more of the five priority food categories. These categories are only identified with the general indicators on the market comparison between two times. No further comparison indicators are produced for these categories.

In order to analyze the evolution of the market between two data collections, subgroups of products have been created. They are mainly based on the pairing of father and son products that have been made by the partners and on the nutritional values. Indeed, these are fields that have been commonly collected between the two different snapshots. No other fields from the data entry and codification template have been taken into account. Four subgroups can be defined :

- Products removed from the market : products from the preexisting data (collected at T0) but absent in the T+1 data collection (either because they have been removed from the market or not collected at T+1);
- New products : products which are absent in the preexisting data (T0) but which have been collected in the T+1 data collection (either new products from the market or not collected at T0);
- Identical products : products which have been collected at both data collections (T0 and T+1) and presenting exactly identical nutritional values (on common nutrients meaning nutrients available both at T0 and T+1);
- Reformulated products : products which have been collected at both data collections (T0 and T+1) and which have at least one nutritional value on common nutrients (nutrients available both at T0 and T+1) that have evolved between both years.

##### 11.2.4.2. Statistical tests used

###### ➤ Portion sizes

Chi-squared tests have been used to compare the percentage of products between the first and second snapshots for the most represented portion sizes.

###### ➤ Nutritional values

For the evolution of the nutritional values, permutation tests have been used. The interest of using permutation tests is based on their flexibility and their robustness when the statistical hypotheses of habitual tests are not verified. Here, using these permutation tests allows the adaptation to random sample sizes, especially to small sample sizes for some subcategories,

as well as the limitation of the impact of aberrant observations sometimes present in the data. The principle rests upon making random sampling on the observed data, without formulating hypotheses on the theoretical distribution of the observed variable. However, it is necessary that the cumulative number of products on both data collection years is greater or equal to six. Conventionally, the term “significant” has been used to indicate that the observed evolution is statistically significant (p-value lower than 0.05).

### 11.2.4.3. T+1 Indicators

Table 42 describes all indicators produced by the R programs and their usefulness. Examples of the outputted graphs can be seen in Annex 22.

**Table 42 : Summary of the Best-ReMaP T+1 indicators**

Follow-up (T+1)	Indicator	Usefulness/remarks
Food supply evolution	Comparison of T0 and T1 data collection (per category)	Compare data collection and identify bias in the data collection (different scope in the collected products)
	Comparison of the distribution of the references collected, by subcategory (in number of references)	Describe precisely the food offer evolution (e.g. to have for each data collection the number of products without added sugar compared to the number of products containing added sugar for each subcategory of soft drinks)
	Decomposition of the T+1 food supply in different subgroups (by comparing with T0 food supply) : Products removed from the market, New products, Identical products and Reformulated products	Describe precisely the food offer evolution
Labeling parameters monitoring	Front of pack labeling : Proportion of collected products with or without front of pack labeling, by category for the T+1	No comparison with preexisting data is possible because the FOP labels have not been collected in preexisting data (T0).  Targeted FOP labeling: Choices, Finnish heart, Keyhole, Nutrinform battery, Nutriscore, Reference intake, Traffic light  'Without FOP labeling' means either no FOP label on the product packaging or no label among the targeted ones
	Portion size : Comparison of the proportion of products with or without quantified portion size, by category	'Without quantified portion size' means either no portion size on the product packaging or no portion size collected (especially for the T0). This field hasn't been followed by every partner in the preexisting data and the interpretation of the comparison results can be biased in that case.
	Portion size : Comparison of the proportion of products with or without quantified portion size, by subcategory	
	Portion size : comparison of the proportion of the most represented portion sizes among collected products from both data collections, per category	The most represented portion sizes used for this indicator are being chosen among both data collections for the given category : the five most represented portion sizes for the T0

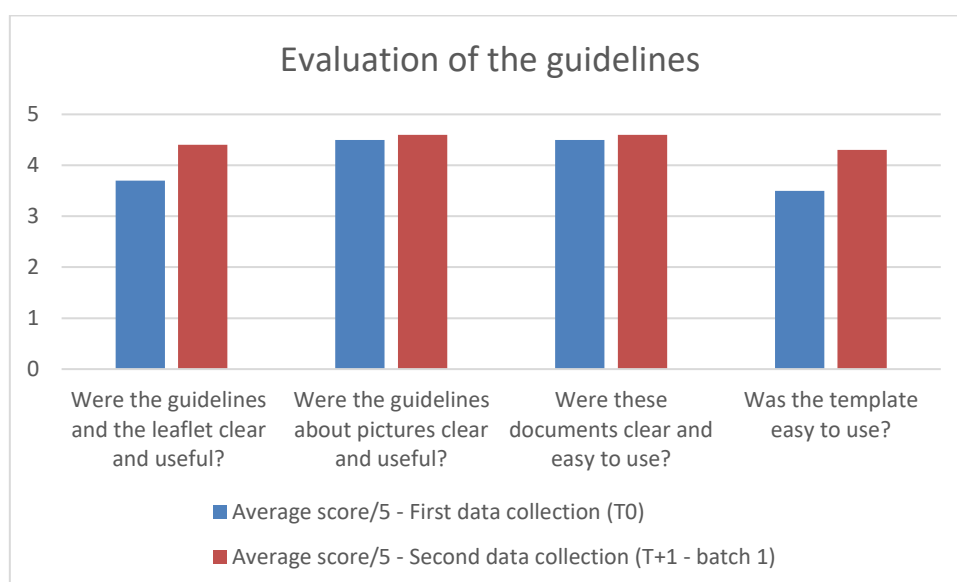
Follow-up (T+1)	Indicator	Usefulness/remarks
		<p>have been selected as well as the five most represented portion sizes for the T+1. For each data collection, for all other portion size (if any) in the data set, they were gathered in 'Other'. The respective number of products in each data collection (T0 and T+1) for each represented portion sizes is attributed to the right size; all other products with a different portion size are counted in 'Other'.</p>
Nutritional content monitoring	Evolution of labeling frequency, by nutrient and category	Identify bias in nutritional content study if the evolution of labeling frequency is important (for instance for nutrients for which the labeling is not mandatory)
	Evolution of the nutrient content distribution among subcategories when considering the whole offer for T0 and T+1	Monitor within a subcategory the distribution of nutrient content over time Identify room for reformulation/margin of progress for a given subcategory (identify best in class products) and compare nutrient content
	Evolution of the nutrient content distribution among subcategories when considering paired products between T0 and T+1	<p>Monitoring of reformulation : products available on the market both at T0 and T+1</p> <p><i>In order to be considered as a couple of paired products for the comparisons of the nutritional evolution, the father and son products must be classified in the same subcategory</i></p>
	For paired products, evolution of the nutrient content product by product	<p>Monitor, for each paired reference, the evolution of the nutrient content : visualize the effective reformulation for each product</p> <p><i>In order to be considered as a couple of paired products for the comparisons of the nutritional evolution, the father and son products must be classified in the same subcategory</i></p>
	Descriptive statistics by subcategory and data collection	
	Summary of the evolution of mean values by subcategory and by nutrient of interest	Identify if significant evolution of the mean content can be explained by reformulations (paired products)



## 12. Evaluation of the guidelines

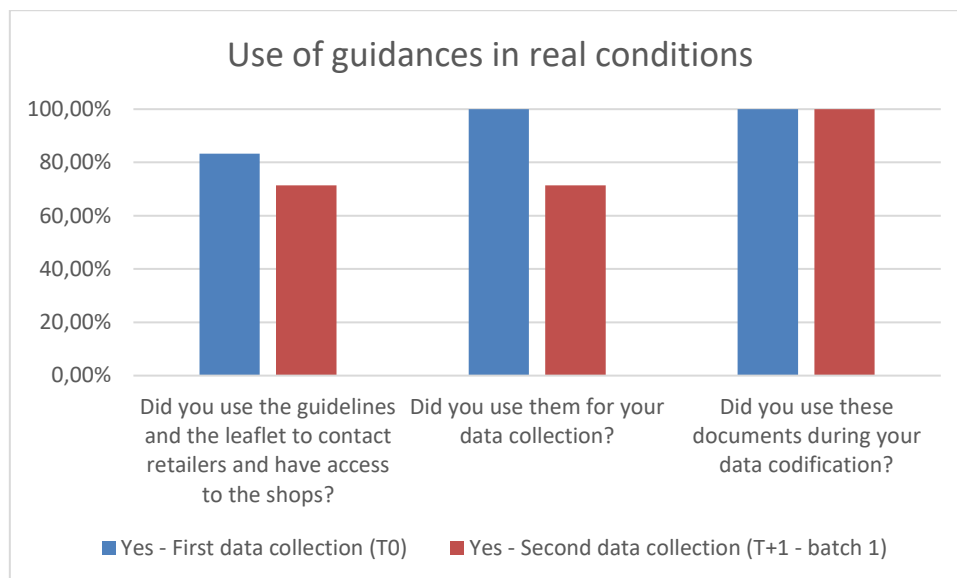
The first version of the guidelines (D5.1) has been evaluated by the partners of the first snapshot (implemented between July 2021 and July 2022), and the partners of the first batch of the second snapshot (implemented between February 2022 and December 2022). This evaluation has been realized through a questionnaire disseminated among the partners and asking them to give a note to the guidelines to assess if they were clear and useful, and if they have been used in real conditions (during the data collection/codification steps). Possibility was also given to the participating countries to share comments about the difficulties that have been met during the different tasks and to make suggestions to improve the methodology.

The guidelines have been positively evaluated, with an average note of 4.05/5 for the first snapshot (countries with no experience in data collection) and 4.50/5 for the second snapshot (countries with at least an experience in data collection) (Figure 27).



**Figure 27 : Evaluation of the guidelines**

The guidelines have been widely used for the data codification (100% for both snapshots), but in a smaller scale for the data collection for countries already having experience in data collection (Figure 28).



**Figure 28 : Use of the guidelines during data collection and codification**

Difficulties were met by unexperienced partners to fill all the fields of the template (only 50% of partners were able to fill all fields vs 86% among experienced partners), but this was mainly due to the use of alternative methods of data collection, especially web scraping (for the countries who could not go into the shops to take pictures, because they were not allowed to do so or because it was too complicated for them). The comments gathered with the questionnaires were mainly related with the difficulties to codify the products in the right subcategory and to the workload due to the data collection methodology. It is true that it can be difficult to identify the right subcategory for a given product, especially for products specific to a country: France has tried to produce examples for each subcategory but it is not possible to identify and list products from all participating countries in the guidelines. About the methodology, taking pictures is indeed very burdensome and this is one of the most challenging question of this task to ensure sustainability, but it was the methodology defined for Best Remap as it is a well-tested and reliable methodology. Work has been engaged on alternative sources of data but to date, none has been validated as some data are missing (barcodes with web scraping for instance) or are not reliable (see chapter 9 about alternatives sources of data).

Few comments were addressed directly to the guidelines so the document has been updated and completed but not modified consequently.

In addition to the questionnaire, it has been observed that the workload was too high for some countries, especially Cyprus who was not able to deliver any data at the end of the task. Lesson learned is that dedicated resources are absolutely necessary to implement such a tool and that it is very important to have trained staff to do the data codification, in order to ensure a high level of quality of the final dataset.

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## 14. Annexes

### Annex 1 : Best-ReMaP categories and definitions (23/03/23)

Categories name	Categories definition	Products excluded from the category	Categories code
<b>Baby Food</b>	All processed cereal-based foods (cereals with milk, reconstituted instant cereals, biscuits), baby foods (fruit- and/or plant-based beverages, dairy desserts, fruit- and cereal-based desserts, fruit-based desserts) and infant foods with vegetables and/or meat/fish (soups, vegetable preparations, meat preparations, dishes) covered by Regulation (EU) No 609/2013 and Directive 2006/125/EC		41
<b>Bread products</b>	Rusks, brioche, crackers, croutons, unleavened bread, puffed cakes, savoury muffins, sandwich breads, toasted bread, hamburger buns, hot-dog buns, sandwich buns, pita bread, pre-baked bread, pre-packaged bread, tortilla wraps, cereal specialities (wheat crackers, etc.), filled cereal specialities (filled crackers, filled cereal sticks, etc.), fine bakery wares (croissants, chocolate croissants, apple turnovers, etc.), kouglof, brioche pretzel, fougasse, panettone, pancakes, crispbreads (sweet or savoury)	Handmade products or cocktail snack products	18
<b>Breakfast cereals</b>	All types of breakfast cereals (plain, chocolate, caramel, filled, healthy, whole wheat, etc.), cereal cakes, cereals requiring preparation such as oatflakes, muesli, puffed rice	Breakfast biscuits	1
<b>Cakes and biscuits</b>	Chocolate or fruit biscuits, filled biscuits, shortbread, barquettes, sandwich biscuits, dry biscuits, etc., biscuit bars, breakfast biscuits, moist cakes, marble cakes, puff pastries, cakes with filling, genoise sponge, etc., macaroons, finger biscuits, crepes, gingerbread, madeleines, financiers, speculoos, coconut macaroons, cookies, rolled biscuits, waffles and wafers		2
<b>Canned biscuits</b>	All fruits preserved in water, fruits in fruit juice, fruits in light syrup, fruits in syrup		14
<b>Cereal bars</b>	Cereal bars and bites (cereal bars with fruits or nuts, with or without chocolate, with caramel, with pieces of biscuit, plain, etc.)	High-protein bars, meal substitutes, sports energy bars, bar-type biscuits and chocolate confectionery bars	35
<b>Cheeses</b>	All cheeses, including cheese bites such as Apérvrais and mixed snacks such as breadsticks/cheese, products as cottage cheese.	Breaded cheeses	45
<b>Chocolate products</b>	Chocolate assortments, chocolate bars, sweets, chocolate truffles or bites, chocolate tablets (diet/light, dark, milk, white, filled, with inclusions, etc.), spreads, chocolate powders (to mix with water or milk), capsules for making cocoa beverages, chocolate substitute.		21

Categories name	Categories definition	Products excluded from the category	Categories code
<b>Cold sauces</b>	Seasoning sauces (such as French dressing, vinaigrette, salad dressings, crudité sauces, Caesar sauce, etc.; low-fat/light or not), cold emulsified sauces (such as mayonnaise, aioli, tartare, Béarnaise, pepper, Bourguignon, burger, American, rouille, curry, for chips, etc.; low-fat/light or not), cold non-emulsified sauces (such as ketchups, barbecue sauce, Mexican sauce, etc.; light or not)	Products such as spicy sauce, pesto, guacamole, tapenade, Mexican salsa dip	38
<b>Confectionery</b>	Boiled sweets, lollipops, gum/jelly sweets, liquid, powdered or gel confectionery, caramels, sugared almonds, candied fruit, fruit pastes, liquorice, calissons, nougats, lozenges, chewy sweets, chewing gum, sugar-free confectionery	Chocolate-coated oilseeds, almond paste/marzipan, sports products (almond paste)	48
<b>Crackers</b>	Peanuts and seeds, coated or sweetened peanuts, dried fruit cocktails, fruit and seed mixtures, Asian mixtures, shrimp fritters, choux pastries, salted crackers, salted crepes dentelles, wafers, breadsticks, savoury mini cakes, sweet or salted popcorn, puffs, sticks and pretzels, tortillas, tuile biscuits	Crisps	19
<b>Delicatessen meats and similar</b>	<p>Delicatessen meats and alternative meat-free products (containing tofu, soy, etc.), found in the room-temperature, chilled and frozen, pre-packed sections (excluding foods cut to order)</p> <p>Cooked ham and shoulder, ham knuckle, roast poultry, ham, raw-cured ham, dry-cured ham, sausages, cooked sausages, duck mousse, country-style pâté, pâté, pork liver mousse or terrine, pâtés or terrines of game, pork, poultry or rabbit, preserved liver, rillettes, lardons, pork belly, dry sausages, sausage specialities, chorizo, pavé, rosette, salami, preparation of cooked ham and shoulder, preparation of poultry, preparation of raw- or dry-cured ham, boudin (white or blood sausage), uncooked andouille and andouillette (chitterling sausage), head cheese, brawn, ham in parsley aspic, roast pork, alternative meat-free products (containing tofu, soy, etc.), sausage specialities such as chipolatas, cachir sausage, merguez or sausages with Provençal herbs, coarse minced sausages (Morteau, Montbéliard, Figatelli, etc.), dried, smoked or cured pork (bacon, coppa, Alsatian Kassler, Corsican Lonzu and other regional specialities of this type), dried, smoked or cured beef (Bündnerfleisch, bresaola), preserved uncooked meat (such as canned sausages), corned beef, corned lamb or other (canned or not)</p>	Delicatessen meats in pastry, delicatessen meat products included in complete dishes (such as sauerkraut, cassoulet, couscous, etc.), canned cooked meats (meats cooked in sauce, special meat recipes, etc.), foie gras, gizzards, poultry liver, delicatessen meat assortments with cheese	5
<b>Dessert mixes</b>	Powdered dessert preparations to which ingredients have to be added (mixes for clafoutis, custard tarts, cookies, custard sauces, pastry cream, crème brûlée, panna cotta, crepes, waffles, pancakes, rice desserts, dairy-based desserts, cakes, etc.), ready-to-cook doughs or batters (for cookies, crème brûlée, cakes)		20

Categories name	Categories definition	Products excluded from the category	Categories code
<b>Fresh dairy products and desserts</b>	All yoghurts and fermented milks (sugar-sweetened, artificially-sweetened or unsweetened, classic or gourmet), fresh cheeses (sugar-sweetened, artificially-sweetened or unsweetened, classic or gourmet), skyr, fresh desserts (dessert creams, curdled milks, jellied milks, Liégeois desserts, fresh desserts with cereals such as rice pudding, fresh mousse desserts, fresh desserts with eggs such as crème caramel, crème brûlée, custards and flans, floating islands, panna cotta and other dairy-based desserts, desserts such as chocolate fondant, profiteroles, tiramisu, clafoutis, rum babas and cakes, whether sugar-sweetened, light or artificially-sweetened) and fresh plant-based desserts (soy desserts and other plant-based desserts)	Dairy products to be stored at room temperature Milk Fresh cream, butter, Cottage cheese	3
<b>Fresh delicatessen products</b>	Products to be stored chilled  Pizzas, ready-rolled pastry (brick, filo, shortcrust, flaky, rich shortcrust, pizza dough), smoked fish, starchy salads (pasta salads, potato salads, tabbouleh, etc.), raw vegetable salads (crudités), mixed salads, brawn or saveloy salads, sandwiches, burgers, toasted sandwiches and breaded escalopes, other snacks, surimi (crab sticks), savoury tarts, flammekueches, quiches Lorraines, spreads (seafood rillettes, taramasalata, seafood terrines, tzatziki, ktipiti, etc.), blinis, savoury filled crepes, fresh plain or sweetened crepes, shrimps, puff pastries or brioches, pâté in pastry, mussels, fish roe, sauces for pasta or fish, seafood tapas, set lunches such as mixed salad sold with a starter and/or dessert, other fresh delicatessen products such as savoury cakes, pizza kits, crustless tarts, etc.	Sauces to be stored at room temperature	15
<b>Frozen pastries and desserts</b>	All frozen fine bakery wares and cakes, as well as products found in the frozen dessert section, i.e. products such as:  - croissants, chocolate croissants, raisin buns, brioches, milk breads, apple turnovers;  - plain or flavoured brioche, with chocolate chips or candied fruit, Tropicéenne, French-toast style brioche;  - doughnuts, sweet fritters, churros, crepes, waffles, pancakes;  - macaroons;  - tarts, crumbles, gâteaux, cakes, genoises (sponges), financiers, madeleines;  - choux pastries (éclairs, profiteroles, Paris-Brest, Saint-Honoré, etc.);  - desserts such as bavarois, tiramisu, opéra, cheesecake, Black Forest gâteau, charlotte, dessert logs	Products such as blinis or pancakes that are served with savoury toppings. Ice cream and sorbet products are included in the Oqali "Ice creams and sorbets" sector.	46

Categories name	Categories definition	Products excluded from the category	Categories code
	<p>(the "Ice creams and sorbets" sector already includes ice-cream logs), etc.;</p> <ul style="list-style-type: none"> <li>- custard tarts, clafoutis, Breton far cake, Basque cake, kouign-amann, kings' cakes, mille-feuilles, cookies;</li> <li>- products such as panna cotta, crème brûlée and mousses found in the frozen dessert section.</li> </ul>		
<b>Frozen snacking products</b>	<p>Pizzas, quiches, tarts, pies, savoury cakes, crepes, pancakes, pastillas, puff pastries, pastry friands, buns, hamburgers, wraps, filled/topped baguettes, cocktail or aperitif products (aumonière bundles, puff pastries, choux pastries, gougères, party loaves, canapés, verrines), salads, tabbouleh, sandwiches, toasted sandwiches (croque monsieur), hot dogs, kebabs, meats in pastry (pâté, roast meat, ham)</p>	<p>Mini or cocktail versions of ready-to-eat frozen meal products are excluded from frozen snacking products (this is the case with mini white sausage and mini quenelle dumplings) French fries, mashed potatoes and potato accompaniments (dauphiné, croquettes, duchess and noisette potatoes, röstis – including onion röstis, potatoes sautéed in duck fat, potato wedges, sautéed or fried potatoes) are included in the Oqali "Processed potato products" sector.</p>	31
<b>Fruit juices and nectars</b>	<p>All fruit juices, fruit juices made from concentrate, nectars, vegetable juices that comply with the national code of good practice, and smoothies that comply with Directive 2012/12/EU</p>	<p>Products that resemble juices and nectars but contain unauthorised ingredients for these products (e.g. fibre, colourings, coconut milk, etc.) and coconut waters</p>	10
<b>Fruit purees, compotes and desserts</b>	<p>All compotes, low-sugar (light) compotes, fruit desserts, fruit purées, fruit compotes with specific added ingredients, fruit compotes with specific added ingredients (without added sugar)</p>	<p>Fruit compotes and purées for children</p>	12
<b>Hot sauces</b>	<p>Sauces for meat or fish (Armorican, Bearnaise, beurre blanc, Hollandaise, etc.), sauces for pasta (Bolognese, with cooked vegetables, pesto, etc.), sauces to accompany dishes (sweet and sour, Basque, curry, Mexican, etc.), tomato coulis, bechamel sauces</p>		36

Categories name	Categories definition	Products excluded from the category	Categories code
<b>Ice creams and sorbets</b>	All ices, ice creams and sorbets in the various existing formats (mini stick, stick, cone, tub and mini tub, bulk), but also ice-cream bars and mini bars, water or fruit ices, sundaes and frozen desserts (mini logs, vacherin, baked Alaska, Liègeois, etc.) and frozen desserts for sharing (including ice cream logs)	Profiteroles	32
<b>Infant milks</b>	All infant and follow-on formulae, and growing-up milks		44
<b>Jams</b>	All standard jams, jellies or marmalades (extra or not), low-sugar (light) jams, jellies or marmalades, fruit preparations, other jam-like products, sweetened chestnut or prune purées	Milk jams (dulce de leche), coulis, toppings, chutneys and confits intended to be eaten with foie gras or cheese	13
<b>Margarines</b>	Margarines	Liquid or semi-liquid vegetable preparations for cooking, solid fats such as Végétaline	40
<b>Other products</b>	<p><b>Foods not currently monitored by Oqali</b></p> <p>For example, all raw products such as eggs, fruits, vegetables, meat and fish, but also rice and dried pasta, flour, fresh cream, oil, butter (note however that margarines are included in the Oqali "Margarines" category), milk, unflavoured natural and mineral waters (note however that flavoured waters are included in the Oqali "Soft drinks" category), canned plain sardines and tuna (canned sardines and fish in oil or flavoured such as canned fish in white wine or tomato, for example, are included in the Best-ReMaP "Ready-to-eat canned meals" category), culinary aids such as stock cubes and cooking stock, room-temperature spreads such as guacamole, tapenade, onion/fig confits, cooked olives, pickles in vinegar, etc.</p>		
<b>Processed potato products</b>	All crisps and similar products (old-fashioned, classic, wavy, low-fat, including oven-baked potato products), French fries (for microwave, deep-fryer or oven), other potato-based side dishes (dauphiné, croquettes, duchess and noisette potatoes, röstis – including onion röstis, potatoes sautéed in duck fat, potato wedges, sautéed or fried potatoes), steamed potatoes and mashed potatoes (ready-to-eat (stored at room temperature/chilled/frozen), in flakes, may contain mushrooms). Sweet potato fries.	Sautéed potatoes with meat or other ingredients than potatoes and condiments. Röstis with lardons. Vegetable crisps, potato gnocchi. Purées other than with potatoes, mashed potatoes with meat, mashed potatoes with other vegetables. Potatoes sautéed in duck fat with lardons, green beans, etc.	8



Categories name	Categories definition	Products excluded from the category	Categories code
<b>Ready-to-eat canned meals</b>	Canned complete meals (such as cassoulet, blanquette, beef Bourguignon, chili con carne, sauerkraut, couscous, cottage or shepherd's pies, paella, meat with vegetables or starchy foods, fish with vegetables or starchy foods, gratins), cooked (microwavable or not) vegetable and/or starchy food dishes, quenelle dumplings, cooked meats without a side dish (duck confit, pork sauté, etc.), cooked pasta, tabbouleh, canned salads	Dehydrated prepared meals, plain canned vegetables (carrots and peas, sweetcorn, etc.), cereals for cooking (with only cereals, water, salt, sugar, preservatives or/and additives)	17
<b>Ready-to-eat fresh meals</b>	Fresh complete meals (such as sauerkraut, paella, couscous, cottage or shepherd's pies, stuffed vegetables and rice, meat with vegetables or starchy foods, fish with vegetables or starchy foods, gratins, risottos), cooked vegetables or starchy foods, plain fresh pasta, cooked pasta (lasagne, stuffed fresh pasta, etc.), breaded meats, battered or breaded fish, quenelle dumplings, cooked meats, cooked fish, fish burgers, prepared shrimps, cooked scallops, tripe, cereal cakes/soy steaks, snails, exotic products (fajitas, enchiladas, pastillas, samosas, fried spring rolls, shrimp fritters, salt cod fritters, etc.)	Pizzas, tarts, sandwiches, salads, blinis, crepes, spreads, fresh desserts, delicatessen meats in pastry, toasted sandwiches (croque monsieur), hamburgers, sauces	47
<b>Ready-to-eat frozen meals</b>	Frozen complete meals (such as couscous, lasagne, moussaka, cottage or shepherd's pies, meat/fish + various side dishes), cooked meats or fish without a side dish (e.g. fish à la Bordelaise), cooked vegetables or starchy foods (side dishes "alone" such as Chinese fried rice, gnocchi, etc.), vegetable patties, gratins and flans, delicatessen seafood starters (fish baked in scallop shell, cassalette, etc.), breaded and/or fried products (battered or breaded fish, squid fritters, nuggets, cordon bleu, etc.), ethnic fried products (salt cod fritters, etc.), snails, savoury soufflés, as well as all the mini and cocktail versions of these dishes. Vegetable protein steaks (including unflavoured), steaks flavoured with tomato or onion, for example (including non-protein steaks). Minced meatballs. Breaded cheeses.	Pizzas, quiches, tarts, crepes, puff pastries, buns, hamburgers, meat in pastry (pâté, roast meat, ham), cocktail or aperitif products, salads, tabbouleh, soups, as well as all raw products: uncooked vegetables, purées, raw meat and fish. Perigord-/Sarlat-style potatoes without any other components. Gnocchi and plain quenelle dumplings. Plain minced meat without vegetable protein. French fries, mashed potatoes and potato accompaniments (dauphiné, croquettes, duchess and noisette potatoes, röstis – including onion röstis, potatoes	39

Categories name	Categories definition	Products excluded from the category	Categories code
		sautéed in duck fat, potato wedges, sautéed or fried potatoes) are included in the Oqali "Processed potato products" sector.	
<b>Soft drinks</b>	All beverages with tea, fruit beverages, energy drinks, colas, flavoured waters, lemonades, tonics and bitters, sports drinks, plant-based beverages, flavoured milk beverages (chocolate, vanilla, strawberry, etc.), alcohol-free beers, alcohol-free aperitif beverages, in liquid or powder/granule form to be reconstituted, as well as fruit and/or vegetable beverages that resemble juices or nectars but contain unauthorised ingredients for this type of product (e.g. fibre, colourings, etc., see la Directive 2012/12/EU), juices containing coconut milk (coconut milk is not a juice according to the Codex Alimentarius).	Syrups and concentrated beverages to be diluted (squashes and cordials) Unflavoured mineral and spring waters Complete meal substitute beverages	9
<b>Soups and broths</b>	Products to be stored at room temperature, chilled or frozen Broths mentioning consumption as soup on their packaging, vegetable soups, meat-based soups, ethnic soups, starchy soups, cold soups, soups with pasta, fish/shellfish/mollusc soups	Culinary aids that cannot be consumed directly (or after simple rehydration of the powder) as broth or soup Cooking stocks	33
<b>Syrups</b>	All syrups, concentrated beverages to dilute (squashes and cordials), concentrated beverages to dilute without added sugar		11

## Annex 2 : Best-ReMaP nomenclature (23/03/23)

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
41	Baby food	Biscuits	Biscuits or rusks meeting the definition of "processed cereal-based foods" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC	68
41	Baby food	Cereals with milk	Ready-to-eat cereals with milk (sold in liquid form) meeting the definition of "processed cereal-based foods" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain fruits and/or vegetables powder.	140
41	Baby food	Dairy desserts	Dairy desserts consisting mainly of milk and/or fresh cheese. These products may contain sugar and/or fruit and/or vegetable and/or chocolate and/or cereals. They meet the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC,	210
41	Baby food	Fruit- and cereal-based desserts	Fruit- and cereal-based desserts consisting mainly of fruit and cereals, and which may contain small quantities of milk products and/or sugar and/or vegetable and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC	209

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
41	Baby food	Fruit- and/or plant-based beverages	Fruit- and/or plant-based beverages that can be ready-to-eat (sold in liquid form) or reconstituted in water (sold in powder form) and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC	91
41	Baby food	Fruit-based desserts	Fruit-based desserts consisting mainly of fruit and which may contain small quantities of milk products and/or sugar and/or vegetable and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC	208
41	Baby food	Instant cereals	Instant cereals to be reconstituted corresponding to cereals to be reconstituted in a bottle or plate, in water or in suitable infant milk (sold in powder form) and meeting the definition of "processed cereal-based foods" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain powder or flakes of fruits, vegetables, chocolate, ...	139
41	Baby food	Meals with vegetables and cereals	Meals with vegetables and/or legumes and cereals meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain potatoes and / or small quantities of fruits.	450

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
41	Baby food	Meals with vegetables and cereals and milk/cream	Meals with vegetables and cereals and milk/cream/cheese consisting mainly of vegetables, cereals, milk and/or cream, and which may contain cheese, potatoes, legumes and/or small quantities of fruits, meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and by Directive 2006/125/EC	451
41	Baby food	Meals with vegetables and potatoes	Meals with vegetables and potatoes meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain legumes and/or small quantities of fruits. Vegetables with potatoes sauces are included in this subcategory.	452
41	Baby food	Meals with vegetables and potatoes and milk/cream	Meals with vegetables and potatoes and milk/cream/cheese consisting mainly of vegetables, potatoes and milk and/or cream and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain legumes and/or small quantities of fruits. Vegetables with potatoes and milk/cream sauces are included in this subcategory.	453

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
41	Baby food	Meals with vegetables and/or starchy food and meat/fish	Meals consisting mainly of meat and/or fish, vegetables and/or starchy foods (rice, pasta, potatoes), and which may contain milk products (as cheese, ...), legumes and/or small quantities of fruits and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC	454
41	Baby food	Meat preparations	Meat preparations meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC	480
41	Baby food	Soups	Soups consisting mainly of vegetables and/or legumes and water, which may contain small quantities of milk products (as cheese, ...) and/or cereals and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Baby stock and soup cubs to be reconstituted with boiling water are included in this subcategory.	529

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
41	Baby food	Vegetable preparations	Vegetable and/or legumes preparations consisting mainly of vegetables and/or legumes, which may contain small quantities of milk (as cheese, ...) and/or fruits products and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Vegetables without starchy food sauces are included in this subcategory.	479
41	Baby food	Other baby foods	Other products for infants under 3 years that don't fit in any existing sub categories (fruit pieces dry, ...).	763
41	Baby food	Other baby processed cereal based foods	Other processed cereal based foods for babies and infants as mueslis, puffed rice cake with fruits and/or vegetable, cereal bars, ... Products may contain fruits, vegetables, chocolate, ...	764
18	Bread products	Other bread products	Other bread products	51
18	Bread products	Cream-filled brioches	Brioches and Viennese bread-type products, milk breads or gâches with cream filling which may contain inclusions (chocolate, fruits etc.)	115
18	Bread products	Brioches with fruit	Brioches and Viennese bread-type products, milk breads or gâches with fruit filling or with fruit (candied or not) inclusions, panettones with fruit, kouglof or similar products.	116

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
18	Bread products	Chocolate brioches	Brioches and Viennese bread-type products, milk breads or gâches with chocolate filling, all chocolate and/or with chocolate chips, panettones without fruit and with chocolate	119
18	Bread products	Plain toasted breads and toasts	Plain toasted breads and toasts containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. These products can contain fruit inclusions, chocolate chips, etc.	402
18	Bread products	Wholemeal_cereal_grains brioches	Brioches and Viennese bread-type products, milk breads or gâches containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. Includes products without gluten.	114
18	Bread products	Other rusks	Other rusks that do not fit the definition of any of the other rusk subcategories, crackers, crackerbreads and extruded products : rusks covered with chocolate, rusks covered with fruit, crispy crackers, crackerbreads filled with chocolate etc. Includes products without gluten (made from soy flour, rice flour, corn flour, etc.)	744



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
18	Bread products	Other breads	Special breads such as pita, kebab bread, Lebanese flatbread, bagel, Swedish bread, etc.	401
18	Bread products	Fine bakery wares_chocolate croissants	Chocolate croissants	605
18	Bread products	Fine bakery wares_croissants	Croissants	604
18	Bread products	Fine bakery wares_other	Apple turnovers, filled croissants, raisin breads, fruit-filled doughnutss, etc.	603
18	Bread products	Wholemeal_cereal_grains sandwich breads / hamburger / hot dog buns	Sandwich breads, special breads for hamburgers and hot dogs, english muffins containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. Includes products without gluten. Cupcake-type muffins and special breads for hamburger containing wheat flour with sesame seeds are excluded.	398

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
18	Bread products	Plain white sandwich breads / hamburger /hot dog buns	Plain sandwich breads, plain special breads for hamburgers and hot dogs, plain english muffins containing wheat flour and without seeds (special breads for hamburger included in this subcategory can contain sesame seeds). These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Cupcake-type muffins are excluded.	399
18	Bread products	Plain brioches	Plain brioches and Viennese bread-type products, plain milk breads or gâches containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Includes products with inclusions of sugar, fudge, etc.	112
18	Bread products	Other_sandwich breads / hamburger / hot dog buns	Sandwich breads, special breads for hamburgers and hot dogs, english muffins, brioche-style or not, with dried fruit inclusions, spicy or seasoning sandwich breads, etc. Includes products without gluten (made from soy flour, rice flour, corn flour, etc.) Cupcake-type muffins are excluded.	400
18	Bread products	Pancakes	Pancake or little thick crepe / crumpet ; plain, with or without chocolate chips, filling or not.	626

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
18	Bread products	Plain rusks	Plain rusks and plain brioche rusks containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Includes products with inclusions of fruit and/or chocolate chips.	117
18	Bread products	Pre-baked breads	Pre-baked breads	405
18	Bread products	Pre-packaged breads	Pre-packaged breads made from whole wheat flour and/or cereal flour (rye, barley, buckwheat, etc.), or wheat flour; plain, with or without seed inclusions (sunflower, flax, etc.) and/or dried fruit Includes products without gluten (made from soy flour, rice flour, corn flour, etc.).	406
18	Bread products	Puffed cakes	Puffed cakes made from rice, corn, spelt, quinoa, buckwheat, cereals; plain, flavored, topped or with filling	288
18	Bread products	Wholemeal_cereal_grains rusks	Rusks containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes rusks containing wheat flour with seeds. These products can contain fruit inclusions and/or chocolate chips. Includes products without gluten.	67
18	Bread products	Tortilla breads and wraps	Special tortilla breads and wraps	408
18	Bread products	Unleavened breads	Unleavened breads	396

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
18	Bread products	Wholemeal_cereal_grains toasted breads and toasts	Toasted breads and toasts containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. These products can contain fruit inclusions and/or chocolate chips. Includes products without gluten.	403
18	Bread products	Croutons	Small pieces of dry bread, seasoned or unseasoned	729
18	Bread products	Breadcrumbs	Grated or crumbled dried bread or rusks	730
1	Breakfast cereals	Cereal preparation to drink	Contains cereal-based products to be reconstituted and whose commercial name or legal name suggests consumption as a beverage. These products contain cereals in powdered, ground form. Conventional porridge mixes are not included in this subcategory. Example: Drinking porridge (porridge in powder form), etc.	796
1	Breakfast cereals	Other ready-to-eat cereals	Other ready-to-eat cereals Examples : keto granola (granola without cereals), porridge with vegetables, etc.	17

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
1	Breakfast cereals	Honey/caramel cereals	<p>Cereals coated with honey, caramel or any other sweetening ingredient (sugar, cane sugar, sugar syrup, glucose syrup, agave syrup, rice syrup). These are neither chocolate nor filled products. May contain nuts. Sweet puffed cereals like Rice Krispies are included in this subcategory.</p> <p>Muesli and cereal flakes are excluded from this subcategory.</p> <p>Example: Puffed wheat with honey, Corn balls with honey, Puffed rice with agave syrup, Caramel-coated puffed wheat, Cereal rings with a fruity taste, etc.</p>	142
1	Breakfast cereals	Chocolate-flavoured cereals	<p>Cereals with chocolate or cocoa, without filling. They may or may not be mixed with filled cereals (with non-filled cereals in the majority). They are usually extruded or puffed. Chocolate-coated cereal flakes are excluded from this subcategory.</p> <p>Example: Chocolate puffed rice, Chocolate cornflakes, Crispy cocoa cereal rings, etc.</p>	135
1	Breakfast cereals	Filled cereals	<p>Cereals filled with chocolate, milk, hazelnut, caramel, vanilla, etc. They may be mixed with unfilled cereals (with filled cereals in the majority).</p> <p>Example: Cereals with milk filling, Cereals with vanilla filling, Cereals with chocolate filling, etc.</p>	138

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
1	Breakfast cereals	Traditional muesli flakes	Mixture of cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) with dried fruit, seeds, flakes, added sugar and/or chocolate. This subcategory also includes porridge mixes (plain, with chocolate, fruit or nuts, etc.) except plain porridge mixes without added sugar that are included in the "Cereals without added sugar"(739) subcategory. Example: 7-fruit flaky muesli, Chocolate hazelnut muesli, etc.	386
1	Breakfast cereals	High-fibre cereals	Unfilled cereals with a fibre content greater than or equal to 6g per 100g of product. These products do not contain honey, caramel, chocolate, fruit or nuts. This subcategory includes cereal cake products that may contain chocolate. Cereal flakes without added sugar and muesli (crunchy and flaky) are excluded from this subcategory. Examples: Nature and fibre, Cereals with wheat bran naturally high in fibre, Wheat bran sticks, etc.	143
1	Breakfast cereals	Chocolate and caramel cereals	Unfilled cereals with caramel and chocolate. They are usually extruded or puffed. Muesli is excluded from this subcategory. For example: Caramel and chocolate cereal mix, Caramel and powdered chocolate puffed cereal, etc.	134

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
1	Breakfast cereals	High-fibre fruit cereals	<p>Unfilled cereals accompanied by fruit and with a fibre content greater than or equal to 6g per 100g of product. These products do not contain honey, caramel or chocolate but may contain nuts.</p> <p>Cereal flakes without added sugar and muesli (crunchy and flaky) with fruit are excluded from this subcategory.</p> <p>Examples: Fruit and fibre, Whole wheat flakes with fruit, etc.</p>	676
1	Breakfast cereals	Cereals without added sugar	<p>Cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) without added sugar, caramel, syrup, honey, molasses, glucose, fructose, sucrose, dextrose, or maltodextrins. These products do not contain fruit, dried fruit, nuts or chocolate. This subcategory includes plain porridge mixes without added sugar. Mueslis without added sugar are excluded from this subcategory (they are included in the "Traditional muesli flakes" subcategory).</p> <p>Examples: Oat flakes, 5-cereal flakes, Cornflakes, Buckwheat flakes without added sugar, etc.</p>	739

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
1	Breakfast cereals	Crunchy chocolate muesli	Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of crunchy clusters with chocolate and/or cocoa. May contain fruit and/or nuts. Example: Chocolate caramel muesli, Granola with figs and chocolate, Crunchy muesli with chocolate pieces and hazelnuts, etc.	678
1	Breakfast cereals	Crunchy fruit muesli	Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of crunchy clusters with fruit. May contain nuts and/or seeds but not chocolate and/or cocoa. Example: Crunchy muesli with dried fruits, Crunchy apple banana and raisin clusters, Red fruit granola, Crunchy cereal mix with almonds and strawberries, etc.	679
1	Breakfast cereals	Crunchy muesli with nuts_seeds	Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of plain crunchy clusters or with only honey/maple syrup or with only nuts (walnuts, hazelnuts, peanuts, almonds, etc.) or seeds. These products do not contain fruit, chocolate and/or cocoa. Example: Crunchy nut muesli, Crunchy flax and pumpkin seed muesli, Crunchy plain muesli, Hazelnut almond and pecan muesli, etc.	680



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
1	Breakfast cereals	Cereal flakes with chocolate_nuts	<p>Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) coated with chocolate and/or plain with pieces of chocolate or nuts (walnuts, hazelnuts, peanuts, almonds, etc.). These products can contain fruits.</p> <p>Example: Rice and wheat flakes with chocolate shavings, Whole wheat, rice and barley flakes coated in sugar with dark chocolate shavings, Rice and wheat flakes with hazelnuts and slivered almonds, etc.</p>	681
1	Breakfast cereals	Sweet cereal flakes	<p>Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) with which contains sugar, honey or maple syrup but without pieces of chocolate, fruit or nuts. These products may be coated, frosted, sweetened, etc. Sweet cereal flakes coated with milk are included in this subcategory. Flakes with more than 6g of fibre/100g are included in the "High-fibre cereals" subcategory.</p> <p>Example: Sugar-frosted cornflakes, Maple syrup cornflakes, Plain cornflakes, Plain buckwheat flakes, etc.</p>	745

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
1	Breakfast cereals	Cereal flakes with fruit	<p>Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) coated or plain with pieces of fruit. These products do not contain chocolate and/or cocoa.</p> <p>Flakes with more than 6g of fibre/100g are included in the "High-fibre fruit cereals" subcategory.</p> <p>Examples: Rice and wheat flakes with pieces of red fruit, Whole wheat, rice and barley flakes with fruit, Rice and spelt flakes with mixed red fruit, etc.</p>	683
2	Cakes and biscuits	Almond crisps	<p>All almond crispy biscuits, Provençal almond crisps, <i>croquants de Cordes</i> biscuits, canistrelli or cantuccini (term used in the legal name or in the commercial name). These products can be plain, flavored, with honey, with fruit, nuts, grains, chocolate, etc.</p>	780
2	Cakes and biscuits	Cakes with fruit_nut_grain	<p>Cakes* with fruit (including coconut) and/or nuts and/or grains. These products do not contain chocolate. Barquette-type sponge biscuits and waffles with fruit are excluded from this subcategory.*Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.</p>	784
2	Cakes and biscuits	Almond tuile biscuits	<p>All almond tuile biscuits. These products can contain fruits, nuts, grains, chocolate, etc.</p>	793

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
2	Cakes and biscuits	Filled or coated biscuits: other	Filled biscuits*, topped with a tablet (filled or not), sandwiched or coated without fruit (chocolate, milk, vanilla, etc). These products can contain nuts or grains. This subcategory includes barquette-type sponge biscuits, tartlet-type biscuits and <i>Lunette de Romans</i> biscuits. Waffers, florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprints), finger biscuits, <i>cigarettes russes</i> biscuits, cookies, etc.	772
2	Cakes and biscuits	Ladyfinger biscuits_boudoirs	All ladyfinger biscuits / boudoirs and pink biscuits from Reims (plain, flavored, with fruit, nuts, grains, chocolate, etc).	769
2	Cakes and biscuits	Chocolate biscuits	Chocolate biscuits* or biscuits with cocoa, without filling, without topping, may contain nuts or grains. Puff pastry biscuits, florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprints), finger biscuits, <i>cigarettes russes</i> biscuits, cookies, etc.	766

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
2	Cakes and biscuits	Chocolate cakes	Chocolate cakes* or cakes with cocoa, filled, coated or with chips. These products can contain nuts or grains. This subcategory includes marble cakes and brownies. Barquette-type sponge biscuits and chocolate waffles as well as products with fruit are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.	782
2	Cakes and biscuits	Crepes: other	Crepes that are not plain, can contain chocolate, fruit, caramel, etc.	776
2	Cakes and biscuits	Crepes dentelle: other	Crepes dentelle that are not plain (including products with caramel, and/or chocolate, and/or fruit)	777
2	Cakes and biscuits	Filled thin waffles or wafers: other	Thin filled waffles and flat or tube wafers filled without fruit (with brown sugar, with honey, etc), coated or not with chocolate. Includes thin filled waffles and filled flat or tube wafers with both fruit and chocolate	786

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
2	Cakes and biscuits	Biscuits with fruit_nut_grain	Biscuits* with fruit and/or nuts and/or grains, without filling, without topping. These products do not contain chocolate. Waffles or wafers, almond crisps, almond tuile biscuits, puff pastry biscuits, florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprints), finger biscuits, <i>cigarettes russes</i> biscuits, cookies, etc.	768
2	Cakes and biscuits	Coconut rock buns	All Congolese rocks or coconut rock buns (with or without chocolate, with or without fruit in addition to coconut)	775
2	Cakes and biscuits	Thin waffles or wafers without filling	Thin waffles and wafers without filling, for example with honey, chicory, covered with chocolate, etc.	788
2	Cakes and biscuits	Plain biscuits	Plain or flavoured biscuits*. Puff pastry biscuits, macaroons and ladyfinger biscuits/boudoirs are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprints), finger biscuits, <i>cigarettes russes</i> biscuits, cookies, etc.	774

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
2	Cakes and biscuits	Biscuits: other	Biscuits that do not correspond to any of the other defined subcategories (florentine biscuits, macaroons, biscuits to be dipped into spread, ginger biscuits, biscuits with tea, etc).	765
2	Cakes and biscuits	Fruit and chocolate biscuits	Biscuits* with fruit (pieces, filling, extracts), including coconut, as well as chocolate or cocoa (topping, coating, inclusion). These products can contain nuts or grains in addition to the fruit. Puff pastry biscuits, florentine biscuits, macaroons and biscuits with a genoise sponge base are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprints), finger biscuits, <i>cigarettes russes</i> biscuits, cookies, etc.	767

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
2	Cakes and biscuits	Fruit-filled or coated biscuits	Filled biscuits*, sandwiched or coated with fruit (including coconut). These products can contain nuts or grains and do not contain chocolate. This subcategory includes barquette-type sponge biscuits, tartlet-type biscuits and <i>Lunette de Romans</i> biscuits. Florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprints), finger biscuits, <i>cigarettes russes</i> biscuits, cookies, etc.	773
2	Cakes and biscuits	Fruit and chocolate cakes	Cakes* with fruit (including coconut) and chocolate in the dough or as topping or icing. Crepes are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.	783
2	Cakes and biscuits	Fruit-filled thin waffles or wafers	Thin waffles and flat or tube wafers with fruit filling (including coconut). These products do not contain chocolate.	787
2	Cakes and biscuits	Gingerbreads	All gingerbreads / iced gingerbreads (term used in the legal name or in the commercial name). These products can be plain, with honey, with milk, with fruit, with chocolate, with dried fruits, etc.	791

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
2	Cakes and biscuits	Plain or with sugar cakes	Plain, with sugar (sprinkled with icing sugar, with inclusions of sugar) or flavored cakes*. Waffles are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.	785
2	Cakes and biscuits	Cakes: other	Cakes that do not correspond to any of the other defined subcategories (rum babas, <i>kouign-amann</i> , <i>canelés</i> , sponge cakes filled with cream, cakes with coffee, carrot cakes, etc)	781
2	Cakes and biscuits	Puff pastry biscuits: other	Puff pastry biscuits and French palmier cookies that are not plain (with grains, with fruit, covered with chocolate, etc)	770
2	Cakes and biscuits	Plain or with sugar crepes	Plain or with sugar (sprinkled with sugar, icing sugar, etc.) crepes, can be flavoured. Crepes with caramel are excluded from this subcategory.	779
2	Cakes and biscuits	Plain crepes dentelle	Plain or flavoured crepes dentelle	778
2	Cakes and biscuits	Plain or with sugar soft waffles	Plain or with sugar (sprinkled with icing sugar, with inclusions of sugar) soft waffles, without filling, can be flavored.	790



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
2	Cakes and biscuits	Plain or with sugar puff pastry biscuits	Puff pastry biscuits and French palmier cookies plain or with sugar (with inclusions of sugar, sugar icing, etc.), can contain flavors. Puff pastry biscuits or French palmier cookies with caramel are excluded from this subcategory.	771
2	Cakes and biscuits	Soft waffles: other	Soft waffles that are not plain. These products can contain chocolate, cocoa, fruits, etc.	789
2	Cakes and biscuits	Speculoos	All speculoos (term used in the legal name or in the commercial name). These products can contain fruit, nuts, grains, chocolate, etc.	792
2	Cakes and biscuits	Assortments	Assortments of cakes and biscuits with average ingredient lists and nutritional values and consisting of products belonging to different subcategories. (If the products in the assortment are belonging to the same subcategory, they should be classified in the corresponding subcategory).	794
14	Canned fruits	Other preserved fruits	Other canned fruits	762
14	Canned fruits	Preserved fruits in fruit juice	The covering liquid consists solely of one or more fruit juices or juices made from concentrate, possibly with the addition of sugar	253
14	Canned fruits	Preserved fruits in syrup	The covering liquid is a mixture of water and possibly juice and sugar	19
14	Canned fruits	Preserved fruits in water	The covering liquid consists solely of water, possibly with the addition of authorised additives (colourings, authorised food acids, etc.)	254

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
35	Cereal bars	Cereal bars with chocolate chips/chocolate coating/chocolate filling	Chocolate and/or chocolate-chip cereal bars, with dark, milk or white chocolate topping or filling e.g. chocolate cereal bars with a milk layer, milk chocolate-filled cereal bars, white chocolate cereal bars, etc.	60
35	Cereal bars	Cereal bars with fruits	Cereal bars with fruit e.g. cereal bars with apricots, cereal bars with green apple, etc.	56
35	Cereal bars	Cereal bars with fruits and chocolate	Cereal bars with fruit and dark, milk or white chocolate e.g. chocolate and coconut cereal bars, chocolate-banana cereal bars, apricot cereal bars with a milk chocolate layer, etc.	59
35	Cereal bars	Cereal bars with nuts	Cereal bars with nuts and that may contain fruit e.g. cereal bars with hazelnuts, cereal bars with caramelised almonds, cereal bars with peanuts, almonds, fruit pieces with cranberries, raisins and oats, etc.	57
35	Cereal bars	Cereal bars with nuts and chocolate	Cereal bars with nuts and dark, milk or white chocolate, may contain fruit e.g. dark chocolate and almond cereal bars, chocolate-chip and peanut cereal bars, hazelnut-raisin chocolate cereal bars, etc.	58

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
35	Cereal bars	Other cereal bars	Other cereal bars e.g. caramel cereal bars with or without honey, cereal bars with a milk layer, cereal bars with pieces of biscuit (lemon flavour or with dried strawberries), plain cereal bites, etc.	14
45	Cheeses	Other cheeses	Other cheeses	22
45	Cheeses	Other soft cow's milk cheeses or cheese specialities	Other soft cow's milk cheeses or cheese specialities. E.g. Chaource, Époisses, Livarot, Maroilles, Mont d'Or, Neufchâtel, Pont l'Évêque, Brie, Brie de Meaux, Brie de pays, Coulommiers, reduced salt Coulommiers, etc., Saint-Marcellin, Saint-Félicien, soft tomme, bricks/squares/slabs of cow's milk cheese, tartiflette cheese, triple-or double-cream cow's milk cheese, with reduced salt, other soft cow's milk cheeses or cheese specialities. May contain creamed goat's cheese mixed with cow's milk	9
45	Cheeses	Camembert	Camembert made from pasteurised milk or raw milk, Camembert de Normandie, including with reduced salt	129
45	Cheeses	Other processed cheeses or cheese specialities	Other processed cheeses or cheese specialities : processed cheese creams, Apéricube®, processed cheese squares, processed cheese snacks with breadsticks, processed cheese cocktail flakes, flavoured processed cheese, Plain or flavoured Cancoillotte	11

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
45	Cheeses	Cocktail bites	Coated or filled (pesto, raw-cured ham, dried tomato, etc.) fresh cheese balls or bites	108
45	Cheeses	Comté	Sliced, grated or diced Comté	176
45	Cheeses	Other soft sheep's or goat's milk cheeses or cheese specialities	Other soft sheep's or goat's milk cheeses or cheese specialities : Bricks/squares/slabs of sheep's/goat's milk, Selles-sur-Cher, other soft sheep's or goat's milk cheeses or cheese specialities. May contain mixtures of goat's milk and other milk(s). Crottin de Chavignol, Crottin de chèvre, Cabécou, Chabichou, Picodon, Rocamadour, including products with reduced salt content	8
45	Cheeses	Edam	Edam	225
45	Cheeses	Emmental	Emmental, sliced, grated or diced, including with reduced salt	226
45	Cheeses	Feta and similar in oil	Dices of feta or similar sheep's or cow's cheese, in oil and herbs	228
45	Cheeses	Feta and similar without oil	Slab of feta or similar sheep's or cow's cheese, including products with reduced salt content	229
45	Cheeses	Unripened goat's cheese	Fresh cheese made with goat's milk, plain or flavoured. May contain products with non-goat's milk, in a mixture	242
45	Cheeses	Goat's cheese logs	Goat's cheese logs, Sainte-Maure	121
45	Cheeses	Gouda	Gouda (sliced, grated or diced, plain or flavoured)	322

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
45	Cheeses	Low-fat pressed cheeses or cheese specialities	Low-fat Leerdammer®, low-fat grated Emmental, low-fat Gouda, etc.	243
45	Cheeses	Low-fat processed cheeses or cheese specialities	Various low-fat processed cheeses or cheese specialities	244
45	Cheeses	Low-fat unripened cheeses or cheese specialities	Various low-fat fresh cheeses including cottage cheese. May contain reduced-/low-salt products	245
45	Cheeses	Maasdam	Maasdam	355
45	Cheeses	Mascarpone	Mascarpone, Gorgonzola with Mascarpone (torta), low-fat Mascarpone	360
45	Cheeses	Other uncooked pressed cheeses or speciality cheeses	Other uncooked pressed cheeses or speciality cheeses. E.g. Cheddar, Leerdammer®, Port Salut®, Cousterson®, Cantal, Morbier, Saint-Nectaire, sheep's milk cheeses (Etorki®, Ossau Iraty, etc.), others (Babybel®, MiniBabybel®, Chaussée aux Moines®, etc.), Slices of raclette cheese (uncooked pressed cheese), flavoured or plain, including with reduced salt, Mimolette in slices or cubes, Reblochon, Uncooked pressed Tomme cheese: Tomme de montagne, des Pyrénées, de Savoie, Tommette de Domessin, etc.	10
45	Cheeses	Mozzarella	Mozzarella in slices, balls, whole, grated, Burrata	384
45	Cheeses	Munster	Munster	387

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
45	Cheeses	Blue-veined cheeses	Blue, Roquefort, Fourme d'Ambert, Gorgonzola, low-fat blue	241
45	Cheeses	Other hard pressed cheeses	Other hard pressed cheeses. E.g. Abondance, Beaufort, Pecorino Romano, Gruyère, Queso Manchego, other hard pressed cheeses	7
45	Cheeses	Brousse and ricotta	Brousse, ricotta	12
45	Cheeses	Parmesan and similar products	Parmesan, Grana Padano, Gran Gusto® and other hard cheeses	412
45	Cheeses	Preparations for cheese fondue	Preparations for cheese fondue with various flavours (Emmental, Comté, pepper, etc.), with white wine, water, etc.	255
45	Cheeses	Processed cheese slices for culinary use	Slices of processed cheese for toasted sandwiches (croque monsieur) or burgers, with various flavours (Cheddar, Emmental, goat's cheese, blue, plain)	584
45	Cheeses	Soft low-fat cheeses	Low-fat soft cow's, goat's or sheep's milk cheeses	240
45	Cheeses	Unripened cheeses or cheese specialities, flavoured	Culinary or spreadable cheeses or cheese specialities, with a variety of flavours (garlic and herbs, pepper, walnuts, cranberry, raisins, etc.) containing non-goat's milk. May contain creamed goat's cheese/goat cheeses mixed with cow's milk and cottage cheese.	246

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
45	Cheeses	Unripened cheeses or cheese specialities, plain	Plain spreadable cheeses or cheese specialities, possibly with cream, containing non-goat's milk. May contain reduced-/low-salt products. Contains fresh cheese based on fromage blanc and cottage cheese.	247
45	Cheeses	Cheese mixtures	Mixtures of cheeses (grated or cubed, for example) belonging to different families: 3 grated cheeses, grated pizza cheese, grated cheese for gratin, Gouda and Mimolette cubes, etc.	707
21	Chocolate products	Other chocolate products	Other chocolate products	34
21	Chocolate products	Capsules for making drinking chocolate	Preparations for making cocoa beverages in machines	221
21	Chocolate products	Chocolate assortments	Items including several types of chocolate (dark/white/milk chocolate mixtures in the same package)	4
21	Chocolate products	Chocolate bars	Milk chocolate bars with peanut filling; milk chocolate bars with caramel filling, etc.	61
21	Chocolate products	Chocolate bites/chocolate-coated confectionery	Fancy truffles with candied orange peel; chocolate-coated peanuts/almonds; chocolate-coated cereals; thin dark chocolate leaves with mint filling; praline truffles, etc.	107
21	Chocolate products	Chocolate spreads	Hazelnut spreads; milk spreads, etc.	417
21	Chocolate products	Cocoa powders	Chocolate powders with 100% cocoa	475
21	Chocolate products	Dark chocolate	Dark chocolate tablets without filling or inclusions (hazelnuts/almonds/cocoa beans, etc)	735

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
21	Chocolate products	Dark cooking chocolate	Dark chocolate tablets for cooking/desserts with or without inclusions	163
21	Chocolate products	Diet (light) chocolate	Diet/light chocolate tablets (without added sugar, reduced carbohydrate content, etc.)	151
21	Chocolate products	Filled milk chocolate	Milk chocolate tablets with filling containing inclusions (milk chocolate with milk filling; milk chocolate with praline filling and chopped hazelnuts, etc.)	734
21	Chocolate products	Filled dark chocolate	Dark chocolate tablets with filling containing inclusions or not (creamy chocolate fondant; dark chocolate with fancy truffle and grated caramelised coconut filling; dark chocolate with mousse filling, etc.)	167
21	Chocolate products	Filled white chocolate	White chocolate tablets with filling containing inclusions or not (white chocolate with praline filling; white chocolate with nougat cream, whole hazelnuts and nougatine chips, etc.)	162
21	Chocolate products	Milk chocolate	Milk chocolate tablets without filling or inclusions (hazelnuts/almonds/cocoa beans, etc)	732
21	Chocolate products	Milk chocolate with inclusions	Milk chocolate tablets with inclusions : hazelnuts/almonds/cocoa beans/fruits/cereals, etc. and without filling (milk chocolate with whole hazelnuts; milk chocolate with crispy cereals, etc.)	733



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
21	Chocolate products	Milk cooking chocolate	Milk chocolate tablets for cooking/desserts with or without inclusions	152
21	Chocolate products	Dark chocolate with inclusions	Dark chocolate tablets with hazelnuts/almonds/cocoa beans/fruits/cereals, etc. (dark chocolate with caramelised pecan nuts; superior dark chocolate with puffed quinoa, etc.)	166
21	Chocolate products	Sweetened cocoa powders	Sweet chocolate powders for mixing with water or milk; chocolate powders with a reduced sugar content, etc.	476
21	Chocolate products	White chocolate	White chocolate tablets (white chocolate; extra fine white chocolate, etc.)	159
21	Chocolate products	White chocolate with inclusions	White chocolate tablets with inclusions and without filling (fine white chocolate with almond and honey nougat; white chocolate with strawberry chips, white chocolate with crispy cereals, etc.)	161
21	Chocolate products	White cooking chocolate	White chocolate tablets for cooking/desserts	160
21	Chocolate products	Chocolate substitute	Any type of Chocolate imitate or substitute prepared to a relevant extent (or fully) not from Cocoa derivatives.	738
38	Cold sauces	Emulsified sauces	All emulsified accompaniment sauces (tartar, Bourguignonne, pepper, for French fries, etc.) other than mayonnaise, which may be stabilised with the addition of egg yolk (often but not always)	508

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
38	Cold sauces	French dressings	Products with "French dressing" in their sales description and/or an oil weight of less than 75% and greater than or equal to 50% in accordance with the manufacturing code governing them	514
38	Cold sauces	Ketchups	Products with the term "ketchup" in their sales description, these products comply with a manufacturing code	338
38	Cold sauces	Light French dressings	Products with "reduced ... French dressing" (oil, fat or any other synonym) in their sales description and/or an oil weight of less than 50% and greater than or equal to 25% in accordance with the manufacturing code governing them	606
38	Cold sauces	Light ketchups	Products with the term "ketchup" in their sales description, as well as a statement regarding a reduction in sugar	339
38	Cold sauces	Low-fat (light) mayonnaise	Products with the term "mayonnaise" in their sales description, as well as a statement regarding a reduction in fat	365
38	Cold sauces	Low-fat (light) salad dressings	Products with "raw vegetable sauces", "crudité sauces" or "salad sauces" in their sales description/name, as well as a statement regarding a reduction in fat	506

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
38	Cold sauces	Mayonnaise	Products with the term "mayonnaise" in their sales description, and a total fat content of 70% or more in accordance with the manufacturing code governing them	364
38	Cold sauces	Non-emulsified sauces	All non-emulsified accompaniment sauces (barbecue, Mexican, etc.) other than ketchups	509
38	Cold sauces	Salad dressings	Products with "raw vegetable sauces", "crudité sauces", "salad sauces" or "Caesar sauces" in their sales description/name	505
38	Cold sauces	Soy sauces	Sauce made from soy beans	627
38	Cold sauces	Mustards	Mustards: condiment foods made from crushed mustard seeds in a mixture of water and vinegar	638
38	Cold sauces	Other cold sauces	Cold sauces not corresponding to any of the defined subcategories.	755
48	Confectionery	Other confectionery	Confectionery that does not fit the definition of any of the other families.	18
48	Confectionery	Confectionery assortments	Assortments with confectionery from different families and with average nutritional values. Assortments of confectionery from the same subcategory (with different tastes/flavours) are classified in the product subcategory. For examples : assortment of gum/jelly sweets and liquorice, assortment of caramels and chocolate caramels.	686

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
48	Confectionery	Gum/jelly sweets	<p>Sweets consisting of sugar and at least one gelling agent from the following list: gelatine, pectins, carrageenans, starches (modified or unmodified), gum arabic or acacia gum, agar agar, alginates, gellan gum, flour.</p> <p>These products may have a tangy flavour and/or be flavoured and/or filled. For example : gummy bears sweet, gummy crocodile sweets, fried egg sweets, cola bottle sweets, peach flavoured ring jelly sweets, gummy sour fruit sweets.</p> <p>Caramels, liquorice, marshmallows and chewing gum are not included in this subcategory.</p>	687

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
48	Confectionery	Boiled sweets	<p>Sweets consisting of sugar and containing no gelling agent (gelatine, pectins, carrageenans, starches (modified or unmodified), gum arabic or acacia gum, agar agar, alginates, gellan gum, flour) in the list of ingredients.</p> <p>These products may have a tangy flavour and/or be flavoured and/or filled.</p> <p>Caramels, liquorice, marshmallows and chewing gum are not included in this subcategory.</p> <p>CAUTION these products may contain carrageenans used as a stabiliser.</p> <p>For examples : sour sweets, caramel flavoured sweets, liquorice flavoured sweets, bêtises de Cambrai sweets, fruits and col flavoured lollipop.</p>	688
48	Confectionery	Calissons	<p>Confectionery made from a fine paste of candied melon (or other candied fruit) and almonds crushed together, topped with royal icing and placed on a base of unleavened bread.</p> <p>Contains the word "calisson" in the trade name and/or sales description. For example : Calisson d'Aix sweets.</p>	689

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
48	Confectionery	Caramels	<p>Caramels with a hard or soft texture, which may be flavoured and whose trade name and/or sales description contains the words "caramel" or "toffee".</p> <p>All Carambar type sweets are excluded from this subcategory. For examples : hard caramels with Normandy's cream, soft caramels with butter and Guérande flower of salt , soft vanilla flavoured caramels.</p>	690
48	Confectionery	Chewing gum	<p>Chewing gums whose sales description contains the words "chewing gum" or "bubble gum" or "gum ball" or "gum for chewing". They may be sugar-coated, filled, coloured, flavoured, and may have a tangy flavour.</p> <p>Chewing gum-filled sweets are excluded from this subcategory. For examples : mint chewing-gums, chlorophyll chewing_gums.</p>	145
48	Confectionery	Marshmallows	<p>Marshmallows without chocolate whose trade name and/or sales description contains the word "marshmallow" (guimauve).</p> <p>These products may have a tangy flavour and/or be flavoured. For examples : marshmallow, vanilla marshmallow.</p>	691

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
48	Confectionery	Lozenges	Flavoured or unflavoured lozenges whose trade name and/or sales description contains the word "lozenge" (pastille). For examples : mint flavoured lozenges, Vichy pastilles.	692
48	Confectionery	Chewy sweets	Sweets whose trade name and/or sales description contains the words "chew" or "chewy". These products may be sugar-coated and/or have a tangy flavour and/or be flavoured and/or filled. All Carambar type sweets are included in this subcategory. For examples : soft raspberry flavoured sweets. Caramels, liquorice, marshmallows, chewing gum, nougats and pralines are not included in this subcategory.	693
48	Confectionery	Liquorice	Liquorice whose trade name and/or sales description contains the word "liquorice" (régliste). These products may be flavoured and/or filled and/or coated. Liquorice-flavoured sweets are not included in this subcategory. For examples : liquorice snails, assortment of liquorice.	694

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
48	Confectionery	Other sugar-free confectionery	<p>Sugar-free artificially-sweetened chewy sweets and "caramel" type sweets, of a hard or soft texture and whose trade name and/or sales description contains the words "caramel" or "toffee" and "chew" or "chewy".</p> <p>These sweets may be flavoured and/or filled and/or coated.</p> <p>All sugar-free Carambar type sweets are included in this subcategory. For examples : caramel flavoured sugar-free sweets with stevia extract, caramel flavoured sugar-free sweets, chewy raspberry flavoured sweets.</p>	695
48	Confectionery	Sugar-free boiled sweets	<p>Sweets consisting of artificial sweetener and containing no gelling agent (gelatine, pectins, carrageenans, starches (modified or unmodified), gum arabic or acacia gum, agar agar, alginates, gellan gum, flour) in the list of ingredients.</p> <p>These products may have a tangy flavour and/or be flavoured and/or filled.</p> <p>Sugar-free lozenges, sugar-free liquorice and sugar-free chewing gum are not included in this subcategory.</p> <p>For examples : sugar-free sweets, orange and lemon flavoured sugar-free sweets.</p>	696



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
48	Confectionery	Sugar-free chewing gum	Sugar-free artificially-sweetened chewing gums whose sales description contains the words "chewing gum" or "bubble gum" or "gum ball" or "gum for chewing". They may be sugar-coated, filled, coloured, flavoured, and may have a tangy flavour. Chewing gum-filled sugar-free sweets are excluded from this subcategory. For examples : spearmint sugar-free chewing gums.	146
48	Confectionery	Sugar-free lozenges	Sugar-free artificially-sweetened lozenges, flavoured or unflavoured, whose trade name and/or sales description contains the word "lozenge" (pastille)". For examples : mint flavoured sugar-free lozenges.	697
48	Confectionery	Sugar-free liquorice	Sugar-free artificially-sweetened liquorice whose trade name and/or sales description contains the word "liquorice" (régliste). These products may be flavoured and/or filled and/or coated. Liquorice-flavoured sugar-free sweets are not included in this subcategory. For example : liquorice and plants sugar-free sweets.	698

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
48	Confectionery	Dextrose sweets	<p>Sweets made of sugar and dextrose, with a hard texture. Contains the word "dextrose" in the list of ingredients.</p> <p>These sweets cannot be either sugar-coated or jellied.</p> <p>Caramels, liquorice, marshmallows and chewing gum are not included in this subcategory.</p> <p>For examples : sweet watch bracelet, sweet necklaces, lollipops</p>	699
48	Confectionery	Sugar-coated sweets	<p>Sweets whose trade name or sales description contains the word "sugar-coated" but not the words "chew" or "chewy".</p> <p>Caramels, liquorice, marshmallows, chewing gum and sugared almonds are not included in this subcategory.</p>	700
48	Confectionery	Chocolate caramels	<p>Caramels with a hard or soft texture, which are filled and/or chocolate coated and whose trade name and/or sales description contains the words "caramel" or "toffee" and "chocolate". For example : soft caramels covered by a layer of chocolate.</p> <p>All Carambar type sweets are excluded from this subcategory.</p>	701

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
48	Confectionery	Candied fruit and fruit pastes	Fruit confectionery in which the product's trade name and/or sales description contains the words "candied fruit" or "fruit pastes". Fruit cooked in a sugar syrup (sucrose, glucose syrup, glucose-fructose syrup, etc.) to which honey or more generally glucose may be added to prevent crystallisation, are included in this subcategory.	702
48	Confectionery	Chocolate marshmallows	Marshmallows with chocolate whose trade name and/or sales description contains the word "marshmallow" (guimauve). For example : chocolat marshmallow bears. These products may have a tangy flavour and/or be flavoured and/or coated.	703
48	Confectionery	Nougats and pralines	Confectionery whose trade name and/or sales description contains the words "nougat" or "praline".	704
19	Crackers	Other crackers	Other crackers	13
19	Crackers	Asian mixtures	Mixtures of peanuts and/or rice crackers and/or small Japanese biscuits	366
19	Crackers	Breadsticks	Long dry bread rolls or flutes, salted and not flaky; plain or with sesame and/or olives and/or olive oil	327
19	Crackers	Coated peanuts	Salted or coated peanuts	124
19	Crackers	Dried fruit cocktails	Mixtures of dried and/or candied and/or fried fruits; sweetened or plain fruits	171

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
19	Crackers	Fruit and seed mixtures	Mixtures of dried fruits (sweetened and/or candied and/or fried) and seeds (roasted and/or salted and/or caramelised)	367
19	Crackers	Mini cakes	Mini savoury cakes (ham-olives/emmental-walnuts)	368
19	Crackers	Peanuts, nuts and seeds	Peanuts, almonds, sunflower seeds, pumpkin seeds, cashew nuts, macadamia nuts, walnuts, hazelnuts, pistachios; with or without shells; plain or roasted and/or salted	2
19	Crackers	Popcorn	Popcorn or popping corn; Sweet or salted	473
19	Crackers	Puff pastry biscuits	Savoury puff pastry biscuits such as flutes, twists, squares or hearts; plain or flavoured (tomato, cheese, etc.)	231
19	Crackers	Salted crackers	Dry salted biscuits consumed as a cocktail snack	188
19	Crackers	Shrimp crisps	Shrimp crisps or crackers	63
19	Crackers	Puffed cereal crackers	Puffed flakes or products made with wheat flour and/or corn flour and/or rice flour and/or multigrain flour (rice, corn, oats, wheat)	528
19	Crackers	Pretzels	Savoury cocktail biscuits such as sticks or pretzels	111
19	Crackers	Sweet peanuts	Sugar-coated or caramelised peanuts	125
19	Crackers	Tortillas crisps	Corn tortillas or chips, rolled or not; Plain or spiced or flavoured (olive, cheese, chili, barbecue, etc.)	583

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
19	Crackers	Fried tuile biscuits (Crunchips and Pringles style)	Fried tuile (stackable) biscuits made from (dried or powder) potatoes and/or corn, rice, wheat and/or malted barley flour; Plain or flavoured (paprika, cheese, roast chicken, barbecue, etc.), Does not contain crisps (deep-fried slices of potatoes).	586
19	Crackers	Wafers	Savoury crispy wafer-type biscuits, filled or flavoured (cheese, curry, garlic and chives, etc.)	304
19	Crackers	Vegetable_legume_fruits crisps	Vegetable, legumes and/or fruit crisps (fried slices)	756
5	Delicatessen meats and similar	Cooked lamb (packaged)	Cooked lamb packaged in trays or packs or canned. Contains similar products reduced in salt.	1
5	Delicatessen meats and similar	Other cooked meats (packaged)	Other cooked meats (packaged or canned). Contains similar products reduced in salt.	50
5	Delicatessen meats and similar	Dried, smoked or cured pork	Dried, smoked or cured pork (coppa, Alsatian Kassler, Corsican Lonzu and other regional specialities of this type). Contains similar products reduced in salt.	628
5	Delicatessen meats and similar	Dried, smoked or cured beef	Dried, smoked or cured beef (Bündnerfleisch, bresaola). Contains similar products reduced in salt.	629
5	Delicatessen meats and similar	Boudin, andouille and andouillette	Boudin (white or blood sausage), uncooked andouille and andouillette (chitterling sausage). Contains similar products reduced in salt.	630

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
5	Delicatessen meats and similar	Pork belly and bacon (packaged)	Belly, country bacon, pancetta, lardons or matchsticks (allumettes) made from cured pork belly or cuts, slices or matchsticks of pork bacon Contains similar products reduced in salt.	753
5	Delicatessen meats and similar	Cooked beef (packaged)	Cooked beef packaged in trays or packs or canned. Example : corned beef, etc. Contains similar products reduced in salt.	90
5	Delicatessen meats and similar	Chorizo	Chorizo (sliced or unsliced). Contains similar products reduced in salt.	168
5	Delicatessen meats and similar	Cooked pork ham and roast (packaged)	Cooked pork ham and roast, plain, smoked, golden baked, with herbs, etc. in slices or in the form of dice/cubes, matchsticks, grated ham, chopped ham. Cooked ham knuckle, all qualities combined. Prosciutto cotto is included in this subcategory. Contains similar products reduced in salt.	742

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
5	Delicatessen meats and similar	Sausages	All types of sausages. Sausages with smooth homogeneous filling, from pork or other meat (poultry, beef...) like sausages from Alsace, Strasbourg or Frankfurt, cocktail sausages, sausages with cheese inclusions. Saveloys, sausages for slicing with smooth homogeneous filling (roulades), fine Lyon sausages, cooked sausages with garlic, Paris sausages. Mortadella, with or without pistachios. Sausage specialties such as chipolatas, merguez or sausages with Provençal herbs, coarse minced sausages (Morteau, Montbéliard, etc.). Cachir sausages are included in this subcategory. Cotto salami (boiled salami) is included in this subcategory. Contains similar products reduced in salt.	795

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
5	Delicatessen meats and similar	Pâté	Country-style pâté, with or without mushrooms or herbs. Superior country-style pâté, country terrine, Breton pâté or terrine, with mushrooms or herbs. Pork liver pâté, mousse, terrine or cream, with or without mushrooms and herbs. Pâté or terrine made from game, with or without inclusions (dried fruit, chestnuts, etc.). Pork-based pâté: ham pâté, meat pâté, Ardennes pâté. Pâté or terrine made from poultry (duck, turkey, chicken) or rabbit, with or without inclusions, containing pork. Pork rillettes. Other pork delicatessen specialities similar to rillettes. Chicken, duck or goose rillettes, scratchings (may contain pork). Other poultry-based delicatessen specialities similar to rillettes. Duck mousse of superior quality or not, with or without mushrooms and herbs, regardless of the liver content. Contains similar products reduced in salt.	743
5	Delicatessen meats and similar	Dry sausage	Dry-cured sausages with or without inclusions (dried fruit, cheese, olives, etc.), dry salami, danish salami.. Cotto salami (boiled salami) is excluded from this subcategory. Does not contain pepperoni. Contains similar products reduced in salt.	520



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
5	Delicatessen meats and similar	Cured ham	Dry-cured ham or raw cured ham Contains similar products reduced in salt. Example : Prosciutto crudo, Serrano ham, Iberian ham, Speck dell' Alto Adige, etc.	333
5	Delicatessen meats and similar	Alternative products without animal protein	Alternative products without animal protein (containing tofu, soy, etc.). These products may contain vegetables. Falafels, veggie steaks or patties are excluded from this subcategory. Contains similar products reduced in salt.	631
5	Delicatessen meats and similar	Other cured meats	Dried meat other than pork or beef. Veal bacon and poultry bacon are included in this subcategory. Contains similar products reduced in salt.	632
5	Delicatessen meats and similar	Pepperoni	Cured mixture of pork and/or beef seasoned with paprika or other chili pepper. Contains similar products reduced in salt.	634
5	Delicatessen meats and similar	Poultry ham and roast (packaged)	Poultry breast or fillet, plain or smoked, golden baked, with herbs, mustard, etc. Poultry roast, poultry breast, cooked poultry meat preparations, in slices or in the form of dice/cube, matchsticks, grated, chopped. Contains similar products reduced in salt.	332

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
5	Delicatessen meats and similar	Poultry lardons	Lardons or matchsticks made from poultry meat Contains similar products reduced in salt.	342
5	Delicatessen meats and similar	Preserved pork or poultry liver (canned)	Confit of poultry or pork liver. Contains similar products reduced in salt.	177
5	Delicatessen meats and similar	Assortment of delicatessen meats	Assortment of different delicatessen meats with average nutritional values for all the assortment components and consisting of products not belonging to the same families. Contains similar products reduced in salt.	740
5	Delicatessen meats and similar	Other delicatessen meats based on offal	Other delicatessen meats based on offal : cooked tongue, cooked muzzle, etc. Contains similar products reduced in salt.	741
20	Dessert mixes	Batters for chocolate cakes	Liquid batters for chocolate cakes, including brownies, marble cakes, muffins, with or without inclusions	427
20	Dessert mixes	Batters for plain cakes	Liquid batters for plain cakes, with or without chocolate chips, apple pieces, coconut, with or without flavourings	428
20	Dessert mixes	Cookie doughs	Liquid batters for cookies, with or without pecans, white chocolate, etc.	426
20	Dessert mixes	Mixes for chocolate cakes	Powdered preparations for chocolate cakes including brownies, marble cakes, muffins, with or without inclusions	377

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
20	Dessert mixes	Mixes for chocolate mousses	Powdered preparations for chocolate mousse, with or without chocolate chips	380
20	Dessert mixes	Other mixes for desserts to be supplemented	Other mixes for desserts to be supplemented	25
20	Dessert mixes	Mixes for cookies	Powdered preparations for chocolate-chip, all chocolate, white chocolate, vanilla flavoured cookies, etc.	370
20	Dessert mixes	Mixes for crèmes brûlées_panna cotta	Powdered preparations for crème brûlée, panna cotta, egg custard, salted butter cream, chocolate cream, with or without coulis, and petits pots de crème (dessert creams)	372
20	Dessert mixes	Mixes for crepes_waffles_pancakes	Powdered preparations for crepes, waffles, pancakes, blinis, including buckwheat or oatbran pancakes, pancakes with chocolate, etc.	373
20	Dessert mixes	Mixes for custard sauces_pastry creams	Powdered preparations for custard sauces, pastry creams, almond creams	371
20	Dessert mixes	Mixes for dairy-based desserts without added sugar	Powdered preparations for classic flans and custards such as chocolate or vanilla flavoured, etc., without added sugar	376
20	Dessert mixes	Mixes for jellied dairy-based desserts	Powdered preparations for classic flans and custards such as chocolate or vanilla flavoured, etc.	375
20	Dessert mixes	Mixes for macaroons	Powdered macaroon preparations (various flavours)	379
20	Dessert mixes	Mixes for other dairy-based desserts	Powdered preparations for semolina custards, egg custards, crème caramel, dessert creams	369

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
20	Dessert mixes	Mixes for plain cakes	Powdered preparations for plain cakes including financiers, carrot cakes, gingerbreads, madeleines, with or without inclusions, flavourings, icing, etc.	378
20	Dessert mixes	Mixes for rice desserts	Powdered preparations for rice puddings	374
3	Fresh dairy products and desserts	Other dairy products	Other dairy products	35
3	Fresh dairy products and desserts	Artificially-sweetened yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, and containing artificial sweeteners regardless of the fat content, with or without sugar. Contains drinkable dairy products with or without ferments.	611
3	Fresh dairy products and desserts	Classic plain fresh cheeses with no added sugar	Plain and unsweetened fresh cheeses, smooth fromages blancs, faisselles, quark, skyr and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/fresh cheeses, with a fat content $\leq 3.8\text{g}/100\text{g}$ . Do not contain artificial sweetener	249
3	Fresh dairy products and desserts	Classic plain yoghurts and fermented milks with no added sugar	Unsweetened plain yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, with a fat content $\leq 3.6\text{g}/100\text{g}$ . Do not contain artificial sweetener	612

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
3	Fresh dairy products and desserts	Classic sweet yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, sweetened without artificial sweetener and with a fat content $\leq 3.6\text{g}/100\text{g}$ . Groups together plain or flavoured products and also those containing fruits, on a bed of fruits, with inclusions of chocolate/caramel/biscuits/cereals, etc. Contains drinkable dairy products with or without ferments	614
3	Fresh dairy products and desserts	Egg-based fresh desserts	Egg-based dessert such as egg creams, crèmes caramel, egg custards, floating islands, œufs au lait, crèmes brûlées and catalan creams	216
3	Fresh dairy products and desserts	Fresh desserts with cereals	Groups together fresh desserts such as all rice milk puddings (vanilla, caramel, chocolate, on a bed of strawberry, etc.), semolina milk puddings, as well as rice and semolina cakes. Groups together products with or without inclusions (of grapes, coconut, etc.), with or without topping.	215
3	Fresh dairy products and desserts	Fresh light and/or artificially-sweetened desserts	Groups together all products in the fresh desserts category containing artificial sweeteners and/or a nutrition claim about reduction, low or no fat and/or sugar according to Regulation (EC) No 1924/2006	218

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
3	Fresh dairy products and desserts	Gourmet plain fresh cheeses with no added sugar	Plain and unsweetened fresh cheeses, smooth fromages blancs, petits suisses, faisselles, quark, skyr, fresh cheeses with mousse, fromage blanc/fresh cheese mousses and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/fresh cheese and with a fat content >3.8g/100g, mainly due to the addition of cream. Do not contain artificial sweetener	250
3	Fresh dairy products and desserts	Gourmet plain yoghurts and fermented milks with no added sugar	Unsweetened plain yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt with a fat content >3.6g/100g, mainly due to the addition of cream. Do not contain artificial sweetener	613

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
3	Fresh dairy products and desserts	Gourmet sweet fresh cheeses	Sweetened fresh cheeses, smooth fromages blancs, quark, skyr, fresh cheeses with mousse, fromage blanc/fresh cheese mousses and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/ fresh cheeses and with a fat content >3.8g/100g, mainly due to the addition of cream. Do not contain artificial sweetener. Groups together plain and flavoured products but also those containing fruits, on a bed of fruit, with inclusions of chocolate/caramel/biscuit/cereal, etc.	252
3	Fresh dairy products and desserts	Gourmet sweet yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, sweetened without artificial sweetener and with a fat content >3.6g/100g, mainly due to the addition of cream. Groups together plain and flavoured products and also those containing fruits, on a bed of fruits, with inclusions of chocolate/caramel/biscuits/cereals, etc.	615

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
3	Fresh dairy products and desserts	Artificially-sweetened fresh cheeses	Artificially-sweetened fresh cheeses, quark, skyr and equivalent products such as dairy specialities/dairy desserts based on ferments or fromage blanc/fresh cheese, irrespective of fat content. May contain artificially-sweetened and sugar-sweetened products	708
3	Fresh dairy products and desserts	Dessert creams and jellied milks	Groups together fresh desserts based on jellied milk or thickened milk without ferment, such as flan or dessert creams, regardless of the flavour (chocolate, vanilla, coffee, brownie, with fruit, on a bed of fruit, etc.)	709
3	Fresh dairy products and desserts	Liégeois desserts and similar	Groups together fresh desserts with "Liégeois" or "Viennese" on the front of the packaging as well as equivalent products based on dessert cream topped with a layer of whipped cream/mousse. Liégeois mousses and equivalent products such as mousse topped with whipped mousse/cream are not included in this subcategory	710
3	Fresh dairy products and desserts	Fresh sweetened soy desserts	Includes all sweetened soy desserts, regardless of the flavour (plain, fruit, chocolate, vanilla, etc.)	711
3	Fresh dairy products and desserts	Fresh plain unsweetened soy desserts	Includes all plain unsweetened soy desserts	712
3	Fresh dairy products and desserts	Other fresh plant-based desserts	Includes all plant-based dessert other than those with soy, whether sweetened or not, with or without cereals	713



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
3	Fresh dairy products and desserts	Fresh cakes	Groups together fresh desserts sold in the chilled food section such as brownies, cakes, fondants, moist cakes with melting centres (regardless of the filling), rum baba, clafoutis, far	714
3	Fresh dairy products and desserts	Fresh desserts with fruit	Groups together products such as pastry desserts or fresh dairy-based desserts made up of layers consisting of a cooked base (pastry, biscuit, genoise sponge) combined with creams and/or mousses and containing fruit (cut fruit, coulis, juice, purée) (example: bavarois/fruit cheesecake/fruit tiramisu/tart/crumble/fruit charlotte, Black Forest gâteau, fraisier or framboisier cakes)	715
3	Fresh dairy products and desserts	Fresh desserts without fruit	Groups together products such as pastry desserts or fresh dairy-based desserts made up of layers consisting of a cooked base (pastry, biscuit, genoise sponge, choux pastry) combined with creams and/or mousses and not containing fruit (example: cheesecake without fruit/tiramisu without fruit/chocolate tart/profiteroles)	716

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
3	Fresh dairy products and desserts	Other fresh desserts	Groups together fresh desserts other than dessert creams, jellied milks, Liégeois desserts, curdled milks, mousses, egg- or cereal-based desserts, cakes and pastry desserts. Contains for example panna cotta, mousses with ganache, fruit/fruit purées topped with whipped cream, French toast, etc.	717
3	Fresh dairy products and desserts	Fresh mousse-type desserts	Groups together mousses of all flavours (chocolate, coffee, caramel, fruit, etc.), including Liégeois mousses and mousses with sauces. May contain eggs. Does not include mousses with fromage blanc/fresh cheese and mousses with ganache.	718
3	Fresh dairy products and desserts	Classic sweetened fresh cheeses	Sugar-sweetened (without artificial sweetening) fresh cheeses, smooth fromage blanc, quark, skyr and equivalent products such as dairy specialities/dairy desserts based on ferments or fromage blanc/fresh cheese, with a fat content $\leq 3.8\text{g}/100\text{g}$ . Includes plain and flavoured products, with fruit, on a bed of fruit, etc.	719
3	Fresh dairy products and desserts	Curdled milks	Includes fresh dairy desserts (other than fresh cheeses) based on renneted milk	720
15	Fresh delicatessen products	Other chilled pizzas	Other chilled pizzas	26

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
15	Fresh delicatessen products	Chilled beetroot salads	Dressed red beetroot salads	281
15	Fresh delicatessen products	Chilled blinis	Plain blinis	89
15	Fresh delicatessen products	Other chilled salads	Other chilled salads	38
15	Fresh delicatessen products	Chilled brick sheets	Brick sheets, filo sheets	230
15	Fresh delicatessen products	Chilled burgers	Cheeseburgers, bacon or chicken burgers	122
15	Fresh delicatessen products	Chilled carrot salads	Dressed grated carrot salads	282
15	Fresh delicatessen products	Chilled celeriac salads	Celeriac remoulade, with fromage blanc or yoghurt	283
15	Fresh delicatessen products	Chilled chicken and raw vegetable sandwiches	Chicken or turkey sandwiches with raw vegetables, chicken and bacon sandwiches (with mainly chicken)	492
15	Fresh delicatessen products	Chilled chicken sandwiches	Chicken or turkey sandwiches without raw vegetables, chicken and bacon sandwiches (with mainly chicken)	491
15	Fresh delicatessen products	Chilled coleslaw salads	Dressed salads with white cabbage and carrot	278
15	Fresh delicatessen products	Chilled complete meals	Set lunches such as mixed salad sold with a starter and/or dessert	270
15	Fresh delicatessen products	Chilled cucumber salads	Cucumbers with cream or fromage blanc or yoghurt	284

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
15	Fresh delicatessen products	Chilled delicatessen-meat sandwiches	Sandwiches of rosette sausage and/or raw-cured ham and/or country pâté with or without raw vegetables	485
15	Fresh delicatessen products	Chilled filled Surimi	Surimi with fresh, processed or goat's cheese filling	563
15	Fresh delicatessen products	Chilled fish and raw vegetable sandwiches	Salmon and/or tuna and/or surimi sandwiches with raw vegetables	490
15	Fresh delicatessen products	Chilled fish roe	Lumpfish, salmon or trout roe	390
15	Fresh delicatessen products	Chilled fish sandwiches	Salmon and/or tuna and/or surimi sandwiches	489
15	Fresh delicatessen products	Chilled savoury tarts	Various tarts and quiches, tielles, pies, pissaladières, flammekueches, tartes flambées, quiche with eggs, cream and smoked lardons	577
15	Fresh delicatessen products	Chilled cheese pizzas	Fresh pizzas with cheese	439
15	Fresh delicatessen products	Chilled delicatessen-meat pizzas	Fresh pizzas with lardons and/or chorizo and/or speck and/or raw-cured ham	438
15	Fresh delicatessen products	Chilled ham and cheese pizzas	Fresh pizzas with cooked ham and cheese, fresh royal pizzas, fresh Regina pizzas	440
15	Fresh delicatessen products	Chilled meat-based pizzas	Fresh beef or chicken pizzas	442
15	Fresh delicatessen products	Chilled plain or sweetened crepes	Plain buckwheat pancakes, fresh crepes with or without sugar, pancakes	195

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
15	Fresh delicatessen products	Chilled vegetable pizzas	Fresh Margarita pizzas, fresh vegetarian pizzas (e.g. Primavera)	441
15	Fresh delicatessen products	Chilled ham and cheese sandwiches	Cooked ham and cheese and/or bacon sandwiches (with mainly ham)	488
15	Fresh delicatessen products	Chilled ham and raw vegetable sandwiches	Cooked ham and raw vegetable sandwiches, with or without cheese and/or bacon (with mainly ham)	487
15	Fresh delicatessen products	Chilled ham sandwiches	Cooked ham sandwiches with butter or mayonnaise without raw vegetables, cooked ham and bacon sandwiches (with mainly ham)	486
15	Fresh delicatessen products	Chilled mixed salads	Green salads with other vegetables and/or diced ham and/or chicken and/or tuna and/or surimi and/or cheese, etc.	279
15	Fresh delicatessen products	Chilled mussels	Plain cooked, Catalan, Provençal-style mussels, etc.	381
15	Fresh delicatessen products	Other chilled cooked vegetable salads	Macedonia, mushrooms à la grecque	40
15	Fresh delicatessen products	Other fresh delicatessen products	Other fresh delicatessen products. E.g. Crustless tarts, tortillas, savoury cakes, cocktail canapés, pizza kits (pizza dough + tomato sauce), Pâté en croûte (classic or mini format) or Lorraine pâté	36
15	Fresh delicatessen products	Other chilled raw vegetable salads (crudités)	Duo or trio of raw vegetables (crudités), seasoned red cabbage salads	39
15	Fresh delicatessen products	Other chilled sandwiches	Other chilled sandwiches. E.g. party loaves, beef and/or chicken-lardon sandwiches, sandwich assortments	42

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
15	Fresh delicatessen products	Other smoked fish	Smoked tuna or fillets of smoked herring or mackerel	32
15	Fresh delicatessen products	Other chilled snacks (hot dog, kebab, panini,...)	Hot dogs, kebabs, panini, garlic filled breads	46
15	Fresh delicatessen products	Other chilled spreads	Guacamole, hummus, tapenade, vegetable spreads, assortments of spreads, etc.	49
15	Fresh delicatessen products	Other chilled starchy salads	Salads made with lentils, rice, bulgur or quinoa	41
15	Fresh delicatessen products	Chilled pasta salads	Salads based on pasta with vegetables and/or cheese and/or salmon and/or chicken and/or surimi and/or tuna and/or delicatessen meats	285
15	Fresh delicatessen products	Chilled pizza dough	Ready-rolled pizza doughs	416
15	Fresh delicatessen products	Chilled plain Surimi	Plain Surimi in the form of sticks, slices, medallions, scraps, etc.	564
15	Fresh delicatessen products	Chilled potato salads	Potato salads such as Piedmontese, Strasbourg, Breton, etc.	481
15	Fresh delicatessen products	Chilled puff pastries_brioches	Vol-au-vents, sausage in brioche, puff pastries, cheese rolls, croissants, pastry friands, etc.	235
15	Fresh delicatessen products	Chilled puff pastry	Ready-rolled puff pastry	423
15	Fresh delicatessen products	Chilled rich shortcrust pastry	Ready-rolled rich shortcrust pastry	429

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
15	Fresh delicatessen products	Chilled sauces	Pasta sauces: carbonara, cheese, Neapolitan. Fish sauces: lemon butter, beurre blanc, hollandaise, mouclade	494
15	Fresh delicatessen products	Chilled savoury filled crepes	Aumonière bundles, filled savoury crepes or buckwheat pancakes (with ham and cheese, goat's cheese and lardons, scallops, etc.)	194
15	Fresh delicatessen products	Chilled seafood rillettes	Rillettes containing tuna and/or surimi and/or salmon and/or crab and/or scallops and/or cod and/or shrimp and/or seaweed	271
15	Fresh delicatessen products	Chilled seafood tapas	Marinated fish or seafood tapas	568
15	Fresh delicatessen products	Chilled seafood terrines	Fish or scallop terrines	579
15	Fresh delicatessen products	Chilled shortcrust pastry	Ready-rolled shortcrust pastry	420
15	Fresh delicatessen products	Chilled shrimps	Pink or grey shrimps, crayfish tails, plain or marinated or Provençal style gambas, etc.	200
15	Fresh delicatessen products	Chilled smoked_salmon_trout	Smoked salmon or trout in slices or lardons, strips or seasoned tartare (with 5 peppers, capers, etc.)	522
15	Fresh delicatessen products	Chilled tabbouleh	Tabbouleh with vegetables, poultry or shrimp	566
15	Fresh delicatessen products	Chilled taramasalata	Taramasalata made with cod or trout roe, salmon or crab taramasalata	569
15	Fresh delicatessen products	Chilled toasted sandwiches and breaded escalopes	Toasted sandwiches (croque monsieur), breaded cheese or chicken escalopes	205

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
15	Fresh delicatessen products	Chilled tzatziki_ktipiti	Fresh cheeses with cucumber or red pepper	587
15	Fresh delicatessen products	Chilled vegetarian sandwiches	Cheese sandwiches with or without raw vegetables	493
46	Frozen pastries and desserts	Frozen apple and similar tarts	Products such as apple tarts, tartes tatin, Normandy tarts, regardless of the pastry (puff pastry, shortcrust or rich shortcrust). Also includes apple crumbles, apple strudels and apple puff pastries	575
46	Frozen pastries and desserts	Other frozen desserts	Other frozen desserts	20
46	Frozen pastries and desserts	Frozen cheesecakes	Products referred to as "cheesecakes", regardless of the flavour	144
46	Frozen pastries and desserts	Frozen chocolate croissants	Frozen chocolate croissants	394
46	Frozen pastries and desserts	Frozen crepes_pancakes_waffles	Products such as crepes, pancakes and waffles (from Brussels, Liège, etc.), plain, filled and/or with inclusions	199
46	Frozen pastries and desserts	Frozen croissants	Frozen croissants	202
46	Frozen pastries and desserts	Frozen custard tart type pastries	Products such as custard tarts, clafoutis, Breton fars	433
46	Frozen pastries and desserts	Frozen doughnuts and sweet fritters	Fried products such as doughnuts, with sugar or filled (chocolate, strawberry, caramel, etc.); also includes fruit in batter	64



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
46	Frozen pastries and desserts	Frozen eclairs	Éclairs and assortments of éclairs regardless of the filling (chocolate, coffee, vanilla, etc.)	224
46	Frozen pastries and desserts	Frozen macaroons	Macaroons and assortments of individual macaroons, regardless of the flavour. Note that cakes with a macaroon base are not included in this family	357
46	Frozen pastries and desserts	Frozen fruit desserts	Cakes or dairy-based desserts consisting of layers with a baked crust such as biscuit, macaroon biscuit, ladyfinger biscuit, genoise sponge, meringue, etc., combined with creams and/or mousses and containing fruit (flavourings, cut fruit, etc.). These products correspond for example to red berry logs, chocolate and pear charlottes, fraisier cakes, poirier cakes, raspberry delights, Black Forest gâteau, etc.	219
46	Frozen pastries and desserts	Frozen Kings' cakes	Products referred to as kings' cakes (galette des rois), regardless of the filling	287
46	Frozen pastries and desserts	Frozen lemon tarts	Products such as lemon tarts, lemon meringue pies, regardless of the pastry (puff pastry, shortcrust or rich shortcrust)	571
46	Frozen pastries and desserts	Frozen moist cakes_all-chocolate cakes	Brownies, chocolate cakes, all-chocolate muffins, chocolate fondants, moist cakes with melting centres (regardless of the filling)	298

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
46	Frozen pastries and desserts	Frozen moist cakes_other than all-chocolate	Moist cakes and cakes other than chocolate, such as lemon cakes, marble cakes, genoise sponge, financiers, madeleines, mini moist cakes with or without inclusions/coating and assortments of mini moist cakes	297
46	Frozen pastries and desserts	Other frozen brioches (not plain or sugar ones)	Brioches with cream filling (such as Tropézienne), with inclusions (candied fruit, chocolate chips, etc.) or with toppings (such as cinnamon roll), as well as French toast-style brioche slices	113
46	Frozen pastries and desserts	Other frozen cakes (rum baba, cookies,...)	Cakes that do not belong to any other cake families, such as rum babas, canelés, Basque cakes, cookies, millefeuilles, kouign-amann, etc.	23
46	Frozen pastries and desserts	Other frozen fruit tarts	Fruit tarts with fruit other than apple and lemon, such as raspberry, blueberry, apricot, plum or bi-fruit tarts (e.g. strawberry-lemon), regardless of the pastry (puff pastry, shortcrust or rich shortcrust). Also includes crumbles and fruit tart assortments containing lemon or apple tarts with average nutritional values for all the assortment components	572
46	Frozen pastries and desserts	Other frozen pastries based on choux pastry	Filled choux pastry products regardless of the filling, Paris-Brest, Religieuse, Saint-Honoré, chouquettes	431

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
46	Frozen pastries and desserts	Frozen plain or sugar brioches	Parisian type brioches, brioche Bordelaise with orange blossom, brioche rings with coarse sugar, sugar pies (with a brioche base)	118
46	Frozen pastries and desserts	Frozen profiteroles	Products referred to as "profiteroles"	262
46	Frozen pastries and desserts	Frozen raisin buns and assortments of fine bakery wares	Raisin breads and assortments of fine bakery wares displaying on the label average nutritional values for all the assortment components	395
46	Frozen pastries and desserts	Frozen tarts without fruit	Products such as chocolate, praline, pecan or chestnut tarts, regardless of the pastry (puff pastry, shortcrust or rich shortcrust)	578
46	Frozen pastries and desserts	Frozen tiramisu	Products referred to as "tiramisu", regardless of the flavour	580
31	Frozen snacking products	Other frozen pizzas	Other frozen pizzas	27
31	Frozen snacking products	Other frozen snacking products	Other frozen snacking products	45
31	Frozen snacking products	Frozen bolognese meat pizzas	Pizzas with beef, such as Bolognese pizzas	449
31	Frozen snacking products	Frozen cheese and ham pizzas	Cooked ham and cheese pizzas, royal and Hawaiian (pineapple and ham) pizzas	444
31	Frozen snacking products	Frozen cheese pizzas	Three- or 4-cheese pizzas, goat's cheese pizzas, raclette pizzas, possibly containing lardons, etc.	443
31	Frozen snacking products	Frozen cheese tarts	Vegetarian cheese tarts, without meat, fish or vegetables, such as 3-cheese tarts or Maroilles tarts. With or without pastry.	573

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
31	Frozen snacking products	Frozen assortments and other cocktail snacks	Assortments of products belonging to different families, as well as shrimp skewers, bacon-wrapped fruits, savoury macaroons or other savoury pastries, cocktail bites consisting of filled choux pastry, such as cheese gougères. Appetisers to be eaten cold in glasses, spoons, etc. and made from mousses, fresh cheese, salmon, etc.	5
31	Frozen snacking products	Frozen cocktail aumonière bundles	Cocktail bites, mini pastillas consisting of a garnish wrapped in a sheet of brick pastry	6
31	Frozen snacking products	Frozen crepes, pancakes and pastillas with meat or fish	Savoury crepes, pancakes and pastillas (made with brick pastry, excluding mini format) with a filling that includes meat or fish/seafood, such as ham and cheese pancakes	198
31	Frozen snacking products	Frozen croque monsieur	Croque-monsieur type toasted sandwiches (including rösti toasted sandwiches)	204
31	Frozen snacking products	Frozen delicatessen-meat pizzas	Pizzas with chorizo, pepperoni, country-style, with speck, sausage, etc.	437
31	Frozen snacking products	Frozen filled/topped baguettes and crackers	Toasted baguettes and crackers with various toppings such as ham and tomato and cheese, for example	54
31	Frozen snacking products	Frozen burgers	Products referred to as burgers, including "potato burgers" but also cheeseburgers and bacon burgers in particular	123

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
31	Frozen snacking products	Frozen snacking products kits	Frozen snacking products kits (fajitas,...)	637
31	Frozen snacking products	Frozen margarita pizzas	Pizzas containing tomato sauce and cheese (such as tomato and mozzarella), as well as those with the term "Margarita" in their sales description	447
31	Frozen snacking products	Other frozen sandwiches	Other sandwich products made with bread such as buns, hot dog buns, bagels or panini	43
31	Frozen snacking products	Other frozen meat-based pizzas	Pizzas with chicken or turkey, such as kebab pizzas	448
31	Frozen snacking products	Frozen party loaves and cocktail canapés	Mini cocktail sandwiches with sandwich/Swedish bread and canapés with toppings	407
31	Frozen snacking products	Frozen puff pastries with meat or fish, meat in pastry	Puff pastries of any size whose filling/topping includes meat or fish/seafood, as well as pastry-wrapped meats and pies consisting only of puff pastry, such as mini sausage puff pastries or salmon puff pastry baskets	233
31	Frozen snacking products	Frozen puff pastries with snails	Puff pastries filled/topped with snails (mainly with parsley butter)	232
31	Frozen snacking products	Frozen tarts with meat or fish	Quiches, tarts and pies (except those with only puff pastry) containing meat or fish/molluscs/shellfish, such as flammekueches or salmon and spinach tarts. With or without pastry. Includes Quiches Lorraines (quiches made with lardons).	266

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
31	Frozen snacking products	Frozen salads	Salads made with starchy foods, raw vegetables (crudités), vegetables, possibly with meat or fish, such as tabbouleh or Italian pasta salad, for example	277
31	Frozen snacking products	Frozen savoury cakes with meat or fish	Cakes with meat or fish such as an olive and ham cake for example	127
31	Frozen snacking products	Frozen savoury vegetarian cakes	Cakes without meat or fish such as a tomato and goat's cheese cake or a blue cheese, honey and rosemary cake	128
31	Frozen snacking products	Frozen seafood pizzas	Pizzas containing fish and/or seafood, such as ocean pizzas	446
31	Frozen snacking products	Frozen vegetable tarts	Vegetarian vegetable tarts (which may contain cheese), such as a fine goat's cheese and courgette tart or a leek and cream tart	574
31	Frozen snacking products	Frozen vegetable/vegetarian pizzas	Pizzas containing only vegetables in their topping, and possibly cheese, such as a 4-seasons pizza	445
31	Frozen snacking products	Frozen vegetarian crepes and pancakes	Savoury crepes and pancakes with a vegetarian filling (no meat or fish), such as a cheese or mushroom crepe	193
31	Frozen snacking products	Frozen vegetarian puff pastries	Puff pastries with a vegetarian filling/topping (without meat or fish) such as goat's cheese and spinach puff pastry baskets and pies consisting only of puff pastry	234
31	Frozen snacking products	Frozen wraps and kebabs	Wrap and kebab type products consisting of a filling surrounded by a wheat tortilla, such as chicken and bacon wraps	610

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
10	Fruit juices and nectars	Fruit juices (100%)	Fruit juices defined by Directive 2012/12/EU: obtained by simply pressing the fruit (the addition of sugar is no longer authorised since the entry into force of Directive 2012/12/EU). Predominantly fruit products containing vegetables and fruit juices obtained by water extraction (prune juice) are also included	335
10	Fruit juices and nectars	Nectars	Nectars defined by Directive 2012/12/EU: consisting of fruit juices or purées (more than 25 or 50% depending on the fruit), water with or without the addition of sugar and/or artificial sweeteners and/or honey (the addition of sugar/sweeteners/honey is no longer mandatory since the entry into force of Directive 2012/12/EU). The minimum juice and/or purée content as a percentage of the volume of the finished product is regulated for each fruit. Predominantly fruit products containing vegetables are also included	388

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
10	Fruit juices and nectars	Reconstituted fruit juices	Fruit juices made from concentrated juices defined by Directive 2012/12/EU: reconstituted by reincorporating into the concentrated fruit juices the same quantity of water as extracted during concentration (the addition of sugar is no longer authorised since the entry into force of Directive 2012/12/EU). Minimum Brix values for reconstituted fruit juices and reconstituted fruit purées are defined for each fruit in the regulations. Predominantly fruit products containing vegetables are also included	336
10	Fruit juices and nectars	Smoothies	Smoothies: all products whose trade names include the word "smoothie" and which comply with the regulations for juices and nectars	524
10	Fruit juices and nectars	Vegetable juices (100%)	Vegetable juices defined according to a national code of good practice: comprises vegetable juices including tomato juices as well as predominantly vegetable products containing fruit	337
12	Fruit purees, compotes and desserts	Fruit compotes	Fruits and sugar mixes having a sugar content in degrees Brix > 24g/100g (Brix degree corresponds to the refractometric value of the finished product determined at 20°C; it is slightly higher than the sugar content mentioned in the nutritional values table)	174



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
12	Fruit purees, compotes and desserts	Fruit compotes with specific added ingredients	Fruit compotes with specific added ingredients are mixtures, brought to a suitable consistency, of sugar, fruit pulp and/or purée (whether concentrated or not), and any other ingredients such as concentrated fruit juice, milk, cereals and flavourings (natural or artificial)	561
12	Fruit purees, compotes and desserts	Fruit compotes with specific added ingredients without added sugar	Fruit compotes with specific added ingredients (without added sugar) correspond to the products described in the "Fruit compotes with specific added ingredients" family, but without added sugars	562
12	Fruit purees, compotes and desserts	Fruit desserts	Fruits and sugar mixes whose sugar content is too high for them to be described as "low-sugar (light) compote" and too low to be described as "compote"	212
12	Fruit purees, compotes and desserts	Fruit purees (without added sugar)	Fruits mixes without added sugar.	263
12	Fruit purees, compotes and desserts	Low-sugar (light) fruit compotes	Fruits and sugar mixes with a nutritional claim which indicates that the sugar content is reduced by at least 30% compared to that of a fruit compote	175
36	Hot sauces	Other hot sauces	All sauces that do not fit any other definition.  <i>Examples: Three-cheese sauce, gorgonzola sauce, etc.</i>	44

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
36	Hot sauces	Tomato coulis and similar	<p>Preparation made from tomatoes corresponding to coulis, purées or chopped tomatoes. These products do not contain any other vegetables or other ingredients (such as cheese, etc.). However, seasoning may also be added (herbs, spices, etc.).</p> <p><i>Examples: tomato coulis, tomato pulp with basil, peeled tomatoes, chopped tomatoes, etc.</i></p>	182
36	Hot sauces	Sweet and sour sauces	<p>Sauce whose trade name or sales description contains the words "sweet and sour".</p> <p><i>Examples: Sweet and sour sauce, sweet and sour sauce with lentils, sweet and sour sauce with mixed vegetables and pineapple, etc.</i></p>	497
36	Hot sauces	Bolognese sauces and similar	<p>Bolognese and other tomato sauces with added protein (chicken, fish, soy protein, etc.)</p> <p><i>Examples: Tomato sauce cooked with two meats, tomato Bolognese sauce, etc.</i></p>	504
36	Hot sauces	Curry sauces	<p>Sauces in which the product's trade name (on the front of the packaging) contains the term "curry"</p> <p><i>Examples: Tandoori curry sauce, Madras coconut curry sauce, etc.</i></p>	507

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
36	Hot sauces	Pesto sauces	<p>Sauces in which the product's trade name (on the front of the packaging) contains the term "pesto" or "pistou". It may be pesto verde (with basil) or rosso (with dried tomato to replace the basil in the classic recipe)</p> <p><i>Examples: Pistou, pesto sauce with tomatoes, green pesto style olive sauce, etc.</i></p>	512
36	Hot sauces	Tomato sauces	<p>Tomato sauces containing seasoning (including garlic and onions) but also vegetables and/or other ingredients excluding cheese and olives.</p> <p>Examples: Tomato sauce with basil, tomato sauce with basil and olive oil, Neapolitan sauce, Provençal sauces, etc.</p>	501
36	Hot sauces	Sauces with tomatoes and cheese	<p>Tomato sauces with added cheese. These products may contain seasoning and/or vegetables and/or other ingredients (including olives). Pesto type sauces are excluded from this subcategory.</p> <p><i>Examples: Tomato sauce with parmesan, tomato sauce with ricotta, etc.</i></p>	513

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
36	Hot sauces	Other sauces from around the world	<p>Sauces with non-western origins. Curry and sweet and sour sauces are excluded from this subcategory.</p> <p><i>Examples: Tikka massala sauces, stir-fry or wok sauce, etc.</i></p>	721
36	Hot sauces	Bechamel and similar sauces	<p>Bechamel and similar sauces</p> <p><i>Examples: Bechamel sauce with nutmeg, dehydrated preparation for bechamel sauce, etc.</i></p>	722
36	Hot sauces	Sauces for fish	<p>Sauces mainly used to accompany fish or seafood. This subcategory includes: Hollandaise sauces, beurre blanc sauces, Armorican sauces, shellfish sauces, sorrel sauces, champagne sauces, lemon butter sauces and tarragon sauces.</p> <p><i>Examples: Hollandaise sauce, butter sauce, etc.</i></p>	723
36	Hot sauces	Sauces for meat	<p>Sauces mainly used to accompany meat. This subcategory includes: Roquefort sauces, Bearnaise sauces, pepper sauces, grand veneur sauces, Madeira sauces, mushroom sauces (including chasseur sauces), shallot sauces, foie gras sauces and mustard sauces.</p> <p><i>Examples: Three-pepper sauce, morel mushroom sauce, etc.</i></p>	724

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
36	Hot sauces	Tomato_olive sauces	Tomato sauces containing olives. These products may contain seasoning and/or vegetables or other ingredients, except cheese.  <i>Examples: Olive and tomato sauce, Provençal-style olive sauce</i>	726
32	Ice creams and sorbets	Assortment of ice-creams	Assortments of ice cream with average nutritional values for all the assortment components and consisting of products not belonging to the same families	3
32	Ice creams and sorbets	Bulk ice-cream	Bulk ice and/or ice cream, classic (vanilla, chocolate, coffee, etc., without inclusions) or containing pieces of chocolate, pistachio, hazelnut, almond, raisins, coconut or fruit	607
32	Ice creams and sorbets	Bulk sorbet	Bulk sorbets	609
32	Ice creams and sorbets	Frozen ice cream desserts for sharing	Products such as Viennetta®, vacherin, frozen nougat, baked Alaska, etc.	558
32	Ice creams and sorbets	Ice cream cones < 80ml	Ice and/or ice cream cones with a net volume < 80ml	315
32	Ice creams and sorbets	Ice-cream bars and mini bars	Ice and/or ice cream bars irrespective of the format, as well as frozen truffles	312
32	Ice creams and sorbets	Ice-cream cones > or = 80ml	Ice and/or ice cream cones with a net volume ≥ 80ml	316
32	Ice creams and sorbets	Ice-cream sticks < 80ml	Ice and/or ice cream sticks with a net volume < 80ml	313
32	Ice creams and sorbets	Ice-cream sticks > or = 80ml	Ice and/or ice cream sticks with a net volume ≥ 80ml	314

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
32	Ice creams and sorbets	Ice-cream tubs < 80ml	Ice and/or ice cream tubs, pouches or pots with a net volume < 80ml	319
32	Ice creams and sorbets	Ice-cream tubs > or = 80ml	Ice and/or ice cream tubs (classic, with biscuit pieces and/or sauces, products such as frosted coconuts, etc.) with a net volume ≥ 80ml	320
32	Ice creams and sorbets	Luxury bulk ice-cream	Bulk ice and/or ice cream including the most gourmet recipes (in comparison to the "Bulk ice-cream" family) and which may contain sauce, biscuit pieces or inclusions (caramelised or praline, nougatine, nougat, chestnuts, meringue, sugar, macadamia nuts or pecans); as well as recipes such as crème brûlée, stracciatella, tiramisu, frozen chocolate mousse, etc.	608
32	Ice creams and sorbets	Mini ice-cream cones	Ice and/or ice cream cones clearly marked as "mini"	318
32	Ice creams and sorbets	Mini ice-cream sticks	Ice and/or ice cream sticks clearly marked as "mini"	317
32	Ice creams and sorbets	Sorbet cones	Sorbet cones irrespective of the format	526
32	Ice creams and sorbets	Sorbet sticks	Sorbet sticks irrespective of the format	525
32	Ice creams and sorbets	Sorbet tubs	Individual sorbet tubs irrespective of the format, and products such as frosted oranges or frosted lemons	527

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
32	Ice creams and sorbets	Sundae and frozen desserts	Products corresponding to mini versions of desserts for sharing (mini logs, vacherin, baked Alaska, etc.); products with meringue (meringue centre) or coating (such as a frozen dome); Liègeois-style products, Melba, Belle-Hélène, sundaes and products contained in a cup, verrine or glass; sandwich-type products (ice and/or ice cream between two wafers and/or two biscuits); cake-type products with genoise sponge and/or a biscuit layer	183
32	Ice creams and sorbets	Water or fruit ices	Individual water or fruit ices (water-based lollipops, push-up, squeeze-up, etc.) irrespective of the format	311
44	Infant milks	Follow-on formulae	Follow-on formulae meeting the definition of "follow-on formula" laid down by Regulation (EU) No 609/20138 and by Directive 2006/141/EC. These products are intended for infants from 6 to 12 months of age	478

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
44	Infant milks	Growing-up milks	Growing-up milk with two types of infant milk: - infant milks for infants from 10 months of age, whose sales description contains "follow-on formula" and whose packaging indicates that the product is intended for infants and young children from 10 months of age. These products are covered by the regulations applicable to follow-on formulae - infant milks for children aged 12 months or over	340
44	Infant milks	Infant formulae	Infant formulae meeting the definition of "infant formula" laid down by Regulation (EU) No 609/2013 and by Directive 2006/141/EC. These products are intended for infants from birth to 6 months of age	477
13	Jams	Fruit preparations	Fruit preparations whose sugar content is too high for them to be described as "low-sugar (light) jam" and too low to be described as "jam". It also includes mixtures of sugar, pulp and/or purée of one or more fruit species and water as defined in the code of practice for processed fruit products	257
13	Jams	Jam, jellies or marmalades	Standard jams, jellies or marmalades (extra or not) according to the regulations (Directive 2001/113/EC)	178



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
13	Jams	Low-sugar (light) jams, jellies or marmalades	Jams, jellies or marmalades with a sugar content reduced by at least 30% compared to standard jams, jellies or marmalades according to the regulations (Directive 2001/113/EC)	179
13	Jams	Other jam-like products	Other fruit preparations, for example fruits preparations with other ingredients such as concentrated fruit juice, milk, cereals and flavourings (natural or artificial).	256
13	Jams	Sweetened chestnut or prune purees	Sweetened chestnut or prune purées according to the regulations (Directive 2001/113/EC). Note that this family contains products with the sales description "chestnut jam" but with the characteristics of a sweetened chestnut purée (fruit content, sugar content, authorised ingredients)	189
40	Margarines	Vegetable fat spreads with a fat content > 41% and ≤ 62 %	Vegetable fat spreads with fat content > 41% and < or = 62%	362
40	Margarines	Vegetable fat spreads with a fat content >62%	Vegetable fat spreads with fat content > 62%	363
40	Margarines	Vegetable fat spreads with a fat content ≤41%	Vegetable fat spreads with fat content < or = 41%	361
	Other products	Liquid stocks	Liquid products based on boiled meat or vegetables, added to a dish for flavouring.	625
	Other products	Dessert creams and similar heat-treated products	Dessert creams and similar heat-treated products	635

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
	Other products	Yoghurts and similar heat-treated products	Yoghurts and similar heat-treated products	636
	Other products	Other products	<p>Foods not currently monitored by Oqali</p> <p>For example, all raw products such as eggs, fruits, vegetables, meat and fish, but also rice and dried pasta, flour, fresh cream, oil, butter (note however that margarines are included in the Oqali "Margarines" category), milk, unflavoured natural and mineral waters (note however that flavoured waters are included in the Oqali "Soft drinks" category), canned plain sardines and tuna (canned sardines and fish in oil or flavoured such as canned fish in white wine or tomato, for example, are included in the Oqali "Ready-to-eat canned meals" category), room-temperature spreads such as guacamole, tapenade, onion/fig confits, cooked olives, etc.</p>	33
	Other products	Pickles	Vegetables preserved in vinegar	639
	Other products	Stock cubes	Solid cube made from dried meat or vegetable juices and other flavourings. Stock cubes are used to add flavour to dishes. Reconstituted by adding boiling water to add flavour in soups and stews. e.g. Maggi chicken stock cubes, Knorr stock cubes.	109

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
8	Processed potato products	Other processed potato products	Other processed potato products	37
8	Processed potato products	Classic and wavy crisps	Crisps not low-fat (light), i.e. deep-fried slices of potatoes, smooth or wavy, plain or flavoured (including "artisanal", "peasant", "old-fashioned" or "traditional" crisps)	149
8	Processed potato products	French fries (chips) for deep-fryer	Products such as frozen French fries or matchstick fries for which the preparation instructions indicate deep-frying, or the choice between deep-frying or pan frying	237
8	Processed potato products	Low-fat crisps	Crisps (slices of fried potatoes) and similar products (oven-baked potato slices not eligible for the designation "crisps") mentioning a reduction in their fat content; this does not include statements regarding reductions in saturated fatty acids and/or salt	150
8	Processed potato products	Microwave fries	Products such as frozen French fries or matchstick fries for which the preparation instructions indicate microwave cooking, or the choice between microwave and oven cooking	239
8	Processed potato products	Oven fries	Products such as frozen French fries or matchstick fries for which the preparation instructions indicate oven cooking, or the choice between oven cooking and deep-frying, or the choice between oven cooking, deep-frying or pan frying	238

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
8	Processed potato products	Potato croquettes and balls	Frozen croquettes, duchess and noisette potatoes, made from mashed potatoes, according to their name or sales description	206
8	Processed potato products	Potato flakes	all plain or cooked flake purées (with milk, cream, nutmeg, chives and onion, etc.).	264
8	Processed potato products	Ready-to-eat mashed potatoes	Ready-to-eat mashed potatoes to be stored at room temperature or frozen, also includes mashed potato pellets for which the addition of milk is advised	265
8	Processed potato products	Röstis	All frozen grated potato cakes, flavoured with onion; does not include röstis with other ingredients, such as lardons for example	276
8	Processed potato products	Sautéed potatoes	Fried potato wedges and quarters, sautéed or fried potatoes in slices or cubes, and grenaille potatoes	474
8	Processed potato products	Steamed potatoes	All steamed vacuum-cooked potatoes and some frozen steamed products	472
17	Ready-to-eat canned meals	Canned baked beans	Canned beans in a sauce (other than brine) such as tomato sauce	640
17	Ready-to-eat canned meals	Other ready-to-eat canned meals	Other ready-to-eat canned meals	29
17	Ready-to-eat canned meals	Canned cannelloni	Pasta stuffed and whose name or sales description contains the term "cannelloni". Examples: cannelloni with Italian sauce, pure beef cannelloni	130

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
17	Ready-to-eat canned meals	Canned meat and starchy food	Products consisting of meat accompanied only by starchy foods (according to the name, sales description or list of ingredients). Examples: Sliced poultry and lentils, chicken with rice, duck confit with potatoes, sausage with macaroni, cassoulet with duck confit, Pure pork cassoulet, Toulouse cassoulet, Castelnaudary cassoulet, my cassoulet-style recipe	597
17	Ready-to-eat canned meals	Canned chili con carne or vegetarian chili	Products whose name or sales description contains the term "chili". They consist of a base of kidney beans, onions, peppers and tomatoes, with or without meat ("carne"). They may be accompanied by rice. Examples: Chili con Carne Products with alternative animal protein (containing tofu, soy, etc.) are excluded.	147
17	Ready-to-eat canned meals	Canned cooked meats	Cooked meat without a side dish. Products such as Basque chicken without a side dish are included in this family. Examples: pork stew cooked in Provence, Caen-style tripe, coq au vin, Basque-style chicken legs	596
17	Ready-to-eat canned meals	Canned cottage pie	Products whose name or sales description contains the term "cottage pie". This family includes only beef products. Examples: cottage pie	329

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
17	Ready-to-eat canned meals	Canned couscous or tagines	Products whose name or sales description contains the term "Couscous" or "tagine". These products are consisting of cereals (wheat semolina, quinoa, bulgur, etc.) and vegetables, with or without meat/fish. Examples: royal couscous, chicken tagine, eight-vegetable couscous	185
17	Ready-to-eat canned meals	Canned fish and starchy food	Products consisting of fish and/or seafood accompanied only by starchy foods (according to the name, sales description or list of ingredients). Examples: fish pie, whiting with lemon sauce and rice, squid à l'américaine with rice, trout fillet with potatoes, salmon with dill and tagliatelli	464
17	Ready-to-eat canned meals	Canned fish and vegetables	Products consisting of fish and/or seafood accompanied only by vegetables (according to the name, sales description or list of ingredients). Examples: whiting with Provençal sauce and baby vegetables; tuna matelote with baby vegetables	465

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
17	Ready-to-eat canned meals	Canned fish with vegetables and starchy foods	Products consisting of fish and/or seafood accompanied by starchy foods and vegetables (according to the name, sales description or list of ingredients). Examples: Provençal-style tuna with wheat and spelt mix, whiting with lemon sauce, bulgur and baby vegetables, grilled tuna with ratatouille vegetables and potatoes, tuna with tomato sauce and pasta	466
17	Ready-to-eat canned meals	Canned lasagne	Products whose name or sales description contains the term "lasagne". They can be vegetarian or contain meat or fish. Examples: lasagne Bolognese, vegetable lasagne, salmon lasagne	344
17	Ready-to-eat canned meals	Canned meat and vegetables	Products consisting of meat accompanied only by vegetables (according to the name, sales description or list of ingredients). Examples: beef braised with carrots, Toulouse sausages with cabbage, moussaka	598
17	Ready-to-eat canned meals	Canned meat confit	Cooked meat without a side dish and whose name or sales description contains the term "confit". Examples: Goose confit, duck wing confit, duck leg confit	594

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
17	Ready-to-eat canned meals	Canned meat with vegetables and starchy foods	Products consisting of meat accompanied by starchy foods and vegetables (according to the name, sales description or list of ingredients). Examples: Sliced poultry with tomato, basil and semolina, chicken with rice and baby vegetables, chicken risotto with tomatoes and parmesan, rabbit with two mustards, chicken tenderloins with vegetable purée, tartiflette	599
17	Ready-to-eat canned meals	Canned Mexican salads	Mixed salads whose name or sales description contains the term "Mexican". They consist of a base of kidney beans, sweetcorn and peppers. Examples: Mexican salad, Mexicana salad	482
17	Ready-to-eat canned meals	Canned mixed salads	Salads containing starchy foods and/or vegetables, possibly with fish or meat. Examples: Italian tuna salad, rice and tuna salad, Piedmontese salad, Indian salad with poultry slices, salmon salad with rice and lentils	280
17	Ready-to-eat canned meals	Canned Niçoise salads	Mixed salads whose name or sales description contains the term "Niçoise". They consist of fish, olives, potatoes and vegetables (tomatoes, peppers, onions). Examples: Niçoise salad with tuna, Niçoise salad with tuna and potatoes, cherry tomatoes and green beans	483



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
17	Ready-to-eat canned meals	Canned paella	Products whose name or sales description contains the term "paella". They generally consist of rice with meat (poultry, pork) and/or seafood but can also be vegetarian. Examples: poultry and seafood paella, royal paella, paella with tofu and baby vegetables, paella-style cooked rice, paella-style chicken sauté	393
17	Ready-to-eat canned meals	Canned pasta Bolognese	Cooked pasta, not stuffed, with a Bolognese sauce. Examples: Spaghetti Bolognese, torti Bolognese, penne Bolognese	757
17	Ready-to-eat canned meals	Canned petits salés (salt pork dishes)	Products whose name or sales description contains the term "petit salé". They are made of pork meat and lentils. Examples: Petit salé, petit salé-style lentils	436
17	Ready-to-eat canned meals	Canned ratatouille	Products consisting exclusively of vegetables and whose name or sales description contains the term "ratatouille". They consist of a mixture of tomatoes, courgettes, aubergines, peppers and onions. Examples: canned ratatouille with vegetables, Provençal-style ratatouille	267

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
17	Ready-to-eat canned meals	Canned raviolis	Stuffed pasta whose name or sales description contains the term "ravioli". It can be stuffed with meat, cheese or vegetables. Examples: ravioli in tomato sauce, vegetable ravioli, poultry ravioli, vegetarian ravioli, cheese ravioli Stuffed pasta with alternative animal protein (containing tofu, soy, etc.) are excluded.	269
17	Ready-to-eat canned meals	Canned salmon with sorrel	Products whose name or sales description contains the terms "salmon" and "sorrel". The salmon is accompanied by starchy foods and possibly vegetables. Examples: salmon with sorrel and rice, salmon with sorrel sauce and pasta	521
17	Ready-to-eat canned meals	Canned sauerkraut	Products whose name or sales description contains the term "sauerkraut". They can be dressed, royal and made with fermented cabbage and meat/delicatessen meats/fish, possibly with potatoes. Examples: dressed sauerkraut with Riesling, royal sauerkraut	170
17	Ready-to-eat canned meals	Canned sausages with lentils	Products whose name or sales description contains the term "sausage" and "lentils". Products consisting of sausages (pork, poultry, etc.) and lentils. Examples: Toulouse sausage with lentils, lentils with duck confit and Toulouse sausages, 100% chicken sausages with lentils	517

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
17	Ready-to-eat canned meals	Canned starchy foods and vegetables	Products consisting of a mixture of cooked vegetables and starchy foods (according to the name, sales description or list of ingredients). Examples: buckwheat and rice duo, curried basmati rice, noodles with baby vegetables, asparagus risotto, Basque sauté with potatoes, Provençal-style vegetables with kidney beans	352
17	Ready-to-eat canned meals	Canned tabbouleh	Products whose name or sales description contains the term "tabbouleh". They consist of cereals (wheat semolina, bulgur, etc.) accompanied by vegetables and possibly meat. Examples: Oriental tabbouleh, tabbouleh with olive oil, tabbouleh salad with chicken	567

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
17	Ready-to-eat canned meals	Canned cooked vegetables	Products consisting of cooked vegetables (according to the name, sales description or list of ingredients). Vegetables for couscous or tagines that contain neither meat nor cereals, as well as sauerkraut that is neither garnished nor royal and without potatoes, are included in this family. Ratatouilles are excluded from this family. Examples: courgettes with basil, aubergine riste, assortment of vegetables for couscous, carrot and olive tagine with honey and cumin, sauerkraut cooked in Riesling, Provençal-style peas, Mexican-style cooked vegetables with red peppers and cumin	347
17	Ready-to-eat canned meals	Canned alternative products without animal protein	Alternative products without animal protein (containing tofu, soy, etc.). Examples : Chili con Tofu, ravioli with tofu.	641
17	Ready-to-eat canned meals	Other canned cooked pasta (apart from lasagna, raviolis)	Cooked pasta, stuffed or not, with a sauce other than Bolognese. Examples: Tortelloni with ricotta and spinach, penne with tuna, fusilli with carbonara sauce, macaroni gratin	758
17	Ready-to-eat canned meals	Canned fish	Cooked fish and/or seafood without a side dish (fish in oil, fish fillet with lemon, mustard or tomato, mackerel fillets in wine, etc.)	737

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
47	Ready-to-eat fresh meals	Other ready-to-eat chilled meals	Other ready-to-eat chilled meals Examples: snails, poached eggs with spinach, fajitas, burritos, enchiladas. Products referred to as "blanquette". Examples: veal blanquette and white rice, turkey blanquette, chicken blanquette. Plain quenelle dumplings, with fish or meat, to be served with any starchy foods or vegetables. Examples: plain quenelles, pike quenelles	30
47	Ready-to-eat fresh meals	Chilled battered or breaded fish	Breaded fish products to be served with starchy foods or vegetables. Examples: Breaded whiting, Alaskan pollock nuggets	469
47	Ready-to-eat fresh meals	Chilled breaded meats	Breaded meat products to be served with starchy foods or vegetables. Examples: veal Milanese, chicken nuggets, chicken fries Chilled cordons bleus are excluded from this subcategory.	600
47	Ready-to-eat fresh meals	Chilled chinese fried rice	Chinese-style fried rice, possibly supplemented by meat or fish. Examples: Chinese fried rice	273
47	Ready-to-eat fresh meals	Chilled cooked fish	Cooked fish/seafood to be served with starchy foods or vegetables. Examples: Minced tuna/salmon steak, salmon fillets wrapped in brick pastry (filo), scallops	467

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
47	Ready-to-eat fresh meals	Chilled cooked meats	Cooked meats to be served with starchy foods or vegetables. Examples: chicken tenderloins in Normandy sauce, duck leg confit, beef kidneys in Madeira sauce, Provençal-style tripe, beef tongue in spicy sauce, Mexican-style chicken wings	595
47	Ready-to-eat fresh meals	Chilled cooked starchy products	Cooked starchy foods, possibly supplemented with meat or fish. Examples: Polenta, rice in tomato sauce, split-pea purée	227
47	Ready-to-eat fresh meals	Chilled cooked vegetable and starchy food	Mixture of cooked vegetable and starchy food Examples: cannelloni with ricotta and spinach	455
47	Ready-to-eat fresh meals	Chilled cooked vegetables	Cooked vegetables, possibly supplemented with meat or fish. Examples: vegetable crumble, green vegetables with herbs, courgette purée, fermented cabbage	348
47	Ready-to-eat fresh meals	Chilled cordons bleus	Cordons bleus or breaded escalopes to be served with starchy foods or vegetables Examples: cordons bleus, breaded turkey ham escalopes, Bolognese Crocs, 3-cheese "steaks" with ham	181
47	Ready-to-eat fresh meals	Chilled cottage pie	Products referred to as "cottage pie". This family includes only beef products. Examples: cottage pie	328

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
47	Ready-to-eat fresh meals	Chilled couscous	Couscous/tagines consisting of cereals and vegetables with or without meat/fish Examples: royal couscous, chicken and merguez couscous, vegetables, semolina and chicken	184
47	Ready-to-eat fresh meals	Chilled fried products (except nem)	Fried products, except fried spring rolls. Examples: samosas, shrimp fritters, salt cod fritters (accras), chicken pastillas	260
47	Ready-to-eat fresh meals	Chilled asiatic steamed products	Steamed products. Examples: Steamed assortments, steamed bites/dumplings, Ha Cao, Xiu Mai	259
47	Ready-to-eat fresh meals	Chilled fish with vegetables	Products containing fish or seafood and accompanied by vegetables. Examples: Alaskan pollock and baby vegetables, scallops in Thai broth with mixed vegetables	468
47	Ready-to-eat fresh meals	Chilled fish_starchy foods	Products containing fish and/or seafood, accompanied by starchy foods. Examples: shrimp risotto, gambas with tagliatelli, Alaskan pollock risotto	470
47	Ready-to-eat fresh meals	Chilled nem with sauce	Products referred to as "nem", can be accompanied by a sauce. Examples: Fried nem with sauce	389
47	Ready-to-eat fresh meals	Chilled gnocchi	Products referred to as "gnocchi", possibly supplemented with meat or fish. Examples: Plain gnocchi, gnocchi for pan-frying	321

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
47	Ready-to-eat fresh meals	Chilled lasagne	Groups together lasagne made with meat, fish lasagnes, lasagne with vegetable with or without cheese. Examples: lasagne Bolognese, salmon lasagne, salmon and leek lasagne, lasagne with goat's cheese and spinach	759
47	Ready-to-eat fresh meals	Chilled meat and starchy food	Products containing meat and accompanied by starchy foods. Examples: cassoulet, kidneys and mashed potato, chili con carne, macaroni with ham	601
47	Ready-to-eat fresh meals	Chilled meat and vegetables	Products containing meat and accompanied by vegetables. Examples: chicken and crunchy vegetables, duck tenderloins with sunshine vegetables, stuffed tomatoes/peppers without rice	602
47	Ready-to-eat fresh meals	Chilled meat with vegetables and starchy foods	Cooked meat with vegetables (and/or fruit) and starchy foods	624
47	Ready-to-eat fresh meals	Chilled paella	Products referred to as "paella". Examples: Paella, Valencianan paella	392
47	Ready-to-eat fresh meals	Chilled pasta Bolognese	Pasta cooked with a Bolognese sauce. Examples: spaghetti Bolognese, tagliatelle Bolognese	414
47	Ready-to-eat fresh meals	Chilled pasta carbonara	Pasta cooked with a carbonara sauce. Examples: tagliatelli carbonara, penne carbonara	415
47	Ready-to-eat fresh meals	Chilled pasta gratins	Pasta-based gratins. Examples: Gratins of macaroni/ravioli/gnocchi	325



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
47	Ready-to-eat fresh meals	Chilled potato-based gratins	Potato-based gratins. Examples: Tartiflettes, gratin dauphinois, potato and broccoli gratins	326
47	Ready-to-eat fresh meals	Chilled alternative products without animal protein	Alternative products without animal protein (containing tofu, soy, etc.)	642
47	Ready-to-eat fresh meals	Chilled sauerkraut	Dressed sauerkraut presented as a complete dish, consisting of fermented cabbage with meat/delicatessen meats and potatoes Examples: dressed sauerkraut, Alsatian sauerkraut	169
47	Ready-to-eat fresh meals	Chilled shepherd's pie	Products referred to as "shepherd's pie" containing fish, delicatessen meats or meats other than beef. Examples: shepherd's pie made with cod/fish/duck/poultry/blood sausage, Brandade	410
47	Ready-to-eat fresh meals	Chilled stuffed fresh pasta	Stuffed pasta and gnocchi. Examples: tortellini with goat's cheese and spinach, gnocchi stuffed with ricotta and basil, half-moons, extra cheese gnocchi, tortellini, Dauphiné ravioli	424
47	Ready-to-eat fresh meals	Chilled stuffed vegetables with rice	Products such as vegetables stuffed with rice and meat. Examples: stuffed tomatoes and cooked rice, stuffed peppers and rice mix, duo of stuffed courgettes	350
47	Ready-to-eat fresh meals	Fish with vegetables and starchy foods	Cooked fish and/or seafood with vegetables and starchy foods	761

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
39	Ready-to-eat frozen meals	Other ready-to-eat frozen meals	Other ready-to-eat frozen meals	31
39	Ready-to-eat frozen meals	Frozen breaded cheeses	Breaded cheese products (examples: breaded cheese nuggets/sticks, breaded goat's cheese/Camembert/Brie)	248
39	Ready-to-eat frozen meals	Frozen breaded fish	Breaded fish fingers/fillets (including those containing insert or breadcrumb with vegetables), squid fritters, fish croquettes, fish nuggets, fillet meunière	463
39	Ready-to-eat frozen meals	Frozen breaded meat	Cordon bleu, breaded escalopes, nuggets, rissoles, fricandelles	592
39	Ready-to-eat frozen meals	Frozen chinese fried rice	Dish whose name and/or sales description contains "Chinese fried rice"	274
39	Ready-to-eat frozen meals	Frozen cooked vegetables	Cooked vegetables, ratatouille, vegetables with cream/cheese, vegetable sautés, vegetable crumbles, breaded vegetables or fritters. Some products may contain fruits. Mixtures of vegetables and meat (including with lardons or ham) are not classified in this product subcategory.	346
39	Ready-to-eat frozen meals	Frozen couscous/tagine	Dish whose name and/or sale description contains "couscous" or "tagine" (including "as couscous" or "as tajine").	186

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
39	Ready-to-eat frozen meals	Frozen ethnic fried products	Fried spring rolls, samosas, shrimp fritters, salt cod fritters (accras), fried aumonière bundles/ravioli (including vegetarian products). Products with alternative animal protein (containing tofu, soy, etc.) and without meat or fish are excluded.	261
39	Ready-to-eat frozen meals	Frozen fish burger/fillet	Fish fillet, burger or grill. Examples: Provençal-style grilled pollock, salmon fillet with tomatoes and thyme, fish burgers, etc. Also includes products such as fish paupiettes and quenelles without sauce	460
39	Ready-to-eat frozen meals	Frozen fish in sauce	Fish and/or seafood in sauce (sorrel, à la Bordelaise, wine, Parisian, seafood blanquette, etc.), including fish in crumble/crust, fish quenelles with sauce. Some products may contain sauces with vegetables.	458
39	Ready-to-eat frozen meals	Frozen fish with vegetables	Cooked fish and/or seafood with vegetables and without starchy foods (separately or together as sauté, gratin)	461
39	Ready-to-eat frozen meals	Frozen fish with vegetables and starchy foods	Cooked fish and/or seafood with vegetables and starchy foods (separately or together as sauté, gratin)	462
39	Ready-to-eat frozen meals	Frozen cottage pie	Dish whose name and/or sale definition contains "Cottage pie" (with only beef meat)	330

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
39	Ready-to-eat frozen meals	Frozen paella	Dish whose name and/or sale definition contains "paella" (including vegetarian paella). Products with alternative animal protein (containing tofu, soy, etc.) and without meat or fish are excluded.	391
39	Ready-to-eat frozen meals	Frozen alternative products without animal protein	Alternative products without animal protein (containing tofu, soy, etc.). Example: vegetarian nuggets made from soy protein, chickpea balls.	643
39	Ready-to-eat frozen meals	Frozen meat in sauce	Meat in sauce such as veal blanquette, beef tongue in Madeira sauce, venison stew in grand veneur sauce, veal sweetbreads, etc. Some products may contain sauces with vegetables.	588
39	Ready-to-eat frozen meals	Frozen meat with starchy foods	Cooked meat (including only lardons or ham) served with rice, pasta, potatoes, cereals or pulses (separately or together as sauté, gratin).	589
39	Ready-to-eat frozen meals	Frozen meat with vegetables	Cooked meat with vegetables (and/or fruit) and without starchy foods, including sauerkraut without starchy foods	590
39	Ready-to-eat frozen meals	Frozen meat with vegetables and starchy foods	Cooked meat (including only lardons or ham) with vegetables (and/or fruit) and starchy foods (separately or together as sauté, gratin), including sauerkraut with potatoes	591

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
39	Ready-to-eat frozen meals	Frozen meat without sauce	Meatballs, marinated meat, stuffed meat, minced meat with onion and/or vegetable protein, marinated skewers, chicken wings, ribs, carpaccio, white or blood sausage, paupiettes, quenelles. Products with alternative animal protein (containing tofu, soy, etc.) and without meat or fish are excluded.	593
39	Ready-to-eat frozen meals	Frozen moussaka	Dish whose name and/or sale definition contains "moussaka"	382
39	Ready-to-eat frozen meals	Other frozen starters	Other hot or cold starters such as snails with parsley, stuffed mussels or clams, mini salmon/foie gras log, fish terrine, fish/seafood tartare, steamed ravioli, seafood/cheese soufflés/crisps, etc.	21
39	Ready-to-eat frozen meals	Frozen pasta Bolognese	Pasta, lasagne and cannelloni dish whose name and/or sale definition contains "Bolognese"	419
39	Ready-to-eat frozen meals	Frozen pasta carbonara	Pasta, lasagne and cannelloni dish whose name and/or sale definition contains "carbonara"	421
39	Ready-to-eat frozen meals	Frozen potato gratins	Gratins dauphinois, potato gratins without meat and without vegetable.	324
39	Ready-to-eat frozen meals	Frozen risottos	Dishes referred to as "risotto" (including vegetarian risottos). Products with alternative animal protein (containing tofu, soy, etc.) and without meat or fish are excluded.	272

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
39	Ready-to-eat frozen meals	Frozen shepherd's pies made with fish, brandade	Cod brandade, shepherd's pies made with fish, fish pies, similar products such as fish gratins without seafood or vegetables. Note that this family also includes products referred to as shepherd's pie made with fish and including vegetables	411
39	Ready-to-eat frozen meals	Frozen shrimp/mussels	Cooked shrimp/prawns/gambas (marinated, with garlic and parsley, etc.), moules marinières (without a side dish)	201
39	Ready-to-eat frozen meals	Frozen starchy foods and fish	Cooked fish or seafood with rice (or risotto), pasta or potatoes	459
39	Ready-to-eat frozen meals	Frozen cooked starchy foods	Mixtures of starchy foods (including cereals and pulses) with or without vegetables. For examples : potato and vegetable sauté, polenta and vegetables, quinoa and cereals with baby vegetables, etc. tables, chickpea balls, etc. Products with alternative animal protein (containing tofu, soy, etc.). Mixtures of starchy foods with meat (including lardons and ham) are not classified in this product subcategory.	351
39	Ready-to-eat frozen meals	Frozen stuffed vegetables	Dish whose name and/or sale definition contains "stuffed [name of the vegetable]" (including those mentioned "as stuffed [name of the vegetable]" or "stuffed [name of the vegetable] style") with or without a side dish.	349

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
39	Ready-to-eat frozen meals	Frozen sushi	makis, sushis, chirashis	565
39	Ready-to-eat frozen meals	Frozen vegetable patties/gratins/flans	Vegetable gratins, vegetable burgers, vegetable patties and similar products, vegetable omelettes. Some products may contain potatoes. Products with meat (including lardons and ham) are not classified in this product subcategory.	286
9	Soft drinks	Fruit beverages with fruit content > or = 50%	Product with a combined fruit juice and purée content $\geq 50\%$ . Possible presence of coconut (not considered as a fruit), milk, tea and cereals in lower proportions than the fruit(s). This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.	95
9	Soft drinks	Vegetable beverages	Beverages containing at least one vegetable (e.g. carrot) and with a vegetable and/or fruit juice and purée content > 50% and which include the term vegetable(s) in their sale description. Possible presence of coconut and tea. This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.	99

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Flavoured milk beverages	Flavoured (chocolate, coffee, strawberry, etc.) drinks containing milk (of animal origin) whose sales description indicates milk drink or flavoured milk. This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.	644
9	Soft drinks	Fruit beverages without added sugar	Beverages with or without artificial sweetening, carbonated or not, containing fruit juice and/or purée (with/without vegetable(s)) in quantities < 50%, without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel not used as an additive. Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.	645



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Sugar-sweetened and artificially-sweetened fruit beverages	Artificially-sweetened beverages, carbonated or not, containing fruit juice and/or purée (with/without vegetable(s)) in quantities < 50%, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.	646
9	Soft drinks	Sugar-sweetened fruit beverages	Beverages without artificial sweetening, carbonated or not, containing fruit juice and/or purée (with/without vegetable(s)) in quantities < 50%, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.	647

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Plant-based beverages without added sugar	Beverages with or without artificial sweetening, flavoured or not, with cereals (rice, oats, spelt, buckwheat, millet, etc.), oilseeds (almonds, hazelnuts, cashew nuts, hemp, etc.) and/or pulses (soy). Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes coconut milk, coconut milk/coconut water mixtures, and plant-based beverages containing tea or fruits (in lower proportions of fruits juice or purée than plant-based beverage). Does not contain products such as birch or maple water or sap, sugar cane juice, herbal infusions.	648

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Sugar-sweetened plant-based beverages	Beverages with or without artificial sweetening, flavoured or not, with cereals (rice, oats, spelt, buckwheat, millet, etc.), oilseeds (almonds, hazelnuts, cashew nuts, hemp, etc.) and/or pulses (soy). Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes coconut milk, coconut milk/coconut water mixtures, and plant-based beverages containing tea or fruits (in lower proportions of fruits juice or purée than plant-based beverage). Does not contain products such as birch or maple water or sap, sugar cane juice, herbal infusions.	649
9	Soft drinks	Flavoured waters without added sugar	Flavoured waters with or without artificial sweetening, carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products without juice or ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.	650

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Flavoured sugar-sweetened and artificially-sweetened waters	Flavoured artificially-sweetened waters, carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products containing no juice but with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.	651
9	Soft drinks	Flavoured sugar-sweetened waters	Flavoured waters without artificial sweetening, carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products containing no juice but with at least one ingredient such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.	652
9	Soft drinks	Colas without added sugar	Cola-flavoured beverages with or without artificial sweetening, with or without additional flavouring and/or mentioning cola in the name or sales description. Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).	653

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Sugar-sweetened and artificially-sweetened colas	Cola-flavoured artificially-sweetened beverages, with or without additional flavouring and/or mentioning cola in the name or sales description. Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).	654
9	Soft drinks	Sugar-sweetened colas	Cola-flavoured beverages without artificial sweetening, with or without additional flavouring and/or mentioning cola in the name or sales description. Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).	655
9	Soft drinks	Tea beverages without added sugar	Beverages with or without artificial sweetening, with tea or maté extracts, carbonated or still, flavoured or not, without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.	656

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Sugar-sweetened and artificially-sweetened tea beverages	Artificially-sweetened beverages, with tea or maté extracts, carbonated or still, flavoured or not, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.	657
9	Soft drinks	Sugar-sweetened tea beverages	Beverages without artificial sweetening, with tea or maté extracts, carbonated or still, flavoured or not, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.	658

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Other sports drinks	Artificially-sweetened beverages whose nutritional composition is particularly adapted to physical exertion., which may contain one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes beverages without artificial sweetening and without ingredients such as mono- and disaccharides, syrup, honey, caramel (not used as additive).	659
9	Soft drinks	Sugar-sweetened sports drinks	Beverages without artificial sweetening containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive) and whose nutritional composition is particularly adapted to physical exertion.	660

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Energy drinks without added sugar	Beverages with or without artificial sweetening, containing one or more stimulant ingredient(s) (caffeine, taurine, guarana, etc.) but without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Contains products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.	662
9	Soft drinks	Sugar-sweetened and artificially-sweetened energy drinks	Artificially-sweetened beverages containing one or more stimulant ingredient(s) (caffeine, taurine, guarana, etc.) and one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). May contain products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.	663



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Sugar-sweetened energy drinks	Beverages without artificial sweetening, containing one or more stimulant ingredient(s) (caffeine, taurine, guarana, etc.) and one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). May contain products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.	664
9	Soft drinks	Tonics and bitters without added sugar	Beverages with or without artificial sweetening, carbonated or not, bitter, flavoured or not, containing quinine and/or quassin (quassia) but no ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).	665

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Sugar-sweetened and artificially-sweetened tonics and bitters	Artificially-sweetened beverages, carbonated or not, bitter, flavoured or not, containing quinine and/or quassin (quassia) as well as one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).	666
9	Soft drinks	Sugar-sweetened tonics and bitters	Beverages without artificial sweetening, carbonated or not, bitter, flavoured or not, containing quinine and/or quassin (quassia) as well as one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).	667
9	Soft drinks	Alcohol-free beers without added sugar	Beverages with or without artificial sweetening, flavoured or not, containing hops, malt or barley, without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive) and/or mentioning alcohol-free beer or shandy/cooler in its name or sales description. Does not contain ginger beer or root beer.	668

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Sugar-sweetened alcohol-free beers	Beverages with or without artificial sweetening, flavoured or not, containing hops, malt or barley, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive) and/or mentioning alcohol-free beer or shandy/cooler in its name or sales description. Does not contain ginger beer or root beer.	669
9	Soft drinks	Aperitif beverages without added sugar	Alcohol-free aperitif or cocktail beverages, still or sparkling beverages based on dealcoholised wine, aniseed without dilution using or gentian beverages, as well as sparkling beverages imitating alcoholic beverages consumed as an aperitif. Products that may be artificially-sweetened but do not contain ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).	670

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Sugar-sweetened aperitif beverages	Alcohol-free aperitif or cocktail beverages, still or sparkling beverages based on dealcoholised wine, aniseed without dilution using or gentian beverages, as well as sparkling beverages imitating alcoholic beverages consumed as an aperitif. Products that may be artificially-sweetened and containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).	671
9	Soft drinks	Other beverages without added sugar	Beverages with or without artificial sweetening, flavoured or not, such as coconut water, birch or maple water or sap, sugar cane juice, herbal infusions without fruit juice (hibiscus, aloe vera, rooibos, basil, etc.). Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.	672

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
9	Soft drinks	Other sugar-sweetened beverages	Beverages with or without artificial sweetening, flavoured or not, such as coconut water, birch or maple water or sap, sugar cane juice, herbal infusions without fruit juice (hibiscus, aloe vera, rooibos, basil, etc.). Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.	673
33	Soups and broths	Other soups (ambient/chilled/frozen)	Other (ambient/chilled/frozen) soups including soups with an exotic connotation (moroccan, indian, thai, chinese, ...) with or without pasta. Examples: Thai soup, Indian soup, Chinese broth, Moroccan chorba, chicken waterzoi style soup, etc.	47
33	Soups and broths	Other soups (dehydrated/instant)	Other (dehydrated/instant) soups including soups with an exotic connotation (moroccan, indian, thai, chinese, ...) with or without pasta. Examples: Thai soup, Indian soup, Chinese broth, Moroccan chorba, chicken waterzoi style soup, etc.	48

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Broths (ambient/chilled/frozen/instant/deshydrated)	<p>All items with the terms "broth" or "consommé" in the trade name and sales description regardless of the ingredients used. Broths containing pasta are excluded from this subcategory. These are products that can be consumed directly (or after simple rehydration of the powder) in broth or soup</p> <p>Examples: beef broth, vegetable broth, shellfish broth, chicken consommé, etc.</p>	110
33	Soups and broths	Cold soups (ambient/chilled/frozen)	<p>All (ambient/chilled/frozen) products whose trade name and/or sales description contains the terms "gazpacho", "chilled soup" or "cold soup" or bearing the words "may be eaten cold", "to be eaten cold" on their packaging.</p> <p><i>Examples: gazpacho, cucumber and mint soup, three-pepper soup, creamy salmorejo recipe, etc.</i></p>	556
33	Soups and broths	Cold soups (dehydrated/instant)	<p>All (dehydrated/instant) products whose trade name and/or sales description contains the terms "gazpacho", "chilled soup" or "cold soup" or bearing the words "may be eaten cold", "to be eaten cold" on their packaging.</p> <p><i>Examples: gazpacho, cucumber and mint soup, three-pepper soup, creamy salmorejo recipe, etc.</i></p>	557

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Meat-based soups (ambient/chilled/frozen)	<p>All (ambient/chilled/frozen) soups or recipes with meat, with the exception of meat broths, soups containing lardons, and vegetable or starchy soups "with meat".</p> <p><i>Examples: cream of poultry, poultry flavoured cream, poultry supreme with morel mushrooms, garbure soup, chicken and extra crispy croutons</i></p>	530
33	Soups and broths	Meat-based soups (dehydrated/instant)	<p>All (dehydrated/instant) soups or recipes with meat ((dehydrated/instant), with the exception of meat broths, soups containing lardons, and vegetable or starchy soups "with meat".</p> <p><i>Examples: cream of poultry, poultry flavoured cream, poultry supreme with morel mushrooms, garbure soup, chicken and extra crispy croutons</i></p>	531

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Soups with pasta (ambient/chilled/frozen)	<p>All (ambient/chilled/frozen) items that include pasta in the ingredients (including broths and consommés) but do not contain meat or seafood. Note that soups with pasta and an exotic connotation (moroccan, indian, thai, chinese, ...) are classified in the Other soups subcategory and that "pistou" and "minestrone" soups, which may contain pasta, are classified in the "Starchy Soups" subcategory.</p> <p>Examples: tomato and vermicelli, Alsatian riewele soup, vegetable broth and vermicelli, etc.</p>	532
33	Soups and broths	Soups with pasta (dehydrated/instant)	<p>All (dehydrated/instant) items that include pasta in the ingredients (including broths and consommés) but do not contain meat or seafood. Note that soups with pasta and an exotic connotation (moroccan, indian, thai, chinese, ...) are classified in the Other soups subcategory and that "pistou" and "minestrone" soups, which may contain pasta, are classified in the "Starchy Soups" subcategory.</p> <p>Examples: tomato and vermicelli, Alsatian riewele soup, vegetable broth and vermicelli, etc.</p>	533



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Asparagus soups (ambient/chilled/frozen)	<p>(Ambient/chilled/frozen) soups essentially consisting of asparagus and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: asparagus velouté, cream of asparagus, asparagus duo with morel mushrooms, etc.</i></p>	534
33	Soups and broths	Asparagus soups (dehydrated/instant)	<p>(Dehydrated/instant) soups essentially consisting of asparagus and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: asparagus velouté, cream of asparagus, asparagus duo with morel mushrooms, etc.</i></p>	535
33	Soups and broths	Onion soups (ambient/chilled/frozen)	<p>(Ambient/chilled/frozen) soups essentially consisting of onions and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: French onion soup, onion soup with melted cheese, French onion soup and croutons, etc.</i></p>	536

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Onion soups (dehydrated/instant)	<p>(Dehydrated/instant) soups essentially consisting of onions and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: French onion soup, onion soup with melted cheese, French onion soup and croutons, etc.</i></p>	537
33	Soups and broths	Carrot soups (ambient/chilled/frozen)	<p>(Ambient/chilled/frozen) soups essentially consisting of carrots and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: carrot velouté, carrot and pumpkin delight with meatballs, carrot and coriander velouté, carrot douceur with coconut milk, etc.</i></p>	538
33	Soups and broths	Carrot soups (dehydrated/instant)	<p>(Dehydrated/instant) soups essentially consisting of carrots and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: carrot velouté, carrot and pumpkin delight with meatballs, carrot and coriander velouté, carrot douceur with coconut milk, etc.</i></p>	539

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Mushroom soups (ambient/chilled/frozen)	<p>(Ambient/chilled/frozen) soups essentially consisting of mushrooms and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: boletus velouté, cream of ceps, wild mushroom soup, cream of mushroom, etc.</i></p>	540
33	Soups and broths	Mushroom soups (dehydrated/instant)	<p>(Dehydrated/instant) soups essentially consisting of mushrooms and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: boletus velouté, cream of ceps, wild mushroom soup, cream of mushroom, etc.</i></p>	541

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Starchy soups (ambient/chilled/frozen)	<p>All (ambient/chilled/frozen) items containing mainly potatoes such as "Savoyard soup", "cream parmentière", "potato delight", etc. This subcategory also includes products with split peas and/or chickpeas and/or broad beans and/or lentils and/or sweet potatoes and/or chestnuts in the trade name and/or sales description and whose proportions are higher than that of vegetables. "Pistou" and "minestrone" soups are classified in this subcategory. Pulses are considered starchy foods.</p> <p><i>Examples: broad bean soup, split pea soup, lentils, carrots and potatoes, potato and cream delight with truffles, chestnut cream, sweet potato and pumpkin douceur, minestrone with olive oil, pistou, etc.</i></p>	542

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Mixed vegetable soups (ambient/chilled/frozen)	<p>(Ambient/chilled/frozen) soups that mention three or more vegetables in their trade name (unless they are only green vegetables) and without any other characteristics that would enable them to be assigned to one of the above-mentioned families. This subcategory also includes products whose trade name refers to a vegetable-based recipe.</p> <p><i>Examples: mixed vegetable velouté, vegetable and lentil blend, 9-vegetable douceur, organic country soup, cream of vegetable, spring vegetable soup, velouté of sunshine vegetables, etc.</i></p>	544
33	Soups and broths	Green vegetable or cabbage soups (ambient/chilled/frozen)	<p>(Ambient/chilled/frozen) soups consisting of green vegetables (except leeks and asparagus) or cabbage and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: Velouté of green vegetables with cheese, blend of green vegetables, 6 green vegetable soup, courgette delight, cream of broccoli, cream of cauliflower and broccoli, watercress velouté, spinach and artichoke velouté, etc.</i></p>	546

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Green vegetable or cabbage soups (dehydrated/instant)	<p>(Dehydrated/instant) soups consisting of green vegetables (except leeks and asparagus) or cabbage and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: Velouté of green vegetables with cheese, blend of green vegetables, 6 green vegetable soup, courgette delight, cream of broccoli, cream of cauliflower and broccoli, watercress velouté, spinach and artichoke velouté, etc.</i></p>	547
33	Soups and broths	Leek soups (ambient/chilled/frozen)	<p>(Ambient/chilled/frozen) soups essentially consisting of leeks and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: leek velouté, leek delight, leek and potato soup, leek and onion soup with croutons, cream of leek, etc.</i></p>	548

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Leek soups (dehydrated/instant)	<p>(Dehydrated/instant) soups essentially consisting of leeks and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: leek velouté, leek delight, leek and potato soup, leek and onion soup with croutons, cream of leek, etc.</i></p>	549
33	Soups and broths	Fish-crustacean-mollusc soups (ambient/chilled/frozen)	<p>All (ambient/chilled/frozen) soups essentially consisting of fish, crustaceans or molluscs.</p> <p><i>Examples: fish soup, shellfish bisque, bouillabaisse, duo of monkfish and scallops, lobster delight à l'armoricaine, shellfish velouté, etc.</i></p>	550
33	Soups and broths	Fish-crustacean-mollusc soups (dehydrated/instant)	<p>All (dehydrated/instant) soups essentially consisting of fish, crustaceans or molluscs.</p> <p><i>Examples: fish soup, shellfish bisque, bouillabaisse, duo of monkfish and scallops, lobster delight à l'armoricaine, shellfish velouté, etc.</i></p>	551

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Pumpkin soups (ambient/chilled/frozen)	<p>(Ambient/chilled/frozen) soups essentially consisting of pumpkins and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: pumpkin velouté, pumpkin douceur with cream, pumpkin velouté with nutmeg, pumpkin and melting carrots, pumpkin and butternut soup, etc.</i></p>	552
33	Soups and broths	Pumpkin soups (dehydrated/instant)	<p>(Dehydrated/instant) soups essentially consisting of pumpkins and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: pumpkin velouté, pumpkin douceur with cream, pumpkin velouté with nutmeg, pumpkin and melting carrots, pumpkin and butternut soup, etc.</i></p>	553



Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Tomato soups (ambient/chilled/frozen)	<p>(Ambient/chilled/frozen) soups essentially consisting of tomatoes and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: tomato velouté, Provençal-style tomato, gourmet tomato soup, tomato, onion and basil, cream of tomato, velvety tomato soup</i></p>	554
33	Soups and broths	Tomato soups (dehydrated/instant)	<p>(Dehydrated/instant) soups essentially consisting of tomatoes and without any other characteristics that would enable them to be assigned to one of the above-mentioned families.</p> <p><i>Examples: tomato velouté, Provençal-style tomato, gourmet tomato soup, tomato, onion and basil, cream of tomato, velvety tomato soup</i></p>	555

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Soups with pasta and meat or fish (ambient/chilled/frozen)	<p>All (ambient/chilled/frozen) items that include pasta in the ingredients (including broths and consommés), as well as meat or seafood. Note that soups with pasta and an exotic connotation (moroccan, indian, thai, chinese, ...) are classified in the Other soups subcategory.</p> <p><i>Examples: poule au pot (poached chicken), pot au feu with vermicelli, beef and carrots with vermicelli, tomato bolognese soup, onions, meat and vermicelli, etc.</i></p>	674
33	Soups and broths	Soups with pasta and meat or fish (dehydrated/instant)	<p>All (dehydrated/instant) items that include pasta in the ingredients (including broths and consommés), as well as meat or seafood. Note that soups with pasta and an exotic connotation (moroccan, indian, thai, chinese, ...) are classified in the Other soups subcategory.</p> <p><i>Examples: poule au pot (poached chicken), pot au feu with vermicelli, beef and carrots with vermicelli, tomato bolognese soup, onions, meat and vermicelli, etc.</i></p>	675

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Starchy soups (dehydrated/instant)	<p>All (dehydrated/instant) items containing mainly potatoes such as "Savoyard soup", "cream parmentière", "potato delight", etc. This subcategory also includes products with split peas and/or chickpeas and/or broad beans and/or lentils and/or sweet potatoes and/or chestnuts in the trade name and/or sales description and whose proportions are higher than that of vegetables. "Pistou" and "minestrone" soups are classified in this subcategory. Pulses are considered starchy foods.</p> <p><i>Examples: broad bean soup, split pea soup, lentils, carrots and potatoes, potato and cream delight with truffles, chestnut cream, sweet potato and pumpkin douceur, minestrone with olive oil, pistou, etc.</i></p>	543

Categories_code	Categories_name	Subcategories_name	Subcategories_definitions	Subcategories_code
33	Soups and broths	Mixed vegetable soups (dehydrated/instant)	<p>(Dehydrated/instant) soups that mention three or more vegetables in their trade name (unless they are only green vegetables) and without any other characteristics that would enable them to be assigned to one of the above-mentioned families. This subcategory also includes products whose trade name refers to a vegetable-based recipe.</p> <p><i>Examples: mixed vegetable velouté, vegetable and lentil blend, 9-vegetable douceur, organic country soup, cream of vegetable, spring vegetable soup, velouté of sunshine vegetables, etc.</i></p>	545
11	Syrups	Concentrated beverages, to dilute	Sweetened products but with carbohydrate content of less than 55% (or 50% for citrus fruits)	100
11	Syrups	Concentrated beverages, to dilute with no added sugar	No sugar or sugar syrup is used	101
11	Syrups	Syrups	According to Decree No. 97-914, they include products with carbohydrate sweetener content more than 55% of the weight of the finished product. This content may be reduced to 50% when the fruit juice(s) present in syrups consist exclusively of citrus fruit juice or when the added carbohydrate sweetener is fructose	523

**Annex 3 : Ranking of the top ten most contributing categories in all countries with French composition data**

The twelve following tables are giving the contribution by population: children (3-9 years old); adolescents (10-17 years old); adults (18-64 years old) and then for each population by nutrient (sugars, fat and saturated fatty acids, salt), obtained with the French composition data.

Best-ReMap categories contributing to <i>sugars intakes</i> among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Baby food									8		
Bread products	5	3	4	5	10	5	7	3		7	3
Breakfast cereals	8		3	9	3	9	5	10	10		5
Cakes and biscuits	2	2	1		8	1	6	1	1	3	1
Chocolate products	4	7	5	4	9	3	3	5	3	2	6
Confectionery	6	8	10	2	6	8	4			6	8
Crackers			7	10							10
Fresh dairy products and desserts	7				7	7	9	9	7	5	9
Fruit juices and nectars	3	1	2	3	1	2	1	4	2	4	4
Fruit purees, compotes and desserts	9	4				4				10	
Ice creams and sorbets		6	6	8	5		10	6	4	9	7
Infant milks			8								
Jams	10	9		6	2	10	8		9		
Ready-to-eat								7			
Sandwich, pizza and other stuffed bread-like cereal product								8			
Soft drinks	1	5	9	1	4	6	2	2	6	1	2
Syrups				7						8	

Best-ReMap categories contributing to <i>fat intakes</i> among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Fresh dairy products and desserts	8				5	6	9		7	8	
Crackers		6						9	9	10	
Ice creams and sorbets		7	8	8	3		10	8	6		6
Sandwich, pizza and other stuffed bread-like cereal product								3	10		10
Breakfast cereals			9	10	9		7				7
Cheeses	4	2	1	4	2	2	4	4	1	6	3
Dessert mixes		9				10					
Cold sauces	7			5	6	7				9	
Cakes and biscuits	1	4	2		4	1	6	2	2	4	1
Delicatessen meats and similar	2	1	6	1	1	4	1	10	3	1	4
Ready-to-eat								1			
Processed potato products	9		5	7			8	7		5	9
Fresh delicatessen products						9			8		
Chocolate products	3	5	7	3	8	5	2	6	4	3	5
Confectionery	10	10		9	10	8					
Margarines	6	8	4	2			5			2	8
Bread products	5	3	3	6	7	3	3	5	5	7	2

Best-ReMap categories contributing to <i>saturated fatty acids</i> intakes among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Cakes and biscuits	1	3	2		5	2	6	3	2	4	1
Cheeses	2	1	1	3	2	1	3	2	1	1	2
Delicatessen meats and similar	3	4	7	1	1	4	1	10	3	3	4
Chocolate products	4	6	5	4	6	6	2	4	4	5	6
Bread products	5	2	4	6	9	3	4	6	6	7	3
Margarines	6	8	6	2	10		5			2	7
Fresh dairy products and desserts	7				4	5	7		7	6	9
Confectionery	8	10		7	8	8	10				
Ice creams and sorbets	9	5	3	5	3	7	9	7	5	9	5
Breakfast cereals	10		8	10	7	9	8				8
Cold sauces				8							
Crackers		7	9					9	8	10	
Dessert mixes		9				10					
Processed potato products			10	9				8	10	8	
Ready-to-eat								1			
Sandwich, pizza and other stuffed bread-like cereal product								5	9		10

Best-ReMaP categories contributing to <i>salt intakes</i> among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Fresh dairy products and desserts					8	9			9		
Processed potato products	9		7	7			10	6	10	6	10
Cold sauces	5		10	5	5	5	5			4	7
Ready-to-eat		7						1			
Breakfast cereals	7	8	4	4	3	8	4	10	8	10	5
Crackers		4	9		9		8	9	7	7	8
Hot sauces	6					10				9	
Dessert mixes		6	6			7					9
Cakes and biscuits	4	5	5	8	6	4	6	7	4	5	3
Cheeses	3	3	2	3	4	3	3	4	3	3	4
Bread products	1	2	1	1	1	1	1	2	1	1	1
Sandwich, pizza and other stuffed bread-like cereal product								3	5		6
Delicatessen meats and similar	2	1	3	2	2	2	2	8	2	2	2
Soft drinks	8						10			8	
Ice creams and sorbets		9		10	10						
Soups and broths			8				7	5			
Margarines		10		6							
Fresh delicatessen products	10				7	6	9		6		
Confectionery				9							



Best-ReMap categories contributing to <i>sugars intakes</i> among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Bread products	4	5	3	5	8	5	5	1	5	7	3	2
Breakfast cereals	6	7	4	7	6	8	8	6	9	10	5	1
Cakes and biscuits	2	3	2		7	1	4	3	1	2	2	4
Chocolate products	5	2	5	4	9	4	3	5	6	3	6	6
Confectionery	10	6	8	3	4	7	6			6	8	
Crackers	8		10	10				9			10	10
Fresh dairy products and desserts	9	9			10	6	9	10	8	5	9	9
Fruit juices and nectars	3	4	1	2	1	2	1	2	2	4	4	3
Fruit purees, compotes and desserts						9						
Ice creams and sorbets		8	7	9	3		10	7	4	8	7	7
Jams	7	10	9	6	5	10	7	8	7			8
Soft drinks	1	1	7	1	2	3	2	4	3	1	1	5
Syrups				8						9		

Best-ReMap categories contributing to <i>fat intakes</i> among adolescents (10-17 years old)	Countries for which data are available for the concerned population										
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Portugal	Slovenia
Cheeses	1	3	1	2	2	2	2	1	1	3	4
Delicatessen meats and similar	2	1	6	3	1	4	1	7	3	4	1
Bread products	3	6	3	6	4	3	4	2	4	2	2
Cakes and biscuits	4	2	2		5	1	6	3	2	1	3
Chocolate products	5	4	4	4	7	5	3	4	5	7	5
Hot sauces	6	10				9					8
Crackers	7							6	7		10
Processed potato products	8	8	7	7			7			10	
Dessert mixes	9					8		9			7
Cold sauces	10	5	10	5	3	7		5	9		
Breakfast cereals			9	10	10	10	8	10		6	6
Fresh dairy products and desserts						6	9		10		
Ice creams and sorbets			8	8	6		10		6	8	9
Margarines		7	5	1	8		5	8		5	
Confectionery		9		9	9						
Sandwich, pizza and other stuffed bread-like cereal product									8	9	

Best-ReMap categories contributing to <i>saturated fatty acids intakes</i> among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Cheeses	1	1	1	1	2	1	1	1	1	1	1	3
Delicatessen meats and similar	2	3	6	4	1	4	2	6	3	3	4	1
Bread products	3	5	3	5	6	3	5	2	5	7	3	2
Cakes and biscuits	4	2	2		4	2	4	3	2	2	2	4
Chocolate products	5	4	4	2	5	5	3	4	6	4	6	5
Hot sauces	6											9
Processed potato products	7			8			10			6		
Breakfast cereals	8		8	10	10	10	9	8			8	6
Dessert mixes	9					9		9				8
Crackers	10		10					5	7			
Ice creams and sorbets		7	7	6	3	7	7		4	9	5	7
Fresh dairy products and desserts		10			7	6	8		9	8	10	10
Cold sauces		9		9				10	10			
Confectionery		8		7	8	8						
Margarines		6	5	3	9		6	7		5	7	
Soft drinks			9									
Sandwich, pizza and other stuffed bread-like cereal product									8	10	9	

Best-ReMap categories contributing to <i>salt intakes</i> among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Bread products	1	1	1	1	1	1	1	1	1	1	1	1
Delicatessen meats and similar	2	2	3	2	2	2	2	3	2	2	2	2
Cheeses	3	3	2	3	3	3	3	2	3	4	4	5
Dessert mixes	4		5			6		4			7	4
Cold sauces	5	4	7	5	4	5	6	8	8	3	8	9
Hot sauces	6	6				7	8			10		6
Breakfast cereals	7	7	4	4	5	8	5	6	10		5	3
Cakes and biscuits	8	5	6		6	4	7	7	4	6	3	7
Crackers	9	10	10	9	8			5	6	7		8
Ready-to-eat	10						9					
Soft drinks		8		8	10	10				9	9	10
Fresh delicatessen products					7	9		9	7			
Processed potato products		9	8	7			10	10	9	5	10	
Ice creams and sorbets					9							
Margarines				6								
Sandwich, pizza and other stuffed bread-like cereal product									5	8	6	
Soups and broths			9				4					

Best-ReMap categories contributing to <i>sugars intakes</i> among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Bread products	4	5	2	1	4	4	3	4	5	1	2	4	2	6	3	1	1
Breakfast cereals	6	9	8	5	7	6	1		10	8		1		8	5	7	2
Cakes and biscuits	2	2	5	3		7	6	1	3	3	6	3	1	3	1	4	3
Canned fruits											7						
Cheeses													8				
Chocolate products	5	3	3	6	6	8	8	7	6	5	4	6	7	5	8		6
Confectionery	10	7			3	3	4	9	8					7	9	8	
Crackers			9	8	10					7	8	9			10	10	10
Fresh dairy products and desserts	9	8		9		9	7	6	7	6	9	10	9	4	6		8
Fruit juices and nectars	3	4	4	4	2	1	2	2	1	4	5	5	3	2	4	9	5
Fruit purees, compotes and desserts								8								5	
Ice creams and sorbets	8	10	7	7	8	10	10	10	9	10		8	4	9	7	6	9
Jams	7	6	6	10	5	2	9	5	4	9	3	7	6	10		3	7
Soft drinks	1	1	1	2	1	5	5	3	2	2	1	2	5	1	2	1	4
Syrups					9												

Best-ReMap categories contributing to <i>fat intakes</i> among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Cheeses	1	1	2	1	2	2	1	1	2	1	3	2	1	1	2	2	3
Delicatessen meats and similar	2	2	1	5	3	1	3	2	1	6	1	3	2	3	4	1	1
Bread products	3	6	3	2	4	4	4	4	5	2	4	6	4	5	3	2	2
Cakes and biscuits	4	5	6	3		6	6	3	3	3	8	4	3	6	1	7	4
Chocolate products	5	7	5	8	5	7	7	5	6	8	6	8	6	7	9	10	5
Crackers	6		9	4	10	9	9			5	5		9	9	6	6	8
Hot sauces	7	8						10	10			10					7
Cold sauces	8	3	7	7	6	3	8	6		7	7	5	7	8			
Dessert mixes	9							8		10							9
Ice creams and sorbets	10		8	9	8								5		10	9	
Breakfast cereals					9		5					9					6
Fresh dairy products and desserts		10				10	10	7	8	9	9			10	7		
Processed potato products		9	10		7				9		10	1	10	4		3	
Ready-to-eat									7							8	
Confectionery						8											
Margarines		4	4	6	1	5	2	9	4	4	2	7		2	5	4	10
Sandwich, pizza and other stuffed bread-like cereal product													8		10		

Best-ReMap categories contributing to <i>saturated fatty acids intakes</i> among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Cheeses	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	2
Delicatessen meats and similar	2	2	1	4	3	2	3	2	2	6	1	3	2	3	4	2	1
Cakes and biscuits	3	3	5	3		5	7	3	3	3	6	2	3	4	2	5	4
Bread products	4	5	6	2	5	3	4	4	6	2	5	6	4	6	3	6	3
Chocolate products	5	6	3	7	4	4	6	6	5	7	4	4	6	5	8	10	5
Ice creams and sorbets	6		7	8	6	8	9	8	8	9	10	9	5	9	6	8	7
Hot sauces	7	9						10	10								9
Fresh dairy products and desserts	8	8		10		7	8	5	7	8	8		9	7	7		8
Breakfast cereals	9		9		9		5					8					6
Crackers	10		10	6						5	7		8		10	7	10
Confectionery		10			8	9	10										
Ready-to-eat								9								9	
Dessert mixes			8					7		10							
Processed potato products					10							7		8		4	
Soft drinks				9													
Margarines		4	4	5	2	6	2	9	4	4	3	5		2	5	3	
Cold sauces		7			7	10					9	10	10				
Sandwich, pizza and other stuffed bread-like cereal product													7	10	9		

Best-ReMap categories contributing to salt intakes among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Bread products	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Delicatessen meats and similar	2	2	2	3	2	2	2	2	2	3	2	2	2	2	2	2	2
Cheeses	3	3	3	2	3	3	4	3	3	2	3	4	3	4	3	3	4
Cold sauces	4	4	6	4	4	4	5	5	8	7	4	5	8	3	5	9	7
Dessert mixes	5		8	7		10		6		5					8		5
Hot sauces	6	5					6	7	7			6		6			6
Cakes and biscuits	7	6	7	6		7	8	4	6	6	7	8	4	7	4	7	8
Breakfast cereals	8	9	4	5	5	6	3	10		8	10	3	9	10	7		3
Ready-to-eat	9			10					5		8					5	
Fresh delicatessen products	10	7		9	10	5	9	8		10			7				
Crackers			5	8	8	8	10	9	10	4	5	9	6	8	9	6	9
Soft drinks		8			9						9	10			10		10
Fruit juices and nectars						9											
Processed potato products		10	9		7				9			7	10	5		8	
Margarines			10		6		7			9	6					10	
Sandwich, pizza and other stuffed bread-like cereal product													5	9	6		
Soups and broths									4							4	



**Annex 4 : Ranking of the top ten most contributing categories in all countries with Estonian composition data**

The twelve following tables are giving the contribution by population: children 3-9 years old); adolescents (10-17 years old); adults (18-64 years old)) and then for each population by nutrients (sugars, fat and saturated fatty acids, salt), obtained with the Estonian composition data.

Best-ReMap categories contributing to sugars intakes among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Fruit juices and nectars	4	1	2	2	2	4	1	3	2	7	4
Cakes and biscuits	1	3	1	10	8	1	6	1	1	2	1
Soft drinks	2	5	8	1	4	5	2	2	6	1	2
Chocolate products	3	7	4	4	9	2	3	5	3	3	5
Bread products	5	2	3	5	7	6	5	4	4	8	3
Ice creams and sorbets	9	6	6	8	6	10	10	6	7	9	7
Confectionery	6	8	10	3	5	8	4			5	9
Breakfast cereals	10		5	9	10	9	7	8	10		6
Fresh dairy products and desserts	7				1	7	8		5	4	10
Jams		9		7	3		9		8		
Syrups				6						6	
Baby food		10							9		8
Fruit purees, compotes and desserts	8	4				3				10	
Cereal bars			9								
Infant milks			7								
Sandwich, pizza and other stuffed bread-like cereal product								9			
Ready-to-eat								7			

Best-ReMap categories contributing to fat intakes among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Bread products	4	1	3	5	4	3	3	5	4	5	2
Cakes and biscuits	1	4	2		5	1	6	2	2	4	1
Cheeses	5	2	1	4	6	2	5	4	1	7	3
Chocolate products	3	6	7	3	7	5	2	6	5	3	6
Delicatessen meats and similar	2	3	4	2	1	4	1	9	3	1	4
Ice creams and sorbets		5	7	7	3	8	10	8	6	10	5
Margarines	6	7	8	1	8		4			2	8
Fresh dairy products and desserts	7				2	6	8		7	8	
Crackers		8	9	9				10		9	9
Processed potato products	9		5	8			7	7	10	6	7
Confectionery	8	10		10	9	7					
Breakfast cereals			10		10		9				10
Cold sauces	10			6							
Fresh delicatessen products						9			8		
Dessert mixes		9				10					
Sandwich, pizza and other stuffed bread-like cereal product								3	9		
Ready-to-eat								1			

Best-ReMap categories contributing to saturated fatty acids intakes among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Bread products	5	2	6	6	7	3	4	7	7	8	3
Cakes and biscuits	1	3	2		5	2	6	2	2	4	1
Cheeses	2	1	1	1	4	1	3	3	1	2	2
Chocolate products	4	6	4	3	6	6	2	4	4	1	6
Delicatessen meats and similar	3	4	5	2	1	4	1	9	3	3	4
Ice creams and sorbets	9	5	3	5	3	8	8	6	5	9	5
Margarines	7	8	8	4	9		5			5	10
Fresh dairy products and desserts	6				2	5	7		6	6	9
Crackers		7	7	10	10	10		10	10		7
Confectionery	8	10		7	8	7	9			10	
Processed potato products			10	9			10	8		7	
Fresh delicatessen products						9	14		8		
Cold sauces	10			8							
Dessert mixes		9									
Ready-to-eat								1			
Sandwich, pizza and other stuffed bread-like cereal product								5	9		8
Infant milks			9								

Best-ReMaP categories contributing to <i>salt intakes</i> among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Bread products	1	1	1	1	1	1	2	2	1	1	1
Breakfast cereals	3	9	3	5	4	7	3	9	8	9	3
Cakes and biscuits	5	5	5	8	6	4	6	8	4	5	4
Cheeses	4	3	2	3	3	3	4	4	3	3	5
Delicatessen meats and similar	2	2	4	2	2	2	1	7	2	2	2
Cold sauces	6			4	5	6	5			6	
Crackers		6	8	9	9		8	10	7	8	6
Processed potato products	8		7	7			10	6		7	9
Chocolate products							9		9		
Margarines				6						4	
Fresh delicatessen products	10				8	8			6		10
Fresh dairy products and desserts	9				7	5			10	10	
Ice creams and sorbets		8		10	10						
Dessert mixes		6	6			9					8
Ready-to-eat		7						1			
Sandwich, pizza and other stuffed bread-like cereal product								3	5		7
Soups and broths			9				7	5			
Hot sauces	7					10					

Best-ReMap categories contributing to <i>sugars intakes</i> among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Soft drinks	1	1	5	1	1	2	1	2	2	1	1	4
Cakes and biscuits	2	3	1		8	1	5	1	1	2	2	3
Breakfast cereals	6	9	6	9	10	9	7	6	9	10	5	1
Confectionery	8	6	8	4	3	8	6		10	4	8	
Ice creams and sorbets		7	7	8	4		10	8	6	8	7	8
Fresh dairy products and desserts	9	8			7	7	9	10	7	5	9	9
Jams	7	10	10	7	5		8	9	8			7
Cereal bars			9								10	
Hot sauces	10					10		7				
Fruit purees, compotes and desserts						6						
Syrups				6						9		
Fruit juices and nectars	5	4	2	2	2	3	2	5	3	6	4	6
Chocolate products	4	2	3	3	9	4	3	4	4	3	6	5
Bread products	3	5	4	5	6	5	4	3	5	7	3	2

Best-ReMap categories contributing to <i>fat intakes</i> among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Bread products	2	5	3	5	2	1	2	2	4	4	2	2
Cakes and biscuits	4	2	2		4	2	6	3	2	3	1	3
Ice creams and sorbets		10	7	8	5	10	8		5		7	8
Processed potato products	6	8	8	7			7	10	8	1	9	
Margarines		6	6	1	9		5	7		6	5	
Crackers	8		10	9				6	9	8		9
Cold sauces	10	7		6	7			8		10		
Fresh dairy products and desserts					8	6	9		10	9		
Breakfast cereals			9				10				10	6
Confectionery		9		10	10	8						
Dessert mixes	7					7		9				7
Hot sauces	9					9						10
Sandwich, pizza and other stuffed bread-like cereal product									7		8	
Cheeses	3	4	1	2	3	3	3	1	1	7	4	5
Chocolate products	5	3	5	3	6	5	4	4	6	5	6	4
Delicatessen meats and similar	1	1	4	4	1	4	1	5	3	2	3	1

Best-ReMap categories contributing to saturated fatty acids intakes among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Bread products	3	5	5	6	7	2	4	3	6	9	3	2
Cakes and biscuits	4	3	2		4	4	5	2	2	3	1	3
Ice creams and sorbets	10	7	6	5	3	7	7	9	4	8	6	7
Fresh dairy products and desserts		9			6	6	8	10	8	6	9	9
Crackers	8		8	10	10			6	9		10	10
Margarines		6	7	4	9		6	7		7	8	
Confectionery		8		7	8	8	9					
Breakfast cereals												6
Processed potato products	7		10	8			10		10	5		
Cold sauces		10		9								
Dessert mixes	9					10		8				8
Soft drinks			9									
Hot sauces	6					9						
Sandwich, pizza and other stuffed bread-like cereal product									7	10	7	
Cheeses	1	1	1	1	2	1	2	1	1	1	2	4
Chocolate products	5	4	3	2	5	5	3	4	5	4	5	5
Delicatessen meats and similar	2	2	4	3	1	3	1	5	3	2	4	1

Best-ReMap categories contributing to <i>salt intakes</i> among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Bread products	1	1	1	1	1	1	1	2	1	1	1	1
Breakfast cereals	6	3	4	5	5	5	5	4	9	10	3	3
Cold sauces	4	5	7	4	4	8	6	8	10	4		9
Crackers	10	10		8	8			6	6	7	8	8
Processed potato products		8	8	6			10			5	9	
Fresh delicatessen products	7				7	9			8			10
Dessert mixes	3		5			6		5			7	4
Chocolate products				9								
Margarines			9	7	10			10		8	10	
Soft drinks		9										
Fresh dairy products and desserts					9	10						
Hot sauces	9	7				7	9	9				7
Sandwich, pizza and other stuffed bread-like cereal product									5	9	6	
Ready-to-eat							8					
Soups and broths			10				3		7			
Cakes and biscuits	8	6	6	10	6	4	7	7	4	6	5	6
Cheeses	5	4	2	3	3	3	4	1	3	3	4	5
Delicatessen meats and similar	2	2	3	2	2	2	2	3	2	2	2	2



Best-ReMaP categories contributing to <i>sugars intakes</i> among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Soft drinks	1	1	1	2	1	4	6	2	2	1	1	3	3	1	1	2	4
Bread products	3	4	2	3	2	2	2	3	4	3	2	4	2	6	3	1	1
Cakes and biscuits	2	2	6	1		7	4	1	3	2	8	2	1	2	2	4	3
Jams	7	7	5	10	6	6	9	6	5	10	3	7	6	10		3	7
Breakfast cereals	6	9	7	7	10		1			9		1		8	6	6	2
Fresh dairy products and desserts	8	8		9		3	5	5	7	6	5	10	8	3	5		8
Ice creams and sorbets	9		8	6	8	9	10		9			9	5	9	7	7	10
Confectionery	10	6			4	5	7	10	8					7	9	9	
Crackers			10	8	9	10				7	10		10				9
Delicatessen meats and similar			9								9					10	
Cheeses													9				
Hot sauces		10						9	10	8		8					
Fruit purees, compotes and desserts								8								5	
Canned fruits											7						
Syrups					7										10		
Fruit juices and nectars	5	5	3	4	3	1	3	4	1	4	6	6	4	5	4	8	5
Chocolate products	4	3	4	5	5	10	8	7	6	5	4	5	7	4	8		6

Best-ReMaP categories contributing to <i>fat intakes</i> among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Bread products	3	3	2	3	4	3	3	3	3	2	3	2	4	4	2	3	2
Cakes and biscuits	4	5	6	2		5	6	4	5	3	7	5	3	6	1	8	4
Cheeses	2	2	3	1	2	2	4	1	2	1	4	4	1	1	3	2	3
Chocolate products	5	6	5	7	5	9	7	6	6	7	6	7	6	7	10	10	5
Crackers	6		8	5	9	8	8			5	5	10	9	8	6	7	6
Cold sauces	10	7	10	9	6	4	10	9		8	9	8	8	10			
Ice creams and sorbets	8		7	8	8	10							5		9	9	
Fresh dairy products and desserts		10				7	9	5	9	9	8			9	7		10
Processed potato products		9	9	10	7				8			3	10	3		5	
Breakfast cereals							5					9					7
Dessert mixes	9							7		10							8
Hot sauces	7	8						10									9
Ready-to-eat									7		10					6	
Sandwich, pizza and other stuffed bread-like cereal product													7		8		
Delicatessen meats and similar	1	1	1	4	3	1	2	2	1	4	1	1	2	2	4	1	1
Margarines		4	4	6	1	6	1	8	4	6	2	6		5	5	4	

Best-ReMaP categories contributing to <i>saturated fatty acids</i> intakes among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Bread products	4	5	4	4	5	5	4	3	4	3	4	5	4	8	4	3	3
Cakes and biscuits	3	3	5	2		6	7	4	3	2	6	3	3	3	2	5	4
Cheeses	1	1	2	1	1	1	1	1	2	1	2	2	1	1	1	1	2
Ice creams and sorbets	6		7	6	6	7	9	7	8	9		9	5	9	6	9	8
Margarines		6	6	9	3	8	3	8	6	6	3	8		6	9	7	
Fresh dairy products and desserts	7	7		10		3	8	7	7	8	7	10	9	5	5		7
Crackers	9		8	7	9	10				7	8		8		10	8	10
Breakfast cereals			10				5					7					6
Processed potato products					10				10			6		7		4	
Cold sauces		9			8						10						
Confectionery		8			7	9	10										
Soft drinks				8													
Dessert mixes			9					9		10							9
Ready-to-eat	10								9		9					6	
Hot sauces	8	10						10									
Sandwich, pizza and other stuffed bread-like cereal product													7	10	8		
Chocolate products	5	4	3	5	4	4	6	6	5	5	5	4	6	4	7	10	5
Delicatessen meats and similar	2	2	1	3	2	2	2	2	1	4	1	1	2	2	3	2	1

Best-ReMaP categories contributing to <i>salt intakes</i> among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Bread products	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1
Cakes and biscuits	8	6	6	6	8	6	8	4	7	6	7	8	5	7	4	7	7
Cheeses	3	3	3	2	3	3	4	3	4	2	3	4	3	3	3	4	5
Breakfast cereals	7	5	4	4	6	8	3			7		3	10	9	5	9	3
Crackers			5	8	9			10		4	5	9	7	10	8	6	9
Fresh delicatessen products	6	8			10	4	10	8	6		9		8				10
Margarines		9	9		5	7	7			8	6			6	10	10	
Processed potato products			8		7				10			7		5		8	
Soft drinks		10		9								10					
Fresh dairy products and desserts						10		9			10						
Dessert mixes	5			7				5		5					7		4
Hot sauces	9	7					6	6	8	10		6					6
Fruit juices and nectars				10		9											
Ready-to-eat	10		10				9		5		8					5	
Soups and broths									1				4			3	
Sandwich, pizza and other stuffed bread-like cereal product													6	8	6		
Cold sauces	4	4		5	4	5	5	7	9	9	4	5	9	4	9		8
Delicatessen meats and similar	2	2	2	3	2	2	2	2	3	3	2	3	2	2	2	1	2

**Annex 5 : Ranking of the top ten most contributing categories in all countries with Dutch composition data**

The twelve following tables are giving the contribution by population: children (3-9 years old); adolescents (10-17 years old); adults (18-64 years old) and then for each population by nutrient (sugars, fat and saturated fatty acids, salt), obtained with the Dutch composition data.

Best-ReMap categories contributing to <i>sugars intakes</i> among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Bread products	5	3	4	5	10	3	7	3	4	8	3
Cakes and biscuits	1	2	1		8	1	4	1	1	4	1
Chocolate products	4	7	5	6	9	5	3	4	3	3	6
Fruit juices and nectars	3	1	3	1	1	2	1	5	2	5	4
Soft drinks	2	4	8	2	4	6	2	2	7	1	2
Ice creams and sorbets	10	5	6	8	5	10	10	6	5	9	7
Breakfast cereals	8		2	9	6	9	6	10			5
Confectionery	6	8	10	4	7	8	5			7	9
Fresh dairy products and desserts	7				2	4	8	8	6	6	10
Jams		9		7	3		9		10		
Crackers		10	9	10							
Syrups	9			3						2	8
Cheeses									8		
Baby food									9		
Fruit purees, compotes and desserts		6				7				10	
Infant milks			7								
Ready-to-eat								7			
Sandwich, pizza and other stuffed bread-like cereal product								9			

Best-ReMap categories contributing to <i>fat intakes</i> among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Bread products	4	1	3	3	5	3	4	2	3	1	2
Cakes and biscuits	1	2	2	10	3	1	6	4	2	5	1
Cheeses	5	3	1	5	2	2	3	5	1	6	3
Chocolate products	3	6	6	4	6	5	2	6	5	4	6
Delicatessen meats and similar	2	4	4	2	1	4	1	10	4	2	4
Margarines	6	8	7	1	8	10	5			3	7
Ice creams and sorbets		7	8	7	4	8	10	8	6		5
Cold sauces	7			6	10	7				9	
Fresh dairy products and desserts	9				7	6	8		7	8	
Breakfast cereals	10		9	9	9		7				8
Crackers		5	10					9		10	
Processed potato products	8		5	8			9	7	10	7	9
Fresh delicatessen products									8		
Dessert mixes		9				9					
Ready-to-eat								1			
Sandwich, pizza and other stuffed bread-like cereal product								3	9		10

Best-ReMap categories contributing to <i>saturated fatty acids intakes</i> among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Bread products	5	1	3	5	7	3	5	4	4	5	3
Cakes and biscuits	1	3	2	9	4	2	6	3	2	4	1
Cheeses	2	2	1	4	2	1	3	2	1	1	2
Chocolate products	4	7	5	2	6	6	2	6	5	3	6
Delicatessen meats and similar	3	4	6	3	1	5	1	10	3	2	4
Ice creams and sorbets	8	5	4	6	3	7	8	7	6	8	5
Margarines	6	8	8	1	10		4			6	9
Fresh dairy products and desserts	7				5	4	7	8	7	7	8
Breakfast cereals	10		7	8	9	9	9				7
Crackers		6					10			9	
Confectionery	9	10			8	8					
Processed potato products			9	10				9	10	10	
Cold sauces				7							
Fresh delicatessen products									9		
Dessert mixes		9				10					
Ready-to-eat								1			
Sandwich, pizza and other stuffed bread-like cereal product								5	8		10

Best-ReMap categories contributing to <i>salt intakes</i> among children (3-9 years old)	Countries for which data are available for the concerned population										
	Belgium	Bulgaria	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal
Bread products	1	1	1	1	1	1	1	2	1	1	1
Breakfast cereals	7	9	4	4	3	9	4	10	9		5
Cakes and biscuits	4	5	5	8	6	4	5	7	4	4	3
Cheeses	3	3	2	3	4	3	3	4	3	3	4
Delicatessen meats and similar	2	2	3	2	2	2	2	6	2	2	2
Crackers		4	8	10	10		10	9	7	5	7
Cold sauces	5			5	5	6	6			7	
Fresh delicatessen products	8				8	8	9		6		9
Chocolate products							8				
Ice creams and sorbets		7		9	9				10		
Processed potato products	9		9	7				8		6	10
Margarines	10			6						10	
Fresh dairy products and desserts					7	10			8	9	
Dessert mixes		6	6			7					8
Fruit juices and nectars		10	7								
Sandwich, pizza and other stuffed bread-like cereal product								3	5	8	6
Ready-to-eat		8						1			
Hot sauces	6					5					
Soups and broths			10				7	5			



Best-ReMaP categories contributing to <i>sugars intakes</i> among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Bread products	3	5	4	6	8	4	5	1	4	7	3	2
Cakes and biscuits	2	3	2		4	1	4	2	1	2	2	3
Breakfast cereals	6	7	3	8	6	7	8	6	10	10	5	1
Ice creams and sorbets		8	7	9	3	10	10	8	5	9	7	7
Confectionery	10	6	8	5	5	8	6			6	8	
Fresh dairy products and desserts	8	9	9		10	6	9	9	8	8	9	9
Jams	7		10	7	7		7	7	9			8
Cold sauces	9											
Syrups		10		3						5	10	
Cheeses									7			
Fruit purees, compotes and desserts						9						10
Chocolate products	5	2	5	4	19	5	3	5	6	3	6	6
Fruit juices and nectars	4	4	1	2	1	2	1	3	2	4	4	4
Soft drinks	1	1	6	1	2	1	2	4	3	1	1	5

Best-ReMap categories contributing to <i>fat intakes</i> among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Bread products	3	4	3	3	4	1	3	2	3	1	1	2
Cakes and biscuits	4	2	2		3	3	6	3	2	3	2	3
Cold sauces	10	6	10	6	6	7		6	8	8		
Ice creams and sorbets		9	7	8	5		9		6		8	8
Margarines		7	6	1	8		5	7		5	5	
Breakfast cereals	8		9	9	9	10	8	10			6	6
Processed potato products		8	8	7			7		10	7	10	10
Crackers	9	10		10				8		9		9
Fresh dairy products and desserts					10	6	10		9	10		
Dessert mixes	6					8		9				7
Hot sauces	7					9						
Sandwich, pizza and other stuffed bread-like cereal product									7		9	
Cheeses	2	5	1	2	2	2	2	1	1	4	3	4
Chocolate products	5	3	4	5	7	5	4	4	5	6	7	5
Delicatessen meats and similar	1	1	5	4	1	4	1	5	4	2	4	1

Best-ReMap categories contributing to <i>saturated fatty acids</i> intakes among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Bread products	3	5	3	5	6	3	5	2	4	5	1	2
Cakes and biscuits	4	2	2	10	4	2	6	3	2	2	2	3
Ice creams and sorbets	9	7	6	6	3	7	7		5	8	5	7
Breakfast cereals	6		7	9	10	9	9	7			7	6
Fresh dairy products and desserts	10	10			8	5	8		8	7	10	10
Margarines		6	8	2	9		4	6		6	9	
Crackers								8	9			9
Cold sauces		9		7				10				
Processed potato products			9	8					10	10		
Confectionery		8			7	8						
Dessert mixes	7					10						8
Fresh delicatessen products								9				
Hot sauces	8											
Sandwich, pizza and other stuffed bread-like cereal product									7	9	8	
Cheeses	1	1	1	1	2	1	1	1	1	1	3	4
Chocolate products	5	4	4	3	5	6	3	4	6	4	6	5
Delicatessen meats and similar	2	3	5	4	1	4	2	5	3	3	4	1

Best-ReMap categories contributing to <i>salt intakes</i> among adolescents (10-17 years old)	Countries for which data are available for the concerned population											
	Austria	Belgium	Cyprus	Denmark	Estonia	France	Germany	Greece	Italy	Netherlands	Portugal	Slovenia
Bread products	1	1	1	1	1	1	1	1	1	1	1	1
Breakfast cereals	8	7	4	4	4	8	6	5	10		4	3
Cold sauces	6	5	8	5	5	7	8	9		6		8
Crackers	10	9	9	10	8	10		6	6	7	9	9
Processed potato products		8	10	7			10		9	5	8	10
Fresh delicatessen products		10			7	9		10	7			
Hot sauces	5	6				4	5	7		9		7
Dessert mixes	4		5			6		4			7	4
Chocolate products				9								
Ice creams and sorbets				8	9				8			
Margarines				6						10		
Fruit juices and nectars			7									
Ready-to-eat	9						9				10	
Sandwich, pizza and other stuffed bread-like cereal product									5	8	6	
Soups and broths							4					
Cakes and biscuits	7	4	6		6	5	7	8	4	4	5	6
Cheeses	3	3	2	3	3	3	3	2	3	3	3	5
Delicatessen meats and similar	2	2	3	2	2	2	2	3	2	2	2	2

Best-ReMap categories contributing to <i>sugars intakes</i> among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Bread products	3	3	3	3	3	6	2	2	4	1	1	3	2	6	3	1	1
Cakes and biscuits	2	2	5	1		2	5	1	2	2	6	1	1	2	1	3	2
Chocolate products	5	4	4	6	7	9	7	7	6	5	4	6	8	4	9		6
Jams	7	6	6		6	3	9	6	5	10	3	8	7	10		4	7
Breakfast cereals	6	9	8	5	8	8	4		10	8		4			5	7	3
Fresh dairy products and desserts	8	8		10		5	6	5	7	6	7	10	9	5	6		8
Ice creams and sorbets	9	10	7	7	9	10	10	10	9	9		9	4	8	8	6	10
Confectionery	10	7			5	9	3	9	8					7	10	8	
Crackers			9	8	10					7	9					10	9
Cheeses													6				
Syrups				9	4							7		9	7		
Fruit purees, compotes and desserts								8								5	
Canned fruits											8						
Fruit juices and nectars	4	5	2	4	2	1	1	4	1	4	5	5	3	3	4	9	5
Soft drinks	1	1	1	2	1	4	8	3	3	3	2	2	5	1	2	2	4

Best-ReMap categories contributing to fat intakes among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Bread products	3	3	2	3	3	3	3	2	3	2	3	2	2	2	1	3	2
Cakes and biscuits	4	6	5	2		6	5	4	5	3	7	4	4	5	3	5	4
Cheeses	1	1	3	1	2	2	4	1	2	1	4	3	1	1	2	1	3
Chocolate products	5	7	6	7	5	7	6	6	6	8	6	8	6	7	10	10	5
Crackers	6		7	5	10	8	9		9	6	5		10	9	8	6	6
Cold sauces	10	5	9	8	6	4	8	7	10	7	8	6	7	8			
Ice creams and sorbets	9		8	9	7	10							5		9	9	9
Fresh dairy products and desserts		10					10	5	8	9	9		9	10	7		
Breakfast cereals			10	10	9		7					9					8
Processed potato products		8			8						10	7		6		7	
Confectionery						9											
Dessert mixes	7							8		10							7
Hot sauces	8	9						10				10					
Ready-to-eat									7							8	
Sandwich, pizza and other stuffed bread-like cereal product													8		6		
Delicatessen meats and similar	2	2	1	4	4	1	2	3	1	5	1	1	3	3	4	2	1
Margarines		4	4	6	1	5	1	9	4	4	2	5		4	5	4	10

Best-ReMap categories contributing to saturated fatty acids intakes among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Bread products	4	4	4	3	4	4	4	4	5	2	4	4	4	3	3	3	3
Cakes and biscuits	3	3	5	2		3	6	3	4	3	6	3	3	4	2	5	4
Cheeses	1	1	2	1	1	1	1	1	1	1	3	1	1	1	1	1	2
Margarines		5	3	9	2	6	2	9	3	5	1	5		6	8	4	
Ice creams and sorbets	6	10	7	6	6	7	9	8	8	9	10	8	5	8	6	7	7
Fresh dairy products and desserts	7	8				9	8	5	7	7	8	10	8	7	5		9
Crackers	10		9	7	10		10		10	8	7		10	10		6	8
Breakfast cereals	8		10		8	10	7					7			10		6
Cold sauces		7			7			10		10	9	9	9				
Processed potato products					9											10	
Confectionery		9				8											
Dessert mixes			8					7									10
Soft drinks				8													
Ready-to-eat									9							8	
Hot sauces	9																
Sandwich, pizza and other stuffed bread-like cereal product													7	9	9		
Chocolate products	5	6	6	5	5	5	5	6	6	6	5	6	6	5	7	9	5
Delicatessen meats and similar	2	2	1	4	3	2	3	2	2	4	1	2	2	2	4	2	1

Best-ReMap categories contributing to <i>salt intakes</i> among adults (18-64 years old)	Countries for which data are available for the concerned population																
	Austria	Belgium	Croatia	Cyprus	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Netherlands	Portugal	Romania	Slovenia
Bread products	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Cakes and biscuits	5	6	6	4		7	7	5	7	7	7	6	4	5	4	6	7
Cheeses	3	3	3	2	3	3	3	3	3	2	3	3	3	3	3	3	3
Breakfast cereals	8	10	4	6	4	5	6			8		4	10		6		5
Crackers			5	5		9		10		4	6	9	6	9	8	7	9
Fresh delicatessen products	10	7		10	8	6	9	8					7	10			10
Margarines		9	8		6		5		9	10	5	10				8	
Processed potato products		8	10		7				10			8		6	10	9	
Hot sauces	6	4					8	4	5	6		5		8			6
Dessert mixes	4		9	7				6		5					7		4
Fresh dairy products and desserts						10		9			10						
Ice creams and sorbets					10								8				
Fruit juices and nectars				8		8					9						
Ready-to-eat	9						10		6		8					5	
Soups and broths									4							4	
Confectionery					9												
Sandwich, pizza and other stuffed bread-like cereal product													5	7	5		
Cold sauces	7	5	7	9	5	4	4	7	8	9	4	7	9	4	9	10	8
Delicatessen meats and similar	2	2	1	3		2	2	2	2	3	2	2	2	2	2	2	1



**Annex 6 : Average percentages of the intakes in salt, saturated fatty acids, fat and sugars covered by the five prioritized food categories by country and population (children, adolescents and adults) (raw products and other products not covered by Best-ReMaP are not considered in these calculations)**

Countries for which data are available for children population (3-9 years old)	Salt (%)	Saturated fatty acids (%)	Fat (%)	Sugars (%)
Belgium	67,8	29,7	31,7	34,7
Bulgaria	70,4	33,6	38,6	21,3
Cyprus	56,9	15,3	20,1	31,9
Denmark	78,3	28,3	32,3	36,1
Estonia	74,9	43,7	46,4	32,2
France	61,5	34,6	34,0	30,4
Germany	75,5	38,4	44,3	30,2
Greece	25,6	10,6	12,1	35,9
Italy	65,4	20,1	24,6	23,0
Netherlands	67,0	29,5	30,7	42,5
Portugal	64,4	28,9	32,7	43,2

Countries for which data are available for adolescents population (10-17 years old)	Salt (%)	Saturated fatty acids (%)	Fat (%)	Sugars (%)
Austria	58,4	34,7	37,1	47,2
Belgium	66,8	26,7	28,3	44,2
Cyprus	57,4	18,6	23,8	35,9
Denmark	74,3	21,1	25,1	42,5
Estonia	73,0	40,6	43,1	34,2
France	65,5	34,5	34,9	35,7
Germany	70,4	34,9	40,1	32,2
Greece	55,4	18,2	24,1	47,1
Italy	67,0	18,1	23,3	28,1
Netherlands	61,9	26,8	27,5	47,6
Portugal	68,6	33,3	37,2	54,9
Slovenia	75,5	49,9	52,7	49,7

Countries for which data are available for adults population (18-64 years old)	Salt (%)	Saturated fatty acids (%)	Fat (%)	Sugars (%)
Austria	57,4	30,8	34,8	43,6
Belgium	64,6	27,0	29,1	48,6
Croatia	84,6	46,9	54,1	48,2
Cyprus	55,6	20,3	24,9	47,9
Denmark	74,4	24,8	29,1	44,6
Estonia	71,7	38,6	40,9	31,9
Finland	74,3	37,6	42,1	47,3
France	65,9	32,1	34,6	36,0
Germany	63,5	32,9	36,8	27,7
Greece	54,8	17,4	22,9	49,6
Hungary	84,2	52,3	54,5	56,8
Ireland	72,8	28,8	29,1	51,7
Italy	71,4	20,4	26,9	33,8
Netherlands	57,4	26,5	27,6	51,1
Portugal	70,6	31,8	37,2	51,8
Romania	74,2	34,3	42,1	47,4
Slovenia	78,7	54,8	58,9	53,0

**Annex 7 : Description of existing databases prior to Best-ReMaP for monitoring processed food in the following countries: Austria, Belgium, Estonia, France, Germany, Ireland and Hungary**

<b>Country</b>	<b>Year of data collection</b>	<b>Food sector (as declared by the country)</b>
<b>Austria</b>	2017-2021	Breakfast cereals
<b>Austria</b>	2017-2020	Dairy products
<b>Austria</b>	2017-2020	Soft drinks
<b>Austria</b>	2017-2021	Complementary products
<b>Austria</b>	2017-2019; 2021	Food in squeeze pouch
<b>Austria</b>	2017-2019	Pizzas
<b>Austria</b>	2017-2018	Sugo & pesto
<b>Austria</b>	2018-2019	Cocoa
<b>Austria</b>	2018	Soup pearl croutons
<b>Austria</b>	2019	Ice creams
<b>Austria</b>	2019-2020	Confectionary
<b>Austria</b>	2020	Sausage products
<b>Austria</b>	2017-2018; 2020	Sauces & condiments
<b>Austria</b>	2020	Savory snacks
<b>Austria</b>	2020	Spreads
<b>Belgium</b>	2018 ; 2019 ; 2020	Bread and bakery products

<b>Belgium</b>	2018 ; 2019 ; 2020	Cereal and grain products
<b>Belgium</b>	2018 ; 2019 ; 2020	Confectionery
<b>Belgium</b>	2018 ; 2019 ; 2020	Convenience foods
<b>Belgium</b>	2018 ; 2019 ; 2020	Dairy
<b>Belgium</b>	2018 ; 2019 ; 2020	Edible oils and oil emulsions
<b>Belgium</b>	2018 ; 2019 ; 2020	Eggs
<b>Belgium</b>	2018 ; 2019 ; 2020	Fish and fish products
<b>Belgium</b>	2018 ; 2019 ; 2020	Fruit and vegetables
<b>Belgium</b>	2018 ; 2019 ; 2020	Meat and meat products
<b>Belgium</b>	2018 ; 2019 ; 2020	Non-alcoholic beverages
<b>Belgium</b>	2018 ; 2019 ; 2020	Sauces, dressings, spreads and dips
<b>Belgium</b>	2018 ; 2019 ; 2020	Snackfoods
<b>Belgium</b>	2018 ; 2019 ; 2020	Sugars, honey and related products
<b>Belgium</b>	2018 ; 2019 ; 2020	Special foods
<b>Estonia</b>	2018	Breakfast cereals (incl. mueslis)
<b>Estonia</b>	2018	Meat products
<b>Estonia</b>	2018	Bread and similar products
<b>Estonia</b>	2018	Non-alcoholic beverages
<b>Estonia</b>	2018	Milk products

<b>Estonia</b>	2018	Plant-based products alternative to milk products
<b>France</b>	2012	Baby Food
<b>France</b>	2012	Infant milk
<b>France</b>	2009 ; 2013	Crackers
<b>France</b>	2010-2011 ; 2016	Cereal bars
<b>France</b>	2008 ; 2011 ; 2018	Breakfast cereals
<b>France</b>	2008 ; 2011	Cakes and biscuits
<b>France</b>	2009 ; 2013-2014	Desserts mixes
<b>France</b>	2009-2010 ; 2013	Soft drinks
<b>France</b>	2009-2010 ; 2013	Fruit juices and nectars
<b>France</b>	2009-2010	Syrups
<b>France</b>	2011 ; 2017	Soups and broth
<b>France</b>	2010 ; 2013	Delicatessen meats and similar
<b>France</b>	2009 ; 2012	Chocolate products
<b>France</b>	2009 ; 2010 ; 2017	Fruit purees, compotes and desserts
<b>France</b>	2010-2011 ; 2015	Ice creams and sorbets
<b>France</b>	2017	Confectionery
<b>France</b>	2009 ; 2010 ; 2017	Jams
<b>France</b>	2009 ; 2010 ; 2017	Canned fruits

<b>France</b>	2011 ; 2016	Margarines
<b>France</b>	2009 ; 2012	Bread products
<b>France</b>	2015	Frozen pastries and desserts
<b>France</b>	2015	Frozen snacking products
<b>France</b>	2010 ; 2016	Ready-to-eat canned meals
<b>France</b>	2008-2009-2010-2011-2012 ; 2016	Ready-to-eat fresh meals
<b>France</b>	2012 ; 2016	Ready-to-eat frozen meals
<b>France</b>	2008-2009-2010-2011 ; 2015	Fresh delicatessen products
<b>France</b>	2008-2009 ; 2011 ; 2017	Fresh dairy products and desserts
<b>France</b>	2015	Cheeses
<b>France</b>	2011 ; 2017	Processed potato products
<b>France</b>	2010 ; 2017	Hot sauces
<b>France</b>	2011 ; 2016	Cold sauces
<b>Germany</b>	2016	Soups
<b>Germany</b>	2016	Brew
<b>Germany</b>	2016	Sauces
<b>Germany</b>	2016	Meat & Meat products
<b>Germany</b>	2016	Fish and seafood
<b>Germany</b>	2016	Stews

<b>Germany</b>	2016	Vegetable/mushrooms/pulses
<b>Germany</b>	2016	Alternative products for food of animal origin
<b>Germany</b>	2016	Potatoes
<b>Germany</b>	2016	Fruits
<b>Germany</b>	2016	Grain
<b>Germany</b>	2016 ; 2019	Breakfast cereals
<b>Germany</b>	2016 ; 2020	Bakery products (incl. Bread and buns)
<b>Germany</b>	2016	Snacks (different food categories)
<b>Germany</b>	2016	Desserts
<b>Germany</b>	2016	Spreads
<b>Germany</b>	2016 ; 2019	Milk products (sweetened yoghurt and curd ; no drinkable mixed products)
<b>Germany</b>	2016	Confectionery
<b>Germany</b>	2018 ; 2019	Soft drinks (sweetened)
<b>Germany</b>	2019	Milk drinks
<b>Germany</b>	2019	Frozen pizzas
<b>Germany</b>	2020	Meat and sausages (selected varieties, subgroups)
<b>Germany</b>	2020	Ready meals advertised for children

<b>Germany</b>	2020	Baby food pouches (pureed complementary feeding products packed in squeezable plastic pouches)
<b>Germany</b>	2020	Muesli/fruit and nuts bar
<b>Ireland</b>	2016-2017	Breakfast cereals
<b>Ireland</b>	2016-2017	Yoghurts
<b>Ireland</b>	2017	Food targeting infants (0-12 months)
<b>Ireland</b>	2017	Food targeting young children (1-3 years)
<b>Hungary</b>	2018 ; 2020	Fruit juices and nectars
<b>Hungary</b>	2018 ; 2020	Carbonated soft drinks
<b>Hungary</b>	2018 ; 2020	Ice tea
<b>Hungary</b>	2018 ; 2020	Syrup
<b>Hungary</b>	2018 ; 2020	Energy drinks
<b>Hungary</b>	2018 ; 2020	Sweets
<b>Hungary</b>	2018 ; 2020	Sweet biscuits
<b>Hungary</b>	2018 ; 2020	Ice cream
<b>Hungary</b>	2018 ; 2020	Chips
<b>Hungary</b>	2018 ; 2020	Crackers
<b>Hungary</b>	2018 ; 2020	Nuts
<b>Hungary</b>	2018 ; 2020	Breakfast cereals



<b>Hungary</b>	2018 ; 2020	Muesli bar
<b>Hungary</b>	2018 ; 2020	Oatmeal
<b>Hungary</b>	2018 ; 2020	Fresh dairy products and desserts
<b>Hungary</b>	2018 ; 2020	Chocolate
<b>Hungary</b>	2018 ; 2020	Cheese
<b>Hungary</b>	2018 ; 2020	Meat products
<b>Hungary</b>	2018 ; 2020	Canned meats, sandwich spread
<b>Hungary</b>	2018 ; 2020	Meat products made from offal
<b>Hungary</b>	2018 ; 2020	Preserve, marmalade, jam
<b>Hungary</b>	2018 ; 2020	Canned/bottled fruit
<b>Hungary</b>	2018 ; 2020	Ketchup
<b>Hungary</b>	2018 ; 2020	Mayonnaise
<b>Hungary</b>	2018 ; 2020	Mustard
<b>Hungary</b>	2018 ; 2020	Plant-based milk
<b>Hungary</b>	2018 ; 2020	Breads
<b>Hungary</b>	2018 ; 2020	Bakery products, bread roll
<b>Hungary</b>	2018 ; 2020	Nut butters and spread
<b>Hungary</b>	2018 ; 2020	Sweet cottage cheese / quark products



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

Food category : Baby food (41)

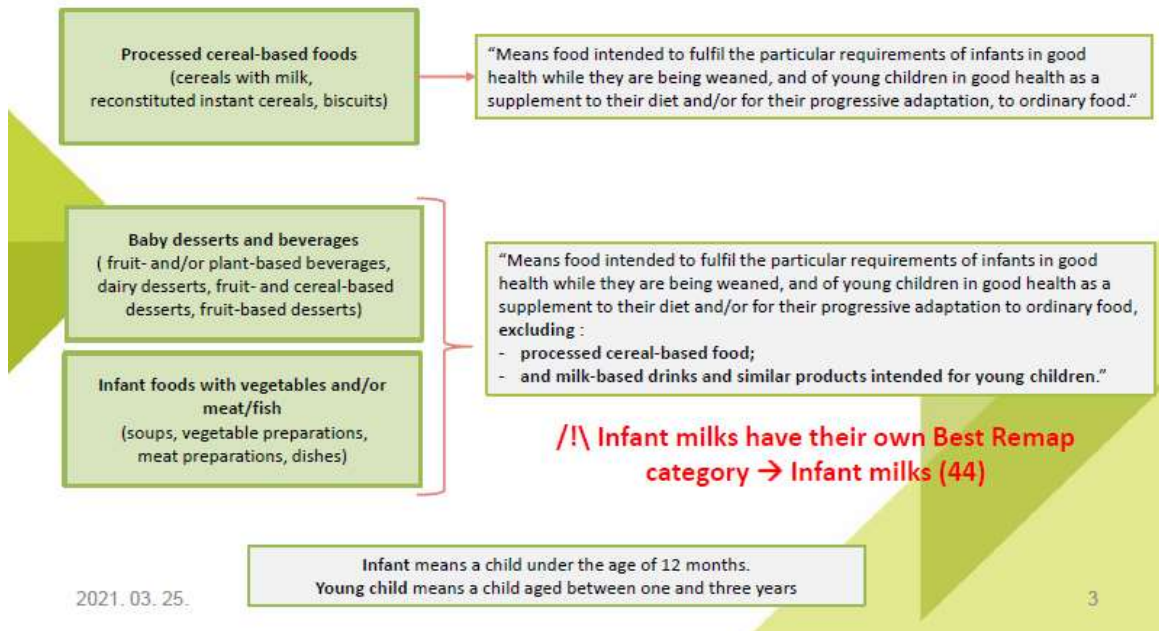
- General description of the category and products included (slide 3)
- Products excluded (slide 4)
- Main types of products (slide 5)
- List of the subcategories and associated definitions (slides 6-10)
- Definitions of the subcategories and examples of products included (slides 11-30)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Baby food (41)

➤ What kind of product can be considered as a Baby food ?



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Baby food (41)

➤ What is excluded from the Baby food category ?

- Infant milks
- Follow-on formulae milks
- Growing-up milks
- All foods that do not comply with regulations UE n°609/20132 and directive 2006/125/CE



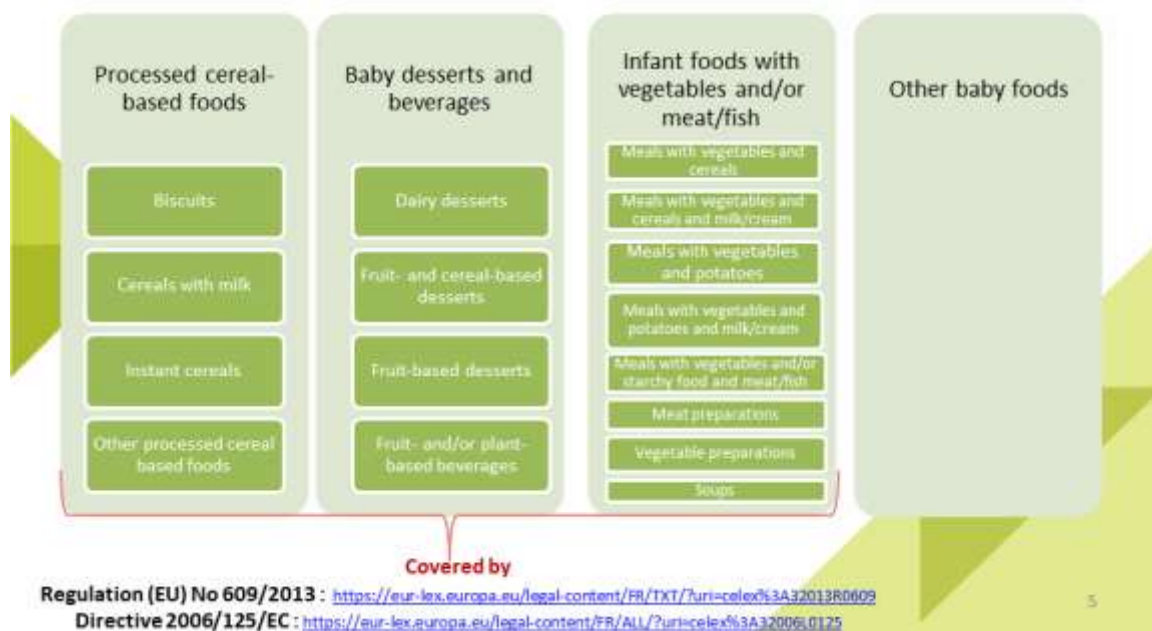


### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

Food category : Baby food (41)

! Infant milks have their own Best Remap category → Infant milks (44)

- 4 main types of products
- 15 subcategories in total



### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

## Baby food subcategories & definitions

Category code : 41

#### ➤ Processed cereal-based foods

Subcategory code	Subcategory name	Subcategory definition
68	Biscuits	Biscuits or rusks meeting the definition of "processed cereal-based foods" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.
140	Cereals with milk	Ready-to-eat cereals with milk (sold in liquid form) meeting the definition of "processed cereal-based foods" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain fruits and/or vegetables powder.
139	Instant cereals	Instant cereals to be reconstituted corresponding to cereals to be reconstituted in a bottle or plate, in water or in suitable infant milk (sold in powder form) and meeting the definition of "processed cereal-based foods" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain powder or flakes of fruits, vegetables, chocolate, ...
764	Other processed cereal based foods	Other processed cereal based foods for babies and infants as mueslis, puffed rice cake with fruits and/or vegetable, cereal bars, ... Products may contain fruits, vegetables, chocolate, ...



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Baby food subcategories & definitions

Category code : 41

#### ➤ Desserts and beverages meeting the definition of baby food

Subcategory code	Subcategory name	Subcategory definition
210	Dairy desserts	Dairy desserts consisting mainly of milk and/or fresh cheese. These products may contain sugar and/or fruit and/or vegetable and/or chocolate and/or cereals. They meet the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.
209	Fruit- and cereal-based desserts	Fruit- and cereal-based desserts consisting mainly of fruit and cereals, and which may contain small quantities of milk products and/or sugar and/or vegetable and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.
208	Fruit-based desserts	Fruit-based desserts consisting mainly of fruit and which may contain small quantities of milk products and/or sugar and/or vegetable and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.
91	Fruit- and/or plant-based beverages	Fruit- and/or plant-based beverages that can be ready-to-eat (sold in liquid form) or reconstituted in water (sold in powder form) and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Baby food subcategories & definitions

Category code : 41

#### ➤ Meals meeting the definition of baby food

Subcategory code	Subcategory name	Subcategory definition
450	Meals with vegetables and cereals	Meals with vegetables and/or legumes and cereals meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain potatoes and / or small quantities of fruits.
451	Meals with vegetables and cereals and milk/cream	Meals with vegetables and cereals and milk/cream/cheese consisting mainly of vegetables, cereals, milk and/or cream, and which may contain cheese, potatoes, legumes and/or small quantities of fruits, meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and by Directive 2006/125/EC.
452	Meals with vegetables and potatoes	Meals with vegetables and potatoes meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain legumes and/or small quantities of fruits. Vegetables with potatoes sauces are included in this subcategory.
453	Meals with vegetables and potatoes and milk/cream	Meals with vegetables and potatoes and milk/cream consisting mainly of vegetables, potatoes and milk and/or cream and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain legumes and/or small quantities of fruits. Vegetables with potatoes and milk/cream sauces are included in this subcategory.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Baby food subcategories & definitions

Category code : 41

#### ➤ Meals meeting the definition of baby food

Subcategory code	Subcategory name	Subcategory definition
454	Meals with vegetables and/or starchy food and meat/fish	Meals consisting mainly of meat and/or fish, vegetables and/or starchy foods (rice, pasta, potatoes), and which may contain milk products (as cheese, ...), legumes, and/or small quantities of fruits and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.
480	Meat preparations	Meat preparations meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.
479	Vegetable preparations	Vegetable and/or legumes preparations consisting mainly of vegetables, and/or legumes, which may contain small quantities of milk (as cheese, ...) and/or fruits products and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Vegetables without starchy food sauces are included in this subcategory.
529	Soups	Soups consisting mainly of vegetables and/or legumes and water, which may contain small quantities of milk products and/or cereals and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Baby stock and soup cubs to be reconstituted with boiling water are included in this subcategory.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Baby food subcategories & definitions

Category code : 41

#### ➤ Other baby foods

Subcategory code	Subcategory name	Subcategory definition
763	Other baby foods	Other products for infants under 3 years that don't fit in any existing sub categories (fruit pieces dry,...).

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

# Processed cereal-based foods

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

➤ Biscuits

Category code	Subcategory code	Subcategory name	Subcategory definition
41	68	Biscuits	Biscuits or rusks meeting the definition of "processed cereal-based foods" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.



*« rusks and biscuits which are to be used either directly or, after pulverisation, with the addition of water, milk or other suitable liquids »*



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### ➤ Cereals with milk

Category code	Subcategory code	Subcategory name	Subcategory definition
41	140	Cereals with milk	Ready-to-eat cereals with milk (sold in liquid form) meeting the definition of "processed cereal-based foods" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain fruits and/or vegetables powder.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### ➤ Instant cereals

Category code	Subcategory code	Subcategory name	Subcategory definition
41	139	Instant cereals	Instant cereals to be reconstituted corresponding to cereals to be reconstituted in a bottle or plate, in water or in suitable infant milk (sold in powder form) and meeting the definition of "processed cereal-based foods" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain powder or flakes of fruits, vegetables, chocolate, ...



*"simple cereals which are or have to be reconstituted with milk or other appropriate nutritious liquids"*

*"cereals with an added high protein food which are or have to be reconstituted with water or other protein-free liquid"*



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### ➤ Instant cereals

Category code	Subcategory code	Subcategory name	Subcategory definition
41	764	Other processed cereal based foods	Other processed cereal based foods for babies and infants as mueslis, puffed rice cake with fruits and/or vegetable, cereal bars, ... Products may contain fruits, vegetables, chocolate, ...



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

**Desserts and beverages  
meeting the definition of  
baby food**

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### ➤ Dairy desserts

Category code	Subcategory code	Subcategory name	Subcategory definition
41	210	Dairy desserts	Dairy desserts consisting mainly of milk and/or fresh cheese. These products may contain sugar and/or fruit and/or vegetable and/or chocolate and/or cereals. They meet the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### ➤ Fruit- and cereal-based desserts

Category code	Subcategory code	Subcategory name	Subcategory definition
41	209	Fruit- and cereal-based desserts	Fruit- and cereal-based desserts consisting mainly of fruit and cereals, and which may contain small quantities of milk products and/or sugar and/or vegetable and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.



Contains fruits and biscuit

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Baby food subcategories & definitions**

Category code	Subcategory code	Subcategory name	Subcategory definition
41	208	Fruit-based desserts	Fruit-based desserts consisting mainly of fruit and which may contain small quantities of milk products and/or sugar and/or vegetable and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

➤ Fruit- and/or plant-based beverages

Category code	Subcategory code	Subcategory name	Subcategory definition
41	91	Fruit- and/or plant-based beverages	Fruit- and/or plant-based beverages that can be ready-to-eat (sold in liquid form) or reconstituted in water (sold in powder form) and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

# Meals meeting the definition of baby food

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

➤ Meals with vegetables and cereals

Category code	Subcategory code	Subcategory name	Subcategory definition
41	450	Meals with vegetables and cereals	Meals with vegetables and/or legumes and cereals meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain potatoes and / or small quantities of fruits.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

➤ Meals with vegetables and cereals and milk/cream

Category code	Subcategory code	Subcategory name	Subcategory definition
41	451	Meals with vegetables and cereals and milk/cream	Meals with vegetables and cereals and milk/cream/cheese consisting mainly of vegetables, cereals, milk and/or cream, and which may contain cheese, potatoes, legumes and/or small quantities of fruits, meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and by Directive 2006/125/EC.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

➤ Meals with vegetables and potatoes

Category code	Subcategory code	Subcategory name	Subcategory definition
41	452	Meals with vegetables and potatoes	Meals with vegetables and potatoes meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain legumes and/or small quantities of fruits. Vegetables with potatoes sauces are included in this subcategory.



FOOD WITH SWEET POTATO IS INCLUDED HERE



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

➤ Meals with vegetables and potatoes and milk/cream

Category code	Subcategory code	Subcategory name	Subcategory definition
41	453	Meals with vegetables and potatoes and milk/cream	Meals with vegetables and potatoes and milk/cream consisting mainly of vegetables, potatoes and milk and/or cream and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Products may contain legumes and/or small quantities of fruits. Vegetables with potatoes and milk/cream sauces are included in this subcategory.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

➤ Meals with vegetables and/or starchy food and meat/fish

Category code	Subcategory code	Subcategory name	Subcategory definition
41	454	Meals with vegetables and/or starchy food and meat/fish	Meals consisting mainly of meat and/or fish, vegetables and/or starchy foods (rice, pasta, potatoes), and which may contain milk products (as cheese, ...), legumes, and/or small quantities of fruits and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

➤ Meat preparations

Category code	Subcategory code	Subcategory name	Subcategory definition
41	480	Meat preparations	Meat preparations meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

➤ Vegetable preparations

Category code	Subcategory code	Subcategory name	Subcategory definition
41	479	Vegetable preparations	Vegetable and/or legumes preparations consisting mainly of vegetables and/or legumes, which may contain small quantities of milk (as cheese, ...) and/or fruits products and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Vegetables without starchy food sauces are included in this subcategory.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### ➤ Soups

Category code	Subcategory code	Subcategory name	Subcategory definition
41	529	Soups	Soups consisting mainly of vegetables and/or legumes and water, which may contain small quantities of milk products (as cheese, ...) and/or cereals and meeting the definition of "baby food" laid down by Regulation (EU) No 609/2013 and Directive 2006/125/EC. Baby stock and soup cubs to be reconstituted with boiling water are included in this subcategory.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### ➤ Other baby foods

Category code	Subcategory code	Subcategory name	Subcategory definition
41	763	Other baby foods	Other products for infants under 3 years that don't fit in any existing sub categories (fruit pieces dry, ...).



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## Thank you for your attention!

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**Annex 9 : Guidelines for classification : Bread products (23/03/23)**



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Bread products (18)

- General description of the category and products included (slide 3)
- Products excluded (slide 4)
- Overview of the category (slide 5-6)
- List of the subcategories and associated definitions (slides 7-8)
- Definitions of the subcategories and examples of products included (slides 9-34)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Bread products

➤ What kind of product can be considered as a bread product?

- ➔ Bread products to be stored at room temperature
- ➔ Gluten-free and vegan products are also included in the category



- Croutons, bread crumbs
- Breads (toasted breads, sandwich breads, pre-packaged or pre-baked breads, hamburger & hot-dog buns, tortilla wraps, pita breads, ...)
- Brioches, kouglof, panettone
- Rusks, crackers, crispbreads (sweet or savoury)
- Puffed cakes, cereal specialties (filled or not)
- Fine bakery wares
- Pancakes, English muffins

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Bread products

➤ What is excluded from the bread products category ?



- Handmade products
- Cocktail snacks products (TUC, aperitif crackers ...)
- Fresh or frozen bread products
- Fresh unbaked dough



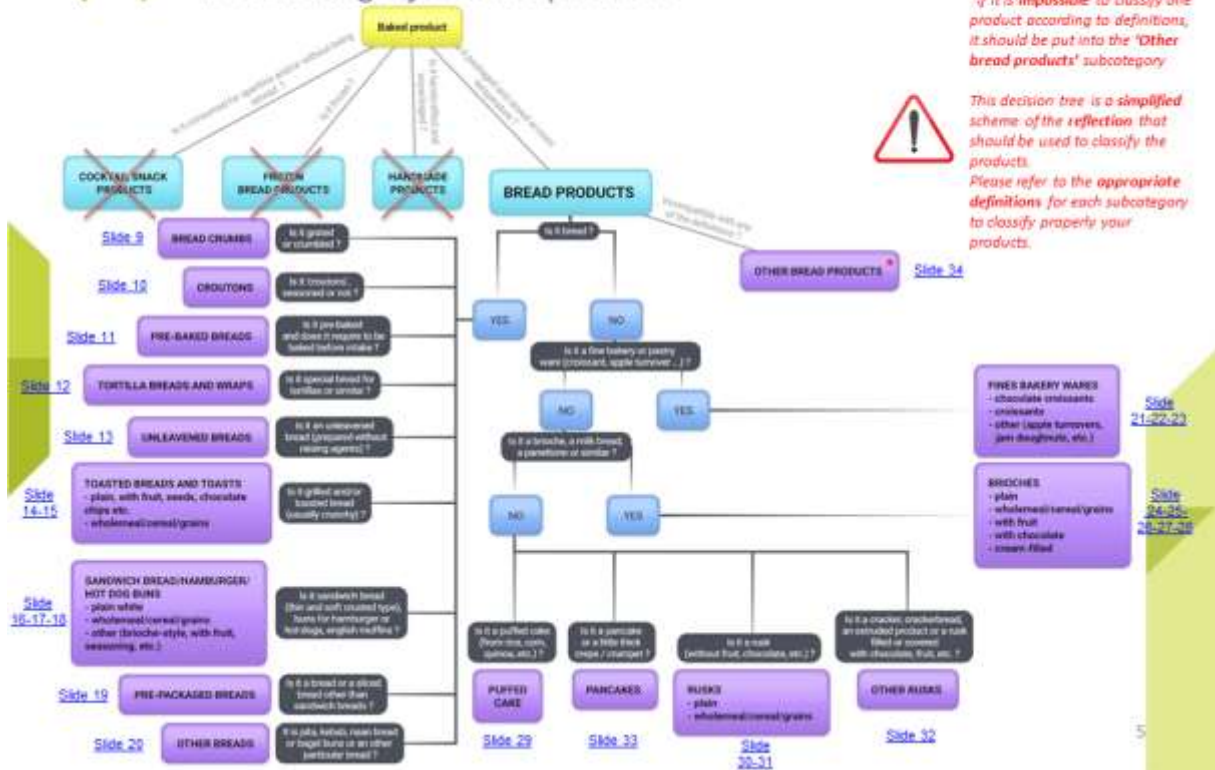
➔ Those products are meant to be consumed as such (without being spread) for aperitive

4



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

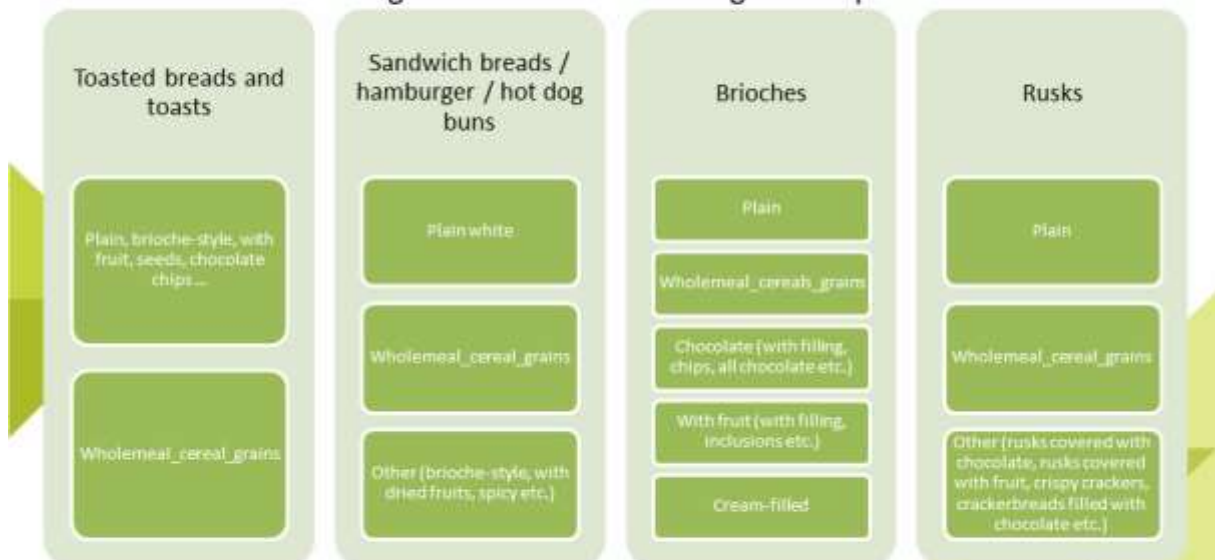
Food category : Bread products



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

Food category : Bread products

➤ Classification distinguishes different subcategories of products for :



➔ For the other subcategories, there is no distinction made between the products (plain, wholemeal, cereal or grains, with fruit or chocolate inclusions, etc.). All of them are classified together in the associated subcategory.



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Bread products subcategories & definitions

Category code : 18

Subcategory code	Subcategory	Definition
730	Breadcrumbs	Grated or crumbled dried bread or rusks
729	CROUTONS	Small pieces of dry bread, seasoned or unseasoned
405	Pre-baked breads	Pre-baked breads
408	Tortilla breads and wraps	Special tortilla breads and wraps
396	Unleavened breads	Unleavened breads
402	Plain toasted breads and toasts	Plain toasted breads and toasts containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. These products can contain fruit inclusions, chocolate chips, etc.
403	Wholemeal_cereal_grains toasted breads and toasts	Toasted breads and toasts containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. These products can contain fruit inclusions and/or chocolate chips. Includes products without gluten.
399	Plain white sandwich breads / hamburger / hot dog buns	Plain sandwich breads, plain special breads for hamburgers and hot dogs, plain english muffins containing wheat flour and without seeds (special breads for hamburger included in this subcategory can contain sesame seeds). These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Cupcake-type muffins are excluded.
398	Wholemeal_cereal_grains sandwich breads / hamburger / hot dog buns	Sandwich breads, special breads for hamburgers and hot dogs, english muffins containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. Includes products without gluten. Cupcake-type muffins and special breads for hamburger containing wheat flour with sesame seeds are excluded.
400	Other_sandwich breads / hamburger / hot dog buns	Sandwich breads, special breads for hamburgers and hot dogs, english muffins, brioche-style or not, with dried fruit inclusions, spicy or seasoning sandwich breads, etc. Includes products without gluten (made from soy flour, rice flour, corn flour, etc.) Cupcake-type muffins are excluded.
406	Pre-packaged breads	Pre-packaged breads made from whole wheat flour and/or cereal flour (rye, barley, buckwheat, etc.), or wheat flour; plain, with or without seed inclusions (sunflower, flax, etc.) and/or dried fruit. Includes products without gluten (made from soy flour, rice flour, corn flour, etc.)
401	Other breads	Special breads such as pita, kebab bread, Lebanese flatbread, bagel, Swedish bread, etc.



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Bread products subcategories & definitions

Category code : 18

Subcategory code	Subcategory	Definition
604	Fine bakery wares_croissants	Croissants
605	Fine bakery wares_chocolate croissants	Chocolate croissants
603	Fine bakery wares_other	Apple turnovers, filled croissants, raisin breads, fruit-filled doughnuts, etc.
112	Plain brioches	Plain brioches and Viennese bread-type products, plain milk breads or gâches containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Includes products with inclusions of sugar, fudge, etc.
114	Wholemeal_cereals_grains brioches	Brioches and Viennese bread-type products, milk breads or gâches containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. Includes products without gluten.
119	Chocolate brioches	Brioches and Viennese bread-type products, milk breads or gâches with chocolate filling, all chocolate and/or with chocolate chips, panettones without fruit and with chocolate
116	Brioches with fruit	Brioches and Viennese bread-type products, milk breads or gâches with fruit filling or with fruit (candied or not) inclusions, panettones with fruit, kouglouf or similar products.
115	Cream-filled brioches	Brioches and Viennese bread-type products, milk breads or gâches with cream filling which may contain inclusions (chocolate, fruits etc.)
288	Puffed cakes	Puffed cakes made from rice, corn, spelt, quinoa, buckwheat, cereals; plain, flavored, topped or with filling
117	Plain rusks	Plain rusks and plain brioche rusks containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Includes products with inclusions of fruit and/or chocolate chips.
67	Wholemeal_cereals_grains rusks	Rusks containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes rusks containing wheat flour with seeds. These products can contain fruit inclusions and/or chocolate chips. Includes products without gluten.
744	Other rusks	Other rusks that do not fit the definition of any of the other rusk subcategories, crackers, crackerbreads and extruded products; rusks covered with chocolate, rusks covered with fruit, crispy crackers, crackerbreads filled with chocolate etc. Includes products without gluten (made from soy flour, rice flour, corn flour, etc.)
626	Pancakes	Pancake or little thick crepe/ crumpet; plain, with or without chocolate chips, filling or not.
51	Other bread products	Other bread products



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Breadcrumbs

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	730	Breadcrumbs	Grated or crumbled dried bread or rusks



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Croutons

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	729	Croutons	Small pieces of dry bread, seasoned or unseasoned



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Pre-baked breads**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	405	Pre-baked breads	Pre-baked breads



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Tortilla breads and wraps**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	408	Tortilla breads and wraps	Special tortilla breads and wraps



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Unleavened breads**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	396	Unleavened breads	Unleavened breads



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Toasted breads and toasts**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	402	Plain toasted breads and toasts	Plain toasted breads and toasts containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. These products can contain fruit inclusions, chocolate chips, etc.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Wholemeal\_cereal\_grains toasted breads and toasts**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	403	Wholemeal_cereal_grains toasted breads and toasts	Toasted breads and toasts containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. These products can contain fruit inclusions and/or chocolate chips. Includes products without gluten.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Plain white sandwich breads / hamburger /hot dog buns**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	399	Plain white sandwich breads / hamburger /hot dog buns	Plain sandwich breads, plain special breads for hamburgers and hot dogs, plain english muffins containing wheat flour and without seeds (special breads for hamburger included in this subcategory can contain sesame seeds). These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Cupcake-type muffins are excluded.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Wholemeal\_cereal\_grains sandwich breads / hamburger / hot dog buns**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	398	Wholemeal_cereal_grains sandwich breads / hamburger / hot dog buns	Sandwich breads, special breads for hamburgers and hot dogs, english muffins containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. Includes products without gluten. Cupcake-type muffins and special breads for hamburger containing wheat flour with sesame seeds are excluded.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Other\_sandwich breads / hamburger / hot dog buns**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	400	Other_sandwich breads / hamburger / hot dog buns	Sandwich breads, special breads for hamburgers and hot dogs, english muffins, brioche-style or not, with dried fruit inclusions, spicy or seasoning sandwich breads, etc. Include products without gluten (made from soy flour, rice flour, corn flour, etc.) Cupcake-type muffins are excluded.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Pre-packaged breads**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	406	Pre-packaged breads	Pre-packaged breads made from whole wheat flour and/or cereal flour (rye, barley, buckwheat, etc.), or wheat flour; plain, with or without seed inclusions (sunflower, flax, etc.) and/or dried fruit include products without gluten (made from soy flour, rice flour, corn flour, etc.).



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Other breads**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	401	Other breads	Special breads such as pita, kebab bread, Lebanese flatbread, bagel, Swedish bread, etc.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Fine bakery wares\_croissants**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	604	Fine bakery wares_croissants	Croissants



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Fine bakery wares\_chocolate croissants**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	605	Fine bakery wares_chocolate croissants	Chocolate croissants



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Fine bakery wares\_other**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	603	Fine bakery wares_other	Apple turnovers, filled croissants, raisin breads, fruit-filled doughnuts, etc.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Plain brioches**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	112	Plain brioches	Plain brioches and Viennese bread-type products, plain milk breads or gâches containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Includes products with inclusions of sugar, fudge, etc.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Wholemeal\_cereals\_grains brioches**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	114	Wholemeal_cereals_grains brioches	Brioches and Viennese bread-type products, milk breads or gâches containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. Includes products without gluten.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Chocolate brioches**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	119	Chocolate brioches	Brioches and Viennese bread-type products, milk breads or gâches with chocolate filling, all chocolate and/or with chocolate chips, panettones without fruit and with chocolate



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Brioches with fruit

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	116	<b>Brioches with fruit</b>	Brioches and Viennese bread-type products, milk breads or gâches with fruit filling or with fruit (candied or not) inclusions, panettones with fruit, kouglof or similar products.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Cream-filled brioches

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	115	<b>Cream-filled brioches</b>	Brioches and Viennese bread-type products, milk breads or gâches with cream filling which may contain inclusions (chocolate, fruits etc.)



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Puffed cakes**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	288	Puffed cakes	Puffed cakes made from rice, corn, spelt, quinoa, buckwheat, cereals; plain, flavored, topped or with filling



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Plain rusks**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	117	Plain rusks	Plain rusks and plain brioche rusks containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Includes products with inclusions of fruit and/or chocolate chips.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Wholemeal\_cereals\_grains rusks**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	67	Wholemeal_cereals_grains rusks	Rusks containing wholewheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes rusks containing wheat flour with seeds. These products can contain fruit inclusions and/or chocolate chips. Includes products without gluten.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Other rusks**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	744	Other rusks	Other rusks that do not fit the definition of any of the other rusk subcategories, crackers, crackerbreads and extruded products: rusks covered with chocolate, rusks covered with fruit, crispy crackers, crackerbreads filled with chocolate etc. Include products without gluten (made from soy flour, rice flour, corn flour, etc.)



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Pancakes**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	626	Pancakes	Pancake or little thick crepe / crumpet; plain, with or without chocolate chips, filling or not.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Other bread products**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	51	Other bread products	Other bread products



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Annex 10 : Guidelines for classification : Breakfast cereals (23/03/23)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Breakfast cereals (1)

- General description of the category and products included (slide 3)
- Products excluded (slide 4)
- Overview of the food category (slide 5)
- Main types of products (slide 6)
- List of the subcategories and associated definitions (slides 7 – 9)
- Definitions of the subcategories and examples of products included (slides 10 – 35)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Breakfast cereals

➤ **What kind of product can be considered as breakfast cereals ?**

- ✓ All types of breakfast cereals (plain, chocolate, caramel, filled, healthy, whole wheat, etc.)
- ✓ Cereal cakes
- ✓ Cereals requiring preparation such as oatflakes, muesli, puffed rice



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Breakfast cereals

➤ **What is excluded from the breakfast cereals category ?**

- Breakfast biscuits
- Cereal bars and bites (cereal bars with fruits or nuts, with or without chocolate, with caramel, with pieces of biscuit, plain, etc.)

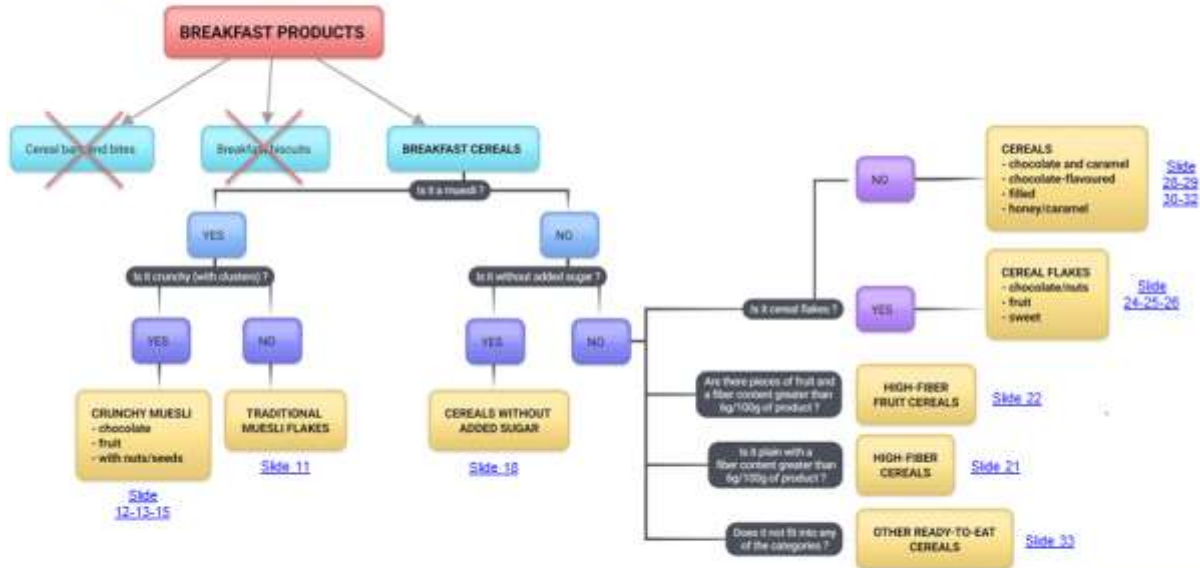


4



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Breakfast cereals



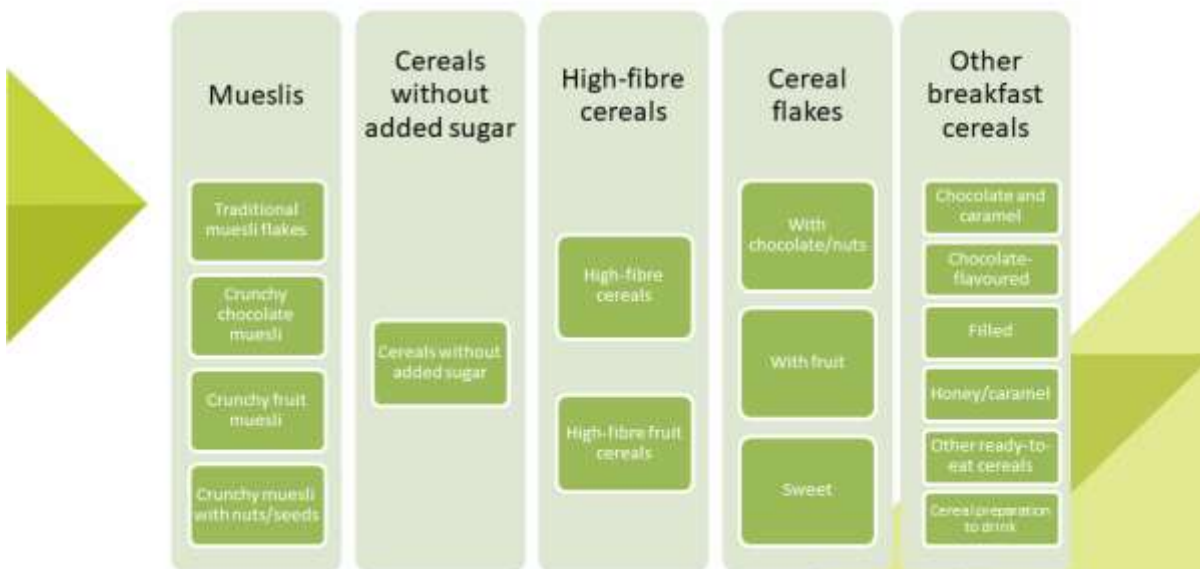
*This decision tree is a simplified scheme of the reflection that should be used to classify the products. Please refer to the appropriate definitions for each subcategory to classify properly your products.*



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Breakfast cereals

- 5 main types of products
- 16 subcategories in total





## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Breakfast cereals subcategories & definitions

#### > Mueslis

Category code : 1

Subcategory code	Subcategory	Definition
386	Traditional muesli flakes	Mixture of cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) with dried fruit, seeds, flakes, added sugar and/or chocolate. This subcategory also includes porridge mixes (plain, with chocolate, fruit or nuts, etc.) except plain porridge mixes without added sugar that are included in the "Cereals without added sugar" (739) subcategory. Example: 7-fruit flaky muesli, Chocolate hazelnut muesli, etc.
678	Crunchy chocolate muesli	Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of crunchy clusters with chocolate and/or cocoa. May contain fruit and/or nuts. Example: Chocolate caramel muesli, Granola with figs and chocolate, Crunchy muesli with chocolate pieces and hazelnuts, etc.
679	Crunchy fruit muesli	Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of crunchy clusters with fruit. May contain nuts and/or seeds but not chocolate and/or cocoa. Example: Crunchy muesli with dried fruits, Crunchy apple banana and raisin clusters, Red fruit granola, Crunchy cereal mix with almonds and strawberries, etc.
680	Crunchy muesli with nuts/seeds	Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of plain crunchy clusters or with only honey/maple syrup or with only nuts (walnuts, hazelnuts, peanuts, almonds, etc.) or seeds. These products do not contain fruit, chocolate and/or cocoa. Example: Crunchy nut muesli, Crunchy flax and pumpkin seed muesli, Crunchy plain muesli, Hazelnut almond and pecan muesli, etc.

#### > Cereals without added sugar

Subcategory code	Subcategory	Definition
739	Cereals without added sugar	Cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) without added sugar, caramel, syrup, honey, molasses, glucose, fructose, sucrose, dextrose, or maltodextrins. These products do not contain fruit, dried fruit, nuts or chocolate. This subcategory includes plain porridge mixes without added sugar. Mueslis without added sugar are excluded from this subcategory (they are included in the "Traditional muesli flakes" subcategory). Examples: Oat flakes, 5-cereal flakes, Cornflakes, puffed buckwheat, puffed millet, etc.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Breakfast cereals subcategories & definitions

#### > High-fibre cereals

Category code : 1

Subcategory code	Subcategory	Definition
143	High-fibre cereals	Unfilled cereals with a fibre content greater than or equal to 6g per 100g of product. These products do not contain honey, caramel, chocolate, fruit or nuts. This subcategory includes cereal cake products that may contain chocolate. Cereal flakes without added sugar and muesli (crunchy and flaky) are excluded from this subcategory. Examples: Nature and fibre, Cereals with wheat bran naturally high in fibre, Wheat bran sticks, etc.
676	High-fibre fruit cereals	Unfilled cereals accompanied by fruit and with a fibre content greater than or equal to 6g per 100g of product. These products do not contain honey, caramel or chocolate but may contain nuts. Cereal flakes without added sugar and muesli (crunchy and flaky) with fruit are excluded from this subcategory. Examples: Fruit and fibre, Whole wheat flakes with fruit, etc.

#### > Cereal flakes

Subcategory code	Subcategory	Definition
681	Cereal flakes with chocolate/nuts	Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) coated with chocolate and/or plain with pieces of chocolate or nuts (walnuts, hazelnuts, peanuts, almonds, etc.). These products can contain fruits. Example: Rice and wheat flakes with chocolate shavings, Whole wheat, rice and barley flakes coated in sugar with dark chocolate shavings, Rice and wheat flakes with hazelnuts and silvered almonds, etc.
683	Cereal flakes with fruit	Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) coated or plain with pieces of fruit. These products do not contain chocolate and/or cocoa. Flakes with more than 6g of fibre/100g are included in the "High-fibre fruit cereals" subcategory. Examples: Rice and wheat flakes with pieces of red fruit, Whole wheat, rice and barley flakes with fruit, Rice and spelt flakes with mixed red fruit, etc.
745	Sweet cereal flakes	Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) which contains sugar, honey or maple syrup but without pieces of chocolate, fruit or nuts. These products may be coated, frosted, sweetened, etc. Sweet cereal flakes coated with milk are included in this subcategory. Flakes with more than 6g of fibre/100g are included in the "High-fibre cereals" subcategory. Example: Sugar-frosted cornflakes, Maple syrup cornflakes, Plain cornflakes, plain buckwheat flakes, etc.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Breakfast cereals subcategories & definitions

➤ Other breakfast cereals

Category code : 1

Subcategory code	Subcategory	Definition
134	Chocolate and caramel cereals	Unfilled cereals with caramel and chocolate. They are usually extruded or puffed. Muesli is excluded from this subcategory. For example: Caramel and chocolate cereal mix, Caramel and powdered chocolate puffed cereal, etc.
135	Chocolate-flavoured cereals	Cereals with chocolate or cocoa, without filling. They may or may not be mixed with filled cereals (with non-filled cereals in the majority). They are usually extruded or puffed. Chocolate-coated cereal flakes are excluded from this subcategory. Example: Chocolate puffed rice, Chocolate cornflakes, Crispy cocoa cereal rings, etc.
138	Filled cereals	Cereals filled with chocolate, milk, hazelnut, caramel, vanilla, etc. They may be mixed with unfilled cereals (with filled cereals in the majority). Example: Cereals with milk filling, Cereals with vanilla filling, Cereals with chocolate filling, etc.
142	Honey/caramel cereals	Cereals coated with honey, caramel or any other sweetening ingredient (sugar, cane sugar, sugar syrup, glucose syrup, agave syrup, rice syrup). These are neither chocolate nor filled products. May contain nuts. Muesli and cereal flakes are excluded from this subcategory. Sweet puffed cereals like "Rice Krispies" are included in this subcategory. Example: Puffed wheat with honey, Corn balls with honey, Puffed rice with agave syrup, Caramel-coated puffed wheat, Cereal rings with a fruity taste, etc.
17	Other ready-to-eat cereals	Other ready-to-eat cereals. Examples: keto granola (granola without cereals), porridge with vegetables, etc.
796	Cereal preparation to drink	Contains cereal-based products to be reconstituted and whose commercial name or legal name suggests consumption as a beverage. These products contain cereals in powdered, ground form. Conventional porridge mixes are not included in this subcategory. Example: Drinking porridge (porridge in powder form), etc.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Food category : Breakfast cereals

- 5 main types of products
- 15 subcategories in total



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Traditional muesli flakes

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	386	Traditional muesli flakes	<p>Mixture of cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) with dried fruit, seeds, flakes, added sugar and/or chocolate. This subcategory also includes porridge mixes (plain, with chocolate, fruit or nuts, etc.) except plain porridge mixes without added sugar that are included in the "Cereals without added sugar" (739) subcategory.</p> <p>Example: 7-fruit flaky muesli, Chocolate hazelnut muesli, etc.</p>



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Crunchy chocolate muesli

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	678	Crunchy chocolate muesli	<p>Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of crunchy clusters with chocolate and/or cocoa. May contain fruit and/or nuts.</p> <p>Example: Chocolate caramel muesli, Granola with figs and chocolate, Crunchy muesli with chocolate pieces and hazelnuts, etc.</p>



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Crunchy fruit muesli

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	679	Crunchy fruit muesli	<p>Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of crunchy clusters with fruit. May contain nuts and/or seeds but not chocolate and/or cocoa.</p> <p>Example: Crunchy muesli with dried fruits, Crunchy apple banana and raisin clusters, Red fruit granola, Crunchy cereal mix with almonds and strawberries, etc.</p>



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Crunchy fruit muesli

#### ➤ Precisions

✓ Coconut is considered as a fruit

→ In the presence of coconut, products will be classified in the subcategories with fruit

#### Example :

This product contains **coconut** and it is specified that there are **flakes and clusters**

→ it will be classified in the subcategory « **Crunchy fruit muesli** »



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Crunchy muesli with nuts/seeds**

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	680	Crunchy muesli with nuts/seeds	<p>Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of plain crunchy clusters or with only honey/maple syrup or with only nuts (walnuts, hazelnuts, peanuts, almonds, etc.) or seeds. These products do not contain fruit, chocolate and/or cocoa.</p> <p>Example: Crunchy nut muesli, Crunchy flax and pumpkin seed muesli, Crunchy plain muesli, Hazelnut almond and pecan muesli, etc.</p>



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Crunchy muesli with nuts/seeds**

➤ **Precisions**

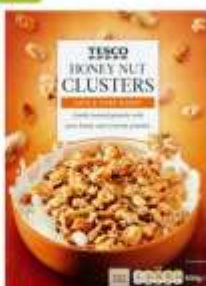
✓ « **Crunchy muesli** » is not always mentioned on package

→ It can be mentioned « **clusters** » or « **flakes and clusters** »

→ It can be mentioned « **granola** »

→ In those cases, products will be considered as « **crunchy muesli** »

Examples :



Will be classified as « **Crunchy muesli with nuts/seeds** »



Will be classified as « **Crunchy fruit muesli** »



Will be classified as « **Crunchy fruit muesli** »

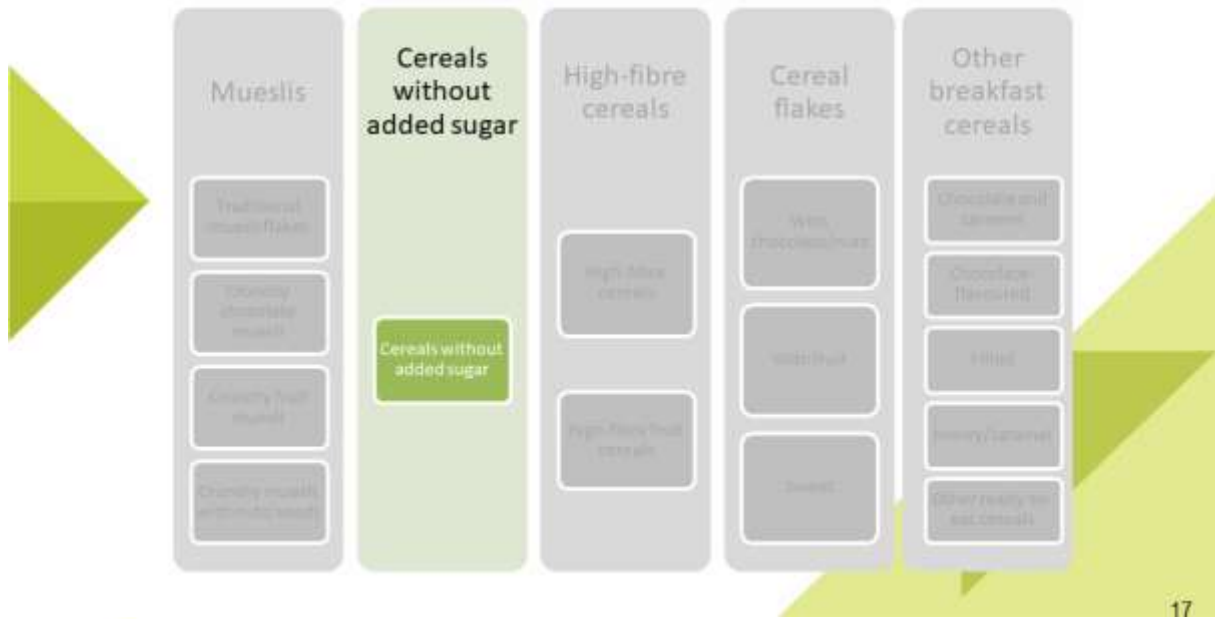
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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Breakfast cereals

- 5 main types of products
- 15 subcategories in total



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Cereals without added sugar

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	739	Cereals without added sugar	<p>Cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) without added sugar, caramel, syrup, honey, molasses, glucose, fructose, sucrose, dextrose, or maltodextrins.</p> <p>These products do not contain fruit, dried fruit, nuts or chocolate. This subcategory includes plain porridge mixes without added sugar.</p> <p>Mueslis without added sugar are excluded from this subcategory (they are included in the "Traditional muesli flakes" subcategory).</p> <p>Examples: Oat flakes, 5-cereal flakes, Cornflakes, Buckwheat flakes without added sugar, etc.</p>



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Cereals without added sugar

→ It can be difficult to categorize cereals without added sugar when the ingredient list is not available.

To categorize cereals without added sugar, you have to follow these steps :

- 1) see if there is a **nutritional claim** such as "no added sugar" or "contains naturally occurring sugars" and, in this case, the product is classified in the 739-Cereals without added sugar subcategory.
- 2) Otherwise you have to look at the **list of ingredients** and if the product **does not contain sugar, caramel, honey, sucrose** or any other sweetening product then the product is classified in the 739-Cereals without added sugar subcategory
- 3) If the list of ingredients is **not available**, then we can **hypothesize** for a product with a sugar content  $\leq 5g/100g$  that it is without added sugar and classify it in the 739-Cereals without added sugar subcategory



*The 3<sup>rd</sup> step is a hypothesis because it can exist products without added sugar with a sugar content > 5g/100g and products with added sugar with a sugar content < 5g/100g*

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Food category : Breakfast cereals

- **5 main types of products**
- **15 subcategories in total**



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

High-fibre cereals

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	143	High-fibre cereals	<p>Unfilled cereals with a fibre content greater than or equal to 6g per 100g of product. These products do not contain honey, caramel, chocolate, fruit or nuts. This subcategory includes cereal cake products that may contain chocolate.</p> <p>Cereal flakes without added sugar and muesli (crunchy and flaky) are excluded from this subcategory.</p> <p>Examples: Nature and fibre, Cereals with wheat bran naturally high in fibre, Wheat bran sticks, etc.</p>



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

High-fibre fruit cereals

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	676	High-fibre fruit cereals	<p>Unfilled cereals accompanied by fruit and with a fibre content greater than or equal to 6g per 100g of product. These products do not contain honey, caramel or chocolate but may contain nuts.</p> <p>Cereal flakes without added sugar and muesli (crunchy and flaky) with fruit are excluded from this subcategory.</p> <p>Examples: Fruit and fibre, Wholewheat flakes with fruit, etc.</p>



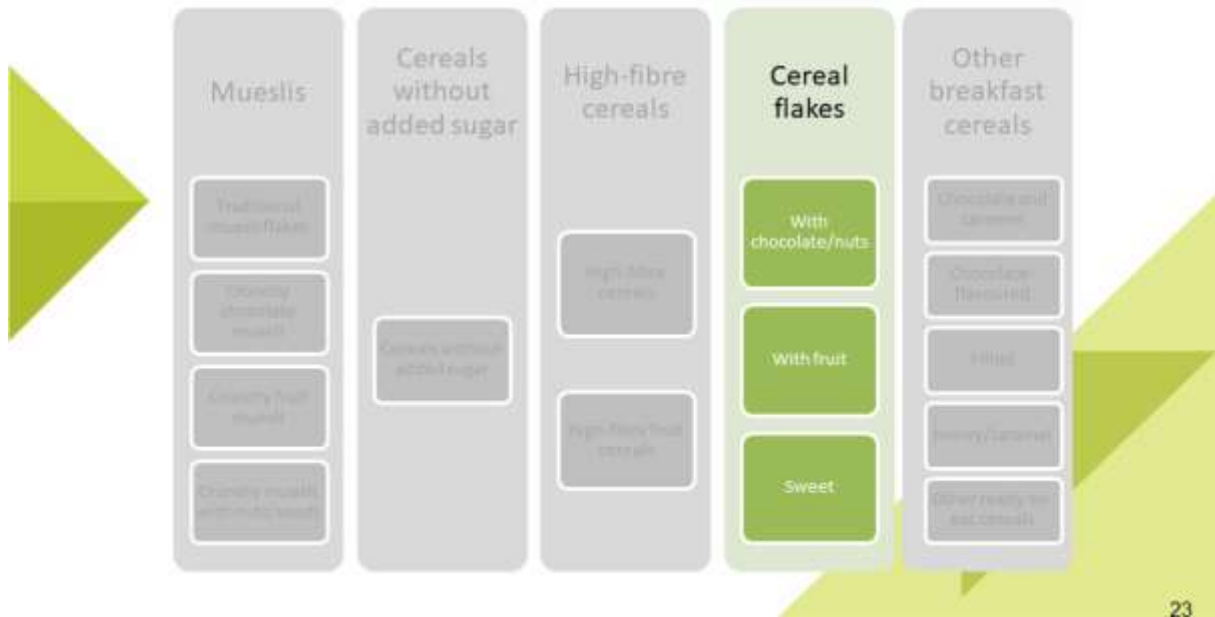
22



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Breakfast cereals

- 5 main types of products
- 15 subcategories in total



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Cereal flakes with chocolate/nuts

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	681	Cereal flakes with chocolate/nuts	<p>Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) coated with chocolate and/or plain with pieces of chocolate or nuts (walnuts, hazelnuts, peanuts, almonds, etc.). These products can contain fruits.</p> <p>Example: Rice and wheat flakes with chocolate shavings, Whole wheat, rice and barley flakes coated in sugar with dark chocolate shavings, Rice and wheat flakes with hazelnuts and slivered almonds, etc.</p>





## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Cereal flakes with fruit

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	683	Cereal flakes with fruit	<p>Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) coated or plain with pieces of fruit. These products do not contain chocolate and/or cocoa.</p> <p>Flakes with more than 6g of fibre/100g are included in the "High-fibre fruit cereals" subcategory.</p> <p>Examples: Rice and wheat flakes with pieces of red fruit, Whole wheat, rice and barley flakes with fruit, Rice and spelt flakes with mixed red fruit, etc.</p>



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Sweet cereal flakes

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	745	Sweet cereal flakes	<p>Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) which contains sugar, honey or maple syrup but without pieces of chocolate, fruit or nuts. These products may be coated, frosted, sweetened, etc. Sweet cereal flakes coated with milk are included in this subcategory.</p> <p>Flakes with more than 6g of fibre/100g are included in the "High-fibre cereals" subcategory.</p> <p>Example: Sugar-frosted cornflakes, Maple syrup cornflakes, Plain cornflakes, Plain buckwheat flakes, etc.</p>



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Breakfast cereals

- 5 main types of products
- 15 subcategories in total



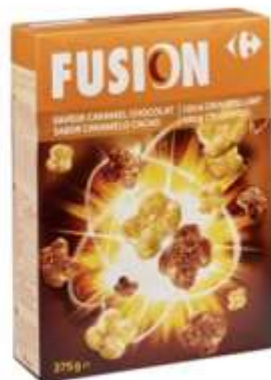
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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Chocolate and caramel cereals

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	134	Chocolate and caramel cereals	<p>Unfilled cereals with caramel and chocolate. They are usually extruded or puffed.</p> <p>Muesli is excluded from this subcategory.</p> <p>For example: Caramel and chocolate cereal mix, Caramel and powdered chocolate puffed cereal, etc.</p>



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Chocolate-flavoured cereals**

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	135	Chocolate-flavoured cereals	<p>Cereals with chocolate or cocoa, without filling. They may or may not be mixed with filled cereals (with non-filled cereals in the majority). They are usually extruded or puffed.</p> <p>Chocolate-coated cereal flakes are excluded from this subcategory.</p> <p>Example: Chocolate puffed rice, Chocolate cornflakes, Crispy cocoa cereal rings, etc.</p>



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Filled cereals**

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	138	Filled cereals	<p>Cereals filled with chocolate, milk, hazelnut, caramel, vanilla, etc. They may be mixed with unfilled cereals (with filled cereals in the majority).</p> <p>Example: Cereals with milk filling, Cereals with vanilla filling, Cereals with chocolate filling, etc.</p>



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Filled cereals

#### ➤ Precisions

✓ It exists products with filled and unfilled cereals

→ If the proportions of filled and unfilled cereals are unknown, the product will be classified as **unfilled cereals**.

#### Example

This product contains **filled** and **unfilled** cereals and the proportions are unknown

→ It will be considered as **unfilled** cereals and will be classified in the « **Chocolate-flavoured cereals** » subcategory



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Honey/caramel cereals

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	142	Honey/caramel cereals	<p>Cereals coated with honey, caramel or any other sweetening ingredient (sugar, cane sugar, sugar syrup, glucose syrup, agave syrup, rice syrup). These are neither chocolate nor filled products. May contain nuts.</p> <p>Muesli and cereal flakes are excluded from this subcategory. Sweet puffed cereals like "Rice Krispies" are included in this subcategory.</p> <p>Example: Puffed wheat with honey, Corn balls with honey, Puffed rice with agave syrup, Caramel-coated puffed wheat, Cereal rings with a fruity taste, etc.</p>



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Other ready-to-eat cereals

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	17	Other ready-to-eat cereals	Other ready-to-eat cereals Examples : keto granola (granola without cereals), porridge with vegetables, etc.



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Other ready-to-eat cereals

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	17	Other ready-to-eat cereals	Other ready-to-eat cereals Examples : keto granola (granola without cereals), porridge with vegetables, etc.

#### ➤ Precision

- ✓ Assortment of different type of cereals with an average ingredient list and average nutritional values must be classified in this sub-category

**Example:** → A single ingredient list and average nutritional values on the back of the package



**INGREDIENTS:** Céréales (Blé, Riz, Avoine de blé), Sucre, Sirop de glucose, Lactose en poudre, Cacao moulu en poudre, Sel, Levure de pain d'orge, Miel, Fécule de cacao, Fibre de maïs, Arômes, Sel, Sel naturel, Caramelle, Colorant (Caroténoïdes), Lait et crème en poudre, amidon de pomme de terre, Vitamine B1, Vitamine B2, Vitamine B3, Vitamine B6, Acide folique, Vitamine B12, Fer.

NUTRITIONAL FACTS	
Per 100g (3.5 oz)	
Energy	450 kcal (1880 kJ)
Total Fat	10g (20%)
Saturated Fat	2g (4%)
Total Carbohydrate	65g (130%)
Sugars	25g (50%)
Fiber	10g (40%)
Protein	10g (20%)
Sodium	1g (20%)
Vitamins	
Vitamin B1	0.15mg (30%)
Vitamin B2	0.15mg (30%)
Vitamin B3	0.5mg (10%)
Vitamin B6	0.15mg (30%)
Vitamin B12	0.15µg (30%)
Folate	0.15mg (30%)



**Assortment of cereals with an ingredient list and nutritional values for each item in the assortment → you must choose the correct subcategory for each item**  
More information about assortments slides 44 to 51 in guideline "Methodology for data collection"

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Cereal preparation to drink**

Category code	Category	Subcategory code	Subcategory	Definition
1	Breakfast cereals	796	Cereal preparation to drink	<p>Contains cereal-based products to be reconstituted and whose commercial name or legal name suggests consumption as a beverage. These products contain cereals in powdered, ground form. Conventional porridge mixes are not included in this subcategory.</p> <p>Example: Drinking porridge (porridge in powder form), etc.</p>



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**Best-ReMaP**  
Healthy Food for a Healthy Europe



**Thank you for your attention!**

**The Joint Action focusing on the implementation of validated best practices in nutrition – Best-ReMap**

This presentation arises from the Joint Action Best-Remap. This Joint Action is addressing the adaption, replication and implementation of effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings, under the framework of the Third Health Programme (2014-2020). Sole responsibility lies with the author and the Consumers, Health, Agriculture and Food Executive Agency is not responsible for any use that may be made of in the information contained therein.

Annex 11 : Guidelines for classification : Cakes and biscuits (23/03/23)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Cakes and biscuits (2)

- General description of the category and products included (slide 3)
- Products excluded (slide 4)
- Overview of the category (slide 5-6)
- List of the subcategories and associated definitions (slides 7-10)
- Definitions of the subcategories and examples of products included (slides 11-40)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Cakes and biscuits

➤ What kind of product can be considered as a cake and biscuit ?

- ➔ Cakes and biscuits to be stored at room temperature\*
- ➔ Gluten-free and vegan products are also included in the category



- Biscuits (Dry biscuits, puff pastry biscuits, ladyfinger biscuits, Swedish oatmeal cookies, shortbread biscuits, Viennese biscuits (sprits), finger biscuits, speculoos, cookies, coconut rock buns, biscuit bars, etc)
- Cakes (Moist cakes, gingerbreads, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, etc)
- Waffles and wafers
- Crepes



\*Exception made for soft cakes/genoise sponge cakes filled with milk usually stored chilled : see the 3 examples above ➔ Included in the category



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Cakes and biscuits

➤ What is excluded from the cakes and biscuits category ?



- Cereal bars / sport energy bars
- Savory biscuits, savory wafers, etc. = products to be consumed for aperitif
- Ready-to-bake dough or batters
- Frozen or chilled cakes and biscuits\*

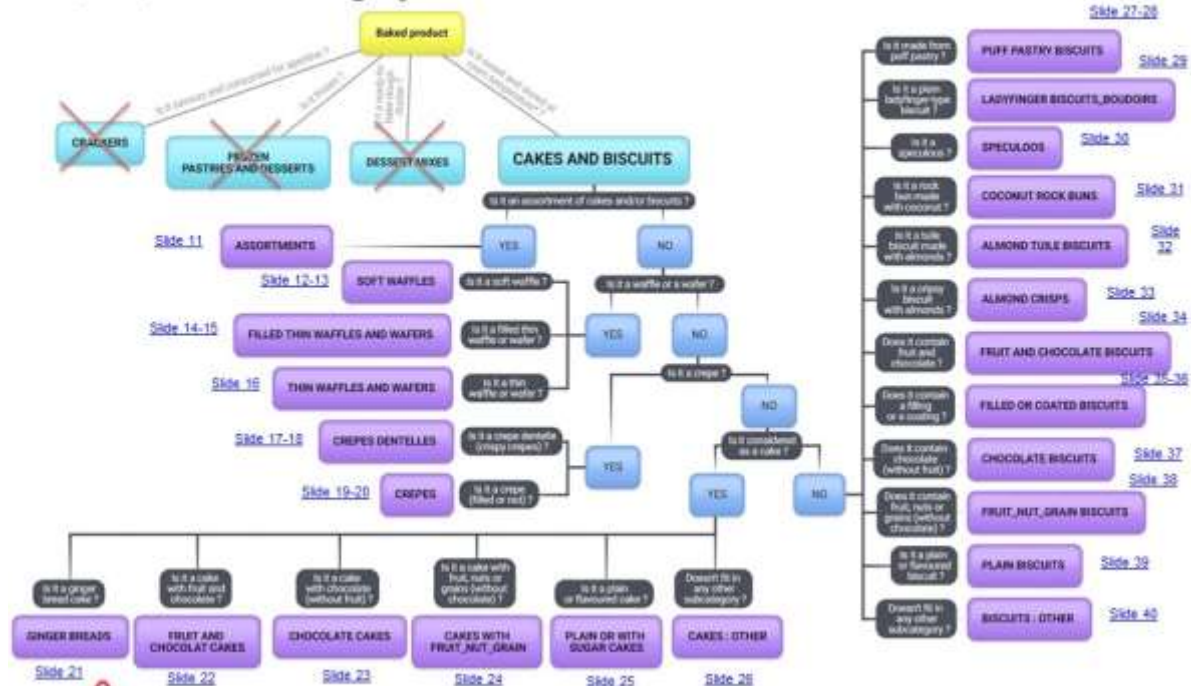


\*See exceptions on slide 3



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

Food category : Cakes and biscuits



This decision tree is a simplified scheme of the reflection that should be used to classify the products. Please refer to the appropriate definitions for each subcategory to classify properly your products.

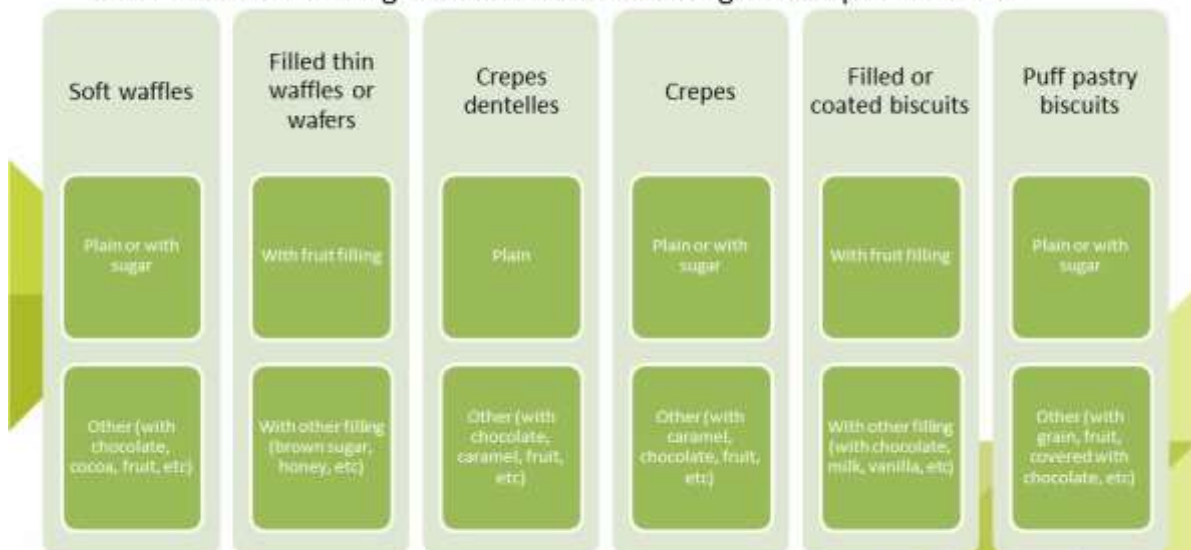
5



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

Food category : Cakes and biscuits

➤ Classification distinguishes different subcategories of products for :



➔ For **almond tuile biscuits, ladyfinger biscuits\_boudoirs, almond crisps, coconut rock buns, gingerbreads** and **speculoos** : no distinction is made between plain, filled or coated, with chocolate, fruit, grain,... They are all classified in the same associated subcategory





## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Cakes and biscuits subcategories & definitions

#### ➤ Assortments

Category code : 2

Subcategory code	Subcategory	Definition
794	Assortments	Assortments of cakes and biscuits with average ingredient lists and nutritional values and consisting of products belonging to different subcategories. (If the products in the assortment are belonging to the same subcategory, they should be classified in the corresponding subcategory).

#### ➤ Waffles and wafers

Subcategory code	Subcategory	Definition
790	Plain or with sugar soft waffles	Plain or with sugar (sprinkled with icing sugar, with inclusions of sugar) soft waffles, without filling, can be flavored.
789	Soft waffles: other	Soft waffles that are not plain. These products can contain chocolate, cocoa, fruits, etc.
787	Fruit-filled thin waffles and wafers	Thin waffles and flat or tube wafers with fruit filling (including coconut). These products do not contain chocolate.
786	Filled thin waffles and wafers: other	Thin filled waffles and flat or tube wafers filled without fruit (with brown sugar, with honey, etc.) coated or not with chocolate. Includes filled waffles and filled flat or tube wafers with both fruit and chocolate
788	Thin waffles or wafers without filling	Thin waffles and wafers without filling, for example with honey, chicory, covered with chocolate, etc.

#### ➤ Crepes

Subcategory code	Subcategory	Definition
778	Plain crepes dentelle	Plain or flavoured crepes dentelle
777	Crepes dentelle: other	Crepes that are not plain, can contain chocolate, fruit, caramel, etc.
779	Plain or with sugar crepes	Plain or with sugar (sprinkled with sugar, icing sugar, etc.) crepes, can be flavoured. Crepes with caramel are excluded from this subcategory.
776	Crepes: other	Crepes that are not plain, can contain chocolate, fruit, caramel, etc.



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Cakes and biscuits subcategories & definitions

#### ➤ Cakes

Category code : 2

Subcategory code	Subcategory	Definition
791	Gingerbreads	All gingerbreads / iced gingerbreads (term used in the legal name or in the commercial name). These products can be plain, with honey, with milk, with fruit, with chocolate, with dried fruits, etc.
783	Fruit and chocolate cakes	Cakes* with fruit (including coconut) and chocolate in the dough or as topping or icing. Crepes are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.
782	Chocolate cakes	Chocolate cakes* or cakes with cocoa, filled, coated or with chips. These products can contain nuts or grains. This subcategory includes marble cakes and brownies. Barquette-type sponge biscuits and chocolate waffles as well as products with fruit are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.
784	Cakes with fruit_nut_grain	Cakes* with fruit (including coconut) and/or nuts and/or grains. These products do not contain chocolate. Barquette-type sponge biscuits and waffles with fruit are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.
785	Plain or with sugar cakes	Plain, with sugar (sprinkled with icing sugar, with inclusions of sugar) or flavored cakes*. Waffles are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.
781	Cakes: other	Cakes that do not correspond to any of the other defined subcategories (rum babas, kouign-amann, canelés, sponge cakes filled with cream, cakes with coffee, carrot cakes, etc)



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Cakes and biscuits subcategories & definitions

Category code : 2

#### ➤ Biscuits

Subcategory code	Subcategory	Definition
771	Plain or with sugar <b>puff pastry biscuits</b>	Puff pastry biscuits and French palmier cookies plain or with sugar (with inclusions of sugar, sugar icing, etc.), can contain flavors. Puff pastry biscuits or French palmier cookies with caramel are excluded from this subcategory.
770	<b>Puff pastry biscuits: other</b>	Puff pastry biscuits and French palmier cookies that are not plain (with grains, with fruit, covered with chocolate, etc)
769	<b>Ladyfinger biscuits_boudoirs</b>	All ladyfinger biscuits / boudoirs and pink biscuits from Reims (plain, flavored, with fruit, nuts, grains, chocolate, etc).
792	<b>Speculoos</b>	All speculoos (term used in the legal name or in the commercial name). These products can contain fruit, nuts, grains, chocolate, etc.
775	<b>Coconut rock buns</b>	All Congolese rocks or coconut rock buns (with or without chocolate, with or without fruit in addition to coconut)
793	<b>Almond tuile biscuits</b>	All almond tuile biscuits. These products can contain fruits, nuts, grains, chocolate, etc.
780	<b>Almond crisps</b>	All almond crispy biscuits, Provençal almond crisps, croquants de Cordes biscuits, canistrelli or cantuccini (term used in the legal name or in the commercial name). These products can be plain, flavored, with honey, with fruit, nuts, grains, chocolate, etc.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Cakes and biscuits subcategories & definitions

Category code : 2

Subcategory code	Subcategory	Definition
767	<b>Fruit and chocolate biscuits</b>	Biscuits* with fruit (pieces, filling, extracts), including coconut, as well as chocolate or cocoa (topping, coating, inclusion). These products can contain nuts or grains in addition to the fruit. Puff pastry biscuits, florentine biscuits, macaroons and biscuits with a genoise sponge base are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigarettes russes biscuits, cookies, etc.
773	<b>Fruit-filled or coated biscuits</b>	Filled biscuits*, sandwiched or coated with fruit (including coconut). These products can contain nuts or grains and do not contain chocolate. This subcategory includes barquette-type sponge biscuits, tartlet-type biscuits and Lunette de Romons biscuits. Florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigarettes russes biscuits, cookies, etc.
772	<b>Filled or coated biscuits: other</b>	Filled biscuits*, topped with a tablet (filled or not), sandwiched or coated without fruit (chocolate, milk, vanilla, etc). These products can contain nuts or grains. This subcategory includes barquette-type sponge biscuits, tartlet-type biscuits and Lunette de Romons biscuits. Wafers, florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigarettes russes biscuits, cookies, etc.
766	<b>Chocolate biscuits</b>	Chocolate biscuits* or biscuits with cocoa, without filling, without topping, may contain nuts or grains. Puff pastry biscuits, florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigarettes russes biscuits, cookies, etc.
768	<b>Biscuits with fruit_nut_grain</b>	Biscuits* with fruit and/or nuts and/or grains, without filling, without topping. These products do not contain chocolate. Wafers or wafers, almond crisps, almond tuile biscuits, puff pastry biscuits, florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigarettes russes biscuits, cookies, etc.
774	<b>Plain biscuits</b>	Plain or flavoured biscuits*. Puff pastry biscuits, macaroons and ladyfinger biscuits/boudoirs are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigarettes russes biscuits, cookies, etc.
765	<b>Biscuits: other</b>	Biscuits that do not correspond to any of the other defined subcategories (florentine biscuits, macaroons, biscuits to be dipped into spread, ginger biscuits, biscuits with tea, etc).



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Assortments**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	794	Assortments	Assortments of cakes and biscuits with average ingredient lists and nutritional values and consisting of products belonging to different subcategories. (If the products in the assortment are belonging to the same subcategory, they should be classified in the corresponding subcategory).



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Plain or with sugar soft waffles**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	790	Plain or with sugar soft waffles	Plain or with sugar (sprinkled with icing sugar, with inclusions of sugar) soft waffles, without filling, can be flavored.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Soft waffles: other

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	789	Soft waffles: other	Soft waffles that are not plain. These products can contain chocolate, cocoa, fruits, etc.



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fruit-filled thin waffles and wafers

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	787	Fruit-filled thin waffles and wafers	Thin waffles and flat or tube wafers with fruit filling (including coconut). These products do not contain chocolate.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Filled thin waffles and wafers: other**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	786	Filled thin waffles and wafers: other	Thin filled waffles and flat or tube wafers filled without fruit (with brown sugar, with honey, etc), coated or not with chocolate. Includes filled waffles and filled flat or tube wafers with both fruit and chocolate



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Thin waffles or wafers without filling**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	788	Thin waffles or wafers without filling	Thin waffles and wafers without filling, for example with honey, chicory, covered with chocolate, etc.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Plain crepes dentelle**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	778	Plain crepes dentelle	Plain or flavoured crepes dentelle



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Crepes dentelle: other**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	777	Crepes dentelle: other	Crepes that are not plain, can contain chocolate, fruit, caramel, etc.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Plain or with sugar crepes**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	779	Plain or with sugar crepes	Plain or with sugar (sprinkled with sugar, icing sugar, etc.) crepes, can be flavoured. Crepes with caramel are excluded from this subcategory.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Crepes: other**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	776	Crepes: other	Crepes that are not plain, can contain chocolate, fruit, caramel, etc.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Gingerbreads**

Category code	Category	Subcategory code	Subcategory	Definition
2.	Cakes and biscuits	791	Gingerbreads	All gingerbreads / iced gingerbreads (term used in the legal name or in the commercial name). These products can be plain, with honey, with milk, with fruit, with chocolate, with dried fruits, etc.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Fruit and chocolate cakes**

Category code	Category	Subcategory code	Subcategory	Definition
2.	Cakes and biscuits	783	Fruit and chocolate cakes	Cakes* with fruit (including coconut) and chocolate in the dough or as topping or icing. Crepes are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.



✓ A cake filled with kiwi and covered with a chocolate icing.

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Chocolate cakes**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	782	Chocolate cakes	Chocolate cakes* or cakes with cocoa, filled, coated or with chips. These products can contain nuts or grains. This subcategory includes marble cakes and brownies. Barquette-type sponge biscuits and chocolate waffles as well as products with fruit are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Cakes with fruit\_nut\_grain**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	784	Cakes with fruit_nut_grain	Cakes* with fruit (including coconut) and/or nuts and/or grains. These products do not contain chocolate. Barquette-type sponge biscuits and waffles with fruit are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Plain or with sugar cakes**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	785	Plain or with sugar cakes	Plain, with sugar (sprinkled with icing sugar, with inclusions of sugar) or flavored cakes*. Waffles are excluded from this subcategory. *Moist cakes, yoghurt cakes, loaf cakes, plain pound cakes, madeleines, genoise sponge cakes, cakes, shortbread cakes, Breton cakes, Basque cakes, galettes, etc.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Cakes: other**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	781	Cakes: other	Cakes that do not correspond to any of the other defined subcategories (rum babas, kouign-amann, caneïls, sponge cakes filled with cream, cakes with coffee, carrot cakes, etc)





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Plain or with sugar puff pastry biscuits**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	771	Plain or with sugar puff pastry biscuits	Puff pastry biscuits and French palmier cookies plain or with sugar (with inclusions of sugar, sugar icing, etc.), can contain flavors. Puff pastry biscuits or French palmier cookies with caramel are excluded from this subcategory.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Puff pastry biscuits: other**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	770	Puff pastry biscuits : other	Puff pastry biscuits and French palmier cookies that are not plain (with grains, with fruit, covered with chocolate, etc)



✓ Contiene agrice puree





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Ladyfinger biscuits\_boudoirs**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	769	Ladyfinger biscuits_boudoirs	All ladyfinger biscuits /boudoirs and pink biscuits from Reims (plain, flavoured, with fruit, nuts, grains, chocolate, etc).



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Speculoos**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	792	Speculoos	All speculoos (term used in the legal name or in the commercial name). These products can contain fruit, nuts, grains, chocolate, etc.





## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Coconut rock buns

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	775	Coconut rock buns	All Congolese rocks or coconut rock buns (with or without chocolate, with or without fruit in addition to coconut)



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Almond tuile biscuits

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	793	Almond tuile biscuits	All almond tuile biscuits. These products can contain fruits, nuts, grains, chocolate, etc.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Almond crisps**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	780	Almond crisps	All almond crispy biscuits, Provençal almond crisps, croquants de Cordes biscuits, canistrelli or cantuccini (term used in the legal name or in the commercial name). These products can be plain, flavored, with honey, with fruit, nuts, grains, chocolate, etc.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Fruit and chocolate biscuits**

Category code	Category	Subcategory code	Subcategory	Definition
18	Bread products	767	Fruit and chocolate biscuits	Biscuits* with fruit (pieces, filling, extracts), including coconut, as well as chocolate or cocoa (topping, coating, inclusion). These products can contain nuts or grains in addition to the fruit. Puff pastry biscuits, florentine biscuits, macarons and biscuits with a genoise sponge base are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigarettes russes biscuits, cookies, etc.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Fruit-filled or coated biscuits**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	773	Fruit-filled or coated biscuits	Filled biscuits*, sandwiched or coated with fruit (including coconut). These products can contain nuts or grains and do not contain chocolate. This subcategory includes barquette-type sponge biscuits, tartlet-type biscuits and Lunette de Romans biscuits. Florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigaretttes russes biscuits, cookies, etc.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Filled or coated biscuits: other**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	772	Filled or coated biscuits: other	Filled biscuits*, topped with a tablet (filled or not), sandwiched or coated without fruit (chocolate, milk, vanilla, etc). These products can contain nuts or grains: This subcategory includes barquette-type sponge biscuits, tartlet-type biscuits and Lunette de Romans biscuits. Wafers, florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigaretttes russes biscuits, cookies, etc.



✓ Contains only strawberry flavor → not considered as a fruit and chocolate biscuit



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Chocolate biscuits**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	766	Chocolate biscuits	Chocolate biscuits* or biscuits with cocoa, without filling, without topping, may contain nuts or grains. Puff pastry biscuits, Florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigorettes russes biscuits, cookies, etc.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Biscuits with fruit\_nut\_grain**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	768	Biscuits with fruit_nut_grain	Biscuits* with fruit and/or nuts and/or grains, without filling, without topping. These products do not contain chocolate. Waffles or wafers, almond crisps, almond tuile biscuits, puff pastry biscuits, Florentine biscuits and macaroons are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigorettes russes biscuits, cookies, etc.



\*The term 'covered' or 'topped' is not mentioned in the commercial or legal names → not considered as a fruit-filled or coated biscuit

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Plain biscuits**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	774	Plain biscuits	Plain or flavoured biscuits*. Puff pastry biscuits, macaroons and ladyfinger biscuits/boudoirs are excluded from this subcategory. *Dry biscuits, petits-beurre biscuits, Swedish oatmeal cookies, shortbread biscuits, Breton galettes biscuits, palets, Viennese biscuits (sprits), finger biscuits, cigaretttes russes biscuits, cookies, etc.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Biscuits: other**

Category code	Category	Subcategory code	Subcategory	Definition
2	Cakes and biscuits	765	Biscuits : other	Biscuits that do not correspond to any of the other defined subcategories (Florentine biscuits, macaroons, biscuits to be dipped into spread, ginger biscuits, biscuits with tea, etc).





 **Best-ReMaP**  
Healthy Food for a Healthy Europe

**Thank you for your attention!**

**The Joint Action focusing on the implementation of validated best practices in nutrition – Best-ReMap**

This presentation arises from the Joint Action Best-Remap. This Joint Action is addressing the adaption replication and implementation of effective health interventions based on practices that have been proven to work in the areas of food reformulation framing of food marketing and public procurement of healthy food in public settings under the framework of the Third Health Programme (2014-2020). Sole responsibility lies with the author and the Consumers Health Agriculture and Food Executive Agency is not responsible for any use that may be made of in the information contained therein.

Annex 12 : Guidelines for classification : Delicatessen meats and similar (23/03/23)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Delicatessen meats and similar (5)

- General description of the category and products included (slide 3)
- Products excluded (slide 4)
- Main types of products (slide 5)
- List of the subcategories and associated definitions (slides 6 – 8)
- Definitions of the subcategories and examples of products included (slides 9 – 34)

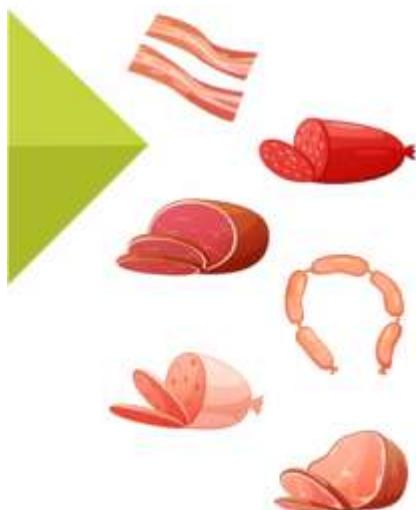


## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

Food category : Delicatessen meats and similar

### ➤ What kind of product can be considered as delicatessen meats and similar ?

**Delicatessen meats and alternative meat-free products (containing tofu, soy, etc.), found in the room-temperature, chilled and frozen, pre-packed sections (excluding foods cut to order)**



- ✓ Cooked ham and shoulder, ham knuckle, roast poultry or pork, etc.
- ✓ Raw-cured ham, dry-cured ham
- ✓ Sausages, cooked sausages, sausage specialities, chorizo, dry sausages, etc.
- ✓ Pâté, country-style pâté, duck mousse, pork liver mousse or terrine, etc.
- ✓ Lardons
- ✓ Pork belly and bacon
- ✓ Boudin (white or blood sausage), uncooked andouille and andouillette (chitterling sausage)
- ✓ Sausage specialities such as chipolatas, merguez, coarse minced sausages (Morteau, Montbéliard, etc.)
- ✓ Dried, smoked or cured meats (Coppa, Alsatian Kassler, Corsican Lonzu, Bündnerfleisch, Bresaola, etc.)
- ✓ Corned beef, corned lamb, etc. (canned or not)
- ✓ Preserved uncooked meat (such as canned sausages)
- ✓ Alternative meat-free products (containing tofu, soy, etc.)

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

Food category : Delicatessen meats and similar

### ➤ What is excluded from the Delicatessen meats and similar category ?

- Delicatessen meats in pastry
- Delicatessen meat products included in complete dishes (such as sauerkraut, cassoulet, couscous, etc.)
- Canned cooked meats (meats cooked in sauce, special meat recipes, etc.)
- Foie gras
- Gizzards and poultry livers
- Delicatessen meat assortments with cheese
- Meat salads
- Aspic products



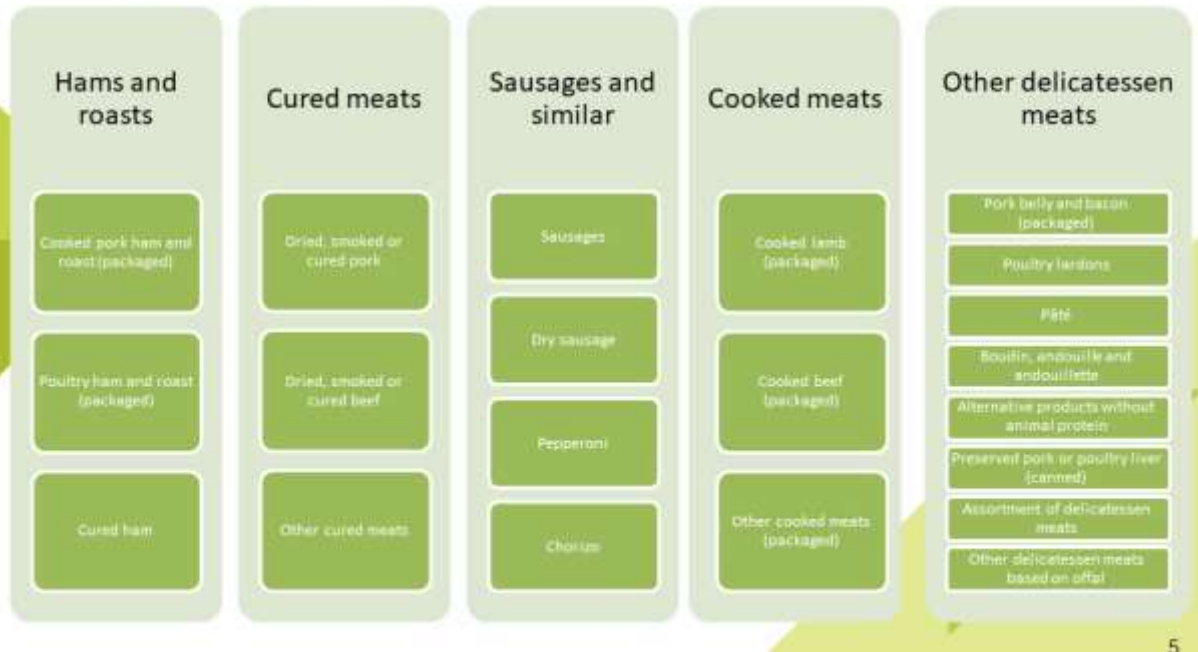
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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Delicatessen meats and similar

- **5 main types of products**
- **21 subcategories in total**



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Delicatessen meats and similar

➤ **Hams and roasts**

**Category code : 5**

Subcategory code	Subcategory	Definition
742	Cooked pork ham and roast (packaged)	Cooked pork ham and roast, plain, smoked, golden baked, with herbs, etc. in slices or in the form of dice/cubes, matchsticks, grated ham, chopped ham. Cooked ham knuckle, all qualities combined. Prosciutto cotto is included in this subcategory. Contains similar products reduced in salt.
332	Poultry ham and roast (packaged)	Poultry breast or fillet, plain or smoked, golden baked, with herbs, mustard, etc. Poultry roast, poultry breast, cooked poultry meat preparations, in slices or in the form of dice/cube, matchsticks, grated, chopped. Contains similar products reduced in salt.
333	Cured ham	Dry-cured ham or raw cured ham Example: Prosciutto crudo, Serrano ham, Iberian ham, Speck dell'Alto Adige, etc. Contains similar products reduced in salt.

➤ **Cured meats**

Subcategory code	Subcategory	Definition
628	Dried, smoked or cured pork	Dried, smoked or cured pork (coppa, Alsatian Kassler, Corsican Lonzu and other regional specialties of this type). Contains similar products reduced in salt.
629	Dried, smoked or cured beef	Dried, smoked or cured beef (Bündnerfleisch, bresaola, ...). Contains similar products reduced in salt.
632	Other cured meats	Dried meat other than pork or beef. Veal bacon and poultry bacon are included in this subcategory. Contains similar products reduced in salt.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Food category : Delicatessen meats and similar

#### > Sausages and similar

Category code : 5

Subcategory code	Subcategory	Definition
795	Sausages	All types of sausages. Sausages with smooth homogeneous filling, from pork or other meat (poultry, beef...) like sausages from Alsace, Strasbourg or Frankfurt, cocktail sausages, sausages with cheese inclusions, Saveloy, sausages for slicing with smooth homogeneous filling (roulades), fine Lyon sausages, cooked sausages with garlic, Paris sausages, Mortadella, with or without pistachios. Sausage specialties such as chipolatas, merguez or sausages with Provençal herbs, coarse minced sausages (Morteau, Montbellard, etc.). Caciù sausages are included in this subcategory. Cotto salami (boiled salami) is included in this subcategory. Contains similar products reduced in salt.
520	Dry sausage	Dry-cured sausages with or without inclusions (dried fruit, cheese, olives, etc.), dry salami, Danish salami. Cotto salami (boiled salami) is excluded from this subcategory. Does not contain pepperoni and chorizo. Contains similar products reduced in salt.
634	Pepperoni	Cured mixture of pork and/or beef seasoned with paprika or other chili pepper. Contains similar products reduced in salt.
168	Chorizo	Chorizo (sliced or unsliced). Contains similar products reduced in salt.

#### > Cooked meats

Subcategory code	Subcategory	Definition
1	Cooked lamb (packaged)	Cooked lamb packaged in trays or packs or canned. Contains similar products reduced in salt.
90	Cooked beef (packaged)	Cooked beef packaged in trays or packs or canned. Example: corned beef, etc. Contains similar products reduced in salt.
50	Other cooked meats (packaged)	Other cooked meats (packaged or canned). Contains similar products reduced in salt.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Food category : Delicatessen meats and similar

#### > Other delicatessen meats

Category code : 5

Subcategory code	Subcategory	Definition
753	Pork belly and bacon (packaged)	Belly, country bacon, pancetta, lardons or matchsticks (allumettes) made from cured pork belly or cuts, slices or matchsticks of pork bacon. Contains similar products reduced in salt.
342	Poultry lardons	Lardons or matchsticks made from poultry meat. Contains similar products reduced in salt.
743	Pâté	Country-style pâté, with or without mushrooms or herbs. Superior country-style pâté, country terrine, Breton pâté or terrine, with mushrooms or herbs. Pork liver pâté, mousse, terrine or cream, with or without mushrooms and herbs. Pâté or terrine made from game, with or without inclusions (dried fruit, chestnuts, etc.). Pork-based pâté: ham pâté, meat pâté, Ardennes pâté. Pâté or terrine made from poultry (duck, turkey, chicken) or rabbit, with or without inclusions, containing pork. Pork rillettes. Other pork delicatessen specialties similar to rillettes. Chicken, duck or goose rillettes, scratchings (may contain pork). Other poultry-based delicatessen specialties similar to rillettes. Duck mousse of superior quality or not, with or without mushrooms and herbs, regardless of the liver content. Contains similar products reduced in salt.
630	Boudin, andouille et andouillette	Boudin (white or blood sausage), uncooked andouille and andouillette (chitterling sausage). Contains similar products reduced in salt.
631	Alternative products without animal protein	Alternative products without animal protein (containing tofu, soy, etc.). These products may contain vegetables. Falafels, veggie steaks or patties are excluded from this subcategory. Contains similar products reduced in salt.
177	Preserved pork or poultry liver (canned)	Confit of poultry or pork liver. Contains similar products reduced in salt.
740	Assortment of delicatessen meats	Assortment of different delicatessen meats with average nutritional values for all the assortment components and consisting of products not belonging to the same subcategories. Contains similar products reduced in salt.
741	Other delicatessen meats based on offal	Other delicatessen meats based on offal: cooked tongue, cooked muzzle, etc. Contains similar products reduced in salt.

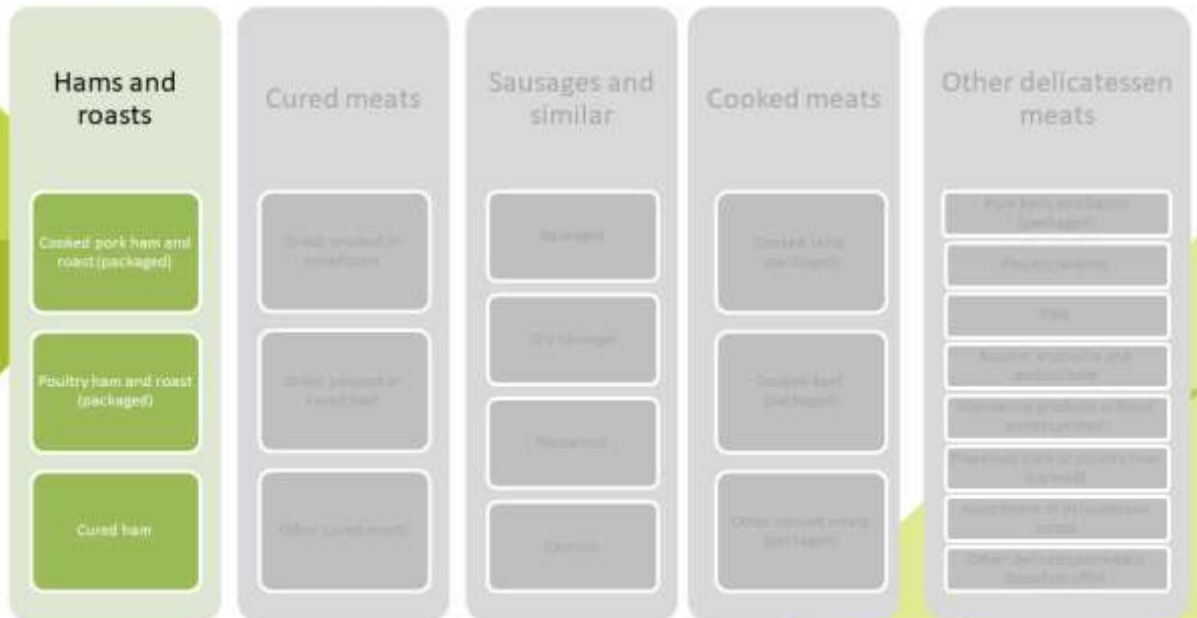
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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Delicatessen meats and similar

- **5 main types of products**
- **21 subcategories in total**



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Cooked pork ham and roast (packaged)

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	742	Cooked pork ham and roast (packaged)	Cooked pork ham and roast, plain, smoked, golden baked, with herbs, etc. in slices or in the form of dice/cubes, matchsticks, grated ham, chopped ham. Cooked ham knuckle, all qualities combined. Prosciutto cotto is included in this subcategory. Contains similar products reduced in salt.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Poultry ham and roast (packaged)**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	332	Poultry ham and roast (packaged)	Poultry breast or fillet, plain or smoked, golden baked, with herbs, mustard, etc. Poultry roast, poultry breast, cooked poultry meat preparations, in slices or in the form of dice/cube, matchsticks, grated, chopped. Contains similar products reduced in salt.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Cured ham**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	333	Cured ham	Dry-cured ham or raw cured ham Example : Prosciutto crudo, Serrano ham, Iberian ham, Speck dell' Alto Adige , etc. Contains similar products reduced in salt.



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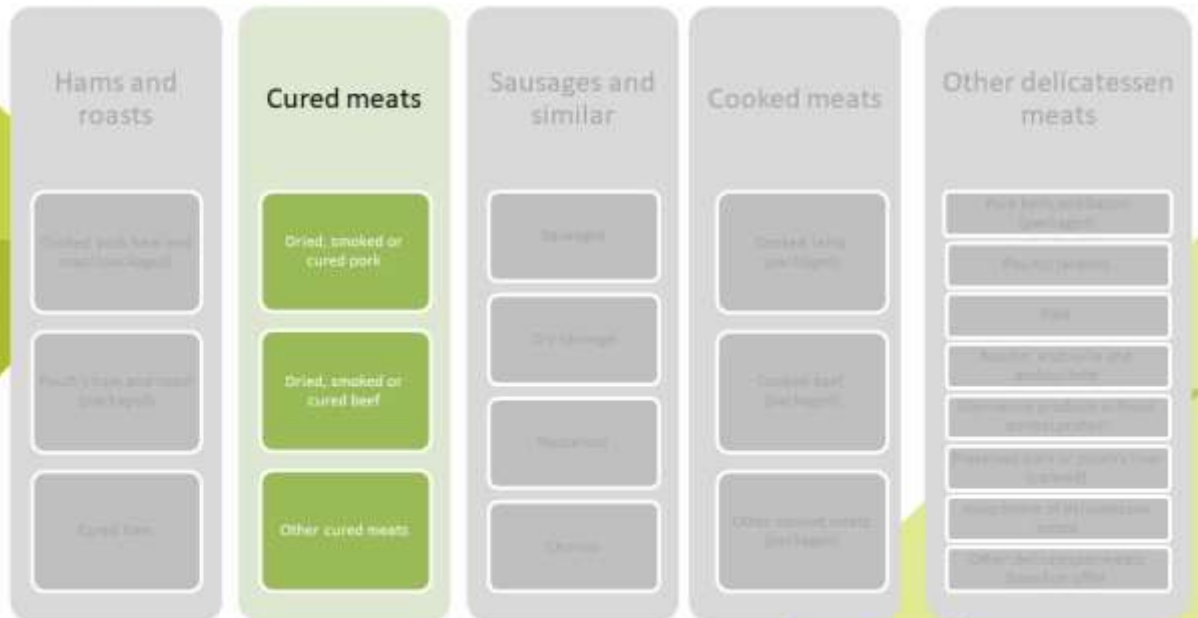




**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Delicatessen meats and similar

- **5 main types of products**
- **21 subcategories in total**



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Dried, smoked or cured pork

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	628	Dried, smoked or cured pork	Dried, smoked or cured pork (coppa, Alsatian Kassler, Corsican Lonzu and other regional specialities of this type). Contains similar products reduced in salt.



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Dried, smoked or cured beef

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	629	Dried, smoked or cured beef	Dried, smoked or cured beef (Bündnerfleisch, bresaola, ...). Contains similar products reduced in salt.



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Other cured meats

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	632	Other cured meats	Dried meat other than pork or beef. Veal bacon and poultry bacon are included in this subcategory. Contains similar products reduced in salt.



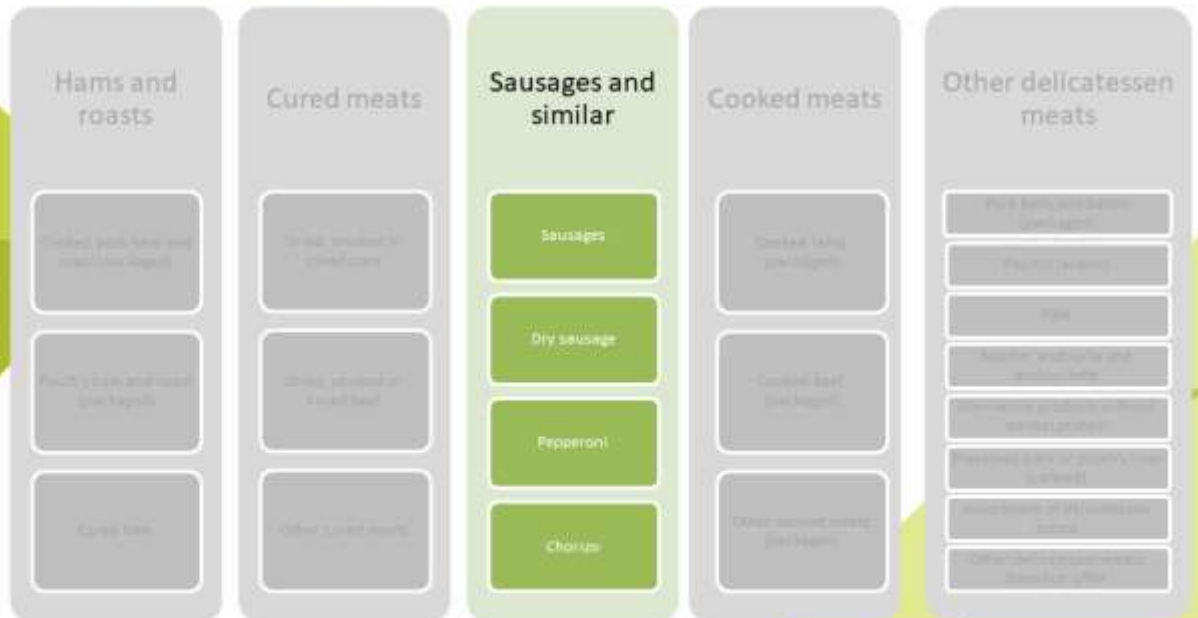
16



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

Food category : Delicatessen meats and similar

- 5 main types of products
- 21 subcategories in total



17



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

Sausages

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	795	Sausages	All types of sausages. Sausages with smooth homogeneous filling, from pork or other meat (poultry, beef...) like sausages from Alsace, Strasbourg or Frankfurt, cocktail sausages, sausages with cheese inclusions. Saveloys, sausages for slicing with smooth homogeneous filling (roulades), fine Lyon sausages, cooked sausages with garlic, Paris sausages. Mortadella, with or without pistachios. Sausage specialties such as chipolatas, merguez or sausages with Provençal herbs, coarse minced sausages (Morteau, Montbéliard, etc.). Cachir sausages are included in this subcategory. Cotto salami (boiled salami) is included in this subcategory. Contains similar products reduced in salt.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Dry sausage**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	520	Dry sausage	<p>Dry-cured sausages with or without inclusions (dried fruit, cheese, olives, etc.), dry salami, Danish salami. Cotto salami (boiled salami) is excluded from this subcategory.</p> <p>Does not contain pepperoni and chorizo. Contains similar products reduced in salt.</p>



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Pepperoni**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	634	Pepperoni	<p>Cured mixture of pork and/or beef seasoned with paprika or other chili pepper. Contains similar products reduced in salt.</p>



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Chorizo**

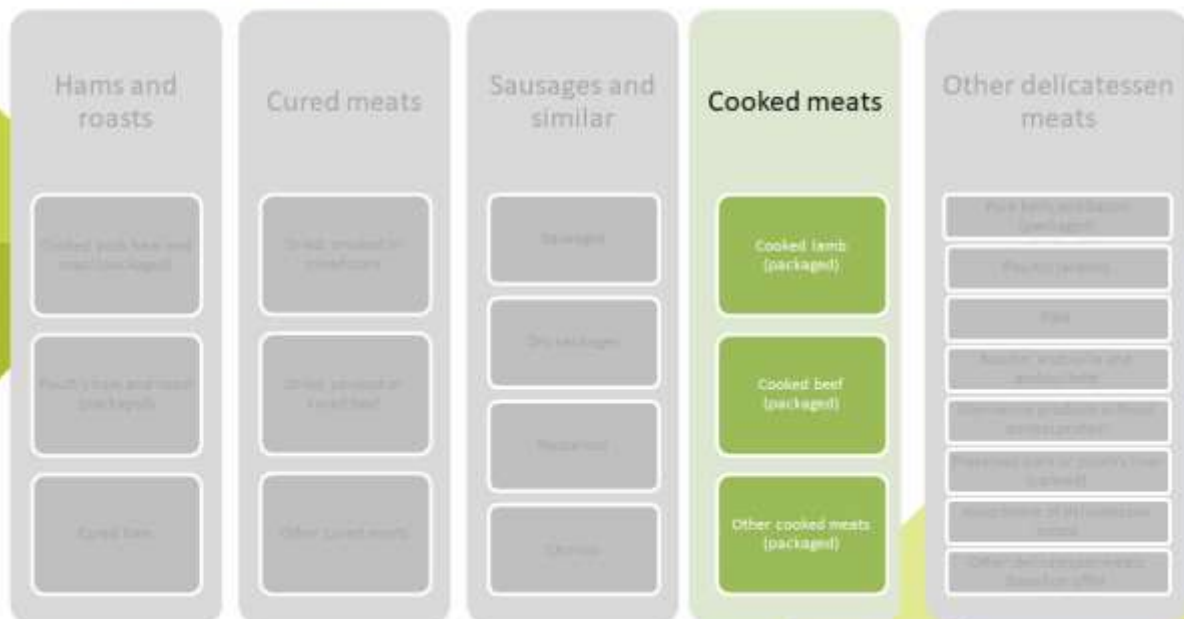
Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	168	Chorizo	Chorizo (sliced or unsliced). Contains similar products reduced in salt.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Food category : Delicatessen meats and similar**

- **5 main types of products**
- **21 subcategories in total**





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Cooked lamb (packaged)**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	1	Cooked lamb (packaged)	Cooked lamb packaged in trays or packs or canned. Contains similar products reduced in salt.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Cooked beef (packaged)**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	90	Cooked beef (packaged)	Cooked beef packaged in trays or packs or canned. Example : corned beef, etc. Contains similar products reduced in salt.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Other cooked meats (packaged)

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	50	Other cooked meats (packaged)	Other cooked meats (packaged or canned). Contains similar products reduced in salt.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Food category : Delicatessen meats and similar

- 5 main types of products
- 21 subcategories in total



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Pork belly and bacon (packaged)**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	753	Pork belly and bacon (packaged)	Belly, country bacon, pancetta, lardons or matchsticks (allumettes) made from cured pork belly or cuts, slices or matchsticks of pork bacon. Contains similar products reduced in salt.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Poultry lardons**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	342	Poultry lardons	Lardons or matchsticks made from poultry meat. Contains similar products reduced in salt.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Pâté**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	743	Pâté	Country-style pâté, with or without mushrooms or herbs. Superior country-style pâté, country terrine, Breton pâté or terrine, with mushrooms or herbs. Pork liver pâté, mousse, terrine or cream, with or without mushrooms and herbs. Pâté or terrine made from game, with or without inclusions (dried fruit, chestnuts, etc.). Pork-based pâté: ham pâté, meat pâté, Ardennes pâté. Pâté or terrine made from poultry (duck, turkey, chicken) or rabbit, with or without inclusions, containing pork. Pork rillettes. Other pork delicatessen specialties similar to rillettes. Chicken, duck or goose rillettes, scratchings (may contain pork). Other poultry-based delicatessen specialties similar to rillettes. Duck mousse of superior quality or not, with or without mushrooms and herbs, regardless of the liver content. Contains similar products reduced in salt.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Boudin, andouille et andouillette**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	630	Boudin, andouille et andouillette	Boudin (white or blood sausage), uncooked andouille and andouillette (chitterling sausage). Contains similar products reduced in salt.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Alternative products without animal protein**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	631	Alternative products without animal protein	Alternative products without animal protein (containing tofu, soy, etc.). These products may contain vegetables. Falafels, veggie steaks or patties are excluded from this subcategory.  Contains similar products reduced in salt.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Preserved pork or poultry liver (canned)**

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	177	Preserved pork or poultry liver (canned)	Confit of poultry or pork liver. Contains similar products reduced in salt.



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Assortment of delicatessen meats

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	740	Assortment of delicatessen meats	Assortment of different delicatessen meats with average nutritional values for all the assortment components and consisting of products not belonging to the same subcategories. Contains similar products reduced in salt.



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Other delicatessen meats based on offal

Category code	Category	Subcategory code	Subcategory	Definition
5	Delicatessen meats and similar	741	Other delicatessen meats based on offal	Other delicatessen meats based on offal : cooked tongue, cooked muzzle, etc. Contains similar products reduced in salt.



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 **Best-ReMaP**  
Healthy Food for a Healthy Europe

**Thank you for your attention!**

**The Joint Action focusing on the implementation of validated best practices in nutrition – Best-ReMap**

This presentation arises from the Joint Action Best-Remap. This Joint Action is addressing the adaption, replication and implementation of effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings, under the framework of the Third Health Programme (2014-2020). Sole responsibility lies with the author and the Consumers, Health, Agriculture and Food Executive Agency is not responsible for any use that may be made of in the information contained therein.

Annex 13 : Guidelines for classification : Fresh dairy products and desserts (23/03/23)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Fresh dairy products and desserts (3)

- General description of the category and products included (slide 3)
- Products excluded (slide 4)
- Overview of the food category (slide 5-6)
- List of the subcategories and associated definitions (slides 7 – 9)
- Definitions of the subcategories and examples of products included (slides 10 – 36)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Fresh dairy products and desserts

➤ What kind of product can be considered as a fresh dairy product and dessert ?

→ Dairy products and desserts to be stored chilled



- Yoghurts and drinkable yoghurts
- Fresh cheeses (Quark, skyr, ...)
- Dessert creams, custards, jellied milks, *crèmes brûlées*, flans, floating islands
- Rice puddings
- Fresh-plant based desserts
- Fresh mousse-type desserts
- Fresh cakes, fresh pastries
- Fresh dairy-based desserts (tiramisu, cheesecake, clafoutis, profiteroles, rum baba ...)
- Panna Cotta
- Curdled milks



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Fresh dairy products and desserts

➤ What is excluded from the fresh dairy products and desserts category ?



- Milk, butter, fresh cream
- Cheeses (ricotta, mascarpone, cottage cheese, cream cheese and similar\*)
- Frozen pastries and desserts
- Dairy products to be stored at room temperature
- Whey products\*

\*However, some of them can be used in **fresh desserts**' recipes (tiramisu, cheesecake ...) or in dairy products' formulation

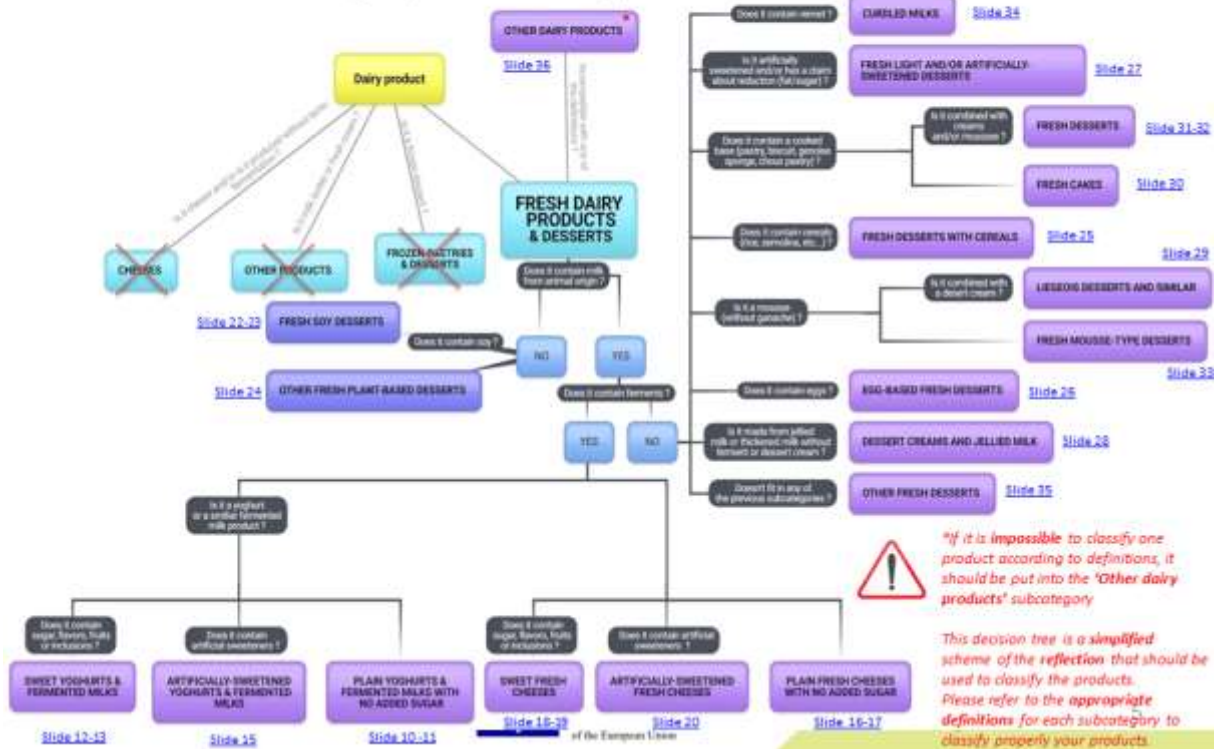


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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Fresh dairy products and desserts



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Fresh dairy products and desserts

- Classification distinguish different categories of products :
- For each yoghurts and fermented milks subcategories (plain or sweet) based on **fat content** :
  - **Classic yoghurts and fermented milks** : fat content ≤ 3,6 g/100g
  - **Gourmet yoghurts and fermented milks** : fat content > 3,6 g/100g
- For each fresh cheeses subcategories (plain or sweet) based on **fat content** :
  - **Classic fresh cheeses** : fat content ≤ 3,8 g/100g
  - **Gourmet fresh cheeses** : fat content > 3,8 g/100g
- For the fresh soy desserts based on **sugar content** :
  - **Fresh plain unsweetened soy desserts** : if the product is plain with no sugar
  - **Fresh sweetened soy desserts** : if the product contains sugar and/or flavours
- For the fresh desserts based on the **product composition** :
  - **Fresh desserts with fruit** : if the product contains fruits
  - **Fresh desserts without fruit** : if the product does not contain fruits



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fresh dairy products and desserts subcategories & definitions

Category code : 3

Subcategory code	Subcategory	Definition
612	Classic plain yoghurts and fermented milks with no added sugar	Unsweetened plain yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, with a fat content $\leq 3.6g/100g$ . Do not contain artificial sweetener
613	Gourmet plain yoghurts and fermented milks with no added sugar	Unsweetened plain yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt with a fat content $>3.6g/100g$ , mainly due to the addition of cream. Do not contain artificial sweetener
614	Classic sweet yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, sweetened without artificial sweetener and with a fat content $\leq 3.6g/100g$ . Groups together plain or flavoured products and also those containing fruits, on a bed of fruits, with inclusions of chocolate/caramel/biscuits/cereal, etc. Contains drinkable dairy products with or without ferments
615	Gourmet sweet yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, sweetened without artificial sweetener and with a fat content $>3.6g/100g$ , mainly due to the addition of cream. Groups together plain and flavoured products and also those containing fruits, on a bed of fruits, with inclusions of chocolate/caramel/biscuits/cereals, etc.
611	Artificially-sweetened yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, and containing artificial sweeteners regardless of the fat content, with or without sugar. Contains drinkable dairy products with or without ferments.
248	Classic plain fresh cheeses with no added sugar	Plain and unsweetened fresh cheeses, smooth fromages blancs, faisselles, quark, skyr and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/fresh cheeses, with a fat content $\leq 3.8g/100g$ . Do not contain artificial sweetener
250	Gourmet plain fresh cheeses with no added sugar	Plain and unsweetened fresh cheeses, smooth fromages blancs, petits suisses, faisselles, quark, skyr, fresh cheeses with mousses, fromage blanc/fresh cheese mousses and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/fresh cheese and with a fat content $>3.8g/100g$ , mainly due to the addition of cream. Do not contain artificial sweetener
719	Classic sweetened fresh cheeses	Sugar-sweetened (without artificial sweetening) fresh cheeses, smooth fromage blanc, quark, skyr and equivalent products such as dairy specialities/dairy desserts based on ferments or fromage blanc/fresh cheese, with a fat content $\leq 3.8g/100g$ . Includes plain and flavoured products, with fruit, on a bed of fruit, etc.
252	Gourmet sweet fresh cheeses	Sweetened fresh cheeses, smooth fromages blancs, quark, skyr, fresh cheeses with mousses, fromage blanc/fresh cheese mousses and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/fresh cheeses and with a fat content $>3.8g/100g$ , mainly due to the addition of cream. Do not contain artificial sweetener. Groups together plain and flavoured products but also those containing fruits, on a bed of fruit, with inclusions of chocolate/caramel/biscuit/cereal, etc.
708	Artificially-sweetened fresh cheeses	Artificially-sweetened fresh cheeses, quark, skyr and equivalent products such as dairy specialities/dairy desserts based on ferments or fromage blanc/fresh cheese, irrespective of fat content. May contain artificially-sweetened and sugar-sweetened products



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fresh dairy products and desserts subcategories & definitions

Category code : 3

Subcategory code	Subcategory	Definition
712	Fresh plain unsweetened soy desserts	Includes all plain unsweetened soy desserts
711	Fresh sweetened soy desserts	Includes all sweetened soy desserts, regardless of the flavour (plain, fruit, chocolate, vanilla, etc.)
713	Other fresh plant-based desserts	Includes all plant-based dessert other than those with soy, whether sweetened or not, with or without cereals
215	Fresh desserts with cereals	Groups together fresh desserts such as all rice milk puddings (vanilla, caramel, chocolate, on a bed of strawberry, etc.), semolina milk puddings, as well as rice and semolina cakes. Groups together products with or without inclusions (of grapes, coconut, etc.), with or without topping.
216	Egg-based fresh desserts	Egg-based dessert such as egg creams, crèmes caramel, egg custards, floating islands, oeufs au lait, crèmes brûlées and catalan creams
218	Fresh light and/or artificially-sweetened desserts	Groups together all products in the fresh desserts category containing artificial sweeteners and/or a nutrition claim about reduction, low or no fat and/or sugar according to Regulation (EC) No 1924/2006
709	Dessert creams and jellied milks	Groups together fresh desserts based on jellied milk or thickened milk without ferment, such as flan or dessert creams, regardless of the flavour (chocolate, vanilla, coffee, brownie, with fruit, on a bed of fruit, etc.)
710	Liégeois desserts and similar	Groups together fresh desserts with "Liégeois" or "Viennese" on the front of the packaging as well as equivalent products based on dessert cream topped with a layer of whipped cream/mousse. Liégeois mousses and equivalent products such as mousse topped with whipped mousse/cream are not included in this subcategory


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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fresh dairy products and desserts subcategories & definitions

Category code : 3

Subcategory code	Subcategory	Definition
714	Fresh cakes	Groups together fresh desserts sold in the chilled food section such as brownies, cakes, fondants, moist cakes with melting centres (regardless of the filling), rum baba, clafoutis, far.
715	Fresh desserts with fruit	Groups together products such as pastry desserts or fresh dairy-based desserts made up of layers consisting of a cooked base (pastry, biscuit, genoise sponge) combined with creams and/or mousses and containing fruit (cut fruit, coulis, juice, purée) (example: bavaresis/fruit cheesecake/fruit tiramisu/tart/crumble/fruit charlotte, Black Forest gâteau, fraisier or framboisier cakes)
716	Fresh desserts without fruit	Groups together products such as pastry desserts or fresh dairy-based desserts made up of layers consisting of a cooked base (pastry, biscuit, genoise sponge, choux pastry) combined with creams and/or mousses and not containing fruit (example: cheesecake without fruit/tiramisu without fruit/chocolate tart/profferoles)
718	Fresh mousse-type desserts	Groups together mousses of all flavours (chocolate, coffee, caramel, fruit, etc.), including Liégeois mousses and mousses with sauces. May contain eggs. Does not include mousses with fromage blanc/fresh cheese and mousses with ganache.
720	Curdled milks	Includes fresh dairy desserts (other than fresh cheeses) based on renneted milk.
717	Other fresh desserts	Groups together fresh desserts other than dessert creams, jellied milks, Liégeois desserts, curdled milks, mousses, egg- or cereal-based desserts, cakes and pastry desserts. Contains for example panna cotta, mousses with ganache, fruit/fruit purée stopped with whipped cream, French toast, etc.
35	Other dairy products	Other dairy products



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Classic plain yoghurts and fermented milks with no added sugar

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	612	Classic plain yoghurts and fermented milks with no added sugar	Unsweetened plain yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, with a fat content $\leq 3.6g/100g$ . Do not contain artificial sweetener



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Gourmet plain yoghurts and fermented milks with no added sugar

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	613	Gourmet plain yoghurts and fermented milks with no added sugar	Unsweetened plain yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt with a fat content >3.6g/100g, mainly due to the addition of cream. Do not contain artificial sweetener



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Classic sweet yoghurts and fermented milks

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	614	Classic sweet yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, sweetened without artificial sweetener and with a fat content ≤3.6g/100g. Groups together plain or flavoured products and also those containing fruits, on a bed of fruits, with inclusions of chocolate/caramel/biscuits/cereals, etc. Contains drinkable dairy products with or without ferments



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Gourmet sweet yoghurts and fermented milks

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	615	Gourmet sweet yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, sweetened without artificial sweetener and with a fat content >3.6g/100g, mainly due to the addition of cream. Groups together plain and flavoured products and also those containing fruits, on a bed of fruits, with inclusions of chocolate/caramel/biscuits/cereals, etc.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Yoghurts and fermented milks

**/!\ Information to take into account only if the ingredient lists of the products are not available**

To decide if a yoghurt or fermented milk should be classified as **plain with no added sugar** or as **sweet** when the ingredient list is not available and no specific flavor is mentioned in the name (i.e. natural, etc.):

→ See if the commercial name or the legal name of the product contains a health claim 'no added sugar' or similar

→ If not, use the sugar content of the product (g/100g):

- For a sugar content < 7.0 g/100g: the product is considered as **plain with no added sugar**
- For a sugar content ≥ 7.0 g/100g: the product is considered as **sweet**



*The cut off is a hypothesis based on observations on the French market and should help to classify only as a last resort*



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Artificially-sweetened yoghurts and fermented milks

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	611	Artificially-sweetened yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, and containing artificial sweeteners regardless of the fat content, with or without sugar. Contains drinkable dairy products with or without ferments.



✓ Contains sweeteners and no sugar



✓ Fermented milk with sweeteners



✓ Fermented milk with sweeteners



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Classic plain fresh cheeses with no added sugar

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	249	Classic plain fresh cheeses with no added sugar	Plain and unsweetened fresh cheeses, smooth fromages blancs, faisselles, quark, skyr and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/fresh cheeses, with a fat content $\leq 3.8g/100g$ . Do not contain artificial sweetener



✓ Contains also yogurt but in a lower amount than Quark so it's still considered as a fresh cheese



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Gourmet plain fresh cheeses with no added sugar

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	250	Gourmet plain fresh cheeses with no added sugar	Plain and unsweetened fresh cheeses, smooth fromages blancs, petits suisses, faisselles, quark, skyr, fresh cheeses with mousse, fromage blanc/fresh cheese mousses and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/fresh cheese and with a fat content >3.8g/100g, mainly due to the addition of cream. Do not contain artificial sweetener



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Classic sweetened fresh cheeses

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	719	Classic sweetened fresh cheeses	Sugar-sweetened (without artificial sweetening) fresh cheeses, smooth fromage blanc, quark, skyr and equivalent products such as dairy specialities/dairy desserts based on ferments or fromage blanc/fresh cheese, with a fat content ≤3.8g/100g. Includes plain and flavoured products, with fruit, on a bed of fruit, etc.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Gourmet sweet fresh cheeses

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	252	Gourmet sweet fresh cheeses	Sweetened fresh cheeses, smooth fromages blancs, quark, skyr, fresh cheeses with mousse, fromage blanc/fresh cheese mousses and equivalent products such as dairy specialties/dairy desserts made with ferments or fromage blanc/fresh cheeses and with a fat content >3.8g/100g, mainly due to the addition of cream. Do not contain artificial sweetener. Groups together plain and flavoured products but also those containing fruits, on a bed of fruit, with inclusions of chocolate/caramel/biscuit/cereal, etc.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Artificially-sweetened fresh cheeses

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	708	Artificially-sweetened fresh cheeses	Artificially-sweetened fresh cheeses, quark, skyr and equivalent products such as dairy specialties/dairy desserts based on ferments or fromage blanc/fresh cheese, irrespective of fat content. May contain artificially-sweetened and sugar-sweetened products



✓ Contains sweeteners and sugar



✓ Contains sweeteners and sugar



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Yoghurts and fermented milks

#### /!\ For products containing both fresh cheese and yoghurt :

To decide if the product should be classified as a **yoghurt and fermented milk** or as a **fresh cheese** :

→ **Check if the legal name of the product highlights one of the two ingredients of interest :**

For example « fresh cheese preparation with ... », etc

- If the term **yoghurt or fermented milk** is mentioned, then classify the product as such
- If the term **fresh cheese** is mentioned, then classify it as such

→ **If the legal name doesn't allow the classification of the product, then look at the ingredient list :**

- If the yoghurt content is higher than the fresh cheese's content, then classify it as a **yoghurt and fermented milk**
- If the fresh cheese content is higher than the yoghurt's content, then classify it as a **fresh cheese**



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fresh plain unsweetened soy desserts

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	712	Fresh plain unsweetened soy desserts	Includes all plain unsweetened soy desserts



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Fresh sweetened soy desserts

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	711	Fresh sweetened soy desserts	Includes all sweetened soy desserts, regardless of the flavour (plain, fruit, chocolate, vanilla, etc.)



### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Other fresh plant-based desserts

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	713	Other fresh plant-based desserts	Includes all plant-based dessert other than those with soy, whether sweetened or not, with or without cereals







### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Fresh desserts with cereals

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	215	Fresh desserts with cereals	Groups together fresh desserts such as all rice milk puddings (vanilla, caramel, chocolate, on a bed of strawberry, etc.), semolina milk puddings, as well as rice and semolina cakes. Groups together products with or without inclusions (of grapes, coconut, etc.), with or without topping.



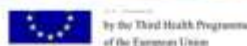
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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Egg-based fresh desserts

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	216	Egg-based fresh desserts	Egg-based dessert such as egg creams, crèmes caramel, egg custards, floating islands, œufs au lait, crèmes brûlées and catalan creams



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Fresh light and/or artificially-sweetened desserts

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	218	Fresh light and/or artificially-sweetened desserts	Groups together all products in the fresh desserts category containing artificial sweeteners and/or a nutrition claim about reduction, low or no fat and/or sugar according to Regulation (EC) No 1924/2006



✓ Classified in this subcategory because no ferments (so not a yogurt or a fresh cheese) but contains sweeteners



✓ Chocolate mousse which contains sweeteners



✓ Nutrition claim 'low fat'



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Dessert cream and jellied milks

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	709	Dessert cream and jellied milks	Groups together fresh desserts based on jellied milk or thickened milk without ferment, such as flan or dessert creams, regardless of the flavour (chocolate, vanilla, coffee, brownie, with fruit, on a bed of fruit, etc.)



✓ Flan without eggs, only jellied milk



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Liégeois desserts and similar

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	710	Liégeois desserts and similar	Groups together fresh desserts with "Liégeois" or "Viennese" on the front of the packaging as well as equivalent products based on dessert cream topped with a layer of whipped cream/mousse. Liégeois mousses and equivalent products such as mousse topped with whipped mousse/cream are not included in this subcategory



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### WORK Package 5 - GUIDELINES FOR CLASSIFICATION

#### Fresh cakes

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	714	Fresh cakes	Groups together fresh desserts sold in the chilled food section such as brownies, cakes, fondants, moist cakes with melting centres (regardless of the filling), rum baba, clafoutis, far



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fresh desserts with fruit

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	715	Fresh desserts with fruit	Groups together products such as pastry desserts or fresh dairy-based desserts made up of layers consisting of a cooked base (pastry, biscuit, genoise sponge) combined with creams and/or mousses and containing fruit (cut fruit, coulis, juice, purée) (example: bavarois/fruit cheesecake/fruit tiramisu/tart/crumble/fruit charlotte, Black Forest gâteau, fraiser or framboisier cakes)



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fresh desserts without fruit

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	716	Fresh desserts without fruit	Groups together products such as pastry desserts or fresh dairy-based desserts made up of layers consisting of a cooked base (pastry, biscuit, genoise sponge, choux pastry) combined with creams and/or mousses and not containing fruit (example: cheesecake without fruit/tiramisu without fruit/chocolate tart/profiteroles)



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fresh mousse-type desserts

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	718	Fresh mousse-type desserts	Groups together mousses of all flavours (chocolate, coffee, caramel, fruit, etc.), including Liégeois mousses and mousses with sauces. May contain eggs. Does not include mousses with fromage blanc/fresh cheese and mousses with ganache.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Curdled milks

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	720	Curdled milks	Includes fresh dairy desserts (other than fresh cheeses) based on renneted milk



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Other fresh desserts

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	717	Other fresh desserts	Groups together fresh desserts other than dessert creams, jellied milks, Liégeois desserts, curdled milks, mousses, egg- or cereal-based desserts, cakes and pastry desserts. Contains for example panna cotta, mousses with ganache, fruit/fruit purées topped with whipped cream, French toast, etc.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Other dairy products

Category code	Category	Subcategory code	Subcategory	Definition
3	Fresh dairy products and desserts	35	Other dairy products	Other dairy products

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Healthy Food for a Healthy Europe

**Thank you for your attention!**

**The Joint Action focusing on the implementation of validated best practices in nutrition – Best-ReMap**

This presentation arises from the Joint Action Best-Remap. This Joint Action is addressing the adaption, replication and implementation of effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings, under the framework of the Third Health Programme (2014-2020). Sole responsibility lies with the author and the Consumers, Health, Agriculture and Food Executive Agency is not responsible for any use that may be made of in the information contained therein.

Annex 14 : Guidelines for classification : Infant milks (23/03/23)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Infant milks (44)

- General description of the category and products included (slide 3)
- Products excluded (slide 4)
- List of the subcategories and associated definitions (slide 5)
- Definitions of the subcategories and examples of products included (slides 6-8)





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Infant milks (44)

➤ What kind of product can be considered as a Infant milks?

<p><b>infant formulae</b></p>	<p>“means foodstuffs intended for particular nutritional use by infants <b>during the first months of life</b> and satisfying by themselves the nutritional requirements of such infants until the introduction of appropriate complementary feeding.”</p>	<p><b>Covered by</b></p> <ul style="list-style-type: none"> <li>- Regulation (EU) No 609/2013 <a href="https://eur-lex.europa.eu/legal-content/fr/TXT/?uri=CELEX:32013R0609">https://eur-lex.europa.eu/legal-content/fr/TXT/?uri=CELEX:32013R0609</a></li> <li>- Directive 2006/141/EC <a href="https://eur-lex.europa.eu/legal-content/fr/TXT/?uri=CELEX%3A32006L0141&amp;id=1612884804197">https://eur-lex.europa.eu/legal-content/fr/TXT/?uri=CELEX%3A32006L0141&amp;id=1612884804197</a></li> </ul>
<p><b>follow-on formulae</b></p>	<p>“means foodstuffs intended for particular nutritional use by <b>infants when appropriate complementary feeding is introduced</b> and constituting the principal liquid element in a progressively diversified diet of such infants.”</p>	
<p><b>Growing-up milks</b></p>	<p>Infant milks for children aged <b>10 months or more</b></p>	

➔ These products can be liquid or powdered

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Infant milks (44)

➤ What is excluded from the Infant milks category ?

- Milks
- Milk powders
- Flavoured milks
- Plant-based beverages

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Infant milks subcategories & definitions**

Category code : 44

Subcategory code	Subcategory name	Subcategory definition
477	Infant formulae	Infant formulae meeting the definition of "infant formula" laid down by Regulation (EU) No 609/2013 and by Directive 2006/141/EC. These products are intended for infants from birth to 6 months of age
478	Follow-on formulae	Follow-on formulae meeting the definition of "follow-on formula" laid down by Regulation (EU) No 609/2013 and by Directive 2006/141/EC. These products are intended for infants from 6 to 12 months of age
340	Growing-up milks	Growing-up milk with two types of infant milk: - infant milks for infants from 10 months of age, whose sales description contains "follow-on formula" and whose packaging indicates that the product is intended for infants and young children from 10 months of age. These products are covered by the regulations applicable to follow-on formulae; - infant milks for children aged 12 months or over.

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

➤ Infant formulae

Category code	Subcategory code	Subcategory name	Subcategory definition
44	477	Infant formulae	Infant formulae meeting the definition of "infant formula" laid down by Regulation (EU) No 609/2013 and by Directive 2006/141/EC. These products are intended for infants from birth to 6 months of age



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### ➤ Follow-on formulae

Category code	Subcategory code	Subcategory name	Subcategory definition
44	478	Follow-on formulae	Follow-on formulae meeting the definition of "follow-on formula" laid down by Regulation (EU) No 609/20138 and by Directive 2006/141/EC. These products are intended for infants from 6 to 12 months of age



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### ➤ Growing-up milks

Category code	Subcategory code	Subcategory name	Subcategory definition
44	340	Growing-up milks	Growing-up milk with two types of infant milk: - infant milks for infants from 10 months of age whose sales description contains "follow-on formula" and whose packaging indicates that the product is intended for infants and young children from 10 months of age. These products are covered by the regulations applicable to follow-on formulae; - infant milks for children aged 12 months or over.





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Annex 15 : Guidelines for classification : Soft drinks (23/03/23)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Soft drinks (9)

- General description of the category and products included (slide 3)
- Products excluded (slide 4)
- Overview of the food category (slide 5-6)
- List of the subcategories and associated definitions (slides 7 – 10)
- Definitions of the subcategories and examples of products included (slides 11 – 44)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Soft drinks

➤ What kind of product can be considered as a soft drink ?



- Fruit or vegetable beverages
- Flavoured milk beverages
- Plant-based beverages
- Flavoured waters
- Colas
- Tea beverages
- Sport drinks
- Energy drinks
- Tonics and bitter
- Alcohol-free beers
- Aperitif beverages
- Instant drinks (powders)
- Spritzer/schorle\*

\*Beverages containing fruit juice with water and carbon dioxide, usually named 'Schorle' or 'Spitzer'



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Soft drinks

➤ What is excluded from the soft drink category ?



- Fruit juices
- Fruit juices from concentrate
- Nectars
- Syrups and concentrated liquids for instant drinks (Sodastream, ...)

	Fruit juices	Fruit juices from concentrate	Nectars
Fruit content	100%	100%	25-50% minimum
<b>Allowed / Prohibited ingredients</b>			
Vitamins & minerals	Yes	Yes	Yes
Pulp	Yes	Yes	Yes
Lemon juice (for acidification)	Yes	Yes	Yes
Added sugars	No	No	Yes
Preservative and coloring agents	No	No	No

According to the definitions from *DIRECTIVE 2012/12/EU relating to fruit juices and certain similar products intended for human consumption*



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Food category : Soft drinks**



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Food category : Soft drinks**

- Classification distinguishes most of the time 3 types of products :
  - **Beverages with no added sugars** : can be containing **artificial sweeteners** but no ingredients such as **mono- and disaccharides** (sucrose, glucose, fructose, fruit sugar, etc.), **syrup, honey, caramel** (not used as an additive)
  - **Sugar-sweetened and artificially-sweetened beverages** : containing one (or more) **artificial sweetener(s)** with one or more ingredients such as **mono- and disaccharides** (sucrose, glucose, fructose, fruit sugar, etc.), **syrup, honey, caramel** (not used as an additive)
  - **Sugar-sweetened beverages** : not containing **artificial sweeteners** but containing one or more ingredients such as **mono- and disaccharides** (sucrose, glucose, fructose, fruit sugar, etc.), **syrup, honey, caramel** (not used as an additive)

This distinction is not used for **Vegetable beverages, Flavoured milk beverages, Plant-based beverages, Sports drinks, Alcohol-free beers, Aperitif beverages and Other beverages**


**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**
**Soft drink subcategories & definitions**

Category code : 9

Subcategory code	Subcategory	Definition
95	Fruit beverages with fruit content > or = 50%	Product with a combined fruit juice and purée content ≥ 50%. Possible presence of coconut (not considered as a fruit), milk, tea and cereals in lower proportions than the fruit(s). This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.
645	Fruit beverages without added sugar	Beverages with or without artificial sweetening, carbonated or not, containing fruit juice and/or purée (with/without vegetable(s)) in quantities < 50%, without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.
646	Sugar-sweetened and artificially-sweetened fruit beverages	Artificially-sweetened beverages, carbonated or not, containing fruit juice and/or purée (with/without vegetable(s)) in quantities < 50%, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.
647	Sugar-sweetened fruit beverages	Beverages without artificial sweetening, carbonated or not, containing fruit juice and/or purée (with/without vegetable(s)) in quantities < 50%, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.
99	Vegetable beverages	Beverages containing at least one vegetable (e.g. carrot) and with a vegetable and/or fruit juice and purée content > 50% and which include the term vegetable(s) in their sale description. Possible presence of coconut and tea. This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.
644	Flavoured milk beverages	Flavoured (chocolate, coffee, strawberry, etc.) drinks containing milk (of animal origin) whose sales description indicates milk drink or flavoured milk. This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.
648	Plant-based beverages without added sugar	Beverages with or without artificial sweetening, flavoured or not, with cereals (rice, oats, spelt, buckwheat, millet, etc.), oilseeds (almonds, hazelnuts, cashew nuts, hemp, etc.) and/or pulses (soy). Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes coconut milk, coconut milk/coconut water mixtures, and plant-based beverages containing tea or fruits in lower proportions of fruits juice or purée than plant-based beverage). Does not contain products such as birch or maple water or sap, sugar cane juice, herbal infusions.


**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**
**Soft drink subcategories & definitions**

Category code : 9

Subcategory code	Subcategory	Definition
649	Sugar-sweetened plant-based beverages	Beverages with or without artificial sweetening, flavoured or not, with cereals (rice, oats, spelt, buckwheat, millet, etc.), oilseeds (almonds, hazelnuts, cashew nuts, hemp, etc.) and/or pulses (soy). Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes coconut milk, coconut milk/coconut water mixtures, and plant-based beverages containing tea or fruits in lower proportions of fruits juice or purée than plant-based beverage). Does not contain products such as birch or maple water or sap, sugar cane juice, herbal infusions.
650	Flavoured waters without added sugar	Flavoured waters with or without artificial sweetening, carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products without juice or ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.
651	Flavoured sugar-sweetened and artificially-sweetened waters	Flavoured artificially-sweetened waters, carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products containing no juice but with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.
652	Flavoured sugar-sweetened waters	Flavoured waters without artificial sweetening, carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products containing no juice but with at least one ingredient such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.
653	Colas without added sugar	Cola-flavoured beverages with or without artificial sweetening, with or without additional flavouring and/or mentioning cola in the name or sales description. Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).
654	Sugar-sweetened and artificially-sweetened colas	Cola-flavoured artificially-sweetened beverages, with or without additional flavouring and/or mentioning cola in the name or sales description. Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).
655	Sugar-sweetened colas	Cola-flavoured beverages without artificial sweetening, with or without additional flavouring and/or mentioning cola in the name or sales description. Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).




**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**
**Soft drink subcategories & definitions**
**Category code : 9**

Subcategory code	Subcategory	Definition
656	Tea beverages without added sugar	Beverages with or without artificial sweetening, with tea or maté extracts, carbonated or still, flavoured or not, without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.
657	Sugar-sweetened and artificially-sweetened tea beverages	Artificially-sweetened beverages, with tea or maté extracts, carbonated or still, flavoured or not, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.
658	Sugar-sweetened tea beverages	Beverages without artificial sweetening, with tea or maté extracts, carbonated or still, flavoured or not, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.
659	Other sports drinks	Artificially-sweetened beverages whose nutritional composition is particularly adapted to physical exertion, which may contain one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes beverages without artificial sweetening and without ingredients such as mono- and disaccharides, syrup, honey, caramel (not used as additive).
660	Sugar-sweetened sports drinks	Beverages without artificial sweetening, containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive) and whose nutritional composition is particularly adapted to physical exertion.
662	Energy drinks without added sugar	Beverages with or without artificial sweetening, containing one or more stimulant ingredient(s) (caffeine, taurine, guarana, etc.) but without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Contains products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.
663	Sugar-sweetened and artificially-sweetened energy drinks	Artificially-sweetened beverages containing one or more stimulant ingredient(s) (caffeine, taurine, guarana, etc.) and one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). May contain products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.
664	Sugar-sweetened energy drinks	Beverages without artificial sweetening, containing one or more stimulant ingredient(s) (caffeine, taurine, guarana, etc.) and one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). May contain products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.


**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**
**Soft drink subcategories & definitions**
**Category code : 9**

Subcategory code	Subcategory	Definition
665	Tonics and bitters without added sugar	Beverages with or without artificial sweetening, carbonated or not, bitter, flavoured or not, containing quinine and/or quassin (quassia) but no ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).
666	Sugar-sweetened and artificially-sweetened tonics and bitters	Artificially-sweetened beverages, carbonated or not, bitter, flavoured or not, containing quinine and/or quassin (quassia) as well as one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).
667	Sugar-sweetened tonics and bitters	Beverages without artificial sweetening, carbonated or not, bitter, flavoured or not, containing quinine and/or quassin (quassia) as well as one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).
668	Alcohol-free beers without added sugar	Beverages with or without artificial sweetening, flavoured or not, containing hops, malt or barley, without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive) and/or mentioning alcohol-free beer or shandy/cooler in its name or sales description. Does not contain ginger beer or root beer.
669	Sugar-sweetened alcohol-free beers	Beverages with or without artificial sweetening, flavoured or not, containing hops, malt or barley, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive) and/or mentioning alcohol-free beer or shandy/cooler in its name or sales description. Does not contain ginger beer or root beer.
670	Aperitif beverages without added sugar	Alcohol-free aperitif or cocktail beverages, still or sparkling beverages based on de-alcoholised wine, aniseed without dilution using or gentian beverages, as well as sparkling beverages imitating alcoholic beverages consumed as an aperitif. Products that may be artificially-sweetened but do not contain ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).
671	Sugar-sweetened aperitif beverages	Alcohol-free aperitif or cocktail beverages, still or sparkling beverages based on de-alcoholised wine, aniseed without dilution using or gentian beverages, as well as sparkling beverages imitating alcoholic beverages consumed as an aperitif. Products that may be artificially-sweetened and containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).
672	Other beverages without added sugar	Beverages with or without artificial sweetening, flavoured or not, such as coconut water, birch or maple water or sap, sugar cane juice, herbal infusions without fruit juice (hibiscus, aloe vera, rooibos, basil, etc.). Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.
673	Other sugar-sweetened beverages	Beverages with or without artificial sweetening, flavoured or not, such as coconut water, birch or maple water or sap, sugar cane juice, herbal infusions without fruit juice (hibiscus, aloe vera, rooibos, basil, etc.). Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Fruit beverages with fruit content > or = 50%**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	95	<b>Fruit beverages with fruit content &gt; or = 50%</b>	Product with a combined <b>fruit juice and purée content ≥ 50%</b> . Possible presence of coconut (not considered as a fruit), milk, tea and cereals in lower proportions than the fruit(s). This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.



✓ Contains vegetal extracts and legal name not mentioning juice or nectar



✓ Contains a flavor



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✓ Contains Coconut milk

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Fruit beverages with fruit content > or = 50%**

➤ **Precisions**

Some beverages can contain hops, malt or barley extracts but are not considered as alcohol-free beers :



Water, invert sugar syrup\*, 1% elderberry juice from elderberry juice concentrate\*, carbonic acid, acidifier: lactic acid; natural flavouring, antioxidant: ascorbic acid; 0.03% barley malt extract.

→ Sugar-sweetened fruit beverage (647)



Natural mineral water, invert sugar syrup, lemon juice from lemon juice concentrate (4.5%), carbonic acid, natural citrus flavouring, herbal extract (0.16%), barley malt extract (gluten-free)

→ Sugar-sweetened fruit beverage (647)

/!\ Products containing only a little amount of hops, malt or barley extracts in addition to other relevant ingredients for classification (fruit juice, caffeine, etc) should not be classified automatically as **alcohol-free beers**

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fruit beverages without added sugar

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	645	Fruit beverages without added sugar	Beverages with or without <b>artificial sweetening</b> , carbonated or not, containing <b>fruit juice and/or purée</b> (with/without vegetable(s)) in <b>quantities &lt; 50%</b> , without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel not used as an additive. Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Sugar-sweetened and artificially-sweetened fruit beverages

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	646	Sugar-sweetened and artificially-sweetened fruit beverages	<b>Artificially-sweetened</b> beverages, carbonated or not, containing <b>fruit juice and/or purée</b> (with/without vegetable(s)) in <b>quantities &lt; 50%</b> , with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Sugar-sweetened fruit beverages**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	647	Sugar-sweetened fruit beverages	Beverages without artificial sweetening, carbonated or not, containing fruit juice and/or purée (with/without vegetable(s)) in quantities < 50%, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.



✓ Contains lemon juice which makes this beverage match with this subcategory (and not the 'other beverages' subcategory despite the aloe vera juice)

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Vegetable beverages**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	99	Vegetable beverages	Beverages containing at least one vegetable (e.g. carrot) and with a vegetable and/or fruit juice and purée content > 50% and which include the term vegetable(s) in their sale description. Possible presence of coconut and tea. This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.



✓ Contains Cucumber (which is indicated on the front pack). Fruit(s) 50% match so not considered as 'tea beverage'

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Flavoured milk beverages

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	644	Flavoured milk beverages	Flavoured (chocolate, coffee, strawberry, etc.) drinks containing milk (of animal origin) whose sales description indicates <b>milk drink</b> or <b>flavoured milk</b> . This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Plant-based beverages without added sugar

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	648	Plant-based beverages without added sugar	Beverages with or without artificial sweetening, flavoured or not, with cereals (rice, oats, spelt, buckwheat, millet, etc.), oilseeds (almonds, hazelnuts, cashew nuts, hemp, etc.) and/or pulses (soy). Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes coconut milk, coconut milk/coconut water mixtures, and plant-based beverages containing tea or fruits (in lower proportions of fruits juice or purée than plant-based beverage). Does not contain products such as birch or maple water or sap, sugar cane juice, herbal infusions.



✓ Contains also apple juice but in lower proportion than rice



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Sugar-sweetened plant-based beverages**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	649	Sugar-sweetened plant-based beverages	Beverages with or without artificial sweetening, flavoured or not, with cereals (rice, oats, spelt, buckwheat, millet, etc.), oilseeds (almonds, hazelnuts, cashew nuts, hemp, etc.) and/or pulses (soy). Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes coconut milk, coconut milk/coconut water mixtures, and plant-based beverages containing tea or fruits (in lower proportions of fruits juice or purée than plant-based beverage). Does not contain products such as birch or maple water or sap, sugar cane juice, herbal infusions.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Flavoured waters without added sugar**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	650	Flavoured waters without added sugar	Flavoured waters with or without artificial sweetening, carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products without juice or ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Flavoured sugar-sweetened and artificially-sweetened waters**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	651	<b>Flavoured sugar-sweetened and artificially-sweetened waters</b>	Flavoured <b>artificially-sweetened waters</b> , carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products containing <b>no juice</b> but with one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Instant drinks fitting that definition are included in this subcategory.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Flavoured sugar-sweetened waters**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	652	<b>Flavoured sugar-sweetened waters</b>	Flavoured waters <b>without artificial sweetening</b> , carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products containing <b>no juice</b> but with at least one ingredient such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Instant drinks fitting that definition are included in this subcategory.





**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Ginger beers / root beers**

➤ **Precisions**

For ginger beer/root beer beverages, the classification should be made according to the subcategories definitions :

Examples of ginger beers/root beers composition	Relevant ingredients (from highest to lowest)			Subcategories
1	Fruit juice (<50%)	-	Ginger extract	Fruit beverage (645, 646, 647)
2	Fruit juice (<50%)	<b>Malt or barley extract</b>	Ginger extract	Alcohol-free beer (668, 669)
3	-	<b>Malt or barley extract</b>	Ginger extract	Alcohol-free beer (668, 669)
4	-	-	<b>Ginger extract</b>	Flavoured water (650, 651, 652)

/!\ Even if mentioned in the **Flavoured waters** definitions, ginger beers/root beers are not automatically classified as such. They should be classified depending on the other relevant ingredients (if there are any)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Colas without added sugar**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	653	Colas without added sugar	Cola-flavoured beverages <b>with or without artificial sweetening</b> , with or without additional flavouring and/or mentioning cola in the name or sales description. Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).







**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Sugar-sweetened and artificially-sweetened colas**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	654	Sugar-sweetened and artificially-sweetened colas	Cola-flavoured <b>artificially-sweetened beverages</b> , with or without additional flavouring and/or mentioning cola in the name or sales description. Products containing one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive).




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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Sugar-sweetened colas**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	655	Sugar-sweetened colas	Cola-flavoured beverages <b>without artificial sweetening</b> , with or without additional flavouring and/or mentioning cola in the name or sales description. Products containing one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive).




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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Tea beverages without added sugar**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	656	Tea beverages without added sugar	Beverages with or without artificial sweetening, with tea or maté extracts, carbonated or still, flavoured or not, without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Sugar-sweetened and artificially-sweetened tea beverages**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	657	Sugar-sweetened and artificially-sweetened tea beverages	Artificially-sweetened beverages, with tea or maté extracts, carbonated or still, flavoured or not, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.



✓ Contains black tea extracts and cherry juice but only 3%





## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Sugar-sweetened tea beverages

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	658	Sugar-sweetened tea beverages	Beverages <b>without artificial sweetening</b> , with tea or maté extracts, carbonated or still, flavoured or not, with one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory



✓ Instant drink in powder form that needs to be diluted and containing black tea extracts



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Artificially-sweetened sports drinks

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	659	Other sports drinks	<b>Artificially-sweetened</b> beverages whose nutritional composition is particularly adapted to physical exertion, which may contain one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Also includes beverages without artificial sweetening and without ingredients such as mono- and disaccharides, syrup, honey, caramel (not used as additive).



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Sugar-sweetened sports drinks

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	660	Sugar-sweetened sports drinks	Beverages <b>without artificial sweetening</b> containing one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive) and whose nutritional composition is particularly adapted to physical exertion.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Energy drinks without added sugar

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	662	Energy drinks without added sugar	Beverages <b>with or without artificial sweetening</b> , containing one or more <b>stimulant ingredient(s)</b> (caffeine, taurine, guarana, etc.) but without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Contains products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.



✓ Contains fruit >50% but also guarana so matching with this subcategory



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✓ Should be excluded because cola but contains guarana + caffeine so matching the definition

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Sugar-sweetened and artificially-sweetened energy drinks**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	663	Sugar-sweetened and artificially-sweetened energy drinks	<b>Artificially-sweetened beverages</b> containing one or more <b>stimulant ingredient(s)</b> (caffeine, taurine, guarana, etc.) and one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). May contain products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Sugar-sweetened energy drinks**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	664	Sugar-sweetened energy drinks	Beverages <b>without artificial sweetening</b> , containing one or more <b>stimulant ingredient(s)</b> (caffeine, taurine, guarana, etc.) and one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). May contain products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.





## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Tonics and bitters without added sugar

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	665	Tonics and bitters without added sugar	Beverages with or without artificial sweetening, carbonated or not, bitter, flavoured or not, containing <b>quinine</b> and/or <b>quassin</b> (quassia) but no ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Sugar-sweetened and artificially-sweetened tonics and bitters

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	666	Sugar-sweetened and artificially-sweetened tonics and bitters	<b>Artificially-sweetened</b> beverages, carbonated or not, bitter, flavoured or not, containing <b>quinine</b> and/or <b>quassin</b> (quassia) as well as one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Sugar-sweetened tonics and bitters**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	667	Sugar-sweetened tonics and bitters	Beverages <b>without artificial sweetening</b> , carbonated or not, bitter, flavoured or not, containing <b>quinine</b> and/or <b>quassin</b> (quassia) as well as one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Alcohol-free beers without added sugar**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	668	Alcohol-free beers without added sugar	Beverages <b>with or without artificial sweetening</b> , flavoured or not, containing <b>hops, malt or barley</b> , without ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive) and/or mentioning alcohol-free beer or shandy/cooler in its name or sales description. Does not contain ginger beer or root beer.



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All beverages named "Fassbrause" are considered as alcohol-free beers

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Sugar-sweetened alcohol-free beers**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	669	Sugar-sweetened alcohol-free beers	Beverages with or without artificial sweetening, flavoured or not, containing hops, malt or barley, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive) and/or mentioning alcohol-free beer or shandy/cooler in its name or sales description. Does not contain ginger beer or root beer.



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Beverages containing hops, malt or barley**

➤ **Precisions**

Some beverages can contain hops, malt or barley extracts but are not considered as alcohol-free beers :







**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Aperitif beverages without added sugar**

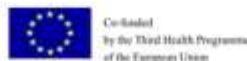
Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	670	<b>Aperitif beverages without added sugar</b>	Alcohol-free aperitif or cocktail beverages, still or sparkling beverages based on <b>dealcoholised wine, aniseed without dilution using or gentian beverages</b> , as well as <b>sparkling beverages imitating alcoholic beverages</b> consumed as an aperitif. Products that may be <b>artificially-sweetened</b> but do not contain ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Sugar-sweetened aperitif beverages**

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	671	<b>Sugar-sweetened aperitif beverages</b>	Alcohol-free aperitif or cocktail beverages, still or sparkling beverages based on <b>dealcoholised wine, aniseed without dilution using or gentian beverages</b> , as well as <b>sparkling beverages imitating alcoholic beverages</b> consumed as an aperitif. Products that may be <b>artificially-sweetened</b> and containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive).





## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Other beverages without added sugar

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	672	Other beverages without added sugar	Beverages with or without artificial sweetening, flavoured or not, such as coconut water, birch or maple water or sap, sugar cane juice, herbal infusions without fruit juice (hibiscus, aloe vera, rooibos, basil, etc.). Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Other sugar-sweetened beverages

Category code	Category	Subcategory code	Subcategory	Definition
9	Soft drinks	673	Other sugar-sweetened beverages	Beverages with or without artificial sweetening, flavoured or not, such as coconut water, birch or maple water or sap, sugar cane juice, herbal infusions without fruit juice (hibiscus, aloe vera, rooibos, basil, etc.). Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.



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 **Best-ReMaP**  
Healthy Food for a Healthy Europe

**Thank you for your attention!**

**The Joint Action focusing on the implementation of validated best practices in nutrition – Best-ReMap**

This presentation arises from the Joint Action Best-Remap. This Joint Action is addressing the adaption, replication and implementation of effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings, under the framework of the Third Health Programme (2014-2020). Sole responsibility lies with the author and the Consumers, Health, Agriculture and Food Executive Agency is not responsible for any use that may be made of in the information contained therein.

## Annex 16 : Fields requested in the template for pre-existing data

Type of field	Fields	Fields definition
	Product code	Unique code given to the product. It can be an already existing code in your database or you can create one.
	Year	Year of the data collection
	Father product code	Unique code of the corresponding preexisting product (previous monitoring)
	Country	The name of your country
	Category code	The code associated to the food category of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)
	Category name	The food category of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)
	Subcategory code	The code associated to the food subcategory of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)
	Subcategory name	The food subcategory of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)
<b>Labeled product description</b>	Bar code	Bar code on the product
	Brand name	Commercial brand of the product (example : Kellogg's or Fanta)
	Legal name	Name as defined by the regulation or the uses (example : <i>Toasted flakes of golden corn</i> )
	Commercial name	Name freely chosen by the producer, mentioned on the front of the pack (example : corn flakes) including product description such as "high fiber content" or "without added sugars" or "reduced in salt", etc..

Type of field	Fields	Fields definition
	Flavor (when needed)	Flavor of the product, when several flavors exist (example for Fanta : <i>lemon</i> )
	Net weight	Net quantity of the food
	Net weight unit (g or mL)	<b>g</b> for solid food or <b>mL</b> for beverages
	Portion size	Indication of the portion size in g or mL. It can either be clearly stated in a claim, guideline daily amounts, or consumption recommendations or mentioned via a nutrition labelling per serving.
	Portion size unit (g or mL)	<b>g</b> for solid food or <b>mL</b> for beverages
	Preservation method	<b>Ambient</b> or <b>Chilled</b> or <b>Frozen</b>
	Other	Any other information on the labeled product description which enable to distinguish the product among others
<b>Labeled nutritional content per 100g or 100 mL</b>	Nutrient content unit of expression (100 g or 100 mL)	100g for solid food or 100mL for beverages
	Energy (kJ)	Energy value in kJ for 100g or 100mL
	Energy (kcal)	Energy value in kCal for 100g or 100mL
	Fat	Fat content in g or mL for 100g or 100 mL
	Saturated fat	Saturated fat content in g or mL for 100g or 100mL
	Carbohydrates	Carbohydrates content in g or mL for 100g or 100mL
	Sugar	Sugar content in g or mL for 100g or 100mL
	Protein	Protein content in g or mL for 100g or 100mL
	Salt	Salt content in g or mL for 100g or 100mL
	Fibre	Fibre content in g or mL for 100g or 100mL

Type of field	Fields	Fields definition
<b>Labeled nutritional content for the product as consumed*</b>	Nutrient content unit of expression for the products as consumed (100g or 100 mL or reconstituted portion)*	100g of product as consumed or 100mL of product as consumed or by reconstituted portion of product as consumed (in that case, the portion size needs to be the one of the reconstituted products)
	Energy as consumed (kJ)*	Energy value in kJ for the product as consumed (for reconstituted products only)
	Energy as consumed (kcal)*	Energy value in kCal for the product as consumed (for reconstituted products only)
	Fat as consumed*	Fat content in g or mL for the product as consumed (for reconstituted products only)
	Saturated fat as consumed*	Saturated fat content in g or mL for the product as consumed (for reconstituted products only)
	Carbohydrates as consumed*	Carbohydrates content in g or mL for the product as consumed (for reconstituted products only)
	Sugar as consumed*	Sugar content in g or mL for the product as consumed (for reconstituted products only)
	Protein as consumed*	Protein content in g or mL for the product as consumed (for reconstituted products only)
	Salt as consumed*	Salt content in g or mL for the product as consumed (for reconstituted products only)
	Fibre as consumed*	Fibre content in g or mL for the product as consumed (for reconstituted products only)
<b>Ingredient list</b>	Ingredient list	Complete ingredient list as labeled on the product respecting the order of the ingredients and keeping the information in parentheses.

\* These fields only concern products to be reconstituted. For example: Instant drinks in powder form, mashed potato pellets that need addition of milk, instant soups in powder form, etc.

Annex 17 : Guidelines for data entry and encoding (23/03/2023)



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

Summary

- A. How to collect the data ([page 3](#))
- B. Template to fill ([page 7](#))
- C. Identification of the product ([page 17](#))
- D. Ingredient list / other information ([page 72](#))
- E. Nutritional content ([page 93](#))
- F. Nutritional content for products to be reconstituted ([page 104](#))



## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### A. How to collect the data



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### A. How to collect the data

- To realize the data collection, you will need to go to **each supermarket** you have identified in a first step.
- The collection will be made by **taking pictures** of **each product** present in the shelves of interest. You must identify **where to find** the products (whether they are in the ambient, fresh or frozen section).
- You will proceed food category by food category to be sure **not to miss** any products of a category.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### A. How to collect the data

#### How to take pictures of a product ?

- 1) You take a readable picture of the **front of the product**



- 2) You take readable pictures of **each face of the product**



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### A. How to collect the data

#### How to take pictures of a product ?

- 3) You can **zoom on parts of interest** for a better reading.  
(for example : list of ingredients, nutritional values, etc.)



Before moving to another product, you need to make sure that you have taken pictures of all the faces of the product and that **all the information** needed for the next steps (entering and codifying the data) is **readable**.

You must not mix pictures of different products. The order of the products when taking picture will be useful for entering and codifying the data.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### B. Template to fill



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### B. Template to fill

- This step has to be carried out **at your office**, after having taken the pictures in the stores.
- You must **upload the pictures** to your computer to be able to start entering and codifying the data.
- An **excel template** is provided to enter all the information needed for each product
- All the products have to be included in the same template, whatever the food category.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### B. Template to fill

- The template to be completed for data collection is an excel document available on the Best-ReMap project intranet:

[https://portal.nijz.si/ssf/a/c/p\\_name/ss\\_forum/p\\_action/1/entityType/folderEntry/action/view\\_permalink/entryId/70250/novl\\_url/1](https://portal.nijz.si/ssf/a/c/p_name/ss_forum/p_action/1/entityType/folderEntry/action/view_permalink/entryId/70250/novl_url/1)  
 (WP5/Working documents/Data collections)

- This excel document includes 3 tabs:
  - User manual** → a tab which gives the definition of each field of the template
  - Template for data collection** → a tab with the template to fill
  - DO NOT USE – MODIFY** → a tab that must not be used or modified because it allows the structure of the “template for data collection” tab



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### B. Template to fill

- In the template : 51 fields to fill or codify for each products with the information found on the pictures that have been taken during the visits to the supermarkets
- 4 types of fields :
  - **Unique number** → unique number that you have to generate
  - **Automatic field** → automatically generated information
  - **Closed list : codification** → scrolling menu proposed in the template to enter data
  - **Data entry** → data entered manually
- Description of each field and where to find the information are given in the next pages



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## WORK Package 5 – Reformulation and processed food monitoring

### The 51 fields of the template

Guidelines for data entry and encoding

Identification of the product		Ingredient list/other information	Nutritional content	Nutritional content for products to be reconstituted
Product_code (page 18)	Brand_name (page 46)	FOP_labeling_type FOP_labeling_type_2/3/4 (page 73-74)	Nutrient_content_expression_unit (page 94)	Nutrient_content_expression_unit_as_consumed (page 109)
Father_product_code (page 21)	Brand_owner (page 47)	Nutri_Score (page 78)	Energy_kJ (page 98)	Energy_as_consumed_kJ (page 112)
Year (page 29)	Type_of_brand (page 49)	Ingredient_list (page 79)	Energy_kCal (page 98)	Energy_as_consumed_kCal (page 112)
Country (page 29)	Legal_name Legal_name_english (page 57)	Net_weight (page 81)	Fat (page 98)	Fat_as_consumed (page 112)
Category_name (page 30)	Commercial_name Commercial_name_english (page 62)	Net_weight_unit (page 81)	Saturated_fat (page 98)	Saturated_fat_as_consumed (page 112)
Subcategory_name (page 31)	Preservation_method (page 68)	Number_of_units (page 83)	Carbohydrates (page 99)	Carbohydrates_as_consumed (page 113)
Category_code (page 32)		Portion_size (page 87)	Sugar (page 99)	Sugar_as_consumed (page 113)
Subcategory_code (page 33)		Portion_size_unit (page 87)	Protein (page 99)	Protein_as_consumed (page 113)
Bar_code (page 34)		Portion_size_comments (page 91)	Salt (page 99)	Salt_as_consumed (page 113)
Assortment (page 37)		Comment (page 92)	Fibre (page 99)	Fibre_as_consumed (page 114)



## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### B. Template to fill

- To be more efficient, we suggest to proceed **food category by food category**
- You need to fill the template store by store starting with the **first two biggest** stores in which you have collected national brands and retailer brands
- After entering and codifying the information for all the products of one food category of the 1st biggest store, you move on to the second biggest store and so on.
- As you have collected the national brands in the 2 biggest stores and to **avoid duplicates**, a verification step is necessary :
  - Therefore, for the 2nd biggest store, you need to check for every **national brand product** that the **bar code** has not already been entered in the template. If the bar code is already present, you must check if it is the same product by looking at the pictures. The detail of the verifications is detailed in the next slide.



## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### B. Template to fill

To be sure that no duplicates are remaining, we recommend the following verification step before entering a new product in the template:

- Select the column “bar\_code” of the template
  - Press Ctrl+f
  - Enter the barcode of every national brand product of the 2<sup>nd</sup> store one by one.
- If an identical bar code is found, it means that 2 products from the 1<sup>st</sup> and the 2<sup>nd</sup> store may be the same. You need to look at all the information of interest (those gathered in the template) for both products to see if they are exactly the same (duplicates).

**Duplicates** = products that have exactly the same information for all the fields, even if the packaging is different.

- If the 2 products are **exactly the same** in the fields gathered (duplicates) → You can delete the pictures of the second product because you won't need to enter and codify it.
- If the 2 products are **different** (any difference in the fields gathered) → You keep pictures of the two products and you will enter and codify both.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### B. Template to fill

- For the rest of the stores, as you have collected **only retailer brands**, there shouldn't be duplicates. But it exists different retailers who sell the same retailer brands so you have to be careful that similar products have not been collected.
- If you have any doubt, do not hesitate to do **this procedure** of searching a bar code already existing to make sure that 2 similar products have not been entered in the template.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### B. Template to fill

- After you have started filling in your template, you can send us a **“test template”** with a **sample of products** (15-20 products) at **any time** so that we can check that the template is filled in correctly and make sure that you are going in the right direction.
- You can send your test templates to: [wp5\\_bestremap@anses.fr](mailto:wp5_bestremap@anses.fr)



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### B. Template to fill

When filling in the template, you will find yourself in 2 cases:

- 1<sup>st</sup> case : **Inventory**  
You don't have pre-existing data, this is your first data collection
  - 2<sup>nd</sup> case : **Follow-up**  
You have pre-existing data (e.g. Euremo data or other pre-existing data) to link with new data collected
- For these two cases, **only the first two fields** have to be managed differently :  
product\_code and father\_product\_code
  - The rest of the fields have to be completed without taking into account the case in which you are.



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

**C. Identification of the product**

- Product code ([page 18](#))
- Father product code ([page 21](#))
- Year ([page 29](#))
- Country ([page 29](#))
- Best-ReMap category and subcategory ([page 30](#))
- Bar code ([page 34](#))
- Assortment ([page 37](#))
- Brand name ([page 46](#))
- Brand owner ([page 47](#))
- Type of brand ([page 49](#))
- Legal name ([page 57](#))
- Commercial name ([page 62](#))
- Preservation method ([page 68](#))



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Field	Field definition	Type of field
Product_code	Unique code given to the product	unique number = mandatory field

**1st case : Inventory**  
(no pre-existing data)

- This code will have to be assigned as follows :
  - The first product will have the code : **1**
  - The second product will have the code : **2**
  - And **so on...**
- Do not reuse the same code twice even for two different food categories

**2nd case : Follow-up**  
(pre-existing data or Euremo data to link)

- First, you need to make sure that **all of your pre-existing data** products have a **unique code**. If not, you must **assign** a unique code to each product of your pre-existing data.
- Then, you have to start the numbering of your products in order **not to repeat** any existing codes (if your highest code was 6704 in your pre-existing data, we recommend for the new data collection that you start from 6705,6706,...)

➤ Each product from pre-existing data and new data must have a unique code for all food categories. There **cannot be 2 similar codes** in the new data and in the pre-existing data.





## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

#### Renaming the pictures

- After creating the unique product code, you need to rename the pictures of a product as follows: **Product\_code\_number of picture**
- The first picture of the product must be the front of pack (to better identify the product).
- Be careful not to mix pictures of different products!

#### Example :

You have a product which unique product\_code is : 32



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

#### What to do with the pictures ?

- The pictures of the products will **not** be transmitted to Anses. You will only send the template (excel file) when it is complete.
- We still advise you to keep your pictures on a **drive** or an **external hard disk**. This way, you will be able to easily find the pictures of a product when you have doubts about the entry of data in the template or if errors have been made.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Field	Field definition	Type of field
<b>Father_product_code</b>	Unique code of the corresponding pre existing product (previous monitoring). One father_product_code can correspond to more than one product_code's	unique number

#### 1st case : Inventory (no pre-existing data)

- This field is not to be filled (leave it **blank**).
- You can go directly to [page 29](#)

#### 2<sup>nd</sup> case : Follow-up (pre-existing data or Euremo data to link)

- When you have a product from the **new data collection**, you need to check if the product exists in your pre-existing data in order to **identify paired products**. The steps for verification are explained in the next pages.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

#### 2<sup>nd</sup> case : Follow-up (pre-existing data or Euremo data to link)

You need to follow these steps **for each product** of the new data collection :

#### **Step 1**

You take the bar code of the product and you search for an identical bar code in your pre-existing data. *(If the product does not have a barcode or if there are no barcodes in your pre-existing data, go directly to step 2)*

- You **don't find an identical bar code** in your pre-existing data → go to **step 2**
- You **find an identical bar code** → you need to verify that it is the **same reference**

**Same reference** = usually same brand, same flavor, same weight, the legal name and commercial name can be different but must be close (the ingredient list and the nutritional values can be different)

- It is **not the same reference** → go to **step 2**
- It is the **same reference** → you enter the unique code of the product of the pre-existing data in the « **father\_product\_code** » field



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**2nd case : Follow-up**  
(pre-existing data or Euremo data to link)

**Step 2**

As the **barcode of a same reference can change over time**, it may not have been found in step 1 or it may correspond to a different product. *(same if you don't have barcodes in your pre-existing data)*

For that purpose, you must **look for a same reference** in the pre-existing data using product information such as **brand name, commercial name, legal name, flavor, net weight**.

**Same reference** = usually same brand, same flavor, same weight, the legal name and commercial name can be different but must be close (the ingredient list and the nutritional values can be different)

- You find the **same reference** based on the product information → you enter the unique code of the product of the pre-existing data in the « father\_product\_code » field.
- You **don't find the same reference** based on the product information → leave the "father\_product\_code" field blank.



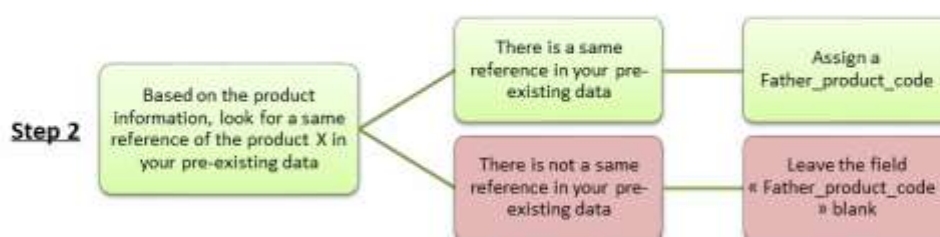
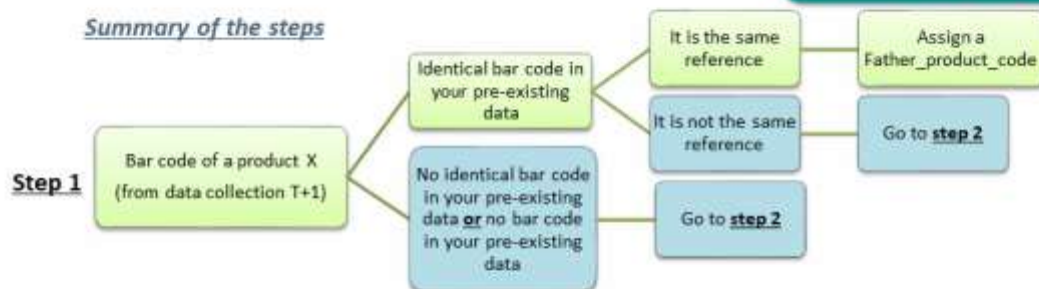
WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**2nd case : Follow-up**  
(pre-existing data or Euremo data to link)

*Summary of the steps*





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Example

**2nd case : Follow-up**  
(pre-existing data or Euremo data to link)



- 1.5L bottle of *Fanta orange*
- collected in **2017** (or during Euremo project)

→ Product\_code = 603



- 1.5L bottle of *Fanta orange*
- collected during T+1 data collection in **2022**

→ Product\_code = 5042  
→ **Father\_product\_code = 603**



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Example

**2nd case : Follow-up**  
(pre-existing data or Euremo data to link)



- **Bio-Kantwurst**
- Brand\_name = *Spar Natur pur*
- Net weight = **1000g**

collected in **2018** (or during Euremo project)

→ Product\_code = 4980



- **Bio-Kantwurst**
- Brand\_name = *Spar Natur pur*
- Net weight = **200g**

collected during T+1 data collection in **2022**

→ Product\_code = 12301  
→ **Father\_product\_code = 4980**



It is possible that 2 paired products have a different net weight (a product's net weight can change over time)



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

*Example*



- Muesli berries and cherries
- Brand\_name = Simply Sumptuous
- collected in 2017 (or during Euremo project)

→ Product\_code = 1504



- Berries and cherries muesli
- Brand\_name = Deluxe
- collected during T+1 data collection in 2022

→ Product\_code = 3075  
→ Father\_product\_code = 1504

**2nd case : Follow-up**  
(pre-existing data or Euremo data to link)



Some retailers may change the name of their brands over time, particularly hard discounters. A father and son product may therefore be of different brands (very rare).



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

*Additional comments*

- A father product can have several son products.

*Example* : There is a product in my pre-existing data (or Euremo data) for which the net weight has not been entered. It can be the father product of several son products that have different weights.



A son product cannot have several father products !





## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Field	Field definition	Type of field
<b>Country</b>	The name of your country	closed list : codification = mandatory field
<b>Year</b>	Year of product collection	closed list : codification = mandatory field

- **Country** = the country where the product has been collected (your country)
- **Year** = please give the year of data collection (and only the year)



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Field	Field definition	Type of field
<b>Category_name</b>	The food category of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)	closed list : codification = mandatory field

Closed list with 5 propositions that you need to choose in a scrolling menu:

- « **Breakfast cereals** »
- « **Soft drinks** »
- « **Bread products** »
- « **Fresh dairy products and desserts** »
- « **Delicatessen meats and similar** »

➤ Please, refer to the specific classification guidelines that have been produced for these 5 food categories



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Field	Field definition	Type of field
<b>Subcategory_name</b>	The food subcategory of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)	closed list : codification = <b>mandatory</b> <b>field</b>

- **16** subcategories for the « Breakfast cereals » category
- **31** subcategories for the « Soft drinks » category
- **26** subcategories for the « Bread products» category
- **25** subcategories for the « Fresh dairy products and desserts » category
- **24** subcategories for the « Delicatessen meats and similar » category

➤ A **closed list of subcategories** is proposed in a scrolling menu depending on the category previously chosen.

➤ **Please, refer to the specific classification guidelines that have been produced for the 5 food categories to assign the correct subcategory name for each product.**



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Field	Field definition	Type of field
<b>Category_code</b>	The code associated to the food category of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)	automatic field

- Breakfast cereals : code = **1**
- Soft drinks : code = **9**
- Bread products : code = **18**
- Fresh dairy products and desserts : code = **3**
- Delicatessen meats and similar : code = **5**

➤ **These codes will be assigned automatically after choosing the category\_name previously.**

➤ **You do not have to enter or codify anything.**



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Field	Field definition	Type of field
<b>Subcategory_code</b>	The code associated to the food subcategory of the Best-ReMaP nomenclature (see Best-ReMaP guidelines for classification)	automatic field

- 16 subcategories for the « Breakfast cereals » category = **16 codes**
  - 31 subcategories for the « Soft drinks » category = **31 codes**
  - 26 subcategories for the « Bread products » category = **26 codes**
  - 25 subcategories for the « Fresh dairy products and desserts » category = **25 codes**
  - 24 subcategories for the « Delicatessen meats and similar » category = **24 codes**
- **These codes will be assigned automatically after choosing the category\_name previously.**
- **You do not have to enter or codify anything.**



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Field	Field definition	Type of field
<b>Bar_code</b>	Bar code of the product	data entry

- You must enter all the numbers present on the **bar code**
- readable pictures are essential





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**Particular cases**



- If the product has a bar code without digits  
→ **leave the field blank** and specify in the *Comments* field : "Bar code without digits"



- If the product has 2 bar codes  
→ **enter the bar code that is directly on the product** (the bar code affixed by the manufacturer)
- The **second bar code** (often affixed by the retailer) can be kept in the *Comments* field



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**Particular cases**



Bar\_code = 058449771890

- **Some barcodes may start with the number "0".**  
This does not correspond to products normally found on the European market but to products imported from the United States/Canada.

You must enter in the field '**Comment**' → "**barcode\_0**" when you have a product with a barcode starting with 0.



Bar\_code = 058449191179

- This will allow to keep the information that the barcode starts with a 0 because Excel (template format) automatically removes the "0" at the beginning of the number.







WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Field	Field definition	Type of field
<b>Assortment</b>	<p><b>Yes or no</b> : to identify if the product is composed of several different products under a same bar code</p> <p>IF YES : 2 cases :</p> <p><b>1.</b> if several nutrient content are given (for each product of the assortment), then create a new line (<b>with a new product code</b>) under the same bar code and indicate in the commercial name for which product/ flavor the line is corresponding),</p> <p><b>2.</b> if an average nutrient content is given, use only one line and indicate "ASSORTMENT" in the name of the product</p>	<p>closed list : codification = <b>mandatory field</b></p>

- For that field, you just need to enter **YES** or **NO**
- If it is **YES**, you need to look at the ingredient list and the nutrient content to properly enter the rest of the information of the product. There are 4 cases that are explained further ([page 40](#)).



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**Examples of assortments :**



Assortment of different pâtés : country terrine, mushroom terrine, poultry liver terrine



Assortment of greek yogurts with different flavors : peach and passion fruit





## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

#### Examples of assortments :



Assortment of yogurts with different flavors : cherry, strawberry, blackberry, raspberry



Assortment of dry sausages with different flavors : walnuts, hazelnuts, plain



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Case	Number of ingredient list	Number of nutrient content	Precision to make in the commercial name of the product	Number of line for the product in the file
1	1	1	« ASSORTMENT »	1 line
2	Several (1 by element of the assortment)	1	« ASSORTMENT »	1 line (the different ingredient lists are in the same box)
3	Several (1 by element of the assortment)	Several (1 by element of the assortment)	Specify the flavor/element	Several lines under the same bar code (1 line for each flavor/element of the assortment with its ingredient list and its nutrient content)
4	1	Several (1 by element of the assortment)	« ASSORTMENT » + specify the flavor/element	Several lines under the same bar code (1 line for each flavor/element of the assortment with its nutrient content but with the same ingredient list)



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**WORK Package 5 – Reformulation and processed food monitoring**

Guidelines for data entry and encoding

**C. Identification of the product**

**Case 1 :** The product contains **1 ingredient list** and **1 nutrient content** (for all elements of the assortment)



- One **average nutritional content**
- One **ingredient list**

→ You need to use only **one line** and indicate "**ASSORTMENT**" in the name of the product

Assortment of yogurts with different flavors : cherry, strawberry, blackberry, raspberry



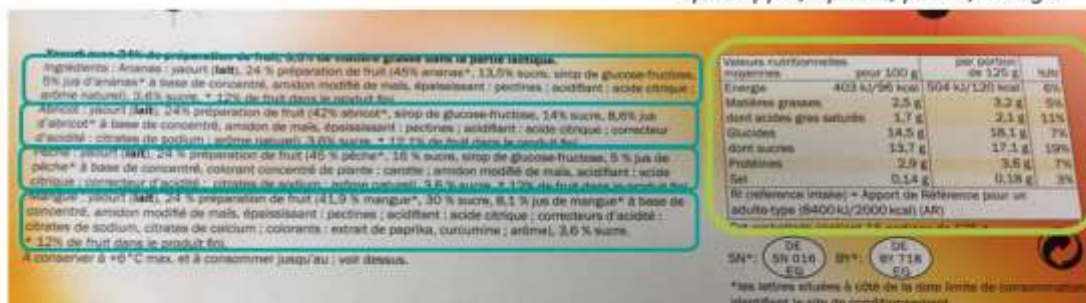
**WORK Package 5 – Reformulation and processed food monitoring**

Guidelines for data entry and encoding

**C. Identification of the product**

**Case 2 :** The product contains **several ingredient lists** and **1 nutrient content** (for all elements of the assortment)

Assortment of yogurts with different flavors : pineapple, apricot, peach, mango



- One **average nutritional content**
- **4 ingredient lists (one for each element of the assortment)**

→ You need to use only **one line** and indicate « **ASSORTMENT** » in the name of the product.

The 4 ingredient list will be in the same box





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**Case 3 :** The product contains **several ingredient lists** and **several nutrient contents** (for each element of the assortment)



Assortment of greek yogurts with different flavors : peach and passion fruit

- Nutritional content and ingredient list for yogurts with **peach** flavor
- Nutritional content and ingredient list for yogurts with **passion fruit** flavor

→ You need to duplicate lines under the same bar code and indicate in the commercial name for which flavor the line is corresponding

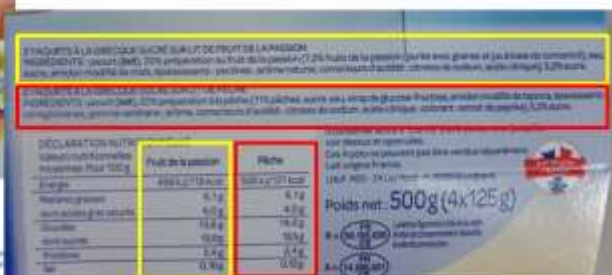


WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

➤ Example of filling in for an **assortment with 2 nutrient content and 2 ingredient lists**:

Product_code	Bar_code	Assortment	legal_name	commercial_name	Ingredient_list	Energy_kJ	Energy_kC	fat	Saturated_fat	Carbohydrat	Sugar	Protein	salt
123	20816612	Yes	Yaourts à la grecque sucrés sur lit de fruit de la passion	Yaourt à la grecque, fruit de la passion	yaourt (LAIT), 20% préparation au fruit de la passion (7,2% fruits de la passion (purée avec graines et jus à base de concentré, eau, sucre, amidon modifié de maïs, épaississants: pectines, arôme naturel, correcteurs d'acidité: citrates de sodium, acide citrique), 5,2% sucre	498	119	6,1	4	13,6	12,9	2,4	0,16
Not the same product code													
124	20816612	Yes	Yaourts à la grecque sucrés sur lit de pêche	Yaourt à la grecque, pêche	yaourt (LAIT), 20% préparation à la pêche (11% pêches, sucre, eau, sirop de glucose-fructose, amidon modifié de tapioca, épaississants: carraghénanes, gomme xanthane, arôme, correcteurs d'acidité: citrates de sodium, acide citrique; colorant: extrait de paprika), 5,2% sucre	505	121	6,1	4	14	13,5	2,4	0,13





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**Case 4 :** The product contains **1 ingredient list** and **several nutrient contents** (for all elements of the assortment)

Variété	Framboise, Pêche, Cerise			Citron			Fruits rouges, Fraise		
	Pour 100 g	Par pot	% des ENJ**	Pour 100 g	Par pot	% des ENJ**	Pour 100 g	Par pot	% des ENJ**
Energie	218 kJ 51 kcal	272 kJ 65 kcal	3%	226 kJ 54 kcal	488 kJ 116 kcal	5%	315 kJ 76 kcal	394 kJ 94 kcal	5%
Protéine	4,4 g	5,5 g	11%	4,4 g	5,5 g	11%	4,4 g	5,5 g	11%
Glucide (dont sucre)	7,1 g 4,2 g	8,5 g 7,5 g	3% 9%	12,3 g 7,2 g	15,4 g 9,0 g	1% 10%	12,9 g 9,4 g	16,1 g 11,5 g	6% 12%
	Lipide (dont acides gras saturés)	Traces	Traces	Traces	0,8 g 0,4 g	1,0 g 0,5 g	1% 3%	Traces	Traces
Fibre	0,1 g	0,1 g	1%	0,1 g	0,1 g	1%	0,3 g	0,4 g	2%
Sodium	80 mg	100 mg	4%	40 mg	75 mg	3%	40 mg	75 mg	2%
Calcium	126 mg (17,5% du CEN*)	170 mg (22,7% du CEN*)	21%	132 mg (17,6% du CEN*)	145 mg (19,3% du CEN*)	21%	121 mg (16,1% du CEN*)	141,0 mg (18,8% du CEN*)	21%

Assortment of yogurts with different flavors: strawberry, raspberry, lemon, red fruits, peach, cherry

- Several nutrient contents
- One ingredient list (for all elements of the assortment)

→ You need to **duplicate lines** under the same bar code and indicate in the **commercial name "ASSORTMENT" +** for which **flavor** the line is corresponding (each line will have the same ingredient list)

Yogurt 0%\* de matières grasses aux fruits aromatisés, avec glucose, fructose et/ou morceaux de biscuits l'œuf citron façon tarte : 0,8%.  
**INGRÉDIENTS :** Yogurt au lait acide (85,8%), fruits : pêche (1%) et fraise (1,5%) ou cerise (8%) et morceaux de glucose (2%) (farine de blé, œuf entier, sucre, miel, matières grasses végétales, sirop de glucose) ou framboise (17,8%) et morceaux de biscuits\* (0,9%) ou fruits rouges et morceaux de biscuits\* : 7,2% (dont fruits rouges : 5,1% (cerise, miris, framboise, fraise) et biscuits\* : 2,2%) ou fraise (5,1%) et morceaux de biscuits\* (2,2%) ou citron et morceaux de biscuits\* : 4,2% (dont citron (1,5%), orange (1,2%) et biscuits\* (1,5%), beurre concentré, œufs, jus de citron, émulsifiant (écithine de soja), sirop de glucose (7,4%), variétés fraise façon tarte, citron façon tarte, fruits rouges bio-cultivés, sirop de fructose (1,4%), variétés framboise façon tarte, pêche savoir miel, cerise façon clafoutis), sucre (1%), variétés pêche façon miel et cerise façon clafoutis), amidon modifié, épaississants (pectine, farine de graines de caroube, gomme de guar), arômes, colorants (carmin, lactine, rouge de betterave, anthocyanes, curcumine), adoucissants (aspartame, acesulfame K), conservateurs de fruits (E202). Contient une source de phénylalanine.  
 \* biscuits (sucre, farine de blé, farine de riz, farine de haret, blanc d'œuf, amidon de blé, fécule de pomme de terre, matières grasses végétales (tournesol)).



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Field	Field definition	Type of field
<b>Brand_name</b>	Commercial brand of the product (example : Kellogg's or Fanta).	data entry

Brand name





**WORK Package 5 – Reformulation and processed food monitoring**

Guidelines for data entry and encoding

**C. Identification of the product**

Field	Field definition	Type of field
<b>Brand_owner</b>	Whenever it's possible, indicate the name of the group owning the brand. For instance : the COCA COLA COMPANY or ALDI or UNILEVER (be careful, it's not always the producer but the brand owner)	data entry

- For some products, you can find the brand owner written on the packaging of the product.
- This field is **not mandatory**, if you don't find the information, please leave it blank.



**WORK Package 5 – Reformulation and processed food monitoring**

Guidelines for data entry and encoding

**C. Identification of the product**

**Examples of brand owners written on the packaging**



Brand owner : The Coca-Cola Company  
Brand name : Coke  
**brand\_owner field = THE COCA-COLA COMPANY**

**Brand owner**



Brand owner : Nestlé  
Brand name : La Laitière  
**brand\_owner field = NESTLE**





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Field	Field definition	Type of field
Type_of_brand	<p>National brands, Retailer brand, Entry level retailer brand or Hard discount</p> <ul style="list-style-type: none"> <li>- <b>National brands:</b> product that is distributed worldwide or nationally under a brand name owned by the producer, as opposed to private label brands (products that carry the brand of the retailer rather than the producer)</li> <li>- <b>Retailer brand:</b> private label brand (own brand of the retailer) like carrefour or Tesco</li> <li>- <b>Entry level retailer brand:</b> first price private label brand</li> <li>- <b>Hard discount:</b> private label from a hard discount (low price) retailer like Aldi or Lidl</li> <li>- <b>Specialised retailer brands :</b> correspond to frozen products sold in freezer centres and by home delivery suppliers »</li> <li>- <b>Specialised organic retailer brands :</b> correspond to the products carrying the brand of the organic retailer rather than the producer and sold only in their own organic supermarket chain</li> </ul>	<p>closed list : codification = mandatory field</p>



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Examples of national brand products

- **Coca-Cola** and **Kellogg's** are two national brands (not linked to any retailers)





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**Examples of retailer brand products**

- **Carrefour classic** and **Tesco** are two retailer brands from the retailers *Carrefour* and *Tesco* (several brands can be found for the same retailer, corresponding to different food sectors or level of quality)



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**Examples of entry level retailer brand products**

- **Carrefour discount** is the entry level retailer brand for the retailer *Carrefour*
- **Eco+** is the entry level retailer brand for the retailer *E.Leclerc*  
(It is constituted by the more « basic » products sold under the retailer brand)







WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**Examples of hard discount products**

- **Golden Bridge** is a brand from the hard discount retailer *Aldi*
  - **Saint Alby** is a brand from the hard discount retailer *Lidl*
- (Hard discount are specialized retailers selling low price products)



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

**Example of specialised retailer brand products (freezer center)**

- *Picard* is a specialised retailer (specialised in frozen products)





## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

#### Examples of specialised organic retailer brand products (products carrying the brand of the organic retailer and sold only in shops specialized in organic products)

- *Biocoop* and *Naturalia* are two specialised organic retailers



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

#### Particular case

- If the product has **no brand name**
- leave the field '**brand\_name**' blank and specify in the *Comments* field: "No brand name" to be sure that it is not an oversight
- you must indicate in the field '**type\_of\_brand**' = *National brand* ('type\_of\_brand' field is a mandatory field)



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Field	Field definition	Type of field
<b>Legal_name</b>	Name as defined by the regulation or the uses (example : Toasted flakes of golden corn), usually comes just before the ingredient list In original language	data entry
<b>Legal_name_english</b>	Translated legal_name in english	data entry

- The legal name is usually found just before the ingredient list but you can also find it elsewhere on the product.
- You must enter it in your **own language** AND translated in **English**.
  - If it is not possible to translate in English the legal name, put the **original name** in both **legal\_name** and **legal\_name\_english** fields.
  - If the legal name is **already in English**, duplicate it in the **legal\_name\_english** field.
- Be careful **not to confuse** the legal name with the **commercial name**.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Field	Field definition	Type of field
<b>Legal_name</b>	Name as defined by the regulation or the uses (example : Toasted flakes of golden corn), usually comes just before the ingredient list In original language	data entry
<b>Legal_name_english</b>	Translated legal_name in english	data entry

- If there is **no legal name** on the product:
  - leave the field **blank**
  - you can indicate in the *Comments* field: "no legal name" so that you know it is not a forgotten information



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Guidelines for data entry and encoding

C. Identification of the product



**Legal\_name** = Toasted flakes of golden corn



**Legal\_name** = Boisson rafraîchissante au jus d'orange avec sucre et édulcorants (*french*)

**Legal\_name\_english** = Refreshing orange juice drink with sugar and sweeteners



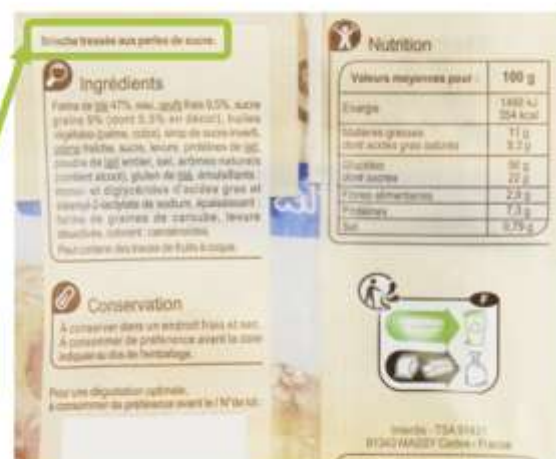
WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product



**Legal\_name** = Jambon cuit supérieur (*french*)  
**Legal\_name\_english** = Superior cooked ham



**Legal\_name** = Brioche tressée aux perles de sucre (*french*)  
**Legal\_name\_english** = Braided brioche with sugar pearls





## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Legal name

**400 g e = 5 l**

GB> Powder preparation for a carbohydrate and electrolyte replenishment drink, contributing to the maintenance of performance during extended endurance exercise and increasing water absorption. To be used as a supplement to a varied, balanced diet and a healthy lifestyle/Lemon flavour/ INGREDIENTS: Sucrose, Glucose syrup, Acid: citric acid, Sodium citrate, Maltodextrin, Calcium salt of orthophosphoric acid, Sodium riboflavin, Natural lemon flavouring with other natural flavourings, Magnesium carbonate, Vitamins C and Thiamin (B1). Allergen information: www.isostar.com

FR> Préparation en poudre pour boisson d'apport en glucides et en électrolytes, contribuant au maintien de la performance lors d'exercices prolongés d'endurance et augmentant l'absorption d'eau. Ce produit est destiné, compte tenu d'une alimentation variée et équilibrée et d'un mode de vie sain, à répondre aux besoins d'un effort musculaire immédiat effectué notamment lors d'une compétition ou dans des conditions d'environnement spéciales/Saveur citron/ INGREDIENTS : Saccharose, Sirop de glucose, Acidifiant: acide citrique, Citrate de sodium, Maltodextrine, Sel de calcium de l'acide orthophosphorique, Chlorure de sodium, Arôme naturel de citron avec autres arômes naturels, Carbonate de magnésium, Vitamines C et Thiamine (B1). Informations allergènes : www.isostar.com

DE> Pulver zur Herstellung eines Kohlenhydrat-Elektrolytgetränks. Kohlenhydrat-Elektrolytlösungen tragen zur Aufrechterhaltung der Ausdauerleistung bei längerem Ausdauertraining bei und verbessern die Aufnahme von Wasser während der körperlichen Betätigung. Empfohlen werden eine abwechslungsreiche und ausgewogene Ernährung sowie eine gesunde Lebensweise. Geeignet für Sport und Wettkampf/ Zitronengeschmack/ ZUTATEN: Saccharose, Glucosesirup, Säuerungsmittel: Zitronensäure, Mineralstoff: Natriumcitrat, Maltodextrin, Mineralstoff: Calciumsalze der Orthophosphorsäure, Natriumchlorid, natürliches Zitronenaroma mit anderen natürlichen Aromen, Mineralstoff: Magnesiumcarbonat, Vitamine: C und Thiamin (B1). Kann enthalten: Milch, Gerste, Soja. IT> Preparato in polvere per bevanda per sportivi con carboidrati ed elettroliti. Contribuisce a prolungare lo sforzo fisico e a migliorare l'assorbimento di acqua durante un esercizio prolungato. Il prodotto va utilizzato nell'ambito di una dieta varia ed equilibrata ed un sano stile di vita/Gusto Limone/ INGREDIENTE: Zucchero, sciroppo di glucosio, acidificanti: acido citrico; citrato di sodio, maltodestrina, sali di calcio dell'acido ortofosforico, cloruro di sodio, aroma naturale limone con altri aromi naturali, carbonato di magnesio, vitamina C, Tiamina (vitamina B1). Informazioni allergeniche: www.isostar.com.

**Legal\_name** = Powder preparation for a carbohydrate and electrolyte replenishment drink, contributing to the maintenance of performance during extended endurance exercise and increasing water absorption. To be used as a supplement to a varied, balanced diet and a healthy lifestyle, lemon flavour



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Field	Field definition	Type of field
<b>Commercial_name</b>	Name freely chosen by the producer, mentioned on the front of the pack : all information on the front of pack product that defines a product, including flavor, product description such as "high fiber content" or "without added sugars" or "reduced in salt", or "organic" etc.	data entry
<b>Commercial_name_english</b>	Translated commercial_name in english	data entry

- You must enter it in your **own language** AND translated in **English**.
  - If it is not possible to translate in English the commercial name, put the **original name** in both **commercial\_name** and **commercial\_name\_english** fields.
  - If the commercial name is **already in English**, duplicate it in the **commercial\_name\_english** field.



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

- The commercial name can include **nutritional claims**:

Ex: "fat free", "0% added sugar", etc.

- The commercial name **does not** include **health claims** and **marketing statement**:

Ex: "reduces cardiovascular risk", "slowly cooked for a delicate flavor", etc.



**Commercial\_name** =  
Actileaf Oat, 100% plant-based,  
no added sugar



= **marketing statement**  
(to not include in the commercial name)



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product



**Commercial name**

**Commercial\_name** = Hazelnut Crunchy Muesli with 5% hazelnuts,  
high on fibre

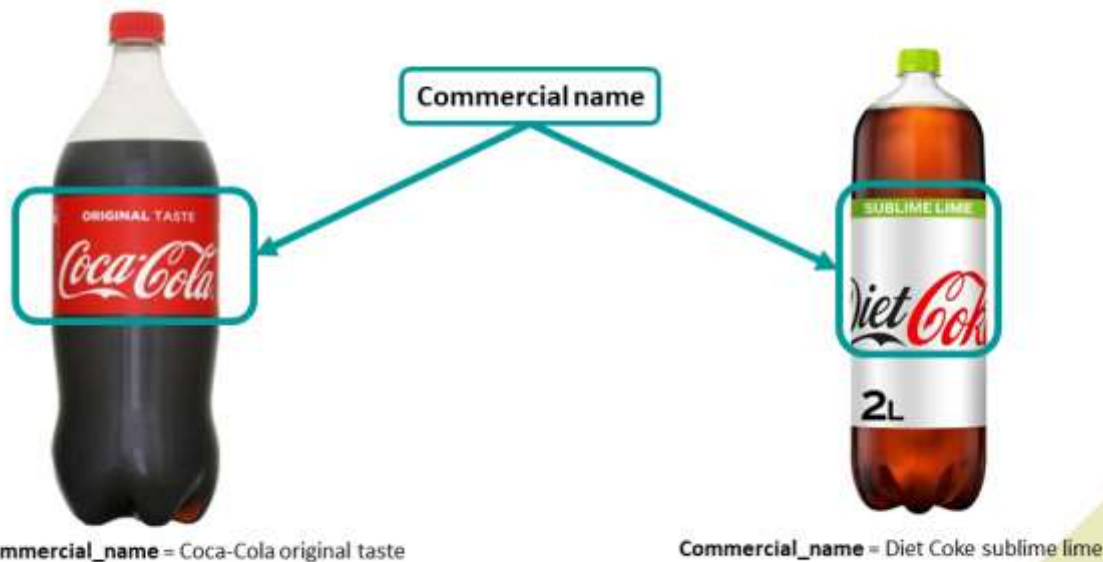




WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product



**Commercial\_name** = Light greek style, sublime strawberry yogurt, 0% added sugar, fat free



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Field	Field definition	Type of field
<b>Preservation_method</b>	Ambient or Chilled or Frozen	closed list : codification = mandatory field

- The preservation method is written on products
- The preservation method requested is that of the products **before opening**.
- If there is **no precision** on the preservation method  
→ preservation\_method = Ambient
- For **frozen** products, a symbol with a snowflake is often present on the package or it's indicated in the legal name.
- For **chilled** products, it is mentioned on the package to keep them in the **refrigerator**.







WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

C. Identification of the product

Presevation\_method = Chilled



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Guidelines for data entry and encoding

C. Identification of the product

Presevation\_method = Ambient





## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### C. Identification of the product

Presevation\_method = Frozen



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### D. Ingredient list / other information

- FOP labeling type ([page 73-74](#))
- Nutri score ([page 78](#))
- Ingredient list ([page 79](#))
- Net weight ([page 81](#))
- Net weight unit ([page 81](#))
- Number of units ([page 83](#))
- Portion size ([page 87](#))
- Portion size unit ([page 87](#))
- Portion size comments ([page 91](#))
- Comments ([page 92](#))



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### D. Ingredient list / other information

Field	Field definition	Type of field
<b>FOP_labeling_type</b>	Type of Front of pack Nutrition labeling present (not mandatory) among these only : Reference intake, traffic light, choices, nutriscore, keyhole, finnish heart, nutrinform battery	closed list : codification = <b>mandatory</b> <b>field</b>

- You must indicate **what type** of Front of pack (FOP) nutrition labeling is present, among the 7 of interest, in a scrolling menu.
- If there is FOP nutrition labeling **other** than the 7 of interest or if there is **no** FOP nutrition labeling, please choose the « **None of the list** » choice in the scrolling menu.
- The FOP labeling is not necessarily on the front of pack of the product. For some products (e.g. yoghurt) it is on the sides of the product. It is still considered as FOP labelling and should be taken into account.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### D. Ingredient list / other information

- **Particular case for products with several types of front of pack labeling of interest (only if you work with the latest version of the template from 24/08/2022)**

Field	Field definition	Type of field
<b>FOP_labeling_type_2</b>	Type of Front of pack Nutrition labeling present (not mandatory) among these only : Reference intake, traffic light, choices, nutriscore, keyhole, finnish heart, nutrinform battery	closed list : codification = <b>mandatory</b> <b>field</b>
<b>FOP_labeling_type_3</b>	<b>By default, these columns are filled with 'None from the list'.</b>  If a product has more than one of these labels on its packaging , you have to replace 'None from the list' by the name of the different labels in the different columns.	
<b>FOP_labeling_type_4</b>	You have to keep 'None from the list' in the remaining column(s) (if there is less than four labels)	



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

Example 1 : a product with 1 label of interest (Reference intake)

FOP_labeling_type	FOP_labeling_type 2	FOP_labeling_type 3	FOP_labeling_type 4
Reference intake	None from the list	None from the list	None from the list

Example 2 : a product with 3 labels of interest (Nutriscore, Traffic light and Nutrinform battery)

FOP_labeling_type	FOP_labeling_type 2	FOP_labeling_type 3	FOP_labeling_type 4
Nutriscore	Nutrinform battery	Traffic light	None from the list



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

**FOP labeling types of interest**



Traffic light



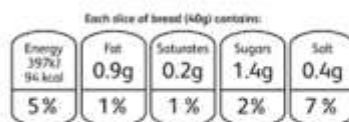
Nutri-score



Nutrinform battery



Keyholes



Reference intake



Choices



Finnish heart





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

**Examples of FOP labeling types unwanted**



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

Field	Field definition	Type of field
Nutri_Score	Letter of the Nutri-score if a Nutri-score is provided on the label	closed list : codification

- Enter the **score** of the product (A, B, C, D or E)



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

Field	Field definition	Type of field
<b>Ingredient_list</b>	Complete ingredient list as labeled on the product respecting the order of the ingredients and keeping all informations (quantities,unit,...). If possible, not additional information that is often found on the packs, such as "can contain eggs" In original language	data entry

- The ingredient list has to be entered in your **own language**, no need for translation at this point.
- You must enter all the information in **one box** of the template, keeping **all the information** as it is written on the product.
- If there is **no ingredient list** on the product:
  - leave the field **blank**
  - you can indicate in the *Comments* field: "no ingredient list" so that you know it is not a forgotten information



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information



**INGREDIENTS:** BARLEYmax™ (Whole Grain Rolled Barley Flakes) (47%), Whole Grain Rolled Oats, Cranberries (8%) (Cranberries, Sugar, Sunflower Oil), Seeds (6%) (Buckwheat, Sunflower Seeds, Linseed), Golden Syrup, Almonds (4.5%), Brown Rice Syrup, Cinnamon (0.5%).

**Contains:** Gluten-containing Cereals and Tree Nuts.

May contain: Lupin, Milk, Peanuts, Sesame Seeds and Soy.

**Ingredient list**  
(that has to be entered in the template as it is written here)

Information that does not need to be entered

*Barley plus – Muesli cranberry, almond & cinnamon*  
(net weight = 500 g)





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

Field	Field definition	Type of field
Net_weight	Net quantity of the food: only number (total weight and not drained weight)	data entry
Net_weight_unit	g or mL	closed list : codification

- The net weight is the **total weight** of a product.
- It is **not** the weight of a **portion** or the weight of a **unit** in a pack of several products.  
Example : a product indicates 6x130g → the net weight will be 780g.

- The net weight of a product will be expressed in **mL** or **g**. You will need to **convert the net weight** found on the product to mL or g if necessary.

For example :

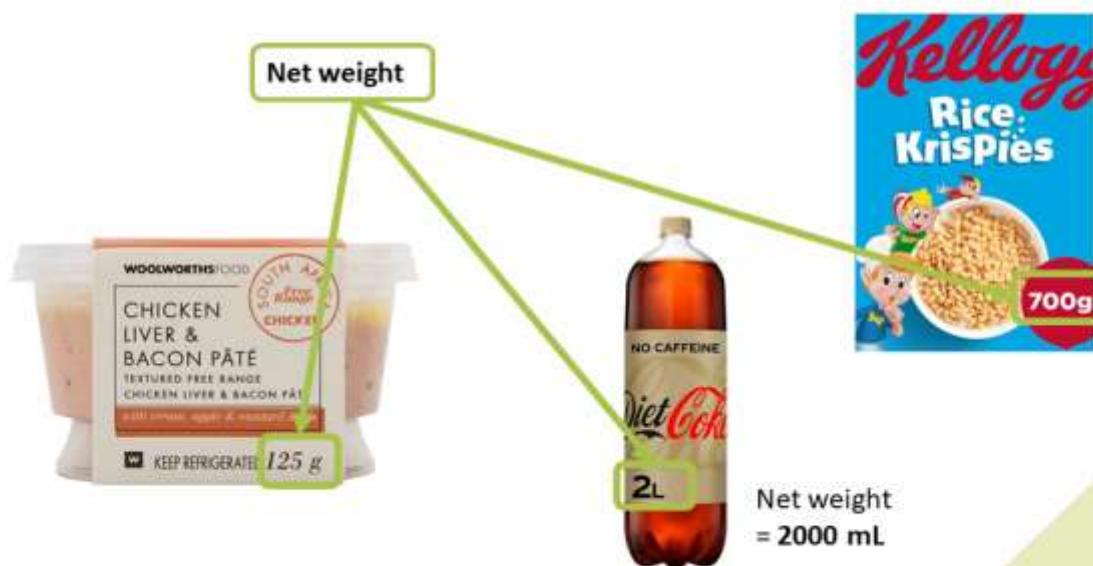
- 2L = 2000mL
- 1.5 kg = 1500g
- 33 cL = 330 mL



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

Field	Field definition	Type of field
Number_of_units	The number of the smallest units in the pack (biscuits, yoghurt pot,...). For products to share, indicate 1	data entry

- The number of units is the number of products found in a same package and indicated on it. This is **not** a recommended portion size.
- If a products has several units with **no precise indication** on the number of these.  
→ leave the field **blank**.
- If a product doesn't have several units, it is meant to be shared.  
→ You must indicate **1** in the field « number\_of\_units ».



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information







WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

**Particular case**



When the number of units is **not precise** or the exact number of units **cannot be counted**  
→ leave the field blank

Here the number of units is not precise : « over 50 slices » → the field is left blank



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

Examples of products to share (coded 1 in the field « number\_of\_units ») :





**WORK Package 5 – Reformulation and processed food monitoring**

Guidelines for data entry and encoding

**D. Ingredient list / other information**

Field	Field definition	Type of field
<b>Portion_size</b>	Value of the portion size (only numbers, not information such as "2 biscuits", "a spoon", "a cup of tea",...). It can either be clearly stated in a claim, guideline daily amounts, or consumption recommendations or mentioned via a nutrition labelling per serving. Leave blank if there is no value.	data entry
<b>Portion_size_unit</b>	g or mL	closed list : codification

- The portion size represents the quantity (value only) of product that is **recommended** to consume in an **eating occasion**. In some cases, the portion size can be the size of a unit or the net weight of a product (a can of soda, a pot of yogurt, etc).
- If nutritional values are displayed on the product for a portion size other than 100g or 100 mL, then that portion size is considered as **the portion size of the product**.
- This size has to be expressed in **g** or **mL** (you must do the conversion if necessary).
- If there is no portion size indication → leave the field **blank**.

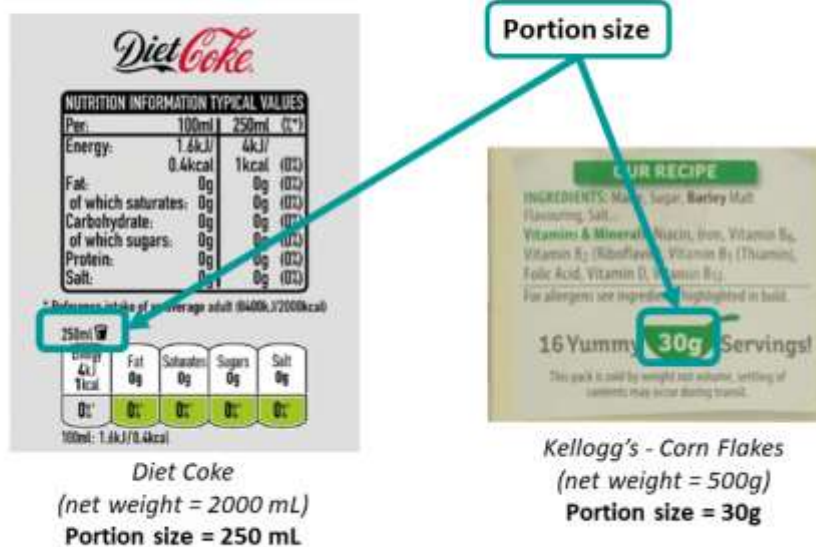
You can find the portion size in different places on the product : in a claim, in a consumption recommendation or mentioned via a nutrition labelling per serving, etc.



**WORK Package 5 – Reformulation and processed food monitoring**

Guidelines for data entry and encoding

**D. Ingredient list / other information**



**Portion size**

**Diet Coke**  
(net weight = 2000 mL)  
Portion size = 250 mL

**Kellogg's - Corn Flakes**  
(net weight = 500g)  
Portion size = 30g





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

Portion size

NUTRITION INFORMATION				
Serving size: 30g (dry mix), approx. 160g (when prepared)				
	Ave. Quantity per Serving (dry mix)	% Daily Intake* per Serving (when prepared)	Ave. Quantity per 100g (dry mix)	Ave. Quantity per Serving with 1/2 cup (125 mL) skim milk (when prepared)
Energy	496 kJ (118 Cal)	9 %	1620 kJ (386 Cal)	670 kJ (160 Cal)
Protein	1.8 g	3 %	1.0 g	6.4 g
Fat, total	0.5 g	0.9 %	1.5 g	0.8 g
- saturated	0.1 g	0.2 %	0.3 g	0.2 g
Carbohydrate	25.5 g	10 %	85.0 g	31.8 g
- sugars	3.0 g	10 %	10.0 g	9.2 g
Sodium	149 mg	9 %	495 mg	213 mg
Thiamin (Vitamin B <sub>1</sub> )	0.54 mg (49% RDI)*		1.8 mg	9.6 mg
Riboflavin (Vitamin B <sub>2</sub> )	0.42 mg (25% RDI)*		1.4 mg	9.7 mg
Niacin	2.5 mg (25% RDI)*		8.3 mg	2.6 mg
Folate	100 µg (25% RDI)*		333 µg	106 µg
Vitamin B <sub>6</sub>	0.4 mg (25% RDI)*		1.3 mg	0.4 mg
Vitamin E	2.6 mg (25% RDI)*		8.3 mg	2.6 mg

\*Percentage Daily Intakes are based on an average adult diet of 8700kJ. Your daily intakes may be higher or lower depending on your energy needs.  
\*Percentage of recommended dietary intake.



This is not the portion size!

This is the size of the portion with an added ingredient: skim milk (= when prepared)

GoldenVale – Bugs Bunny's Breakfast bubbles (puffed rice)  
(net weight = 450g)  
Portion size = 30 g



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

D. Ingredient list / other information

Particular case of product to be reconstituted (powder)

Preparación: mezclar 2 cucharadas (40 g) con 500 ml de agua.

Nutritional values/ Nährwertangaben/ Valeurs nutritives/ Información nutricional/ valori nutrizionali	100 g Powder/ Pulver/ de poudre/ de polvo/ di polvere	Per portion, pro Portion/ per portion de/ por porción de/ per porzione de 500 ml
Energy/Energie/Energia/ valor energético/Energia/ nutricional/ valori nutrizionali	1557 kJ	107 kcal
Fat/Fett/ Matière grasse/Grassi/grassi/ of which saturated/ davon gesättigte/ de las grasas saturadas/ di cui grassi saturati	0.2 g	0.1 g
Carbohydrate/Kohlenhydrate/ Glucides/ hidratos de carbono/ Carboidrati	38.3 g	11.4 g
- of which sugars/ davon Zucker/ dont sucre/ de los azúcares/ di cui zuccheri	35.3 g	10.6 g
Fibre/Faser/Fibra/ Fibra alimentaria/Fibra	0 g	0 g
Protein/Eiweiß/ Protéines/ Proteína/ Proteína	0 g	0 g
Salt/Salz/ Sale/ Sale	1.6 g	0.7 g



Portion size (= reconstituted portion of product as consumed)

Prima Vita – Iso Sport drink lemon flavour (powder)  
(net weight = 750g)  
Portion size = 500 mL



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### D. Ingredient list / other information

Field	Field definition	Type of field
<b>Portion_size_comments</b>	Portion when it's not a size (2 biscuits, a spoon, 1 bar,...)	data entry

- This field has to be filled in when a **portion** is indicated **without precision of size**.
- It does **not** concern **all the products**.
- When a portion size is known, this field has to be left blank.

If you fill in this field, it means the previous fields « portion\_size » and « portion\_size\_unit » are blanks.

#### Example



This picture is the only information for the portion size of the product  
 → **Portion\_size\_comments** = 3 spoons  
 → **Portion\_size** = *blanks*



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### D. Ingredient list / other information

Field	Field definition	Type of field
<b>Comment</b>	Any other information on the labeled product description which enable to distinguish the product among others or that the reconstituted portion is not written on the packaging,...	data entry

- You can use this field when a **product information is missing** and indicate which information is missing to be sure that it is not information that has been forgotten.  
 example : "no ingredient list", "no legal name", etc.
- You can also use this field to add **other information** about the product that you think is important to keep:  
 example: an additional barcode, details of the net weight "4x100g", etc.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### E. Nutritional content

- Nutrient content expression unit ([page 94](#))
- Energy (kJ/kCal) ([page 98](#))
- Fat and saturated fat ([page 98](#))
- Carbohydrates and sugar ([page 99](#))
- Protein ([page 99](#))
- Salt ([page 99](#))
- Fibre ([page 99](#))



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### E. Nutritional content

Field	Field definition	Type of field
Nutrient_content_expressi on_unit	100 g or 100 mL	closed list : codification

- The nutrient content expression unit is to choose between **100g** or **100 mL** depending on the product you have.
- This is **NOT** the content expression unit for :
  - the portion size
  - a unit of the product
  - the product to be reconstituted when reconstituted (powdered products)
  - the product with an added ingredient (example : cereal + milk)



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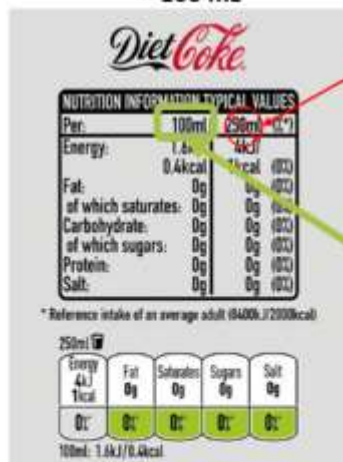


WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

E. Nutritional content

*Diet Coke*  
(net weight = 2000 mL)  
Nutrient content expression unit  
= 100 mL



NUTRITION INFORMATION TYPICAL VALUES	
Per:	100ml (3.5fl.oz.)
Energy:	0.4kcal (1.6kJ)
Fat:	0g (0%)
of which saturates:	0g (0%)
Carbohydrate:	0g (0%)
of which sugars:	0g (0%)
Protein:	0g (0%)
Salt:	0g (0%)

\* Reference intake of an average adult (8400kJ/2000kcal)

250ml	Energy	Fat	Saturates	Sugars	Salt
100ml	kJ	g	g	g	g
100ml	1.6kJ/0.4kcal	0g	0g	0g	0g

Portion size  
(not the information of interest)

*Milbona -Turkish style yoghurt*  
(net weight = 1000 g)  
Nutrient content expression unit  
= 100 g



Nutrition		per 100g	per serving (250g)	%RDI*
Energy		514kJ/125kcal	770kJ/186kcal	19%
Fat		10.0g	15.0g	21%
of which saturates		6.1g	9.2g	46%
Carbohydrate		4.2g	6.3g	2%
of which sugars		4.2g	6.3g	7%
Protein		<0.5g	<0.5g	10%
Salt		3.4g	5.1g	3%
		0.13g	0.20g	3%

\*Reference intake of an average adult (8400kJ/2000kcal)  
For more information visit [www.mil.co.uk](http://www.mil.co.uk) or [www.mil.ie](http://www.mil.ie)  
The pack contains approx. 6 servings

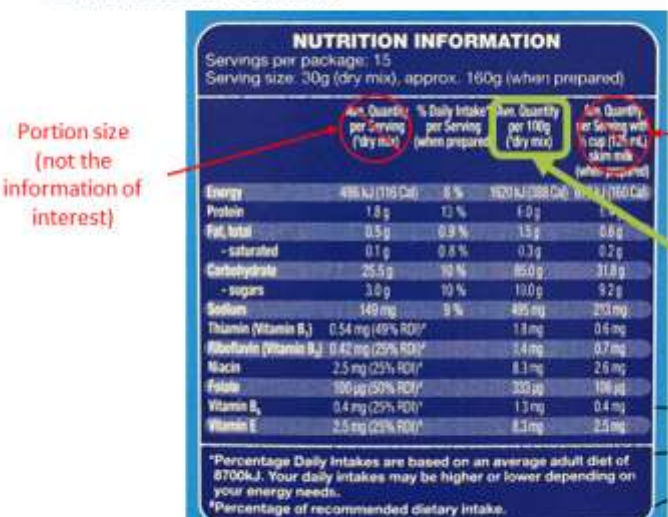
Nutrient content expression unit



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

E. Nutritional content



NUTRITION INFORMATION				
Servings per package: 15				
Serving size: 30g (dry mix), approx. 160g (when prepared)				
	Avg. Quantity per Serving (dry mix)	% Daily Intake per Serving (when prepared)	Avg. Quantity per 100g (dry mix)	Avg. Quantity per Serving with 1/2 cup (125 mL) skim milk (when prepared)
Energy	496 kJ (119 Cal)	8 %	1620 kJ (388 Cal)	165 kJ (39 Cal)
Protein	1.8 g	3 %	1.0 g	1.8 g
Fat, total	0.5 g	0.9 %	1.5 g	0.6 g
- saturated	0.1 g	0.2 %	0.3 g	0.2 g
Carbohydrate	25.5 g	10 %	85.0 g	31.8 g
- sugars	3.0 g	10 %	10.0 g	9.2 g
Sodium	149 mg	9 %	495 mg	233 mg
Thiamin (Vitamin B <sub>1</sub> )	0.54 mg (49% RDI)*		1.8 mg	0.6 mg
Riboflavin (Vitamin B <sub>2</sub> )	0.42 mg (25% RDI)*		3.4 mg	0.7 mg
Niacin	2.5 mg (25% RDI)*		8.3 mg	2.6 mg
Folate	190 µg (50% RDI)*		335 µg	106 µg
Vitamin B <sub>6</sub>	0.4 mg (25% RDI)*		1.3 mg	0.4 mg
Vitamin E	2.5 mg (25% RDI)*		8.3 mg	2.5 mg

\*Percentage Daily Intakes are based on an average adult diet of 8700kJ. Your daily intakes may be higher or lower depending on your energy needs.  
\*Percentage of recommended dietary intake.

Portion size  
(not the information of interest)

Nutrient content expression unit for the portion size of the product with an added ingredient : skim milk  
(not the information of interest)

Nutrient content expression unit

*GoldenVale – Bugs Bunny's Breakfast bubbles (puffed rice)*  
(net weight = 450g)  
Nutrient content expression unit = 100 g





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

E. Nutritional content

**Case of a product to be reconstituted**

Nutritional values/ Nährwertangaben/ Valeurs nutritives/Información nutricional/Valori nutricional	100 g Powder/ de poudre/ polvo/eli polvere	Per portion, pro porcion, per porcion de, per porción, de, per porzione de, 500 ml
Energy/Energie/Energia/ Valor energético/Energia	157 kJ 368 kcal	623 kJ 147 kcal
Fat/Fett/Matières grasses/Graiss/Graas - of which saturates/davon gesättigte Fettsäuren/dont acides gras saturés/ de los cuales saturados/di cui grassi saturi	0,3 g 0,2 g	0,1 g 0,1 g
Carbohydrate/Kohlenhydrate/ glucides/ Hidratos de carbono/Carboidrati - of which sugars/davon Zucker/ dont sucres/de los cuales azúcares/ di cui zuccheri	88,5 g 85,5 g	55,4 g 34,1 g
Fibre/Faserstoff/Fibre alimentares/Fibra alimentaria/Fibre	0 g	0,0 g
Protein/Eiweiß/Protéines/ Proteínas/Proteine	0 g	0,0 g
Salt/Salz/Sal/Sale	1,8 g	0,7 g

Nutrient content expression unit for the product when reconstituted (not the information of interest here)  
→ This information will be useful for other fields in the template (see page 109)

**Nutrient content expression unit**

Prima Vita – Iso Sport drink lemon flavour (powder)  
(net weight = 750g)

Nutrient content expression unit = 100 g



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

E. Nutritional content

Field	Field definition	Type of field
<b>Energy_kJ</b>	Energy value in kJ for 100g or 100mL Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Energy_kCal</b>	Energy value in kCal for 100g or 100mL Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Fat</b>	Fat content in g for 100g or 100 mL Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Saturated_fat</b>	Saturated fat content in g for 100g or 100mL Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

E. Nutritional content

Field	Field definition	Type of field
<b>Carbohydrates</b>	Carbohydrates content in g for 100g or 100mL Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Sugar</b>	Sugar content in g for 100g or 100mL Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Protein</b>	Protein content in g for 100g or 100mL Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Salt</b>	Salt content in g for 100g or 100mL Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry
<b>Fibre</b>	Fibre content in g for 100g or 100mL Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces"	data entry

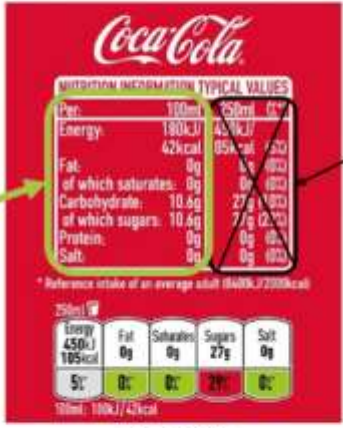


WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding


E. Nutritional content

**Information of interest for the nutritional values for 100 mL of product**



**Coca-Cola**  
(net weight = 1500 mL)

*Information for the nutritional values for a portion of product (not the information of interest)*









WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

E. Nutritional content

Information for the nutritional values for a portion of product (not the information of interest)

Information for the nutritional values for a portion of product with an added ingredient: skim milk (not the information of interest)

NUTRITION INFORMATION				
	Servings per package: 10		Serving Size: 50 g	
	Per Serve (50 g)	%DI* Per Serve	Per serve with 120 ml skim milk	Per 100 g
Energy	890 kJ 211 Cal	9%	1120 kJ 265 Cal	1600 kJ 382 Cal
Protein	6.1 g	13%	11.5 g	13.3 g
Fat, Total	5.1 g	8%	5.6 g	10.9 g
- Saturated	0.8 g	3%	0.8 g	1.5 g
Carbohydrate	23.0 g	8%	31.0 g	47.2 g
- Sugars	8.1 g	9%	15.0 g	16.1 g
Dietary Fibre	11.3 g	34%	10.3 g	20.5 g
- Insoluble	5.1 g			10.8 g
- Soluble	4.9 g			9.7 g
- Beta-glucan	2.0 g			4.0 g
- Resistant Starch	1.7 g			1.4 g
Sodium	5 m g	0.2%	18 m g	10 m g
Glycemic Index (GI) - Low 46				

Information of interest for the nutritional values for 100 g of product

Barley plus – Muesli cranberry, almond & cinnamon  
(net weight = 500 g)



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

E. Nutritional content

Typical values	100ml contains	250ml contains %
Energy	199kJ 47kcal	500kJ 120kcal
Protein	0.5g	1.3g
Carbohydrate	10.5g	26.3g
of which sugars	trace	trace
Fat	trace	trace
of which saturates	trace	trace
Fibre	trace	trace
Sodium	trace	trace
Salt equivalent	trace	trace

Indicate « traces » in the field

Ingredients:  
Organic Apple Juice (81%),  
Devon Spring Water (18.5%),  
Organic Ceremonial Matcha.

Nutritional Information: Per 100ml

Energy	161kJ (38kcal)
Fat	<0.5g (of which saturates) <0.1g
Carbohydrate	8.4g (of which sugars) 7.7g
Protein	0.5g
Salt	<0.1g

Serve chilled.

Indicate « <0,1 » in the field





## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### E. Nutritional content

#### Particular case



Acidity Regulator (Sodium Citrate), Preservatives (Potassium Sorbate, Sodium Benzoate), Sweeteners (Aspartame, Acesulfame K, Sodium Saccharin). Contains a Source of Phenylalanine.

NUTRITION INFORMATION TYPICAL VALUES		
Per:	100ml	250ml (1")
Energy:	14kJ 3kcal	35kJ 8kcal (80)
Carbohydrate:	0.5g	1g (2)
of which sugars:	0.5g	1g (2)
Salt:	0.08g	0.20g (4)
Fat, Saturates, Protein – negligible amount		

Reference intake of an average adult  
(8400kJ/2000kcal) 500ml = 2 x 250ml

Best before end: See side of cap or bottle neck. Store cool and dry.

Quantities of nutrients can be described as "negligible amounts"

→ you must indicate in the template "traces" for the mentioned nutrients.



## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### F. Nutritional content for products to be reconstituted

- Nutrient content expression unit as consumed ([page 109](#))
- Energy as consumed (kJ/kCal) ([page 112](#))
- Fat as consumed and saturated fat as consumed ([page 112](#))
- Carbohydrates as consumed and sugar as consumed ([page 113](#))
- Protein as consumed ([page 113](#))
- Salt as consumed ([page 113](#))
- Fibre as consumed ([page 114](#))



This section only concerns specific products (if not concerned, go directly to [page 117](#))



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted **ONLY**

- The next fields concern exclusively the **products which have to be reconstituted**, that is to say that the products cannot be consumed as they are sold.
- In most cases, these products are sold in **powder form**.  
In the 5 food categories covered by the Best-ReMaP project, this should only concern a small part of the products, mainly in the **Soft drinks** category.
  - The information of interest for the products to be reconstituted is **NOT** the information of the **portion size** or the information of the portion size with an **added ingredient** (example: breakfast cereal + milk).
  - The nutritional values of the product before reconstitution must have been entered in the **previous fields**.
  - Do not fill the next fields if the product is not concerned and **go directly to page 117**.



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted **ONLY**



Product to be reconstituted with nutritional values after reconstitution  
→ **Concerned by the next fields**



Edible product as it is with nutritional values after preparation (addition of milk)  
→ **Not concerned by the next fields**





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted ONLY

Examples of products to be reconstituted that concern the next fields



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted ONLY

Information that must have been entered in the previous fields (see [page 97](#))

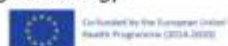
Nutritional values/ Nährwertangaben/ Valeurs nutritives/Información nutricional/Valori nutrizionali	100 g Powder/ Pulver/ de poudre/de polvo/di polvere	Per portion/pro Portion/par portion de/por porción de/per porzione da 500 ml
Energy/Energie/Energia/ Valor energético/Energia	1557 kJ 366 kcal	623 kJ 147 kcal
Fat/Fette/Lipides grasas/Grasas/Grassi - of which saturated/saturadas/saturés/ Fettsäuren/dont acides gras saturés/ de las cuales saturadas/di cui grassi saturati	0,3 g 0,2 g	0,1 g 0,1 g
Carbohydrate/Kohlenhydrate/Glucides/ Hidratos de carbono/Carboidrati - of which sugars/davon Zucker/ dont sucres/de los cuales azúcares/ di cui zuccheri	88,5 g 85,3 g	35,4 g 34,1 g
Fibre/Säbstoffe/Fibres alimentaires/Fibra alimentaria/Fibre	0 g	0,0 g
Protein/Eiweiß/Protéines/ Proteínas/Proteine	0 g	0,0 g
Salt/Salz/Sel/sal/Sale	1,8 g	0,7 g

**Preparación:** mezclar 2 cucharadas (40 g) con 500 ml de agua.

Prima Vita – Iso Sport drink lemon flavour (powder)  
(net weight = 750g)

→ By looking closely at the product you can see that it is a product to be reconstituted.

Information of interest, of the product to be reconstituted, for the next fields





WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted ONLY

Field	Field definition	Type of field
<b>Nutrient_content_expressi on_unit_as_consumed</b>	100g of product as consumed or 100mL of product as consumed or by reconstituted portion of product as consumed (in that case, the portion size needs to be the one of the reconstituted products) That applies to products which need to be reconstituted first before they can be consumed. E.g. potato flakes, dehydrated soups,... Leave blank if not concerned (and also the nine following fields _as_consumed)	closed list : codification

- The nutrient content expression unit when a product is reconstituted (as consumed) will be :
  - **100g** of product as consumed
  - **100 mL** of product as consumed
  - **By reconstituted portion** of product as consumed  
The reconstituted portion of product as consumed is indicated in the field « portion\_size » that must have been filled in previously (see [page 90](#) of this guide)



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted ONLY

Nutritional values/ Nährwertangaben/ Valeurs nutritives/Información nutricional/Valori nutrizionali	100 g Powder/ Pulver/ de poudre/de polvo/di polvere	Per portion/prò Portion/por portion de/por porción de/per porzione da 500 ml
Energy/Energie/Energie/ Valor energético/Energia	1557 kJ 366 kcal	425 kJ 147 kcal
Fat/Fett/Matières grasses/Grasas/Grassi - of which saturates/davon gesättigte/ Fettsäuren/dont acides gras saturés/ de las cuales saturadas/di cui grassi saturi	0,3 g 0,2 g	0,1 g 0,1 g
Carbohydrate/Kohlenhydrate/Duclides/ Hidratos de carbono/Carboidrati - of which sugars/davon Zucker/ dont sucres/de los cuales azúcares/ di cui zuccheri	88,5 g 85,3 g	35,4 g 34,1 g
Fibre/Balaststoffe/Fibres alimentaires/Fibra alimentaria/Fibre	0 g	0,0 g
Protein/Eiweiß/Protéines/ Proteínas/Proteine	0 g	0,0 g
Salt/Salz/Sel/Sal/Sale	1,8 g	0,7 g

Prima Vita – Iso Sport drink lemon flavour (powder)  
(net weight = 750g)

**Nutrient content expression unit as consumed**  
(here the nutrient expression unit as consumed = **by reconstituted portion of product as consumed**)

- You must verify that this is the value that have been entered in the "portion\_size" field
- Here, portion\_size = 500 mL



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted ONLY

**Nutrient content expression unit as consumed**  
(here the nutrient expression unit as consumed = by reconstituted portion of product as consumed)

- You must verify that this is the value that have been entered in the "portion\_size" field
- Here, portion\_size = 500 mL

NUTRITIONAL VALUES / INFORMATION NUTRITIONNELLE / NÄHRWERTANGABEN / DICHIARAZIONE NUTRIZIONALE	100g	500 ml <sup>(2)</sup>	
Energy / Valeur énergétique / Brennwert / Energia /	1590 / 374	633 / 149	kJ / kcal
Fat / Matières grasses / Fett / Grassi /	0	0	g
of which saturated fatty acids / dont acides gras saturés /			
davon gesättigte Fettsäuren / di cui acidi grassi saturi /	0	0	g
Carbohydrates / Glucides / Kohlenhydrate / Carboidrati /	88	35	g
of which sugars / dont sucres / davon Zucker / di cui zuccheri /	70	28	g
Protein / Protéines / Eiweiß / Proteine /	0	0	g
Salt / Sel / Salz / Sale /	2,8	1,1	g
Vitamin C / Vitamine C / Vitamina C /	100 = 125% <sup>(1)</sup>	40 = 50% <sup>(1)</sup>	mg
Thiamin (Vitamin B1) / Thiamine (Vitamine B1) / Thiamine (B1) / Tiammina (Vitamina B1) /	0,58 = 53% <sup>(1)</sup>	0,23 = 21% <sup>(1)</sup>	mg
Calcium / Calcio /	400 = 50% <sup>(1)</sup>	160 = 20% <sup>(1)</sup>	mg
Magnesium / Magnésium / Magnesio /	155 = 41% <sup>(1)</sup>	62,0 = 17% <sup>(1)</sup>	mg



Isostar – Hydrate & Perform lemon flavour (powder)  
(net weight = 400 g)



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted ONLY

Field	Field definition	Type of field
<b>Energy_as_consumed_kj</b>	Energy value in kJ for the product as consumed (for reconstituted products only) Only numbers: except in 2 cases: when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces" Leave blank if not concerned	data entry
<b>Energy_as_consumed_kCal</b>	Energy value in kCal for the product as consumed (for reconstituted products only) Only numbers: except in 2 cases: when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces" Leave blank if not concerned	data entry
<b>Fat_as_consumed</b>	Fat content in g for the product as consumed (for reconstituted products only) Only numbers: except in 2 cases: when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces" Leave blank if not concerned	data entry
<b>Saturated fat_as_consumed</b>	Saturated fat content in g for the product as consumed (for reconstituted products only) Only numbers: except in 2 cases: when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces" Leave blank if not concerned	data entry





## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted ONLY

Field	Field definition	Type of field
<b>Carbohydrates_as_consumed</b>	Carbohydrates content in g for the product as consumed (for reconstituted products only) Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces" Leave blank if not concerned	data entry
<b>Sugar_as_consumed</b>	Sugar content in g for the product as consumed (for reconstituted products only) Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces" Leave blank if not concerned	data entry
<b>Protein_as_consumed</b>	Protein content in g for the product as consumed (for reconstituted products only) Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces" Leave blank if not concerned	data entry
<b>Salt_as_consumed</b>	Salt content in g for the product as consumed (for reconstituted products only) Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces" Leave blank if not concerned	data entry



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted ONLY

Field	Field definition	Type of field
<b>Fibre_as_consumed</b>	Fibre content in g for the product as consumed (for reconstituted products only) Only numbers except in 2 cases : when it's a less than value, indicate it with the symbol in the field (examples: "<0.5" or "<0,1") or when it's mentioned as "traces", indicate it also as "traces" Leave blank if not concerned	data entry



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted ONLY

Nutritional values/ Nährwertangaben/ Valeurs nutritives/Información nutricional/Valori nutrizionali	100 g Powder/ Pulver/ de poudre/di polvo/di polve e	Per portion/pro Portion/par portion de/por porción de/per porzione da 500 ml
Energy/Energie/Energie/ Valor energético/Energia	1557 kJ 366 kcal	623 kJ 147 kcal
Fat/Fett/Matières grasses/Grasas/Grassi - of which saturates/davon gesättigte Fettsäuren/dont acides gras saturés/ de las cuales saturadas/di cui grassi saturi	0,3 g 0,2 g	0,1 g 0,1 g
Carbohydrate/Kohlenhydrate/Glucides/ Hidratos de carbono/Carboidrati - of which sugars/davon Zucker/ dont sucres/de los cuales azúcares/ di cui zuccheri	88,5 g 95,3 g	35,4 g 34,1 g
Fibre/Faseroestoffe/Fibres alimentaires/Fibra alimentaria/Fibre	0 g	0,0 g
Protein/Eiweiß/Protéines/ Proteínas/Proteine	0 g	0,0 g
Salt/Salz/Sel/Sale	1,8 g	0,7 g

Information of interest for the nutritional values of the product as consumed

Prima Vita – Iso Sport drink lemon flavour (powder)  
(net weight = 750g)



Co-funded by the European Union's  
Health Programme (2014-2020)



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

F. Nutritional content for products to be reconstituted

Fields concerning products to be reconstituted ONLY



Information of interest for the nutritional values of the product as consumed

NUTRITIONAL VALUES / INFORMATION NUTRITIONNELLE / NÄHRWERTANGABEN / DICHIARAZIONE NUTRIZIONALE	100 g <sup>(2)</sup>	500 ml <sup>(2)</sup>	
Energy / Valeur énergétique / Brennwert / Energia /	1590 / 374	633 / 149	kJ / kcal
Fat / Matières grasses / Fett / Grassi / of which saturated fatty acids / dont acides gras saturés / davon gesättigte Fettsäuren / di cui acidi grassi saturi /	0	0	g
Carbohydrates / Glucides / Kohlenhydrate / Carboidrati/ of which sugars / dont sucres / davon Zucker / di cui zuccheri /	88 70	35 28	g g
Protein / Protéines / Eiweiß / Proteine /	0	0	g
Salt / Sel / Salz / Sale /	2,8	1,1	g
Vitamin C / Vitamine C / Vitamina C /	100 = 125% <sup>(1)</sup>	40 = 50% <sup>(1)</sup>	mg
Thiamin (Vitamin B1) / Thiamine (Vitamine B1) / Thiamine (B1) / Tiammina (Vitamina B1) /	0,58 = 53% <sup>(1)</sup>	0,23 = 21% <sup>(1)</sup>	mg
Calcium / Calcio /	400 = 50% <sup>(1)</sup>	160 = 20% <sup>(1)</sup>	mg
Magnesium / Magnésium / Magnesio /	155 = 41% <sup>(1)</sup>	62,0 = 17% <sup>(1)</sup>	mg

Isostar – Hydrate & Perform lemon flavour (powder)  
(net weight = 400 g)



Co-funded by the European Union's  
Health Programme (2014-2020)





## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data entry and encoding

### FINAL STEP

- After entering and coding all of your data, you need to do a **final step of checking for duplicates**.

**Duplicates** = products that have exactly the same information for all the fields, even if the packaging is different

- When you find duplicates of a product, you can **delete** them.



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**Best-ReMaP**  
Healthy Food for a Healthy Future


## Thank you for your attention!


ANSES
[wp5\\_bestremap@anses.fr](mailto:wp5_bestremap@anses.fr)

The Joint Action focusing on the implementation of validated best practices in nutrition – Best-ReMaP

This presentation arises from the Joint Action Best-ReMaP. This JA is addressing the adaption, replication and implementation of effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings. This presentation was funded by the European Union's Health Programme (2014-2020). The content of this presentation represents the views of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the Consumers, Health, Agriculture and Food Executive Agency (CHA/FEA) or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.


**Annex 18 : Presentation leaflet designed to contact retailers and present the Best-ReMaP Joint Action and WP5**



 **Best-ReMaP**  
Healthy Food for a Healthy Future

**Work Package 5 :**  
**EU Harmonised Reformulation and  
processed food monitoring**  
**Leaflet for contact with retailers**

ANSES – WP5  
02/2021



This leaflet was funded by the European Union's Health Programme (2014-2020)

Leaflet for contact with retailers



## Objectives:

Best-ReMaP is a joint action of EU Member States on diet and nutrition with a special focus on children, funded by the European Commission as part of the European Union's Health Programme (2014-2020). The main purpose is to adapt, replicate and implement practices that have been proven to work in the areas of food reformulation, food marketing and public procurement of foods in public settings, such as kindergartens, schools, hospitals.

Within the joint action, the work package (WP) 5 is aiming to share and promote, among the 21 partners participating in the WP, best practices on how to implement a sustainable European monitoring system for processed food reformulation. The use of these best practices will contribute to a standardized monitoring system at the European level to facilitate comparisons and to encourage the improvement of the nutritional quality of the European food supply. The identification of the best reformulations of processed food, by analyzing trend assessment between consecutive snapshots, will stimulate food providers for the improvement of the nutritional quality of their processed products and create a virtuous circle at the European level.

For that purpose, the members of the work package will produce guidelines, implement snapshots of the food products available on their market via data collection, and launch a European database to monitor the nutritional quality of manufactured foods (at branded products level) and promote food reformulations.

## Partners:

21 partners representing 21 European countries are taking part to this WP.

Applicant organization name	Country
AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL	France
BUNDESMINISTER FUER ARBEIT, SOZIALES, GESUNDHEIT UND KONSUMENTENSCHUTZ	Austria
SCIENSANO	Belgium
MINISTRY OF CIVIL AFFAIRS	Bosnia and Herzegovina
NATSIONALEN CENTAR PO OBSHTESTVENO ZDRAVE I ANALIZI	Bulgaria
HRVATSKI ZAVOD ZA JAVNO ZDRAVSTVO	Croatia
MINISTRY OF HEALTH OF THE REPUBLIC OF CYPRUS	Cyprus
FODEVARESTYRELSEN	Denmark
SOTSIAALMINISTEERIUM	Estonia
TERVEYDEN JA HYVINVOINNIN LAITOS	Finland
MAX RUBNER INSTITUT BUNDESFORSCHUNGSINSTITUT FUR ERNAEHRUNG UND LEBENSMITTEL	Germany
INSTITOUTON YGEIAS TOU PAIDIOU	Greece
SEMMELWEIS EGYETEM	Hungary
DEPARTMENT OF HEALTH	Ireland
ISTITUTO SUPERIORE DI SANITA	Italy
MINISTRY OF HEALTH – GOVERNMENT OF MALTA	Malta
RIJKSINSTITUUT VOOR VOLKSGEZONDHEID EN MILIEU	Netherlands
SLASKI UNIWERSYTET MEDYCZNY W KATOWICACH	Poland
MINISTERIO DA SAUDE – REPUBLICA PORTUGUESA	Portugal
INSTITUTUL NATIONAL DE SANATATE PUBLICA	Romania
NACIONALNI INSTITUT ZA JAVNO ZDRAVJE	Slovenia

Leaflet for contact with retailers



## Main tasks:

### Optimization of the European harmonized processed food supply monitoring

Prioritization of the 5 processed food categories to monitor by assessing the biggest contributive food groups for the nutrient intakes (fat, saturated fat, sugars, salt) especially for children.

Improving efficiency and sustainability of monitoring efforts by exploring new sources of data (crowdsourcing, open databases, Foodswitch or GS1) and new technologies (photos and text extraction).

### Assistance for the Food reformulation monitoring

Elaboration of technical guidelines for monitoring of the processed food supply and reformulation.

Encouragement of the implementation of the first or second snapshot (national action plan) for data collection on the market and start of the European database's development with working title JRC Food Database.

### Extension of the first European snapshot of the nutritional quality of the processed food

According to Oqali methodology, collection and standardization of the nutritional composition, ingredients and portion size of processed foods, provided on labels with the European Regulation N°1169/2011 (proteins, carbohydrates, salt, sugars, fats, saturated fats and energy).

Production of statistics in order to have a first overview of the food supply in each participating country.

### Implementation of the second European Snapshot of the nutritional quality of the processed food

At another time and according to Oqali methodology as well, collection and encoding of nutritional data provided on labels of processed food and linkage with products collected in the first snapshot.

### Trend assessment of the nutritional quality of the processed food

Assessment of the nutritional quality evolutions and identification of best reformulations.

Assessment of the impact of processed food reformulation on nutrient intakes by using the nutritional composition data issued from the first and second snapshots, with a focus made on children.

European comparisons of the processed food reformulations and processed food turnover based on JANPA indicators.

Implementing this data collection and nutritional information comparisons among EU Member states, will allow to:

- estimate the nutritional composition variability
- identify the best formulations
- analyze the possible level of improvement of the nutritional quality of food
- encourage food reformulations
- build a European monitoring network

Leaflet for contact with retailers



## The Oqali model:

### Presentation of Oqali

The Oqali Project has been set up in 2008 as part of the French Nutrition and Health Programme by the Ministries in charge of Agriculture, Health and Consumer Affairs.

It is implemented and managed by 2 teams, the French Agency for Food, Environmental and Occupational Health & Safety (Anses) and the French National Institute for Agriculture, Food and Environment (INRAE). The aim of the project is to monitor changes in processed foods supply available on the French market by measuring nutritional quality evolution, over time (nutritional composition and labelling information).

To achieve these objectives, close collaborations with manufacturers and retailers have been developed, in order to facilitate data collection, establish relevant food classifications and identify the main technological constraints for better interpreting the results.

### Aims of Oqali

The main objectives of this observatory are:

- To collect and analyze nutritional data on branded processed foodstuffs, taking into account socio-economic parameters (types of brands, market shares and sometimes prices)
- To follow nutritional and labelling changes in the food supply (nutrient contents, ingredients, serving sizes, claims, ...)
- To clarify and assess public and private interventions with a view to ensuring a constant improvement of products food supply;
- To support initiatives favoring the adoption of strategies aimed at improving the food supply nutritional quality and monitoring their implementation.

Oqali constitutes a valuable decision tool for French authorities.

### Outcomes of Oqali

Oqali is following several labelling indicators: health claims, nutritional claims, guideline daily amount, serving size and nutritional labelling per serving size.

These indicators are studied for a food category, between subcategories of a food category and between different types of brands.

Nutrient comparisons are established, between subcategories of products in the same category or within a subcategory of products (between national brands / retailer brands / entry-level retailer brand / hard discount).

To finish, the evolution over time of the studied indicators is also carried out.

### Studies produced by Oqali

Oqali regularly produces food category reports and thematic studies.

The food category reports are produced in order to monitor the changes in the food supply quality thanks to the follow-up of various indicators: nutritional information provided on labels; the nutrient composition and variability.

Until now, reports have been published for 31 food categories and are available at [www.oqali.fr](http://www.oqali.fr).

Several thematic studies have also been realized. Some of them have been dedicated to the assessment of the potential cumulative impact of voluntary commitment charters on consumer nutrient intakes and volumes of sold nutrients. Some others were dedicated to ingredients, additives or allergens presence in the different food categories.

Leaflet for contact with retailers



## Food categories:

Due to time and budget constraints, only five priority food categories will be studied during the Best-ReMaP joint action.

Those categories are part of the biggest contributive food groups for the nutrient intakes for children but should also have been already covered by some preexisting databases in a few countries and be large enough to have products from national brands, retailers' brands, entry-level retailers' brands and hard discounters.

## Role of retailers:

Partners in the participating countries will contact retailers in order to have the authorization to take pictures on the shelves of the supermarkets. These pictures will enable to follow food supply of the five selected food groups.

## Data gathered in the Joint Action:

All data gathered during the project (for all countries) will be shared among a common European database.

## Annex 19 : Summary of the products selected or excluded for data collection

**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

This document summarizes the subcategories that will be collected and those that should not be collected for each of the five priority food categories selected for the **Best-ReMaP Joint Action** (Bread products, Breakfast cereals, Delicatessen meats and similar, Fresh dairy products and desserts & Soft drinks).

For more details on the subcategories (examples of products, etc), please refer to the complete classification guidelines (available on the Best-ReMaP intranet : WP5\WORKING DOCUMENTS\Data collections).

To have access to the whole Best-ReMaP nomenclature, please refer to the D5.1: Development of the guidelines for a European harmonised and sustainable monitoring system of the processed food supply

**Please read this document carefully and take the information into account before starting to collect the data**



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

For each of the five priority food categories :

- General description of the category and products included
- Products excluded
- List of the subcategories and associated definitions
  - **The crossed subcategories and definitions are those that should not be collected for the Best-ReMaP project. They have been excluded since they are considered as not relevant when targeting the children's food consumptions**

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

# Bread products (18)

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Bread products (18)

➤ What kind of product can be considered as a bread product?

- Bread products to be stored at room temperature
- Gluten-free and vegan products are also included in the category



- Croutons, bread crumbs
- Breads (toasted breads, sandwich breads, pre-packaged or pre-baked breads, hamburger & hot-dog buns, tortilla wraps, pita breads, ...)
- Brioches, kouglof, panettone
- Rusks, crackers, crispbreads (sweet or savoury)
- Puffed cakes, cereal specialties (filled or not)
- Fine bakery wares
- Pancakes, English muffins

2021. 06. 02.

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Bread products (18)

➤ What is excluded from the bread products category ?



- Handmade products
- Cocktail snacks products (TUC, aperitif crackers ...)
- Fresh or frozen bread products
- Fresh unbaked dough



→ Those products are meant to be consumed as such (without being spread) for aperitive

2021. 06. 02.



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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Bread products subcategories & definitions

Category code : 18

Subcategory code	Subcategory	Definition
230	Bread crumbs	Grated or crumbed dried bread or rusks
239	CROUTONS	Small pieces of dry bread, seasoned or unseasoned
405	Pre-baked breads	Pre-baked breads
408	Tortilla breads and wraps	Special tortilla breads and wraps
396	Unleavened breads	Unleavened breads
402	Plain toasted breads and toasts	Plain toasted breads and toasts containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. These products can contain fruit inclusions, chocolate chips, etc.
403	Wholemeal_cereal_grains toasted breads and toasts	Toasted breads and toasts containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. These products can contain fruit inclusions and/or chocolate chips. Includes products without gluten.
399	Plain white sandwich breads / hamburger / hot dog buns	Plain sandwich breads, plain special breads for hamburgers and hot dogs, plain english muffins containing wheat flour and without seeds (special breads for hamburger included in this subcategory can contain sesame seeds). These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Cupcake-type muffins are excluded.
398	Wholemeal_cereal_grains sandwich breads / hamburger / hot dog buns	Sandwich breads, special breads for hamburgers and hot dogs, english muffins containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. Includes products without gluten. Cupcake-type muffins and special breads for hamburger containing wheat flour with sesame seeds are excluded.
400	Other_sandwich breads / hamburger / hot dog buns	Sandwich breads, special breads for hamburgers and hot dogs, english muffins, brioche-style or not, with dried fruit inclusions, spicy or seasoning sandwich breads, etc. Includes products without gluten (made from soy flour, rice flour, corn flour, etc.) Cupcake-type muffins are excluded.
406	Pre-packaged breads	Pre-packaged breads made from whole wheat flour and/or cereal flour (rye, barley, buckwheat, etc.), or wheat flour, plain, with or without seed inclusions (sunflower, flax, etc.) and/or dried fruit. Includes products without gluten (made from soy flour, rice flour, corn flour, etc.)
401	Other breads	Special breads such as pita, kebab bread, Lebanese flatbread, bagel, Swedish bread, etc.



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Bread products subcategories & definitions

Category code : 18

Subcategory code	Subcategory	Definition
604	Fine bakery wares_croissants	Croissants
605	Fine bakery wares_chocolate croissants	Chocolate croissants
603	Fine bakery wares_other	Apple turnovers, filled croissants, raisin breads, fruit-filled doughnuts, etc.
112	Plain brioches	Plain brioches and Viennese bread-type products, plain milk breads or gâches containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Includes products with inclusions of sugar, fudge, etc.
114	Wholemeal_cereals_grains brioches	Brioches and Viennese bread-type products, milk breads or gâches containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. Includes products without gluten.
119	Chocolate brioches	Brioches and Viennese bread-type products, milk breads or gâches with chocolate filling, all chocolate and/or with chocolate chips, panettones without fruit and with chocolate
116	Brioches with fruit	Brioches and Viennese bread-type products, milk breads or gâches with fruit filling or with fruit (candied or not) inclusions, panettones with fruit, kougliof or similar products.
115	Cream-filled brioches	Brioches and Viennese bread-type products, milk breads or gâches with cream filling which may contain inclusions (chocolate, fruits etc.)
268	Puffed cakes	Puffed cakes made from rice, corn, millet, quinoa, buckwheat, cereal, plain, flavored, topped or with filling
117	Plain rusks	Plain rusks and plain brioche rusks containing wheat flour and without seeds. These products can contain broad beans flour and/or soy flour and/or barley flour in addition to the wheat flour. Includes products with inclusions of fruit and/or chocolate chips.
67	Wholemeal_cereal_grains rusks	Rusks containing whole wheat flour or with addition of bran/germ/fiber and/or containing at least one cereal flour (apart from wheat, broad beans, soy and barley), with or without seeds. Includes products containing wheat flour with seeds. These products can contain fruit inclusions and/or chocolate chips. Includes products without gluten.
244	Other rusks	Other rusks that do not fit the definition of any of the other rusk subcategories, crackers, cracker's aids and extruded products - rusks covered with chocolate, rusks covered with fruit, cracker's aids, cracker's aids filled with chocolate etc. Includes products without gluten (made from soy flour, rice flour, corn flour, etc.)
626	Pancakes	Pancake or little thick crepe / crumpet, plain, with or without chocolate chips, filling or not.
51	Other bread products	Other bread products



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

## Breakfast cereals (1)

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Breakfast cereals (1)

➤ **What kind of product can be considered as breakfast cereals ?**

- ✓ All types of breakfast cereals (plain, chocolate, caramel, filled, healthy, whole wheat, etc.)
- ✓ Cereal cakes
- ✓ Cereals requiring preparation such as oatflakes, muesli, puffed rice



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Food category : Breakfast cereals (1)**

➤ **What is excluded from the breakfast cereals category ?**

- Breakfast biscuits
- Cereal bars and bites (cereal bars with fruits or nuts, with or without chocolate, with caramel, with pieces of biscuit, plain, etc.)



**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

**Breakfast cereals subcategories & definitions**

➤ **Mueslis**

Category code : 1

Subcategory code	Subcategory	Definition
386	Traditional muesli flakes	Mixture of cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) with dried fruit, seeds, flakes added sugar and/or chocolate. This subcategory also includes porridge mixes (plain, with chocolate, fruit or nuts, etc.) except plain porridge mixes without added sugar that are included in the "Cereals without added sugar" (739) subcategory. Example: 7-fruit flaky muesli, Chocolate hazelnut muesli, etc.
678	Crunchy chocolate muesli	Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of crunchy clusters with chocolate and/or cocoa. May contain fruit and/or nuts. Example: Chocolate caramel muesli, Granola with figs and chocolate, Crunchy muesli with chocolate pieces and hazelnuts, etc.
679	Crunchy fruit muesli	Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of crunchy clusters with fruit. May contain nuts and/or seeds but not chocolate and/or cocoa. Example: Crunchy muesli with dried fruits, Crunchy apple banana and raisin clusters, Red fruit granola, Crunchy cereal mix with almonds and strawberries, etc.
680	Crunchy muesli with nuts/seeds	Mixture of cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) in the form of plain crunchy clusters or with only honey/maple syrup or with only nuts (walnuts, hazelnuts, peanuts, almonds, etc.) or seeds. These products do not contain fruit, chocolate and/or cocoa. Example: Crunchy nut muesli, Crunchy flax and pumpkin seed muesli, Crunchy plain muesli, Hazelnut almond and pecan muesli, etc.

➤ **Cereals without added sugar**

Subcategory code	Subcategory	Definition
739	Cereals without added sugar	Cereals (oat, wheat, rice, spelt, corn, buckwheat, etc.) without added sugar, caramel, syrup, honey, molasses, glucose, fructose, sucrose, dextrose, or maltodextrins. These products do not contain fruit, dried fruit, nuts or chocolate. This subcategory includes plain porridge mixes without added sugar. Mueslis without added sugar are excluded from this subcategory (they are included in the "Traditional muesli flakes" subcategory). Examples: Oat flakes, 5-cereal flakes, Cornflakes, puffed buckwheat, puffed millet etc.



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Breakfast cereals subcategories & definitions

#### > High-fiber cereals

Category code : 1

Subcategory code	Subcategory	Definition
143	High-fiber cereals	Unfilled cereals with a fiber content greater than or equal to 6g per 100g of product. These products do not contain honey, caramel, chocolate, fruit or nuts. This subcategory includes cereal cake products that may contain chocolate. Cereal flakes without added sugar and muesli (crunchy and flaky) are excluded from this subcategory. Examples: Nature and fiber, Cereals with wheat bran naturally high in fiber, Wheat bran sticks, etc.
676	High-fiber fruit cereals	Unfilled cereals accompanied by fruit and with a fiber content greater than or equal to 6g per 100g of product. These products do not contain honey, caramel or chocolate but may contain nuts. Cereal flakes without added sugar and muesli (crunchy and flaky) with fruit are excluded from this subcategory. Examples: Fruit and fiber, Whole wheat flakes with fruit, etc.

#### > Cereal flakes

Subcategory code	Subcategory	Definition
681	Cereal flakes with chocolate/nuts	Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) coated with chocolate and/or plain with pieces of chocolate or nuts (walnuts, hazelnuts, peanuts, almonds, etc.). These products can contain fruits. Example: Rice and wheat flakes with chocolate shavings, Whole wheat, rice and barley flakes coated in sugar with dark chocolate shavings, Rice and wheat flakes with hazelnuts and sliced almonds, etc.
683	Cereal flakes with fruit	Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) coated or plain with pieces of fruit. These products do not contain chocolate and/or cocoa. Flakes with more than 6g of fiber/100g are included in the "High-fiber fruit cereals" subcategory. Examples: Rice and wheat flakes with pieces of red fruit, Whole wheat, rice and barley flakes with fruit, Rice and spelt flakes with mixed red fruit, etc.
745	Sweet cereal flakes	Cereal flakes (oat, wheat, rice, spelt, corn, buckwheat, etc.) which contains sugar, honey or maple syrup but without pieces of chocolate, fruit or nuts. These products may be coated, frosted, sweetened, etc. Sweet cereal flakes coated with milk are included in this subcategory. Flakes with more than 6g of fiber/100g are included in the "High-fiber cereals" subcategory. Example: Sugar-frosted corn flakes, Maple syrup corn flakes, Plain corn flakes, plain buckwheat flakes, etc.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Breakfast cereals subcategories & definitions

#### > Other breakfast cereals

Category code : 1

Subcategory code	Subcategory	Definition
134	Chocolate and caramel cereals	Unfilled cereals with caramel and chocolate. They are usually extruded or puffed. Muesli is excluded from this subcategory. For example: Caramel and chocolate cereal mix, Caramel and powdered chocolate puffed cereals, etc.
135	Chocolate flavoured cereals	Cereals with chocolate or cocoa, without filling. They may or may not be mixed with filled cereals (with non-filled cereals in the majority). They are usually extruded or puffed. Chocolate-coated cereal flakes are excluded from this subcategory. Example: Chocolate puffed rice, Chocolate corn flakes, Crispy cocoa cereal rings, etc.
138	Filled cereals	Cereals filled with chocolate, milk, hazelnut, caramel, vanilla, etc. They may be mixed with unfilled cereals (with filled cereals in the majority). Example: Cereals with milk filling, Cereals with vanilla filling, Cereals with chocolate filling, etc.
142	Honey/caramel cereals	Cereals coated with honey, caramel or any other sweetening ingredient (sugar, cane sugar, sugar syrup, glucose syrup, agave syrup, rice syrup). These are neither chocolate nor filled products. May contain nuts. Muesli and cereal flakes are excluded from this subcategory. Sweet puffed cereals like "Rice Krispies" are included in this subcategory. Example: Puffed wheat with honey, Corn balls with honey, Puffed rice with agave syrup, Caramel-coated puffed wheat, Cereal rings with a fruity taste, etc.
17	Other ready-to-eat cereals	Other ready-to-eat cereals. Examples: ketogranola (granola without cereals), porridge with vegetables, etc.

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

# Delicatessen meats and similar (5)

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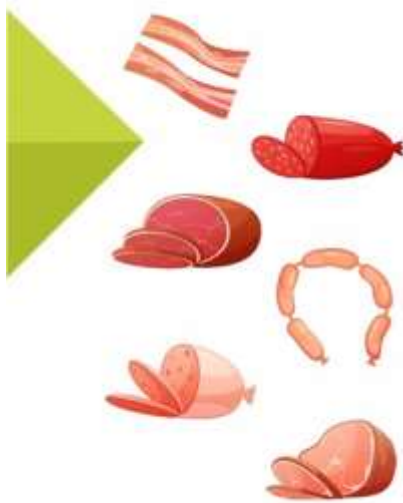


**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Delicatessen meats and similar (5)

➤ **What kind of product can be considered as delicatessen meats and similar ?**

**Delicatessen meats and alternative meat-free products (containing tofu, soy, etc.), found in the room-temperature, chilled and frozen, pre-packed sections (excluding foods cut to order)**



- ✓ Cooked ham and shoulder, ham knuckle, roast poultry or pork, etc.
- ✓ Raw-cured ham, dry-cured ham
- ✓ Sausages, cooked sausages, sausage specialities, chorizo, dry sausages, etc.
- ✓ Pâté, country-style pâté, duck mousse, pork liver mousse or terrine, etc.
- ✓ Lardons
- ✓ Pork belly and bacon
- ✓ Boudin (white or blood sausage), uncooked andouille and andouillette (chitterling sausage)
- ✓ Sausage specialities such as chipolatas, merguez, coarse minced sausages (Morteau, Montbéliard, etc.)
- ✓ Dried, smoked or cured meats (Coppa, Alsatian Kassler, Corsican Lonzu, Bündnerfleisch, Bresaola, etc.)
- ✓ Corned beef, corned lamb, etc. (canned or not)
- ✓ Preserved uncooked meat (such as canned sausages)
- ✓ Alternative meat-free products (containing tofu, soy, etc.)

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Delicatessen meats and similar (5)

➤ **What is excluded from the Delicatessen meats and similar category ?**

- Delicatessen meats in pastry
- Delicatessen meat products included in complete dishes (such as sauerkraut, cassoulet, couscous, etc.)
- Canned cooked meats (meats cooked in sauce, special meat recipes, etc.)
- Foie gras
- Gizzards and poultry livers
- Delicatessen meat assortments with cheese



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Delicatessen meats and similar

➤ **Hams and roasts**

Category code : 5

Subcategory code	Subcategory	Definition
742	Cooked pork ham and roast (packaged)	Cooked pork ham and roast, plain, smoked, golden baked, with herbs, etc. in slices or in the form of dice/cubes, matchsticks, grated ham, chopped ham. Cooked ham knuckle, all qualities combined. Contains similar products reduced in salt.
332	Poultry ham and roast (packaged)	Poultry breast or fillet, plain or smoked, golden baked, with herbs, mustard, etc. Poultry roast, poultry breast, cooked poultry meat preparations, in slices or in the form of dice/cube, matchsticks, grated, chopped. Contains similar products reduced in salt.
333	Cured ham:	Dry-cured ham or raw cured ham Example: Prosciutto, Serrano ham, Iberian ham, Speck, etc. Contains similar products reduced in salt.

➤ **Cured meats**

Subcategory code	Subcategory	Definition
628	Dried, smoked or cured pork	Dried, smoked or cured pork (coppa, Alsatian Kessler, Corsican Lonzu and other regional specialities of this type). Contains similar products reduced in salt.
629	Dried, smoked or cured beef	Dried, smoked or cured beef (Bündnerfleisch, bresaola), including halal dry sausages and similar halal products made from beef. Contains similar products reduced in salt.
632	Other cured meats	Dried meat other than pork or beef. Veal bacon and poultry bacon are included in this subcategory. Contains similar products reduced in salt.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Food category : Delicatessen meats and similar

#### > Sausages and similar

Category code : 5

Subcategory code	Subcategory	Definition
795	Sausages	All types of sausages. Sausages with smooth homogeneous filling, from pork or other meat (poultry, beef, ...) like sausages from Alsace, Strasbourg or Frankfurt, cocktail sausages, sausages with cheese inclusions, Saveloy, sausages for slicing with smooth homogeneous filling (roulades), fine Lyon sausages, cooked sausages with garlic, Paris sausages, Mortadella, with or without pistachios. Sausage specialties such as chipolatas, merguez or sausages with Provençal herbs, coarse minced sausages (Mortesi, Montbiéland, etc.). Cachir sausages are included in this subcategory. Contains similar products reduced in salt.
520	Dry sausage	Pork dry-cured sausages with or without inclusions (dried fruit, cheese, olives, etc.), salami, danish salami. Specialties made with 100% ham: specialties of sausage, chorizo, dry-cured ham sausage. Does not contain pepperoni. Contains similar products reduced in salt.
634	Pepperoni	Cured mixture of pork and beef seasoned with paprika or other chili pepper. Contains similar products reduced in salt.
168	Chorizo	Chorizo (sliced or unsliced). Contains similar products reduced in salt.

#### > Cooked meats

Subcategory code	Subcategory	Definition
1	Cooked lamb (packaged)	Cooked lamb packaged in trays or packs or canned. Contains similar products reduced in salt.
90	Cooked beef (packaged)	Cooked beef packaged in trays or packs or canned. Example: corned beef, etc. Contains similar products reduced in salt.
50	Other cooked meats (packaged)	Other cooked meats (packaged or canned). Contains similar products reduced in salt.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Food category : Delicatessen meats and similar

#### > Other delicatessen meats

Category code : 5

Subcategory code	Subcategory	Definition
753	Pork belly and bacon (packaged)	Belly, country bacon, pancetta, lardons or matchsticks (allumettes) made from cured pork belly or cuts, slices or matchsticks of pork bacon. Contains similar products reduced in salt.
342	Poultry lardons	Lardons or matchsticks made from poultry meat. Contains similar products reduced in salt.
743	Pâté	Country-style pâté, with or without mushrooms or herbs. Superior country-style pâté, country terrine, Breton pâté or terrine, with mushrooms or herbs. Pork liver pâté, mousse, terrine or cream, with or without mushrooms and herbs. Pâté or terrine made from game, with or without inclusions (dried fruit, chestnuts, etc.). Pork-based pâté: ham pâté, meat pâté, Ardennes pâté. Pâté or terrine made from poultry (duck, turkey, chicken) or rabbit, with or without inclusions, containing pork. Pork rillettes. Other pork delicatessen specialties similar to rillettes. Chicken, duck or goose rillettes, scratchings (may contain pork). Other poultry-based delicatessen specialties similar to rillettes. Duck mousse of superior quality or not, with or without mushrooms and herbs, regardless of the liver content. Contains similar products reduced in salt.
690	Boudin and boudin de andouillette	Boudin (white or blood sausage), uncooked and boudin and andouillette (chitterling sausage). Contains similar products reduced in salt.
631	Alternative products without animal protein	Alternative products without animal protein (containing tofu, soy, etc.). These products may contain vegetables. Contains similar products reduced in salt.
177	Preserved pork or poultry liver (canned)	Confit of poultry or pork liver. Contains similar products reduced in salt.
740	Assortment of delicatessen meats	Assortment of different delicatessen meats with average nutritional values for all the assortment components and consisting of products not belonging to the same subcategories. Contains similar products reduced in salt.
244	Other delicatessen meats based on offal	Other delicatessen meats based on offal: cooked tongue, cooked muscle, etc. Contains similar products reduced in salt.

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

# Fresh dairy products and desserts (3)

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

Food category : Fresh dairy products and desserts (3)

➤ What kind of product can be considered as a fresh dairy product and dessert ?

→ Dairy products and desserts to be stored chilled



- Yoghurts and drinkable yoghurts
- Fresh cheeses (Quark, skyr, ...)
- Dessert creams, custards, jellied milks, *crèmes brûlées*, flans, floating islands
- Rice puddings
- Fresh-plant based desserts
- Fresh mousse-type desserts
- Fresh cakes, fresh pastries
- Fresh dairy-based desserts (*tiramisu*, cheesecake, *clafoutis*, *profiteroles*, *rum baba* ...)
- Panna Cotta
- Curdled milks

2021. 06. 02.

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Fresh dairy products and desserts (3)

➤ What is excluded from the fresh dairy products and desserts category ?



- Milk, butter, fresh cream
- Cheeses (ricotta, mascarpone, cottage cheese, cream cheese and similar\*)
- Frozen pastries and desserts
- Dairy products to be stored at room temperature

\*However, some of them can be used in fresh desserts' recipes (tiramisu, cheesecake ...)

2021. 06. 02.



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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Fresh dairy products and desserts subcategories & definitions

Category code : 3

Subcategory code	Subcategory	Definition
E12	Classic plain yoghurts and fermented milks with no added sugar	Unsweetened plain yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, with a fat content ≥3.6g/100g. Do not contain artificial sweetener
E13	Gourmet plain yoghurts and fermented milks with no added sugar	Unsweetened plain yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt with a fat content >3.6g/100g, mainly due to the addition of cream. Do not contain artificial sweetener
E14	Classic sweet yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, sweetened without artificial sweetener and with a fat content ≥3.6g/100g. Groups together plain or flavoured products and also those containing fruits, on a bed of fruits, with inclusions of chocolate/caramel/biscuits/cereal, etc. Contains drinkable dairy products with or without ferments
E15	Gourmet sweet yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, sweetened without artificial sweetener and with a fat content >3.6g/100g, mainly due to the addition of cream. Groups together plain and flavoured products and also those containing fruits, on a bed of fruits, with inclusions of chocolate/caramel/biscuits/cereal, etc.
E11	Artificially-sweetened yoghurts and fermented milks	Yoghurts, fermented milks and equivalent products such as dairy specialities/dairy desserts made with ferments or yoghurt, and containing artificial sweeteners regardless of the fat content, with or without sugar. Contains drinkable dairy products with or without ferments
249	Classic plain fresh cheeses with no added sugar	Plain and unsweetened fresh cheeses, smooth fromages blancs, faisselles, quark, skyr and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/fresh cheeses, with a fat content ≥3.8g/100g. Do not contain artificial sweetener
250	Gourmet plain fresh cheeses with no added sugar	Plain and unsweetened fresh cheeses, smooth fromages blancs, petits suisses, faisselles, quark, skyr, fresh cheeses with mousse, fromage blanc/fresh cheese mousses and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/fresh cheese and with a fat content >3.8g/100g, mainly due to the addition of cream. Do not contain artificial sweetener
719	Classic sweetened fresh cheeses	Sugar-sweetened (without artificial sweetening)/fresh cheeses, smooth fromage blanc, quark, skyr and equivalent products such as dairy specialities/dairy desserts based on ferments or fromage blanc/fresh cheese, with a fat content ≥3.8g/100g. Includes plain and flavoured products, with fruit, on a bed of fruit, etc.
252	Gourmet sweet fresh cheeses	Sweetened fresh cheeses, smooth fromages blancs, quark, skyr, fresh cheeses with mousse, fromage blanc/fresh cheese mousses and equivalent products such as dairy specialities/dairy desserts made with ferments or fromage blanc/fresh cheeses and with a fat content >3.8g/100g, mainly due to the addition of cream. Do not contain artificial sweetener. Groups together plain and flavoured products but also those containing fruits, on a bed of fruit, with inclusions of chocolate/caramel/biscuit/cereal, etc.
708	Artificially-sweetened fresh cheeses	Artificially-sweetened fresh cheeses, quark, skyr and equivalent products such as dairy specialities/dairy desserts based on ferments or fromage blanc/fresh cheese, irrespective of fat content. May contain artificially-sweetened and sugar-sweetened products



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fresh dairy products and desserts subcategories & definitions

Category code : 3

Subcategory code	Subcategory	Definition
712	Fresh plain unsweetened soy desserts	Includes all plain unsweetened soy desserts
711	Fresh sweetened soy desserts	Includes all sweetened soy desserts, regardless of the flavour (plain, fruit, chocolate, vanilla, etc.)
713	Other fresh plant-based desserts	Includes all plant-based dessert other than those with soy, whether sweetened or not, with or without cereals
215	Fresh desserts with cereals	Groups together fresh desserts such as all rice milk puddings (vanilla, caramel, chocolate, on a bed of strawberry, etc.), semolina milk puddings, as well as rice and semolina cakes. Groups together products with or without inclusions (of grapes, coconut, etc.), with or without topping.
216	Egg-based fresh desserts	Egg-based dessert such as egg creams, crèmes caramel, egg custards, floating islands, œufs au lait, crèmes brûlées and catalan creams
218	Fresh light and/or artificially-sweetened desserts	Groups together all products in the fresh desserts category containing artificial sweeteners and/or a nutrition claim about reduction, low or no fat and/or sugar according to Regulation (EC) No 1924/2006
709	Dessert creams and jellied milks	Groups together fresh desserts based on jellied milk or thickened milk without ferment, such as flan or dessert creams, regardless of the flavour (chocolate, vanilla, coffee, brownie, with fruit, on a bed of fruit, etc.)
710	Liégeois desserts and similar	Groups together fresh desserts with "Liégeois" or "Viennese" on the front of the packaging as well as equivalent products based on dessert cream topped with a layer of whipped cream/mousse. Liégeois mousses and equivalent products such as mousse topped with whipped mousse/cream are not included in this subcategory

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## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Fresh dairy products and desserts subcategories & definitions

Category code : 3

Subcategory code	Subcategory	Definition
714	Fresh cakes	Groups together fresh desserts sold in the chilled food section such as brownies, cakes, fondants, moist cakes with melting centres (regardless of the filling), rum bûche, clafoutis, etc.
715	Fresh desserts with fruit	Groups together products such as pastry desserts or fresh dairy-based desserts made up of layers consisting of a cooked base (pastry, bûche, genoise sponge) combined with creams and/or mousses and containing fruit (see fruit, fruits, puree, purée) (example: bavaise, fruit cheesecake, fruit tiramisu/tart/crumble, fruit Charlotte, Black Forest gâteau, fraise or framboise cake)
716	Fresh desserts without fruit	Groups together products such as pastry desserts or fresh dairy-based desserts made up of layers consisting of a cooked base (pastry, bûche, genoise sponge, choux pastry) combined with creams and/or mousses and not containing fruit (example: cheesecake without fruit/tiramisu without fruit/chocolate tart/profferole)
718	Fresh mousse-type desserts	Groups together mousses of all flavours (chocolate, coffee, caramel, fruit, etc.), including Liégeois mousses and mousses with sauces. May contain eggs. Does not include mousses with fromage blanc/fresh cheese and mousses with ganache.
720	Curdled milks	Includes fresh dairy desserts (other than fresh cheeses) based on renneted milk
917	Other fresh desserts	Groups together fresh desserts other than dessert creams, jellied milk, Liégeois desserts, curdled milks, mousses, egg- or cereal based desserts, cakes and pastry desserts. Contains for example panna cotta, mousses with ganache, fruit/fruit-puree topped with whipped cream, Fresh toast, etc.
35	Other dairy products	Other dairy products

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

# Soft drinks (9)

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**

Food category : Soft drinks (9)

➤ What kind of product can be considered as a soft drink ?



- Fruit or vegetable beverages
- Flavoured milk beverages
- Plant-based beverages
- Flavoured waters
- Colas
- Tea beverages
- Sport drinks
- Energy drinks
- Tonics and bitter
- Alcohol-free beers
- Aperitif beverages
- Instant drinks (powders)



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Food category : Soft drinks (9)

➤ What is excluded from the soft drink category ?



- Fruit juices
- Fruit juices from concentrate
- Nectars
- Syrups and concentrated liquids for instant drinks (Sodastream, ...)

	Fruit juices	Fruit juices from concentrate	Nectars
Fruit content	100%	100%	25-50% minimum
<b>Allowed / Prohibited ingredients</b>			
Vitamins & minerals	Yes	Yes	Yes
Pulp	Yes	Yes	Yes
Lemon juice (for acidification)	Yes	Yes	Yes
Added sugars	No	No	Yes
Preservative and coloring agents	No	No	No

2021.06.02



According to the definitions from *DIRECTIVE 2012/12/EU relating to fruit juices and certain similar products intended for human consumption*



## WORK Package 5 - GUIDELINES FOR CLASSIFICATION

### Soft drink subcategories & definitions

Category code : 9

Subcategory code	Subcategory	Definition
35	Fruit beverages with fruit content > or = 50%	Product with a combined fruit juice and purée content ≥ 50%. Possible presence of coconut (not considered as a fruit), milk, tea and cereals in lower proportions than the fruit(s). This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.
645	Fruit beverages without added sugar	Beverages with or without artificial sweetening, carbonated or not, containing fruit juice and/or purée (with/without vegetable(s)) in quantities < 50%, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.
646	Sugar-sweetened and artificially-sweetened fruit beverages	<b>Artificially-sweetened</b> beverages, carbonated or not, containing fruit juice and/or purée (with/without vegetable(s)) in quantities < 50%, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.
647	Sugar-sweetened fruit beverages	Beverages <b>without artificial sweetening</b> , carbonated or not, containing fruit juice and/or purée (with/without vegetable(s)) in quantities < 50%, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Possible presence of milk (of animal or vegetable origin) and cereals in lower proportions than the fruit(s). Does not contain products with stimulant ingredients (tea, taurine, guarana, coffee, etc.) or quinine. Instant drinks fitting that definition are included in this subcategory.
39	Vegetable beverages	Beverages containing at least one vegetable (e.g. carrot) and with a vegetable and/or fruit juice and purée content > 50% and which include the term vegetable(s) in their sale description. Possible presence of coconut and tea. This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.
644	Flavoured milk beverages	<b>Flavoured</b> (chocolate, coffee, strawberry, etc.) drinks containing milk (of animal origin) whose sales description indicates milk drink or flavoured milk. This subcategory includes sugar-sweetened, artificially-sweetened and unsweetened products.
648	Plant-based beverages without added sugar	Beverages with or without artificial sweetening, flavoured or not, with cereals (rice, oats, spelt, buckwheat, millet, etc.), oilseeds (almonds, hazelnuts, cashew nuts, hemp, etc.) and/or pulses (soy). Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes coconut milk, coconut milk/coconut water mixtures, and plant-based beverages containing tea or fruits (in lower proportions of fruits juice or purée than plant-based beverage). Does not contain products such as birch or maple water or sap, sugar cane juice, herbal infusions.


**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**
**Soft drink subcategories & definitions**
**Category code : 9**

Subcategory code	Subcategory	Definition
648	Sugar-sweetened plant-based beverages	Beverages with or without artificial sweetening, flavoured or not, with cereals (rice, oats, spelt, buckwheat, millet, etc.), oilseeds (almonds, hazelnuts, cashew nuts, hemp, etc.) and/or pulses (soy). Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes coconut milk, coconut milk/coconut water mixtures, and plant-based beverages containing tea or fruits (in lower proportions of fruits juice or purée than plant-based beverage). Does not contain products such as birch or maple water or sap, sugar cane juice, herbal infusions.
650	Flavoured waters without added sugar	Flavoured waters with or without artificial sweetening, carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products without juice or ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.
651	Flavoured sugar-sweetened and artificially-sweetened waters	Flavoured artificially-sweetened waters, carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products containing no juice but with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.
652	Flavoured sugar-sweetened waters	Flavoured waters without artificial sweetening, carbonated or not, and beverages whose name or sales description indicates ginger beer or root beer. Products containing no juice but with at least one ingredient such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Instant drinks fitting that definition are included in this subcategory.
653	Colas without added sugar	Cola-flavoured beverages with or without artificial sweetening, with or without additional flavouring and/or mentioning cola in the name or sales description. Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).
654	Sugar-sweetened and artificially-sweetened colas	Cola-flavoured artificially-sweetened beverages, with or without additional flavouring and/or mentioning cola in the name or sales description. Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).
655	Sugar-sweetened colas	Cola-flavoured beverages without artificial sweetening, with or without additional flavouring and/or mentioning cola in the name or sales description. Products containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive).

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**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**
**Soft drink subcategories & definitions**
**Category code : 9**

Subcategory code	Subcategory	Definition
656	Tea beverages without added sugar	Beverages with or without artificial sweetening, with tea or maté extracts, carbonated or still, flavoured or not, without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.
657	Sugar-sweetened and artificially-sweetened tea beverages	Artificially-sweetened beverages, with tea or maté extracts, carbonated or still, flavoured or not, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.
658	Sugar-sweetened tea beverages	Beverages without artificial sweetening, with tea or maté extracts, carbonated or still, flavoured or not, with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Does not include products containing plant-based milk and containing tea or tea beverages with at least 50% fruit. Instant drinks fitting that definition are included in this subcategory.
659	Other sports drinks	Artificially-sweetened beverages whose nutritional composition is particularly adapted to physical exertion, which may contain one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Also includes beverages without artificial sweetening and without ingredients such as mono- and disaccharides, syrup, honey, caramel (not used as an additive).
660	Sugar-sweetened sports drinks	Beverages without artificial sweetening, containing one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive) and whose nutritional composition is particularly adapted to physical exertion.
662	Energy drinks without added sugar	Beverages with or without artificial sweetening, containing one or more stimulant ingredient(s) (caffeine, taurine, guarana, etc.) but without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). Contains products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.
663	Sugar-sweetened and artificially-sweetened energy drinks	Artificially-sweetened beverages containing one or more stimulant ingredient(s) (caffeine, taurine, guarana, etc.) and one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). May contain products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.
664	Sugar-sweetened energy drinks	Beverages without artificial sweetening, containing one or more stimulant ingredient(s) (caffeine, taurine, guarana, etc.) and one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), syrup, honey, caramel (not used as an additive). May contain products with tea in addition to a stimulant ingredient, but does not contain coffee and milk beverages (animal milk or plant-based beverages) or colas.


**WORK Package 5 - GUIDELINES FOR CLASSIFICATION**
**Soft drink subcategories & definitions**
**Category code : 9**

Subcategory code	Subcategory	Definition
665	<b>Tonics and bitters without added sugar</b>	Beverages with or without artificial sweetening, carbonated or not, bitter, flavoured or not, containing <b>quinine</b> and/or <b>quassin</b> (quassia) but no ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).
666	<b>Sugar-sweetened and artificially-sweetened tonics and bitters</b>	<b>Artificially-sweetened</b> beverages, carbonated or not, bitter, flavoured or not, containing <b>quinine</b> and/or <b>quassin</b> (quassia) as well as one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).
667	<b>Sugar-sweetened tonics and bitters</b>	Beverages without artificial sweetening, carbonated or not, bitter, flavoured or not, containing <b>quinine</b> and/or <b>quassin</b> (quassia) as well as one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Does not include quinine-based aperitif beverages (e.g. Palermo).
668	<b>Alcohol-free beers without added sugar</b>	Beverages with or without artificial sweetening, flavoured or not, containing <b>hops, malt or barley</b> , without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive) and/or mentioning alcohol-free beer or shandy/coolers in its name or sales description. Does not contain ginger beer or root beer.
669	<b>Sugar-sweetened alcohol-free beers</b>	Beverages with or without artificial sweetening, flavoured or not, containing <b>hops, malt or barley</b> , with one or more ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive) and/or mentioning alcohol-free beer or shandy/coolers in its name or sales description. Does not contain ginger beer or root beer.
670	<b>Aperitif beverages without added sugar</b>	<b>Alcohol-free aperitif or cocktail beverages, still or sparkling beverages based on de-alcoholised wine, aniseed</b> without dilution using or <b>genian</b> beverages, as well as <b>sparkling beverages imitating alcoholic beverages</b> consumed as an aperitif. Products that may be artificially-sweetened but do not contain ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive).
671	<b>Sugar-sweetened aperitif beverages</b>	<b>Alcohol-free aperitif or cocktail beverages, still or sparkling beverages based on de-alcoholised wine, aniseed</b> without dilution using or <b>genian</b> beverages, as well as <b>sparkling beverages imitating alcoholic beverages</b> consumed as an aperitif. Products that may be artificially-sweetened and containing one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive).
672	<b>Other beverages without added sugar</b>	Beverages with or without artificial sweetening, flavoured or not, such as coconut water, birch or maple water or sap, sugar cane juice, herbal infusions <b>without fruit juice</b> (hibiscus, aloe vera, rooibos, basil, etc.). Products without ingredients such as mono- and disaccharides (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Instant drinks fitting that definition are included in this subcategory.
673	<b>Other sugar-sweetened beverages</b>	Beverages with or without artificial sweetening, flavoured or not, such as coconut water, birch or maple water or sap, sugar cane juice, herbal infusions <b>without fruit juice</b> (hibiscus, aloe vera, rooibos, basil, etc.). Products containing one or more ingredients such as <b>mono- and disaccharides</b> (sucrose, glucose, fructose, fruit sugar, etc.), <b>syrup, honey, caramel</b> (not used as an additive). Instant drinks fitting that definition are included in this subcategory.


**Best-ReMaP**  
 Healthy Food for a Healthy Europe

**Thank you for your attention!**
**The Joint Action focusing on the implementation of validated best practices in nutrition – Best-ReMap**

This presentation arises from the Joint Action Best-ReMap. This Joint Action is addressing the adaption, replication and implementation of effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings, under the framework of the Third Health Programme (2014-2020). Sole responsibility lies with the author and the Consumers, Health, Agriculture and Food Executive Agency is not responsible for any use that may be made of in the information contained therein.

Annex 20 : Guidelines for food purchasing



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for food purchasing

HOW TO COLLECT THE DATA

Food purchasing

- If it is not possible to take pictures of the products in the shop (refusal of authorization to take pictures by the retailers), it might be possible to buy the products to be collected.



The purchase of the products to be collected must be done as a **last resort** after having tried everything to take pictures directly in the shops (request for authorization, intervention from a higher hierarchical level, etc.).

The purchase of food requires much more complex collection logistics than taking photos.





## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for food purchasing

### HOW TO COLLECT THE DATA

#### Food purchasing

##### *Prior information*

##### → **Budget**

- Any expenditure on product purchases will be deducted from the total budget allocated to WP5 for your institution.
- Written proof (invoice) must be kept for all product purchases and should be forwarded to the project coordination team.
- For any question related to budget or reimbursement, contact [Best.Remap@nijz.si](mailto:Best.Remap@nijz.si)

The budget is **not sufficient** to purchase **all** the products that need to be collected. The purchase of products comes **in addition** to the traditional method (taking pictures of the products directly in the shop) to complete the collection.

2023. 03. 23.



3



## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for food purchasing

### HOW TO COLLECT THE DATA

#### Food purchasing

##### *Prior information*

##### → **Redistribution of food**

- In order to avoid food waste, the products purchased will have to be redistributed. A donation of these products to a charity seems to be a good idea.



As the **cold chain** must be respected for the redistribution of products, we advise you to buy products that can be stored in the ambient shelves (products in the categories: *Breakfast cereals, Soft drinks and Bread products*).

For products in the categories *Delicatessen meats and similar and Fresh dairy products and desserts*, it is preferable to take pictures as this is less restrictive for redistribution.

2023. 03. 23.



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for food purchasing

HOW TO COLLECT THE DATA

Food purchasing

*Product collection*

- Taking pictures in the shop possible:
  - take pictures of products directly in the shop
  
- Restriction on taking pictures in the shop :
  - buy the product
  - bring it back to your office
  - take pictures of the product to get the information of interest
  - redistribution of the product

It is **imperative to avoid duplicates** in a case of collection with product purchase to optimize the budget. A **close monitoring** of products already collected must be done to ensure that the same product is not collected twice. For this purpose, you need to assign numbers to the pictures and **start entering the information** describing the product in the template **during collection** to avoid buying a product already collected.

2023.03.23.



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WORK Package 5 – Reformulation and processed food monitoring

Guidelines for food purchasing

HOW TO COLLECT THE DATA

Food purchasing

*Product collection*

Diagram for the collection of the **5 food categories** in the first **2** (largest) shops



2023.03.23.



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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for food purchasing

### HOW TO COLLECT THE DATA

#### Food purchasing

##### *Product collection*

###### 3<sup>rd</sup> shop and more

Taking pictures possible

→ take pictures of **retailer brands products only** for the 5 food categories.

###### 3<sup>rd</sup> shop and more

Restrictions on taking pictures

→ Collect as much as possible by taking pictures directly in the shop but if this is too complicated collect **only retailer brand products** for the 5 food categories by **purchasing them**.



The budget does not allow to buy all the products in all the shops. It is imperative to take pictures in the shops as much as possible.

Definitions of the different retailers and brands can be found **page 49** on the document « *Guidelines for data entry and encoding* ».

2023. 03. 23.



Co-funded by the European Union's  
Health Programme (2014-2020)

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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for food purchasing

### HOW TO COLLECT THE DATA

#### Food purchasing

##### *Product collection*

To summarize :

1st shop  
and  
2nd shop

- **Pictures possible** : Collect **national** brand products in **both** shops + **retailer** brand products in **both** shops
- **Restrictions on taking pictures** : Collect **national** brand products in **only one** shop (1st or 2nd) + collect **retailer** brand products in **both** shops

3rd shop  
and more

- **All cases** : Collect **only retailer** brand products in all shops

Definitions of the different retailers and brands can be found **page 49** on the document « *Guidelines for data entry and encoding* ».

2023. 03. 23.



Co-funded by the European Union's  
Health Programme (2014-2020)

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## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for food purchasing

### HOW TO COLLECT THE DATA

#### Food purchasing

##### *Product collection*

##### Important points:

- Always take pictures** instead of purchasing **when possible**
- Give priority to **taking pictures** of products that are stored **chilled or frozen** (food categories : *Delicatessen meats and similar, Fresh dairy products and desserts*)
- The **purchase** of products should preferably be done for products that are stored in the **ambient** shelves (food categories: *Breakfast cereals, Soft drinks, Bread products*)
- Follow closely** the products already collected (either by picture or by purchase). You need to assign numbers to the pictures and start entering the information describing the product in the template during collection to avoid buying a product already collected.
- Proceed **food category by food category** when collecting to have a clearer view of the products already collected and those that will have to be purchased to complete the collection.

2023. 03. 23.



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**Best-ReMaP**  
Healthy Food for a Healthy Future

## Thank you for your attention!

ANSES
[wp5\\_bestremap@anses.fr](mailto:wp5_bestremap@anses.fr)

The Joint Action focusing on the implementation of validated best practices in nutrition – Best-ReMaP

This presentation arises from the Joint Action Best-ReMaP. This JA is addressing the adaption, replication and implementation of effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings. This presentation was funded by the European Union's Health Programme (2014-2020). The content of this presentation represents the views of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the Consumers, Health, Agriculture and Food Executive Agency (CHA/FEA) or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.

Annex 21 : Guidelines for data treatment and analysis for a first snapshot (T0)



WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data treatment and analysis for a first snapshot (T0)

**1) Introduction** [\(page 3\)](#)

**2) Installation of the necessary equipment and presentation of the Rstudio software** [\(page 6\)](#)

- A. Preliminary steps [\(page 7\)](#)
- B. Installation of software [\(page 29\)](#)
- C. Introduction to R studio [\(page 41\)](#)
- D. Cleaning of the Rstudio interface [\(page 52\)](#)

**3) Running of the programs** [\(page 59\)](#)

- A. Part 1: R setup program [\(page 68\)](#)
- B. Part 2: Verification programs and template cleaning/standardization [\(page 78\)](#)
  - i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1' [\(page 80\)](#)
  - ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2' [\(page 109\)](#)
  - iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3' [\(page 133\)](#)
- C. Part 3 : Indicators and statistics production program [\(page 157\)](#)



## WORK Package 5 – Reformulation and processed food monitoring

### 1) Introduction



3



## WORK Package 5 – Reformulation and processed food monitoring

### Summary of the steps for data treatment and analysis



**It is important to finish each step before moving on to the next**

- **The data entry and encoding of the collected data must be fully completed before starting the steps 2 and 3.**
- **Steps 2 and 3** will be done by data processing programs on the Rstudio software which is a free software and therefore accessible to all. The programs have already been created and written in order to harmonise the work. You will just need to run the programs on your data (you will not have to create any programs).



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## WORK Package 5 – Reformulation and processed food monitoring

### Equipment needed

Tools you  
already  
have

- **T0 collection template** : template that you filled in according to the WP5 methodology during your T0 data collection and with data for the 5 priority food categories.
- **Pictures of the products** that you have collected for your T0 data collection

Tools you will  
have to  
download  
(explanation  
[page 29](#))

- **R, Rstudio** : Free statistical software that you will use to check and correct the data entered in your template and to perform indicators/statistics on your data
- **WP5 R programs** : R programs created by Anses that you will just have to run on the Rstudio software (you will be guided at each step, you will not have to create programs or develop code).
- **WP5 verification file**: file that you will have to download and save in .csv format as it will be used in the R program. This file does **not have to be filled in or modified**, it is a support document for R programs but it must be available on your computer.

The **WP5 R programs** and **WP5 verification file** are available in a **zip folder** on the project intranet by following this link:  
[https://portal.nijz.si/ssf/a/c/p\\_name/ssf\\_forum/p\\_action/1/entityType/folderEntry/action/view\\_permalink/entryId/74848/ovl\\_urf/1](https://portal.nijz.si/ssf/a/c/p_name/ssf_forum/p_action/1/entityType/folderEntry/action/view_permalink/entryId/74848/ovl_urf/1)

You will need to copy this **folder** as it is on the desktop of your computer (this action is detailed in the [slide 27-28](#))



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## WORK Package 5 – Reformulation and processed food monitoring

### 2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps ([page 7](#))

B. Installation of software ([page 29](#))

C. Introduction to R studio ([page 38](#))

D. Cleaning of the Rstudio interface ([page 52](#))



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WORK Package 5 – Reformulation and processed food monitoring

2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps

B. Installation of software

C. Introduction to R studio

D. Cleaning of the Rstudio interface



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WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

**1<sup>st</sup> preliminary step : preparation of the T0 collection template** [\(page 9\)](#)

**2<sup>nd</sup> preliminary step : creation of the working folder** [\(page 27\)](#)



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## WORK Package 5 – Reformulation and processed food monitoring

### Preliminary steps

#### 1<sup>st</sup> preliminary step : preparation of the T0 collection template

- You must ensure that your T0 collection template is a **single file** with a **single tab** for all data collected during T0 (the 5 food categories in the same tab).
- Verifications/treatments on the data will only start once the template has been filled in **completely (when all products of the data collection have been entered in the template)**.
- As your T0 collection template contains many rows and drop-down menus, you will have to copy it into a **new .xlsx excel file** to keep only the filled rows and remove the drop-down menus.

see the following slides for a step-by-step explanation of this procedure

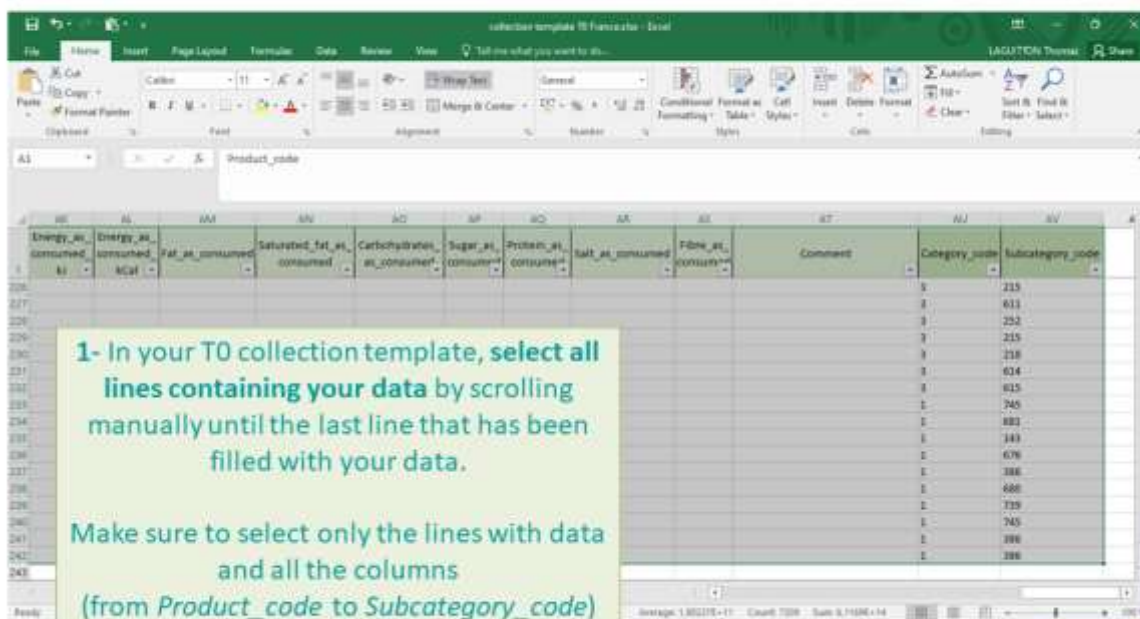


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## WORK Package 5 – Reformulation and processed food monitoring

### Preliminary steps



**1- In your T0 collection template, select all lines containing your data by scrolling manually until the last line that has been filled with your data.**

**Make sure to select only the lines with data and all the columns (from Product\_code to Subcategory\_code)**

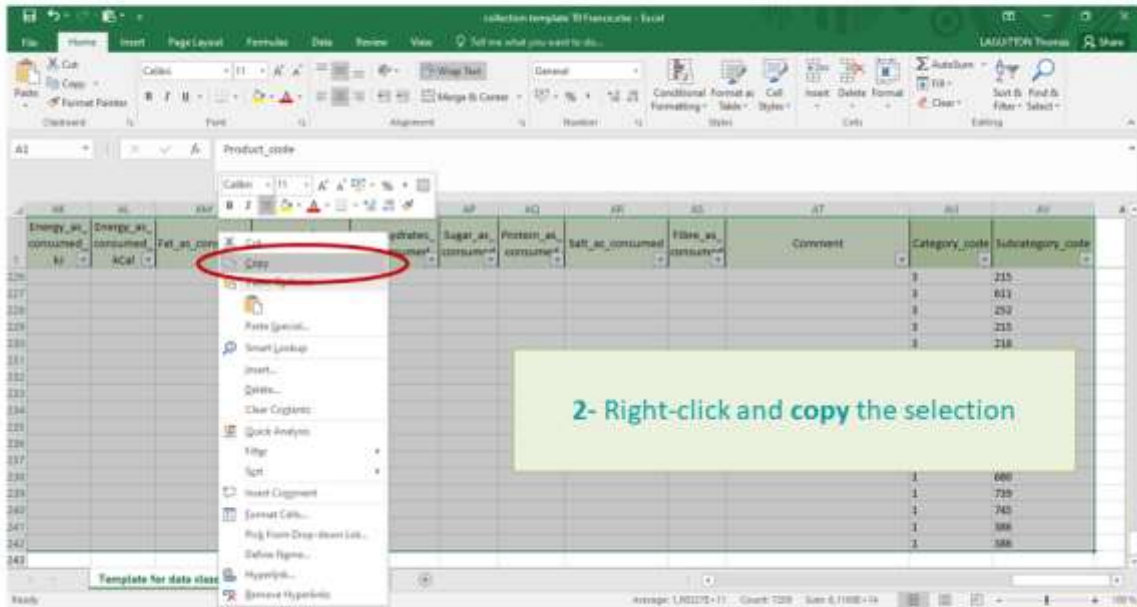


10



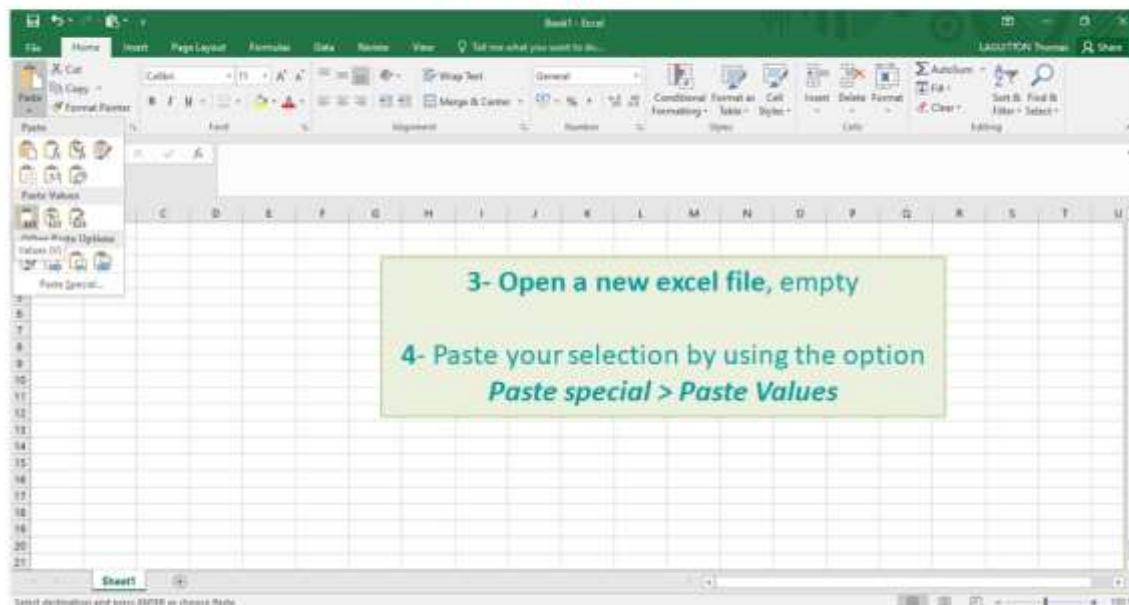
WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



WORK Package 5 – Reformulation and processed food monitoring

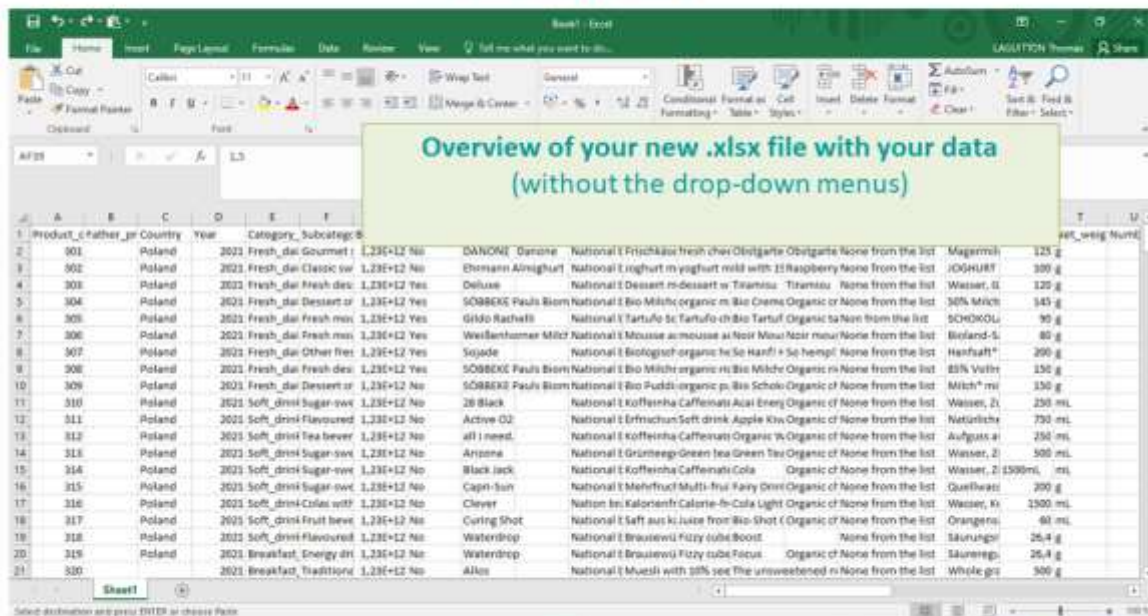
Preliminary steps





## WORK Package 5 – Reformulation and processed food monitoring

### Preliminary steps



Overview of your new .xlsx file with your data (without the drop-down menus)

Product_Cat	Product	Country	Year	Category_Subcategory	Energy	Protein	Fat	Carbohydrate	Sugar	Sodium	Trans Fat	Alcohol	Other	Brand	Manufacturer	Product Type	Weight	Unit	
1	301	Poland	2021	Fresh_dai Gourmet	1,230	12	No	DAWNOR	Garone	National	1	Frischkäse	Fresh	cheese	Obolgartse	Obolgartse	None from the list	Magermilch	125 g
2	302	Poland	2021	Fresh_dai Classic sw	1,230	12	No	Ethmann	Almighurt	National	1	oghurt	in yogurt	mild	with 15 Raspberry	None from the list	JOGHURT	300 g	
3	303	Poland	2021	Fresh_dai Fresh des	1,230	12	Yes	Deluxe		National	1	Dessert	in-dessert	in Tiramisu	Tiramisu	None from the list	Wasser, D	120 g	
4	304	Poland	2021	Fresh_dai Dessert or	1,230	12	Yes	SOBBEK	Pauls Biom	National	1	Bio Milchs	organic	in Bio Creme	Organic or None from the list	30% Milch	145 g		
5	305	Poland	2021	Fresh_dai Fresh mo	1,230	12	Yes	Grilo	Rachels	National	1	Tartufo	in	Tartufo ch	Bio Tartuf	Organic or None from the list	SCHOKOL	90 g	
6	306	Poland	2021	Fresh_dai Fresh mo	1,230	12	Yes	Weißbrot	Milch	National	1	Mousse	in-mousse	in Noir	Mou	Noir mou	None from the list	Biefand-S	80 g
7	307	Poland	2021	Fresh_dai Other fres	1,230	12	Yes	Sojade		National	1	Biologisc	organic	in So Hanf	in So hempf	None from the list	Hanfhaft	200 g	
8	308	Poland	2021	Fresh_dai Fresh des	1,230	12	Yes	SOBBEK	Pauls Biom	National	1	Bio Milchs	organic	in Bio Milchs	Organic or None from the list	83% Vollr	150 g		
9	309	Poland	2021	Fresh_dai Dessert or	1,230	12	No	SOBBEK	Pauls Biom	National	1	Bio Puddi	organic	in Bio Schoko	Organic of None from the list	Milch	mi	150 g	
10	310	Poland	2021	Soft_drink Sugar-ov	1,230	12	No	28	Black	National	1	Koffeinha	Caffeinati	Acai Ener	Organic of None from the list	Wasser, Z	250 ml		
11	311	Poland	2021	Soft_drink Flavoured	1,230	12	No	Active	O2	National	1	Erfrachn	Soft drink	Apple Kin	Organic of None from the list	Neturlich	750 ml		
12	312	Poland	2021	Soft_drink Tea bever	1,230	12	No	all	I need.	National	1	Koffeinha	Caffeinati	Organic or None from the list	Aufguss	a	250 ml		
13	313	Poland	2021	Soft_drink Sugar-ov	1,230	12	No	Arizona		National	1	Grüneep	Green tea	Green Tea	Organic of None from the list	Wasser, Z	500 ml		
14	314	Poland	2021	Soft_drink Sugar-ov	1,230	12	No	Black	Jack	National	1	Koffeinha	Caffeinati	Cola	Organic of None from the list	Wasser, Z	1500ml		
15	315	Poland	2021	Soft_drink Sugar-ov	1,230	12	No	Capri	Sun	National	1	Mehrfrau	Multi-fru	Fruy Drin	Organic of None from the list	Quelheat	200 g		
16	316	Poland	2021	Soft_drink Colas wtt	1,230	12	No	Clever		Nation	1	Kalorienf	Calorie-fr	Cola Light	Organic of None from the list	Wasser, K	3300 ml		
17	317	Poland	2021	Soft_drink Fruit beve	1,230	12	No	Curling	Shot	National	1	Saft aus Ki	Juice from Bio	Shot	Organic of None from the list	Orangens	40 ml		
18	318	Poland	2021	Soft_drink Flavoured	1,230	12	No	Waterdrop		National	1	Brausew	Fizy tube	Boost	None from the list	Säurung	25,4 g		
19	319	Poland	2021	Breakfast_Energy dri	1,230	12	No	Waterdrop		National	1	Brausew	Fizy tube	Focus	Organic of None from the list	Säurung	25,4 g		
20	320	Poland	2021	Breakfast_Tradition	1,230	12	No	Alles		National	1	Muesli	with 10%	see The unsweetened	in None from the list	Whole gra	300 g		



## WORK Package 5 – Reformulation and processed food monitoring

### Preliminary steps

#### 1<sup>st</sup> preliminary step : preparation of the T0 collection template

- Now you have an **.xlsx** file containing only the lines with your data and without the drop-down menus.  
You can rename it **T0 collection template country.xlsx** (with the name of your own country) for example.
- You must **make a copy** of this file (T0 collection template country.xlsx) and save it in **.csv** format under the name **T0\_data\_collection\_country.csv** (with the name of your own country)

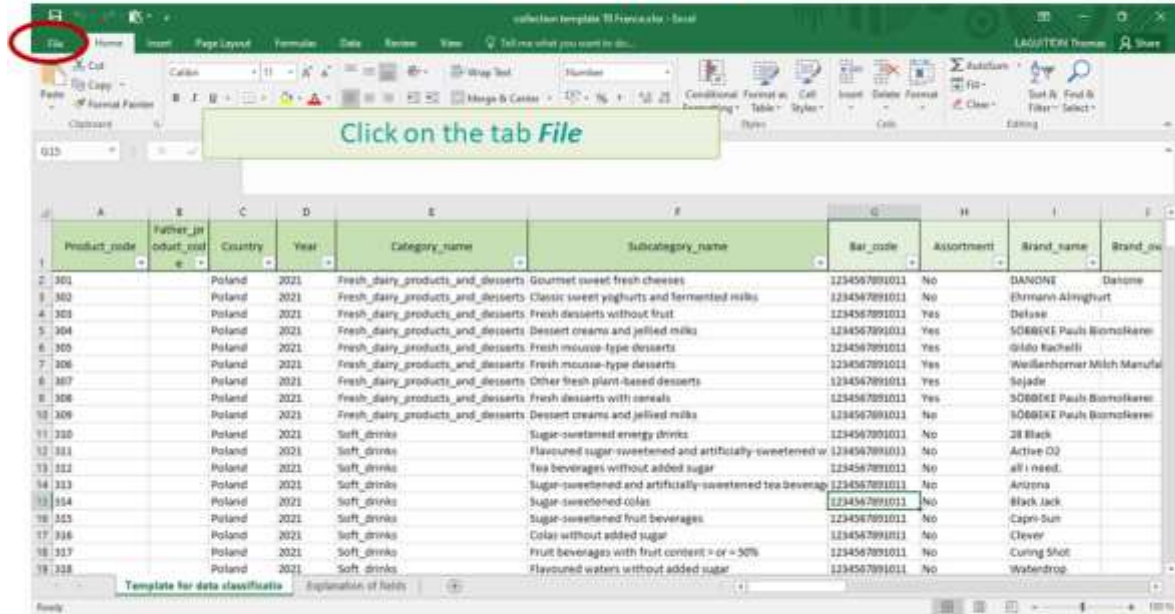
**The creation of this file in .csv format is very important because it is this file that will be used in the R software for the verification and indicator creation stages.**

*see the following slides for a step-by-step explanation of this procedure*



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

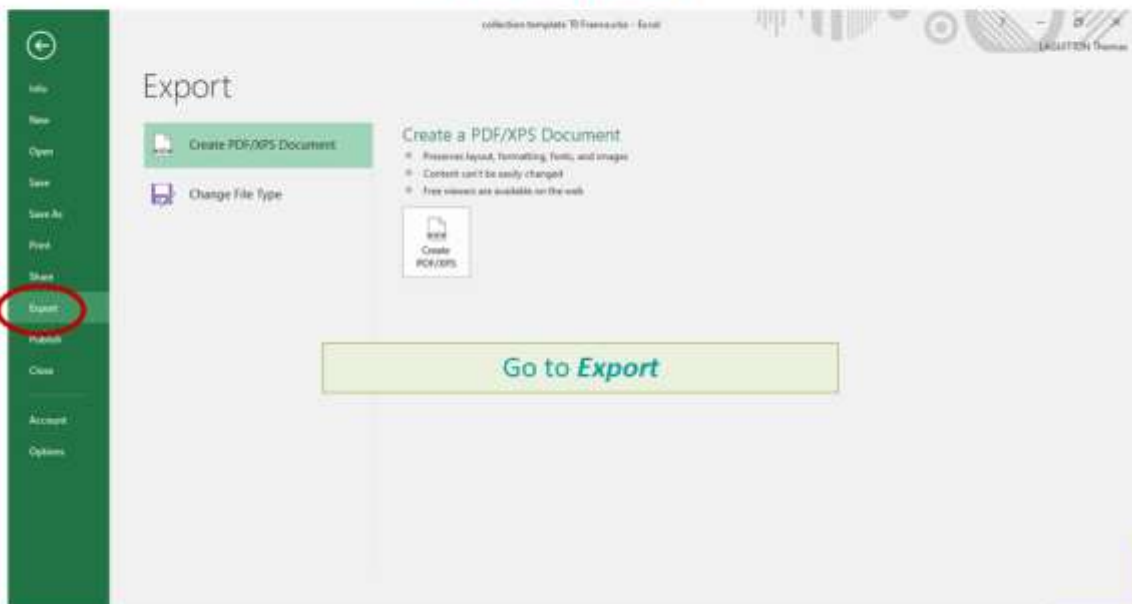


Product_code	Father_id	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment	Brand_name	Brand_id
301		Poland	2021	Fresh_dairy_products_and_desserts	Gourmet sweet fresh cheeses	1234567891011	No	DANONE	Datone
302		Poland	2021	Fresh_dairy_products_and_desserts	Classic sweet yoghurts and fermented milks	1234567891011	No	Ehrmann Almhurst	
303		Poland	2021	Fresh_dairy_products_and_desserts	Fresh desserts without fruit	1234567891011	Yes	Deluxe	
304		Poland	2021	Fresh_dairy_products_and_desserts	Dessert creams and jelled milks	1234567891011	Yes	SORBETE Pauls Biomilkerer	
305		Poland	2021	Fresh_dairy_products_and_desserts	Fresh mousse-type desserts	1234567891011	Yes	Silbo Racheff	
306		Poland	2021	Fresh_dairy_products_and_desserts	Fresh mousse-type desserts	1234567891011	Yes	Weissenhomer Milch Manufa	
307		Poland	2021	Fresh_dairy_products_and_desserts	Other fresh plant-based desserts	1234567891011	Yes	Sojade	
308		Poland	2021	Fresh_dairy_products_and_desserts	Fresh desserts with cereals	1234567891011	Yes	SORBETE Pauls Biomilkerer	
309		Poland	2021	Fresh_dairy_products_and_desserts	Dessert creams and jelled milks	1234567891011	No	SOBOTE Pauls Biomilkerer	
310		Poland	2021	Soft_drinks	Sugar-sweetened energy drinks	1234567891011	No	2B Black	
311		Poland	2021	Soft_drinks	Flavoured sugar-sweetened and artificially-sweetened w	1234567891011	No	Active O2	
312		Poland	2021	Soft_drinks	Tea beverages without added sugar	1234567891011	No	all i need.	
313		Poland	2021	Soft_drinks	Sugar-sweetened and artificially-sweetened tea beverage	1234567891011	No	Arizona	
314		Poland	2021	Soft_drinks	Sugar-sweetened colas	1234567891011	No	Black Jack	
315		Poland	2021	Soft_drinks	Sugar-sweetened fruit beverages	1234567891011	No	Capri-Sun	
316		Poland	2021	Soft_drinks	Colas without added sugar	1234567891011	No	Clever	
317		Poland	2021	Soft_drinks	Fruit beverages with fruit content > or = 50%	1234567891011	No	Curing Shot	
318		Poland	2021	Soft_drinks	Flavoured waters without added sugar	1234567891011	No	Waterdrop	



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



Export

Create PDF/XPS Document

Change File type

Create a PDF/XPS Document

- Preserved layout, formatting, fonts, and images
- Content can't be easily changed
- Free viewers are available on the web

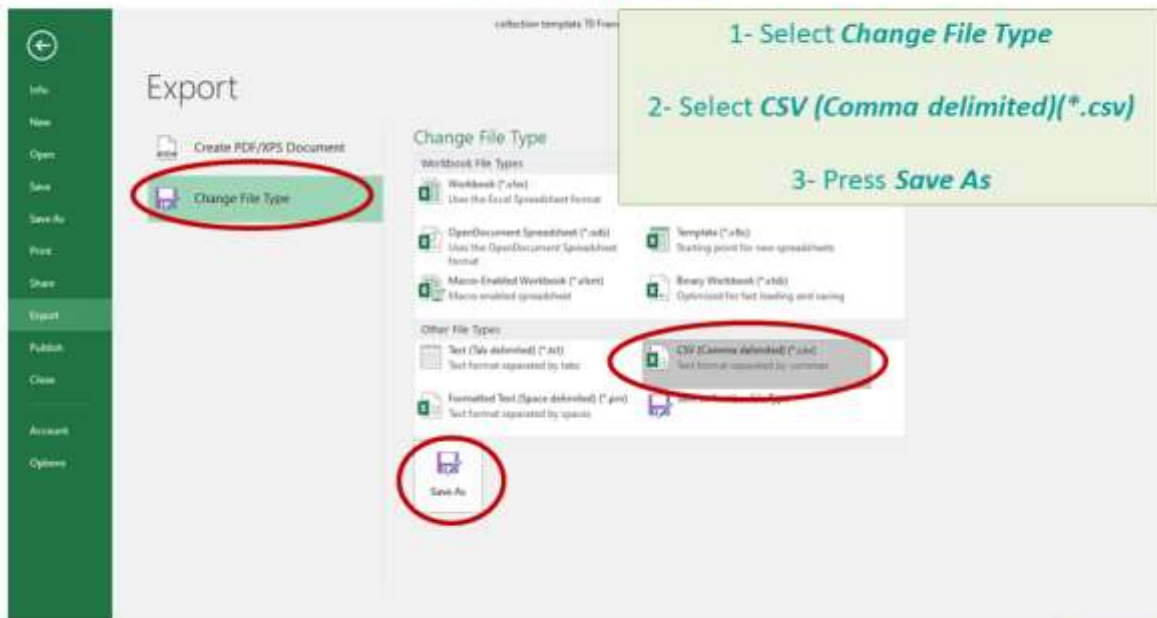
Create PDF/XPS





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

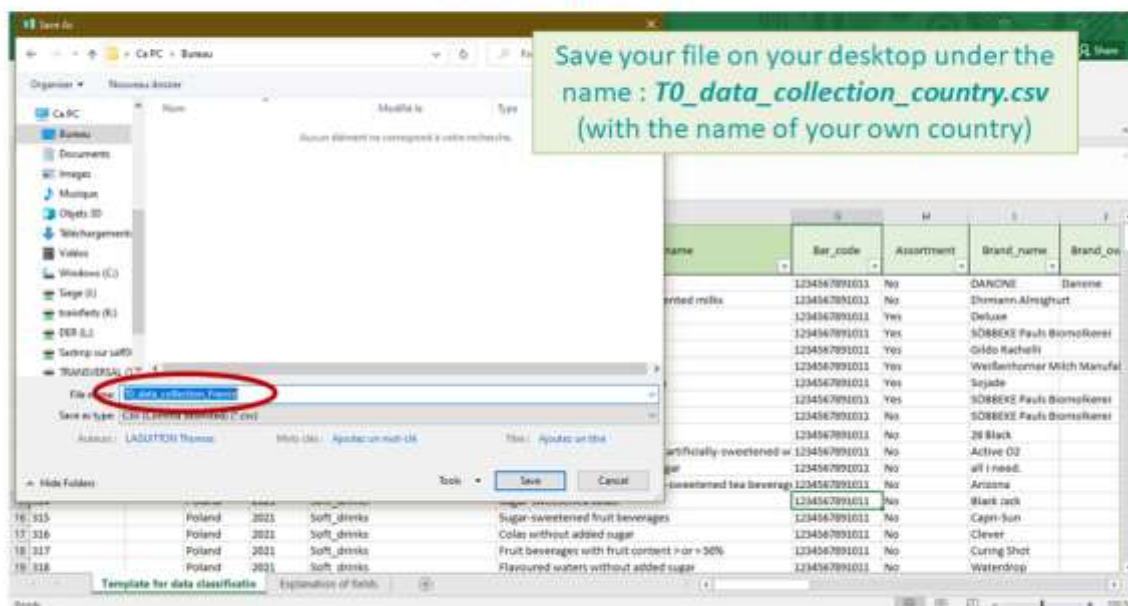


**1- Select Change File Type**  
**2- Select CSV (Comma delimited)(\*.csv)**  
**3- Press Save As**



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



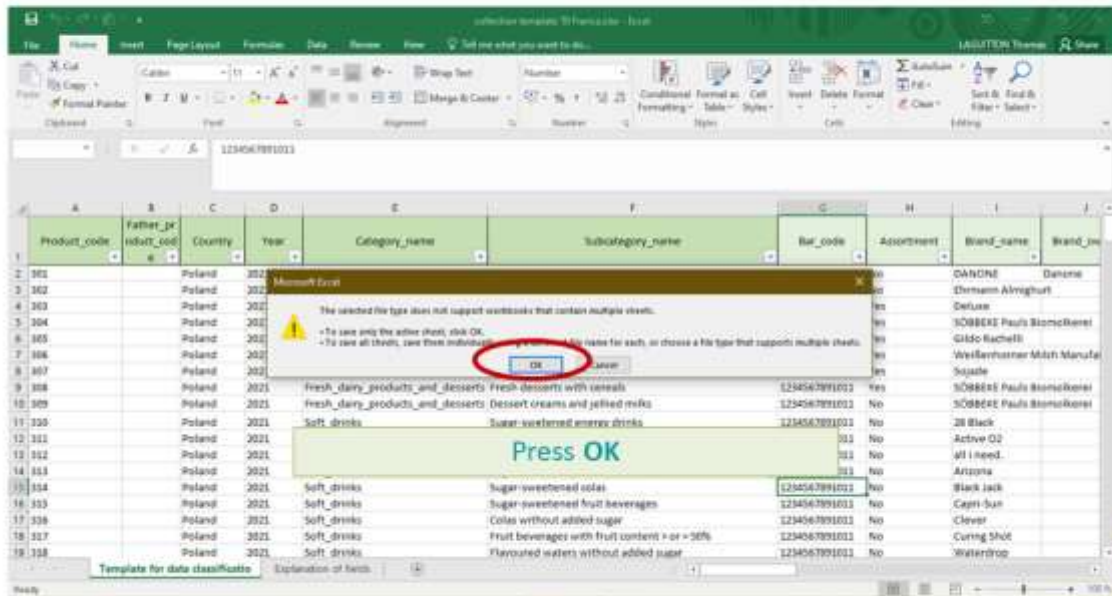
Save your file on your desktop under the name : **T0\_data\_collection\_country.csv** (with the name of your own country)

name	bar_code	Assortment	Brand_name	Brand_o
ermed milk	1234567891011	No	DANONE	Danone
	1234567891011	No	Shrmann.Alsigfrut	
	1234567891011	Yes	Deluxe	
	1234567891011	Yes	SORBEZE Pauls Bismolken	
	1234567891011	Yes	Gildo Racheli	
	1234567891011	Yes	Weißbiermer Milch Manufak	
	1234567891011	Yes	Sejade	
	1234567891011	Yes	SORBEZE Pauls Bismolken	
	1234567891011	No	SORBEZE Pauls Bismolken	
artificially sweetened =	1234567891011	No	3B Black	
ge	1234567891011	No	Active O2	
weetened tea beverage	1234567891011	No	Arizona	
	1234567891011	No	Black Jack	
	1234567891011	No	Capri-Sun	
	1234567891011	No	Clever	
	1234567891011	No	Curing Shot	
	1234567891011	No	WaterStop	



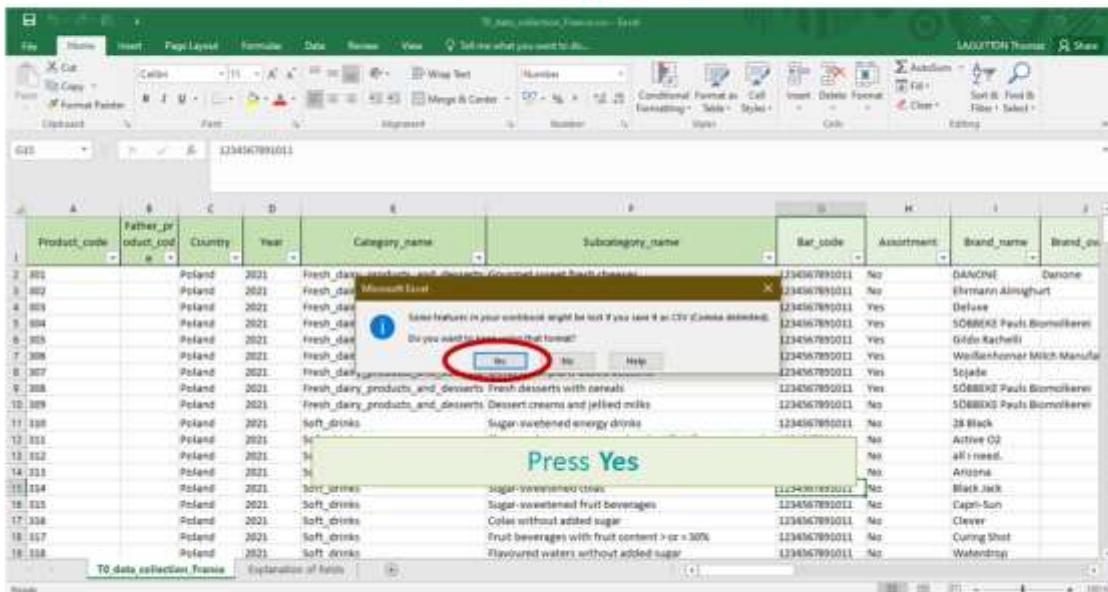
WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



When you save your **.xlsx** file in **.csv format**, the barcodes in the **.csv file** appear in scientific writing (e.g. 1.89E+12). It is necessary to select the column 'bar\_codes' and change the column format to **'Number'** with **0 decimal digit**. The bar codes will appear in full and you will not lose any information. You can then save this new version of your template with the full barcodes and overwrite the old one.

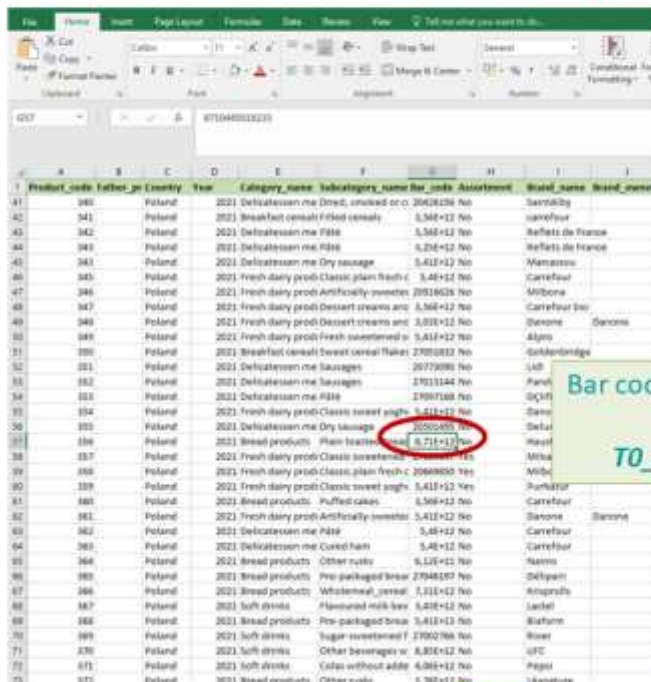
Be careful, as soon as you reopen this new **.csv file**, the barcodes will be written scientifically again and you will have to repeat this procedure. We therefore invite you to do this procedure only once when you save the **.csv file** and not to reopen the saved file. (To be read in R, the file must not be opened so you do not need to re-open it)

see the following slides for a step-by-step explanation of this procedure



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



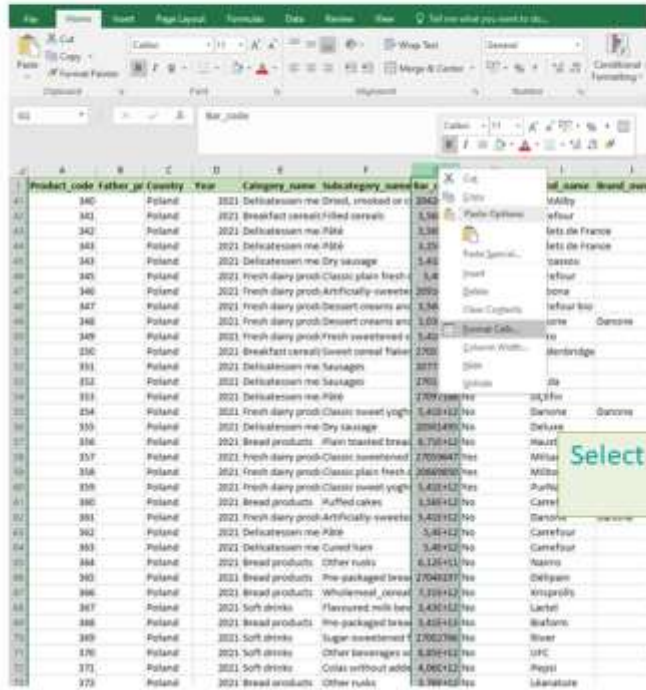
Product_code	Label_no	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment	Brand_name	Brand_owner
340		Poland	2021	Delicatessen me	Dried, smoked or c.	2042436	No	Sarnibizy	
341		Poland	2021	Breakfast cereals	Filled cereals	5,34E+12	No	Carrefour	
342		Poland	2021	Delicatessen me	Pâté	5,34E+12	No	Beffets de France	
343		Poland	2021	Delicatessen me	Pâté	5,21E+12	No	Beffets de France	
343		Poland	2021	Delicatessen me	Dry sausage	5,41E+12	No	Mansoux	
345		Poland	2021	Fresh dairy prod	Classic plain fresh c.	5,46E+12	No	Carrefour	
346		Poland	2021	Fresh dairy prod	Artificially sweeten	2021625	No	Milbona	
347		Poland	2021	Fresh dairy prod	Dessert creams and	5,56E+12	No	Carrefour (no)	
348		Poland	2021	Fresh dairy prod	Dessert creams and	5,02E+12	No	Bonone	Bonone
349		Poland	2021	Fresh dairy prod	Fresh sweetened w.	5,41E+12	No	Alpen	
350		Poland	2021	Breakfast cereals	Sweet cereal flakes	2702822	No	Schönbirgde	
351		Poland	2021	Delicatessen me	Sausages	20279396	No	J&B	
352		Poland	2021	Delicatessen me	Sausages	2703104	No	Ferret	
353		Poland	2021	Delicatessen me	Pâté	2909708	No	Q&M	
354		Poland	2021	Fresh dairy prod	Classic plain fresh c.	5,41E+12	No	Dano	
355		Poland	2021	Delicatessen me	Dry sausage	2020265	No	Delal	
356		Poland	2021	Bread products	Plain toast	8,71E+12	No	Maya	
357		Poland	2021	Fresh dairy prod	Classic sweetened	2020265	No	Milka	
358		Poland	2021	Fresh dairy prod	Classic plain fresh c.	2066800	Yes	Milko	
359		Poland	2021	Fresh dairy prod	Classic sweet yoght	5,41E+12	Yes	Purifit	
360		Poland	2021	Bread products	Puffed cakes	8,56E+12	No	Carrefour	
361		Poland	2021	Fresh dairy prod	Artificially sweeten	5,41E+12	No	Bonone	Bonone
362		Poland	2021	Delicatessen me	Pâté	5,46E+12	No	Carrefour	
363		Poland	2021	Delicatessen me	Cured ham	5,46E+12	No	Carrefour	
364		Poland	2021	Bread products	Other rolls	8,12E+12	No	Manna	
365		Poland	2021	Bread products	Pre-packaged bread	2704827	No	Deliya	
366		Poland	2021	Bread products	Wholemeal_cereal	1,21E+12	No	Alpen	
367		Poland	2021	Soft drinks	Flavored milk bev	5,42E+12	No	Lactel	
368		Poland	2021	Bread products	Pre-packaged bread	5,41E+12	No	Bisfarm	
369		Poland	2021	Soft drinks	Sugar sweetened f.	2700286	No	Bever	
370		Poland	2021	Soft drinks	Other beverages w.	8,83E+12	No	UPC	
371		Poland	2021	Soft drinks	Cola without alcoh	4,06E+12	No	Pepsi	
372		Poland	2021	Bread products	Other rolls	5,76E+12	No	Litvanore	

Bar codes appearing in scientific format in your file  
**T0\_data\_collection\_country.csv**



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



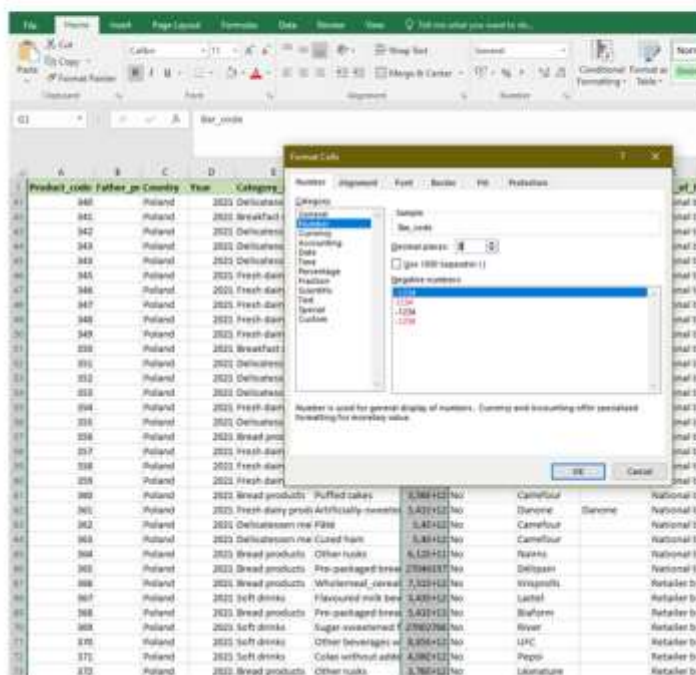
Product_code	Father_pr	Country	Year	Category_name	Subcategory_name	Bar_code	Brand_name	Brand_owners
340		Poland	2021	Delicatessen me	Dried, uncooked or...	2042	Maibly	
341		Poland	2021	Breakfast cereals	Filled cereals	3,36	wflour	
342		Poland	2021	Delicatessen me	Flour	3,38	lets de France	
343		Poland	2021	Delicatessen me	Flour	3,35	lets de France	
344		Poland	2021	Delicatessen me	Dry sausage	5,42	casos	
345		Poland	2021	Fresh dairy prod	Classo plain fresh	5,8	wflour	
346		Poland	2021	Fresh dairy prod	Artificially sweete	2092	bona	
347		Poland	2021	Fresh dairy prod	Dessert creams and	3,36	wflour bio	
348		Poland	2021	Fresh dairy prod	Dessert creams and	3,38	one	Gansone
349		Poland	2021	Fresh dairy prod	Fresh sweetened s	5,42	no	
350		Poland	2021	Breakfast cereals	Sweet cereal Flavr	270	Merbridge	
351		Poland	2021	Delicatessen me	Sauzages	2077	gala	
352		Poland	2021	Delicatessen me	Sauzages	270	gala	
353		Poland	2021	Delicatessen me	Flour	2709	gala	
354		Poland	2021	Fresh dairy prod	Classo sweet yoght	5,42	gansone	Gansone
355		Poland	2021	Delicatessen me	Dry sausage	2051	Delays	
356		Poland	2021	Bread products	Flour toasted bread	3,70	Maibly	
357		Poland	2021	Fresh dairy prod	Classo sweetened	2709	Maibly	
358		Poland	2021	Fresh dairy prod	Classo plain fresh	2049	Maibly	
359		Poland	2021	Fresh dairy prod	Classo sweet yoght	5,42	Parfy	
360		Poland	2021	Bread products	Puffed cakes	3,38	Carrefour	
361		Poland	2021	Fresh dairy prod	Artificially sweete	5,42	Dansive	www.dansive.com
362		Poland	2021	Delicatessen me	Kibie	5,42	Carrefour	
363		Poland	2021	Delicatessen me	Cured ham	5,42	Carrefour	
364		Poland	2021	Bread products	Other rusk	6,12	Nasno	
365		Poland	2021	Bread products	Pre-packaged bread	2704	Delays	
366		Poland	2021	Bread products	Wholemeal_cereal	5,29	Krisproly	
367		Poland	2021	Soft drinks	Flavoured milk bev	5,42	Lactel	
368		Poland	2021	Bread products	Pre-packaged bread	5,42	Bafarm	
369		Poland	2021	Soft drinks	Sugar sweetened s	2702	River	
370		Poland	2021	Soft drinks	Other beverages w	6,20	LPC	
371		Poland	2021	Soft drinks	Colas without add	4,06	Peppi	
372		Poland	2021	Bread products	Other rusk	3,70	Lakanata	

Select the *Bar\_codes* column, right click and go to *Format Cells*



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



Product_code	Father_pr	Country	Year	Category	Subcategory	Bar_code	Brand	Brand_owners
340		Poland	2021	Delicatessen				
341		Poland	2021	Breakfast				
342		Poland	2021	Delicatessen				
343		Poland	2021	Delicatessen				
344		Poland	2021	Delicatessen				
345		Poland	2021	Fresh dairy				
346		Poland	2021	Fresh dairy				
347		Poland	2021	Fresh dairy				
348		Poland	2021	Fresh dairy				
349		Poland	2021	Fresh dairy				
350		Poland	2021	Breakfast				
351		Poland	2021	Delicatessen				
352		Poland	2021	Delicatessen				
353		Poland	2021	Fresh dairy				
354		Poland	2021	Delicatessen				
355		Poland	2021	Delicatessen				
356		Poland	2021	Bread prod				
357		Poland	2021	Fresh dairy				
358		Poland	2021	Fresh dairy				
359		Poland	2021	Fresh dairy				
360		Poland	2021	Bread products	Puffed cakes	3,38	Carrefour	National S1
361		Poland	2021	Fresh dairy prod	Artificially sweete	5,42	Dansive	National S1
362		Poland	2021	Delicatessen me	Flour	5,42	Carrefour	National S1
363		Poland	2021	Delicatessen me	Cured ham	5,42	Carrefour	National S1
364		Poland	2021	Bread products	Other rusk	6,12	Nasno	National S1
365		Poland	2021	Bread products	Pre-packaged bread	2704	Delays	National S1
366		Poland	2021	Bread products	Wholemeal_cereal	5,29	Krisproly	Retailer D1
367		Poland	2021	Soft drinks	Flavoured milk bev	5,42	Lactel	Retailer D1
368		Poland	2021	Bread products	Pre-packaged bread	5,42	Bafarm	Retailer D1
369		Poland	2021	Soft drinks	Sugar sweetened s	2702	River	Retailer D1
370		Poland	2021	Soft drinks	Other beverages w	6,20	LPC	Retailer D1
371		Poland	2021	Soft drinks	Colas without add	4,06	Peppi	Retailer D1
372		Poland	2021	Bread products	Other rusk	3,70	Lakanata	Retailer D1

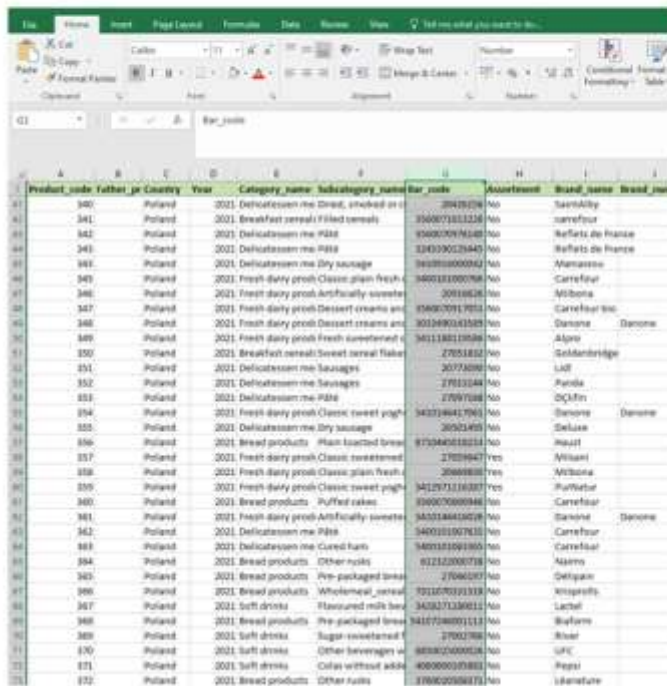
In the *Number* tab, choose the 'number' category, indicate '0' for decimal places and click OK





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



Product code	Father	Country	Year	Category name	Subcategory name	Bar code	Manufacturer	Brand name	Brand name
340		Poland	2021	Deliicatessen me Cheese, stacked or c		3943224	No	Santitas	
341		Poland	2021	Breakfast cereals / Flaked cereals		3360071111216	No	carrefour	
342		Poland	2021	Deliicatessen me Pils		3360070976145	No	Beffets de France	
343		Poland	2021	Deliicatessen me Pils		334039023440	No	Beffets de France	
344		Poland	2021	Deliicatessen me Dry sausage		3650010000042	No	Marcotte	
345		Poland	2021	Fresh dairy prod:Classic grain fresh		3650010007068	No	Carrefour	
346		Poland	2021	Fresh dairy prod:Artificially sweete		30918628	No	Milbona	
347		Poland	2021	Fresh dairy prod:Dessert creams an		3360070917811	No	Carrefour	
348		Poland	2021	Fresh dairy prod:Dessert creams an		301490041828	No	Danone	Danone
349		Poland	2021	Fresh dairy prod:Fresh sweetened c		3611180118584	No	Alpro	
350		Poland	2021	Breakfast cereals:Sweet cereal flake		27051832	No	Goldenberg	
351		Poland	2021	Deliicatessen me Sausages		30774090	No	Laf	
352		Poland	2021	Deliicatessen me Sausages		2781244	No	Ponde	
353		Poland	2021	Deliicatessen me Pils		2789708	No	OCFin	
354		Poland	2021	Fresh dairy prod:Classic sweet yogh		3432746417961	No	Bonone	Danone
355		Poland	2021	Deliicatessen me Dry sausage		3052405	No	Seize	
356		Poland	2021	Bread products / Plain toasted bread		875946818214	No	Meut	
357		Poland	2021	Fresh dairy prod:Classic sweetened		2709467	Yes	Milani	
358		Poland	2021	Fresh dairy prod:Classic grain fresh		3566808	Yes	Milbona	
359		Poland	2021	Fresh dairy prod:Classic sweet yogh		341271114027	Yes	Burford	
360		Poland	2021	Bread products / Puffed cakes		3360070909946	No	Carrefour	
361		Poland	2021	Fresh dairy prod:Artificially sweete		3433344010029	No	Danone	Danone
362		Poland	2021	Deliicatessen me Pils		3400310107811	No	Carrefour	
363		Poland	2021	Deliicatessen me Cured ham		3400310109180	No	Carrefour	
364		Poland	2021	Bread products / Other nuts		81212000718	No	Nams	
365		Poland	2021	Bread products / Pre-packaged bread		2704007	No	Getgajn	
366		Poland	2021	Bread products / Wholemeal_cmeal		701270311319	No	Kropiecki	
367		Poland	2021	Soft drinks / Flavoured milk bev		343371336011	No	Lactel	
368		Poland	2021	Bread products / Pre-packaged bread		3417248001111	No	Belfare	
369		Poland	2021	Soft drinks / Sugar-sweetened f		2700788	No	Ribar	
370		Poland	2021	Soft drinks / Other beverages w		86382000014	No	UPC	
371		Poland	2021	Soft drinks / Cols without alkali		400800000080	No	Pepsi	
372		Poland	2021	Bread products / Other nuts		278600086073	No	Lanatura	

Your barcodes appear in full, you can save this table by overwriting the previous version and close it.

Please note! If you open this file again, you will have to do the same operation again. The numbers are automatically converted to scientific format when opening a .csv file.



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

1<sup>st</sup> preliminary step : preparation of the T0 collection template

Summary of the manipulations in the 1st preliminary step

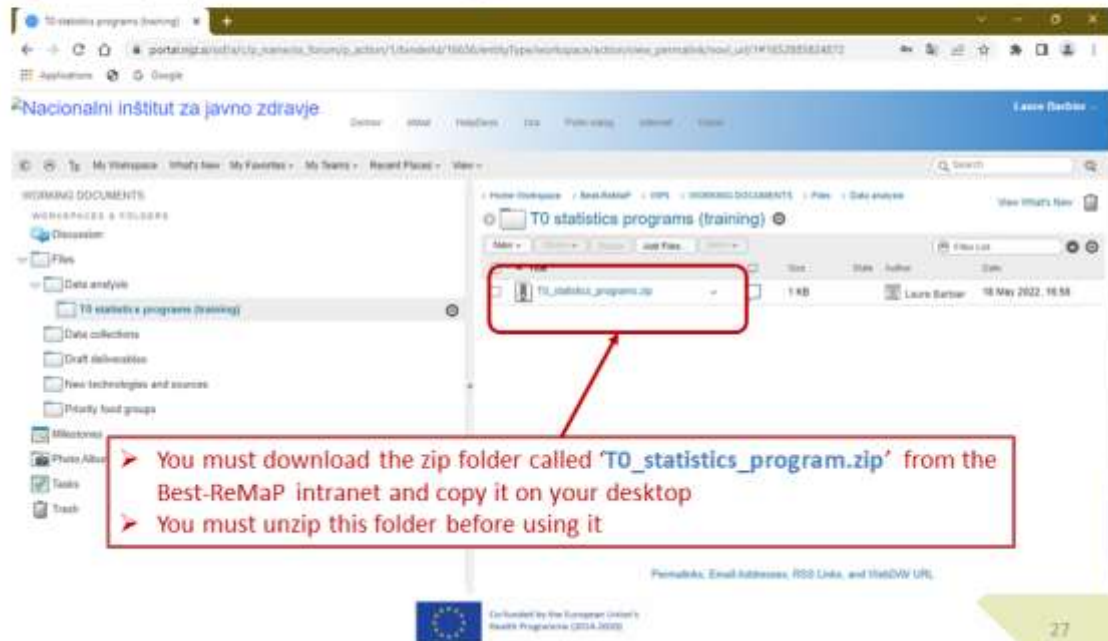




WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

**2<sup>nd</sup> preliminary step : creation of the working folder**



Nacionalni inštitut za javno zdravje

WORKING DOCUMENTS

T0\_statistics\_programs (training)

T0\_statistics\_programs.zip

1 KB

Laure Barbier 18 May 2022, 16:58

➤ You must download the zip folder called 'T0\_statistics\_program.zip' from the Best-ReMaP intranet and copy it on your desktop

➤ You must unzip this folder before using it

Financed by the European Union's Health Programme (2014-2020)

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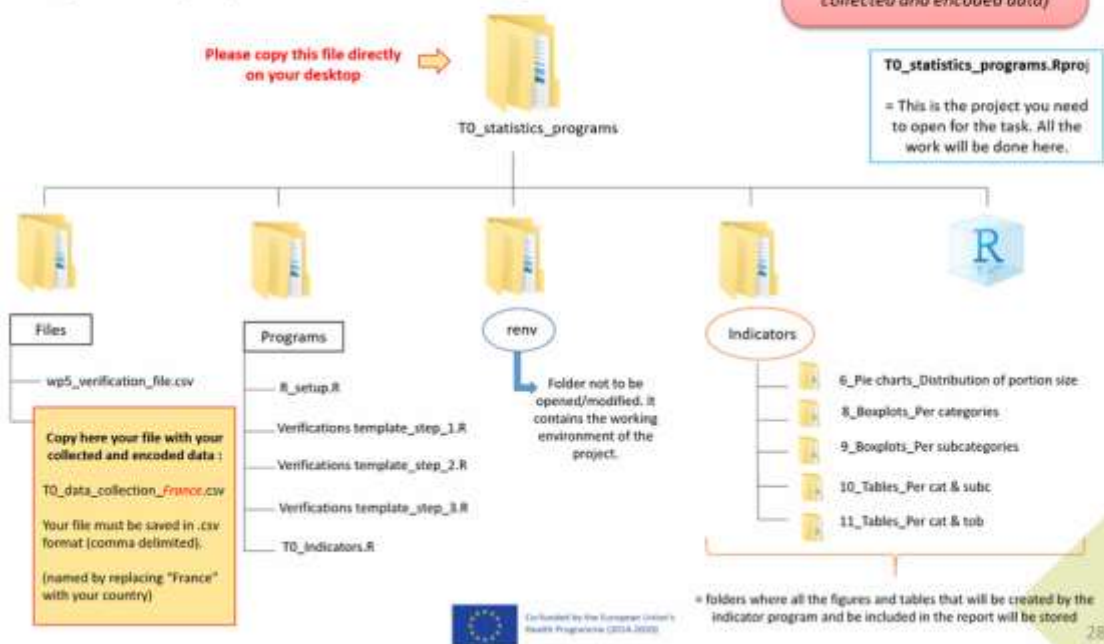


WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

**2<sup>nd</sup> preliminary step : creation of the working folder**

*It is very important that you don't change any names of the files that are listed here (except the file with your collected and encoded data)*





WORK Package 5 – Reformulation and processed food monitoring

2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps

**B. Installation of software**

C. Introduction to R studio

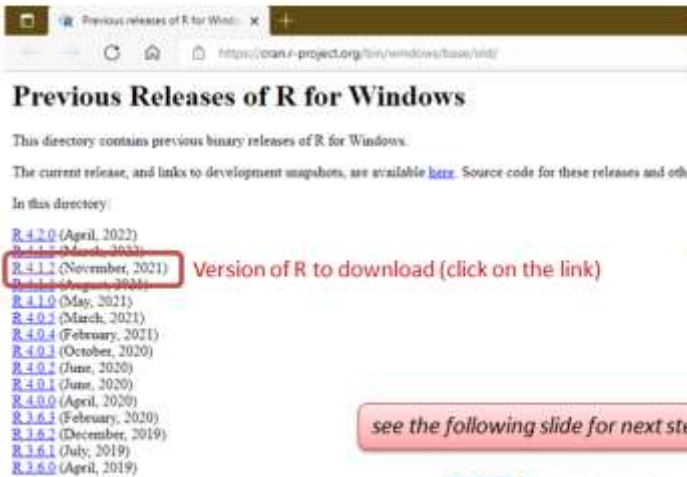
D. Cleaning of the Rstudio interface



WORK Package 5 – Reformulation and processed food monitoring

Installation of R software

- **Download the R software:**  
Follow this link and select **version 4.1.2** (which is not the latest version but the version on which the programs were created):  
<https://cran.r-project.org/bin/windows/base/old/>



If you already have R on your computer, check which version of the software you have.  
If it is a version **other than 4.1.2**, then you need to download version **4.1.2** as shown.  
→ You will have **2 versions of R** on your computer.

see the following slide for next step





WORK Package 5 – Reformulation and processed food monitoring

### Installation of R software

• **Download the R software:**

Follow this link and select **version 4.1.2** (which is not the latest version but the version on which the programs were created):

<https://cran.r-project.org/bin/windows/base/old/>



**Index of /bin/windows/base/old/4.1.2**

Name	Last modified	Size	Description
Parent Directory			
NEWS.R412-win.pdf	2021-11-01 19:14	105K	
<b>R412-win.exe</b>	2021-11-01 20:30	168M	
README.R412	2021-11-01 19:14	8.5K	
SYN-REVISION.R412	2021-11-01 19:14	46	
md5sum.txt	2021-11-01 20:30	50	
release.html	2021-11-01 19:14	90	
rx-FAQ.html	2021-11-01 19:14	99K	

*Apache Server at cran.r-project.org Port 443*

- Click to download this .exe file.
- Once you have downloaded this file, you can open it and click on 'Run'.
- The R software will then be installed on your computer.

*During the software installation, accept all the basic settings by clicking 'next' at each step*



WORK Package 5 – Reformulation and processed food monitoring

### Installation of R software

**Tutorial video to download and install the R software**

→ This video is available at any time on the Best ReMaP intranet in the WP5 section [https://portal.nijz.si/ssf/a/c/p\\_name/ss\\_forum/p\\_action/1/entityType/folderEntry/acton/view\\_permalink/entryId/74767/novl\\_url/1](https://portal.nijz.si/ssf/a/c/p_name/ss_forum/p_action/1/entityType/folderEntry/acton/view_permalink/entryId/74767/novl_url/1)





WORK Package 5 – Reformulation and processed food monitoring

Installation of Rstudio software

- **Download the Rstudio software:**  
Follow this link :  
<https://www.rstudio.com/products/rstudio/download/>

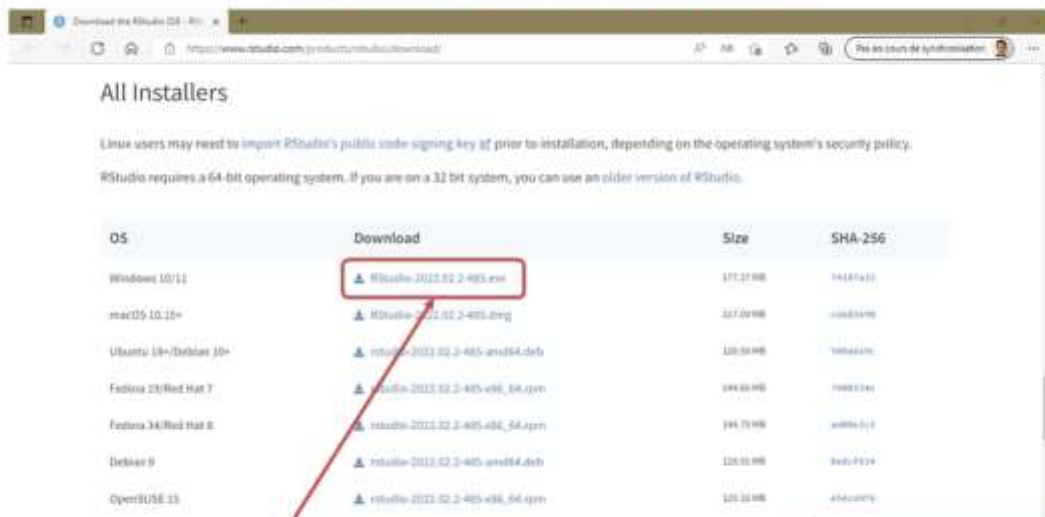


When you are on this page, scroll down to find the links to all the Rstudio installers (see next slide)



WORK Package 5 – Reformulation and processed food monitoring

Installation of Rstudio software



- Click to download this .exe file.
- Once you have downloaded this file, you can open it and click on 'Run'.
- The Rstudio software will then be installed on your computer.

During the software installation, accept all the basic settings by clicking 'next' at each step



WORK Package 5 – Reformulation and processed food monitoring

### Installation of Rstudio software

**Tutorial video to download and install the Rstudio software**

→ This video is available at any time on the Best ReMaP intranet in the WP5 section  
[https://portal.nijz.si/ssf/a/c/p\\_name/ss\\_forum/p\\_action/1/entityType/folderEntry/action/view\\_permalink/entryId/74768/novl\\_url/1](https://portal.nijz.si/ssf/a/c/p_name/ss_forum/p_action/1/entityType/folderEntry/action/view_permalink/entryId/74768/novl_url/1)



WORK Package 5 – Reformulation and processed food monitoring

### Overview of R et Rstudio interfaces



'R'

- No processing will be done on this interface
- Software needed to be able to work on Rstudio



'Rstudio'

- Interface that allows the software to be used = environment that facilitates input, code execution and visualisation of results
- Programs will be running through RStudio





WORK Package 5 – Reformulation and processed food monitoring

Overview of R



```
RStudio (64-bit) - R Console
File Edit View Misc Packages Windows Help
[Icons]

R version 4.1.2 (2021-11-24) -- "Bird Hippie"
Copyright (C) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R est un logiciel libre livré sans AUCUNE GARANTIE.
Vous pouvez le redistribuer sous certaines conditions.
Tapez 'license()' ou 'licence()' pour plus de détails.

R est un projet collaboratif avec de nombreux contributeurs.
Tapez 'contributors()' pour plus d'information et
'station()' pour la façon de le citer dans les publications.

Tapez 'demo()' pour des démonstrations, 'help()' pour l'aide
en ligne ou 'help.start()' pour obtenir l'aide au format HTML.
Tapez 'q()' pour quitter R.

> |
```

Overview of the R software when you open it  
 This is just for information purposes as you will not be working on this software but on the Rstudio interface.



WORK Package 5 – Reformulation and processed food monitoring

2) Installation of the necessary equipment and presentation of the Rstudio software

- A. Preliminary steps
- B. Installation of software
- C. Introduction to R studio**
- D. Cleaning of the Rstudio interface



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

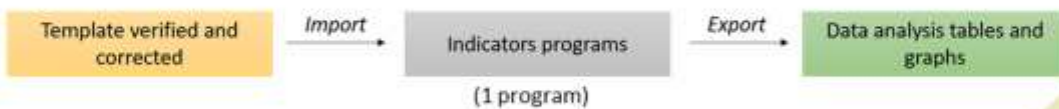
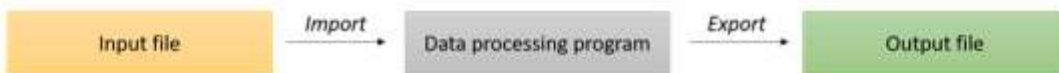
How does data processing software like Rstudio work?



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

How will the Rstudio data processing software work in Task 5.3.2?



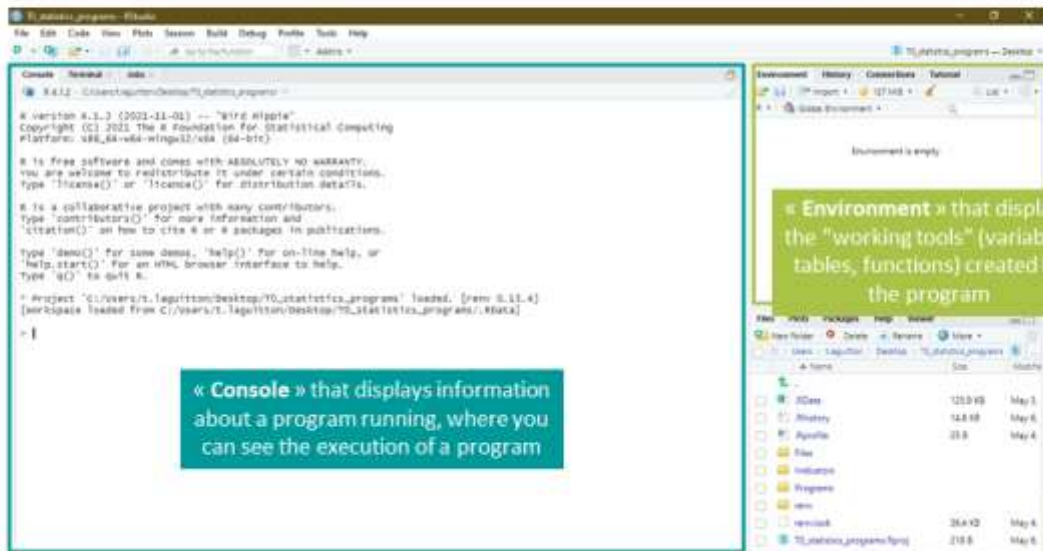




WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

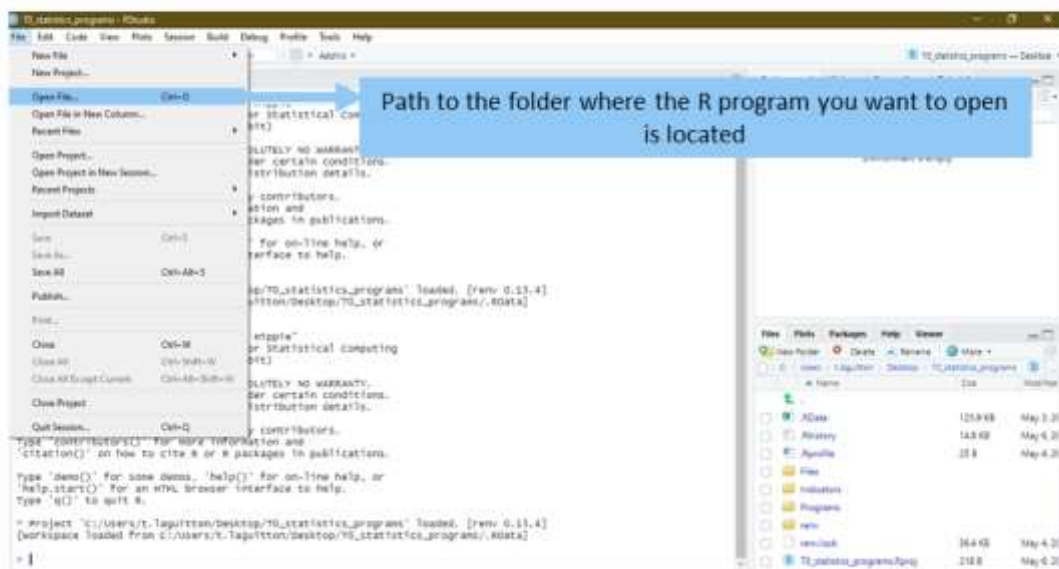
Overview of the Rstudio software when you open it for the first time.



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

How to open a program in Rstudio

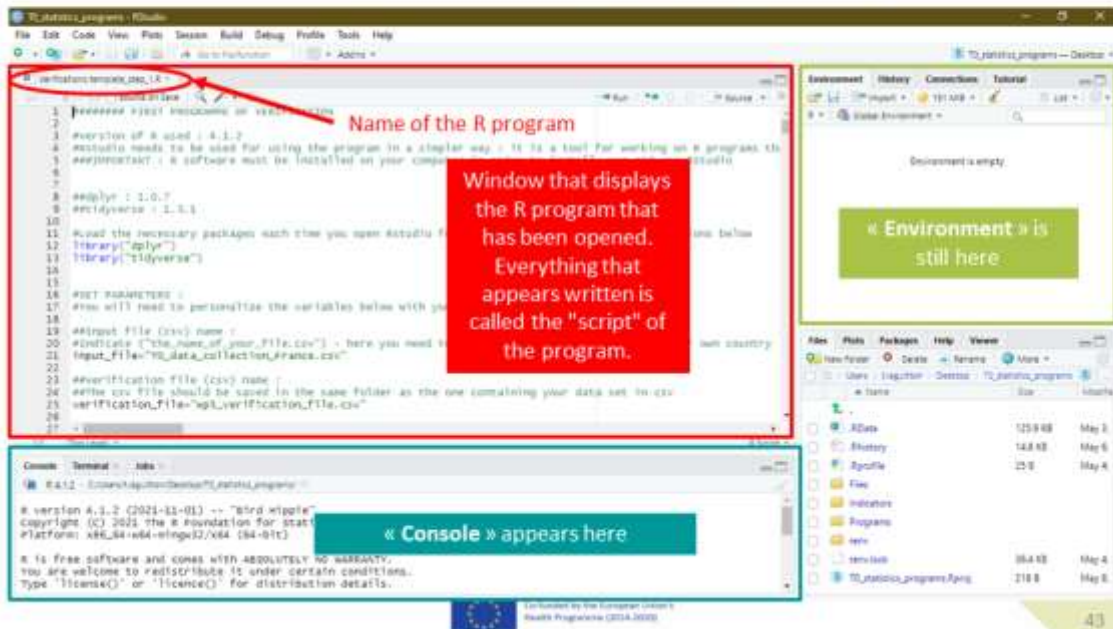




WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

Rstudio when a program is opened



Environment is empty

« Environment » is still here

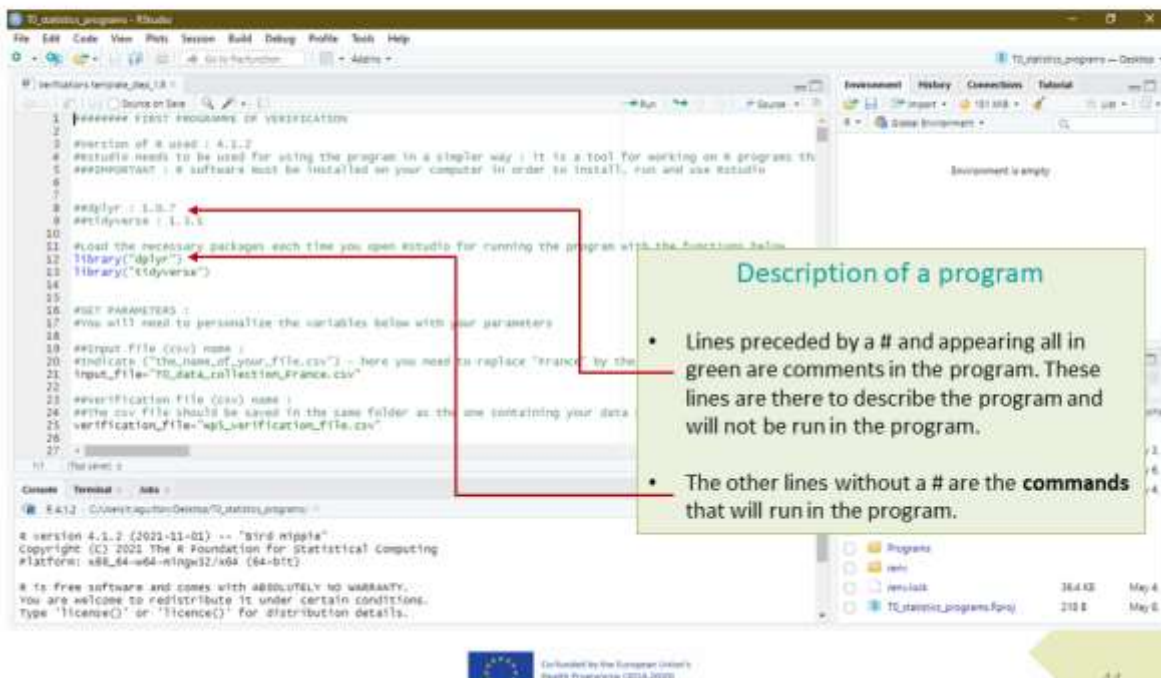
« Console » appears here

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WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



Environment is empty

Description of a program

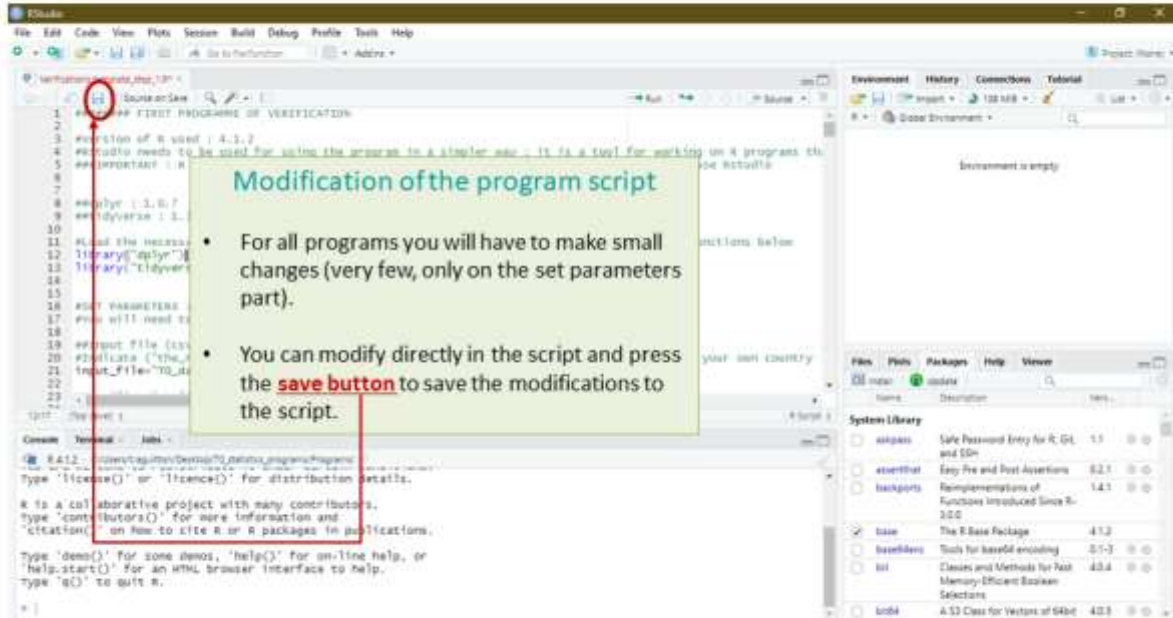
- Lines preceded by a # and appearing all in green are comments in the program. These lines are there to describe the program and will not be run in the program.
- The other lines without a # are the **commands** that will run in the program.

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WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



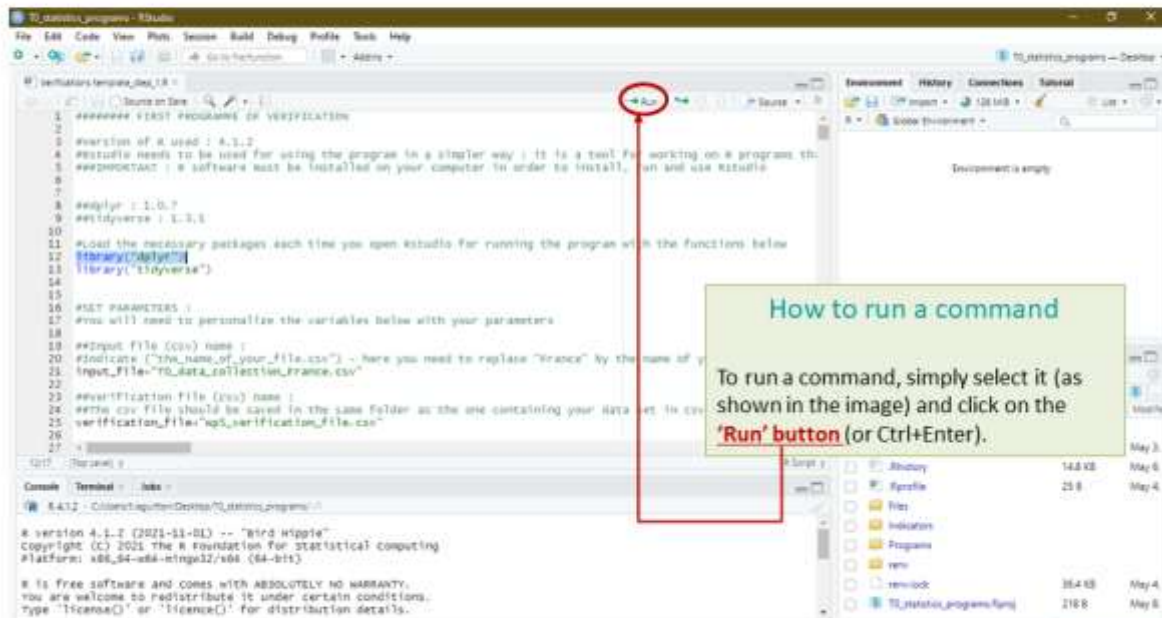
**Modification of the program script**

- For all programs you will have to make small changes (very few, only on the set parameters part).
- You can modify directly in the script and press the **save** button to save the modifications to the script.



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



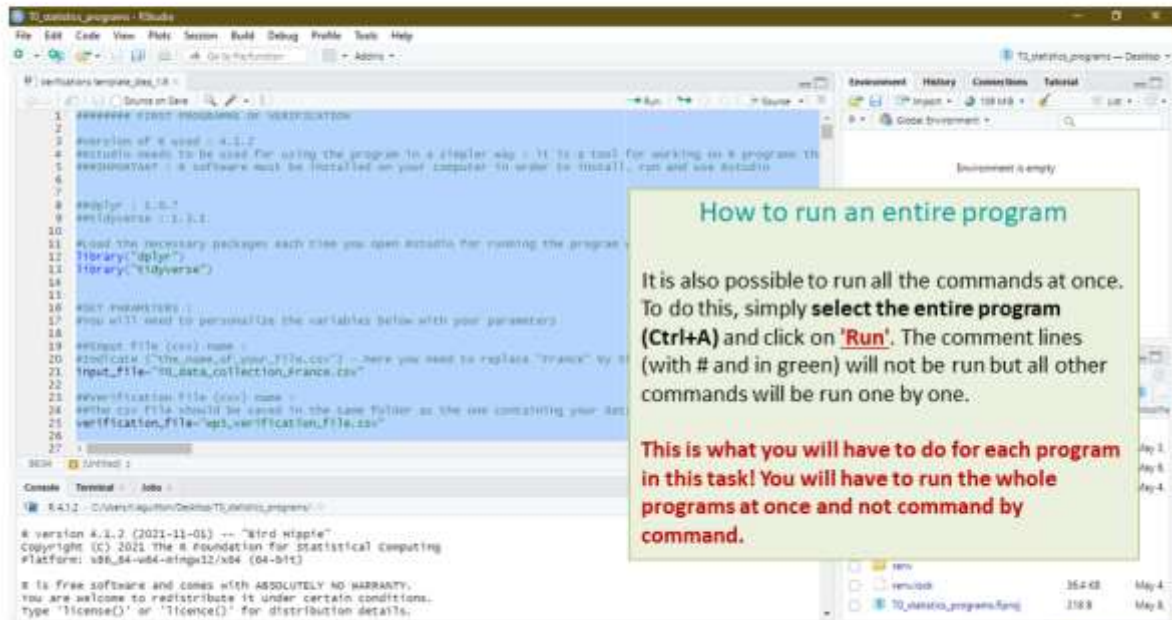
**How to run a command**

To run a command, simply select it (as shown in the image) and click on the **'Run' button** (or Ctrl+Enter).



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



**How to run an entire program**

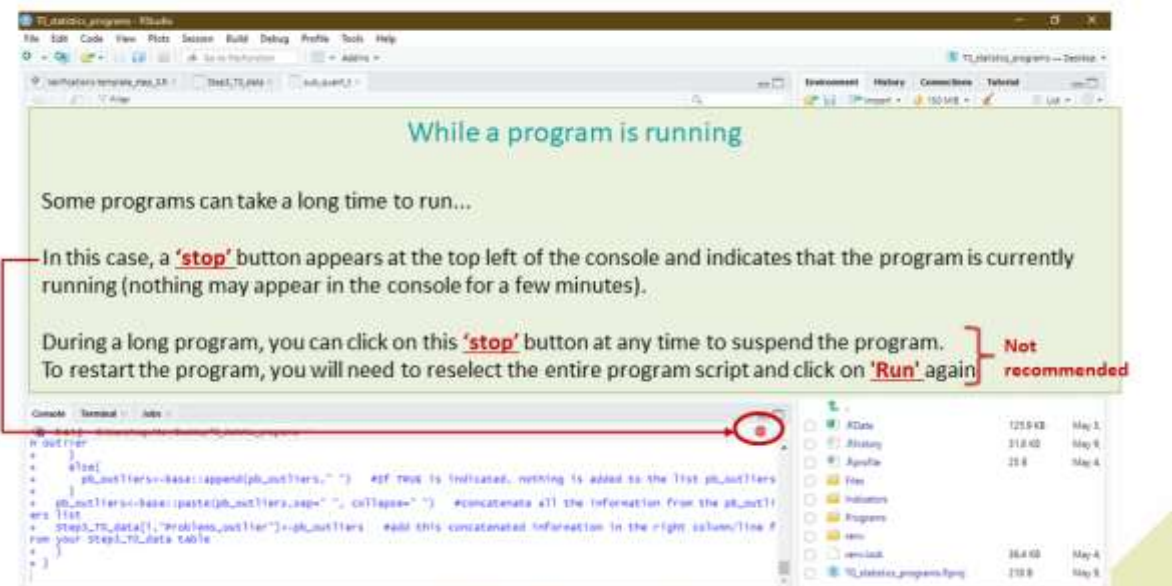
It is also possible to run all the commands at once. To do this, simply **select the entire program (Ctrl+A)** and click on **'Run'**. The comment lines (with # and in green) will not be run but all other commands will be run one by one.

**This is what you will have to do for each program in this task! You will have to run the whole programs at once and not command by command.**



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



**While a program is running**

Some programs can take a long time to run...

In this case, a **'stop'** button appears at the top left of the console and indicates that the program is currently running (nothing may appear in the console for a few minutes).

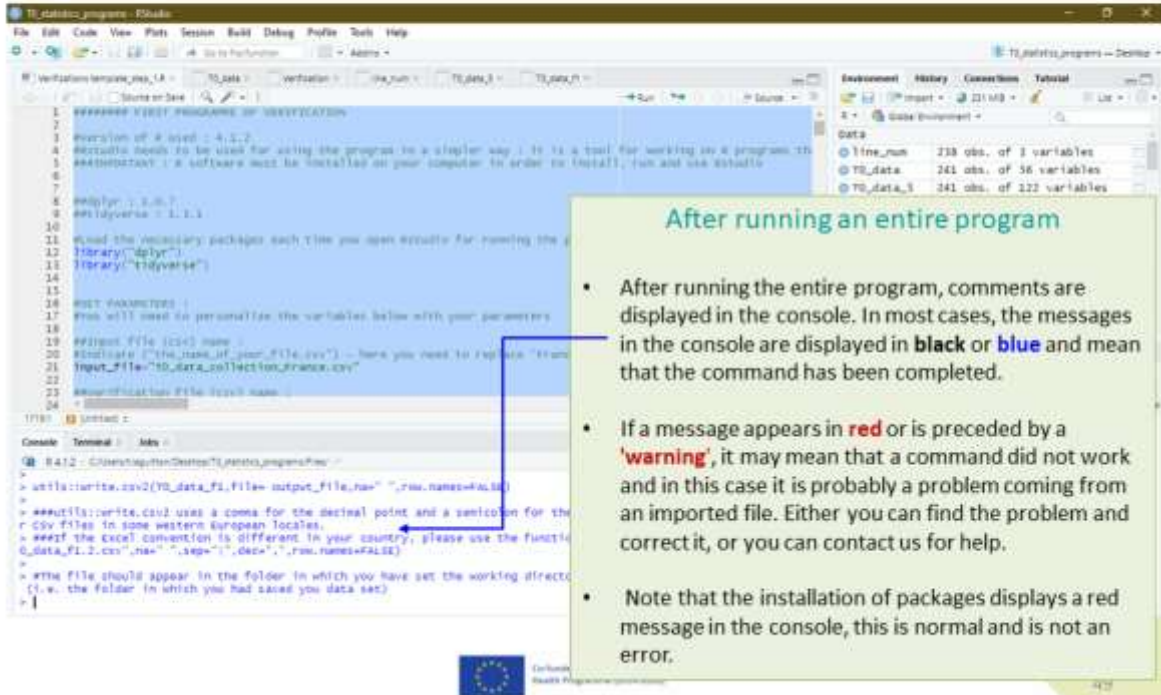
During a long program, you can click on this **'stop'** button at any time to suspend the program. To restart the program, you will need to reselect the entire program script and click on **'Run'** again. **Not recommended**





## WORK Package 5 – Reformulation and processed food monitoring

### Introduction to Rstudio software



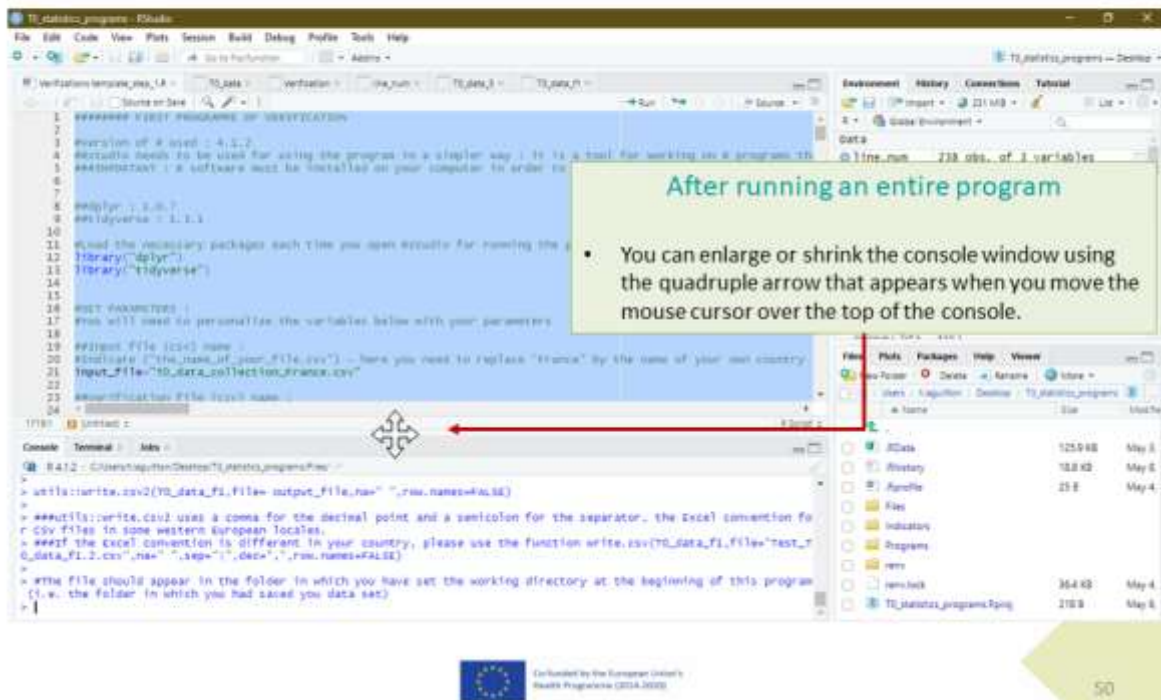
**After running an entire program**

- After running the entire program, comments are displayed in the console. In most cases, the messages in the console are displayed in **black** or **blue** and mean that the command has been completed.
- If a message appears in **red** or is preceded by a **'warning'**, it may mean that a command did not work and in this case it is probably a problem coming from an imported file. Either you can find the problem and correct it, or you can contact us for help.
- Note that the installation of packages displays a red message in the console, this is normal and is not an error.



## WORK Package 5 – Reformulation and processed food monitoring

### Introduction to Rstudio software



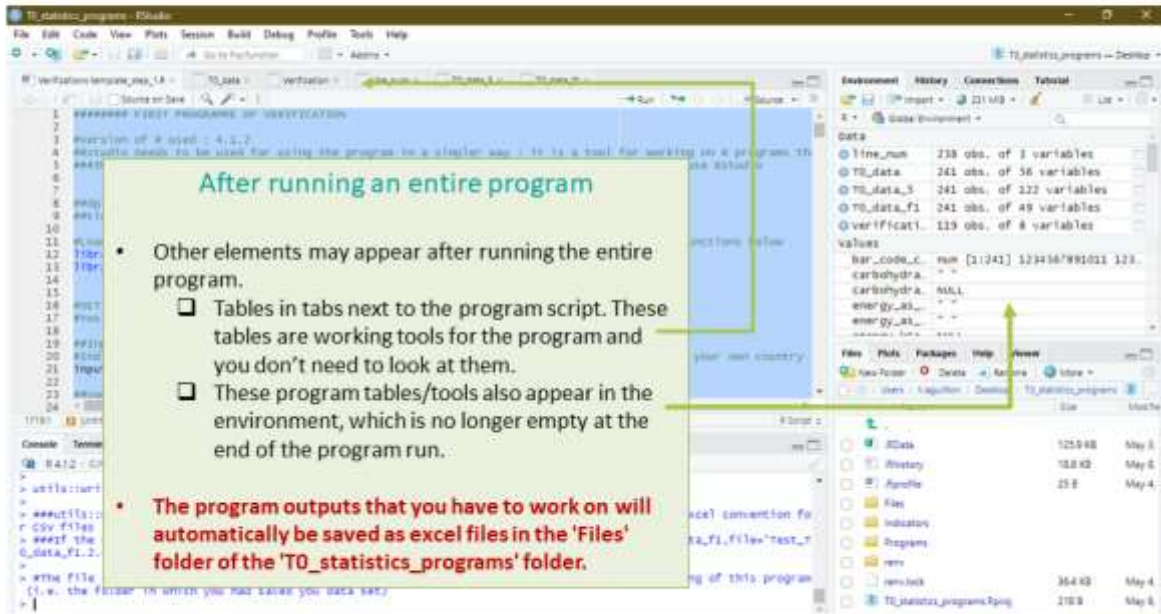
**After running an entire program**

- You can enlarge or shrink the console window using the quadruple arrow that appears when you move the mouse cursor over the top of the console.



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



**After running an entire program**

- Other elements may appear after running the entire program.
  - Tables in tabs next to the program script. These tables are working tools for the program and you don't need to look at them.
  - These program tables/tools also appear in the environment, which is no longer empty at the end of the program run.
- The program outputs that you have to work on will automatically be saved as excel files in the 'Files' folder of the 'T0\_statistics\_programs' folder.



WORK Package 5 – Reformulation and processed food monitoring

2) Installation of the necessary equipment and presentation of the Rstudio software

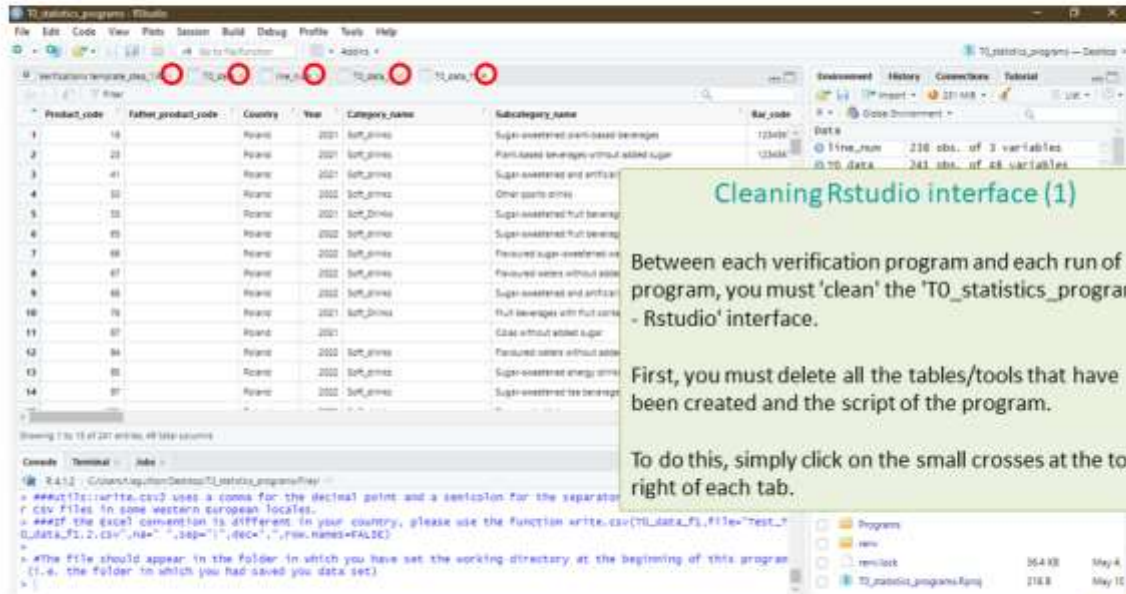
- A. Preliminary steps
- B. Installation of software
- C. Introduction to R studio
- D. Cleaning of the Rstudio interface**





WORK Package 5 – Reformulation and processed food monitoring

‘Cleaning’ of Rstudio between each program



**Cleaning Rstudio interface (1)**

Between each verification program and each run of a program, you must 'clean' the 'TO\_statistics\_programs - Rstudio' interface.

First, you must delete all the tables/tools that have been created and the script of the program.

To do this, simply click on the small crosses at the top right of each tab.

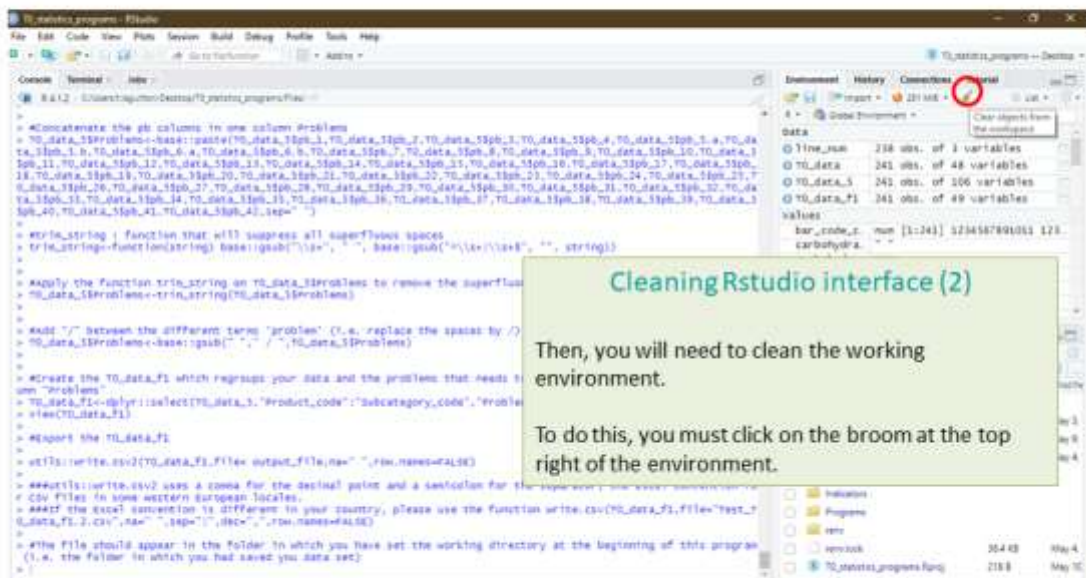


Co-funded by the European Union's Health Programme (2014-2020)



WORK Package 5 – Reformulation and processed food monitoring

‘Cleaning’ of Rstudio between each program



**Cleaning Rstudio interface (2)**

Then, you will need to clean the working environment.

To do this, you must click on the broom at the top right of the environment.

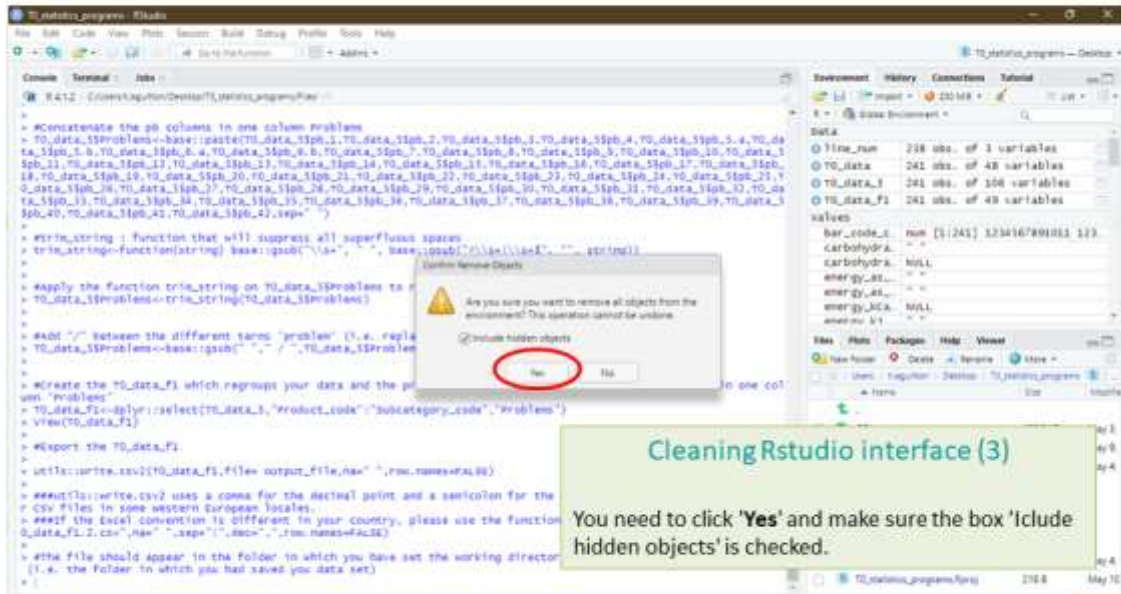


Co-funded by the European Union's Health Programme (2014-2020)



## WORK Package 5 – Reformulation and processed food monitoring

### 'Cleaning' of Rstudio between each program



**Cleaning Rstudio interface (3)**  
You need to click 'Yes' and make sure the box 'Include hidden objects' is checked.



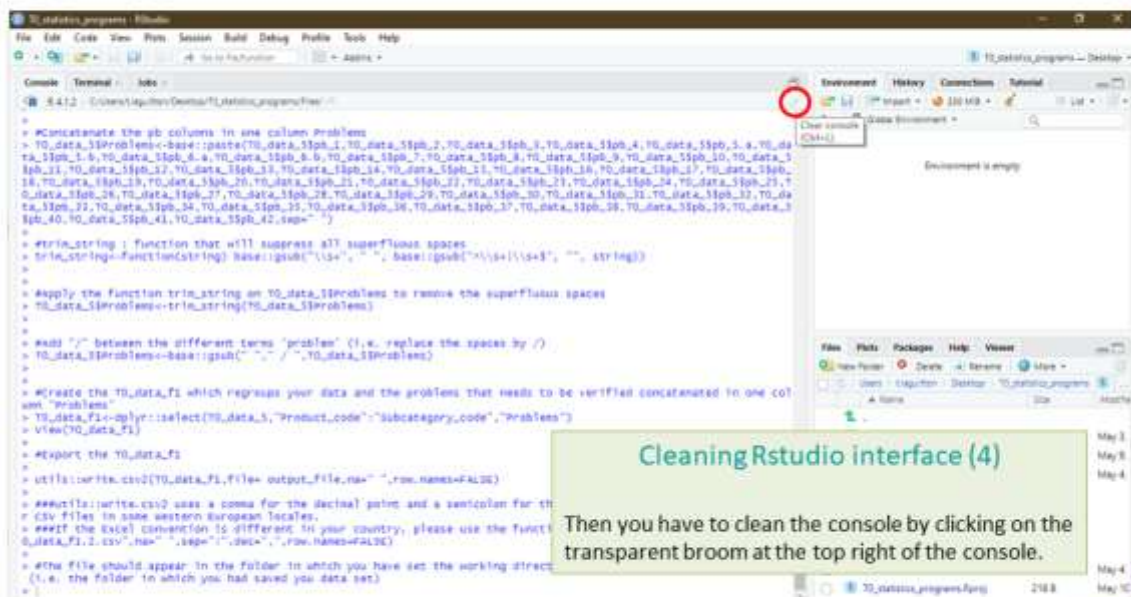
Co-funded by the European Union's  
Research Programme (2014-2020)

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## WORK Package 5 – Reformulation and processed food monitoring

### 'Cleaning' of Rstudio between each program



**Cleaning Rstudio interface (4)**  
Then you have to clean the console by clicking on the transparent broom at the top right of the console.



Co-funded by the European Union's  
Research Programme (2014-2020)

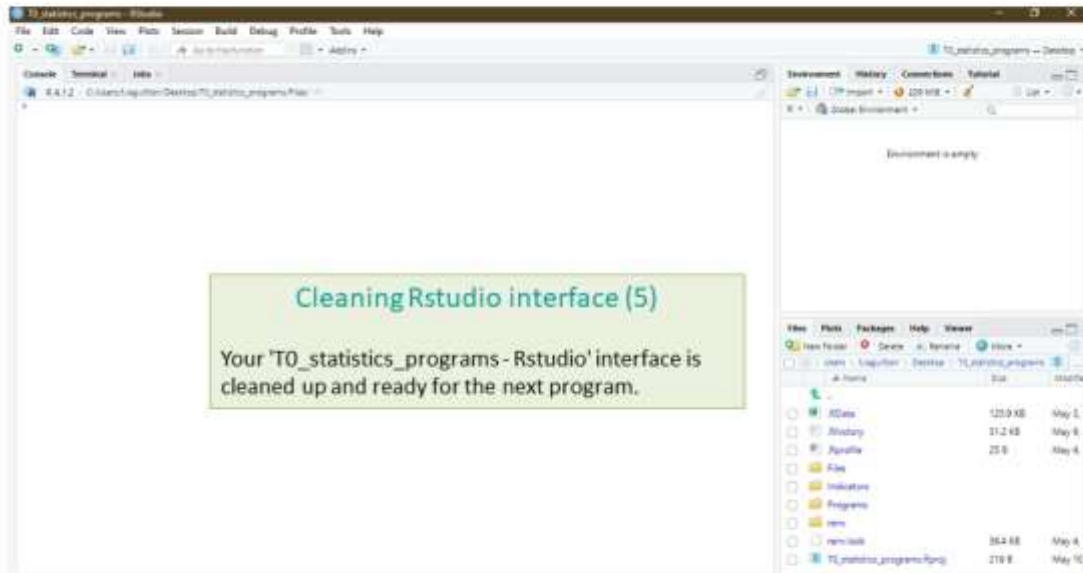
56





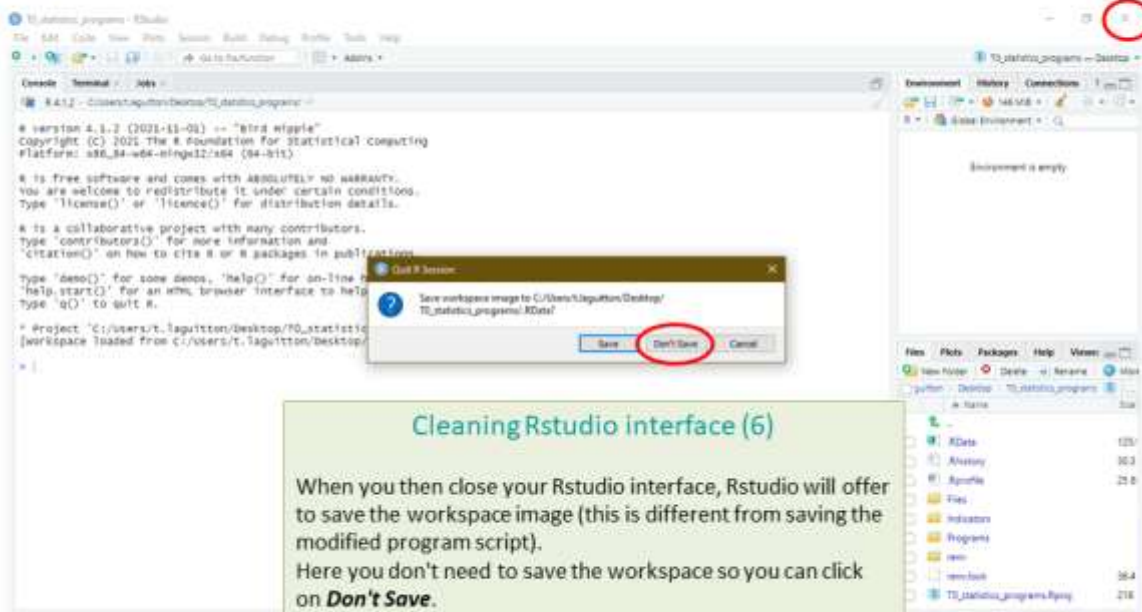
WORK Package 5 – Reformulation and processed food monitoring

‘Cleaning’ of Rstudio between each program



WORK Package 5 – Reformulation and processed food monitoring

‘Cleaning’ of Rstudio between each program





WORK Package 5 – Reformulation and processed food monitoring

3) Running of the programs

A. Part 1 : R setup program [\(page 68\)](#)

B. Part 2 : Verification programs and template cleaning/standardization [\(page 78\)](#)

i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1' [\(page 80\)](#)

ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2' [\(page 109\)](#)

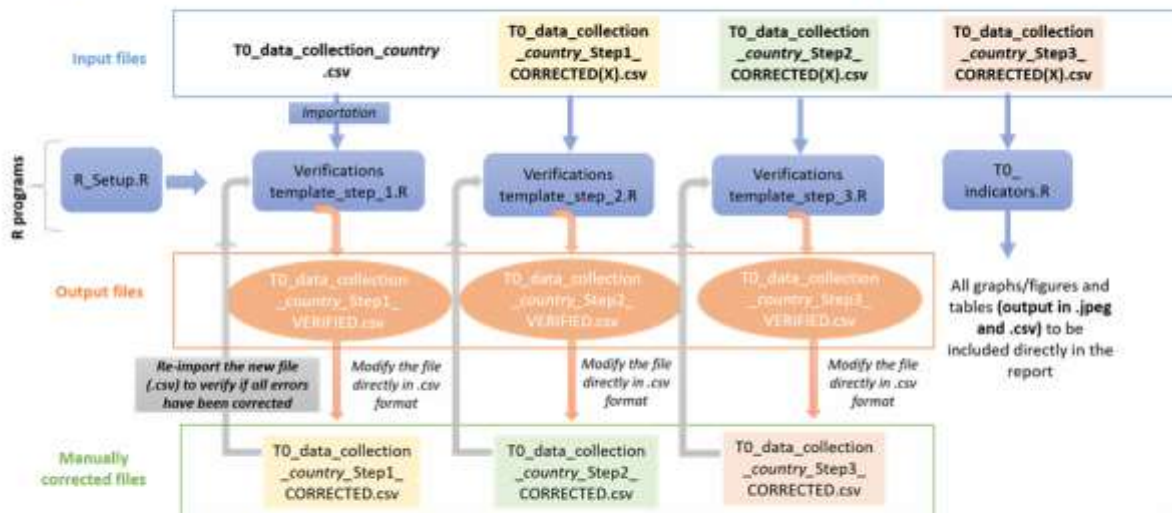
iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3' [\(page 133\)](#)

C. Part 3 : Indicators and statistics production program [\(page 157\)](#)



WORK Package 5 – Reformulation and processed food monitoring

Description of the different 'R' programs



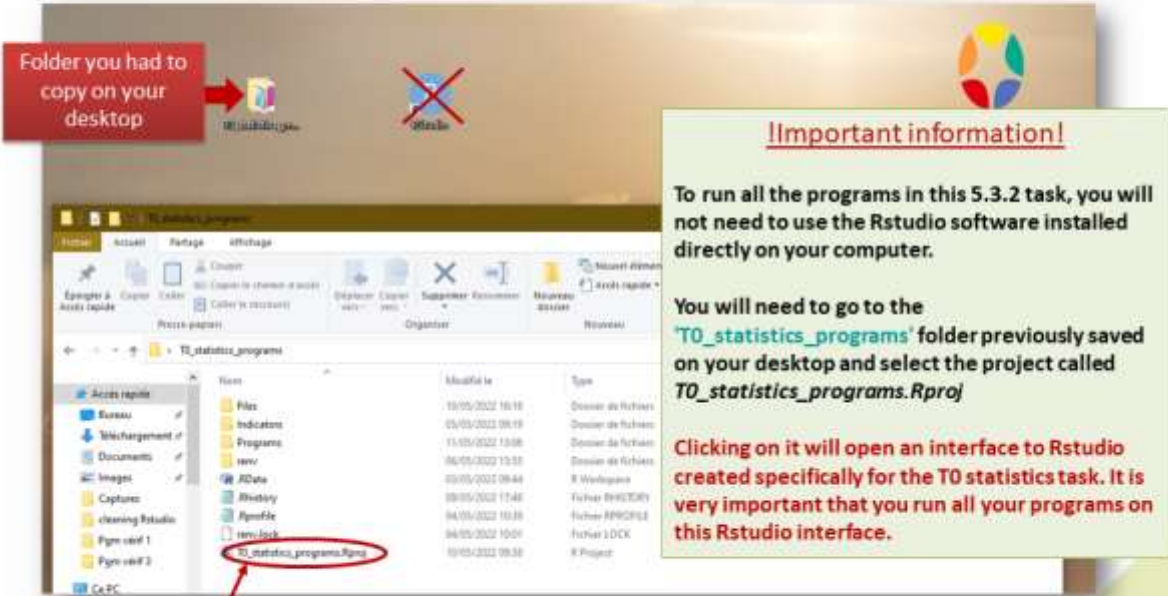
→ All the R programs are already prepared and written, you will just need to make some minor parameter changes and run them.

→ The verification part with 3 programs is the longest but this part is essential to ensure the reliability of the indicators that will come out of the last program 'TO\_indicators'.



WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



**Folder you had to copy on your desktop**

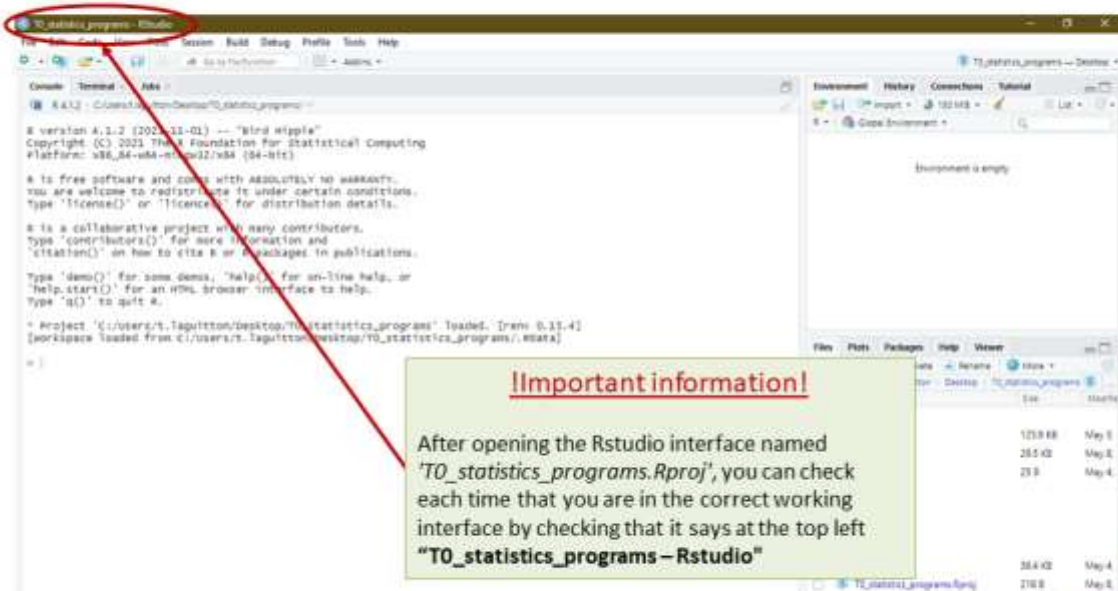
**!Important information!**  
To run all the programs in this 5.3.2 task, you will not need to use the Rstudio software installed directly on your computer. You will need to go to the 'TO\_statistics\_programs' folder previously saved on your desktop and select the project called TO\_statistics\_programs.Rproj. Clicking on it will open an interface to Rstudio created specifically for the T0 statistics task. It is very important that you run all your programs on this Rstudio interface.

Rstudio interface created specifically for the project that you always have to work with



WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



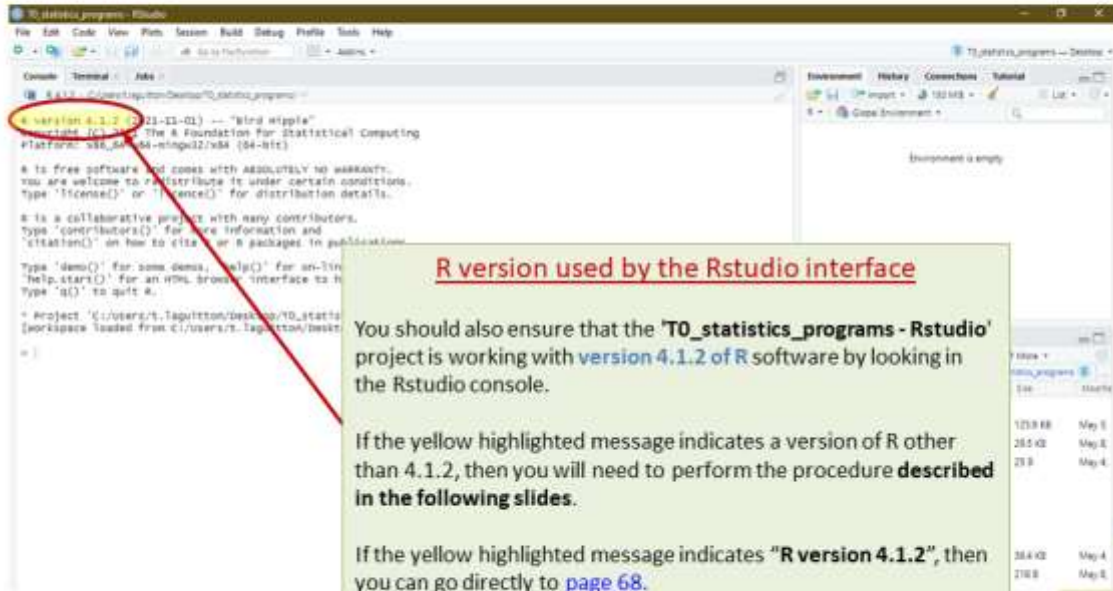
**!Important information!**  
After opening the Rstudio interface named 'TO\_statistics\_programs.Rproj', you can check each time that you are in the correct working interface by checking that it says at the top left "TO\_statistics\_programs – Rstudio"





WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



**R version used by the Rstudio interface**

You should also ensure that the 'TO\_statistics\_programs - Rstudio' project is working with **version 4.1.2 of R** software by looking in the Rstudio console.

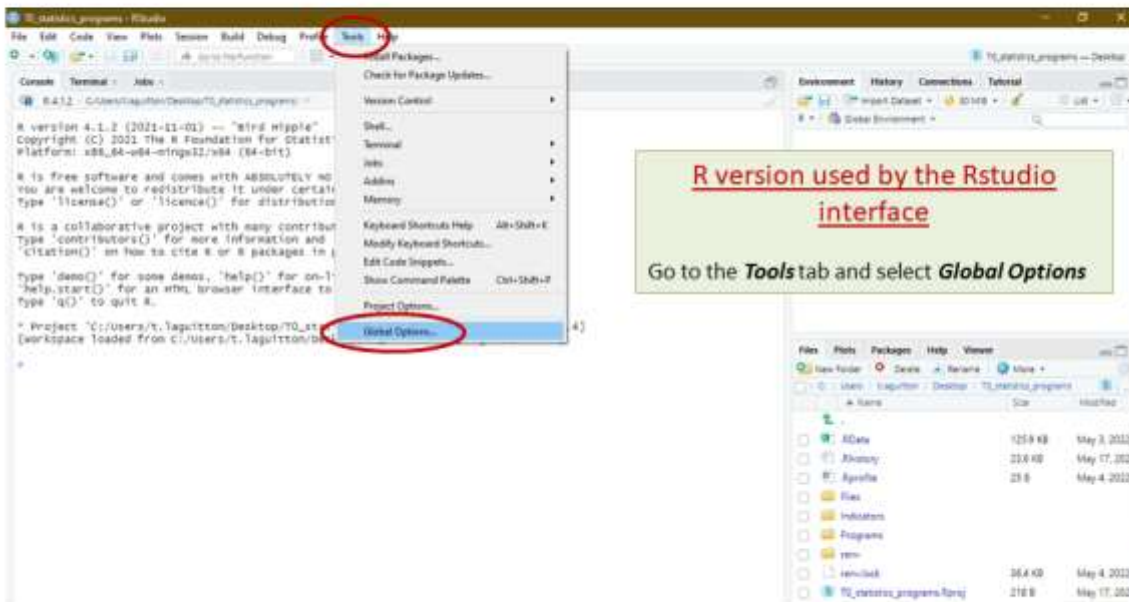
If the yellow highlighted message indicates a version of R other than 4.1.2, then you will need to perform the procedure **described in the following slides**.

If the yellow highlighted message indicates "R version 4.1.2", then you can go directly to [page 68](#).



WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



**R version used by the Rstudio interface**

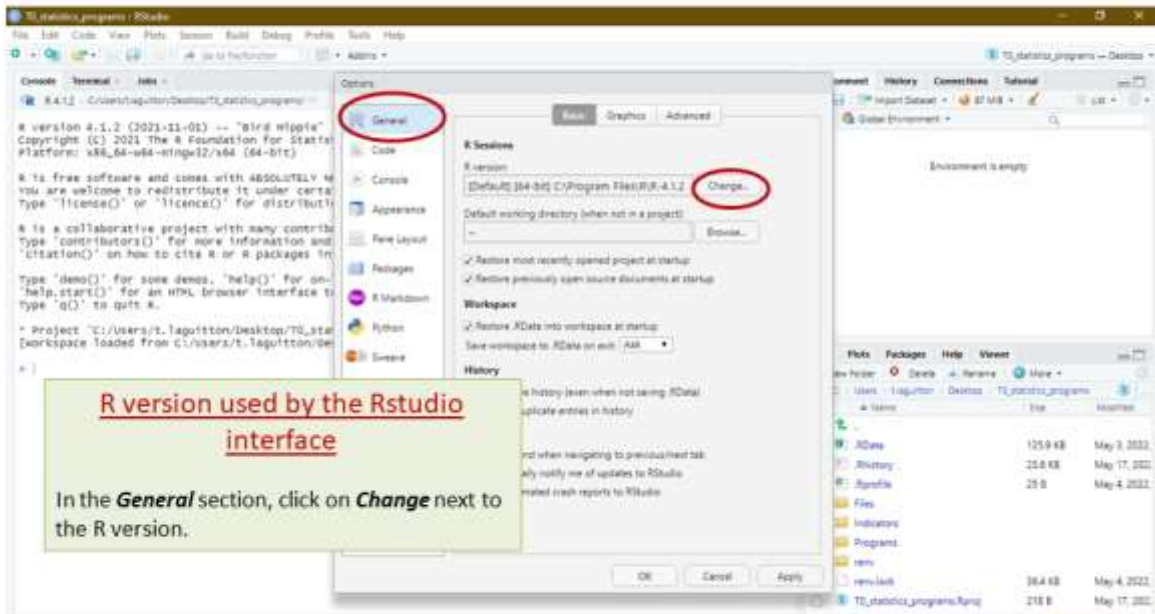
Go to the **Tools** tab and select **Global Options**





WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



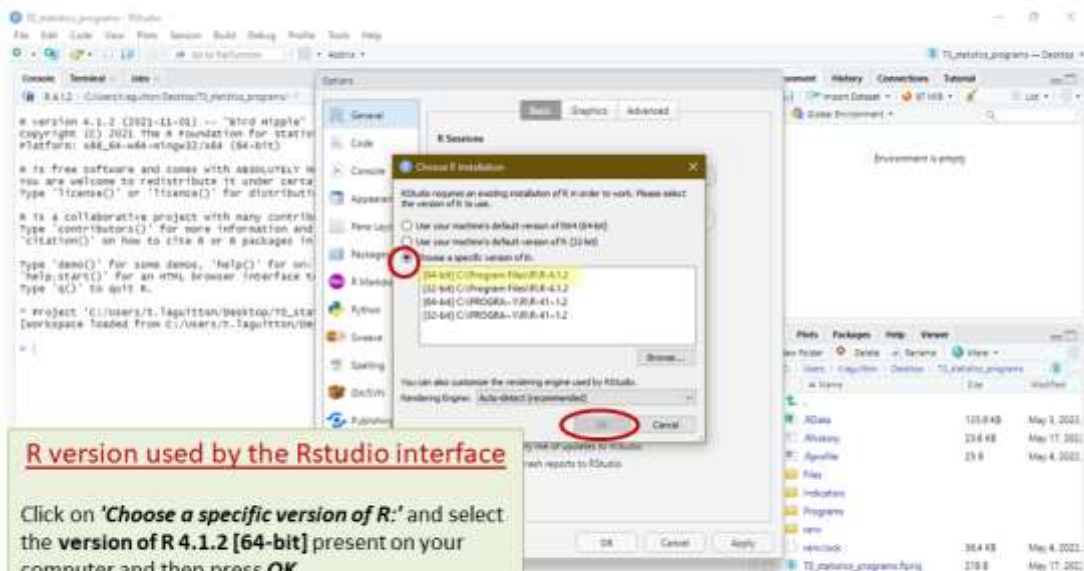
**R version used by the Rstudio interface**

In the **General** section, click on **Change** next to the R version.



WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



**R version used by the Rstudio interface**

Click on **'Choose a specific version of R:'** and select the **version of R 4.1.2 [64-bit]** present on your computer and then press **OK**.

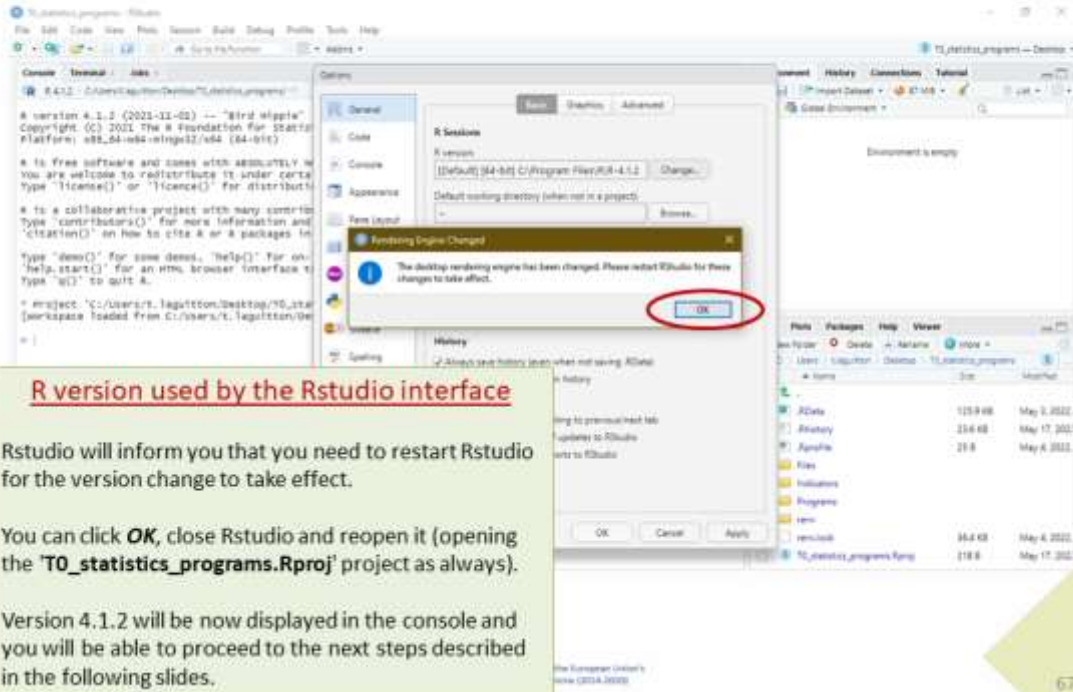
(If you have any doubts about which version of R to choose at this point as there are several 4.1.2 versions on offer, please feel free to send us a screenshot of the proposals made and we will help you choose)





WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



**R version used by the Rstudio interface**

Rstudio will inform you that you need to restart Rstudio for the version change to take effect.

You can click **OK**, close Rstudio and reopen it (opening the **'TO\_statistics\_programs.Rproj'** project as always).

Version 4.1.2 will be now displayed in the console and you will be able to proceed to the next steps described in the following slides.



WORK Package 5 – Reformulation and processed food monitoring

3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1st verification program : 'Verifications template\_step\_1'

ii. 2nd verification program : 'Verifications template\_step\_2'

iii. 3rd verification program : 'Verifications template\_step\_3'

C. Part 3 : Indicators and statistics production program



## WORK Package 5 – Reformulation and processed food monitoring

### 'R\_setup' program

#### Presentation of the 'R\_setup' program :

Just after installing the R and R studio software and before starting the verification programs, you will need to run the 'R\_setup' program just once. This will allow the installation of packages that contain functions that will be needed for data verification and the creation of indicators.

#### Requirements before starting the program 'R\_setup' :

- Before running the 'R\_setup' program, you must ensure that you have **downloaded** the **R** and **Rstudio** software.
- You must also ensure that you are working on the Rstudio interface called **TO\_statistics\_programs.Rproj** located in the 'TO\_statistics\_programs' folder on your desktop (see 2<sup>nd</sup> preliminary step [pages 27-28](#))

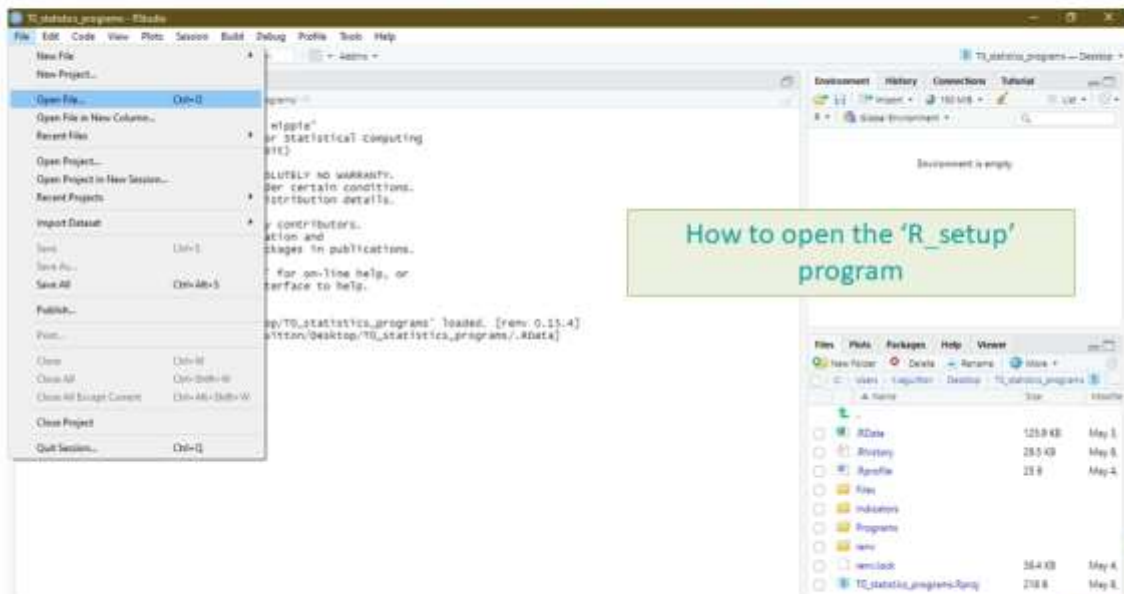


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## WORK Package 5 – Reformulation and processed food monitoring

### Running the 'R\_setup' program



The screenshot shows the RStudio environment. The 'File' menu is open, highlighting 'Open File...'. The console window shows the following text:

```

RStudio
[1] "RStudio"
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[100] "RStudio"

```

The file explorer window shows the following files:

Name	Size	Modified
RData	125.9 KB	May 3
History	28.5 KB	May 3
Rprofile	23 B	May 3
Files		
Indicators		
Programs		
new		
remlock	38.4 KB	May 4
TC_statistics_programs.Rproj	218 B	May 8

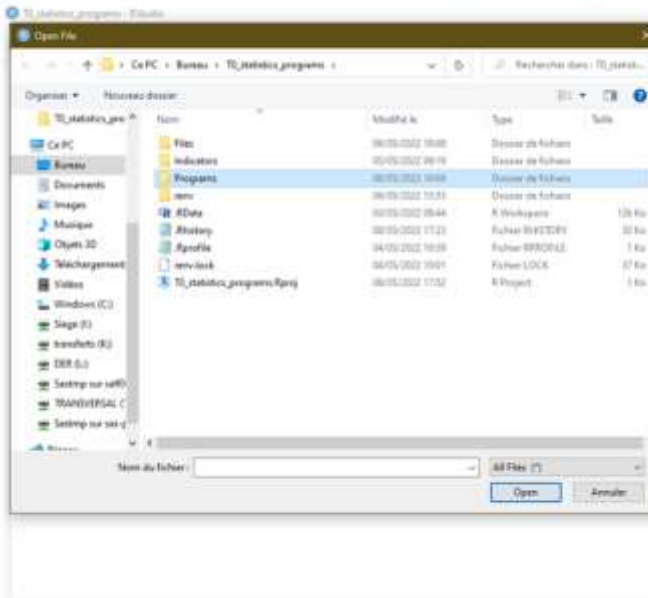
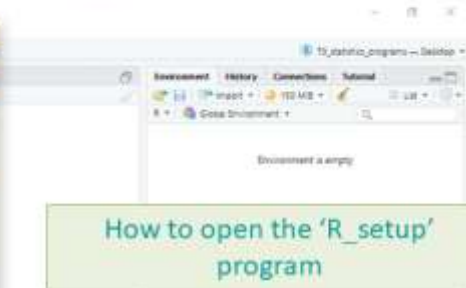


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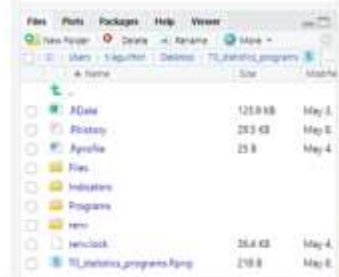


WORK Package 5 – Reformulation and processed food monitoring

Running the 'R\_setup' program

How to open the 'R\_setup' program

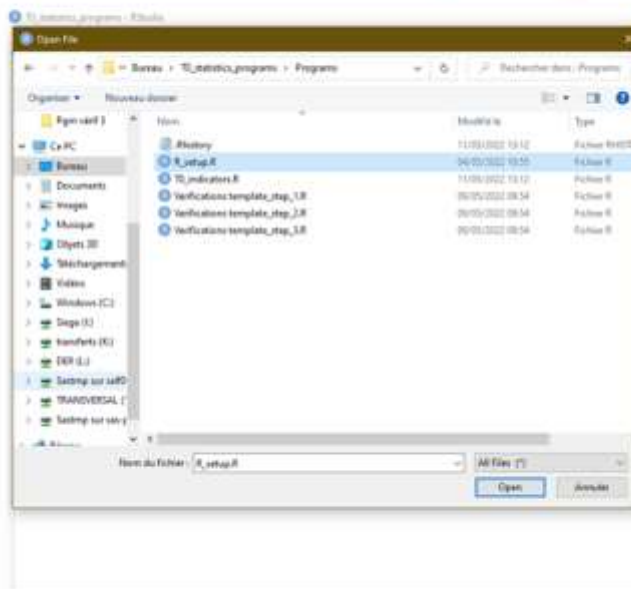



File Name	Size	Modified
ADate	125.9 KB	May 3
RHistory	25.3 KB	May 6
Aprofile	25 B	May 4
Files		
Indicators		
Programs		
rem		
serviclock	26.4 KB	May 4
TI_statistics_programs.Rproj	218 B	May 6

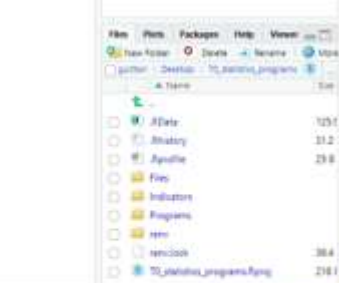


WORK Package 5 – Reformulation and processed food monitoring

Running the 'R\_setup' program

How to open the 'R\_setup' program



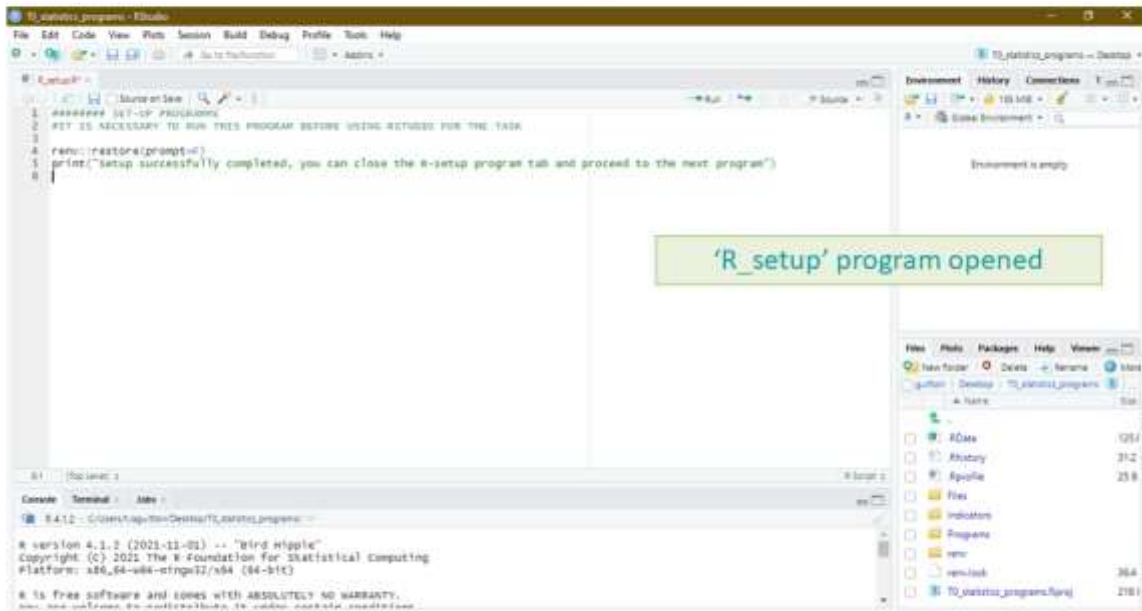
File Name	Size	Modified
ADate	125.1 KB	
RHistory	21.2 KB	
Aprofile	25 B	
Files		
Indicators		
Programs		
rem		
serviclock	38.4 KB	
TI_statistics_programs.Rproj	218 B	





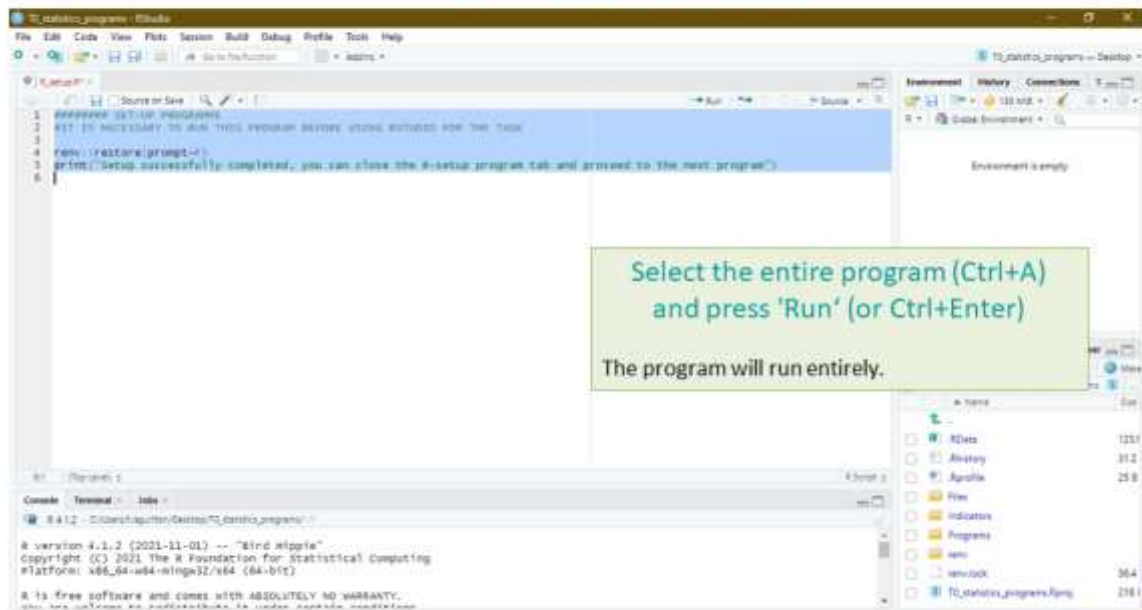
## WORK Package 5 – Reformulation and processed food monitoring

### Running the 'R\_setup' program



## WORK Package 5 – Reformulation and processed food monitoring

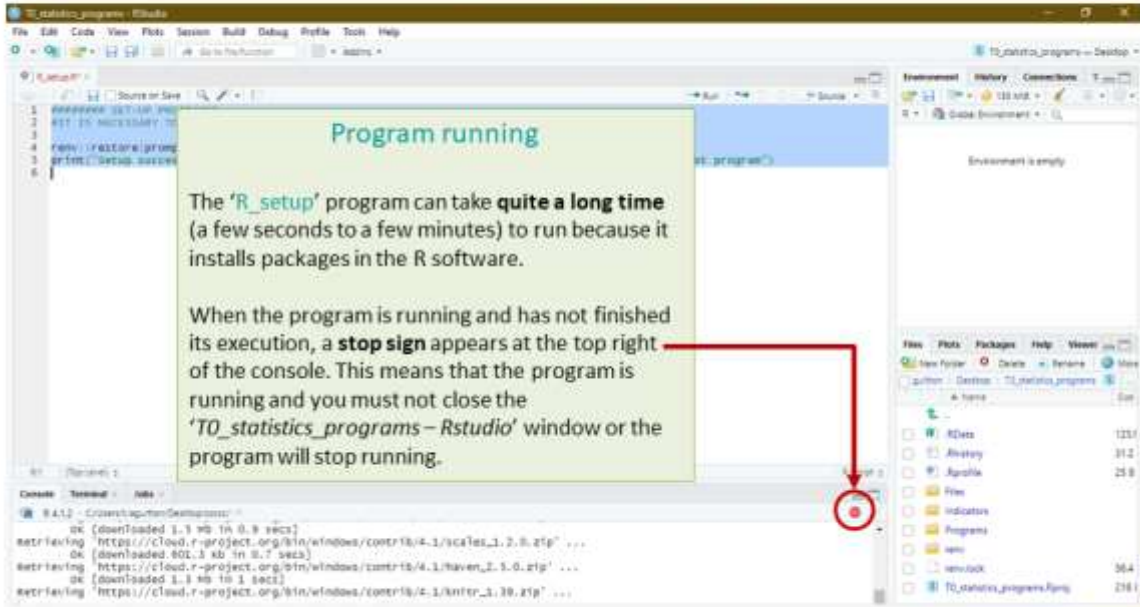
### Running the 'R\_setup' program





WORK Package 5 – Reformulation and processed food monitoring

Running the 'R\_setup' program



**Program running**

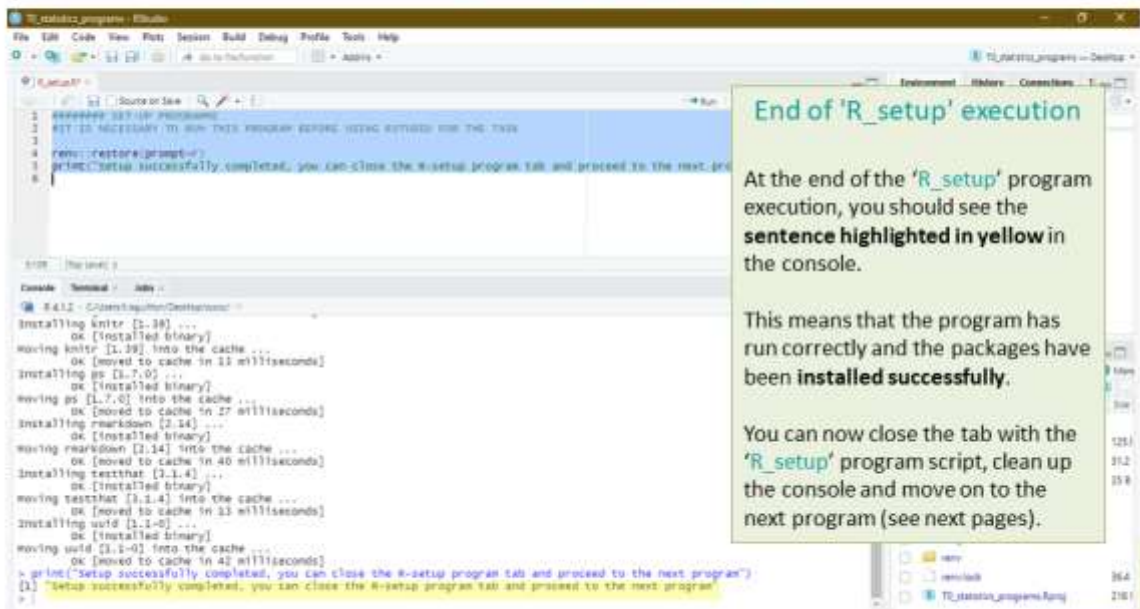
The 'R\_setup' program can take quite a long time (a few seconds to a few minutes) to run because it installs packages in the R software.

When the program is running and has not finished its execution, a **stop sign** appears at the top right of the console. This means that the program is running and you must not close the 'TO\_statistics\_programs - Rstudio' window or the program will stop running.



WORK Package 5 – Reformulation and processed food monitoring

Running the 'R\_setup' program



**End of 'R\_setup' execution**

At the end of the 'R\_setup' program execution, you should see the **sentence highlighted in yellow** in the console.

This means that the program has run correctly and the packages have been **installed successfully**.

You can now close the tab with the 'R\_setup' program script, clean up the console and move on to the next program (see next pages).





## WORK Package 5 – Reformulation and processed food monitoring

### 'R\_setup' program

#### Tutorial video to run the Rsetup program

→ This video is available at any time on the Best ReMaP intranet in the WP5 section  
[https://portal.nijz.si/ssf/a/c/p\\_name/ssf\\_forum/p\\_action/1/entityType/folderEntry/action/view\\_permalink/entryId/74766/novl\\_url/1](https://portal.nijz.si/ssf/a/c/p_name/ssf_forum/p_action/1/entityType/folderEntry/action/view_permalink/entryId/74766/novl_url/1)



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## WORK Package 5 – Reformulation and processed food monitoring

### 3) Running of the programs

A. Part 1: R setup program

**B. Part 2: Verification programs and template cleaning/standardization**

i. 1<sup>st</sup> verification program: 'Verifications template\_step\_1' [\(page 80\)](#)

ii. 2<sup>nd</sup> verification program: 'Verifications template\_step\_2' [\(page 109\)](#)

iii. 3<sup>rd</sup> verification program: 'Verifications template\_step\_3' [\(page 133\)](#)

C. Part 3: Indicators and statistics production program



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## WORK Package 5 – Reformulation and processed food monitoring

### Verification programs

- In this part, you will run 3 verification programs on your file : `TO_data_collection_country.csv`
- This part is very important because it will check that there are no input errors in the template and that the data can be used for creating indicators.

You will need to run these programs in the following order:

- 1) Verifications template\_step\_1.R
- 2) Verifications template\_step\_2.R
- 3) Verifications template\_step\_3.R

- The only information that verification programs cannot check is the **accuracy** of the **Best-ReMaP category and subcategory classification** of the collected products. We therefore suggest that you carefully check the classification of your products collected before starting the verification programs.



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## WORK Package 5 – Reformulation and processed food monitoring

### 3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1'

ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2'

iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

C. Part 3 : Indicators and statistics production program



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## WORK Package 5 – Reformulation and processed food monitoring

### 1<sup>st</sup> verification program : 'Verifications template\_step\_1'

#### **Presentation of the 'Verifications template step\_1' program :**

- This is the first out of the 3 programs of verification of the data entered in your template.
- In this program, data entry problems are checked (misspelling of information, missing mandatory fields, ...)

#### **Requirements before starting the program 'Verifications template\_step\_1' :**

- Before running the program, you need to make sure that **a copy** of your T0 collection template is saved in .csv format in the folder 'Files' in the 'T0\_statistics\_programs' folder that you have saved on your desktop.
- You need to make sure that your template have been renamed :  
T0\_data\_collection\_country.csv (with the name of your own country)
- You need to make sure that the barcodes in your file T0\_data\_collection\_country.csv appear in full and not in scientific format (see procedure [pages 21→25](#))

Your Rstudio interface must have been cleaned up before running the program.  
All cleaning steps are described on [pages 52→58](#).

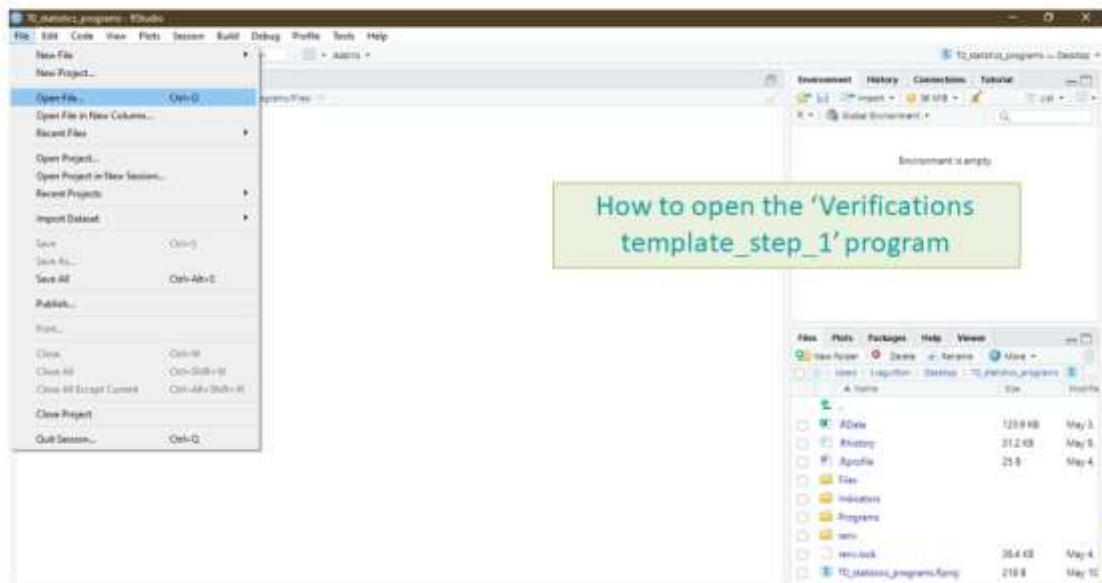


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## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



How to open the 'Verifications template\_step\_1' program

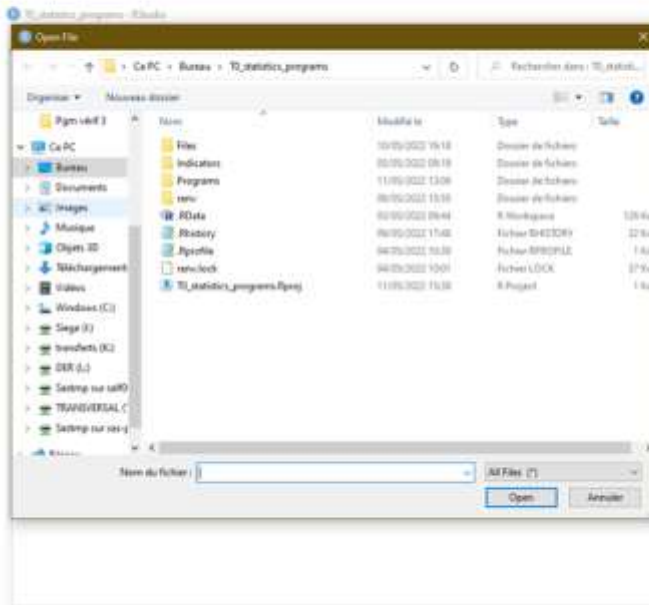


82

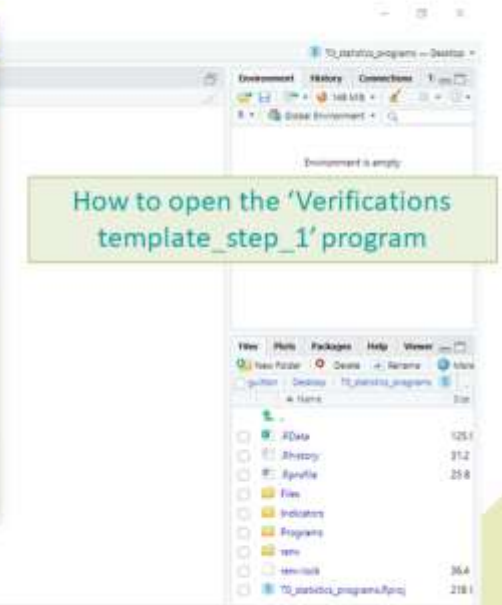


WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_1' program



Nom	Modifié le	Type	Taille
Files	10/05/2022 19:18	dossier de fichiers	
Indicators	05/05/2022 08:18	dossier de fichiers	
Programs	11/05/2022 13:08	dossier de fichiers	
rem	05/05/2022 13:08	dossier de fichiers	
RData	02/05/2022 09:44	R WorkSpace	128 Ko
Rhistory	06/05/2022 11:40	Fichier R42SDH	22 Ko
Rprofile	04/05/2022 10:39	Fichier RPROFLE	1 Ko
rem.lock	04/05/2022 10:01	Fichier LOCK	27 Ko
TI_statistics_programs.Rproj	11/05/2022 13:08	R Project	1 Ko



Environment: History Connections

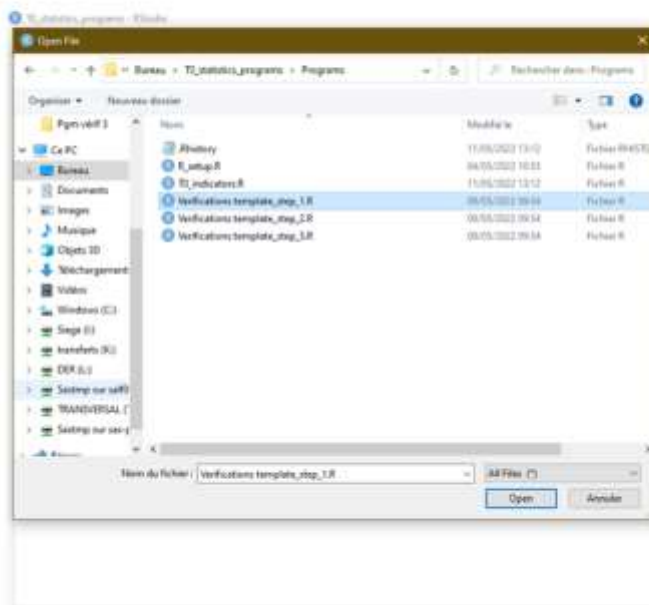
View	Plot	Package	Help	Viewer
TIData				125.1
Rhistory				31.2
Rprofile				25.8
Files				
Indicators				
Programs				
rem				36.4
rem.lock				27 Ko
TI_statistics_programs.Rproj				218.1

How to open the 'Verifications template\_step\_1' program

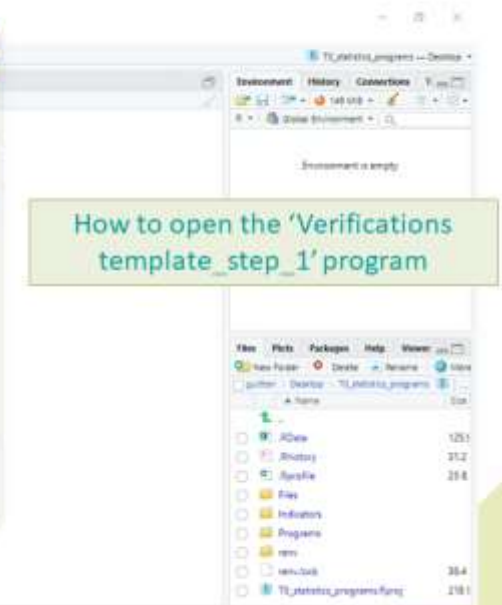


WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_1' program



Nom	Modifié le	Type
Rhistory	11/05/2022 13:10	Fichier R42SDH
R_setup.R	04/05/2022 10:01	Fichier R
TI_indicators.R	11/05/2022 13:12	Fichier R
Verifications template_step_1.R	05/05/2022 09:54	Fichier R
Verifications template_step_2.R	05/05/2022 09:54	Fichier R
Verifications template_step_3.R	05/05/2022 09:54	Fichier R



Environment: History Connections

View	Plot	Package	Help	Viewer
TIData				125.1
Rhistory				31.2
Rprofile				25.8
Files				
Indicators				
Programs				
rem				36.4
rem.lock				27 Ko
TI_statistics_programs.Rproj				218.1

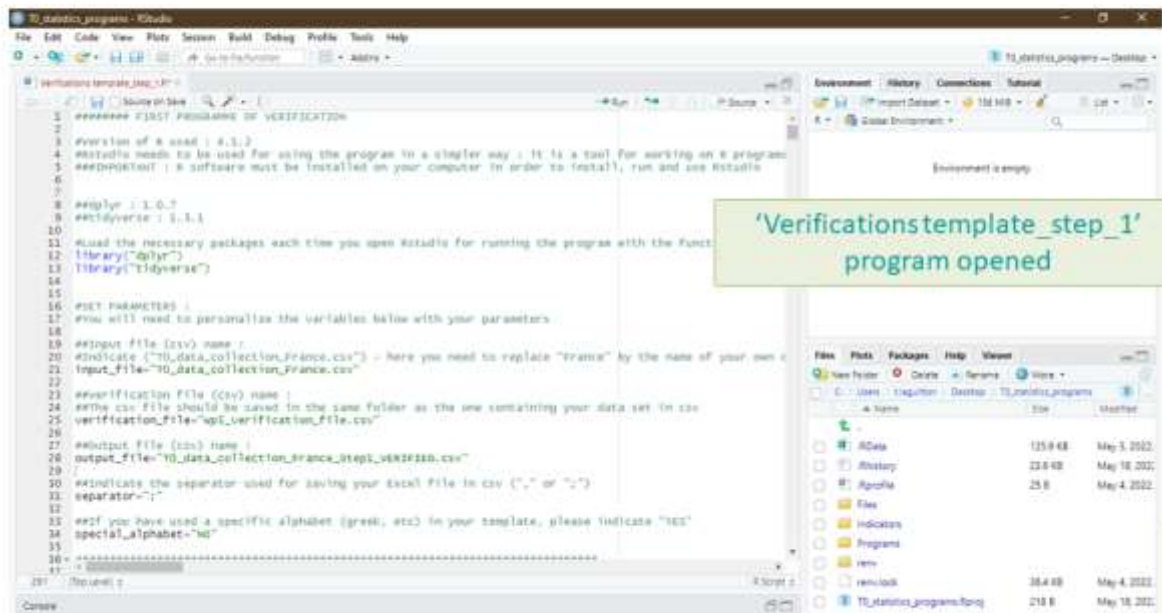
How to open the 'Verifications template\_step\_1' program





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



**'Verifications template\_step\_1' program opened**



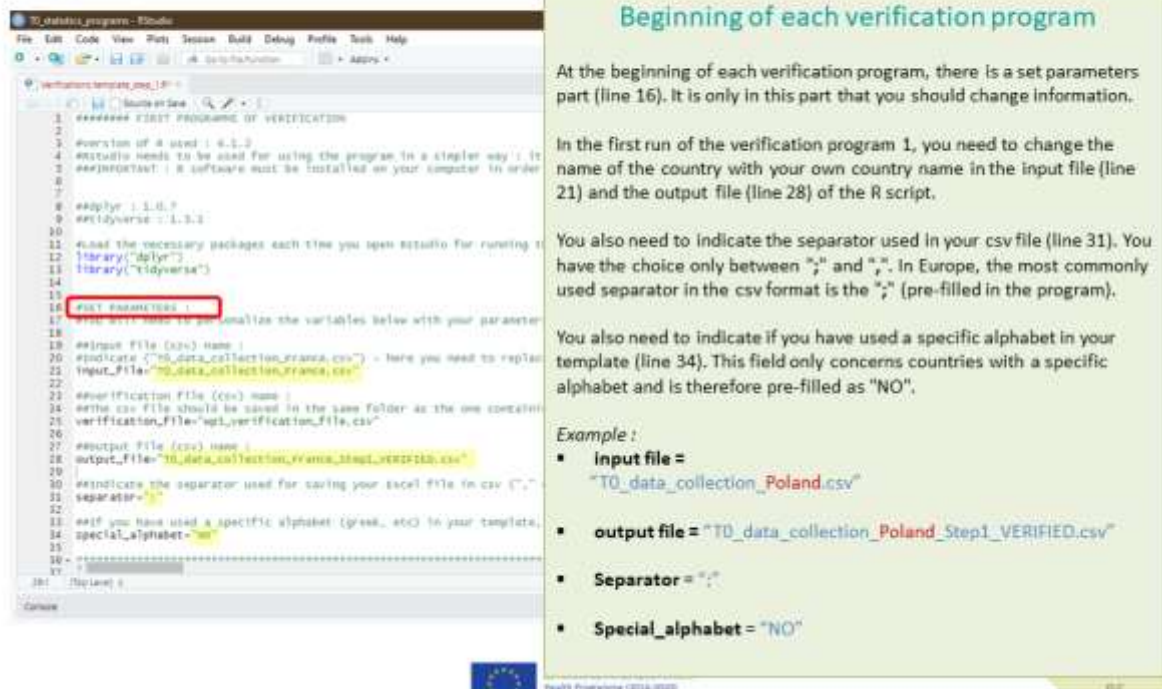
Co-funded by the European Union's  
Health Programme (2014-2020)

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## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



**Beginning of each verification program**

At the beginning of each verification program, there is a set parameters part (line 16). It is only in this part that you should change information.

In the first run of the verification program 1, you need to change the name of the country with your own country name in the input file (line 21) and the output file (line 28) of the R script.

You also need to indicate the separator used in your csv file (line 31). You have the choice only between ";" and ",". In Europe, the most commonly used separator in the csv format is the ";" (pre-filled in the program).

You also need to indicate if you have used a specific alphabet in your template (line 34). This field only concerns countries with a specific alphabet and is therefore pre-filled as "NO".

**Example :**

- **input file =**  
"TD\_data\_collection\_Poland.csv"
- **output file =** "TD\_data\_collection\_Poland\_Step1\_VERIFIED.csv"
- **Separator =** ";"
- **Special\_alphabet =** "NO"



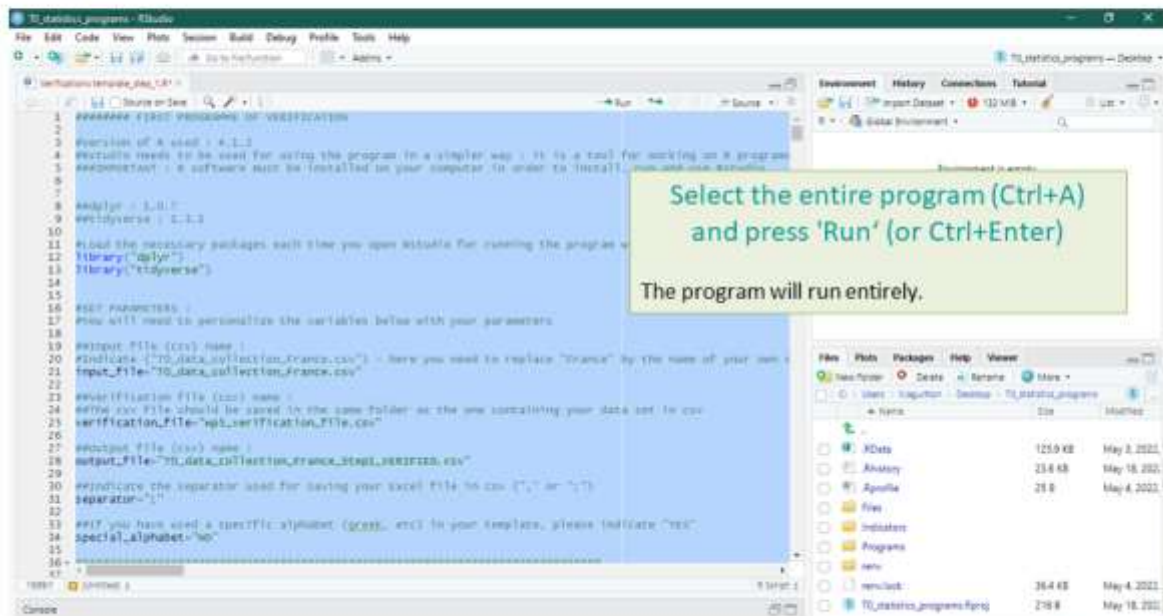
Co-funded by the European Union's  
Health Programme (2014-2020)

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## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



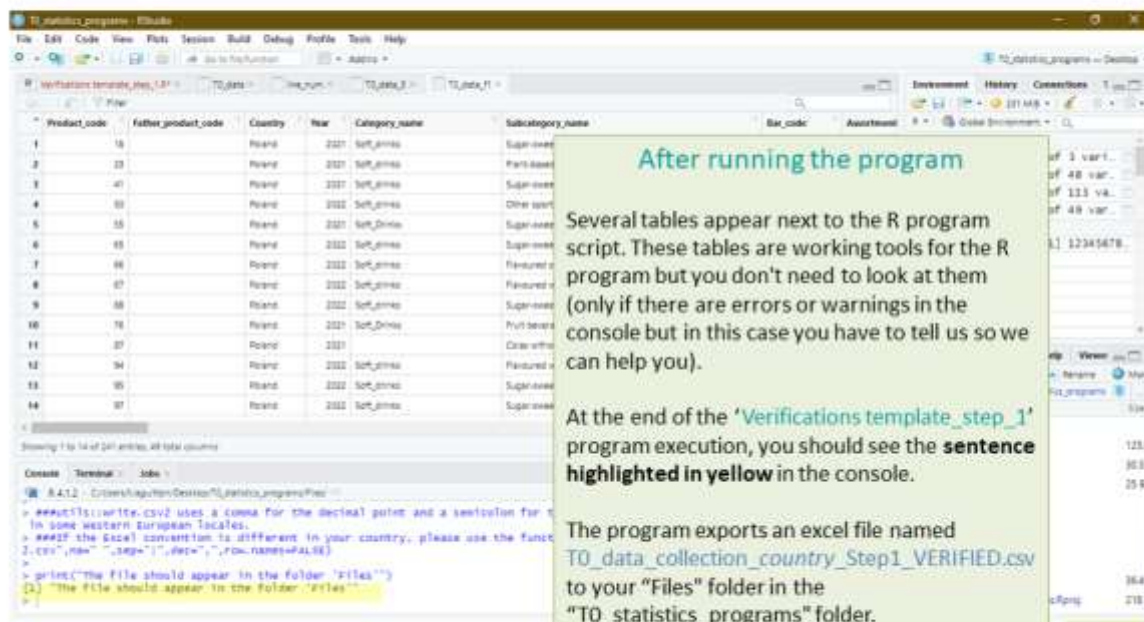
Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter)

The program will run entirely.



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



After running the program

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

At the end of the 'Verifications template\_step\_1' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports an excel file named `TO_data_collection_country_Step1_VERIFIED.csv` to your "Files" folder in the "TO\_statistics\_programs" folder.

Product_code	father_product_code	Country	Year	Category_name	Subcategory_name
1	18	Poland	2021	Soft_drinks	Super-soft
2	23	Poland	2021	Soft_drinks	Pepsi drink
3	40	Poland	2021	Soft_drinks	Super-soft
4	50	Poland	2022	Soft_drinks	Diet soft
5	55	Poland	2021	Soft_drinks	Super-soft
6	65	Poland	2022	Soft_drinks	Super-soft
7	67	Poland	2022	Soft_drinks	Flavored s
8	68	Poland	2022	Soft_drinks	Flavored s
9	68	Poland	2022	Soft_drinks	Super-soft
10	76	Poland	2021	Soft_drinks	Pepsi drink
11	87	Poland	2021	Soft_drinks	Clear soft
12	94	Poland	2022	Soft_drinks	Flavored s
13	95	Poland	2022	Soft_drinks	Super-soft
14	97	Poland	2022	Soft_drinks	Super-soft

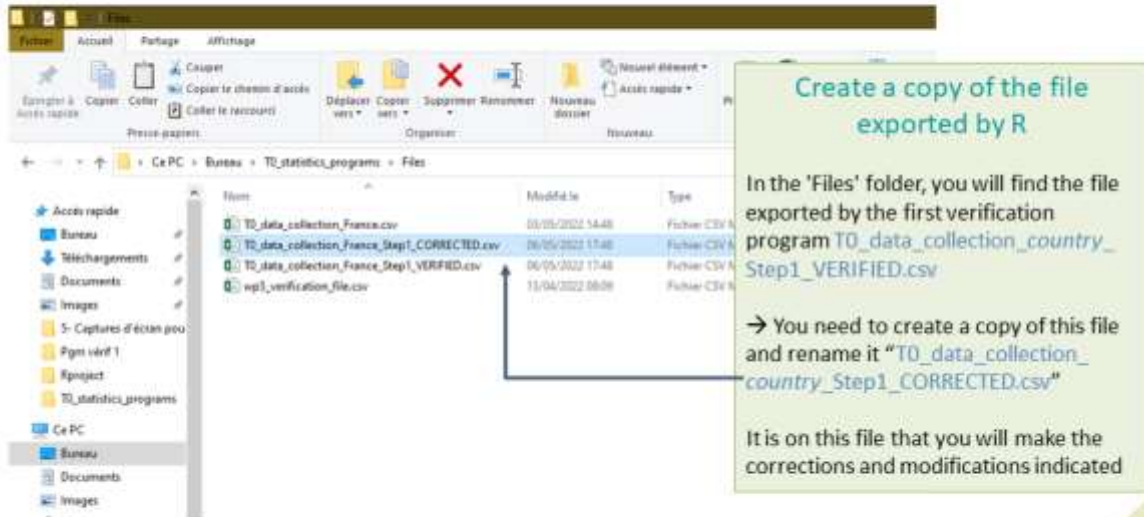






## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



**Create a copy of the file exported by R**

In the 'Files' folder, you will find the file exported by the first verification program `T0_data_collection_country_Step1_VERIFIED.csv`

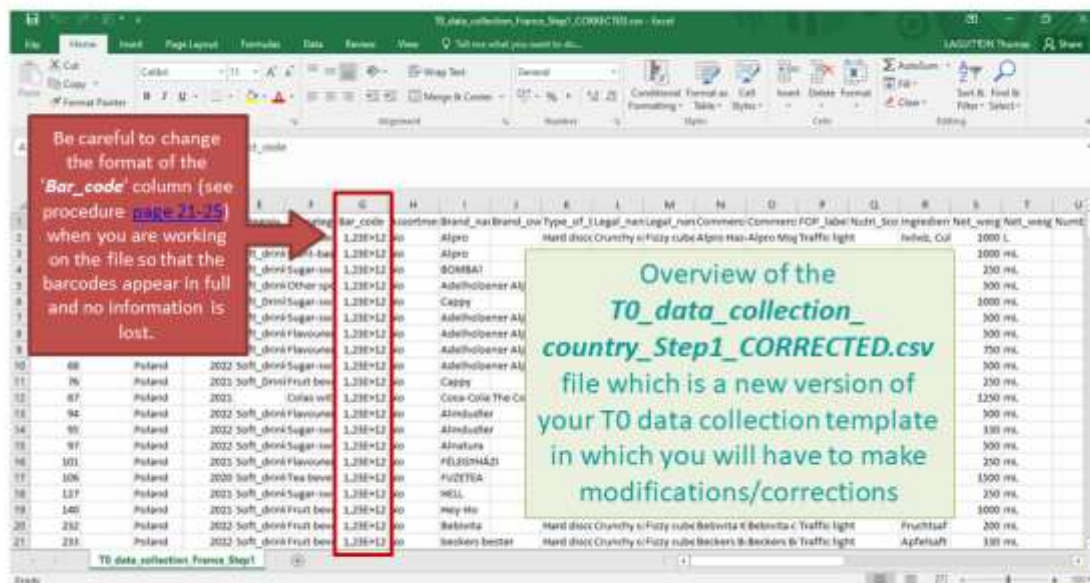
→ You need to create a copy of this file and rename it "`T0_data_collection_country_Step1_CORRECTED.csv`"

It is on this file that you will make the corrections and modifications indicated



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

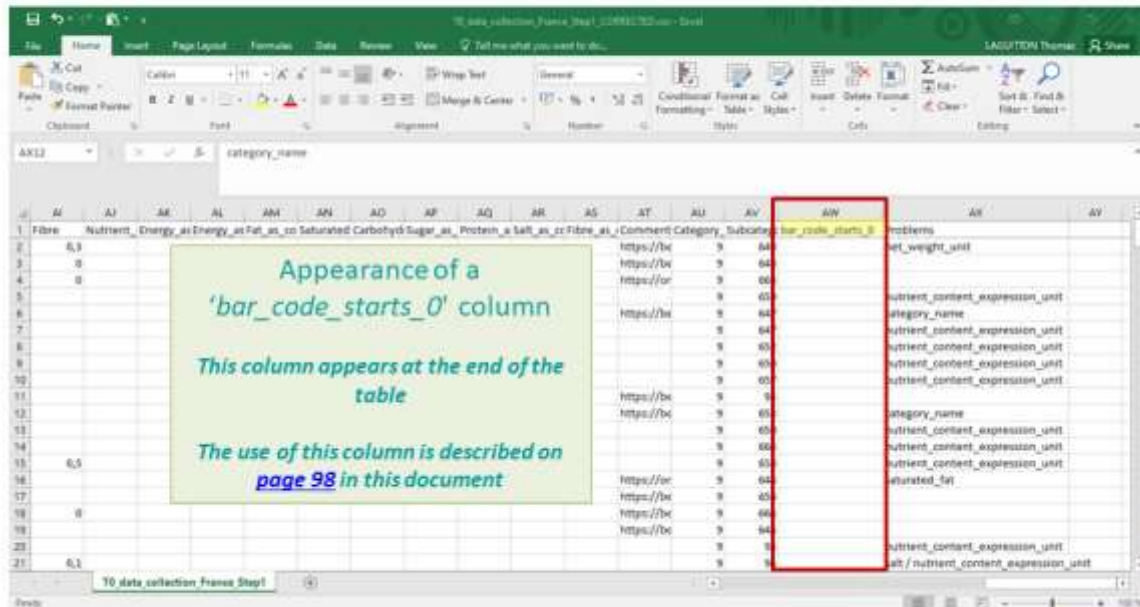


Be careful to change the format of the 'Bar\_code' column (see procedure [page 21-25](#)) when you are working on the file so that the barcodes appear in full and no information is lost.

**Overview of the `T0_data_collection_country_Step1_CORRECTED.csv` file which is a new version of your T0 data collection template in which you will have to make modifications/corrections**



WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_1' program



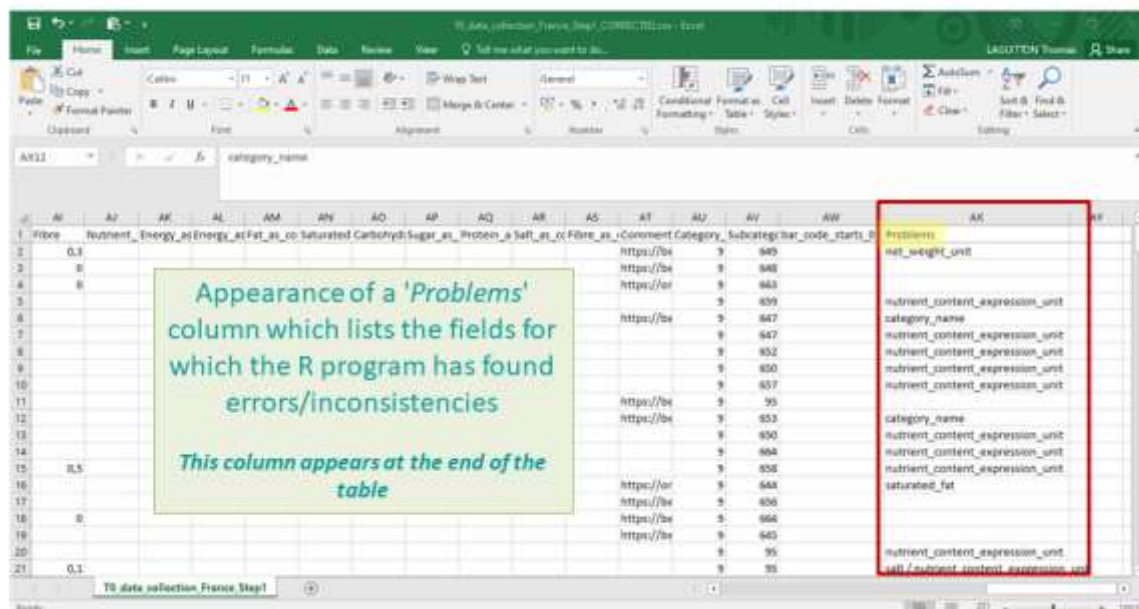
Appearance of a 'bar\_code\_starts\_0' column

This column appears at the end of the table

The use of this column is described on page 98 in this document



WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_1' program



Appearance of a 'Problems' column which lists the fields for which the R program has found errors/inconsistencies

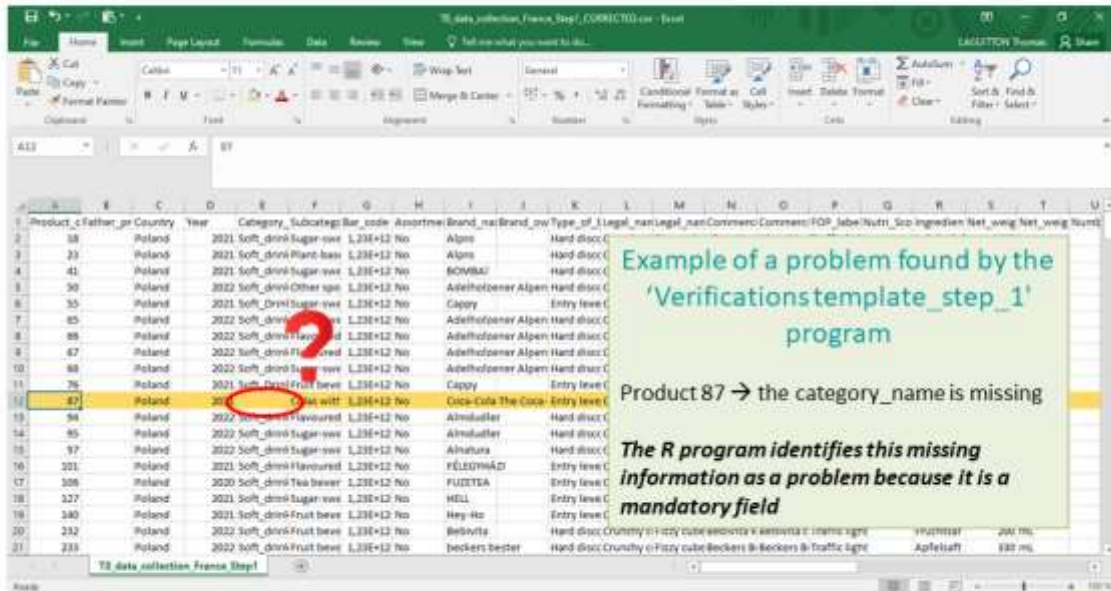
This column appears at the end of the table





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program



Example of a problem found by the 'Verifications template\_step\_1' program

Product 87 → the category\_name is missing

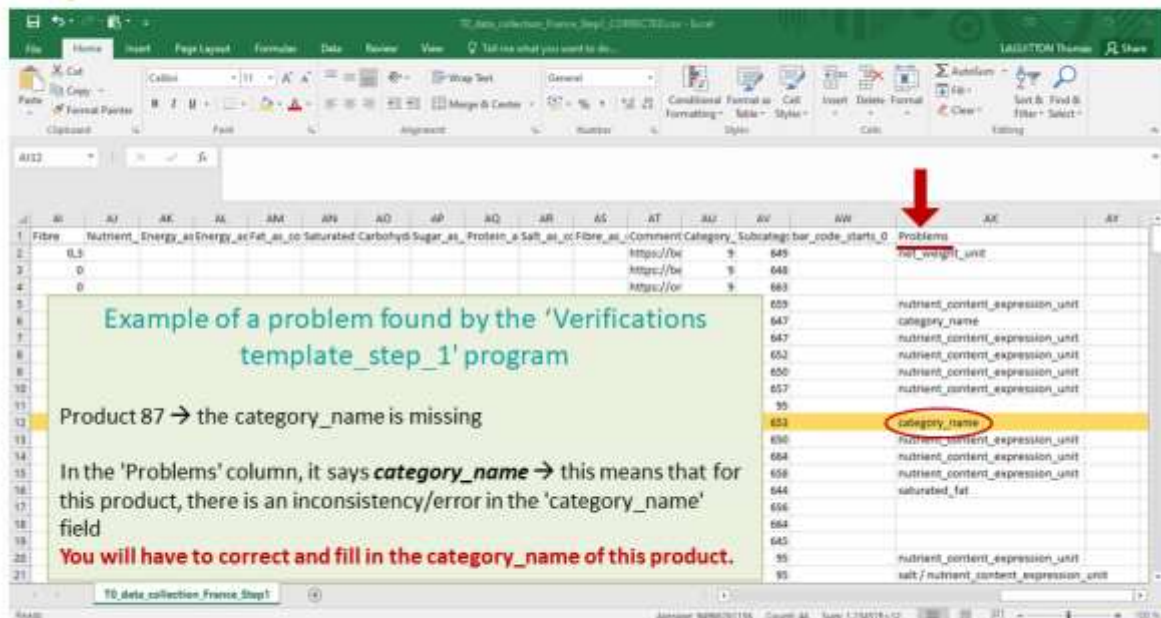
The R program identifies this missing information as a problem because it is a mandatory field

Product_c	Year	Country	Category	Subcategory	Bar_code	Asortime	Brand_n	Brand_w	Type_of	Legal_n	Legal_w	Commercial	Commercial	POP	Label	Nutri	Ingredient	Net_w	Net_w	Net_w
38	2021	Poland	Soft_drink	Sugar-swe	L23E+12	No	Alpen		Hand disc	C										
23	2021	Poland	Soft_drink	Plant-base	L23E+12	No	Alpen		Hand disc	C										
41	2021	Poland	Soft_drink	Sugar-swe	L23E+12	No	SONMAS		Hand disc	C										
30	2022	Poland	Soft_drink	Other spe	L23E+12	No	Asterhofener Alpen		Hand disc	C										
35	2021	Poland	Soft_drink	Sugar-swe	L23E+12	No	Capry		Entry level	C										
25	2022	Poland	Soft_drink	Flavoured	L23E+12	No	Asterhofener Alpen		Hand disc	C										
89	2022	Poland	Soft_drink	Flavoured	L23E+12	No	Asterhofener Alpen		Hand disc	C										
47	2022	Poland	Soft_drink	Flavoured	L23E+12	No	Asterhofener Alpen		Hand disc	C										
88	2022	Poland	Soft_drink	Sugar-swe	L23E+12	No	Asterhofener Alpen		Hand disc	C										
76	2021	Poland	Soft_drink	Fruit-bev	L23E+12	No	Capry		Entry level	C										
87	2021	Poland	Soft_drink	Sugar-swe	L23E+12	No	Coca-Cola The Coca-Cola		Entry level	C										
94	2022	Poland	Soft_drink	Flavoured	L23E+12	No	Almaduller		Hand disc	C										
85	2022	Poland	Soft_drink	Sugar-swe	L23E+12	No	Almaduller		Hand disc	C										
97	2022	Poland	Soft_drink	Sugar-swe	L23E+12	No	Almaduller		Hand disc	C										
301	2021	Poland	Soft_drink	Flavoured	L23E+12	No	PEŁODMĄD		Entry level	C										
308	2020	Poland	Soft_drink	Tea-bev	L23E+12	No	FLUETEA		Entry level	C										
327	2021	Poland	Soft_drink	Sugar-swe	L23E+12	No	MDL		Entry level	C										
340	2021	Poland	Soft_drink	Fruit-bev	L23E+12	No	Hey-ko		Entry level	C										
332	2022	Poland	Soft_drink	Fruit-bev	L23E+12	No	Bevinta		Hand disc	C										
233	2022	Poland	Soft_drink	Fruit-bev	L23E+12	No	beckers bester		Hand disc	C										



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program



Example of a problem found by the 'Verifications template\_step\_1' program

Product 87 → the category\_name is missing

In the 'Problems' column, it says *category\_name* → this means that for this product, there is an inconsistency/error in the 'category\_name' field

You will have to correct and fill in the category\_name of this product.

	Nutrient	Energy_asFat_as	Saturated	Carbohydr	Sugar_as	Protein_a	Salt_as	Fibre_as	Comment	Category	Subcategory	bar_code	starts_0	Problems
1	Fibre													
2	0L5								https://e				649	category_name
3	0								https://be				648	category_name
4	0								https://or				683	category_name
5													659	nutrient_content_expression_unit
6													647	category_name
7													647	nutrient_content_expression_unit
8													652	nutrient_content_expression_unit
9													650	nutrient_content_expression_unit
10													657	nutrient_content_expression_unit
11													35	category_name
12													653	category_name
13													650	nutrient_content_expression_unit
14													664	nutrient_content_expression_unit
15													658	nutrient_content_expression_unit
16													644	nutrient_content_expression_unit
17													656	saturated_fat
18													664	
19													645	
20													35	nutrient_content_expression_unit
21													95	salt/nutrient_content_expression_unit



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

- In the following slides all the terms that can appear in the problem column and how to make corrections will be presented.
- Please note that the verification program 'Verifications template\_step\_1' is **case sensitive** (upper and lower case letters are important). Any information entered that does not match the **spelling** and **case** of the elements in the drop-down lists of the initial data entry template will appear as an error.



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action	
<b>Duplicate_code</b>	Different products have the same product code	→ You must change the product code so that all products have a unique code	'Product_code' is a mandatory field
<b>Empty_product_code</b>	The product does not have a unique product code	→ You must create a unique product code that does not already exist for the product	
<b>Country</b>	Incorrect country name (i.e. not contained in the closed list of the input template) or missing country name	→ You must check the spelling of the country by comparing it with the <b>closed list of the input template</b> or add the country name if it is missing	'Country' is a mandatory field
<b>Year</b>	Year different from 2021 or 2022 or missing	→ You must correct the collection year (no other choice than <b>2021</b> or <b>2022</b> ) or add it if it is missing	'Year' is a mandatory field
<b>Category_name</b>	Incorrect category name (i.e. not contained in the closed list of the input template) or missing category name	→ You must check the spelling of the category name by comparing it with the <b>closed list of the input template</b> or add the category name if it is missing	'Category_name' is a mandatory field
<b>Category_code</b>	Category code that does not exist or missing category code	→ You must check the category code exists by comparing it with the classification guides of the 5 food categories or add the category code if it is missing	'Category_code' is a mandatory field





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program

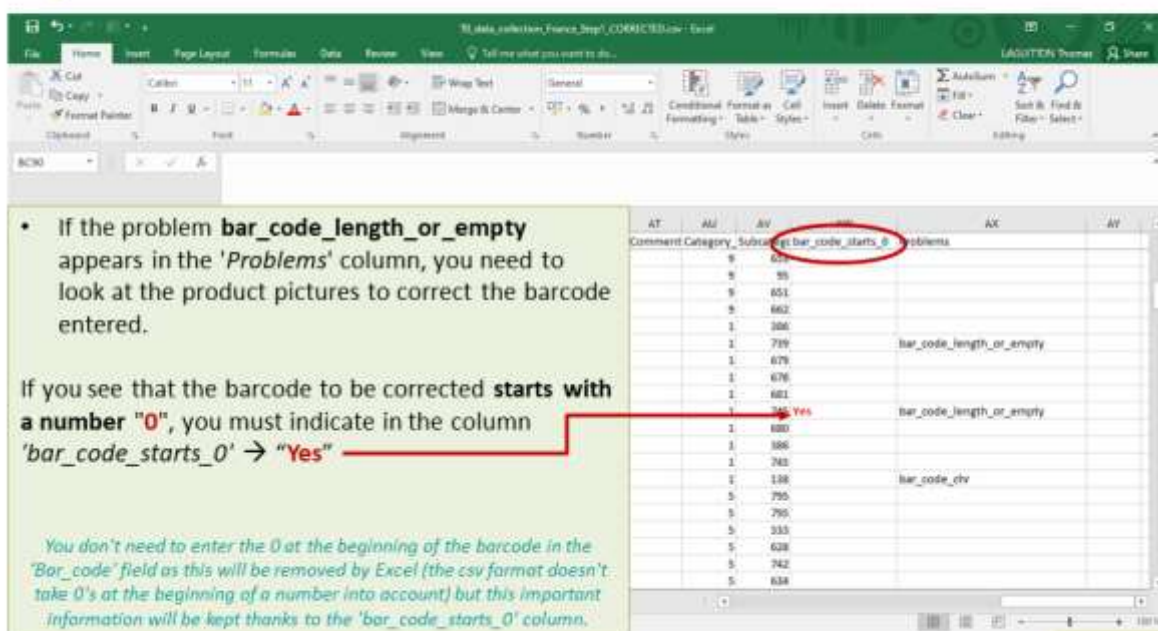
Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action	
Subcategory_name	Incorrect subcategory name (i.e. not contained in the closed list of the input template) or missing subcategory name	→ You must check the spelling of the subcategory name by comparing it with the closed list of the input template or add the subcategory name if it is missing	'Subcategory_name' is a mandatory field
Subcategory_code	Category code that does not exist or missing category code	→ You must check the subcategory code exists by comparing it with the classification guides of the 5 food categories or add the subcategory code if it is missing	'Subcategory_code' is a mandatory field
Bar_code_length_or_empty	The barcode does not have 8, 12, 13, 14, or 15 digits or is missing	→ You must go back to the product pictures and correct the barcode or add the barcode if you have forgotten it. If the barcode does not appear on the product pictures or is the same as in the picture, you must indicate in the 'Comments' field: "barcode checked".	
Bar_code_chr	The barcode contains characters other than numbers that are unwanted	→ You must go back to the product pictures and correct the barcode as there can be no characters other than numbers in a barcode	



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program



• If the problem **bar\_code\_length\_or\_empty** appears in the 'Problems' column, you need to look at the product pictures to correct the barcode entered.

If you see that the barcode to be corrected **starts with a number "0"**, you must indicate in the column 'bar\_code\_starts\_0' → **"Yes"**

*You don't need to enter the 0 at the beginning of the barcode in the 'Bar\_code' field as this will be removed by Excel (the csv format doesn't take 0's at the beginning of a number into account) but this important information will be kept thanks to the 'bar\_code\_starts\_0' column.*



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

#### Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action	
<b>Brand_name</b>	Brand name is missing	→ You must go back to the product pictures and add the brand name of the product if you have forgotten it. If the brand name does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: " <i>brand name checked and unreadable/not existing</i> ".	
<b>Type_of_brand</b>	Incorrect type of brand (i.e. not contained in the closed list of the input template) or missing type of brand	→ You must check the spelling of the type of brand by comparing it with the closed list of the input template or add the type of brand if it is missing by looking at the product's brand name	'Type_of_brand' is a mandatory field
<ul style="list-style-type: none"> <li>• <b>Legal_name</b></li> <li>• <b>Legal_name_english</b></li> </ul>	Legal name is missing Legal name in english is missing	→ You must go back to the product pictures and add the legal name of the product if you have forgotten it. If the legal name does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: " <i>legal name checked and unreadable/not existing</i> ". → If the legal name in English is missing, you must translate the legal name and add it to the template	



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

#### Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action	
<ul style="list-style-type: none"> <li>• <b>Commercial_name</b></li> <li>• <b>Commercial_name_english</b></li> </ul>	Commercial name is missing Commercial name in english is missing	→ You must go back to the product pictures and add the commercial name of the product if you have forgotten it. If the commercial name does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: " <i>commercial name checked and unreadable/not existing</i> ". → If the commercial name in English is missing, you must translate the commercial name and add it to the template	
<b>FOP_labeling_type</b>	Incorrect FOP labeling type (i.e. not contained in the closed list of the input template) or missing FOP labeling type	→ You must check the spelling of the FOP labeling type by comparing it with the closed list of the input template or add the FOP labeling type if it is missing by looking at the product's pictures. If there is no FOP labeling type of interest on the pictures of the product, you must enter 'None from the list'.	'FOP_labeling_type' is a mandatory field
<b>Nutri_score</b>	Incorrect nutri-score (not a letter between A and E)	→ You must go back to the product pictures and find the correct nutri-score of the product and enter it in the template	



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

#### Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action
<b>Ingredient_list</b>	Ingredient list is missing	→ You must go back to the product pictures and add the ingredient list of the product. If you have forgotten it. If the ingredient list does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: "ingredient list checked and unreadable/not existing".
<b>Net_weight</b>	The net weight contains characters other than numbers that are unwanted	→ You must go back to the product pictures and correct the net weight as there can be no characters other than numbers in the 'net_weight' field.
<b>Net_weight_unit</b>	The net weight unit is different from « g » or « mL » (i.e. not contained in the closed list of the input template)	→ You must check the spelling of the net weight unit by paying attention to upper and lower case. It should be entered as "g" or "mL".
<b>Number_of_units</b>	The number of units contains characters other than numbers that are unwanted	→ You must correct the number of units as there can be no characters other than numbers in the 'number_of_units' field
<b>Portion_size</b>	The portion size contains characters other than numbers that are unwanted	→ You must go back to the product pictures and correct the portion size as there can be no characters other than numbers in the 'portion_size' field.

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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action
<b>Portion_size_unit</b>	The portion size unit is different from « g » or « mL »	→ You must check the spelling of the net weight unit by paying attention to upper and lower case. It must be entered "g" or "mL" and not something else.
<b>Nutrient_content_expression_unit</b>	The nutrient content expression unit is different from « 100g » or « 100mL »	→ You must check the spelling of the nutrient content expression unit. It must be entered « 100g » or « 100mL » and not something else.
<ul style="list-style-type: none"> <li>• Energy_kCal</li> <li>• Energy_kJ</li> <li>• Fat</li> <li>• Saturated_fat</li> <li>• Carbohydrates</li> <li>• Sugar</li> <li>• Protein</li> <li>• Salt</li> <li>• Fibre</li> </ul>	The fields contain characters other than numbers (except "<" and "traces") that are unwanted.	<p>→ You must correct so that only numbers remain and no other characters</p> <p>→ if you have any doubt about the values when correcting, go back to the product photos</p>
<b>Nutrient_content_expression_unit_as_consumed</b>	The nutrient content expression unit for products to be reconstituted is different from « 100g » or « 100mL »	→ You must check the spelling of the nutrient content expression unit as consumed. It must be entered « 100g » or « 100mL » and not something else

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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template step 1' program, their meaning and what to do

Problem	Meaning	Action
<ul style="list-style-type: none"> <li>• Energy_as_consumed_kCal</li> <li>• Energy_as_consumed_kJ</li> <li>• Fat_as_consumed</li> <li>• Saturated_fat_as_consumed</li> <li>• Carbohydrates_as_consumed</li> <li>• Sugar_as_consumed</li> <li>• Protein_as_consumed</li> <li>• Salt_as_consumed</li> <li>• Fibre_as_consumed</li> </ul>	<p>The fields contain characters other than numbers (except "&lt;" and "traces") that are unwanted</p>	<p>→ You must correct so that only numbers remain and no other characters</p> <p>→ If you have any doubt about the values when correcting, go back to the product photos</p>



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

- Fields that are indicated as mandatory in the previous table and that show a problem when information is missing  
 → **You must correct or enter information for these fields.**
- For nutritional values containing the word "traces", it is also necessary to **check by hand** and **standardize** the spelling of "traces" (so you don't have "Traces", "trace", ...)
- For products where a problem appears but the information entered is correct or missing, you must indicate in the 'Comments' field that the problem has been checked (see the 'Action' column in the previous tables).  
 → **This way, when you will run the verification program again, you will be able to identify problems that appear without being a problem (and have already been verified).**





## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

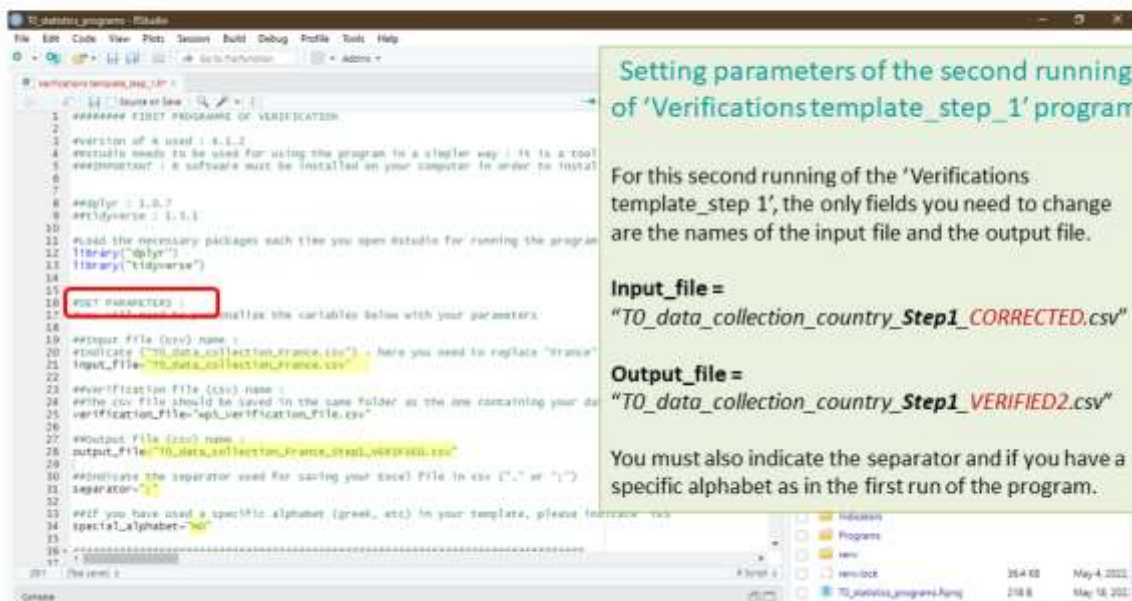
- **Be careful! When saving the file, you must be sure that the barcodes appear in full and not in scientific format. If this is the case, you must repeat the procedure on pages 21→25.**
- Once the corrections have been made and the barcodes are in the correct format, you can save the file *TO\_data\_collection\_country\_Step1\_CORRECTED.csv* and close it.
- You will have to run this corrected file again in the 'Verifications template\_step\_1' program to make sure you haven't missed a check.

Your Rstudio interface must be cleaned up before running the 'Verifications template\_step\_1' program again.  
All cleaning steps are described on [pages 52→58](#).



## WORK Package 5 – Reformulation and processed food monitoring

### 2<sup>nd</sup> running of 'Verifications template\_step\_1' program



**Setting parameters of the second running of 'Verifications template\_step\_1' program**

For this second running of the 'Verifications template\_step\_1', the only fields you need to change are the names of the input file and the output file.

**Input\_file =**  
"TO\_data\_collection\_country\_Step1\_CORRECTED.csv"

**Output\_file =**  
"TO\_data\_collection\_country\_Step1\_VERIFIED2.csv"

You must also indicate the separator and if you have a specific alphabet as in the first run of the program.





WORK Package 5 – Reformulation and processed food monitoring

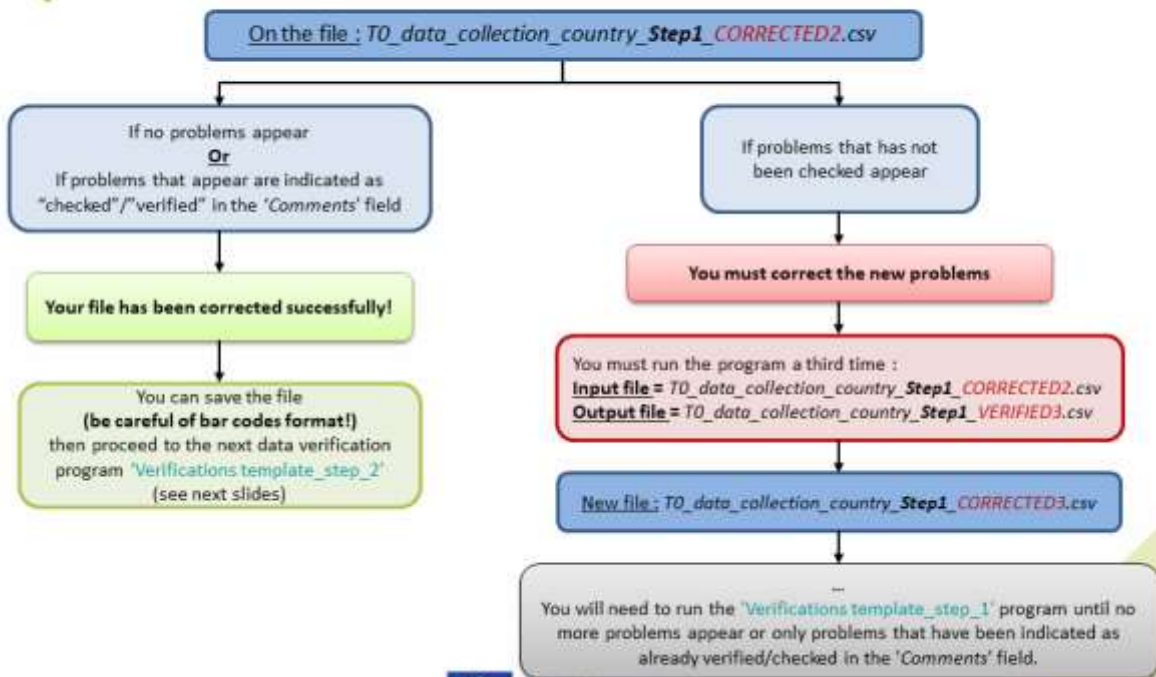
2<sup>nd</sup> running of 'Verifications template\_step\_1' program

- At the end of this second run, you get in the **"Files"** folder a file called:  
**"TO\_data\_collection\_country\_Step1\_VERIFIED2.csv"**
  - You must create a copy of this file and call it :  
**"TO\_data\_collection\_country\_Step1\_CORRECTED2.csv"**
- It is on this file that you will make the modifications following the checks



WORK Package 5 – Reformulation and processed food monitoring

2<sup>nd</sup> running of 'Verifications template\_step\_1' program





## WORK Package 5 – Reformulation and processed food monitoring

### 3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1'

ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2'

iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

C. Part 3 : Indicators and statistics production program



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## WORK Package 5 – Reformulation and processed food monitoring

### 2<sup>nd</sup> verification program : 'Verifications template\_step\_2'

#### **Presentation of the 'Verifications template step\_2' program :**

- In this second verification program, consistency problems will be highlighted: consistency of categories and their codes, sub-categories and their codes, values and their units, etc.

#### **Requirements before starting the program 'Verifications template\_step\_2' :**

- The program 'Verifications template\_step\_1' should have been run on your data
- You should no longer have any problems appearing or only problems that have been notified as verified after running the program 'Verifications template\_step\_1'
- You must have your template in your possession and it must now be called:  
 T0\_data\_collection\_country\_Step1\_CORRECTED(X).csv (with the name of your own country)  
 ( X) is the number of the last file exported and corrected after the last run of the first verification program )
- You need to make sure that the barcodes in your file  
 T0\_data\_collection\_country\_Step1\_CORRECTED(X).csv appear in full and not in scientific format (see procedure [pages 21→25](#))

Your Rstudio interface must have been cleaned up before running the program.  
 All cleaning steps are described on [pages 52→58](#).

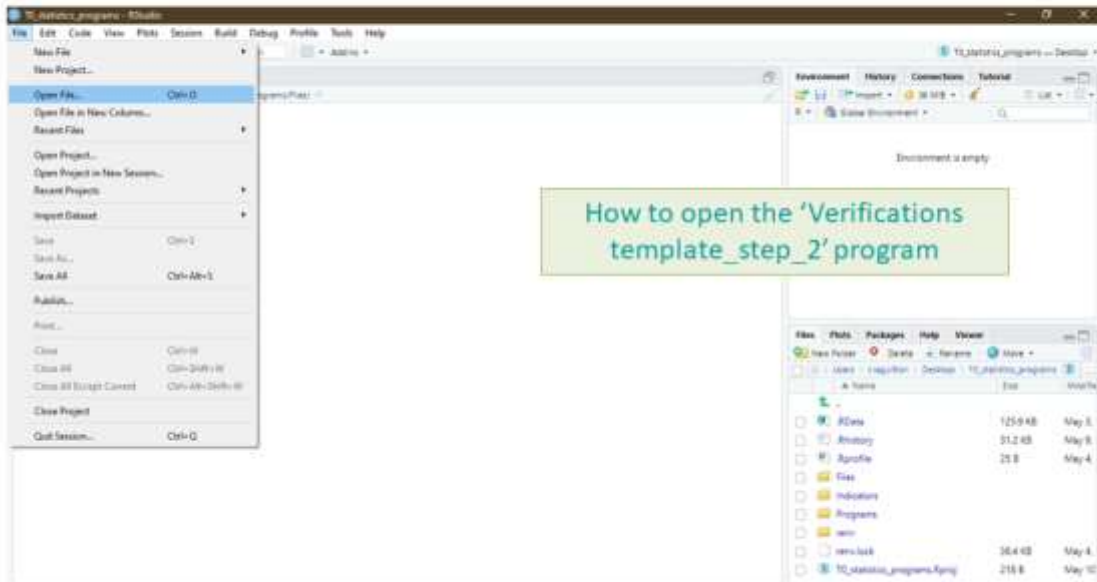


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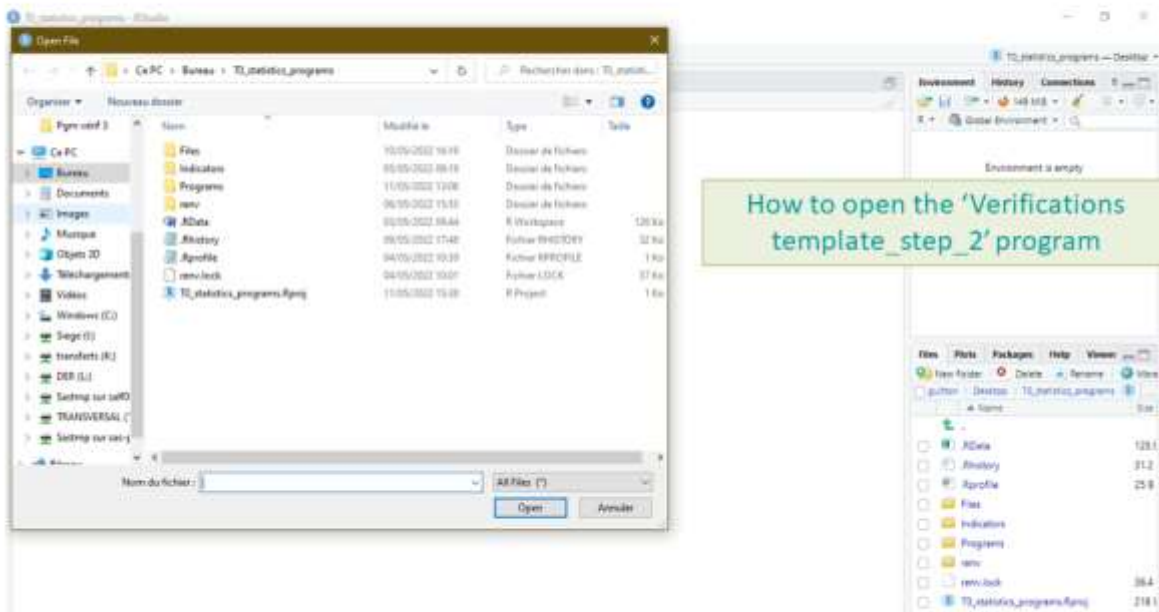
WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_2' program



WORK Package 5 – Reformulation and processed food monitoring

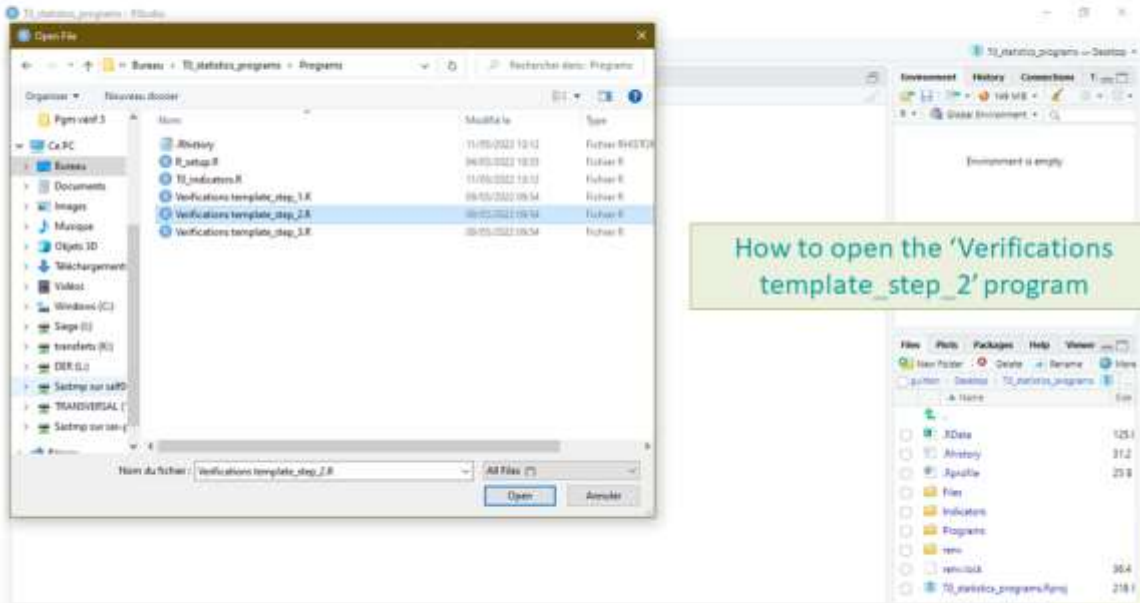
Running of 'Verifications template\_step\_2' program





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_2' program

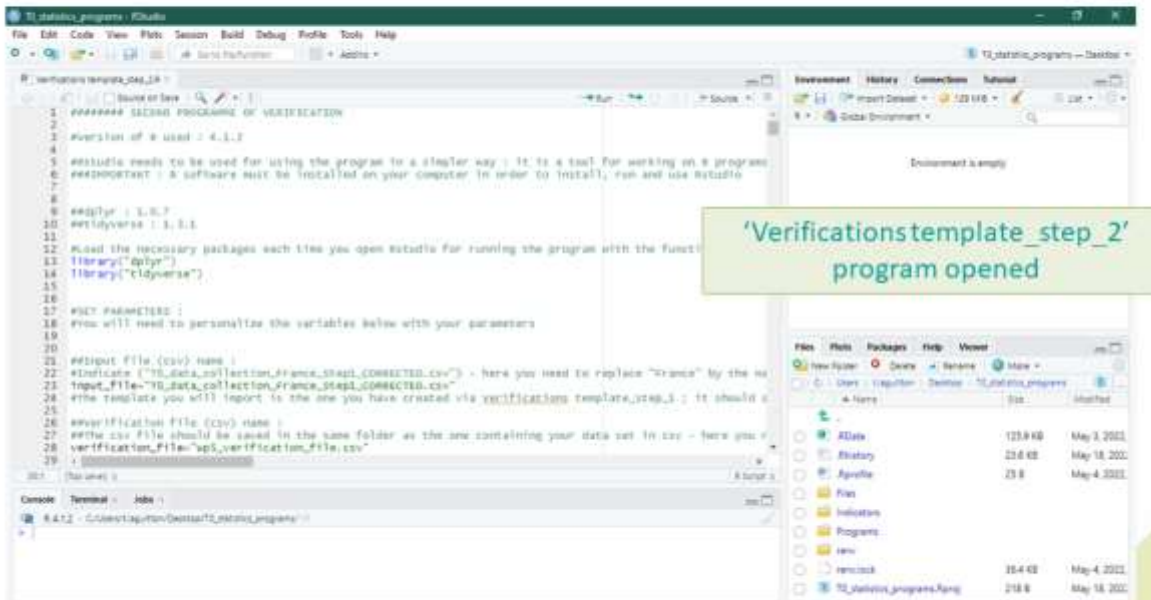


How to open the 'Verifications template\_step\_2' program



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_2' program



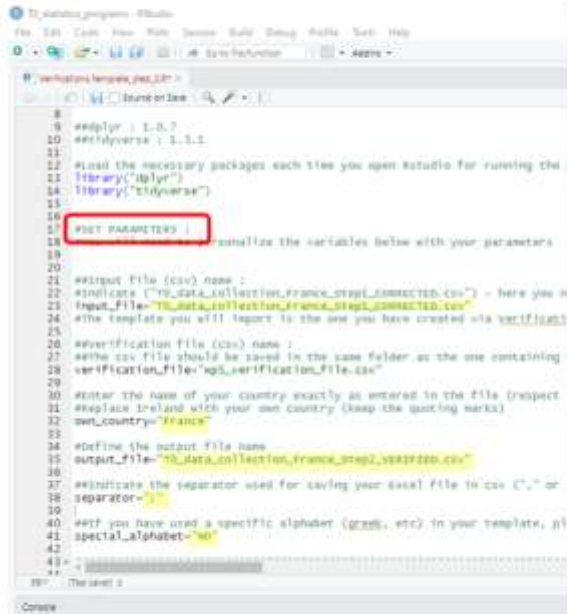
'Verifications template\_step\_2' program opened





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_2' program



```

8 # Rscript - 1.0.7
9 # RStudio - 1.3.1
10 # RStudio - 1.3.1
11 # Load the necessary packages each time you open RStudio for running the program
12 library("dplyr")
13 library("tidyverse")
14
15
16
17 POST PARAMETERS :
18 You will need to personalize the variables below with your parameters
19
20
21 #input file (csv) name :
22 #indicate ("TO_data_collection_france_step1_CORRECTED.csv") - here you need to
23 #input_file="TO_data_collection_france_step1_CORRECTED.csv"
24 #the template you will import to the one you have created via verification_template_step_1
25
26 #verification file (csv) name :
27 #the csv file should be saved in the same folder as the one containing your data set in csv - here you
28 #verification_file="sp_verification_file.csv"
29
30 #enter the name of your country exactly as entered in the file (respect the capital letter)
31 #replace Ireland with your own country (keep the quoting marks)
32 own_country="france"
33
34 #define the output file name
35 output_file="TO_data_collection_france_step2_VERIFIED.csv"
36
37 #indicate the separator used for saving your excel file in csv (";" or ",")
38 separator=";"
39
40 #if you have used a specific alphabet (greek, etc) in your template, please indicate "YES"
41 special_alphabet="no"
42
43
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```

#### Setting parameters of the 2<sup>nd</sup> verification program

In the first run of the 2<sup>nd</sup> verification program, you need to change the name of the country with your own country name in the input file (line 23) and the output file (line 35) of the R script + **line 32** (**'own\_country='**)

You must also indicate the separator and if you have a specific alphabet as in the program 'Verifications template\_step\_1'.

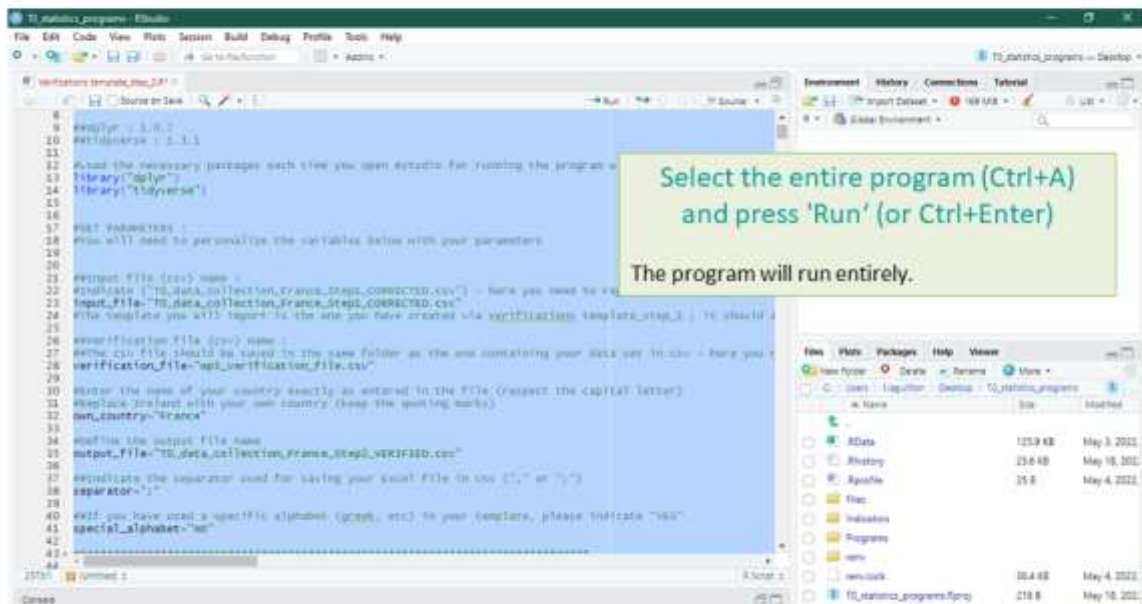
Example :

- **Input\_file =**  
"TO\_data\_collection\_Poland\_Step1\_CORRECTED(X).csv"  
{ X} is the number of the last file exported and corrected after the last run of the first verification program )
- **Own\_country = "Poland"** (same spelling as in the country name in the template)
- **Output\_file = "TO\_data\_collection\_Poland\_Step2\_VERIFIED.csv"**
- **Separator = ";"**
- **Special\_alphabet = "NO"**



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_2' program



```

6 # Rscript - 1.0.7
7 # RStudio - 1.3.1
8 # RStudio - 1.3.1
9 # Load the necessary packages each time you open RStudio for running the program
10 library("dplyr")
11 library("tidyverse")
12
13
14
15
16
17 POST PARAMETERS :
18 You will need to personalize the variables below with your parameters
19
20
21 #input file (csv) name :
22 #indicate ("TO_data_collection_france_step1_CORRECTED.csv") - here you need to
23 #input_file="TO_data_collection_france_step1_CORRECTED.csv"
24 #the template you will import to the one you have created via verification_template_step_1
25
26 #verification file (csv) name :
27 #the csv file should be saved in the same folder as the one containing your data set in csv - here you
28 #verification_file="sp_verification_file.csv"
29
30 #enter the name of your country exactly as entered in the file (respect the capital letter)
31 #replace Ireland with your own country (keep the quoting marks)
32 own_country="france"
33
34 #define the output file name
35 output_file="TO_data_collection_france_step2_VERIFIED.csv"
36
37 #indicate the separator used for saving your excel file in csv (";" or ",")
38 separator=";"
39
40 #if you have used a specific alphabet (greek, etc) in your template, please indicate "YES"
41 special_alphabet="no"
42
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```

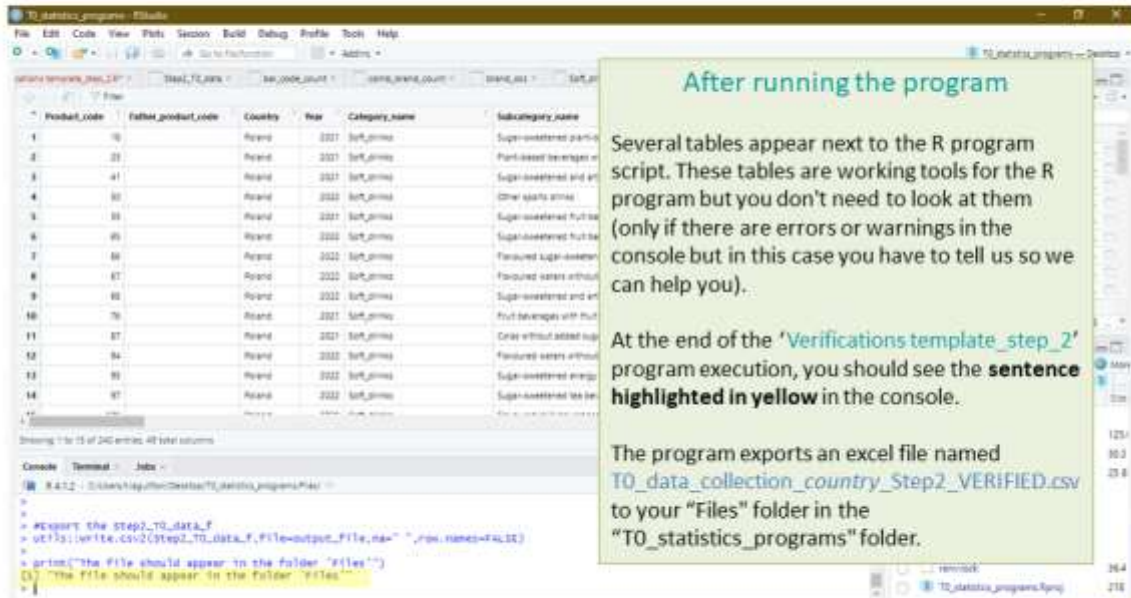
Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter)

The program will run entirely.



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_2' program



**After running the program**

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

At the end of the 'Verifications template\_step\_2' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports an excel file named **TO\_data\_collection\_country\_Step2\_VERIFIED.csv** to your "Files" folder in the "TO\_statistics\_programs" folder.

Product_code	Father_product_code	Country	Year	Category_name	Subcategory_name
1	19	Roland	2021	Soft_drinks	Super-sweetened partic
2	23	Roland	2021	Soft_drinks	Part-based beverage w
3	41	Roland	2021	Soft_drinks	Sugar-sweetened and ar
4	30	Roland	2022	Soft_drinks	Other sports drinks
5	39	Roland	2021	Soft_drinks	Sugar-sweetened fruit b
6	45	Roland	2022	Soft_drinks	Sugar-sweetened fruit b
7	59	Roland	2022	Soft_drinks	Flavored sugar-sweete
8	67	Roland	2022	Soft_drinks	Flavored waters without
9	69	Roland	2022	Soft_drinks	Sugar-sweetened and ar
10	76	Roland	2021	Soft_drinks	Fruit beverages with fru
11	87	Roland	2021	Soft_drinks	Crisp without added sug
12	94	Roland	2022	Soft_drinks	Flavored waters without
13	99	Roland	2022	Soft_drinks	Sugar-sweetened energ
14	97	Roland	2022	Soft_drinks	Sugar-sweetened tea be

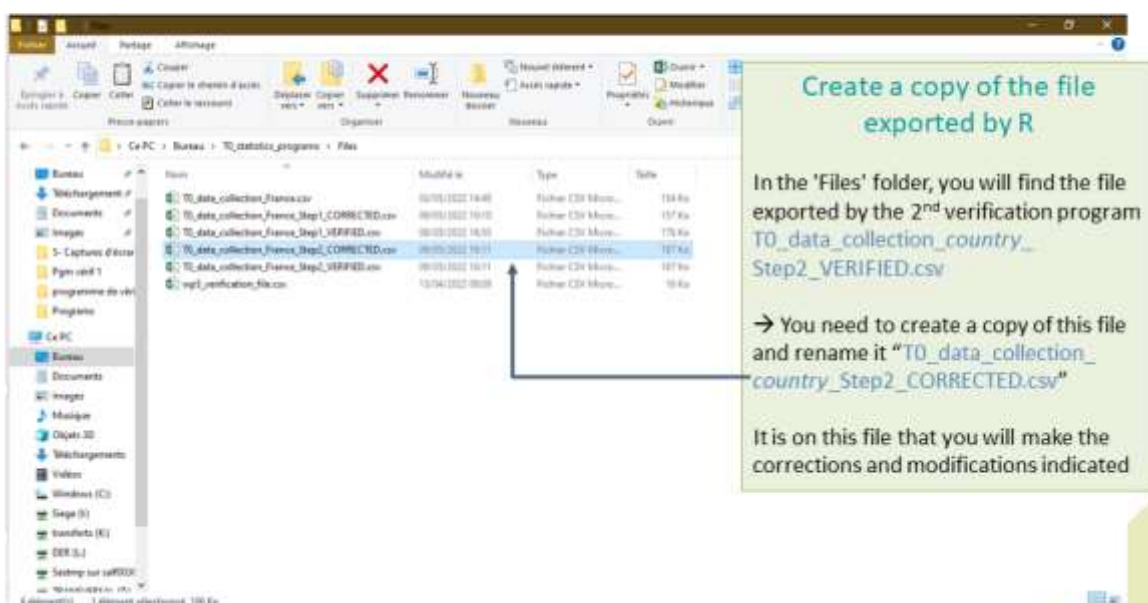
```

R 4.1.2 : C:\Users\jup\OneDrive\TO_statistics_programs\Files >
>
> export the STEP2_TO_DATA_F
> get3(export_csv2(step2_TO_DATA_F, file_output_file_name = "", zip_name = FALSE))
> print("The file should appear in the folder 'Files'")
[3] "The file should appear in the folder 'Files'"
    
```



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_2' program



**Create a copy of the file exported by R**

In the 'Files' folder, you will find the file exported by the 2<sup>nd</sup> verification program **TO\_data\_collection\_country\_Step2\_VERIFIED.csv**

→ You need to create a copy of this file and rename it "**TO\_data\_collection\_country\_Step2\_CORRECTED.csv**"

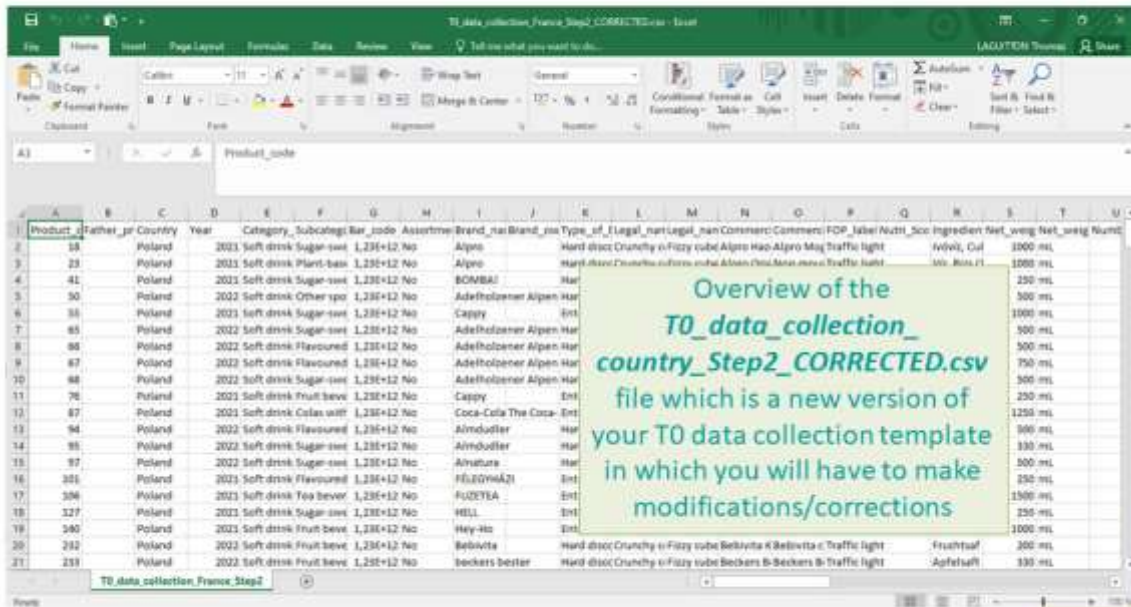
It is on this file that you will make the corrections and modifications indicated

File Name	Modified	Type	Size
TO_data_collection_France.csv	08/05/2022 18:48	Table CSV More...	134 Ko
TO_data_collection_France_Step1_CORRECTED.csv	08/05/2022 18:50	Table CSV More...	137 Ko
TO_data_collection_France_Step1_VERIFIED.csv	08/05/2022 18:50	Table CSV More...	175 Ko
TO_data_collection_France_Step2_CORRECTED.csv	08/05/2022 18:51	Table CSV More...	187 Ko
TO_data_collection_France_Step2_VERIFIED.csv	08/05/2022 18:51	Table CSV More...	187 Ko
export_verification_files.csv	13/04/2022 09:09	Table CSV More...	16 Ko





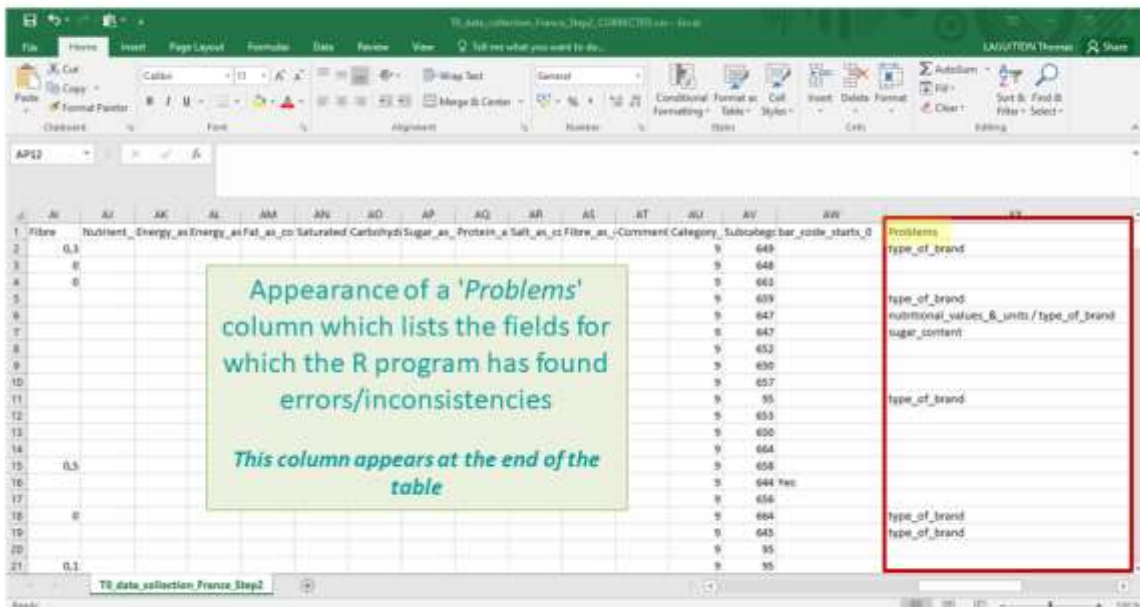
WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_2' program



Overview of the *T0\_data\_collection\_country\_Step2\_CORRECTED.csv* file which is a new version of your T0 data collection template in which you will have to make modifications/corrections



WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_2' program



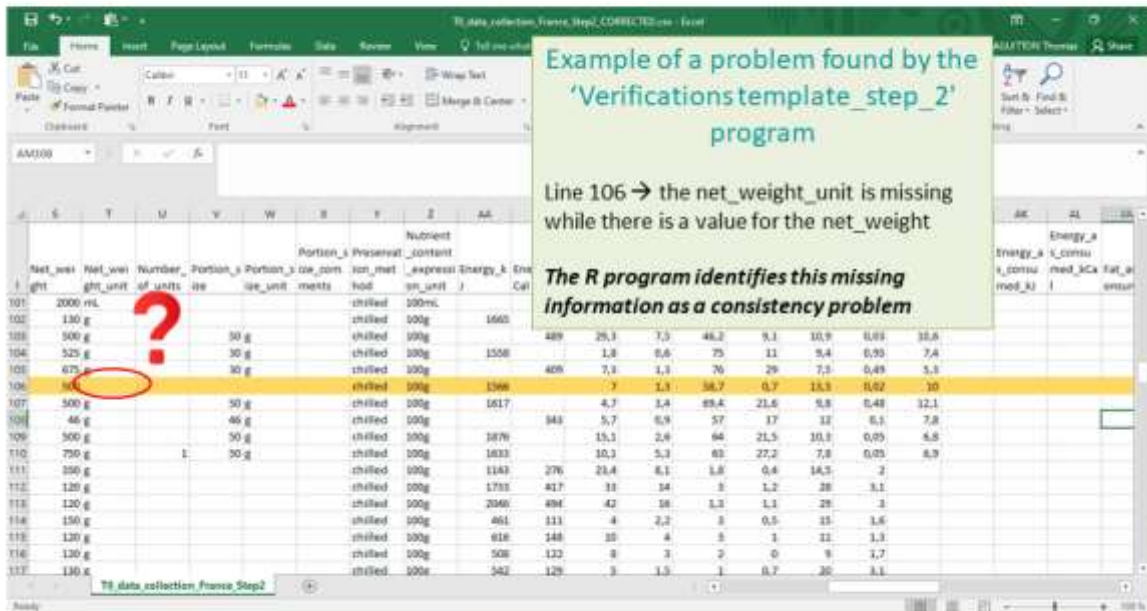
Appearance of a 'Problems' column which lists the fields for which the R program has found errors/inconsistencies  
*This column appears at the end of the table*







WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_2' program



Example of a problem found by the 'Verifications template\_step\_2' program

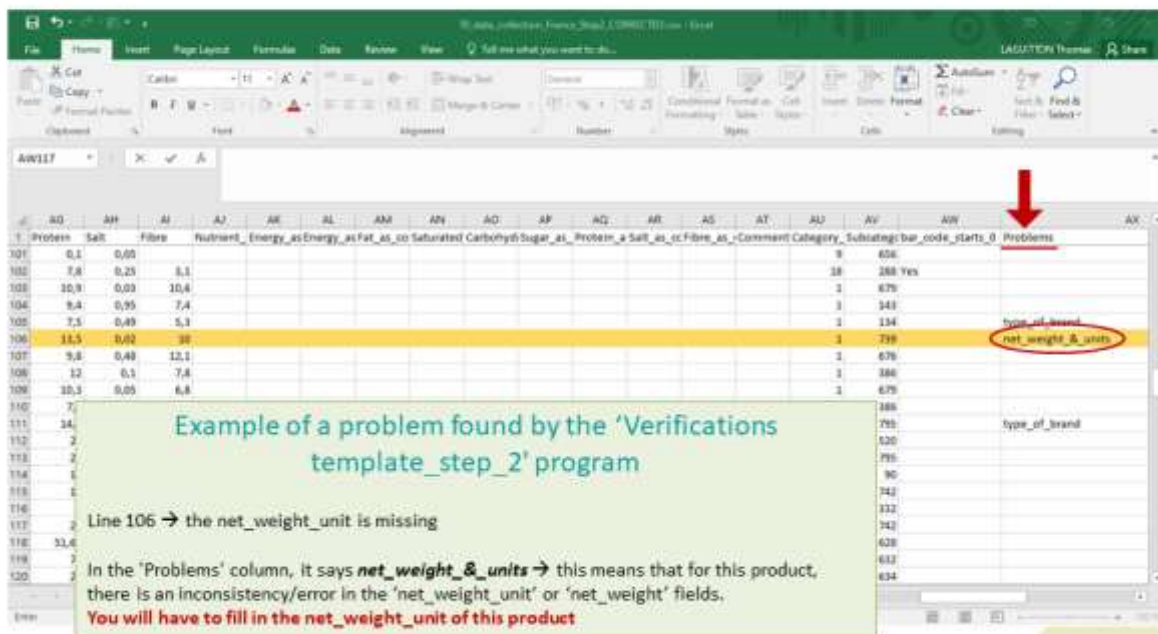
Line 106 → the net\_weight\_unit is missing while there is a value for the net\_weight

The R program identifies this missing information as a consistency problem

Line	Net_weight	Net_weight_unit	Number_of_units	Portion_size	Portion_size_unit	Portion_size_comments	Preservation_method	Nutrient_express_unit	Energy_kJ	Energy_kCal	...						
101	2000	ml					chilled	100ml			...						
102	130	g					chilled	100g	1660		...						
103	500	g		30 g			chilled	100g	489	26,3	7,3	46,2	9,1	10,9	0,09	35,6	
104	525	g		30 g			chilled	100g	1558		1,8	0,6	75	11	9,4	0,99	7,4
105	675	g		30 g			chilled	100g	409	7,3	1,1	76	29	7,3	0,49	5,3	
106	30						chilled	100g	1546		7	1,1	36,7	0,7	15,3	0,52	3,0
107	500	g		50 g			chilled	100g	1617		4,7	1,4	69,4	21,6	9,8	0,48	12,1
108	46	g		46 g			chilled	100g	843		5,7	0,9	57	17	12	0,1	7,8
109	500	g		50 g			chilled	100g	1076		15,1	2,6	64	21,5	10,1	0,09	6,8
110	750	g	1	30 g			chilled	100g	1033		10,1	5,3	63	27,2	7,8	0,09	8,9
111	250	g					chilled	100g	1143	276	23,4	8,1	1,8	0,6	14,5	2	
112	120	g					chilled	100g	1733	417	31	14	1	1,2	28	3,1	
113	120	g					chilled	100g	2040	494	42	18	1,3	1,1	29	1	
114	150	g					chilled	100g	461	111	4	2,2	1	0,5	15	1,6	
115	120	g					chilled	100g	818	148	35	4	1	1	11	1,3	
116	120	g					chilled	100g	508	122	9	2	2	0	9	1,7	
117	130	g					chilled	100g	542	129	9	1,3	1	0,7	20	3,1	



WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_2' program



Example of a problem found by the 'Verifications template\_step\_2' program

Line 106 → the net\_weight\_unit is missing

In the 'Problems' column, it says net\_weight & units → this means that for this product, there is an inconsistency/error in the 'net\_weight\_unit' or 'net\_weight' fields.  
**You will have to fill in the net\_weight\_unit of this product**

Line	Problem	Salt	Fibre	Nutrient_Energy_asEnergy_kJ	Fat_asFat_asCoSaturatedCarbohydrSugar_asProtein_aSalt_asFibre_asCommentCategory_Substring_bar_code_start_0	Problems
101	0,1	0,05				8 406
102	7,8	0,25	8,1			38 288 Yes
103	10,9	0,03	10,4			1 679
104	9,4	0,95	7,4			1 343
105	7,5	0,49	5,3			1 134
106	15,5	0,60	30			1 799
107	9,8	0,49	12,1			1 676
108	12	0,1	7,4			1 386
109	10,1	0,05	6,8			1 679
110	7					1 386
111	34					795
112	2					120
113	2					795
114	1					90
115	1					742
116	1					332
117	2					742
118	33,4					628
119	2					612
120	2					634

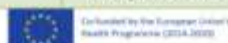


## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>nomenclature</b>	Wrong association between 'Category_name', 'Category_code', 'Subcategory_name' and 'Subcategory_code'	→ Check the 4 fields and correct those (or the one) that are not correctly associated
<b>Net_weight_&amp;_units</b>	<ul style="list-style-type: none"> <li>The <b>net weight</b> is filled but there is no associated <b>net weight unit</b></li> <li><b>or</b></li> <li>The <b>net weight unit</b> is filled but there is no associated <b>net weight</b></li> </ul>	<ul style="list-style-type: none"> <li>→ If there is a value in the 'net_weight' field, you must add the unit « g » or « mL » in the 'net_weight_unit' field</li> <li>→ If there is a unit in the field 'net_weight_unit', you must go back to the pictures of the product and add the value of the portion size. If there is no net weight for this product, it must be an input error and you can delete the unit.</li> <li>→ When you have any doubts, you must go back to the pictures of the product to be sure of what to enter</li> </ul>
<b>Portion_size_&amp;_units</b>	<ul style="list-style-type: none"> <li>The <b>portion size</b> is filled but there is no associated <b>portion size unit</b></li> <li><b>or</b></li> <li>The <b>portion size unit</b> is filled but there is no associated <b>portion size</b></li> </ul>	<ul style="list-style-type: none"> <li>→ If there is a value in the 'portion_size' field, you must add the unit « g » or « mL » in the 'portion_size_unit' field</li> <li>→ If there is a unit in the field 'portion_size_unit', you must go back to the pictures of the product and add the value of the portion size. If there is no portion size for this product, it must be an input error and you can delete the unit.</li> <li>→ When you have any doubts, you must go back to the pictures of the product to be sure of what to enter</li> </ul>



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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>Nutritional_values_&amp;_units</b>	<ul style="list-style-type: none"> <li>The <b>nutrient content expression unit</b> is filled but there are no associated <b>nutritional values</b> for the nutrients</li> <li><b>or</b></li> <li>There are <b>nutritional values</b> for the nutrients but there is no associated <b>nutrient content expression unit</b></li> </ul>	<ul style="list-style-type: none"> <li>→ If there are nutritional values for the nutrients, you must add the unit « 100g » or « 100mL » in the 'nutrient_content_expression_unit' field</li> <li>→ If there is a unit in the field 'nutrient_content_expression_unit', you must go back to the pictures of the product and add the nutritional values of each nutrient. If there is nutritional values for this product, it must be an input error and you can delete the unit.</li> <li>→ When you have any doubts, you must go back to the pictures of the product to be sure of what to enter</li> </ul>
<b>Nutritional_values_as_consumed_&amp;_units</b>	<ul style="list-style-type: none"> <li>The <b>nutrient content expression unit for products to be reconstituted</b> is filled but there is no associated <b>nutritional values for the nutrients as consumed</b></li> <li><b>or</b></li> <li>There are <b>nutritional values for the nutrients as consumed</b> but there is no associated <b>nutrient content expression unit for products to be reconstituted</b></li> </ul>	<ul style="list-style-type: none"> <li>→ If there are nutritional values as consumed for the nutrients, you must add the unit « 100g » or « 100mL » in the 'nutrient_content_expression_unit_as_consumed' field</li> <li>→ If there is a unit in the field 'nutrient_content_expression_unit_as_consumed', you must go back to the pictures of the product and add the nutritional values as consumed of each nutrient. If there is no nutritional values as consumed for this product, it must be an input error and you can delete the unit.</li> <li>→ When you have any doubts, you must go back to the pictures of the product to be sure of what to enter</li> </ul>



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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>Wrong_country</b>	This is not the name of your country	→ You must enter the name of your own country, making sure that this is the same spelling as the closed list of the input template
<b>Duplicate_bar_code</b>	Same bar code has been found for 2 or more products	→ If the products have the same bar code and are <b>similar</b> (= duplicates = same bar code + same information for all the fields), you must delete one of the products to keep only one.  → If the products have the same bar code but are <b>different</b> , you must check if it is an input error by going back to the pictures of the products. <ul style="list-style-type: none"> <li>• If it is an input error, you must enter the correct bar code.</li> <li>• If the products really have the same bar code, you must keep them in the template and indicate in the 'Comments' field : « bar code checked and same for several different products »</li> </ul>
<b>Type_of_brand</b>	The same brand has been associated with several types of brand. (This problem appears for all products of a same brand if they have been associated with different types of brand)	→ You must filter in the Excel file on a brand name that shows the problem « <i>Type_of_brand</i> », then you must select the correct type of brand and apply it to all the products of the same brand name.



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>Carbohydrates_or_sugar_content</b>	The <b>sugar</b> content is greater than the <b>carbohydrates</b> content	→ You must go back to the pictures of the product and look at the sugar and carbohydrates content to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product
<b>Carbohydrates_or_sugar_as_consumed_content</b>	The <b>sugar as consumed</b> content is greater than the <b>carbohydrates as consumed</b> content for products to be reconstituted	→ You must go back to the pictures of the product and look at the sugar and carbohydrates content as consumed to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product
<b>Fat_or_saturated_fat_content</b>	The <b>saturated fat</b> content is greater than the <b>fat</b> content	→ You must go back to the pictures of the product and look at the fat and saturated fat content to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product
<b>Fat_or_saturated_fat_as_consumed_content</b>	The <b>saturated fat as consumed</b> content is greater than the <b>fat as consumed</b> content for products to be reconstituted	→ You must go back to the pictures of the product and look at the fat and saturated fat content as consumed to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>Verify_units_g_100g</b>	a unit in "g" appears for a product belonging to the 'Soft drinks' category	<ul style="list-style-type: none"> <li>→ You must look at all the fields of the product that have units and find the unit "g". (Net_weight_unit, Portion_size_unit, Nutrient_content_expression_unit, Nutrient_content_expression_unit_as_consumed)</li> <li>→ You must compare with the pictures of the product to check if this is an input error and correct it if necessary.</li> <li>→ <b>It is not necessarily an input error as some milk beverages can have units in g.</b></li> </ul>
<b>Verify_units_ml_100ml</b>	a unit in "ml" appears for a product belonging to a category other than the 'Soft drinks' category	<ul style="list-style-type: none"> <li>→ You must look at all the fields of the product that have units and find the unit "ml". (Net_weight_unit, Portion_size_unit, Nutrient_content_expression_unit, Nutrient_content_expression_unit_as_consumed)</li> <li>→ You must compare with the pictures of the product to check if this is an input error and correct it if necessary.</li> <li>→ <b>It is not necessarily an input error as some yoghourts can have units in mL.</b></li> </ul>



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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>Enter_Nutri_score</b>	The 'FOP labeling type' field indicates <i>Nutriscore</i> but there is no associated nutri-score in the 'Nutriscore' field	<ul style="list-style-type: none"> <li>→ You must go back to the pictures of the product and enter the letter of the nutri-score that appears on the package.</li> <li>→ If there is no nutri-score on the picture, you must correct the entry in the field 'FOP_labeling_type' by choosing another FOP labeling type or <i>none of the list</i> (mandatory field)</li> </ul>
<b>Remove_Nutri_score</b>	<ul style="list-style-type: none"> <li>• A nutri score is filled in the 'Nutriscore' field but the 'FOP labeling type' does not indicate <i>Nutriscore</i>.</li> </ul>	<ul style="list-style-type: none"> <li>→ You must go back to the pictures of the product and check if there is a nutri-score on the package           <ul style="list-style-type: none"> <li>• If there is a nutri-score on the package, you must indicate <i>Nutriscore</i> in the 'FOP_labeling_type' field and check that the letter of the nutri-score entered is the right one</li> <li>• If there is no nutri-score on the picture, you must delete the letter in the 'Nutriscore' field and choose a FOP labeling type or <i>none of the list</i> in the field 'FOP_labeling_type' (mandatory field)</li> </ul> </li> </ul>



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WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_2' program

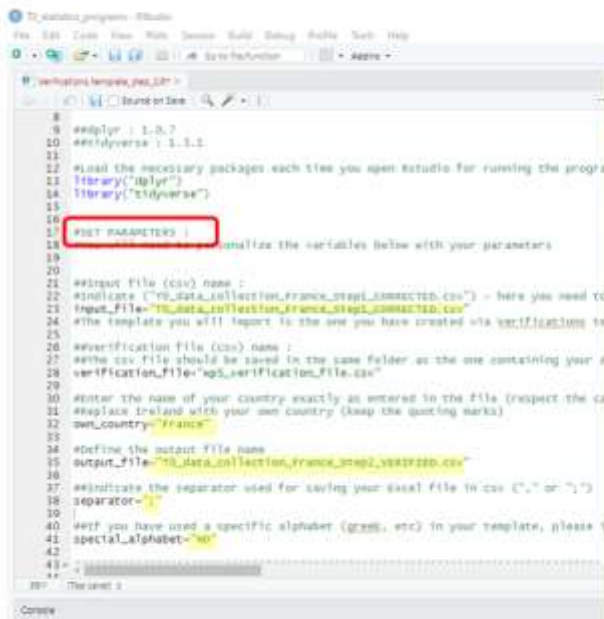
- **Be careful! When saving the file, you must be sure that the barcodes appear in full and not in scientific format. If this is the case, you must repeat the procedure on pages 21→25.**
- Once the corrections have been made and the barcodes are in the correct format, you can save the file *TO\_data\_collection\_country\_Step2\_CORRECTED.csv* and close it.
- You will have to run this corrected file again in the 'Verifications template\_step\_2' program to make sure you haven't missed a check.

Your Rstudio interface must be cleaned up before running the 'Verifications template\_step\_2' program again.  
All cleaning steps are described on pages 52→58.



WORK Package 5 – Reformulation and processed food monitoring

2<sup>nd</sup> running of 'Verifications template\_step\_2' program



```

8
9 #@p1yr : 1-0-7
10 #@cidverse : 1.1.1
11
12 #load the necessary packages each time you open Rstudio for running the program
13 library("dplyr")
14 library("tidyverse")
15
16
17
18
19
20
21 #input file (csv) name :
22 #@input_file ("TO_data_collection_france_step2_CORRECTED.csv") - here you need to
23 input_file="TO_data_collection_france_step2_CORRECTED.csv"
24 #the template you will import is the one you have created via 'Verifications template_step_2'
25
26 #verification file (csv) name :
27 #the csv file should be saved in the same folder as the one containing your 'input_file'
28 verification_file="sp2_verification_file.csv"
29
30 #enter the name of your country exactly as entered in the file (respect the capital letters)
31 #replace Ireland with your own country (keep the quoting marks)
32 own_country="france"
33
34 #define the output file name
35 output_file="TO_data_collection_france_step2_VERIFIED2.csv"
36
37 #indicate the separator used for saving your excel file in csv (";" or ",")
38 separator=";"
39
40 #if you have used a specific alphabet (gb231, etc) in your template, please indicate it here
41 special_alphabet=""
42
43
44
45
                    
```

**Setting parameters of the second running of 'Verifications template\_step\_2' program**

For this second running of the 'Verifications template\_step\_2', the only fields you need to change are the names of the input file and the output file.

**Input\_file =**  
"TO\_data\_collection\_country\_Step2\_CORRECTED.csv"

**Output\_file =**  
"TO\_data\_collection\_country\_Step2\_VERIFIED2.csv"

**Make sure the country name on line 32 is yours and if not, enter it.**

You must also indicate the separator and if you have a specific alphabet as in the first run of the program.





WORK Package 5 – Reformulation and processed food monitoring

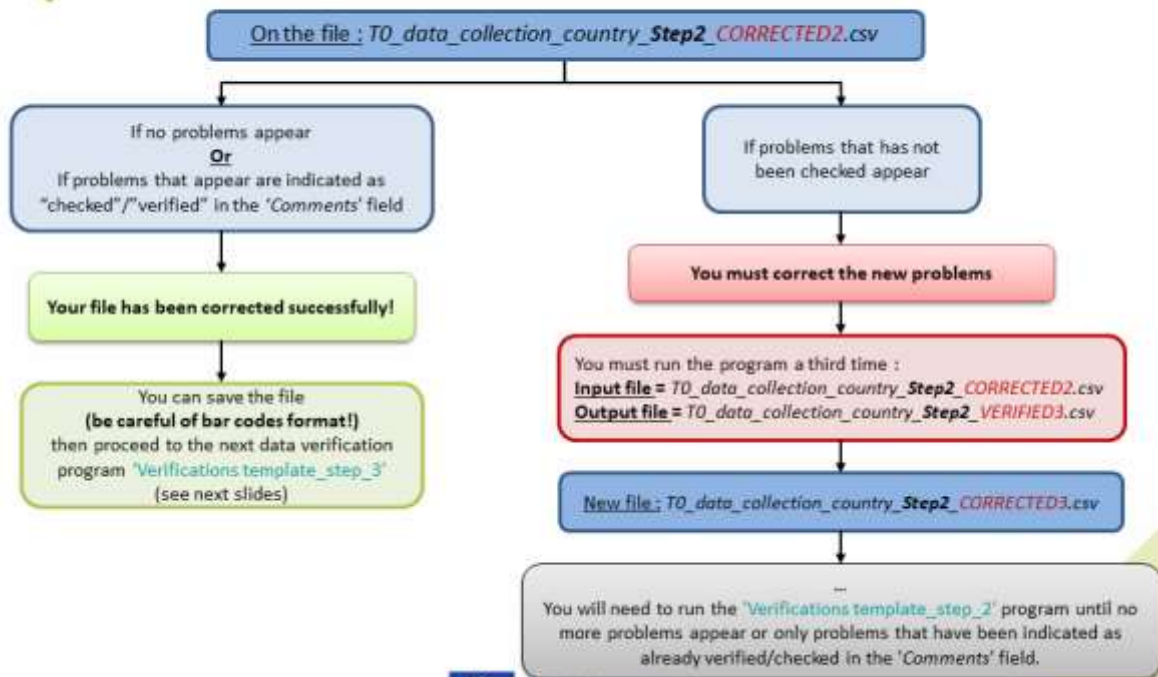
2<sup>nd</sup> running of 'Verifications template\_step\_2' program

- At the end of this second run, you get in your "files" folder a file called:  
"TO\_data\_collection\_country\_Step2\_VERIFIED2.csv"
  - You must create a copy of this file and call it :  
"TO\_data\_collection\_country\_Step2\_CORRECTED2.csv"
- It is on this file that you will make the modifications following the checks



WORK Package 5 – Reformulation and processed food monitoring

2<sup>nd</sup> running of 'Verifications template\_step\_2' program





## WORK Package 5 – Reformulation and processed food monitoring

### 3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template  
cleaning/standardization

i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1'

ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2'

iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

C. Part 3 : Indicators and statistics production program



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## WORK Package 5 – Reformulation and processed food monitoring

### 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

#### Presentation of the 'Verifications template step\_3' program :

- Third verification program : verification of outliers in your nutritional values
  - For each nutrient in each subcategory, the following position indicators will be calculated :
    - 1st quartile (Q1)
    - 3rd quartile (Q3)
    - Interquartile range (IQR=Q3-Q1)
- Nutrient values will be considered outliers if they are below  $Q1-(IQR*1.5)$  and above  $Q3+(IQR*1.5)$ .



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## WORK Package 5 – Reformulation and processed food monitoring

### 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

#### Requirements before starting the program 'Verifications template\_step\_3' :

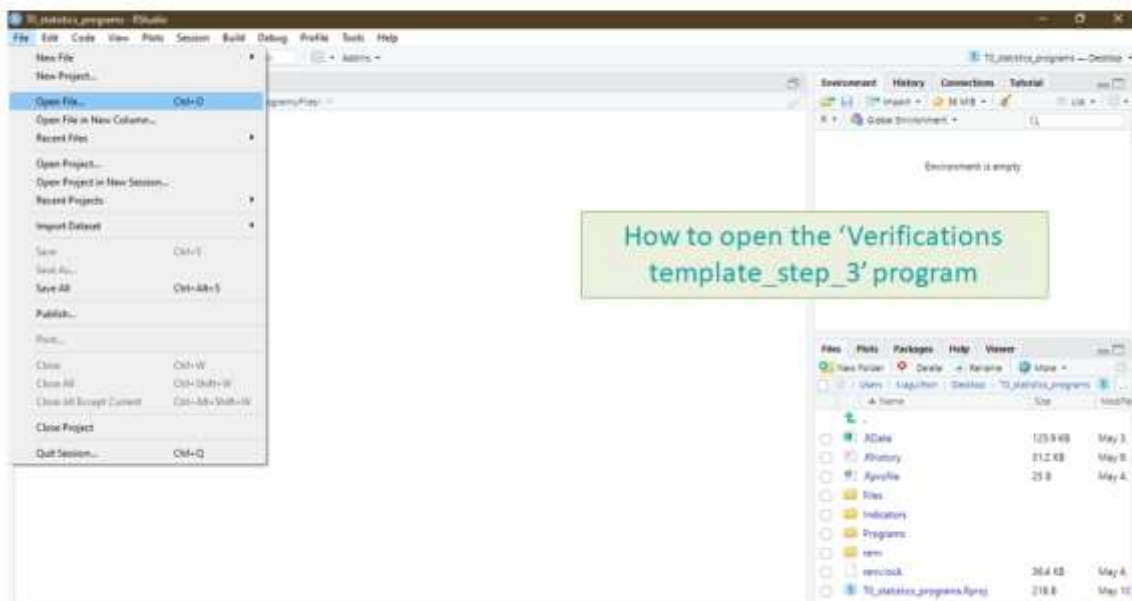
- The programs 'Verifications template\_step\_1' and 'Verifications template\_step\_2' should have been run on your data
- You should no longer have any problems appearing or only problems that have been notified as verified after running the program 'Verifications template\_step\_2'
- You must have your template in your possession and it must now be called:  
TO\_data\_collection\_country\_Step2\_CORRECTED(X).csv (with the name of your own country)  
( X) is the number of the last file exported and corrected after the last run of the first verification program )
- You need to make sure that the barcodes in your file  
TO\_data\_collection\_country\_Step2\_CORRECTED(X).csv appear in full and not in scientific format (see procedure [pages 21→25](#))

Your Rstudio interface must have been cleaned up before running the program.  
All cleaning steps are described on [pages 52→58](#).



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_3' program



The screenshot shows the RStudio environment with the 'File' menu open, highlighting 'Open File...'. A file explorer window is also open, showing a directory structure with files like 'ADate', 'Phistory', 'Aprofile', 'Files', 'Indicators', 'Programs', 'em', 'menclock', and 'T0\_statistics\_programs.Rproj'. A text box overlaid on the image reads: 'How to open the 'Verifications template\_step\_3' program'.

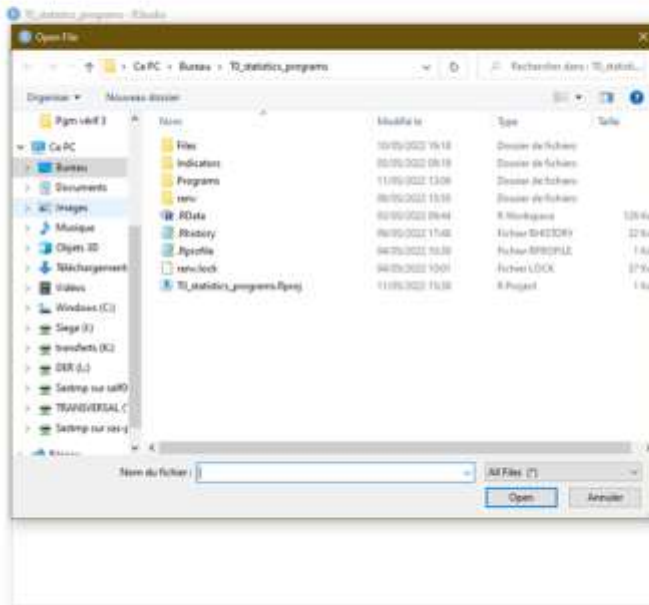






WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_3' program



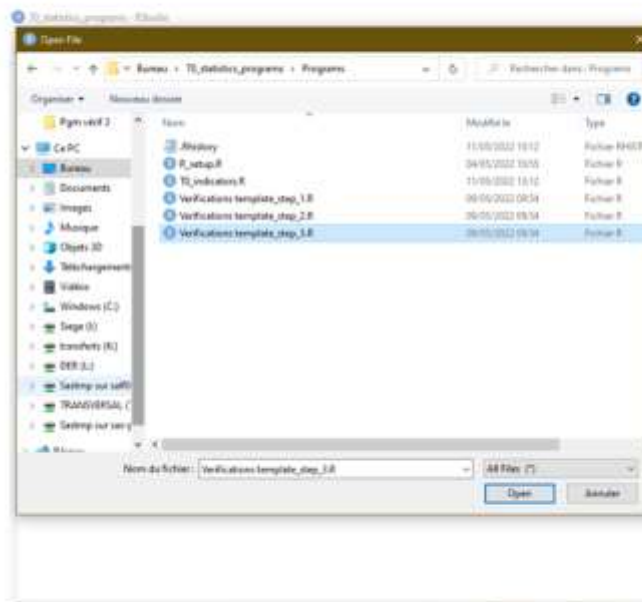
Nom	Modifié le	Type	Taille
Files	10/05/2022 16:18	Dossier de fichiers	
Indicateurs	05/05/2022 08:18	Dossier de fichiers	
Programs	11/05/2022 13:08	Dossier de fichiers	
rem	06/05/2022 13:55	Dossier de fichiers	
RData	02/05/2022 09:44	R WorkSpace	128 Ko
Rhistory	06/05/2022 11:40	Fichier SH42SDH	22 Ko
Rprofile	04/05/2022 16:39	Fichier SH50PHE	1 Ko
rem.lock	04/05/2022 10:01	Fichier LOCK	27 Ko
TI_statistics_programs.Rproj	11/05/2022 13:38	R Project	1 Ko

How to open the 'Verifications template\_step\_3' program



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_3' program



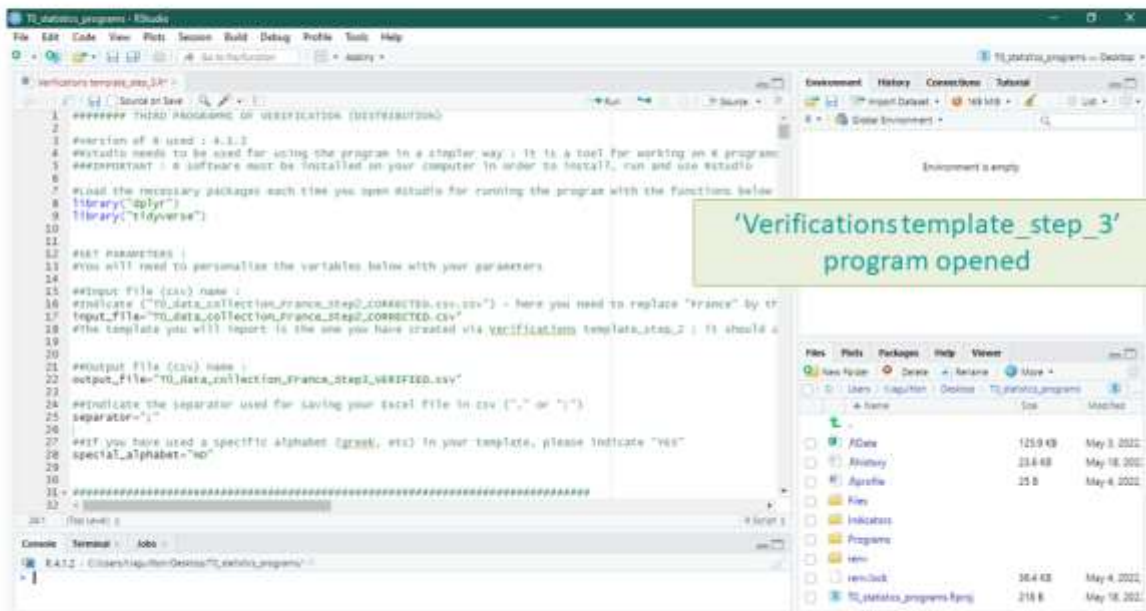
Nom	Modifié le	Type
RData	11/05/2022 16:12	Fichier SH42SDH
R_setup.R	04/05/2022 13:55	Fichier R
TI_indicators.R	11/05/2022 16:12	Fichier R
Verifications template_step_1.R	06/05/2022 08:34	Fichier R
Verifications template_step_2.R	06/05/2022 09:34	Fichier R
Verifications template_step_3.R	06/05/2022 09:34	Fichier R

How to open the 'Verifications template\_step\_3' program



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_3' program



**'Verifications template\_step\_3' program opened**

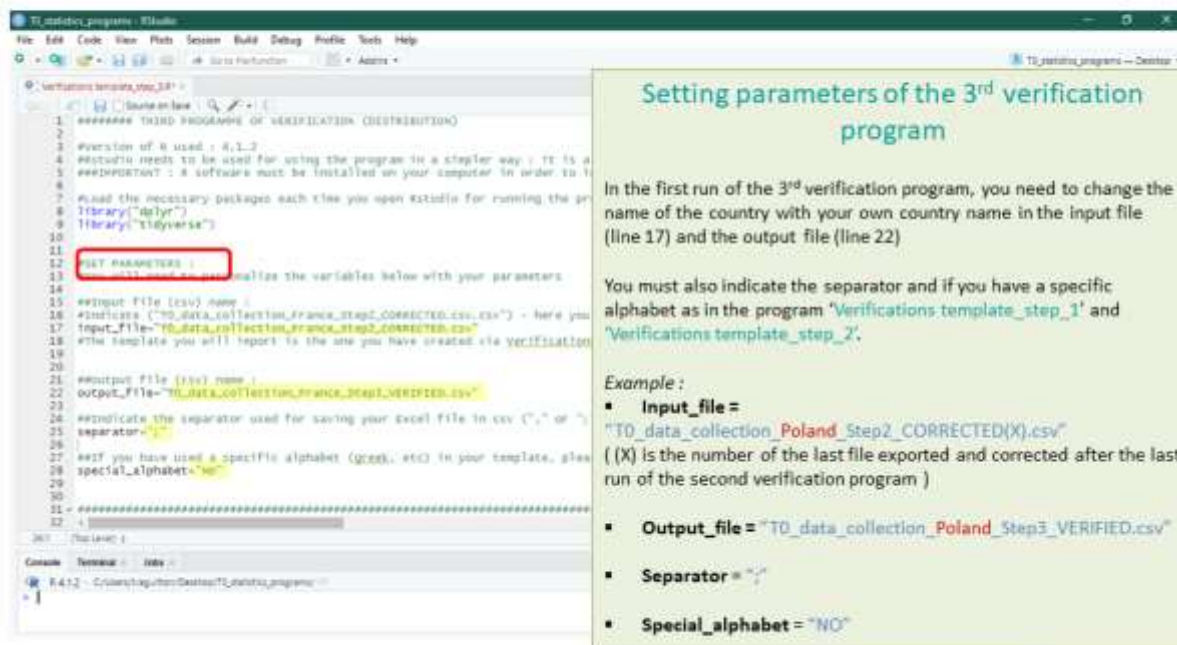
```

1 ##### THIRD PROGRAM OF VERIFICATION (DISTRIBUTION)
2
3 Version of R used : 4.1.2
4 Rstudio needs to be used for using the program in a simpler way : it is a
5 #IMPORTANT : a software must be installed on your computer in order to install, run and use Rstudio
6
7 #load the necessary packages each time you open Rstudio for running the program with the functions below
8 #library("dplyr")
9 #library("tidyverse")
10
11
12 ##!# PARAMETERS !#
13 #you will need to personalize the variables below with your parameters
14
15 #input file (csv) name :
16 #indicate ("T0_data_collection_france_step0_CORRECTED.csv.csv") - here you need to replace "france" by th
17 #input_file="T0_data_collection_france_step0_CORRECTED.csv"
18 #the template you will report is the one you have created via verifications template_step_2 : it should a
19
20
21 #output file (csv) name :
22 output_file="T0_data_collection_france_step1_VERIFIED.csv"
23
24 #indicate the separator used for saving your excel file in csv (";" or ",")
25 separator=";"
26
27 #if you have used a specific alphabet (greek, etc) in your template, please indicate "yes"
28 special_alphabet="no"
29
30
31 #####
32
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```



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_3' program



**Setting parameters of the 3<sup>rd</sup> verification program**

In the first run of the 3<sup>rd</sup> verification program, you need to change the name of the country with your own country name in the input file (line 17) and the output file (line 22)

You must also indicate the separator and if you have a specific alphabet as in the program "Verifications template\_step\_1" and "Verifications template\_step\_2".

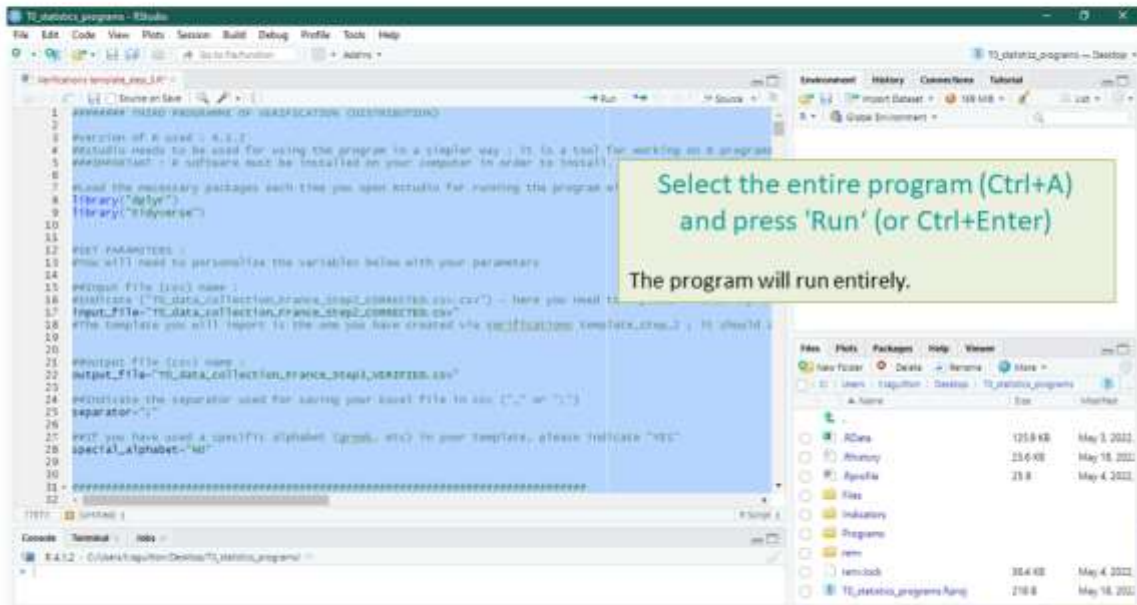
**Example :**

- Input\_file =** "T0\_data\_collection\_Poland\_Step2\_CORRECTED(X).csv"  
(X) is the number of the last file exported and corrected after the last run of the second verification program )
- Output\_file =** "T0\_data\_collection\_Poland\_Step3\_VERIFIED.csv"
- Separator =** ";"
- Special\_alphabet =** "NO"



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_3' program



1 ##### READ PROGRAMS OF REFORMULATION DISTRIBUTION  
2  
3 version of R used : 4.3.2  
4 Results needs to be used for using the program in a similar way : it is a tool for working as a program  
5 important : R software must be installed on your computer in order to install  
6  
7 Read the necessary packages each time you open Rstudio for running the program  
8 library("dplyr")  
9 library("Rgraphviz")  
10  
11  
12 FIRST PARAMETERS :  
13 #this will need to personalize the variables below with your parameters  
14  
15 #PROG file (can) name :  
16 #input\_file="TO\_data\_collection\_frames\_step2\_CONNECTED.csv" - here you need to  
17 #input\_file="TO\_data\_collection\_frames\_step2\_CONNECTED.csv"  
18 #input\_file="TO\_data\_collection\_frames\_step2\_CONNECTED.csv" - here you need to  
19 #input\_file="TO\_data\_collection\_frames\_step2\_CONNECTED.csv" - here you need to  
20  
21 #output file (can) name :  
22 #output\_file="TO\_data\_collection\_frames\_step2\_CONNECTED.csv"  
23  
24 #separator the separator used for saving your excel file in csv (";" or ",")  
25 separator=";"  
26  
27 #if you have used a specific alphabet (cp866, etc) in your template, please indicate "ENC"  
28 #alphabet="ENC"  
29  
30  
31 #####  
32

Environment History Connections Subplot  
Import Dataset 100 MB 127  
Data Environment

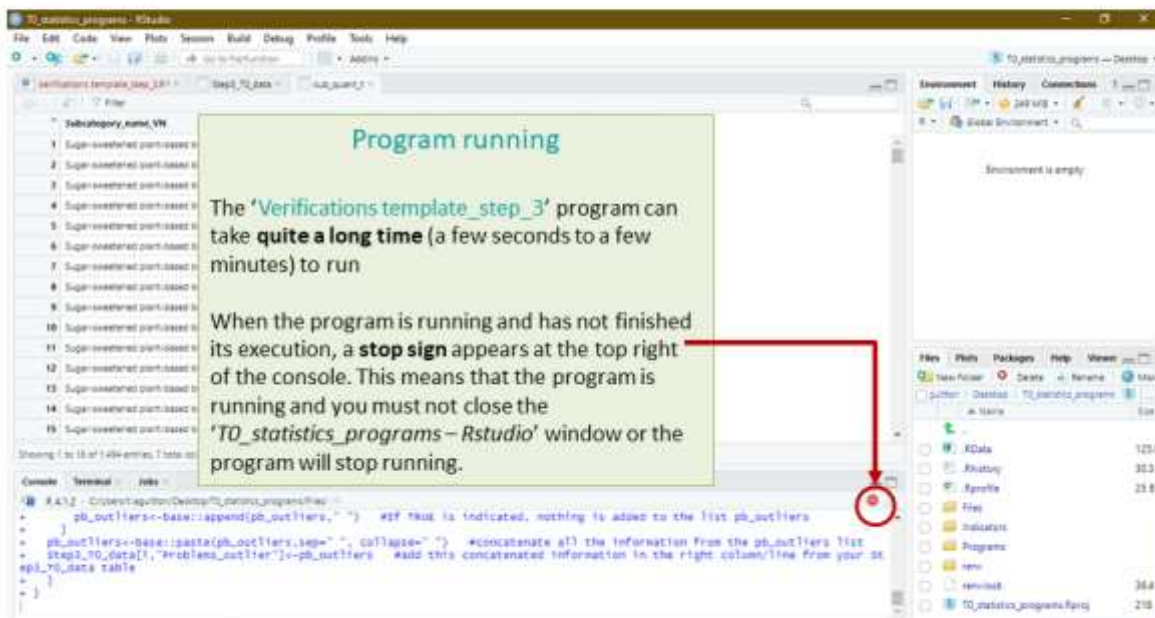
Files Plots Packages Help Views  
New Folder Details Rename Stars  
Library Desktop TO\_statistics\_programs  
Name Size Modified  
RData 1258 KB May 3, 2022  
Rhistory 23.6 KB May 18, 2022  
Rprofile 23 B May 4, 2022  
Files  
Library  
Programs  
env  
renv.lock 35.4 KB May 4, 2022  
TO\_statistics\_programs.Rproj 218 B May 18, 2022

Console Terminal Jobs  
R 4.3.2 : C:\Users\agustin\Desktop\TO\_statistics\_programs\



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_3' program



Verifications template\_step\_3.R  
Step\_3\_data  
sub\_query

File Edit Code View Plots Session Build Debug Profile Tools Help  
TO\_statistics\_programs - Desktop

Environment History Connections Subplot  
Import Dataset 100 MB 127  
Data Environment

Files Plots Packages Help Views  
New Folder Details Rename Stars  
Library Desktop TO\_statistics\_programs  
Name Size Modified  
RData 125/  
Rhistory 30.3  
Rprofile 23.8  
Files  
Library  
Programs  
env  
renv.lock 35.4  
TO\_statistics\_programs.Rproj 218

Verifications template\_step\_3.R  
1 Super-sweetened part-based in  
2 Super-sweetened part-based in  
3 Super-sweetened part-based in  
4 Super-sweetened part-based in  
5 Super-sweetened part-based in  
6 Super-sweetened part-based in  
7 Super-sweetened part-based in  
8 Super-sweetened part-based in  
9 Super-sweetened part-based in  
10 Super-sweetened part-based in  
11 Super-sweetened part-based in  
12 Super-sweetened part-based in  
13 Super-sweetened part-based in  
14 Super-sweetened part-based in  
15 Super-sweetened part-based in

Showing 1 to 15 of 149 entries. 7 data set

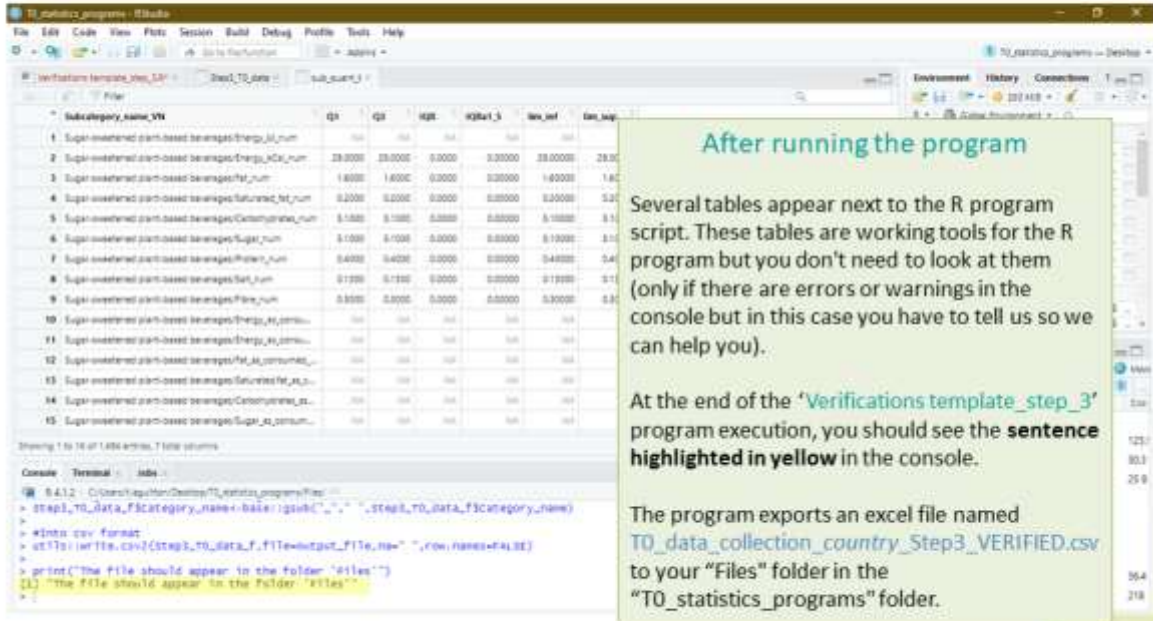
Console Terminal Jobs  
R 4.3.2 : C:\Users\agustin\Desktop\TO\_statistics\_programs\flow  
+ pb\_outliers<-base::append(pb\_outliers, " ") #if NA is indicated, nothing is added to the list pb\_outliers  
+ pb\_outliers<-base::paste(pb\_outliers, sep=" ", collapse=" ") #concatenate all the information from the pb\_outliers list  
+ step1\_TO\_data[, "problems\_outlier"]<-pb\_outliers #add this concatenated information in the right column/line from your st  
+ }  
+ }





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_3' program



**After running the program**

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

At the end of the 'Verifications template\_step\_3' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports an excel file named `T0_data_collection_country_Step3_VERIFIED.csv` to your "Files" folder in the "T0\_statistics\_programs" folder.

Subcategory_name_VN	Q1	Q2	Q3	Q3at_3	Max_val	Min_val
Sugar sweetened palm-based beverages/Energy_num	28.0000	28.0000	0.0000	0.00000	28.00000	28.00
Sugar sweetened palm-based beverages/Cal_num	1.6000	1.6000	0.0000	0.00000	1.60000	1.60
Sugar sweetened palm-based beverages/fat_num	0.2000	0.2000	0.0000	0.00000	0.20000	0.20
Sugar sweetened palm-based beverages/Carbohydrate_num	0.1000	0.1000	0.0000	0.00000	0.10000	0.10
Sugar sweetened palm-based beverages/Sugar_num	0.1000	0.1000	0.0000	0.00000	0.10000	0.10
Sugar sweetened palm-based beverages/Protein_num	0.4000	0.4000	0.0000	0.00000	0.40000	0.40
Sugar sweetened palm-based beverages/Salt_num	0.1000	0.1000	0.0000	0.00000	0.10000	0.10
Sugar sweetened palm-based beverages/Fibre_num	0.0000	0.0000	0.0000	0.00000	0.00000	0.00
Sugar sweetened palm-based beverages/Energy_at_percent	NA	NA	NA	NA	NA	NA
Sugar sweetened palm-based beverages/Energy_at_percent	NA	NA	NA	NA	NA	NA
Sugar sweetened palm-based beverages/fat_at_percent	NA	NA	NA	NA	NA	NA
Sugar sweetened palm-based beverages/Carbohydrate_at_percent	NA	NA	NA	NA	NA	NA
Sugar sweetened palm-based beverages/Saturated_fat_at_percent	NA	NA	NA	NA	NA	NA
Sugar sweetened palm-based beverages/Sugar_at_percent	NA	NA	NA	NA	NA	NA
Sugar sweetened palm-based beverages/Protein_at_percent	NA	NA	NA	NA	NA	NA
Sugar sweetened palm-based beverages/Salt_at_percent	NA	NA	NA	NA	NA	NA

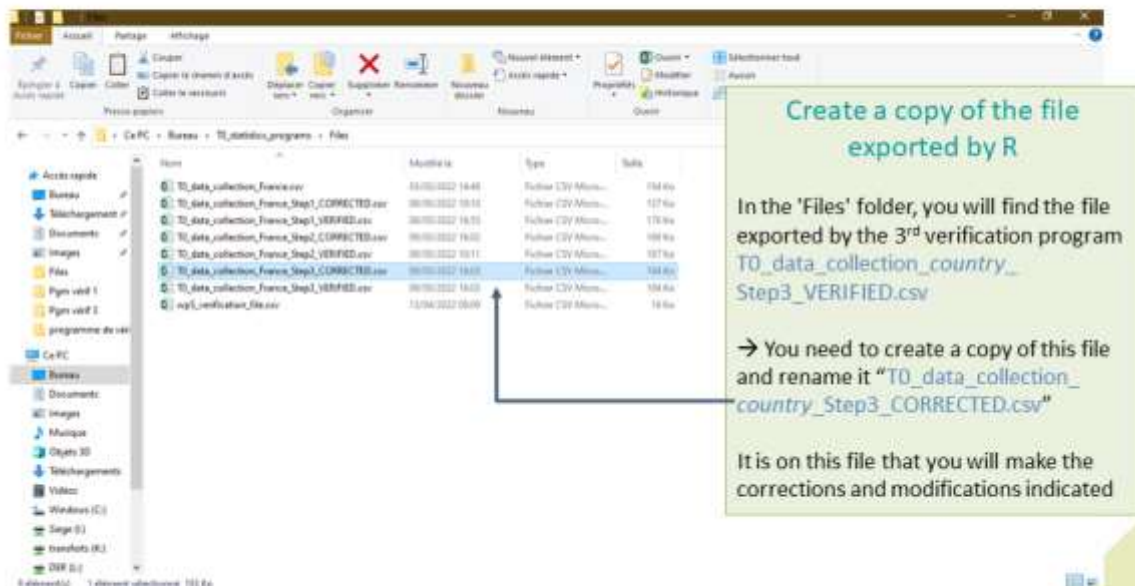
```

R Console Output:
6.412 - C:\Users\aquar\Desktop\T0_statistics_programs\Files
> step3_T0_data_f3category_name+base+gsub(" ", "_", step3_T0_data_f3category_name)
> #into csv format
> write.csv(step3_T0_data_f3category_name, file=paste0("T0_data_collection_country_Step3_VERIFIED.csv"), row.names=F, as.is=T)
> print("The file should appear in the folder 'Files'")
[1] "The file should appear in the folder 'Files'"
    
```



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_3' program



**Create a copy of the file exported by R**

In the 'Files' folder, you will find the file exported by the 3<sup>rd</sup> verification program `T0_data_collection_country_Step3_VERIFIED.csv`

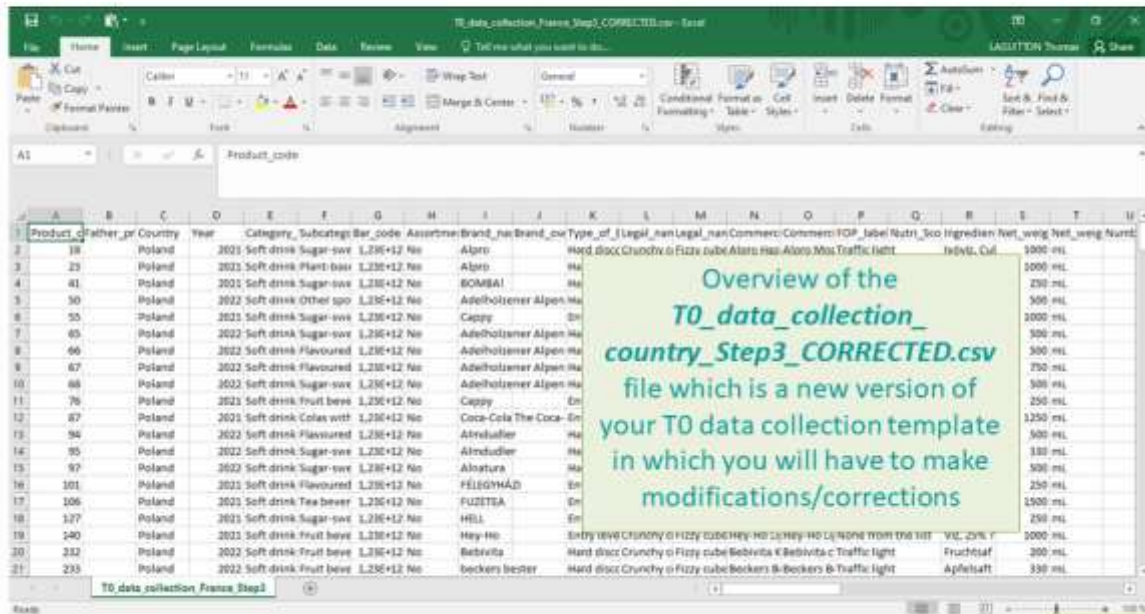
→ You need to create a copy of this file and rename it "`T0_data_collection_country_Step3_CORRECTED.csv`"

It is on this file that you will make the corrections and modifications indicated

Name	Modified	Type	Size
T0_data_collection_France.csv	06/09/2022 14:48	Table CSV Microsoft Excel	134 Ko
T0_data_collection_France_Step1_CORRECTED.csv	06/09/2022 16:14	Table CSV Microsoft Excel	127 Ko
T0_data_collection_France_Step1_VERIFIED.csv	06/09/2022 16:50	Table CSV Microsoft Excel	176 Ko
T0_data_collection_France_Step2_CORRECTED.csv	06/09/2022 16:50	Table CSV Microsoft Excel	166 Ko
T0_data_collection_France_Step2_VERIFIED.csv	06/09/2022 16:51	Table CSV Microsoft Excel	187 Ko
T0_data_collection_France_Step3_CORRECTED.csv	06/09/2022 16:58	Table CSV Microsoft Excel	164 Ko
T0_data_collection_France_Step3_VERIFIED.csv	06/09/2022 16:58	Table CSV Microsoft Excel	164 Ko
exp_LoVerification_Step3.csv	12/04/2022 09:09	Table CSV Microsoft Excel	16 Ko



WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_3' program

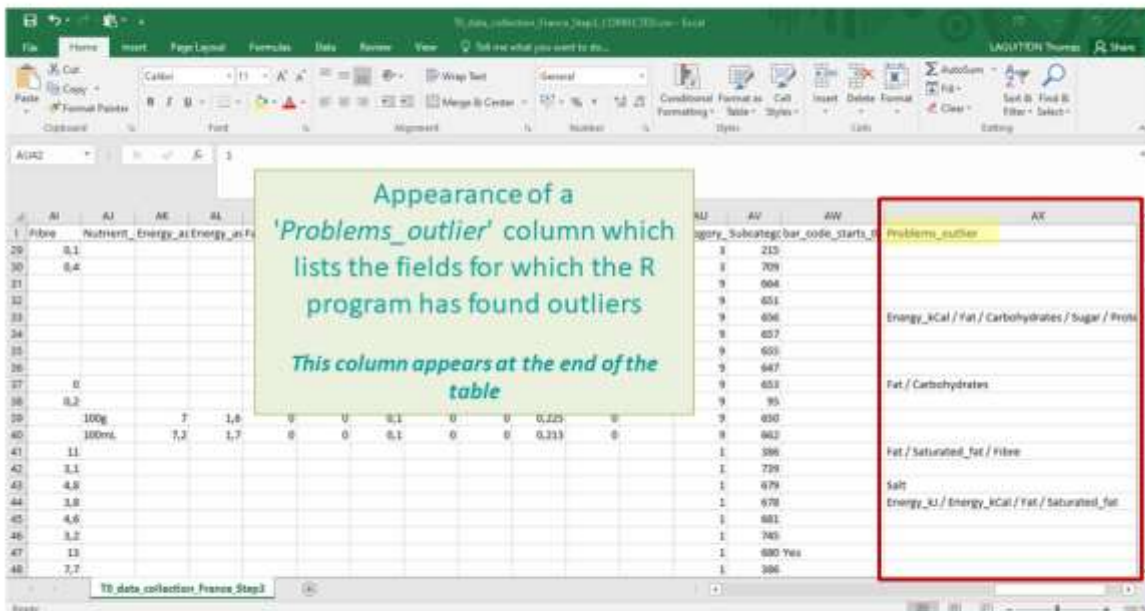


Overview of the **T0\_data\_collection\_country\_Step3\_CORRECTED.csv** file which is a new version of your T0 data collection template in which you will have to make modifications/corrections

Product_code	Country	Year	Category_Subcategory	Bar_code	Assortment	Brand_nam	Brand_cse	Type_of_Legal_nam	Legal_nam	Commercial	Commercial_POP	Nutri_Score	Ingredient	Net_wweig	Net_wweig_Nutri
3	Poland	2023	Soft drink Sugar-swt	1.235+12	No	Alpro	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	5000 mL
4	Poland	2023	Soft drink Sugar-swt	1.235+12	No	BOMBAY	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	5000 mL
5	Poland	2022	Soft drink Other spo	1.235+12	No	Adelholzener Alpen	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	250 mL
6	Poland	2022	Soft drink Sugar-swt	1.235+12	No	Cappy	En	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	500 mL
7	Poland	2022	Soft drink Sugar-swt	1.235+12	No	Adelholzener Alpen	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	2000 mL
8	Poland	2022	Soft drink Flavourd	1.235+12	No	Adelholzener Alpen	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	500 mL
9	Poland	2022	Soft drink Flavourd	1.235+12	No	Adelholzener Alpen	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	700 mL
10	Poland	2022	Soft drink Sugar-swt	1.235+12	No	Adelholzener Alpen	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	500 mL
11	Poland	2023	Soft drink Fruit bev	1.235+12	No	Cappy	En	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	250 mL
12	Poland	2023	Soft drink Colas swt	1.235+12	No	Coca-Cola The Coca-	En	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	1250 mL
13	Poland	2022	Soft drink Flavourd	1.235+12	No	Almdudler	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	500 mL
14	Poland	2022	Soft drink Sugar-swt	1.235+12	No	Almdudler	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	100 mL
15	Poland	2022	Soft drink Sugar-swt	1.235+12	No	Alnostura	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	500 mL
16	Poland	2023	Soft drink Flavourd	1.235+12	No	FÉLEGYHÁZI	En	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	250 mL
17	Poland	2023	Soft drink Tea bever	1.235+12	No	FUZETA	En	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	1400 mL
18	Poland	2023	Soft drink Sugar-swt	1.235+12	No	HILL	En	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	250 mL
19	Poland	2023	Soft drink Fruit bev	1.235+12	No	Hey No	En	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	2000 mL
20	Poland	2022	Soft drink Fruit bev	1.235+12	No	Bevita	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	300 mL
21	Poland	2022	Soft drink Fruit bev	1.235+12	No	beckers bever	Ma	Hard disc	Crunchy	o Fizzy cube	Alpro Ma	Alpro Ma	Traffic light	Indiv. Cul	330 mL



WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_3' program



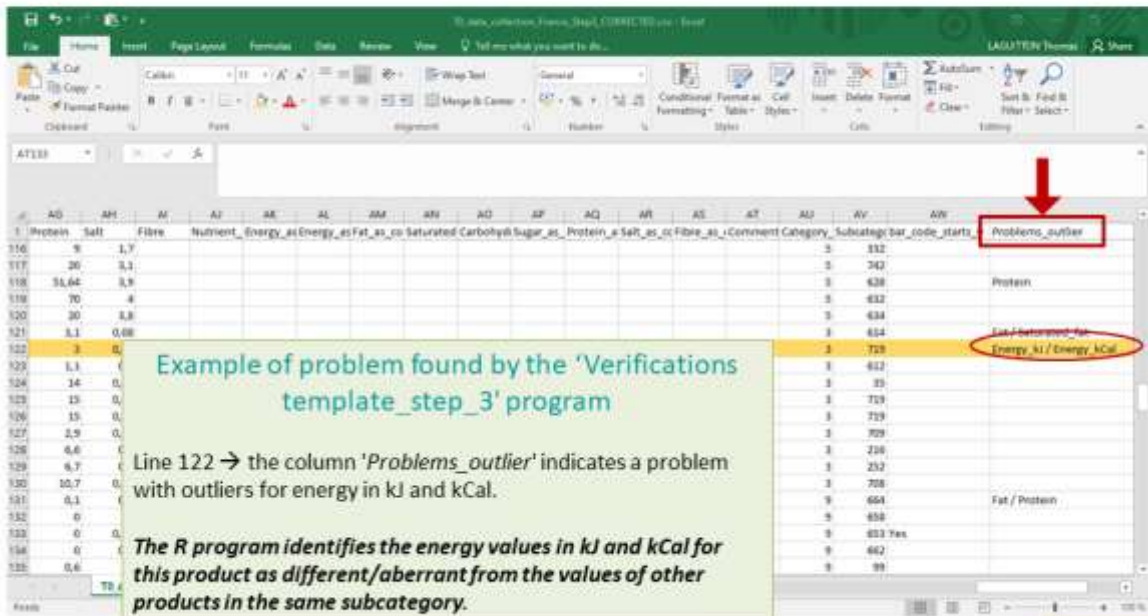
Appearance of a **'Problems\_outlier'** column which lists the fields for which the R program has found outliers  
This column appears at the end of the table

Fibre	Nutrient_Energy	Energy	Energy_kJ	Energy_kCal	Fat	Saturated_fat	Fibre	Salt	Problems_outlier
0,1									
0,4									
11									Energy_kCal / Fat / Carbohydrates / Sugar / Protein
3,1									Fat / Carbohydrates
4,8									Fat / Saturated_fat / Fibre
3,8									Salt
4,6									Energy_kJ / Energy_kCal / Fat / Saturated_fat
3,2									
13									
7,7									



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_3' program



**Example of problem found by the 'Verifications template\_step\_3' program**

Line 122 → the column 'Problems\_outlier' indicates a problem with outliers for energy in kJ and kCal.

*The R program identifies the energy values in kJ and kCal for this product as different/aberrant from the values of other products in the same subcategory.*

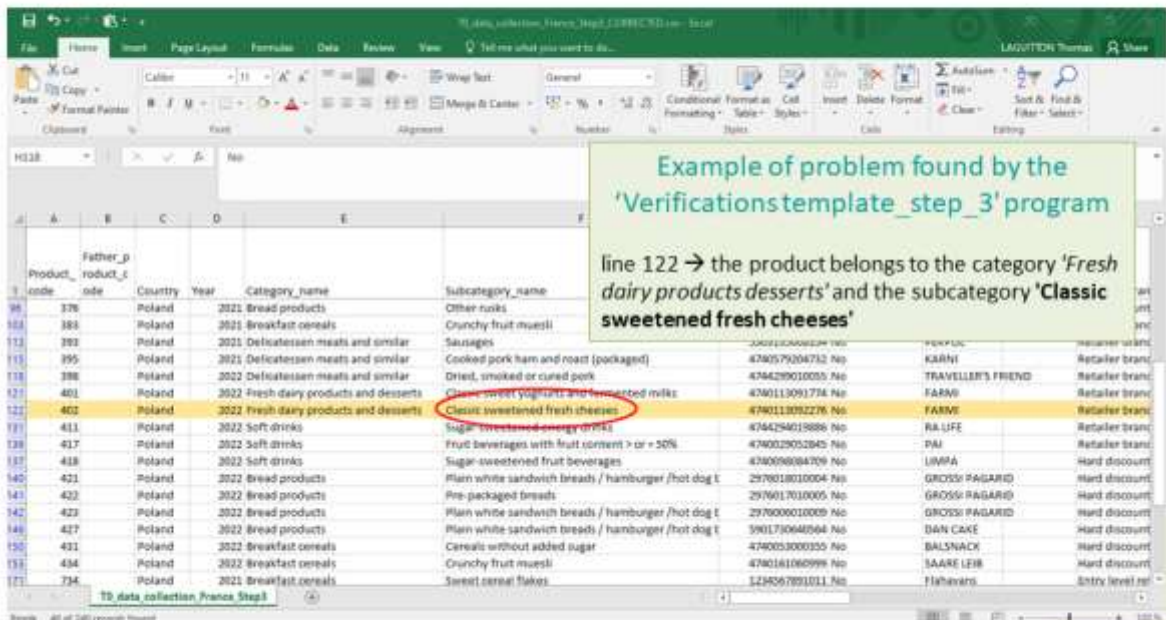


Co-funded by the European Union's  
Health Programme (2014-2020)



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_3' program



**Example of problem found by the 'Verifications template\_step\_3' program**

line 122 → the product belongs to the category 'Fresh dairy products desserts' and the subcategory 'Classic sweetened fresh cheeses'

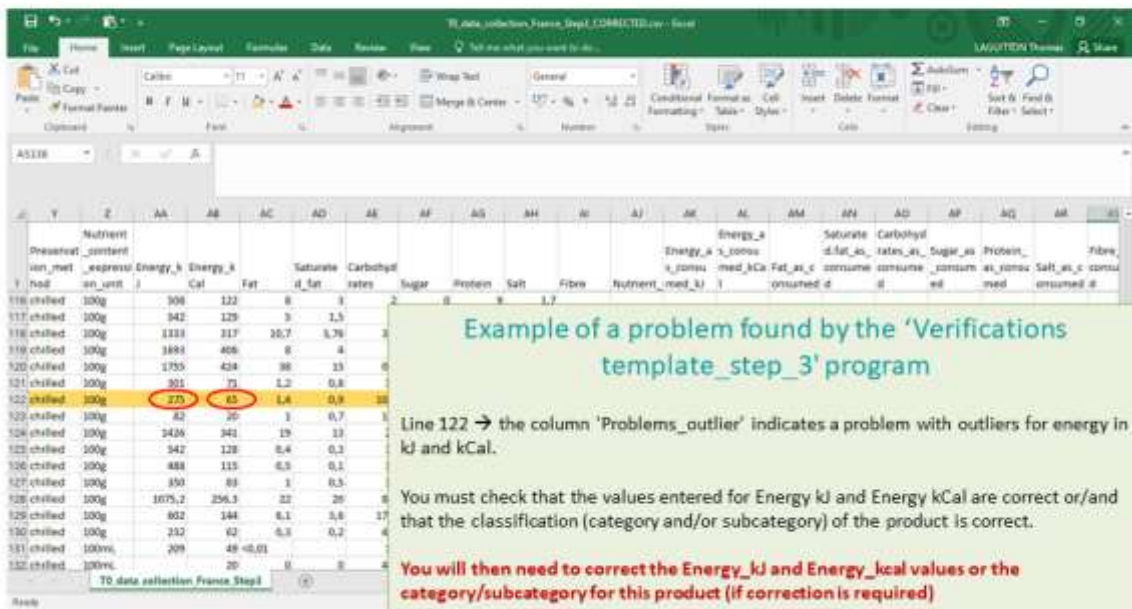


Co-funded by the European Union's  
Health Programme (2014-2020)



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_3' program



**Example of a problem found by the 'Verifications template\_step\_3' program**

Line 122 → the column 'Problems\_outlier' indicates a problem with outliers for energy in kJ and kCal.

You must check that the values entered for Energy kJ and Energy kCal are correct or/and that the classification (category and/or subcategory) of the product is correct.

**You will then need to correct the Energy\_kj and Energy\_kcal values or the category/subcategory for this product (if correction is required)**



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_3' program

Terms that may appear in the 'Problems\_outlier' field following the 'Verifications template\_step\_3' program, their meaning and what to do

Problem	Meaning	Solution
<ul style="list-style-type: none"> <li>• Energy_kCal</li> <li>• Energy_kj</li> <li>• Fat</li> <li>• Saturated_fat</li> <li>• Carbohydrates</li> <li>• Sugar</li> <li>• Protein</li> <li>• Salt</li> <li>• Fibre</li> <li>• Energy_as_consumed_kCal</li> <li>• Energy_as_consumed_kj</li> <li>• Fat_as_consumed</li> <li>• Saturated_fat_as_consumed</li> <li>• Carbohydrates_as_consumed</li> <li>• Sugar_as_consumed</li> <li>• Protein_as_consumed</li> <li>• Salt_as_consumed</li> <li>• Fibre_as_consumed</li> </ul>	<ul style="list-style-type: none"> <li>• The nutritional value of the product for this nutrient appears to be an outlier compared to the nutritional value for this nutrient of other products in the same subcategory.</li> </ul>	<p>→ Check the pictures of the product, to be sure that the value entered in the template is the correct one. If not, you must enter the correct value directly in the Excel file in .csv format.</p> <p><b>And/or</b></p> <p>→ Check that the category and subcategory associated to the product are the correct ones (you can help you with the WP5 classification guidelines that have been created for each food category). If not, you must enter the correct information (category name + code and/or subcategory name + code) directly in the Excel file in .csv format.</p> <p><b>Else</b></p> <p>→ Nutritional value and subcategory entered for this product are the correct ones, no correction is needed. You must indicate in the 'Comments' field: "outliers checked".</p> <p><b>Be careful! A product can have wrong values + wrong classification, it is important to check both for the product.</b></p>



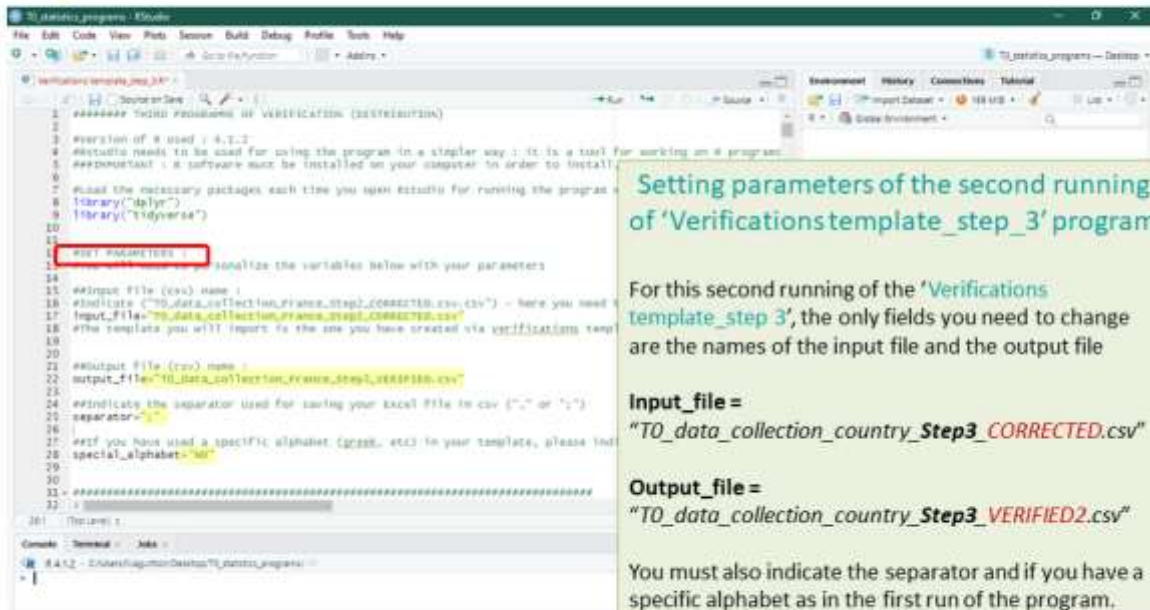
WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_3' program

- **Be careful! When saving the file, you must be sure that the barcodes appear in full and not in scientific format. If this is the case, you must repeat the procedure on pages 21→25.**
- Once the corrections have been made and the barcodes are in the correct format, you can save the file *TO\_data\_collection\_country\_Step3\_CORRECTED.csv* and close it.
- You will have to run this corrected file again in the 'Verifications template\_step\_3' program to make sure you haven't missed a check.

Your Rstudio interface must be cleaned up before running the 'Verifications template\_step\_2' program again.  
All cleaning steps are described on pages 52→58.



WORK Package 5 – Reformulation and processed food monitoring  
2<sup>nd</sup> running of 'Verifications template\_step\_3' program



**Setting parameters of the second running of 'Verifications template\_step\_3' program**

For this second running of the 'Verifications template\_step\_3', the only fields you need to change are the names of the input file and the output file

**Input\_file =**  
"TO\_data\_collection\_country\_Step3\_CORRECTED.csv"

**Output\_file =**  
"TO\_data\_collection\_country\_Step3\_VERIFIED2.csv"

You must also indicate the separator and if you have a specific alphabet as in the first run of the program.







WORK Package 5 – Reformulation and processed food monitoring

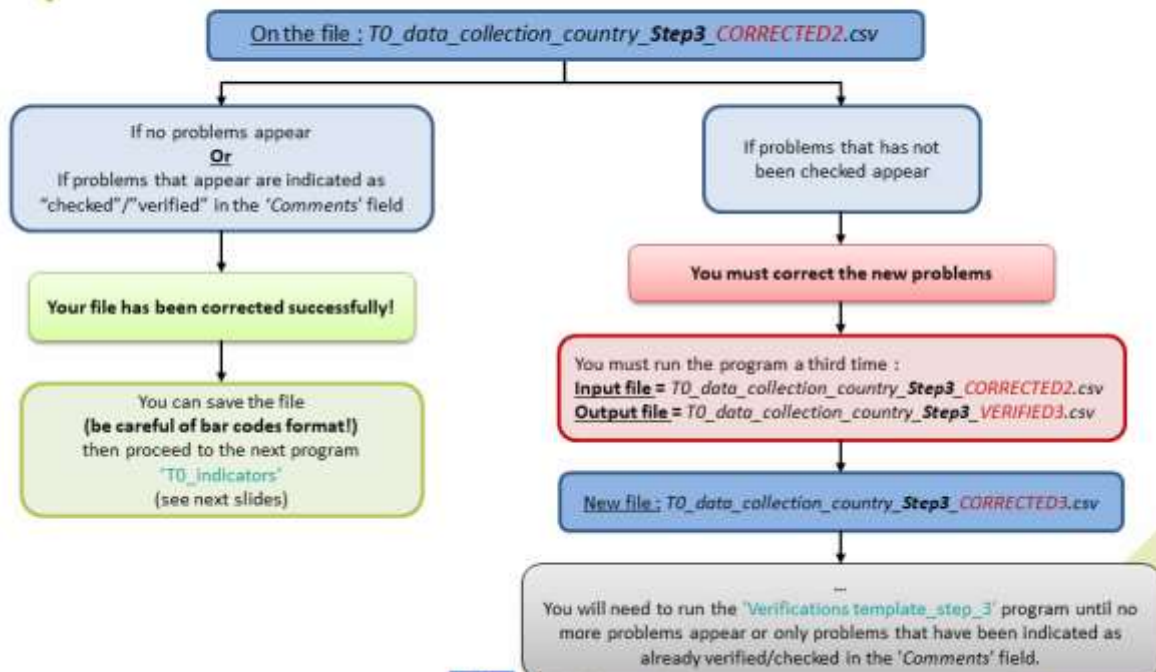
2<sup>nd</sup> running of 'Verifications template\_step\_3' program

- At the end of this second run, you get in your "files" folder a file called:  
"TO\_data\_collection\_country\_Step3\_VERIFIED2.csv"
  - You must create a copy of this file and call it :  
"TO\_data\_collection\_country\_Step3\_CORRECTED2.csv"
- It is on this file that you will make the modifications following the checks



WORK Package 5 – Reformulation and processed food monitoring

2<sup>nd</sup> running of 'Verifications template\_step\_3' program





## WORK Package 5 – Reformulation and processed food monitoring

### End of the 3 verification programs

→ You should now have a file called : *TO\_data\_collection\_country\_Step3\_CORRECTED(X).csv*  
 ( X ) is the number of the last file exported and corrected after the last run of the second verification program )

This file is the final version of your data collection template after you have done all the checks and corrected all the errors.

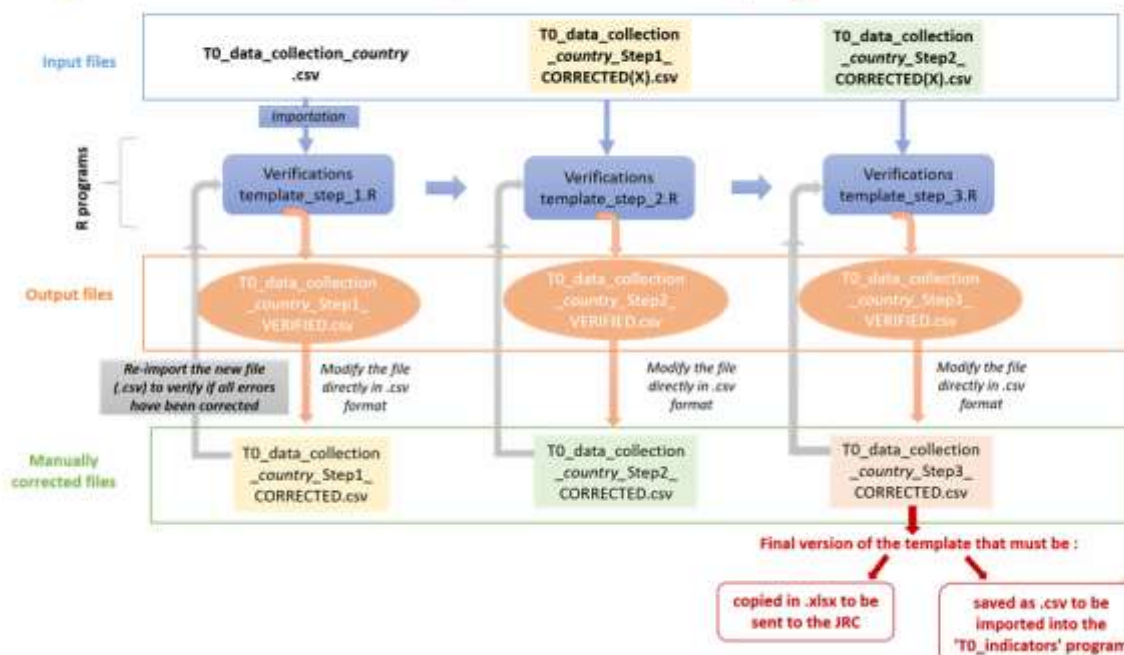
→ You must create a copy of this file and save it in **.xlsx format**  
 (You can call this file : *TO\_data\_collection\_country\_final.xlsx* for example)

This copy in **.xlsx format** will be the final version of your data collection template that will be transmitted to the **JRC**.



## WORK Package 5 – Reformulation and processed food monitoring

### Summary of the 3 verification programs





## WORK Package 5 – Reformulation and processed food monitoring

### 3) Running of the programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template  
cleaning/standardization

i. 1<sup>st</sup> verification program : 'Verifications template step 1'

ii. 2<sup>nd</sup> verification program : 'Verifications template step 2'

iii. 3<sup>rd</sup> verification program : 'Verifications template step 3'

C. Part 3 : Indicators and statistics production program



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## WORK Package 5 – Reformulation and processed food monitoring

### Production of indicators for data collected during T0

#### **Presentation of the 'T0 indicators' program :**

- The aim is to produce harmonised indicators, so it is necessary that all partners use the same program and produce similar indicators to be comparable.
- These indicators will be output as .jpeg graphs and .csv tables at the end of the program
- In the program for producing the indicators, the non-quantified values ("traces" and "<") are treated automatically and as in Oqali and JANPA:
  - ❑ "traces": replaced by 0,0001
  - ❑ "<": the value is divided by 2  
Example : < 0,5 → 0,25

Only data collected during T0 will be treated in this section.  
Indicators with link to pre-existing data will be seen in a future training with the presence of partners carrying out a T+1 collection.



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## WORK Package 5 – Reformulation and processed food monitoring

### Production of indicators for data collected during T0

#### Requirements before starting this section :

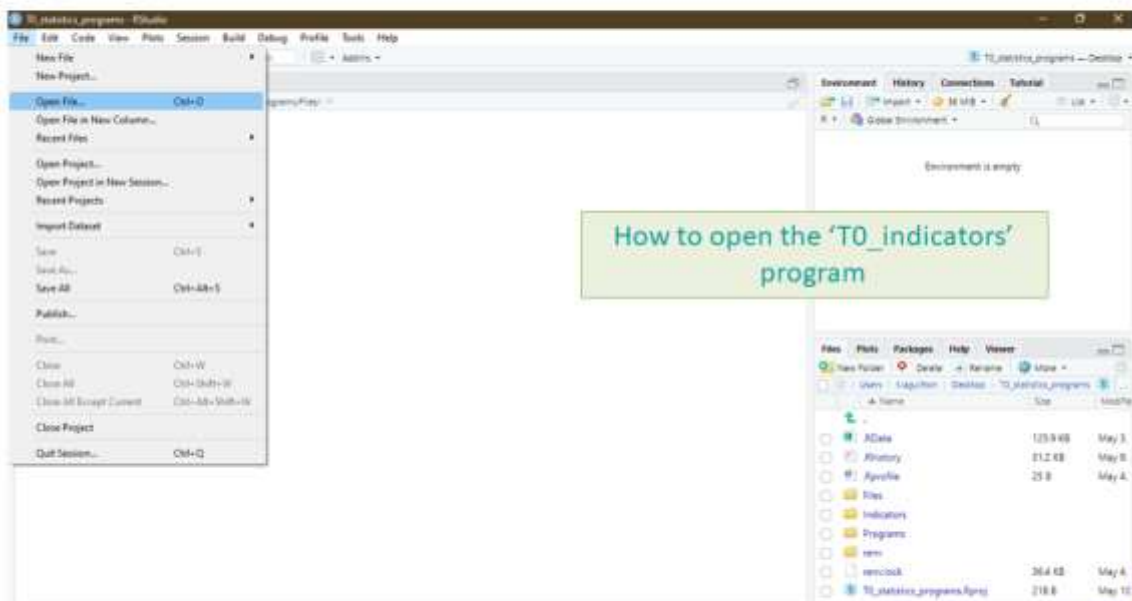
- Before starting this part, you should have run the 3 verification programs that were described before and in which you had no more problems to correct (or problems that have been verified and do not need to be changed)
- You should have in your possession your template of data collected during T0 in .csv format which should now be called : `T0_data_collection_country_Step3_CORRECTED(X).csv` ((X) is the number of the last file exported and corrected after the last run of the third verification program)
- You need to make sure that the barcodes in your file `T0_data_collection_country_Step3_CORRECTED(X).csv` appear in full and not in scientific format (see procedure [pages 21→25](#))

Your Rstudio interface must have been cleaned up before running the program.  
All cleaning steps are described on [pages 52→58](#).



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T0\_indicators' program



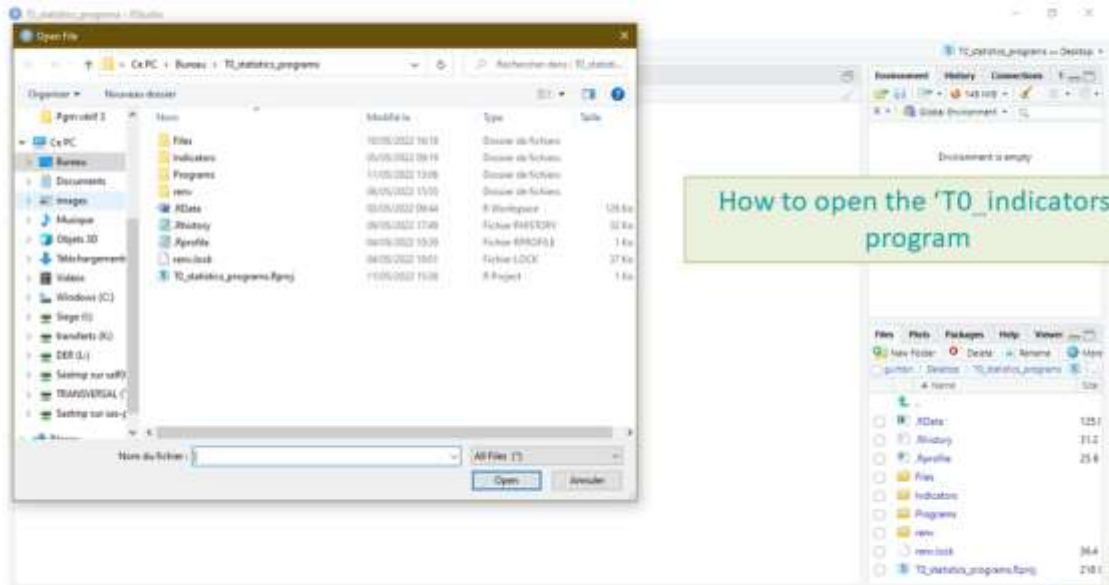
The screenshot shows the RStudio environment with the 'File' menu open, highlighting 'Open File...'. A file explorer window is also open, showing a directory structure with files like 'ADate', 'PHistory', 'AProfile', 'Files', 'Indicators', 'Programs', 'rem', 'resclock', and 'T0\_statistics\_programs.Rproj'. A text box overlaid on the image reads: "How to open the 'T0\_indicators' program".





WORK Package 5 – Reformulation and processed food monitoring

Running of 'T0\_indicators' program

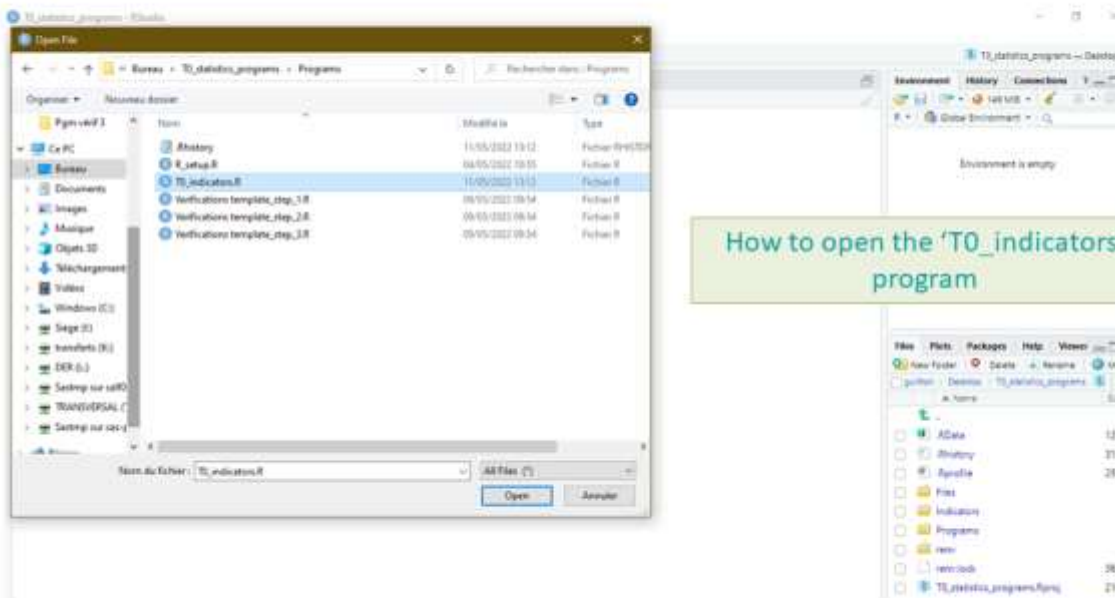


How to open the 'T0\_indicators' program



WORK Package 5 – Reformulation and processed food monitoring

Running of 'T0\_indicators' program



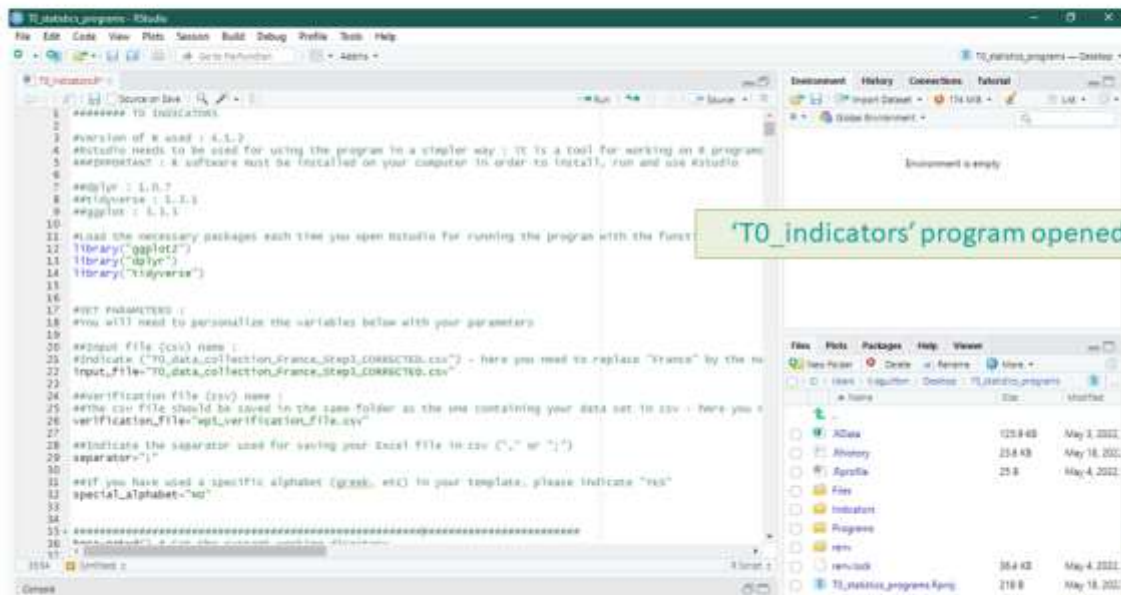
How to open the 'T0\_indicators' program





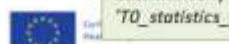
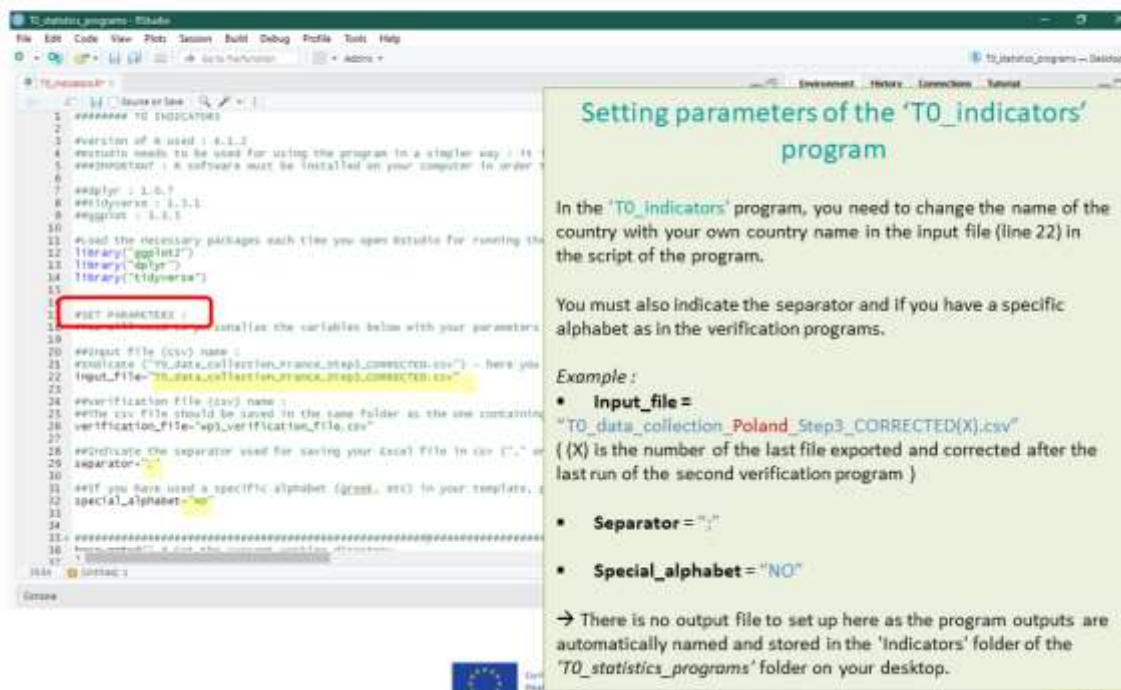
## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T0\_indicators' program



## WORK Package 5 – Reformulation and processed food monitoring

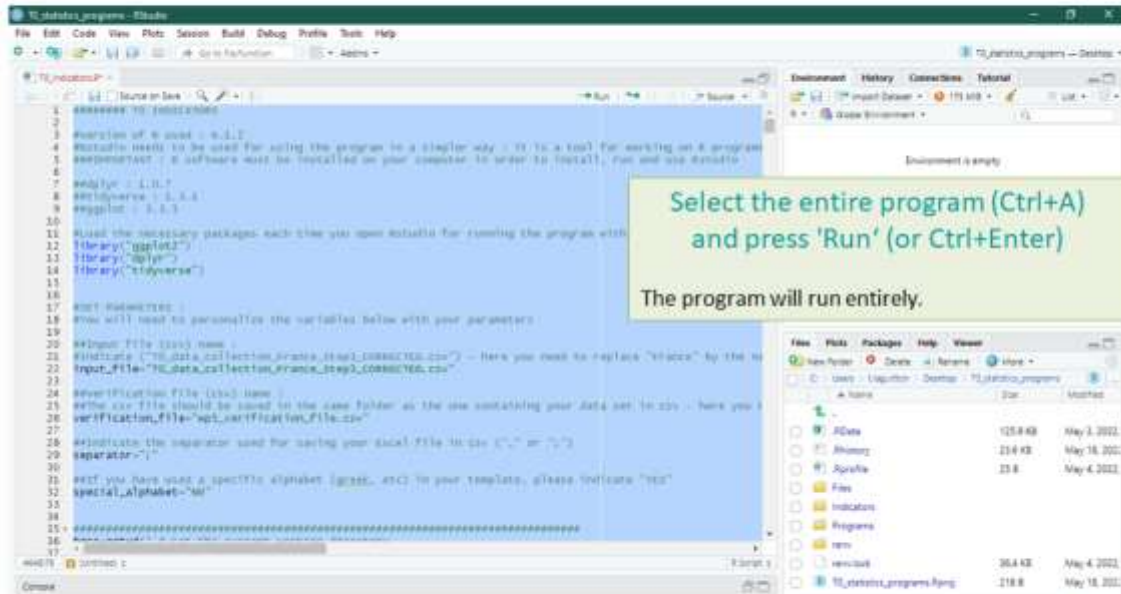
### Running of 'T0\_indicators' program





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'TO\_indicators' program



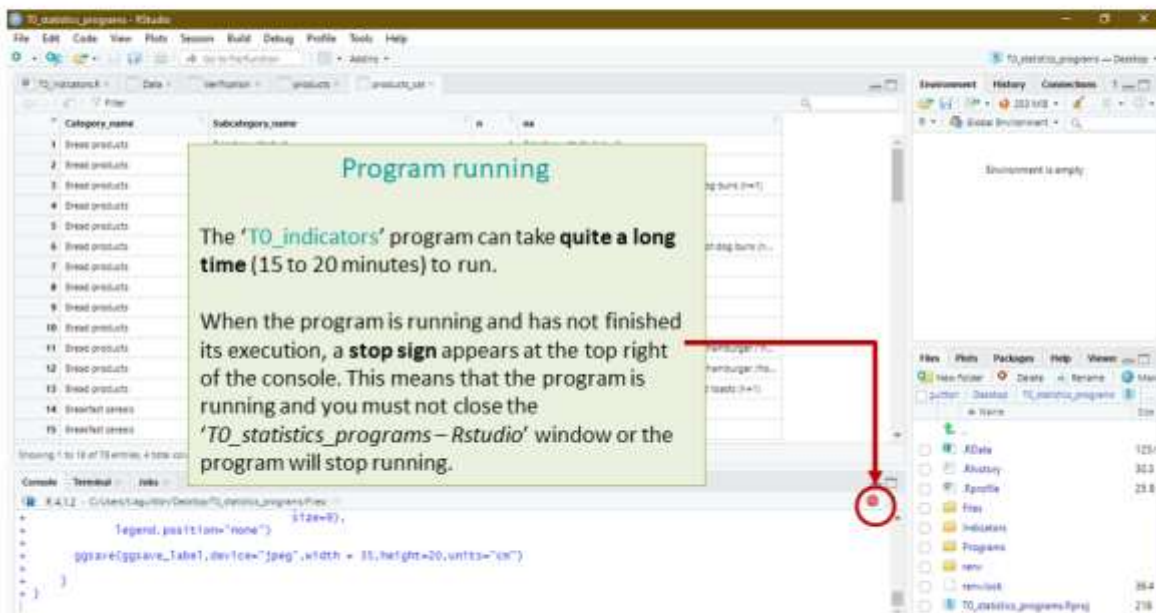
**Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter)**

The program will run entirely.



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'TO\_indicators' program



**Program running**

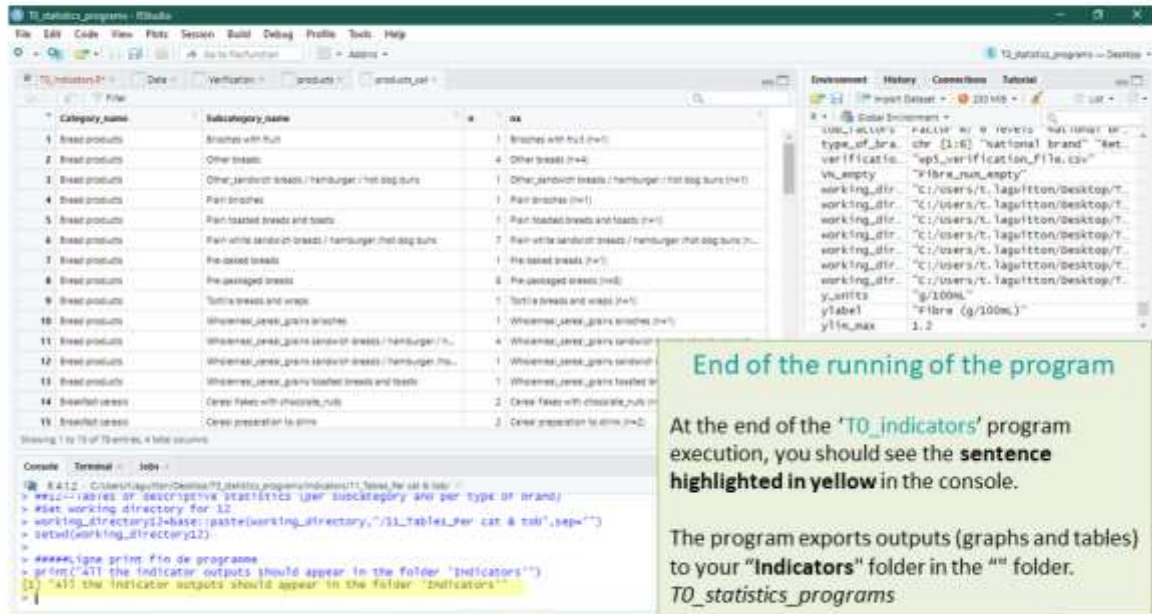
The 'TO\_indicators' program can take **quite a long time** (15 to 20 minutes) to run.

When the program is running and has not finished its execution, a **stop sign** appears at the top right of the console. This means that the program is running and you must not close the 'TO\_statistics\_programs - Rstudio' window or the program will stop running.



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T0\_indicators' program



The screenshot shows a Python IDE window titled 'T0\_statistics\_programs - IDLE'. The main window displays a table with columns: 'Category\_name', 'Subcategory\_name', and 'NA'. The table lists various food categories like 'Bread products', 'Other breads', 'Pastry products', etc. The console window at the bottom shows the execution of a script with the following code and output:

```

C:\Users\T. Laguitton\Desktop> cd T0_statistics_programs\indicators
C:\Users\T. Laguitton\Desktop> python T0_indicators.py
[1] "All the indicator outputs should appear in the folder 'indicators'"

```

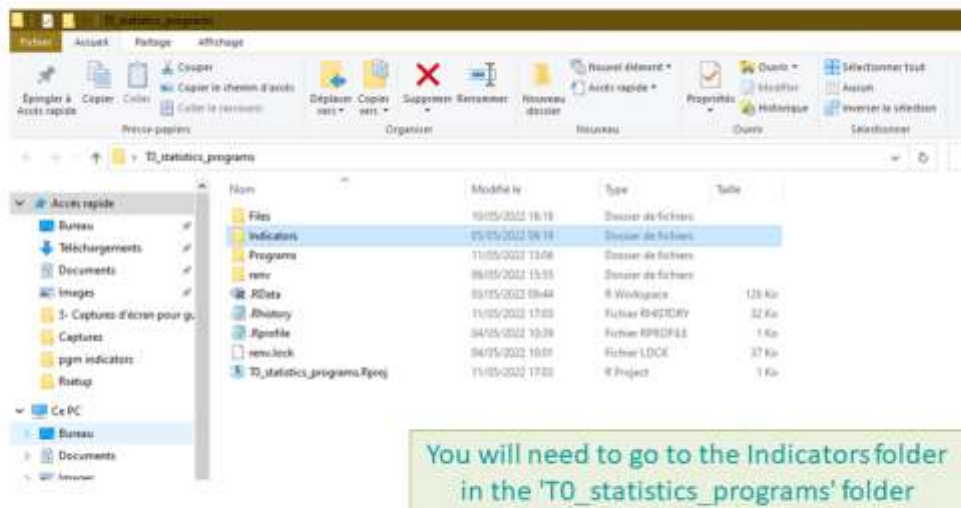
**End of the running of the program**  
At the end of the 'T0\_indicators' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports outputs (graphs and tables) to your "Indicators" folder in the "T0" folder. *T0\_statistics\_programs*



## WORK Package 5 – Reformulation and processed food monitoring

### After running 'T0\_indicators' program



The screenshot shows a Windows File Explorer window titled 'T0\_statistics\_programs'. The folder contains the following items:

Nom	Modifié le	Type	Taille
Files	10/05/2022 16:18	Dossier de fichiers	
Indicators	05/05/2022 08:19	Dossier de fichiers	
Programs	11/05/2022 13:06	Dossier de fichiers	
retr	08/05/2022 15:35	Dossier de fichiers	
RData	03/05/2022 08:44	R Workspace	128 Ko
Rhistory	11/05/2022 17:03	Fichier R-HISTORY	22 Ko
Rprofile	04/05/2022 10:39	Fichier RPROF.LI	1 Ko
remake	04/05/2022 10:01	Fichier LOCK	27 Ko
T0_statistics_programs.Rproj	11/05/2022 17:03	R Project	1 Ko

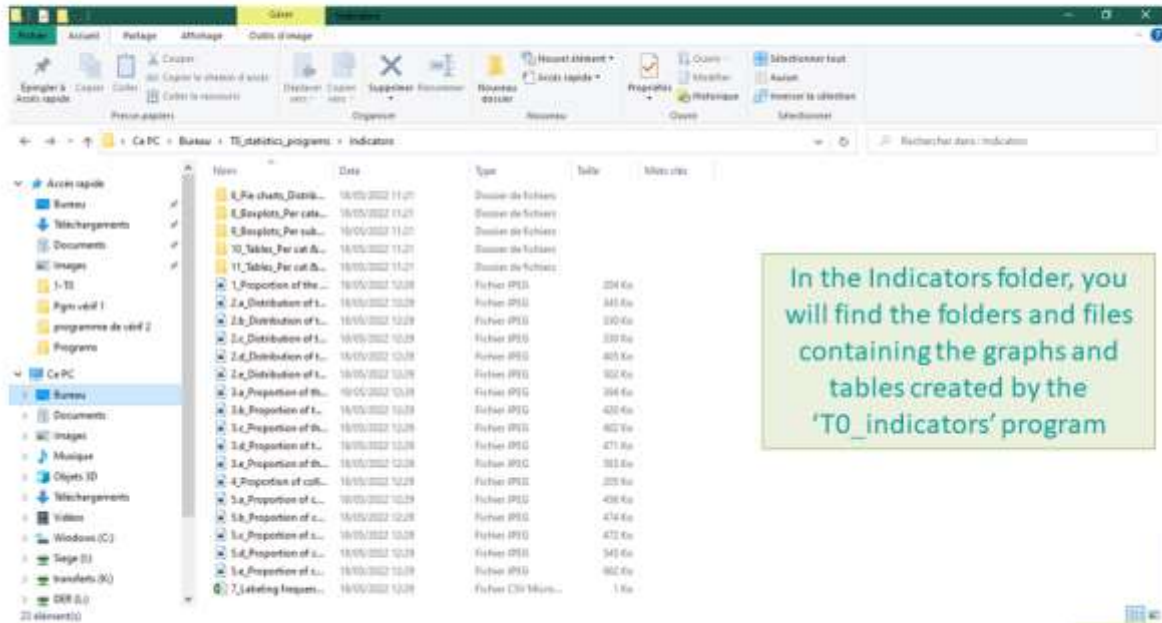
**You will need to go to the Indicators folder in the 'T0\_statistics\_programs' folder**





WORK Package 5 – Reformulation and processed food monitoring

After running 'T0\_indicators' program



In the Indicators folder, you will find the folders and files containing the graphs and tables created by the 'T0\_indicators' program



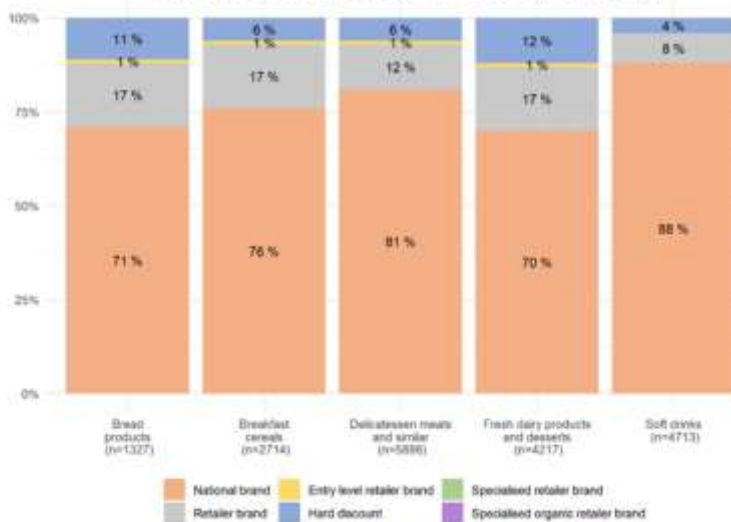
WORK Package 5 – Reformulation and processed food monitoring

Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

1) Study of the food supply

Proportion of the different types of brand collected (per category)



This output will be numbered « 1\_ » in the Indicators folder



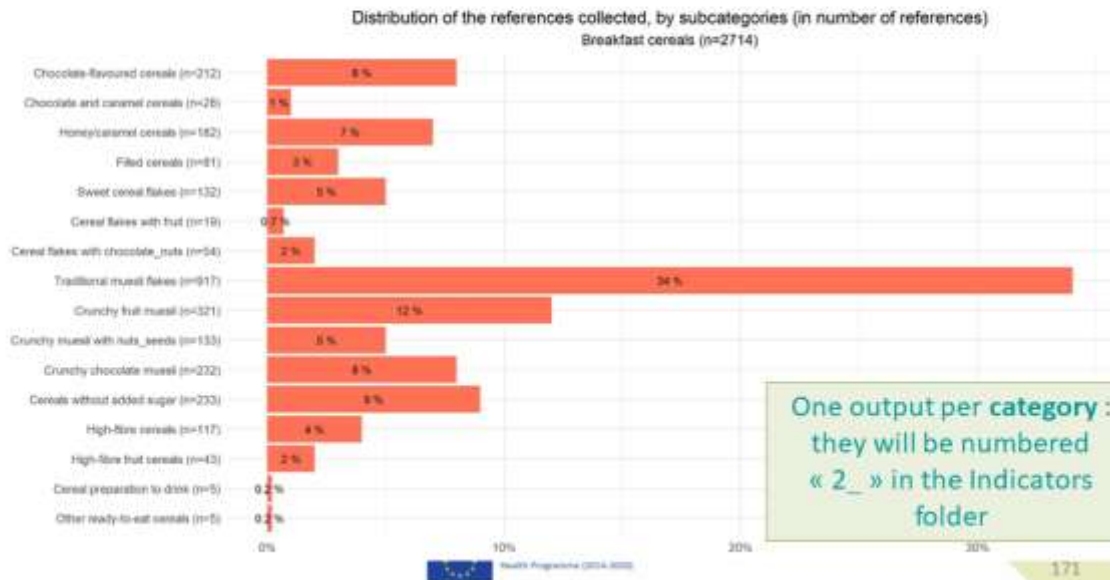


WORK Package 5 – Reformulation and processed food monitoring

Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

1) Study of the food supply

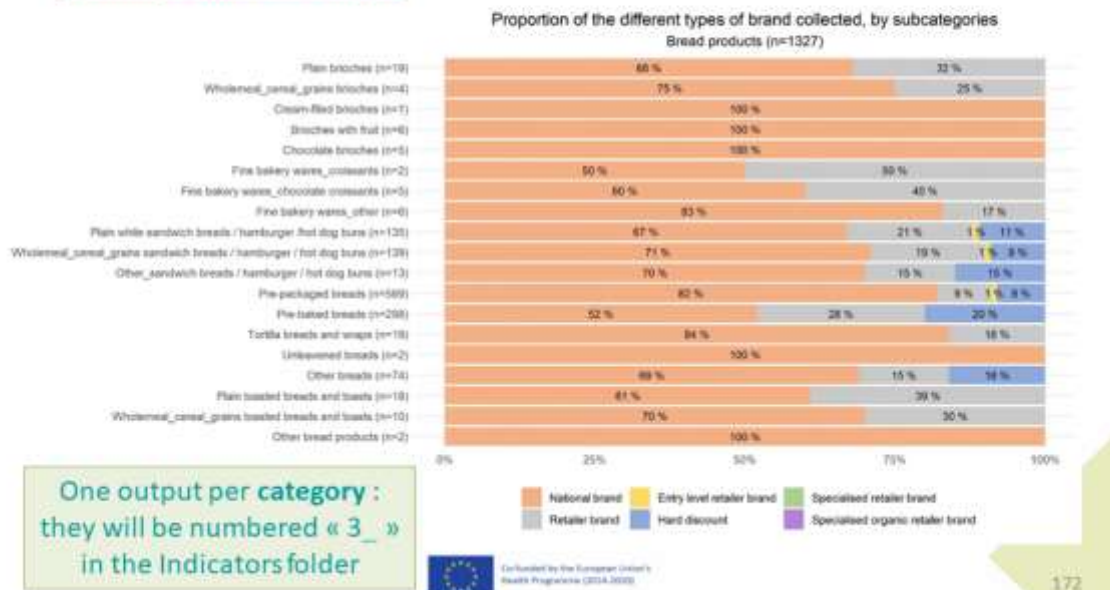


WORK Package 5 – Reformulation and processed food monitoring

Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

1) Study of the food supply





WORK Package 5 – Reformulation and processed food monitoring

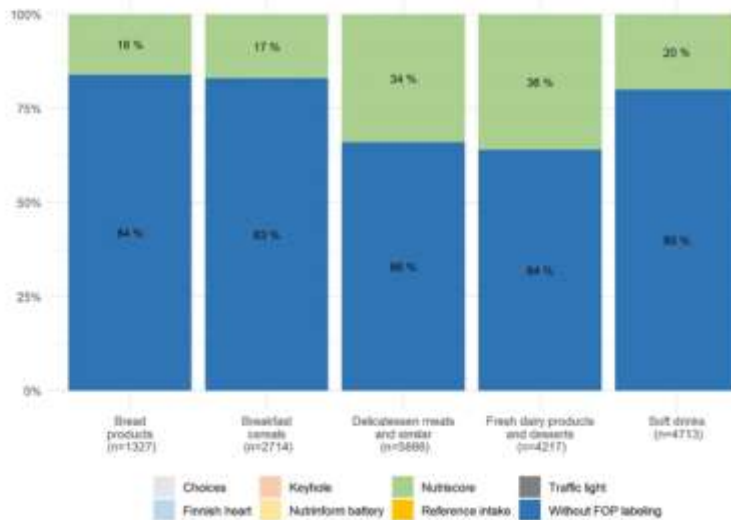
Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

2) Study of the labeling parameters

Front of pack labeling

Proportion of collected products with or without front of pack labeling, by category



This output will be numbered « 4\_ » in the Indicators folder



WORK Package 5 – Reformulation and processed food monitoring

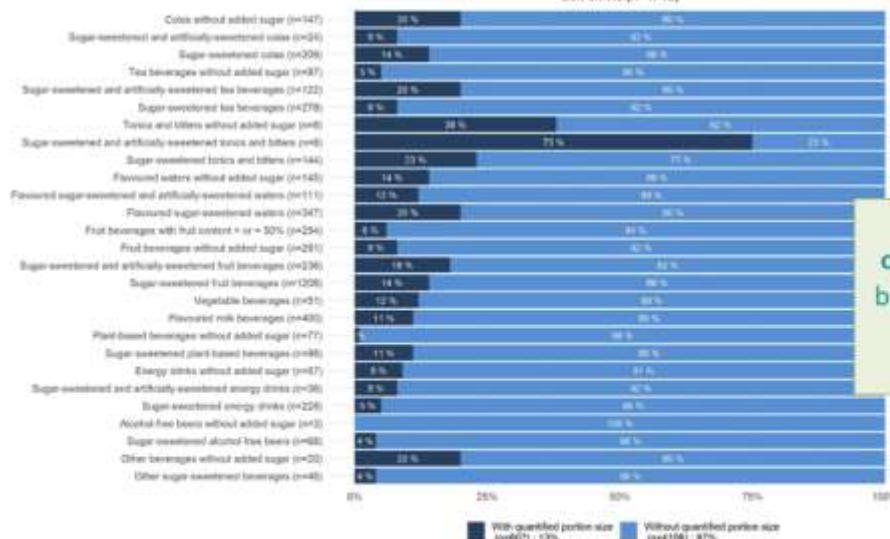
Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

2) Study of the labeling parameters

Portion size

Distribution of products with or without quantified portion size (per subcategory)  
Soft drinks (n=4713)



One output per category : they will be numbered « 5\_ » in the Indicators folder



WORK Package 5 – Reformulation and processed food monitoring

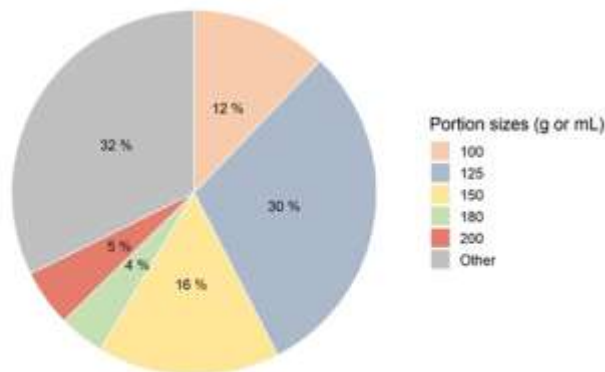
Production of indicators for data collected during T0

**The outputs from the 'T0 indicators' program :**

**2) Study of the labeling parameters**

**Portion size**

Proportion of the five most represented portion sizes among collected products, by category  
Fresh dairy products and desserts (n=1235)



One output per category : they will be numbered « 6.a\_ » in the Indicators folder

The five most represented portion sizes are represented in the pie chart ; all other portion sizes are gather in 'Other'



WORK Package 5 – Reformulation and processed food monitoring

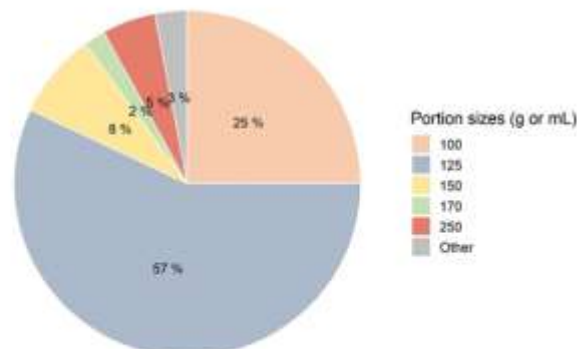
Production of indicators for data collected during T0

**The outputs from the 'T0 indicators' program :**

**2) Study of the labeling parameters**

**Portion size**

Proportion of the five most represented portion sizes among collected products, by subcategory  
Fresh dairy products and desserts : Classic plain yoghurts and fermented milks with no added sugar (n=61)



/!\ One output per subcategory : they will be numbered « 6.b\_ » in the Indicators folder

The five most represented portion sizes are represented in the pie chart ; all other portion sizes are gather in 'Other'



## WORK Package 5 – Reformulation and processed food monitoring

### Production of indicators for data collected during T0

**The outputs from the 'T0 indicators' program :**

#### 3) Study of the labeled nutritional values (state of play of the nutritional composition)

Labeling frequency, by nutrient

Category_name	Energy_kJ	Energy_kCal	Fat	Saturated_fat	Carbohydrates	Sugar	Protein	Salt	Fibre
Bread products (n=1327)	78%	96%	100%	98%	100%	99%	100%	100%	68%
Breakfast cereals (n=2714)	86%	96%	99%	98%	99%	98%	99%	98%	86%
Delicatessen meats and similar (n=5886)	83%	96%	100%	100%	100%	100%	100%	100%	19%
Fresh dairy products and desserts (n=4217)	93%	90%	100%	100%	86%	100%	100%	85%	22%
Soft drinks (n=4713)	77%	98%	97%	97%	100%	99%	97%	97%	16%

This output (in.csv) will be numbered « 7\_ » in the Indicators folder



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## WORK Package 5 – Reformulation and processed food monitoring

### Production of indicators for data collected during T0

**The outputs from the 'T0 indicators' program :**

#### 3) Study of the labeled nutritional values (state of play of the nutritional composition)

##### State of play of the nutritional composition

Nutrients of interest for each category :

	Fat	Saturated fat	Sugar	Protein	Fibre	Salt
Bread products	X	X	X		X	X
Breakfast cereals	X	X	X		X	X
Delicatessen meats and similar	X	X	X	X		X
Fresh dairy products and desserts	X	X	X	X	X	
Soft drinks	X	X	X		X	X

Only for Flavoured milk beverages and Plant-based beverages



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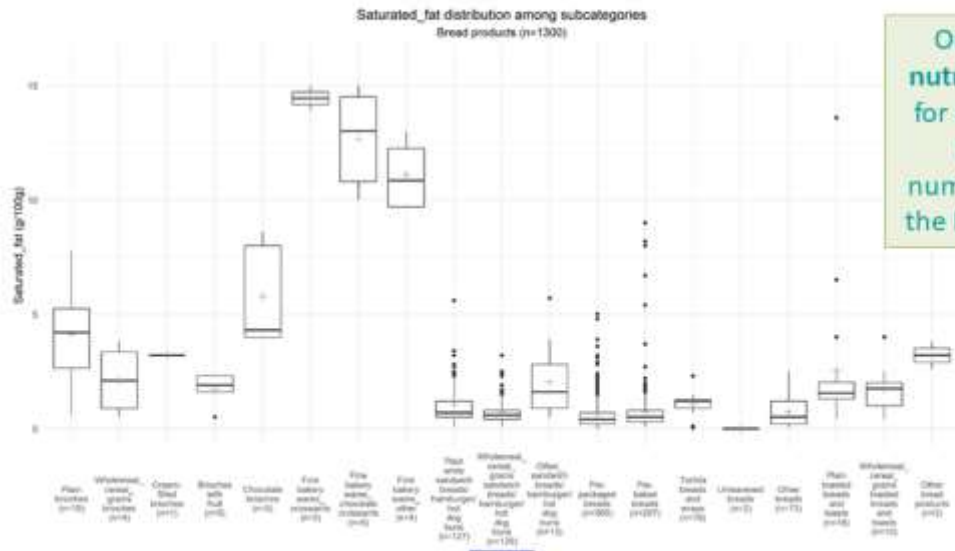
WORK Package 5 – Reformulation and processed food monitoring

Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

**3) Study of the labeled nutritional values (state of play of the nutritional composition)**

**State of play of the nutritional composition**



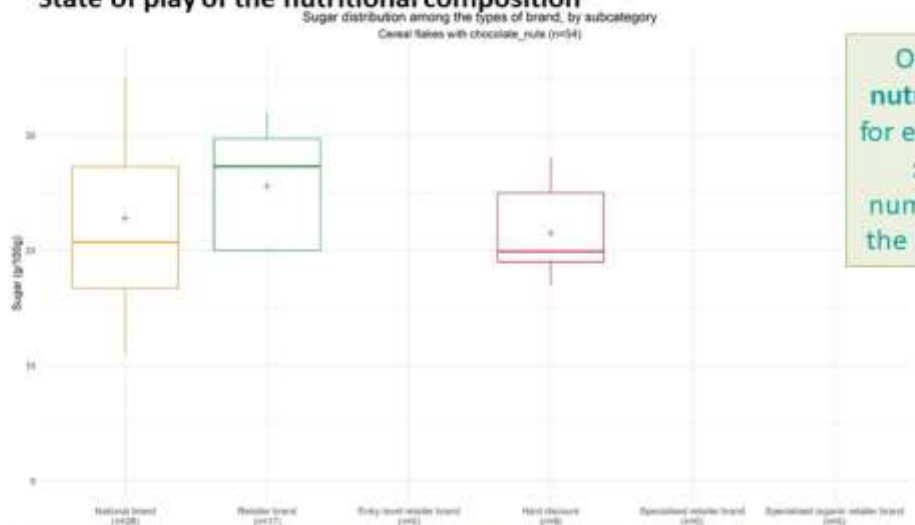
WORK Package 5 – Reformulation and processed food monitoring

Production of indicators for data collected during T0

The outputs from the 'T0 indicators' program :

**3) Study of the labeled nutritional values (state of play of the nutritional composition)**

**State of play of the nutritional composition**



Regarding the proportion of the different type of brand collected, come back to us to decide if these analysis are relevant (not relevant if all brands are not well covered)



WORK Package 5 – Reformulation and processed food monitoring

Production of indicators for data collected during T0

**The outputs from the 'T0\_indicators' program :**

**3) Study of the labeled nutritional values (state of play of the nutritional composition)**

**State of play of the nutritional composition**

Sugar (g/100g)	Number of products	First					Standard deviation	
		Minimum	Maximum	quartile	Median	Third quartile Mean		
Cereal flakes with chocolate_nuts	54	11,1	35	19,9	22	28,2	23,5	6,4
Cereal flakes with fruit	19	7,1	26	14	15,6	18	16,6	5,1
Cereal preparation to drink	0							
Cereals without added sugar	233	0	11,5	0,8	1,1	1,5	1,3	1,1
Chocolate-flavoured cereals	212	2,1	40	22	24,9	28,5	24,7	5,8
Chocolate and caramel cereals	28	23	32	25	27	29	27,1	2,4
Crunchy chocolate muesli	232	1,6	31,1	17	21	24	20,2	5,5
Crunchy fruit muesli	321	2,3	41,4	15	19	23	19,1	6
Crunchy muesli with nuts_seeds	153	1,5	35	12,4	17,4	20	16,2	6,2
Filled cereals	81	21	44	27,5	29	34	30,4	5,2
High-fibre cereals	114	2,6	28,4	10,8	14	18	13,7	6
High-fibre fruit cereals	43	2,8	32	14,2	20	24	19,3	6,9
Honey/caramel cereals	180	2,2	48	22,7	25	29	25,1	8
Other ready-to-eat cereals	5	2,7	22,6	3				8,2
Sweet cereal flakes	131	3	37	5,8				9,6
Traditional muesli flakes	885	0,4	33	9,3				7,1

One output (in.csv) per labeled nutrient for each category : they will be numbered « 10\_ » in the Indicators folder



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**Best-ReMaP**  
Healthy Food for a Healthy Future

## Thank you for your attention!

ANSES
wp5\_bestremap@anses.fr

The Joint Action focusing on the implementation of validated best practices in nutrition – Best-ReMaP

This presentation arises from the Joint Action Best-ReMaP. This JA is addressing the adaption, replication and implementation of effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings. This presentation was funded by the European Union's Health Programme (2014-2020). The content of this presentation represents the views of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the Consumers, Health, Agriculture and Food Executive Agency (CHA/FEA) or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.

## Annex 22 : Guidelines for data treatment and analysis for a follow-up snapshot (T+1)



## WORK Package 5 – Reformulation and processed food monitoring

Guidelines for data treatment and analysis for a follow-up snapshot (T+1)

- 1) Introduction [\[page 3\]](#)
- 2) Installation of the necessary equipment and presentation of the Rstudio software [\[page 5\]](#)
  - A. Preliminary steps [\[page 7\]](#)
  - B. Installation of software [\[page 35\]](#)
  - C. Introduction to R studio [\[page 44\]](#)
  - D. Cleaning of the Rstudio interface [\[page 58\]](#)
- 3) Running of the verification programs [\[page 65\]](#)
  - A. Part 1: R setup program [\[page 74\]](#)
  - B. Part 2: Verification programs and template cleaning/standardization [\[page 84\]](#)
    - i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1' [\[page 86\]](#)
    - ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2' [\[page 115\]](#)
    - iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3' [\[page 140\]](#)
    - iv. 4<sup>th</sup> verification program : 'Verifications template\_step\_4' [\[page 162\]](#)
- 4) Introduction to the creation of indicators [\[page 187\]](#)
  - A. Explanation of the steps [\[page 188\]](#)
  - B. Installation/update of the necessary equipment [\[page 192\]](#)
- 5) Running of the programs for the creation of indicators [\[page 201\]](#)
  - A. Entry tables generated for statistical tests [\[page 202\]](#)
  - B. Permutation tests [\[page 223\]](#)
  - C. Creation of statistical indicators [\[page 258\]](#)





## WORK Package 5 – Reformulation and processed food monitoring

### 1) Introduction

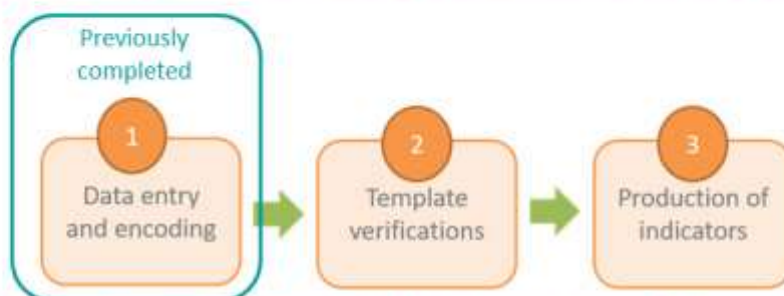


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## WORK Package 5 – Reformulation and processed food monitoring

### Summary of the steps for data treatment and analysis



**It is important to finish each step before moving on to the next**

- **Steps 2 and 3** will be done by data processing programs on the Rstudio software which is a free software and therefore accessible to all. The programs have already been created and written in order to harmonise the work. You will just need to run the programs on your data (you will not have to create any programs).



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## WORK Package 5 – Reformulation and processed food monitoring

### Equipment needed

#### Tools you already have

- **T+1 collection template** : template that you filled in according to the WP5 methodology during your T+1 data collection and with data for the 5 priority food categories.
- **Pictures of the products** that you have collected for your T+1 data collection
- **Pre-existing data template** : template with your pre-existing national data that have been classified in the Best-ReMaP nomenclature

#### Tools you will have to download (explanation pages 35-43)

- **R, Rstudio** : Free statistical software that you will use to check and correct the data entered in your template and to perform indicators/statistics on your data
- **WP5 R programs** : R programs created by Anses that you will just have to run on the Rstudio software (you will be guided at each step, you will not have to create programs or develop code).
- **Support files for programs** (*wp5\_verification\_file*; *Best-ReMaP\_nomenclature*; *Subcategory\_order*; *Years of interest*) : files that you will have to download and as it will be used in the R program. These files do **not have to be filled in or modified** (except the file 'Years of interest').

The **WP5 R programs** and **the support files** are available in a **zip folder** on the project Intranet by following this link:  
[https://portal.nijz.si/ssf/a/c/p\\_name/ssf\\_forum/p\\_action/1/binderid/21932/entityType/folder/action/view\\_permalink/novi\\_url/1](https://portal.nijz.si/ssf/a/c/p_name/ssf_forum/p_action/1/binderid/21932/entityType/folder/action/view_permalink/novi_url/1)

You will need to copy this **folder** as it is on the desktop of your computer (this action is detailed in the [slide 28-29](#))

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## WORK Package 5 – Reformulation and processed food monitoring

### 2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps ([page 7](#))

B. Installation of software ([page 35](#))

C. Introduction to R studio ([page 44](#))

D. Cleaning of the Rstudio interface ([page 58](#))



WORK Package 5 – Reformulation and processed food monitoring

2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps

B. Installation of software

C. Introduction to R studio

D. Cleaning of the Rstudio interface



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WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

**1<sup>st</sup> preliminary step : preparation of the T+1 collection template** [\(page 9\)](#)

**2<sup>nd</sup> preliminary step : preparation of the pre-existing data template** [\(page 26\)](#)

**3<sup>rd</sup> preliminary step : creation of the working folder** [\(page 28\)](#)

**4<sup>th</sup> preliminary step : preparation of the file "Years of interest.csv"** [\(page 30\)](#)



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WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

**1<sup>st</sup> preliminary step : preparation of the T+1 collection template**

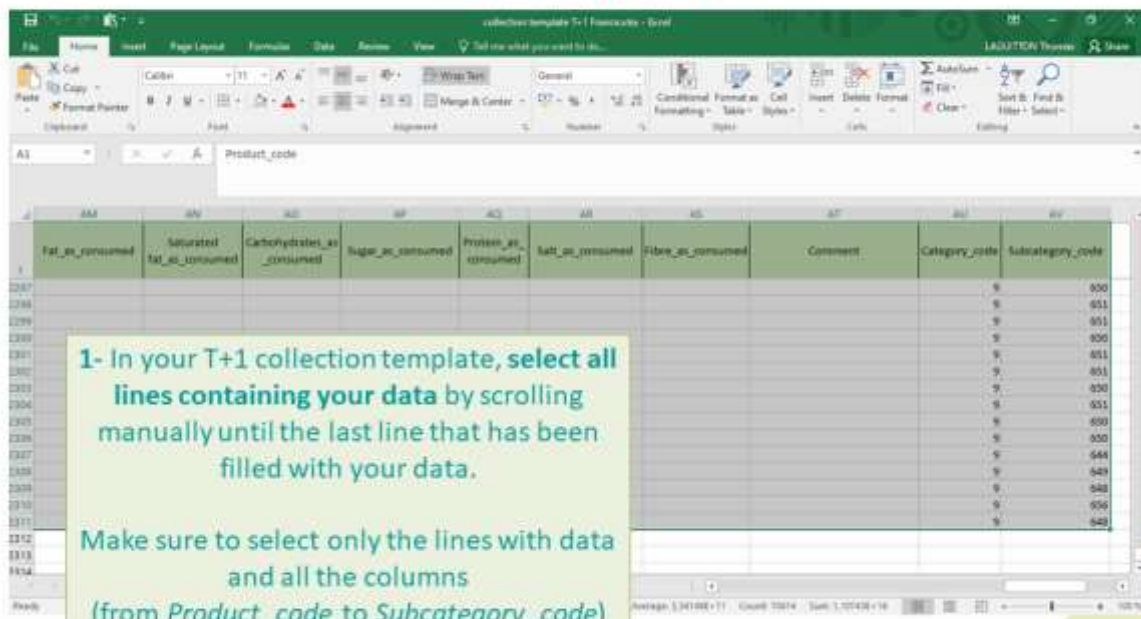
- You must ensure that your T+1 collection template is a **single file** with a **single tab** for all data collected during T+1 (the 5 food categories in the same tab).
- As your T+1 collection template contains many rows and drop-down menus, you will have to copy it into a **new .xlsx excel file** to keep only the filled rows and remove the drop-down menus.

*see the following slides for a step-by-step explanation of this procedure*



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



**1- In your T+1 collection template, select all lines containing your data by scrolling manually until the last line that has been filled with your data.**

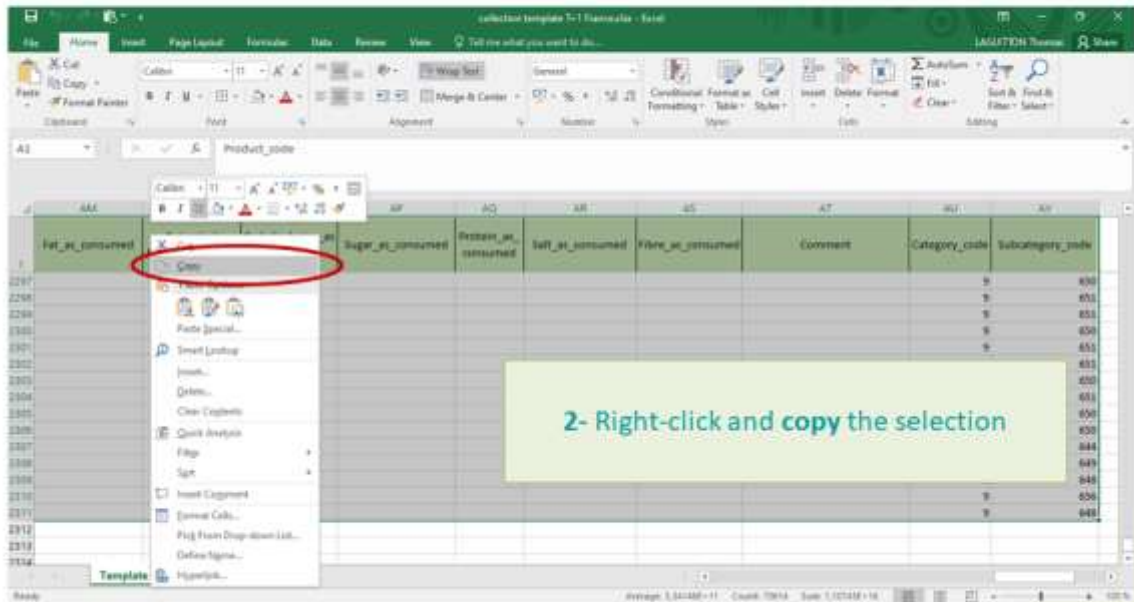
**Make sure to select only the lines with data and all the columns (from Product\_code to Subcategory\_code)**





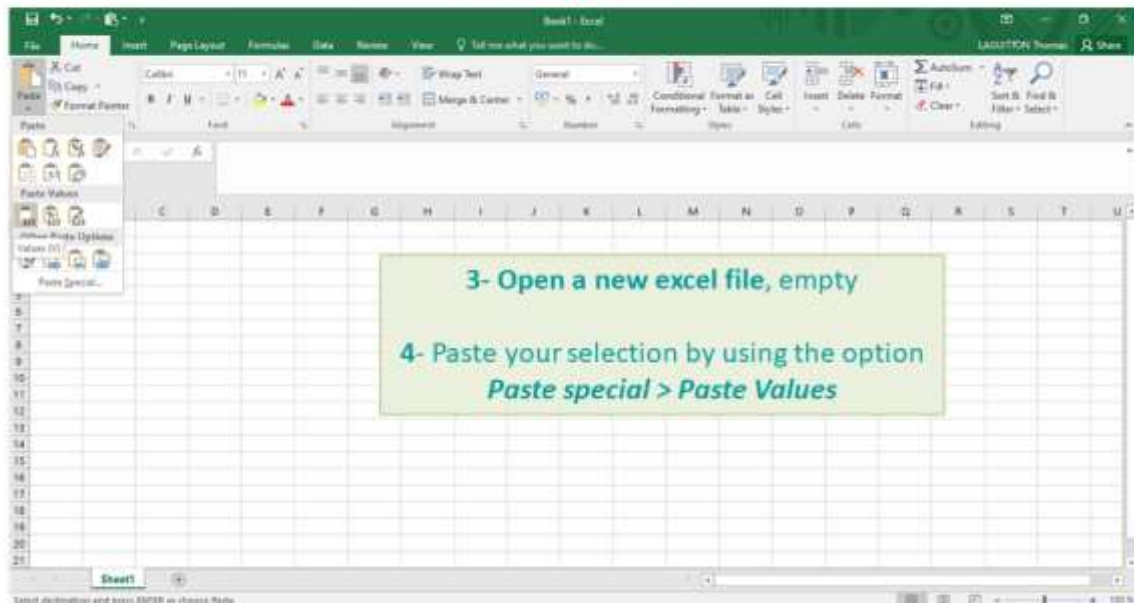
WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps





## WORK Package 5 – Reformulation and processed food monitoring

### Preliminary steps

Overview of your new .xlsx file with your data  
(without the drop-down menus)

Product_code	Product_c	Father_gr	Country	Year	Category	Subcategory	Bar_code	Assortme	Brand_nu	Brand_ow	Type_of	Legal_nu	Legal_nu	Comments	Comments	POP_label	Nutri_Sco	Ingredient	Net_wieg	Net_wieg	Numr
1	1650		Ireland	2021	Breakfast	Cereals w	4.096+12	No	Kavanagh	Aldi	Hard disc	Gluten Fr	Gluten Fr	Gluten Fr	None from the list			Gluten Fr	300	g	
2	1653		Ireland	2021	Breakfast	Traditions	4.096+12	No	Kavanagh	Aldi	Hard disc	Wholegr	Wholegr	High Ome	High Ome	Traffic light		Jumbo Oa	300	g	
3	1653		Ireland	2021	Breakfast	Cereals w	4.096+12	No	Kavanagh	Aldi	Hard disc	Instant Po	Instant Po	Microwav	Microwav	Traffic light		Wholegr	300	g	
4	1654		Ireland	2021	Breakfast	Cereals w	4.096+12	No	Kavanagh	Aldi	Hard disc	Wholegr	Wholegr	Organic	Organic	Traffic light		Oat Flakes	150	g	
5	1655		Ireland	2021	Breakfast	Cereals w	4.096+12	No	Kavanagh	Aldi	Hard disc	Wholegr	Wholegr	Pomidge	Pomidge	Traffic light		Wholegr	500	g	
6	1657		Ireland	2021	Breakfast	Traditions	4.096+12	No	Specialty	Aldi	Hard disc	A Blend o	A Blend o	Very Bern	Very Bern	Traffic light		Blackcurr	300	g	
7	1658	803	Ireland	2021	Breakfast	High Fibre	4.096+12	No	Harvest M	Aldi	Hard disc	Wholegr	Wholegr	Bran Flak	Bran Flak	Traffic light		Wholegr	750	g	
8	1659		Ireland	2021	Breakfast	Chocolate	4.096+12	No	Harvest M	Aldi	Hard disc	Cocoa Flac	Cocoa Flac	Choco Hoi	Choco Hoi	Traffic light		Wholegr	375	g	
9	1661	937	Ireland	2021	Breakfast	Chocolate	4.096+12	No	Harvest M	Aldi	Hard disc	Milk Choc	Milk Choc	Choco Rio	Choco Rio	Traffic light		Fice, Suga	375	g	
10	1663	586	Ireland	2021	Breakfast	Sweet cer	4.096+12	No	Harvest M	Aldi	Hard disc	Corn Flak	Corn Flak	Corn Flak	Corn Flak	Traffic light		Matre, Su	300	g	
11	1665	938	Ireland	2021	Breakfast	Crunchy fl	4.096+12	No	Harvest M	Aldi	Hard disc	Crunchy C	Crunchy C	Crisp Cere	Crisp Cere	Traffic light		Oat Flaker	300	g	
12	1672		Ireland	2021	Breakfast	Crunchy fl	4.096+12	No	Harvest M	Aldi	Hard disc	Oat, Corn	Oat, Corn	Honey & F	Honey & F	Traffic light		WHOLEGR	300	g	
13	1674	947	Ireland	2021	Breakfast	Sweet cer	4.096+12	No	Harvest M	Aldi	Hard disc	Toasted P	Toasted P	Honey Nu	Honey Nu	Traffic light		MAIZO 98	300	g	
14	1675		Ireland	2021	Breakfast	Crunchy fl	4.096+12	No	Harvest M	Aldi	Hard disc	Low Sugar	Low Sugar	Low Sugar	Low Sugar	Traffic light		Oat Flakes	300	g	
15	1676		Ireland	2021	Breakfast	Crunchy fl	4.096+12	No	Harvest M	Aldi	Hard disc	Low Sugar	Low Sugar	Low Sugar	Low Sugar	Traffic light		Oat Flaker	300	g	
16	1677	937	Ireland	2021	Breakfast	Chocolate	4.096+12	No	Harvest M	Aldi	Hard disc	Chocolate	Chocolate	Choco Rio	Choco Rio	Traffic light		Rice (85%)	375	g	
17	1680	998	Ireland	2021	Breakfast	Sweet cer	4.096+12	No	Harvest M	Aldi	Hard disc	Rice and	Rice and	Original B	Original B	Traffic light		RICE (98%)	300	g	
18	1683		Ireland	2021	Breakfast	Traditions	4.096+12	No	Harvest M	Aldi	Hard disc	Toasted H	Toasted H	Protein G	Protein G	Traffic light		Wholegr	400	g	
19	1682	850	Ireland	2021	Breakfast	Traditions	4.096+12	No	Harvest M	Aldi	Hard disc	Honey To	Honey To	Raisin & A	Raisin & A	Traffic light		WHOLEGR	300	g	
20	1683		Ireland	2021	Breakfast	Traditions	4.096+12	No	Harvest M	Aldi	Hard disc	Oats with	Oats with	Really Nu	Really Nu	Traffic light		Wholegr	300	g	



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Health Programme (2014-2020)

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## WORK Package 5 – Reformulation and processed food monitoring

### Preliminary steps

#### **1<sup>st</sup> preliminary step : preparation of the T+1 collection template**

→ Now you have an **.xlsx** file containing only the lines with your data and without the drop-down menus.

You can rename it **T+1 data collection country.xlsx** (with the name of your own country) for example.

→ You must **make a copy** of this file (T+1 collection template *country.xlsx*) and save it in **.csv (comma separator) format** under the name **T+1\_data\_collection\_country.csv** (with the name of your own country)

**The creation of this file in .csv format is very important because it is this file that will be used in the R software for the verification and indicator creation stages.**

*see the following slides for a step-by-step explanation of this procedure*



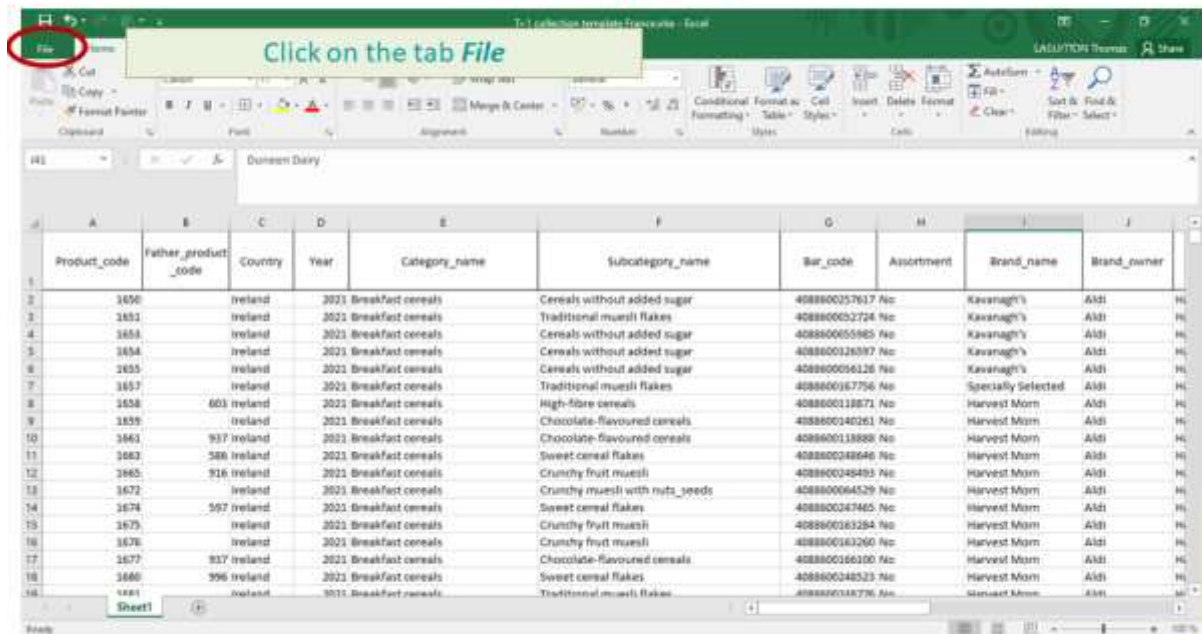
Co-funded by the European Union's  
Health Programme (2014-2020)

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WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



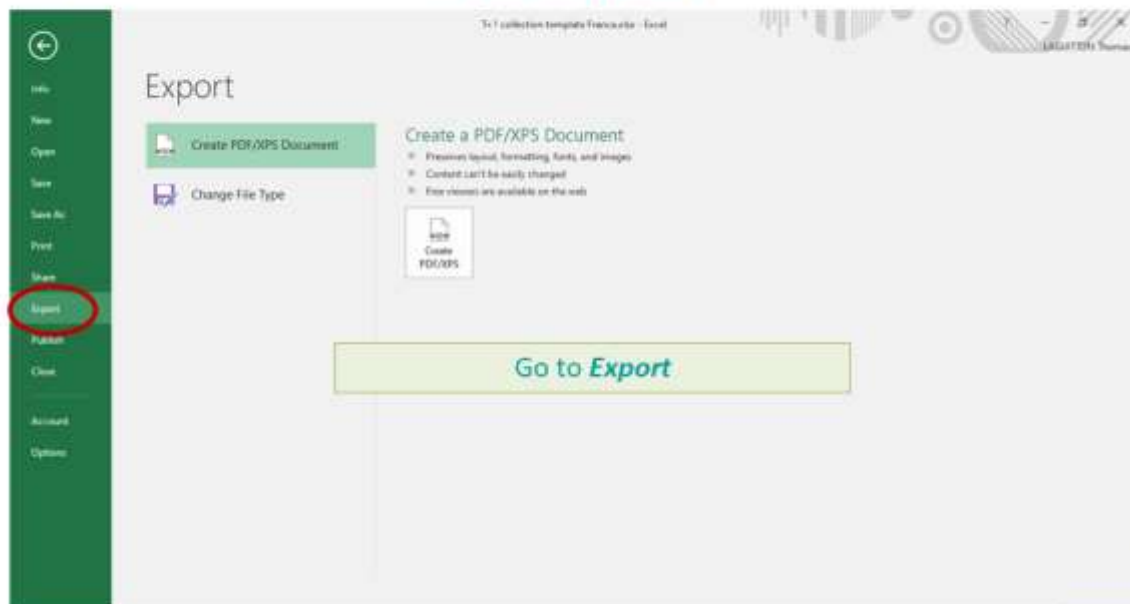
Click on the tab **File**

Product_code	Father_product_code	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment	Brand_name	Brand_owner
3650		Ireland	2021	Breakfast cereals	Cereals without added sugar	4088600257617	No	Kavanagh's	Aldi
3651		Ireland	2021	Breakfast cereals	Traditional muesli flakes	4088600527224	No	Kavanagh's	Aldi
3653		Ireland	2021	Breakfast cereals	Cereals without added sugar	408860055985	No	Kavanagh's	Aldi
3654		Ireland	2021	Breakfast cereals	Cereals without added sugar	4088600326397	No	Kavanagh's	Aldi
3655		Ireland	2021	Breakfast cereals	Cereals without added sugar	408860056128	No	Kavanagh's	Aldi
3657		Ireland	2021	Breakfast cereals	Traditional muesli flakes	4088600167756	No	Specialty Selected	Aldi
3658	603	Ireland	2021	Breakfast cereals	High-fibre cereals	4088600118671	No	Harvest Morn	Aldi
3659		Ireland	2021	Breakfast cereals	Chocolate-flavoured cereals	408860040261	No	Harvest Morn	Aldi
3661	937	Ireland	2021	Breakfast cereals	Chocolate-flavoured cereals	4088600118888	No	Harvest Morn	Aldi
3663	586	Ireland	2021	Breakfast cereals	Sweet cereal flakes	4088600248646	No	Harvest Morn	Aldi
3665	916	Ireland	2021	Breakfast cereals	Crunchy fruit muesli	4088600348493	No	Harvest Morn	Aldi
3671		Ireland	2021	Breakfast cereals	Crunchy muesli with nuts_seeds	4088600664529	No	Harvest Morn	Aldi
3674	597	Ireland	2021	Breakfast cereals	Sweet cereal flakes	4088600247465	No	Harvest Morn	Aldi
3675		Ireland	2021	Breakfast cereals	Crunchy fruit muesli	4088600163284	No	Harvest Morn	Aldi
3676		Ireland	2021	Breakfast cereals	Crunchy fruit muesli	4088600163260	No	Harvest Morn	Aldi
3677	817	Ireland	2021	Breakfast cereals	Chocolate-flavoured cereals	4088600166100	No	Harvest Morn	Aldi
3680	596	Ireland	2021	Breakfast cereals	Sweet cereal flakes	4088600248523	No	Harvest Morn	Aldi
3681		Ireland	2021	Breakfast cereals	Traditional muesli flakes	4088600332736	No	Harvest Morn	Aldi



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

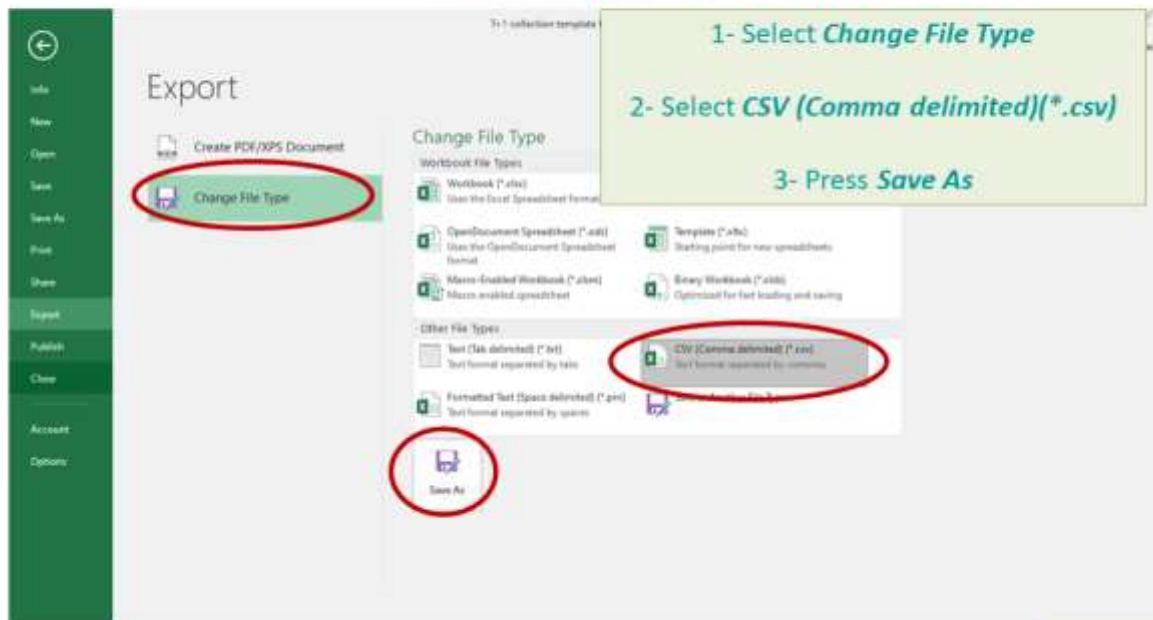


Go to **Export**



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

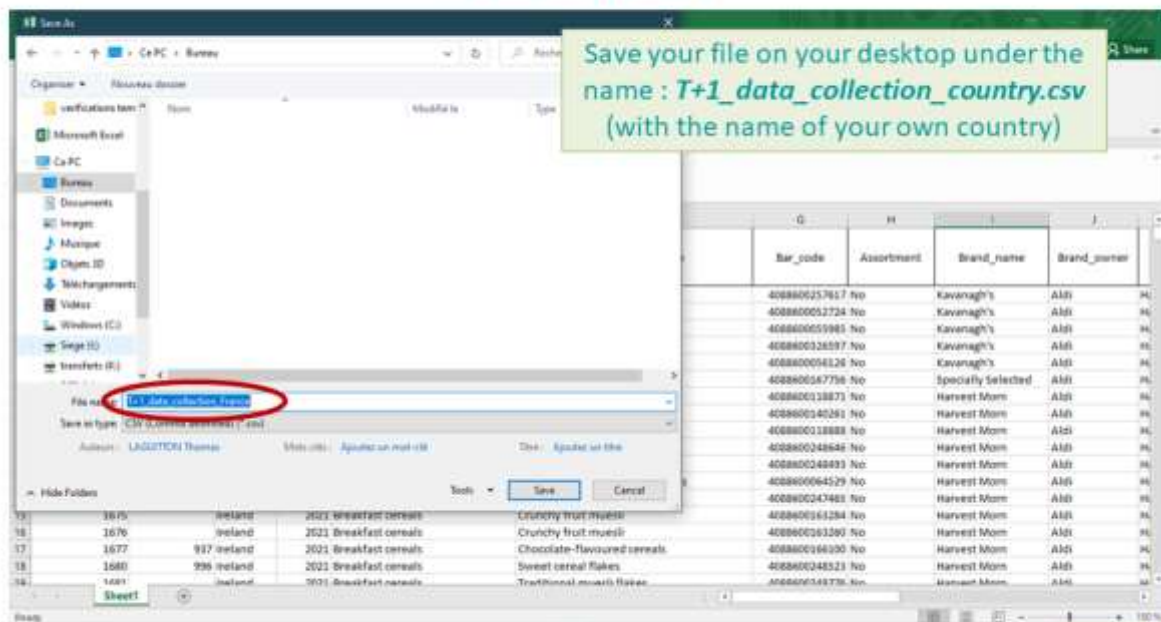


**1- Select *Change File Type***  
**2- Select *CSV (Comma delimited) (\*.csv)***  
**3- Press *Save As***



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



Save your file on your desktop under the name : *T+1\_data\_collection\_country.csv* (with the name of your own country)

Bar_code	Assortment	Brand_name	Brand_owner
408860257617	No	Kavanagh's	AlB
408860022724	No	Kavanagh's	AlB
4088600059985	No	Kavanagh's	AlB
408860326097	No	Kavanagh's	AlB
4088600096126	No	Kavanagh's	AlB
408860267758	No	Specially Selected	AlB
408860218873	No	Harvest Morn	AlB
408860240261	No	Harvest Morn	AlB
408860238888	No	Harvest Morn	AlB
408860248646	No	Harvest Morn	AlB
408860248493	No	Harvest Morn	AlB
408860064529	No	Harvest Morn	AlB
408860247463	No	Harvest Morn	AlB
408860263284	No	Harvest Morn	AlB
408860263280	No	Harvest Morn	AlB
408860266200	No	Harvest Morn	AlB
408860248523	No	Harvest Morn	AlB
408860248739	No	Harvest Morn	AlB

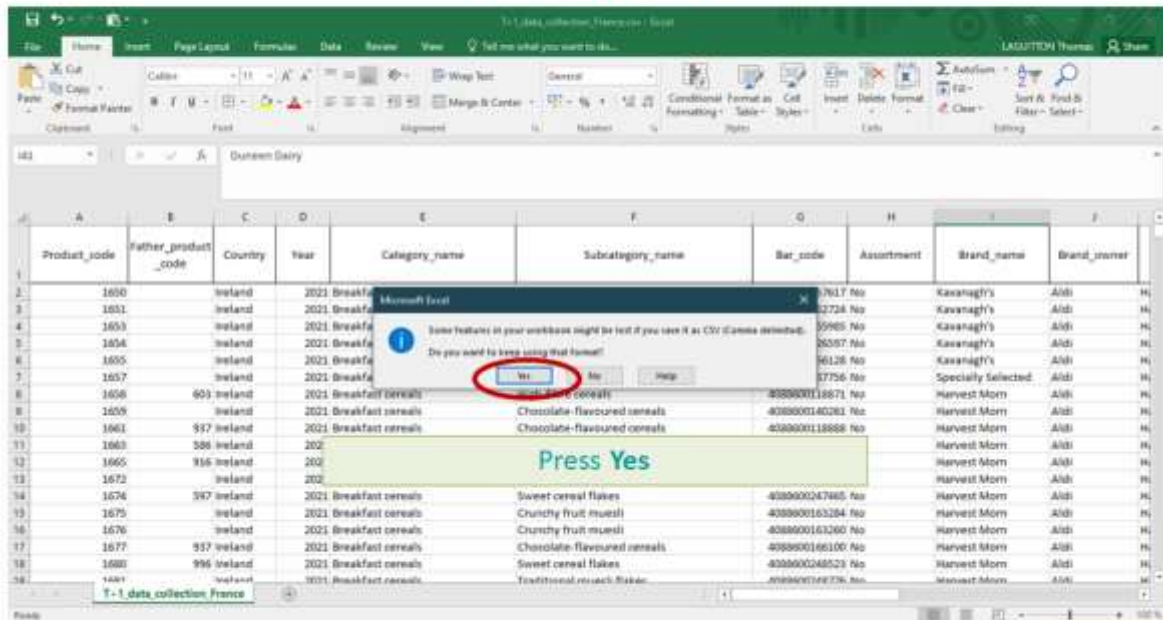






WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



When you save your **.xlsx** file in **.csv** format, the barcodes in the **.csv** file appear in scientific writing (e.g. 1.89E+12). It is necessary to select the column 'bar\_codes' and change the column format to '**Number**' with **0 decimal digit**. The bar codes will appear in full and you will not lose any information. You can then save this new version of your template with the full barcodes and overwrite the old one.

Be careful, as soon as you reopen this new **.csv** file, the barcodes will be written scientifically again and you will have to repeat this procedure. We therefore invite you to do this procedure only once when you save the **.csv** file and not to reopen the saved file. (To be read in R, the file must not be opened so you do not need to re-open it)

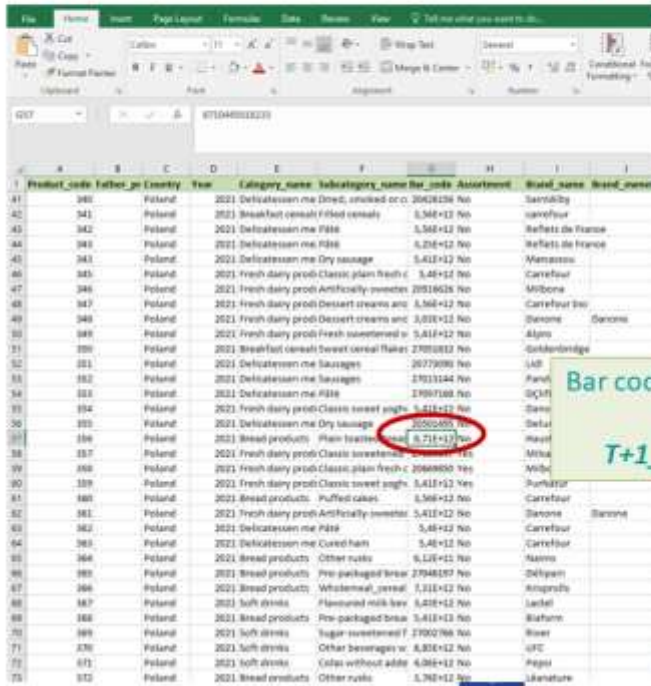
see the following slides for a step-by-step explanation of this procedure





WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



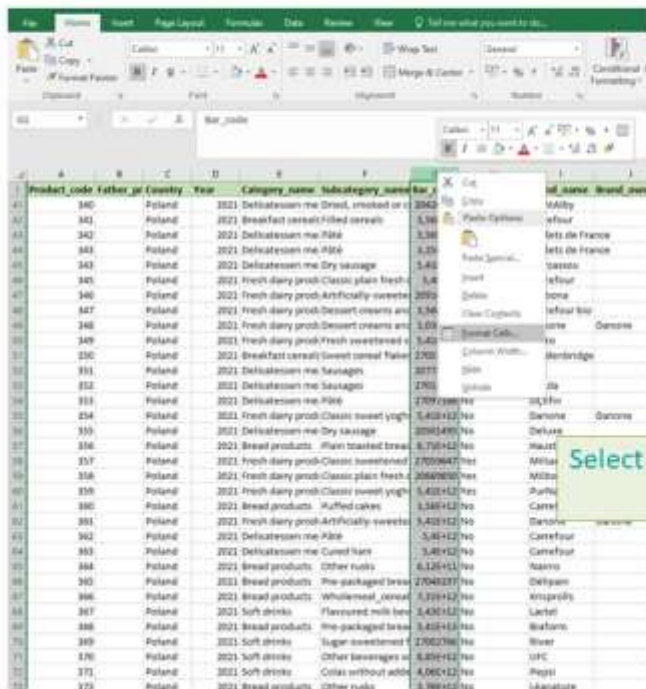
Product_code	Father_pr	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment	Brand_name	Brand_owner
341		Poland	2021	Delicatessen me	Dried, smoked or c	5 411412 700200	No	Santitas	
342		Poland	2021	Breakfast cereals	Flaked cereals	5 348+12	No	Carrefour	
343		Poland	2021	Delicatessen me	Pâté	5 348+12	No	Beffets de France	
344		Poland	2021	Delicatessen me	Pâté	5 216+12	No	Beffets de France	
345		Poland	2021	Delicatessen me	Dry sausage	5 411412	No	Messoux	
346		Poland	2021	Fresh dairy prod	Classic plain fresh c	5 48+12	No	Carrefour	
347		Poland	2021	Fresh dairy prod	Artificially sweeten	2051626	No	Milbona	
348		Poland	2021	Fresh dairy prod	Dessert creams and	5 368+12	No	Carrefour	Sanone
349		Poland	2021	Fresh dairy prod	Dessert creams and	3 838+12	No	Sanone	Sanone
350		Poland	2021	Fresh dairy prod	Fresh sweetened y	5 411412	No	Aljo	
351		Poland	2021	Breakfast cereals	Sweet cereal flakes	2 7010312	No	Ginkgo	Herbridge
352		Poland	2021	Delicatessen me	Sausages	2 7013144	No	U&F	
353		Poland	2021	Delicatessen me	Pâté	2 7013144	No	Parfi	Sanone
354		Poland	2021	Delicatessen me	Pâté	2 7013144	No	Sanone	Sanone
355		Poland	2021	Fresh dairy prod	Classic sweet yogh	5 411412	No	Sanone	Sanone
356		Poland	2021	Delicatessen me	Dry sausage	2052000	No	Sanone	Sanone
357		Poland	2021	Bread products	Plain toasted bread	5 371+12	No	Milva	
358		Poland	2021	Fresh dairy prod	Classic sweetened y	2051626	No	Milva	
359		Poland	2021	Fresh dairy prod	Classic plain fresh c	2051626	Yes	Milva	
360		Poland	2021	Fresh dairy prod	Classic sweet yogh	5 411412	Yes	Carrefour	
361		Poland	2021	Bread products	Puffed cakes	5 368+12	No	Carrefour	
362		Poland	2021	Fresh dairy prod	Artificially sweeten	5 411412	No	Sanone	Sanone
363		Poland	2021	Delicatessen me	Pâté	5 48+12	No	Carrefour	
364		Poland	2021	Delicatessen me	Cured ham	5 48+12	No	Carrefour	
365		Poland	2021	Bread products	Other rolls	6 116+12	No	Sanone	
366		Poland	2021	Bread products	Pre-packaged bread	2 7042187	No	Deljo	
367		Poland	2021	Bread products	Wholemeal_cereal	1 211+12	No	King's	
368		Poland	2021	Soft drinks	Flavored milk bev	5 411412	No	Lactel	
369		Poland	2021	Bread products	Pre-packaged bread	5 411412	No	Sanone	
370		Poland	2021	Soft drinks	Sugar sweetened F	2 7002 766	No	Bev	
371		Poland	2021	Soft drinks	Other beverages w	6 201+12	No	UPC	
372		Poland	2021	Soft drinks	Colla without add	4 206+12	No	Regis	
373		Poland	2021	Bread products	Other rolls	5 762+12	No	Laborato	

Bar codes appearing in scientific format in your file  
*T+1\_data\_collection\_country.csv*



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



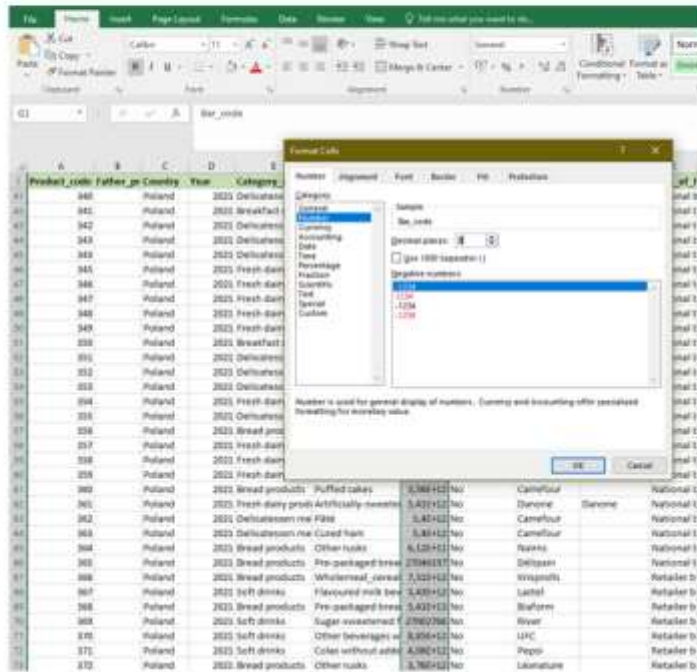
Product_code	Father_pr	Country	Year	Category_name	Subcategory_name	Bar_code	Assortment	Brand_name	Brand_owner
340		Poland	2021	Delicatessen me	Dried, smoked or c	3062	No	Milva	
341		Poland	2021	Breakfast cereals	Flaked cereals	5 368	No	yfour	
342		Poland	2021	Delicatessen me	Pâté	5 368	No	lets de France	
343		Poland	2021	Delicatessen me	Pâté	5 25	No	lets de France	
344		Poland	2021	Delicatessen me	Dry sausage	5 42	No	Sanzo	
345		Poland	2021	Delicatessen me	Dry sausage	5 42	No	Carrefour	
346		Poland	2021	Fresh dairy prod	Classic plain fresh c	5 48	No	Carrefour	
347		Poland	2021	Fresh dairy prod	Artificially sweeten	2052	No	Sanone	
348		Poland	2021	Fresh dairy prod	Dessert creams and	5 368	No	Carrefour	Sanone
349		Poland	2021	Fresh dairy prod	Fresh sweetened y	1 403	No	Sanone	Sanone
350		Poland	2021	Breakfast cereals	Sweet cereal flakes	2 701	No	Herbridge	
351		Poland	2021	Delicatessen me	Sausages	2 701	No	U&F	
352		Poland	2021	Delicatessen me	Sausages	2 701	No	U&F	
353		Poland	2021	Delicatessen me	Pâté	2 701	No	U&F	
354		Poland	2021	Fresh dairy prod	Classic sweet yogh	5 411412	No	Sanone	Sanone
355		Poland	2021	Delicatessen me	Dry sausage	2051490	No	Deljo	
356		Poland	2021	Bread products	Plain toasted bread	6 116+12	No	Milva	
357		Poland	2021	Fresh dairy prod	Classic sweetened y	2 7009647	No	Milva	
358		Poland	2021	Fresh dairy prod	Classic plain fresh c	2051626	No	Milva	
359		Poland	2021	Fresh dairy prod	Classic sweet yogh	5 411412	Yes	Carrefour	
360		Poland	2021	Bread products	Puffed cakes	5 368+12	No	Carrefour	
361		Poland	2021	Fresh dairy prod	Artificially sweeten	5 411412	No	Sanone	Sanone
362		Poland	2021	Delicatessen me	Pâté	5 48+12	No	Carrefour	
363		Poland	2021	Delicatessen me	Cured ham	5 48+12	No	Carrefour	
364		Poland	2021	Bread products	Other rolls	6 116+12	No	Sanone	
365		Poland	2021	Bread products	Pre-packaged bread	2 7042187	No	Deljo	
366		Poland	2021	Bread products	Wholemeal_cereal	1 211+12	No	King's	
367		Poland	2021	Soft drinks	Flavored milk bev	5 411412	No	Lactel	
368		Poland	2021	Bread products	Pre-packaged bread	5 411412	No	Sanone	
369		Poland	2021	Soft drinks	Sugar sweetened F	2 7002 766	No	Bev	
370		Poland	2021	Soft drinks	Other beverages w	6 201+12	No	UPC	
371		Poland	2021	Soft drinks	Colla without add	4 206+12	No	Regis	
372		Poland	2021	Bread products	Other rolls	5 762+12	No	Laborato	

Select the Bar\_codes column, right click and go to Format Cells



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



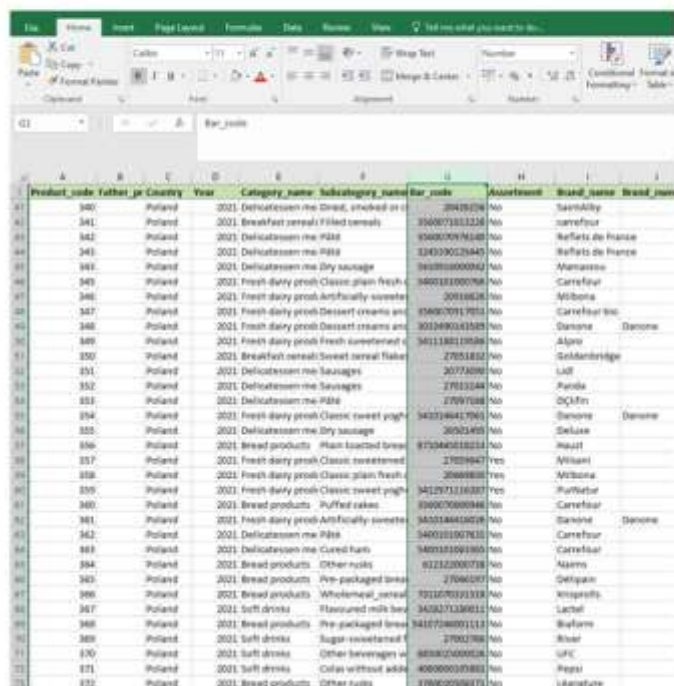
Product_code	Folder_id	Country	Year	Category	Number	Engagement	Part	Brand	PK	Retention
340		Poland	2021	DeliCakes	3,38E+12	No		Carrefour		National
341		Poland	2021	Breakfast	5,42E+12	No		Dorville		National
342		Poland	2021	DeliCakes	5,42E+12	No		Carrefour		National
343		Poland	2021	DeliCakes	5,42E+12	No		Carrefour		National
344		Poland	2021	Fresh-dairy	6,12E+12	No		Nestle		National
345		Poland	2021	Fresh-dairy	2,79E+12	No		Delipain		National
346		Poland	2021	Fresh-dairy	3,32E+12	No		Wagapain		Retailer
347		Poland	2021	Fresh-dairy	5,42E+12	No		Buform		Retailer
348		Poland	2021	Fresh-dairy	2,79E+12	No		River		Retailer
349		Poland	2021	Breakfast	5,42E+12	No		LFC		Retailer
350		Poland	2021	DeliCakes	4,98E+12	No		Pepsi		Retailer
351		Poland	2021	DeliCakes	3,78E+12	No		Liberature		Retailer

In the **Number** tab, choose the 'number' category, indicate '0' for decimal places and click OK



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps



Product_code	Folder_id	Country	Year	Category_name	Subcategory_name	Bar_code	Engagement	Brand_name	Brand_id
340		Poland	2021	DeliCakes	me Dried, packaged	3847928	No	Santitas	
341		Poland	2021	Breakfast cereals	Filled cereals	33487333236	No	Carrefour	
342		Poland	2021	DeliCakes	me P&B	93487076148	No	Beffets de France	
343		Poland	2021	DeliCakes	me P&B	32433027845	No	Beffets de France	
344		Poland	2021	DeliCakes	me Dry sausage	54010000042	No	Manassis	
345		Poland	2021	Fresh-dairy prod	Classic plain fresh	34003100078	No	Carrefour	
346		Poland	2021	Fresh-dairy prod	Artificially sweeten	30118428	No	Milbona	
347		Poland	2021	Fresh-dairy prod	Dessert cream	09497071705	No	Carrefour	
348		Poland	2021	Fresh-dairy prod	Dessert cream and	30289043585	No	Dorville	Dorville
349		Poland	2021	Fresh-dairy prod	Fresh sweetened	30118011938	No	Alpro	
350		Poland	2021	Breakfast cereals	Sweet cereal flakes	27051852	No	Goldenbridge	
351		Poland	2021	DeliCakes	me Sausages	30773090	No	Lidl	
352		Poland	2021	DeliCakes	me Sausages	27121244	No	Pendle	
353		Poland	2021	DeliCakes	me P&B	27097088	No	OGGI	
354		Poland	2021	Fresh-dairy prod	Classic sweet yogh	342318441790	No	Dorville	Dorville
355		Poland	2021	DeliCakes	me Dry sausage	30202495	No	Selusa	
356		Poland	2021	Bread products	Plain toasted bread	673346181214	No	Jouit	
357		Poland	2021	Fresh-dairy prod	Classic sweetened	27094947	Yes	Milioni	
358		Poland	2021	Fresh-dairy prod	Classic plain fresh	20448030	Yes	Milbona	
359		Poland	2021	Fresh-dairy prod	Classic sweet yogh	342318441790	Yes	Puffaber	
360		Poland	2021	Bread products	Puffed cakes	09497070948	No	Carrefour	
361		Poland	2021	Fresh-dairy prod	Artificially sweeten	342318441790	No	Dorville	Dorville
362		Poland	2021	DeliCakes	me P&B	34003100078	No	Carrefour	
363		Poland	2021	DeliCakes	me Cured ham	34003100078	No	Carrefour	
364		Poland	2021	Bread products	Other nuts	61212000738	No	Nestle	
365		Poland	2021	Bread products	Pre-packaged bread	27062070	No	Delipain	
366		Poland	2021	Bread products	Wholemeal_cereal	70167032133	No	Wagapain	
367		Poland	2021	Soft drinks	Flavored milk bev	342318441790	No	Lactel	
368		Poland	2021	Bread products	Pre-packaged bread	342318441790	No	Buform	
369		Poland	2021	Soft drinks	Sugar sweetened	27027788	No	River	
370		Poland	2021	Soft drinks	Other beverages	400000027882	No	LFC	
371		Poland	2021	Soft drinks	Cola without addi	400000027882	No	Pepsi	
372		Poland	2021	Bread products	Other nuts	378620584873	No	Liberature	

Your barcodes appear in full, you can save this table by overwriting the previous version and close it.

Please note! If you open this file again, you will have to do the same operation again. The numbers are automatically converted to scientific format when opening a .csv file.



## WORK Package 5 – Reformulation and processed food monitoring

### Preliminary steps

#### 1<sup>st</sup> preliminary step : preparation of the T+1 collection template

##### Summary of the manipulations in the 1st preliminary step



## WORK Package 5 – Reformulation and processed food monitoring

### Preliminary steps

#### 2<sup>nd</sup> preliminary step : preparation of the pre-existing data template

- You must **make a copy** of your file containing your pre-existing data that has been reclassified into the Best-ReMaP nomenclature. You must save this copy in **.csv format** under the name `pre_existing_data_country.csv` (with the name of your own country)
- You can follow the procedure on **pages 15 to 20** for creating the copy in .csv format.
- You should also follow the procedure on **pages 20 to 24** each time you open the file "pre\_existing\_data\_country.csv" so that you do not lose any barcode information

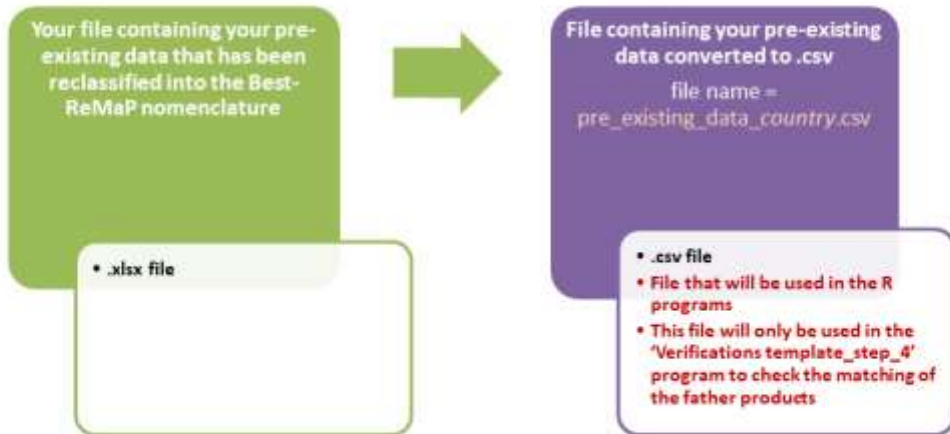


WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

**2<sup>nd</sup> preliminary step : preparation of the pre-existing data template**

Summary of the manipulations in the 2<sup>nd</sup> preliminary step



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

**3<sup>rd</sup> preliminary step : creation of the working folder**

Nationalni inštitut za javno zdravje

My Workspace > What's New > My Favorites > My Teams > Recent Places > View > Search

WORKING DOCUMENTS

WORKSPACES & FOLDERS

- Discussion
- Files
  - Data analysis
    - T+1 statistic programs
      - T0 export frame
      - T0 statistics programs
    - Data collections
    - Draft deliberations
    - New technologies and products
    - Priority food groups

T+1 statistic programs

T+1\_statistics\_programs.zip 112.940 KB Laura Bert 19 Oct 2022, 17:47

➤ You must download the zip folder called 'T+1\_statistics\_program.zip' from the Best-ReMaP intranet and copy it on your desktop  
[https://portal.nljz.si/ssf/a/c/p\\_name/ss\\_forum/p\\_action/1/binderId/21932/entityType/folder/action/view\\_permalink/novl\\_url/1](https://portal.nljz.si/ssf/a/c/p_name/ss_forum/p_action/1/binderId/21932/entityType/folder/action/view_permalink/novl_url/1)

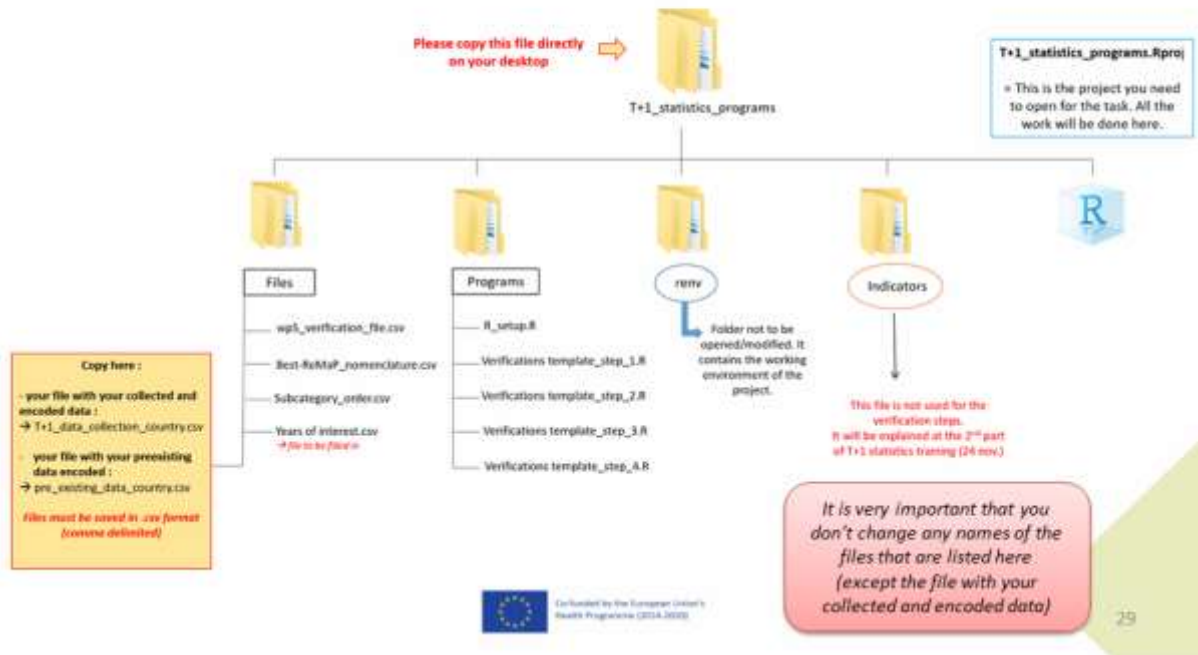
➤ You must unzip this folder before using it



## WORK Package 5 – Reformulation and processed food monitoring

### Preliminary steps

#### 3<sup>rd</sup> preliminary step : creation of the working folder



## WORK Package 5 – Reformulation and processed food monitoring

### Preliminary steps

#### 4<sup>th</sup> preliminary step : preparation of the file "Years of interest.csv"

- In the working folder **T+1\_statistics\_programs** that you copied to your desktop in the 3<sup>rd</sup> preliminary step, there is a file called "**Years of interest.csv**" in the folder 'Files'.
- Before starting the task 5.4.1, we asked you to select which **years of each category** of your pre-existing data **will be used for pairing + comparisons/creation of indicators** with the data collected during Best-ReMaP. The selected years are the ones we called "years of interest".
- You will therefore need to edit the file "**Years of interest.csv**" manually by entering the years of interest (those that you have selected) of your pre-existing data for each Best-ReMaP category.
- Once you have modified this file, you should save the changes.  
 This file will be used in the 4<sup>th</sup> data verification step ([page 162](#))

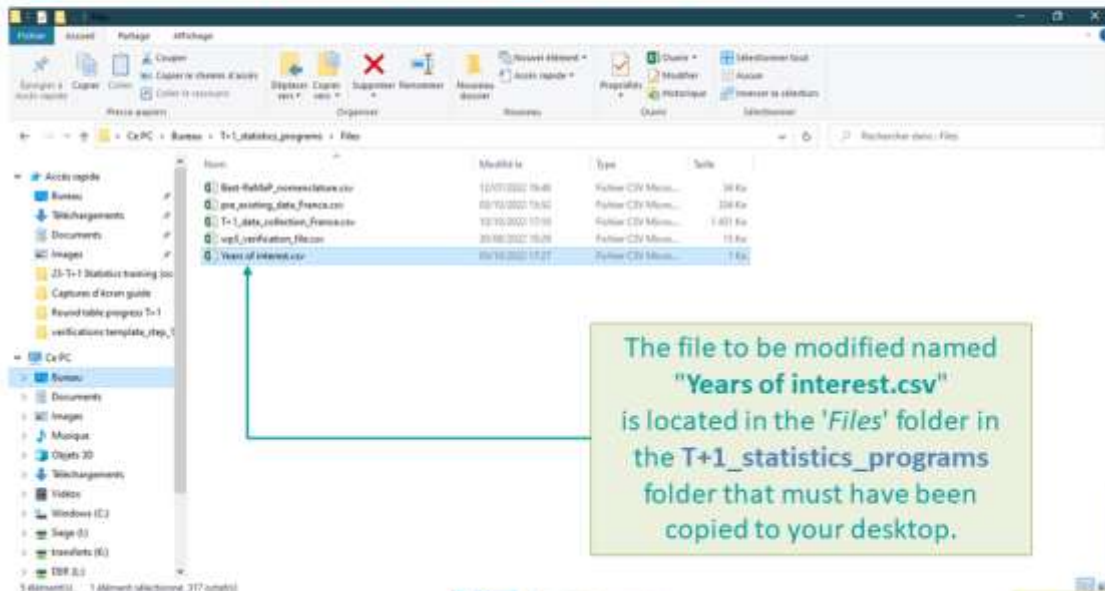
see the following slide for an example



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

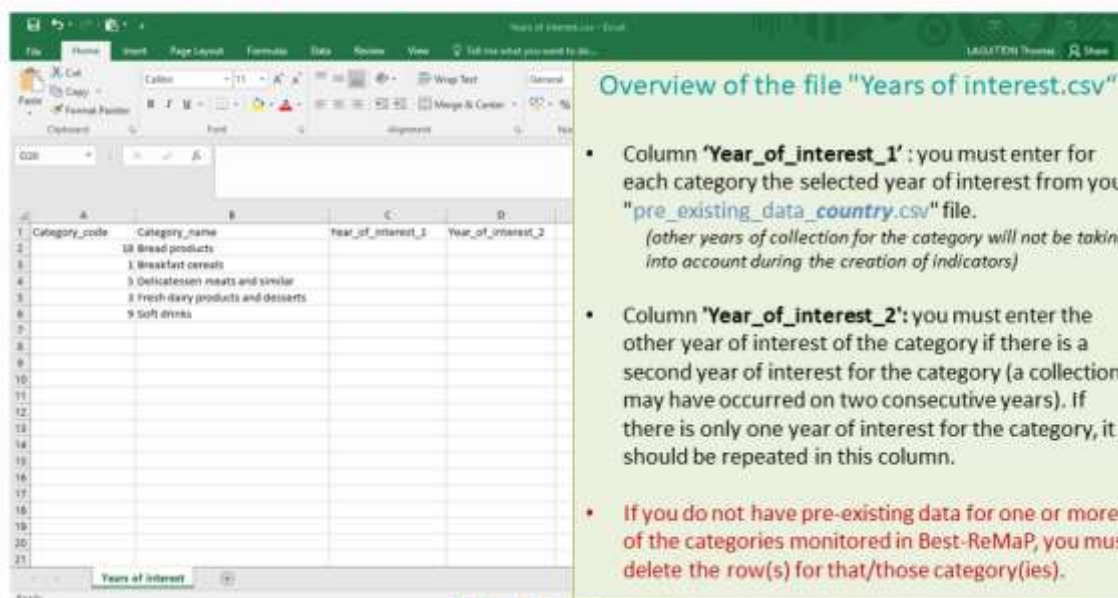
**4<sup>th</sup> preliminary step : preparation of the file "Years of interest.csv"**



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

**4<sup>th</sup> preliminary step : preparation of the file "Years of interest.csv"**

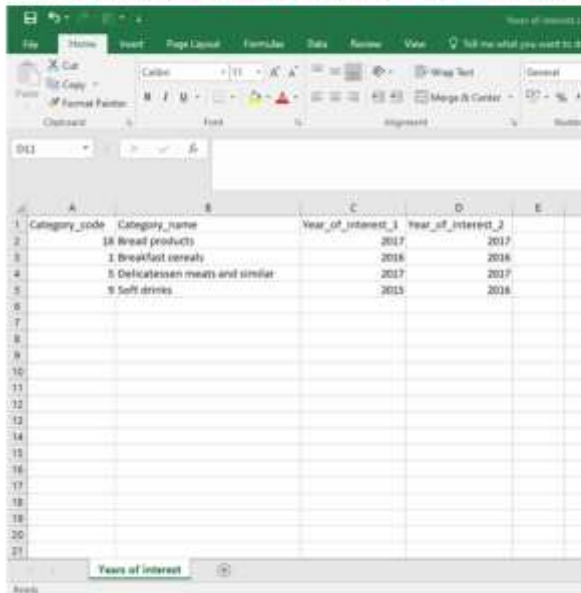




WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

4<sup>th</sup> preliminary step : preparation of the file "Years of interest.csv"




Category_code	Category_name	Year_of_interest_1	Year_of_interest_2
18	Bread products	2017	2017
1	Breakfast cereals	2016	2016
5	Delicatessen meats and similar	2017	2017
9	Soft drinks	2015	2016

**Example**

From your "pre\_existing\_data\_country.csv" file:

- You have selected **2017** as the year of interest for the categories : *Bread products, Delicatessen meats and similar.*
- You have selected **2016** as the year of interest for the category : *Breakfast cereals*
- You have selected **2015 and 2016** as years of interest for the category : *Soft drinks*. Indeed, products from this category were collected from December 2015 to January 2016.
- You have no pre-existing data for the sub-category *Fresh dairy products and desserts*, so the row has been deleted.



Co-funded by the European Union's Health Programme (2014-2020)

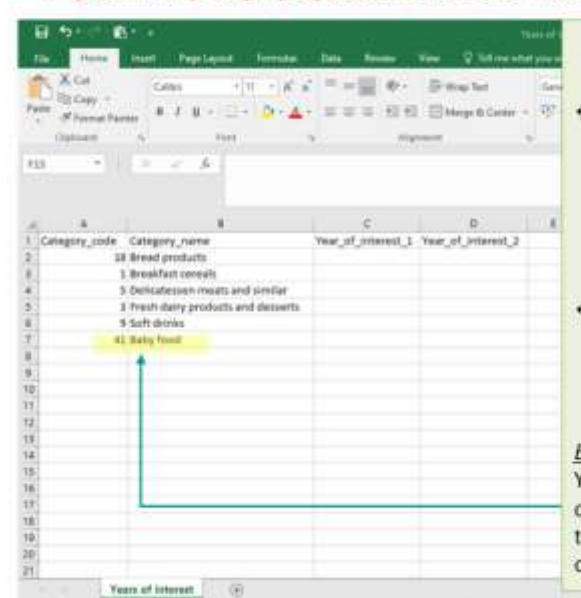
33



WORK Package 5 – Reformulation and processed food monitoring

Preliminary steps

4<sup>th</sup> preliminary step : preparation of the file "Years of interest.csv"




Category_code	Category_name	Year_of_interest_1	Year_of_interest_2
18	Bread products		
1	Breakfast cereals		
5	Delicatessen meats and similar		
3	Fresh dairy products and desserts		
9	Soft drinks		
41	Baby food		

**File "Years of interest.csv"**

- ❖ This file is a **key file** for the rest of the programs as it allows the identification of the categories for which indicators will be generated. If a category for which you have pre-existing data is forgotten in this file, then it will not be taken into account for the creation of indicators.
- ❖ If you have other categories that are not monitored in Best-ReMaP but for which you wish to generate indicators, you must enter this category in the file.

Example:  
You wish to generate indicators for another category which is *Baby food (41)*, you must enter the category\_code and category\_name + the years of interest of your pre-existing data for this category



Health Programme (2014-2020)

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WORK Package 5 – Reformulation and processed food monitoring

2) Installation of the necessary equipment and presentation of the Rstudio software

A. Preliminary steps

**B. Installation of software**

C. Introduction to R studio

D. Cleaning of the Rstudio interface



WORK Package 5 – Reformulation and processed food monitoring

Installation of R software

- **Download the R software:**  
Follow this link and select **version 4.1.2** (which is not the latest version but the version on which the programs were created):  
<https://cran.r-project.org/bin/windows/base/old/>



If you already have R on your computer, check which version of the software you have.  
If it is a version **other than 4.1.2**, then you need to download version **4.1.2** as shown.  
→ You will have **2 versions of R** on your computer.

see the following slide for next step





WORK Package 5 – Reformulation and processed food monitoring

Installation of R software

- **Download the R software:**  
Follow this link and select **version 4.1.2** (which is not the latest version but the version on which the programs were created):  
<https://cran.r-project.org/bin/windows/base/old/>



**Index of /bin/windows/base/old/4.1.2**

Name	Last modified	Size	Description
Parent Directory			
NEWS.R412-win.pdf	2021-11-01 19:14	105K	
<b>R412-win.exe</b>	2021-11-01 20:30	168M	
README.R412	2021-11-01 19:14	8.5K	
SYN-REVISION.R412	2021-11-01 19:14	46	
md5sum.txt	2021-11-01 20:30	50	
release.html	2021-11-01 19:14	90	
rv-FAQ.html	2021-11-01 19:14	99K	

Apache Server at cran.r-project.org Port 443

- Click to download this .exe file.
- Once you have downloaded this file, you can open it and click on 'Run'.
- The R software will then be installed on your computer.

During the software installation, accept all the basic settings by clicking 'next' at each step



WORK Package 5 – Reformulation and processed food monitoring

Installation of R software

**Tutorial video to download and install the R software**

→ This video is available at any time on the Best ReMaP intranet in the WP5 section  
[https://portal.nijz.si/ssf/a/c/p\\_name/ss\\_forum/p\\_action/1/entityType/folderEntry/acton/view\\_permalink/entryId/77697/novl\\_url/1](https://portal.nijz.si/ssf/a/c/p_name/ss_forum/p_action/1/entityType/folderEntry/acton/view_permalink/entryId/77697/novl_url/1)



WORK Package 5 – Reformulation and processed food monitoring

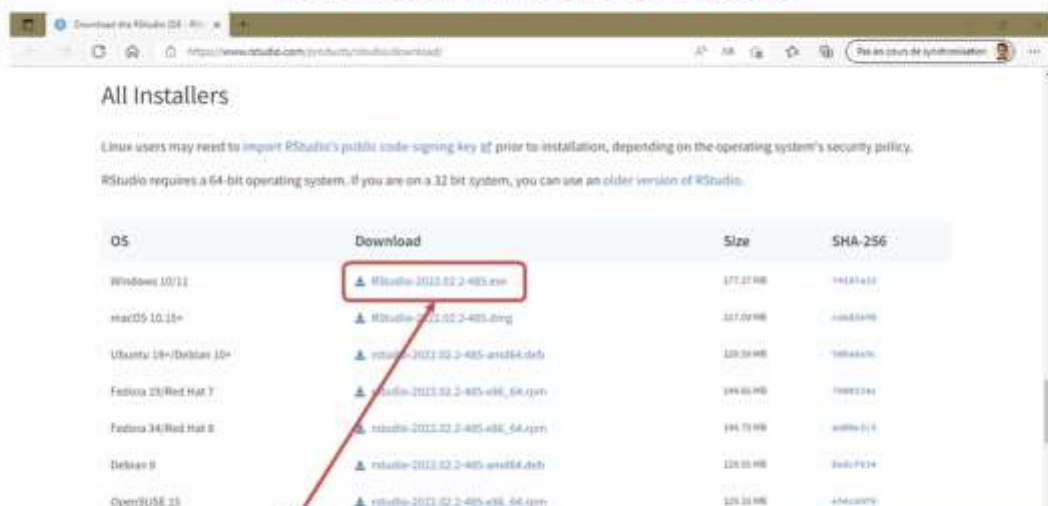
### Installation of Rstudio software

- **Download the Rstudio software:**  
Follow this link :  
<https://www.rstudio.com/products/rstudio/download/>



WORK Package 5 – Reformulation and processed food monitoring

### Installation of Rstudio software



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WORK Package 5 – Reformulation and processed food monitoring

### Installation of Rstudio software

**Tutorial video to download and install the Rstudio software**

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[https://portal.nijz.si/ssf/a/c/p\\_name/ss\\_forum/p\\_action/1/entityType/folderEntry/action/view\\_permalink/entryId/77698/novl\\_url/1](https://portal.nijz.si/ssf/a/c/p_name/ss_forum/p_action/1/entityType/folderEntry/action/view_permalink/entryId/77698/novl_url/1)



WORK Package 5 – Reformulation and processed food monitoring

### Overview of R et Rstudio interfaces



- No processing will be done on this interface
- Software needed to be able to work on Rstudio



- Interface that allows the software to be used = environment that facilitates input, code execution and visualisation of results
- Programs will be running through RStudio





WORK Package 5 – Reformulation and processed food monitoring

Overview of R



```

RStudio (64-bit) - [R Console]
File Edit View Misc Packages Windows Help

R version 4.1.2 (2021-11-24) -- "Bird Hippie"
Copyright (C) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R est un logiciel libre livré sans AUCUNE GARANTIE.
Vous pouvez le redistribuer sous certaines conditions.
Tapez 'license()' ou 'licence()' pour plus de détails.

R est un projet collaboratif avec de nombreux contributeurs.
Tapez 'contributors()' pour plus d'information et
'station()' pour la façon de le citer dans les publications.

Tapez 'demo()' pour des démonstrations, 'help()' pour l'aide
en ligne ou 'help.start()' pour obtenir l'aide au format HTML.
Tapez 'q()' pour quitter R.

> |
    
```

Overview of the R software when you open it  
 This is just for information purposes as you will not be working on this software but on the Rstudio interface.



WORK Package 5 – Reformulation and processed food monitoring

2) Installation of the necessary equipment and presentation of the Rstudio software

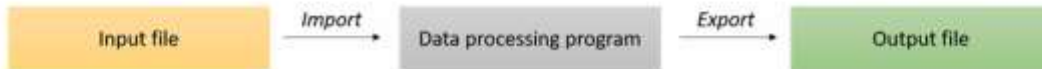
- A. Preliminary steps
- B. Installation of software
- C. Introduction to R studio**
- D. Cleaning of the Rstudio interface



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

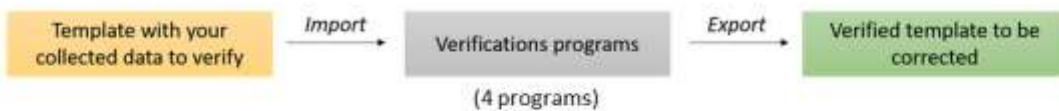
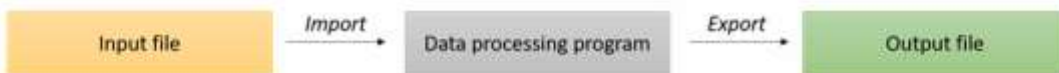
How does data processing software like Rstudio work?



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

How will the Rstudio data processing software work in Task 5.3.2?

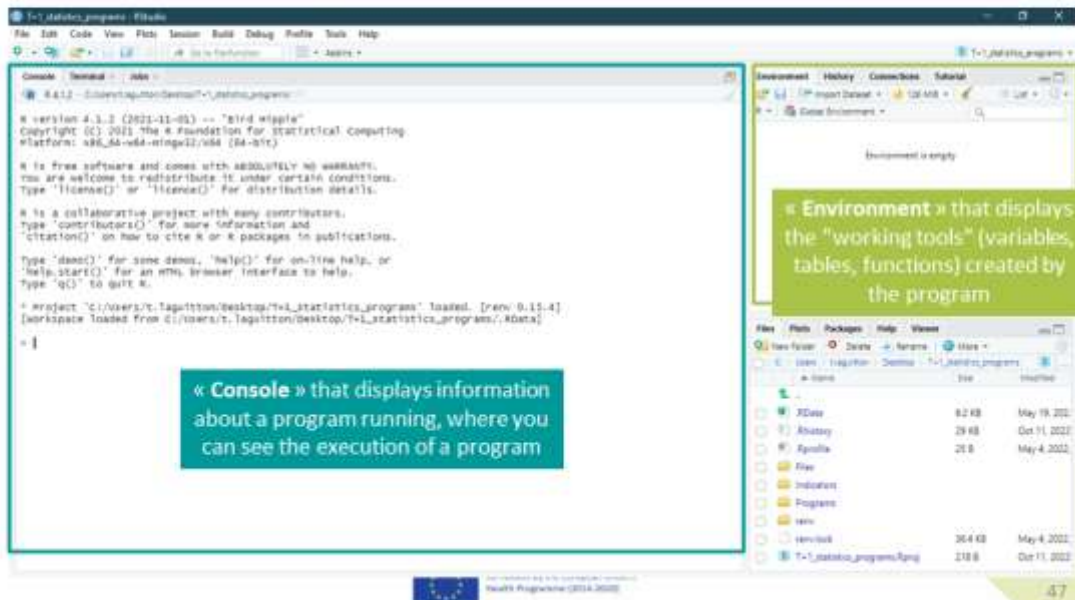




WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

Overview of the Rstudio software when you open it for the first time.



The screenshot shows the RStudio interface with the console pane on the left and the environment pane on the right. The console displays the R startup message, including the version (4.1.2) and platform (x86\_64-w64-mingw32/x64). The environment pane shows a table of loaded packages.

Package	Size	Installed
XDate	82 KB	May 19, 2022
Xlsx	29 KB	Oct 11, 2022
gplots	25 B	May 4, 2022
Indicators		
Programs		
renv		
renv.lock	364 KB	May 4, 2022
T-1_statistics_programs.Rproj	218 B	Oct 11, 2022

« Console » that displays information about a program running, where you can see the execution of a program

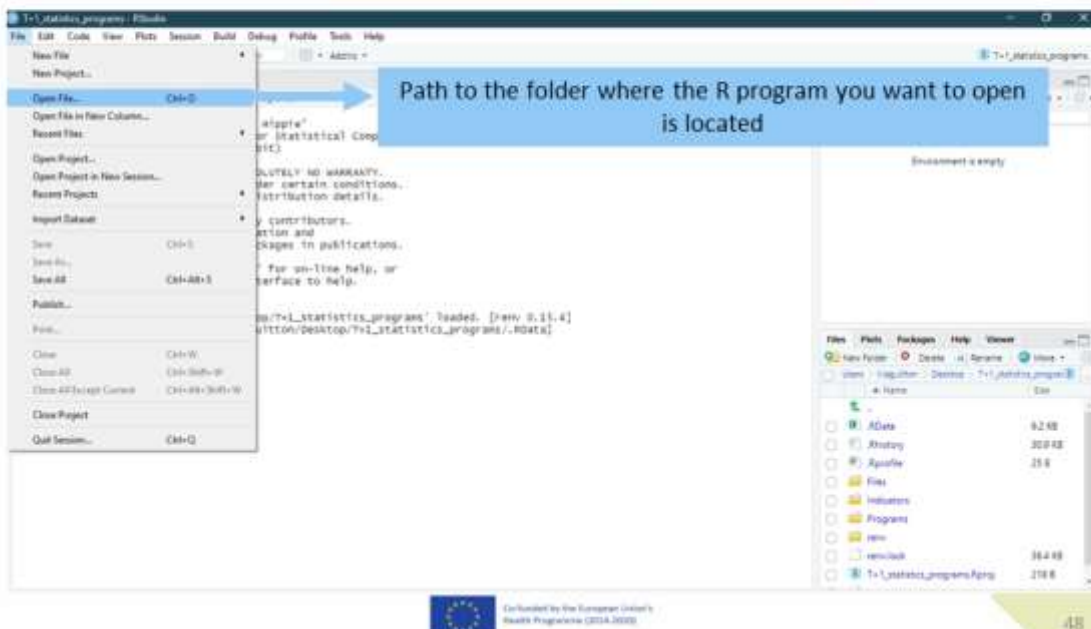
« Environment » that displays the "working tools" (variables, tables, functions) created by the program



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

How to open a program in Rstudio



The screenshot shows the RStudio interface with the 'Open File' menu open. A blue arrow points from the menu to a file explorer window showing the file structure of the project.

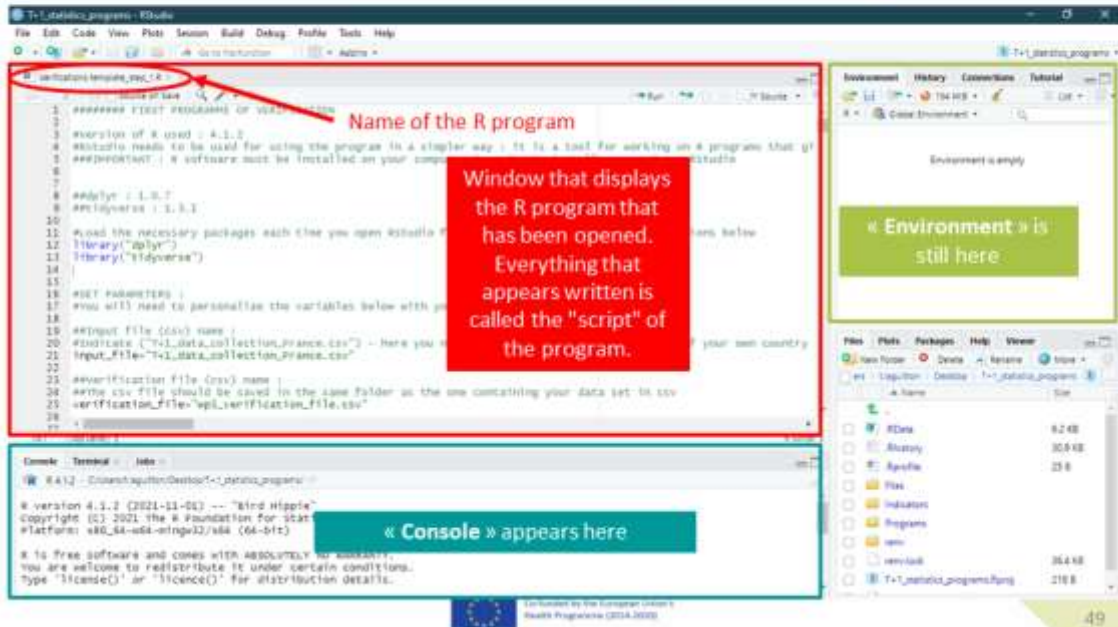
Path to the folder where the R program you want to open is located



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software

Rstudio when a program is opened



**Name of the R program**

Window that displays the R program that has been opened. Everything that appears written is called the "script" of the program.

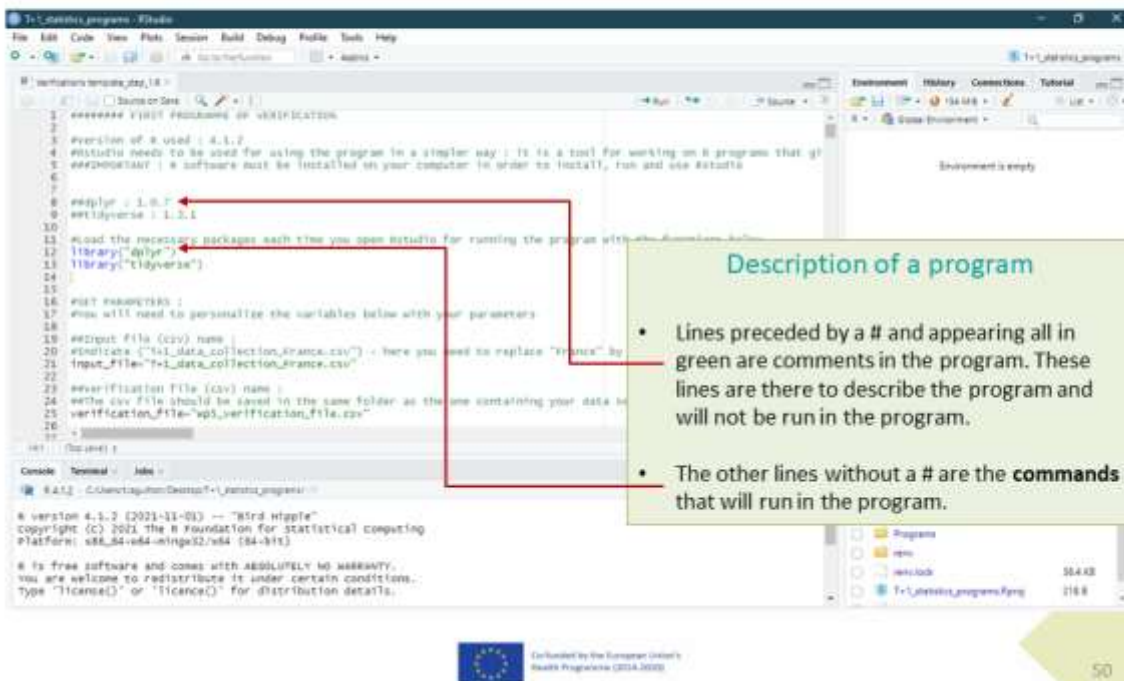
« Environment » is still here

« Console » appears here



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



**Description of a program**

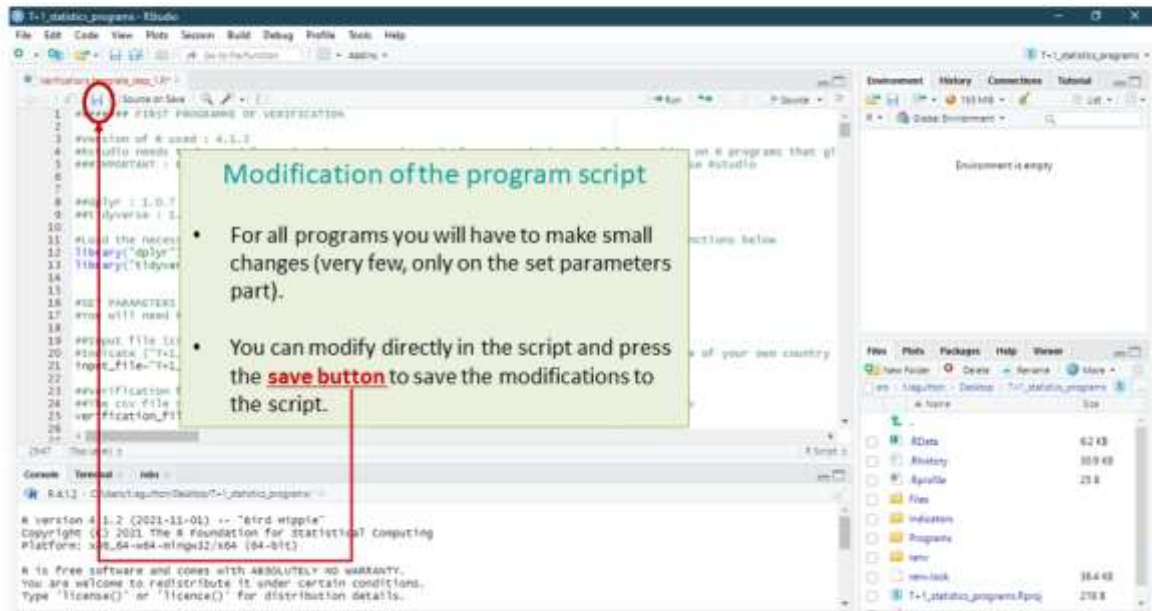
- Lines preceded by a # and appearing all in green are comments in the program. These lines are there to describe the program and will not be run in the program.
- The other lines without a # are the **commands** that will run in the program.





WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



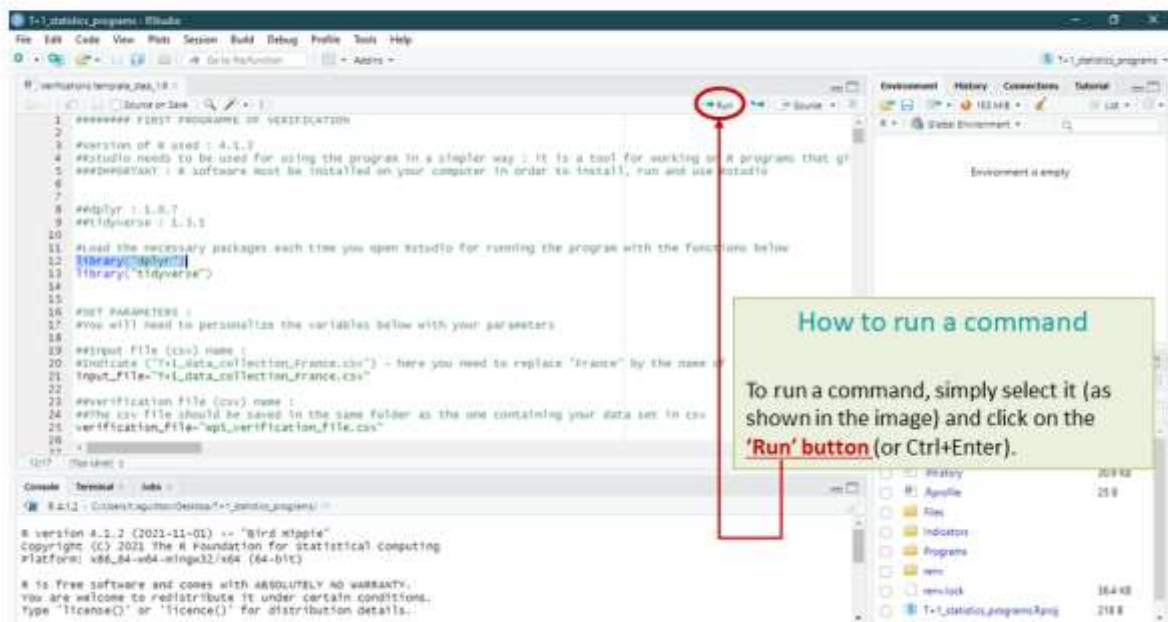
**Modification of the program script**

- For all programs you will have to make small changes (very few, only on the set parameters part).
- You can modify directly in the script and press the **save button** to save the modifications to the script.



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



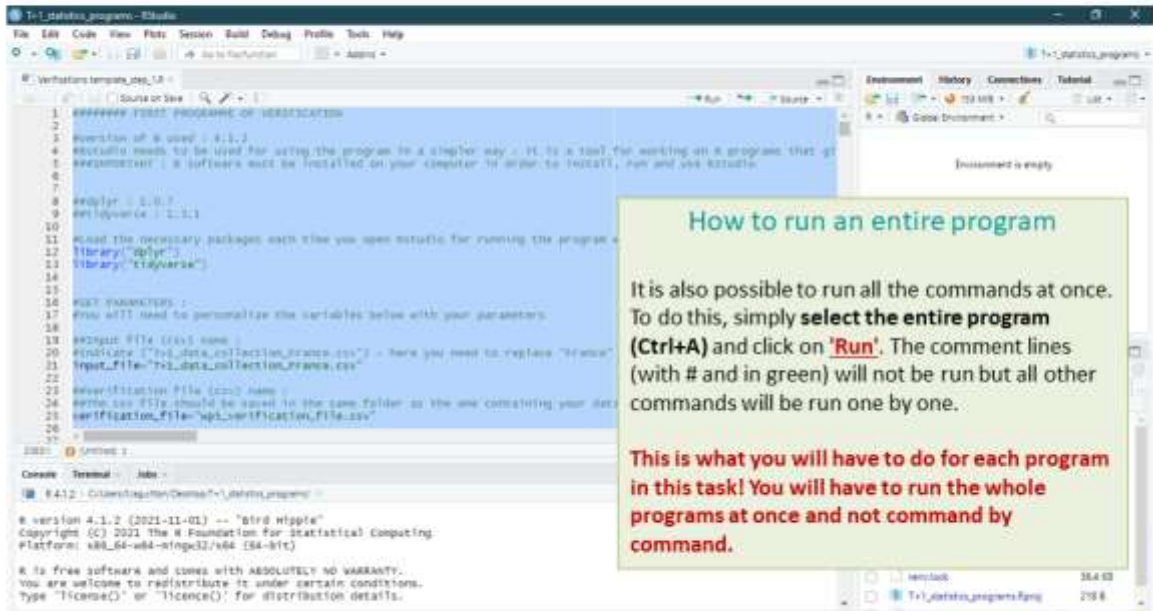
**How to run a command**

To run a command, simply select it (as shown in the image) and click on the **'Run' button** (or Ctrl+Enter).



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



**How to run an entire program**

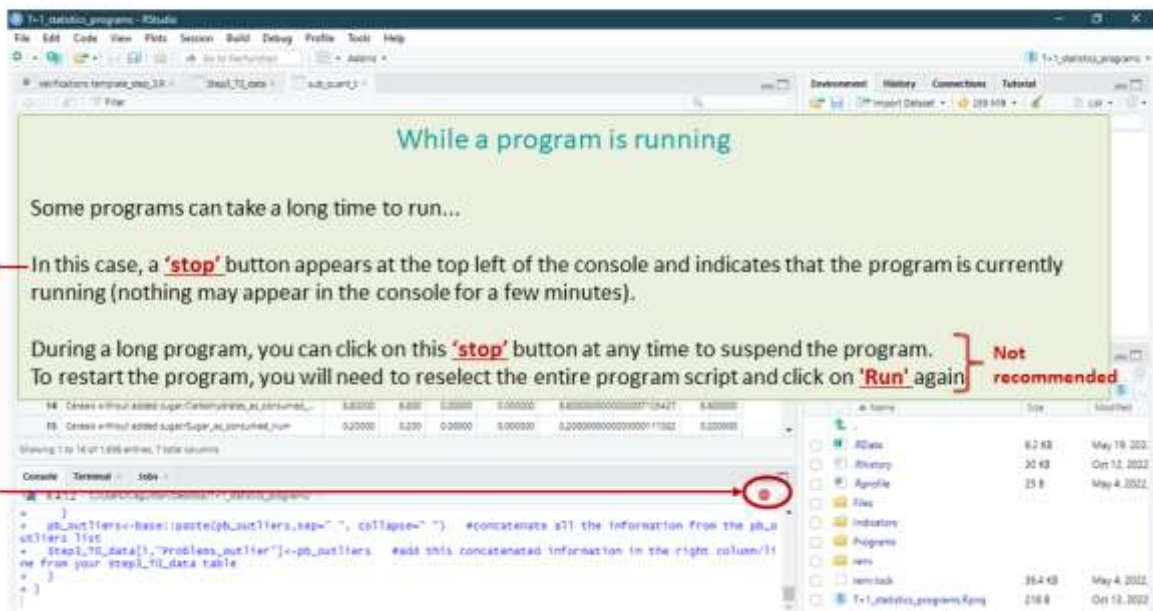
It is also possible to run all the commands at once. To do this, simply **select the entire program (Ctrl+A)** and click on **'Run'**. The comment lines (with # and in green) **will not be run** but all other commands will be run one by one.

**This is what you will have to do for each program in this task! You will have to run the whole programs at once and not command by command.**



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



**While a program is running**

Some programs can take a long time to run...

In this case, a **'stop'** button appears at the top left of the console and indicates that the program is currently running (nothing may appear in the console for a few minutes).

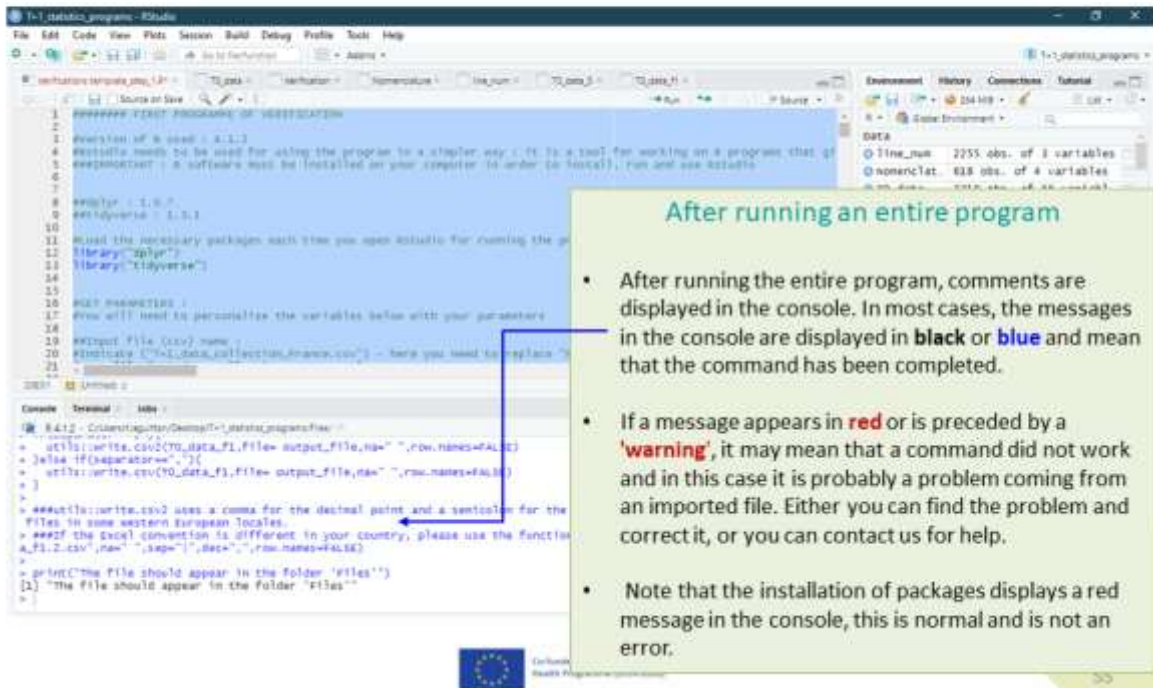
During a long program, you can click on this **'stop'** button at any time to suspend the program. To restart the program, you will need to reselect the entire program script and click on **'Run'** again. **Not recommended**





WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



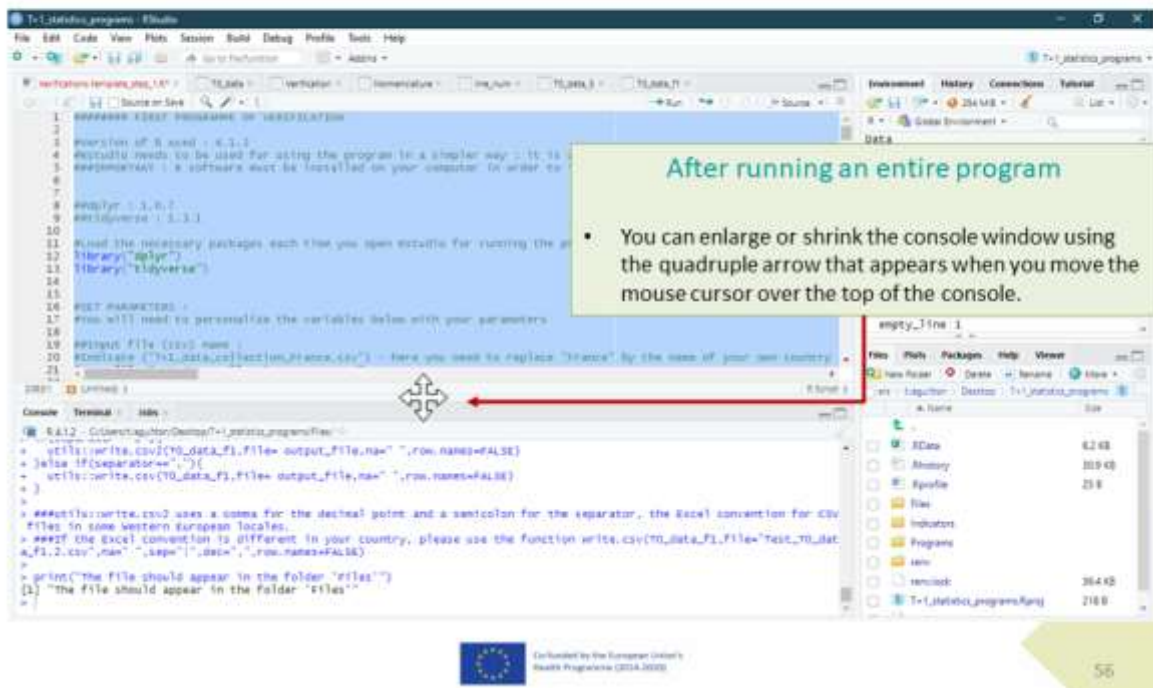
**After running an entire program**

- After running the entire program, comments are displayed in the console. In most cases, the messages in the console are displayed in **black** or **blue** and mean that the command has been completed.
- If a message appears in **red** or is preceded by a **'warning'**, it may mean that a command did not work and in this case it is probably a problem coming from an imported file. Either you can find the problem and correct it, or you can contact us for help.
- Note that the installation of packages displays a red message in the console, this is normal and is not an error.



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



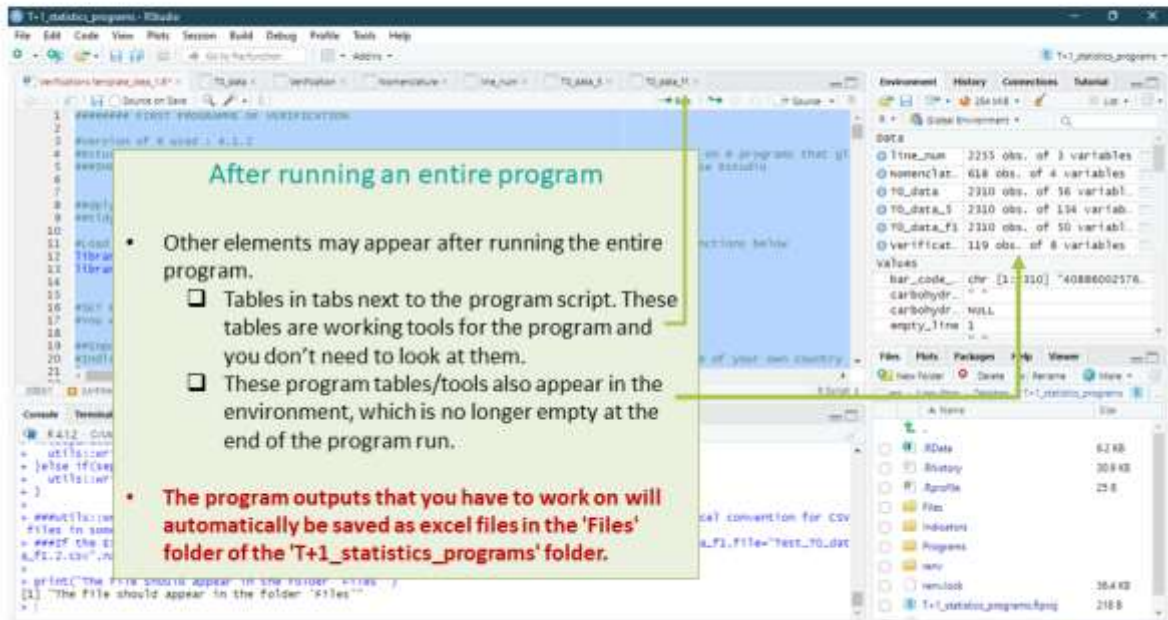
**After running an entire program**

- You can enlarge or shrink the console window using the quadruple arrow that appears when you move the mouse cursor over the top of the console.



WORK Package 5 – Reformulation and processed food monitoring

Introduction to Rstudio software



**After running an entire program**

- Other elements may appear after running the entire program.
  - Tables in tabs next to the program script. These tables are working tools for the program and you don't need to look at them.
  - These program tables/tools also appear in the environment, which is no longer empty at the end of the program run.
- The program outputs that you have to work on will automatically be saved as excel files in the 'Files' folder of the 'T+1\_statistics\_programs' folder.**



WORK Package 5 – Reformulation and processed food monitoring

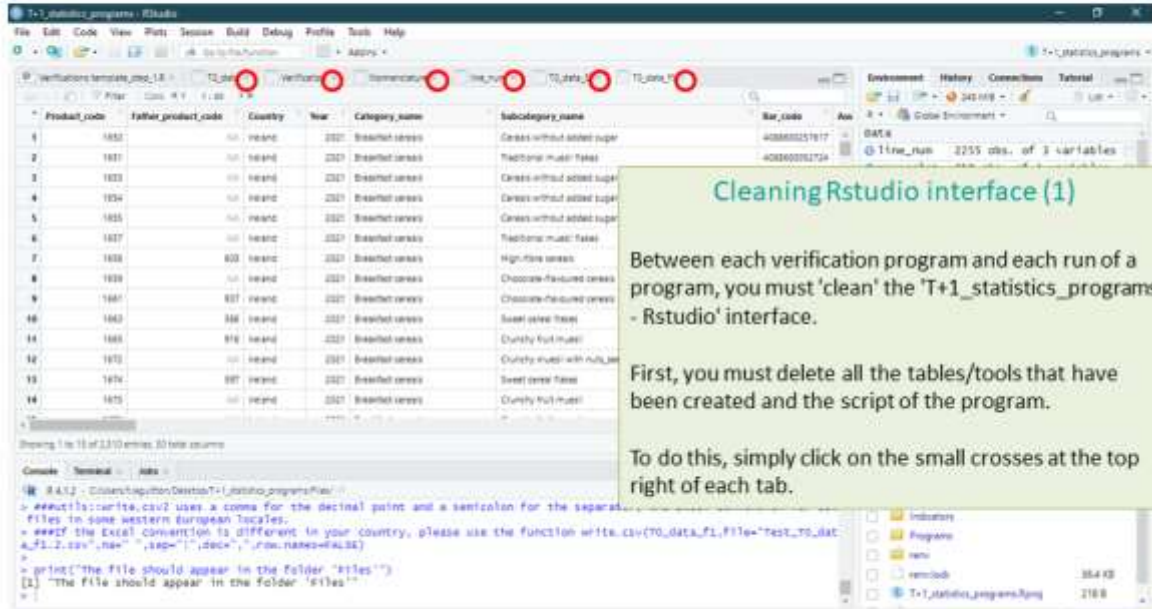
2) Installation of the necessary equipment and presentation of the Rstudio software

- A. Preliminary steps
- B. Installation of software
- C. Introduction to R studio
- D. Cleaning of the Rstudio interface**



## WORK Package 5 – Reformulation and processed food monitoring

### 'Cleaning' of Rstudio between each program



**Cleaning Rstudio interface (1)**

Between each verification program and each run of a program, you must 'clean' the 'T+1\_statistics\_programs - Rstudio' interface.

First, you must delete all the tables/tools that have been created and the script of the program.

To do this, simply click on the small crosses at the top right of each tab.

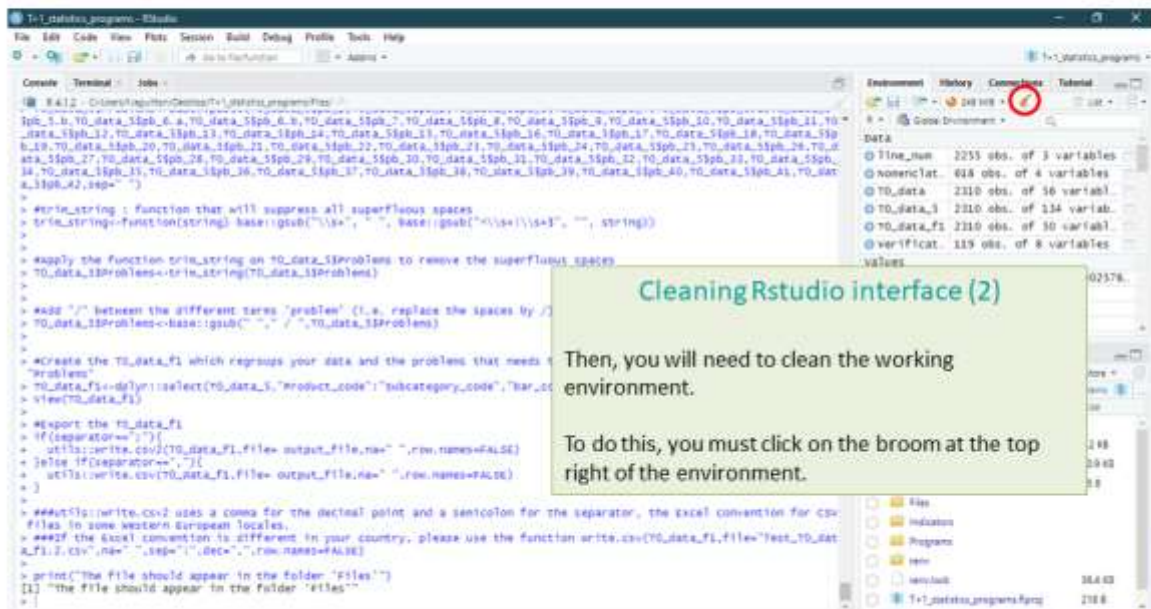


Co-funded by the European Union's  
Health Programme (2014-2020)



## WORK Package 5 – Reformulation and processed food monitoring

### 'Cleaning' of Rstudio between each program



**Cleaning Rstudio interface (2)**

Then, you will need to clean the working environment.

To do this, you must click on the broom at the top right of the environment.

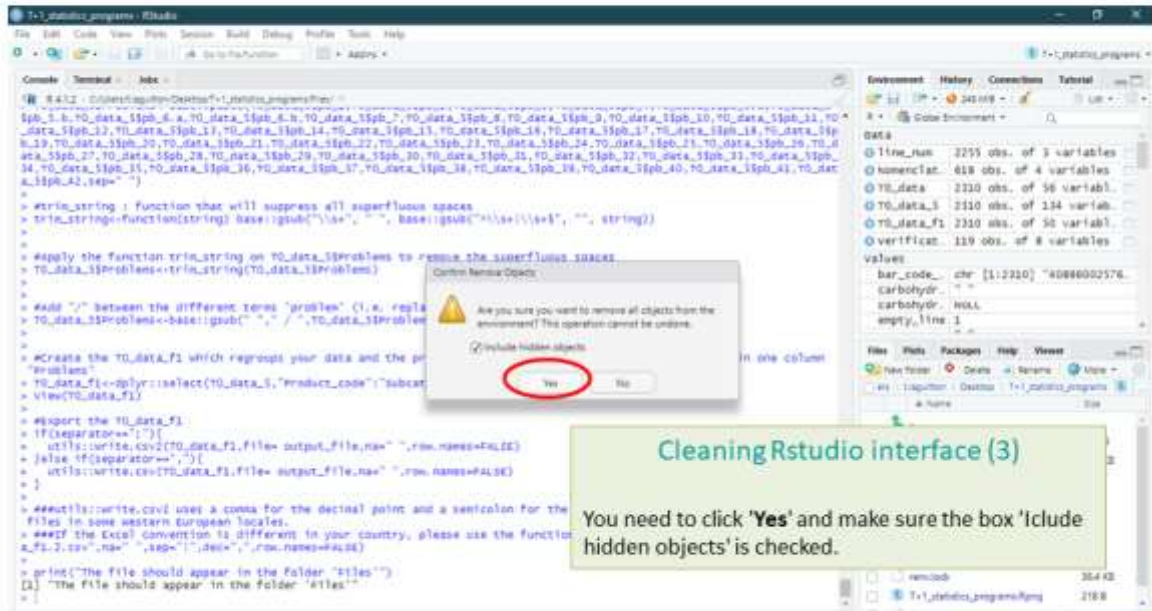


Co-funded by the European Union's  
Health Programme (2014-2020)



## WORK Package 5 – Reformulation and processed food monitoring

### 'Cleaning' of Rstudio between each program



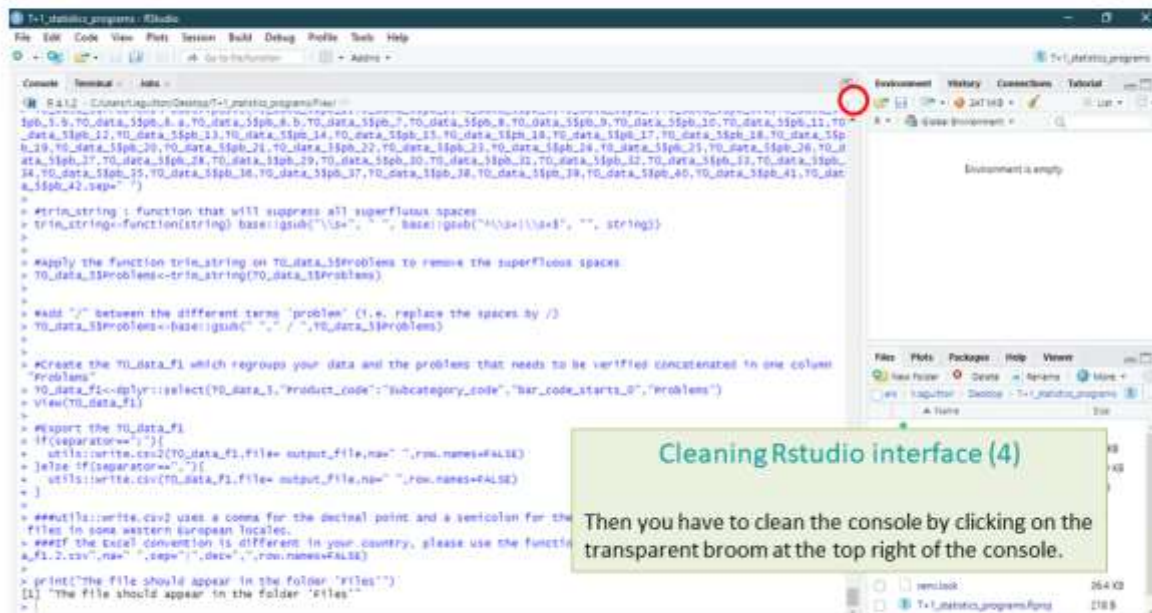
**Cleaning Rstudio interface (3)**

You need to click 'Yes' and make sure the box 'Include hidden objects' is checked.



## WORK Package 5 – Reformulation and processed food monitoring

### 'Cleaning' of Rstudio between each program



**Cleaning Rstudio interface (4)**

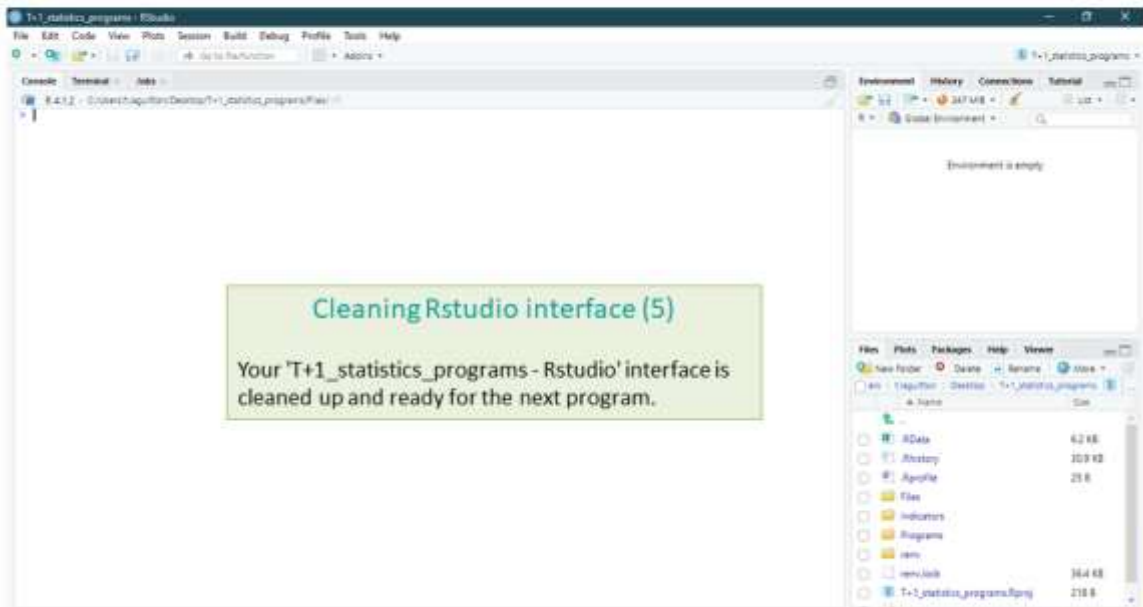
Then you have to clean the console by clicking on the transparent broom at the top right of the console.





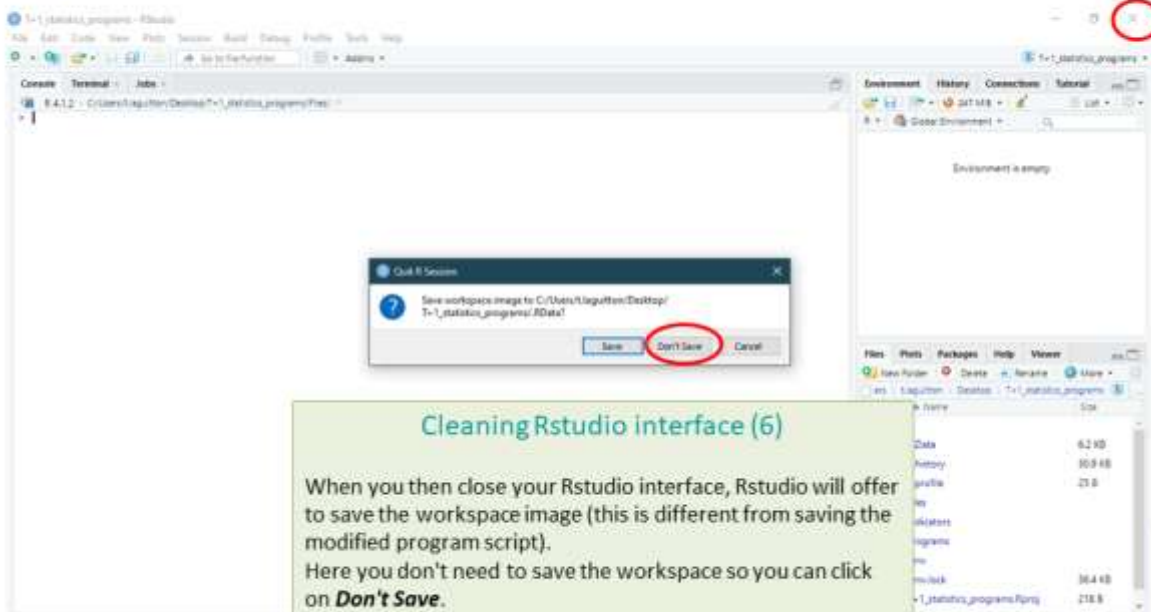
WORK Package 5 – Reformulation and processed food monitoring

‘Cleaning’ of Rstudio between each program



WORK Package 5 – Reformulation and processed food monitoring

‘Cleaning’ of Rstudio between each program





WORK Package 5 – Reformulation and processed food monitoring

3) Running of the verification programs

A. Part 1 : R setup program [\(page 74\)](#)

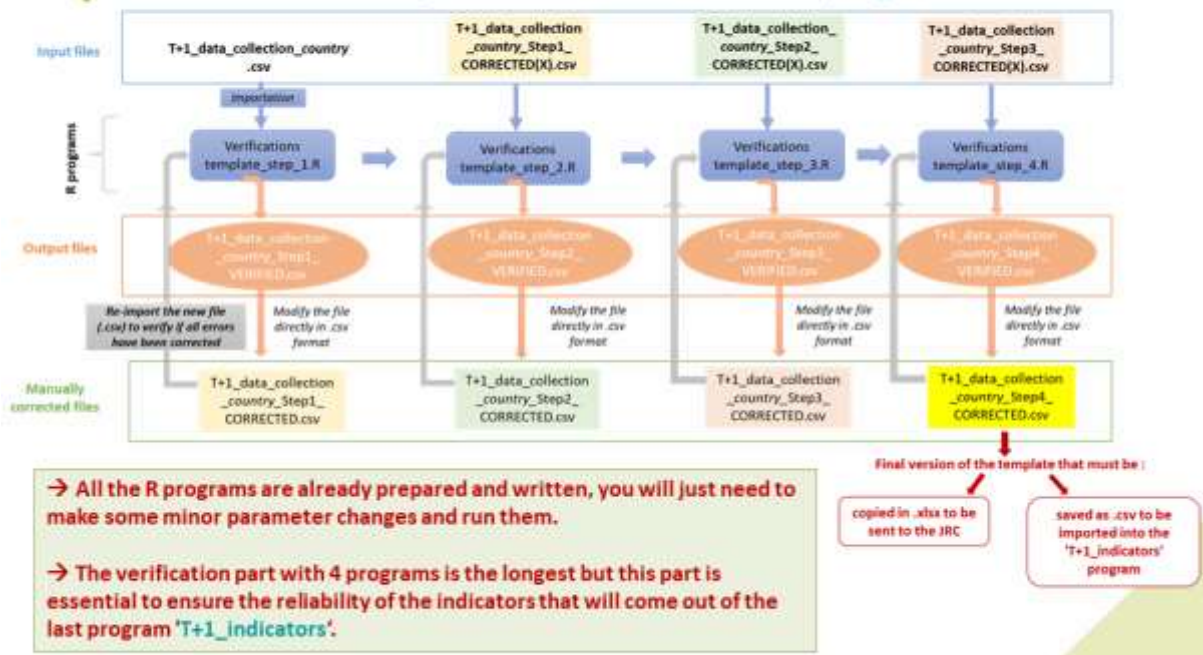
B. Part 2 : Verification programs and template cleaning/standardization [\(page 84\)](#)

- i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1' [\(page 86\)](#)
- ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2' [\(page 115\)](#)
- iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3' [\(page 140\)](#)
- iv. 4<sup>th</sup> verification program : 'Verifications template\_step\_4' [\(page 162\)](#)



WORK Package 5 – Reformulation and processed food monitoring

Description of the different 'R' programs



→ All the R programs are already prepared and written, you will just need to make some minor parameter changes and run them.

→ The verification part with 4 programs is the longest but this part is essential to ensure the reliability of the indicators that will come out of the last program 'T+1\_indicators'.

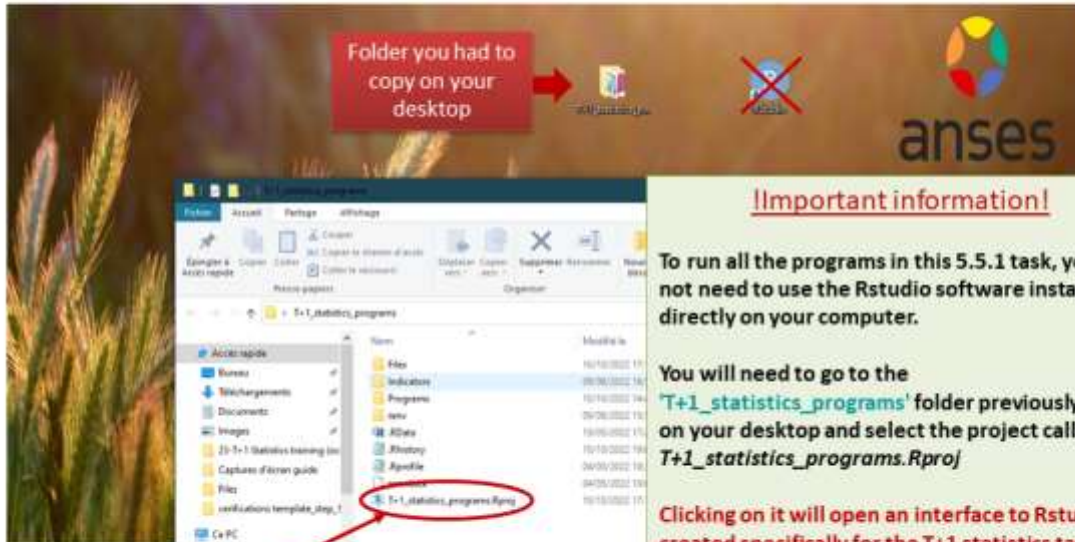






WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



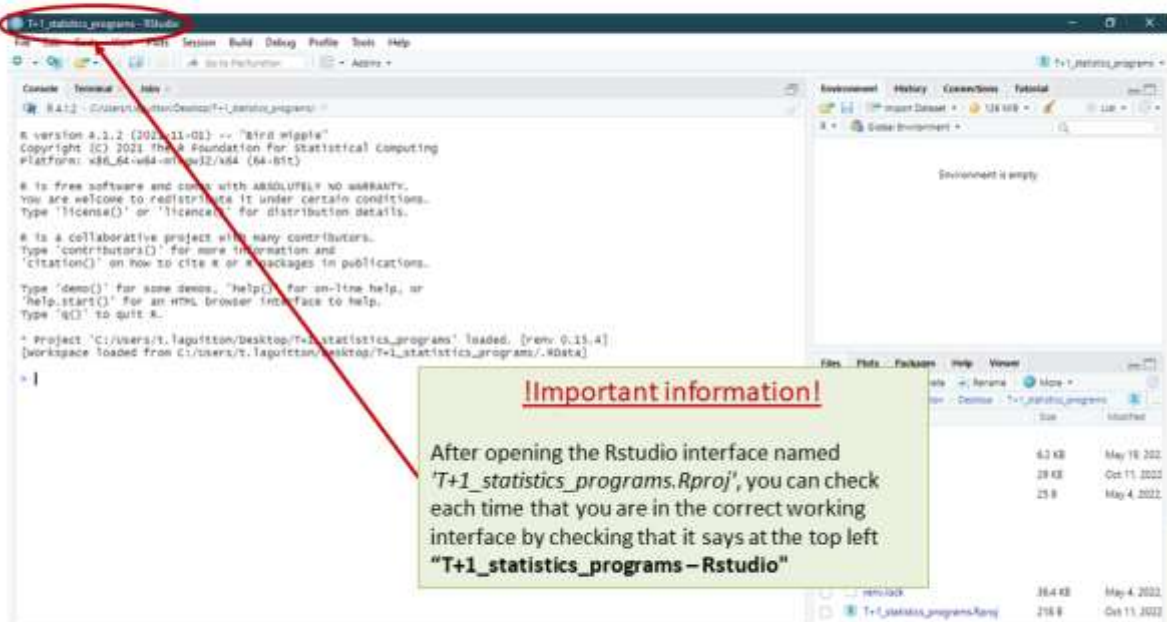
Rstudio interface created specifically for the project that you always have to work with

**Important information!**  
To run all the programs in this 5.5.1 task, you will not need to use the Rstudio software installed directly on your computer.  
You will need to go to the 'T+1\_statistics\_programs' folder previously saved on your desktop and select the project called 'T+1\_statistics\_programs.Rproj'.  
Clicking on it will open an interface to Rstudio created specifically for the T+1 statistics task. It is very important that you run all your programs on this Rstudio interface.



WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



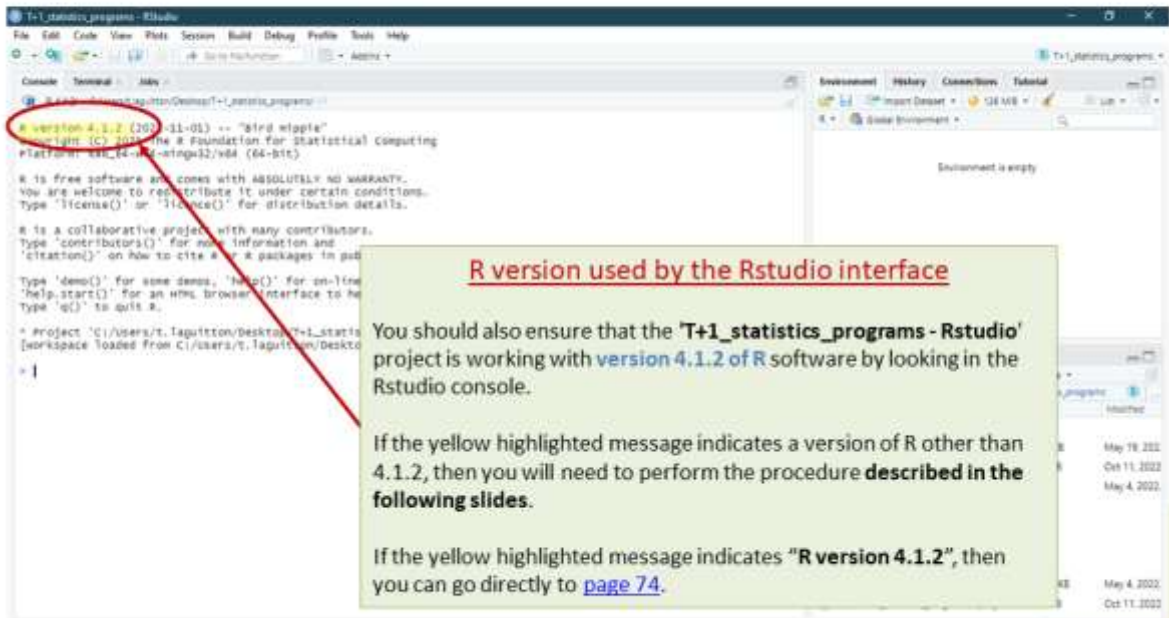
**Important information!**  
After opening the Rstudio interface named 'T+1\_statistics\_programs.Rproj', you can check each time that you are in the correct working interface by checking that it says at the top left "T+1\_statistics\_programs – Rstudio"





WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



**R version used by the Rstudio interface**

You should also ensure that the 'T+1\_statistics\_programs - Rstudio' project is working with **version 4.1.2 of R** software by looking in the Rstudio console.

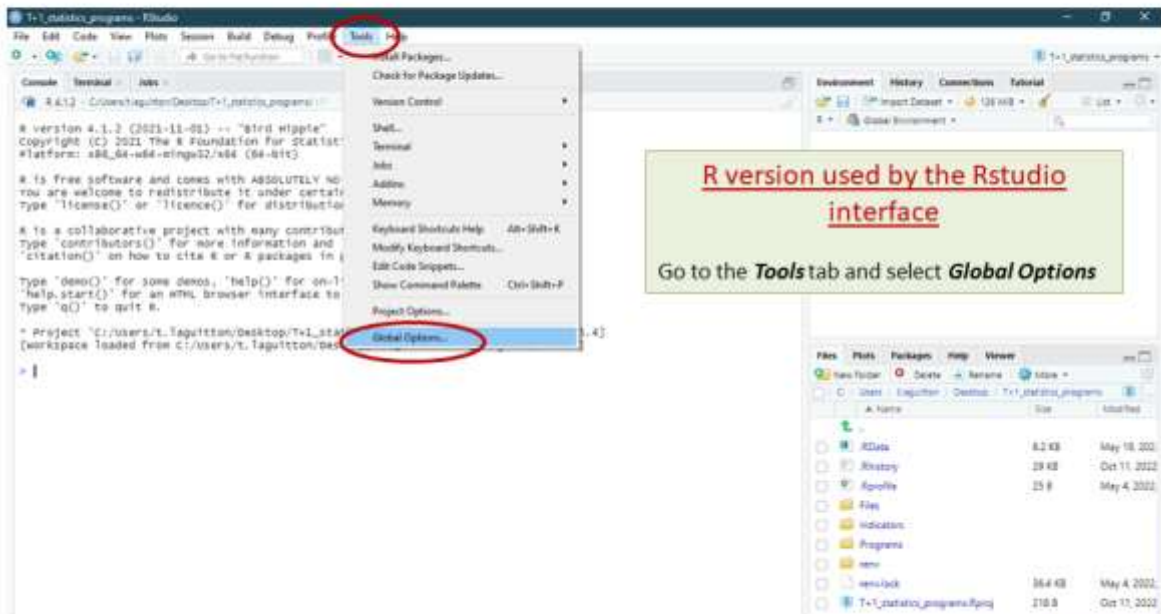
If the yellow highlighted message indicates a version of R other than 4.1.2, then you will need to perform the procedure **described in the following slides**.

If the yellow highlighted message indicates "R version 4.1.2", then you can go directly to [page 74](#).



WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



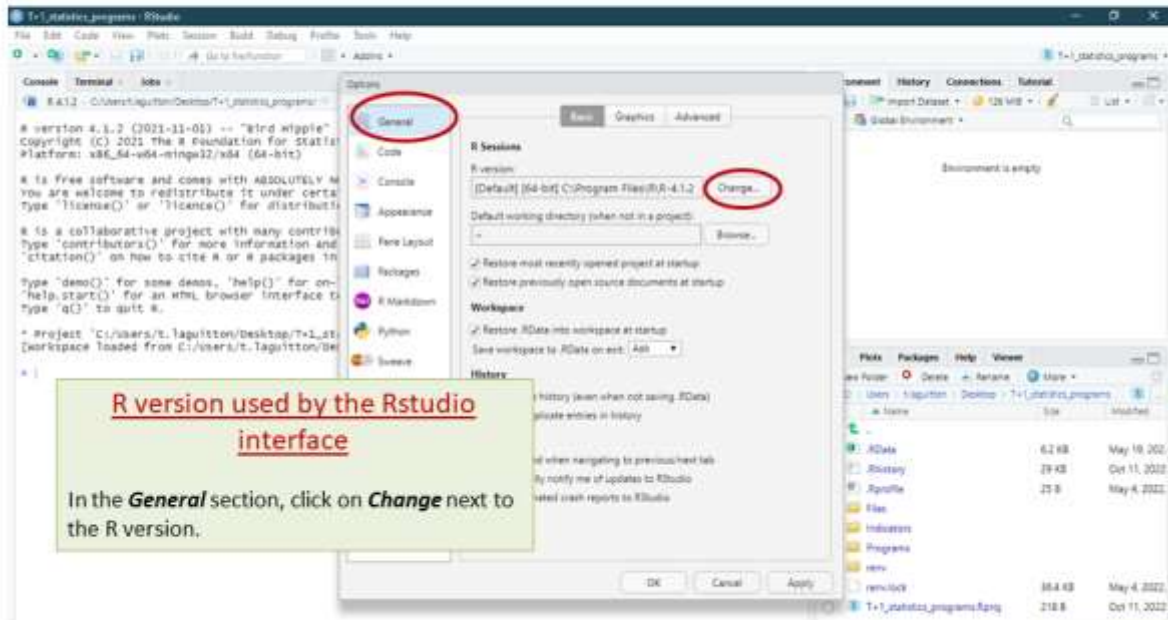
**R version used by the Rstudio interface**

Go to the **Tools** tab and select **Global Options**



WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



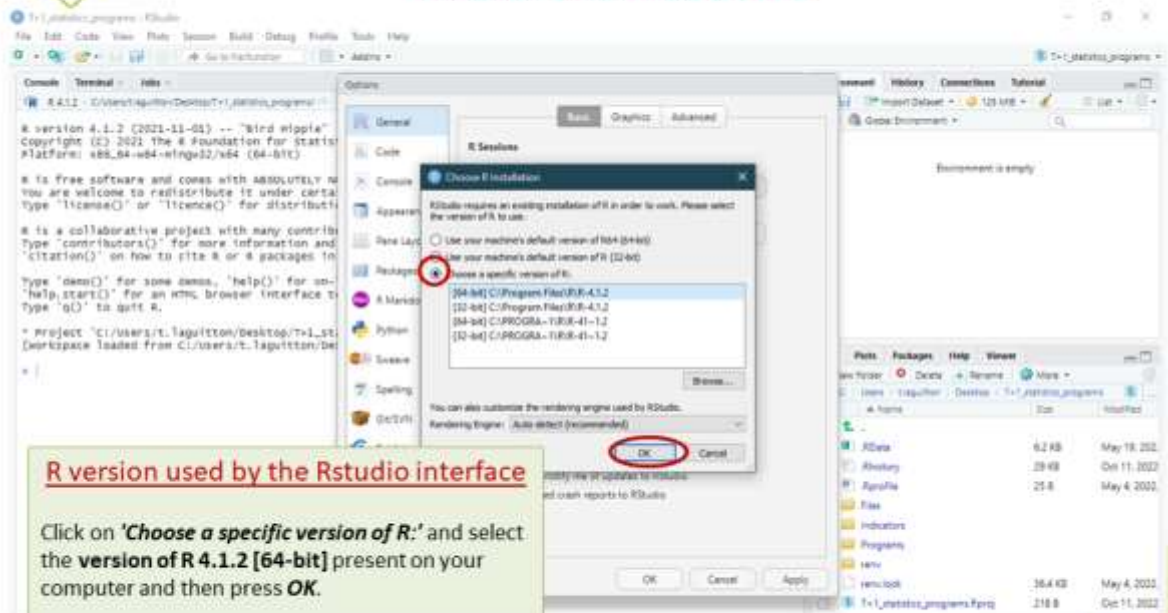
**R version used by the Rstudio interface**

In the **General** section, click on **Change** next to the R version.



WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



**R version used by the Rstudio interface**

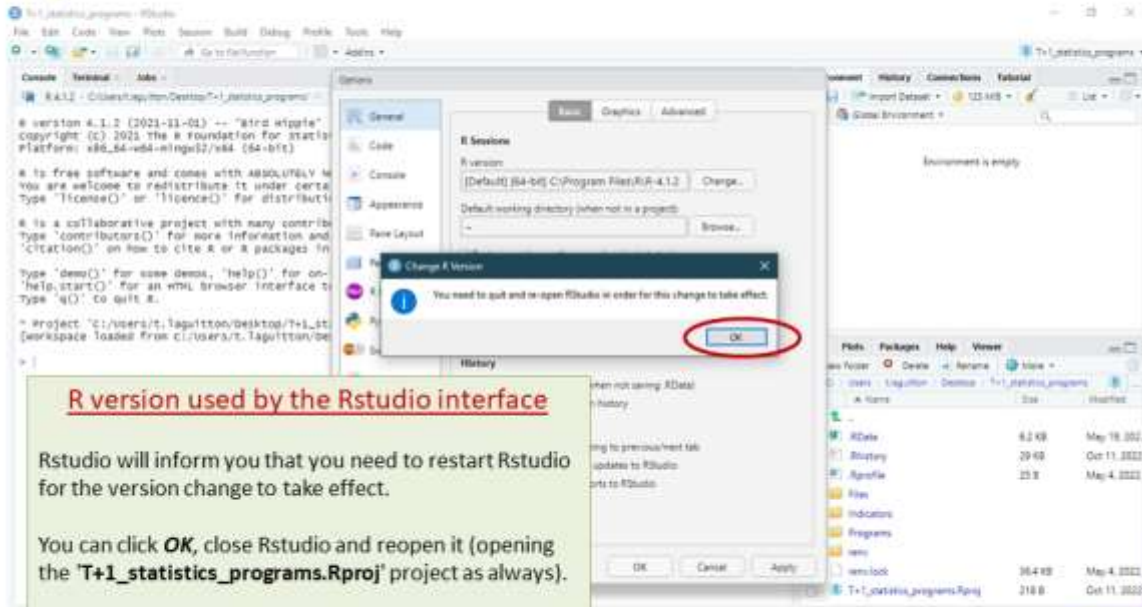
Click on **'Choose a specific version of R:'** and select the **version of R 4.1.2 [64-bit]** present on your computer and then press **OK**.





WORK Package 5 – Reformulation and processed food monitoring

Rstudio interface to use



**R version used by the Rstudio interface**

Rstudio will inform you that you need to restart Rstudio for the version change to take effect.

You can click **OK**, close Rstudio and reopen it (opening the 'T+1\_statistics\_programs.Rproj' project as always).

Version 4.1.2 will be now displayed in the console and you will be able to proceed to the next steps described in the following slides.



WORK Package 5 – Reformulation and processed food monitoring

3) Running of the verification programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1st verification program : 'Verifications template\_step\_1'

ii. 2nd verification program : 'Verifications template\_step\_2'

iii. 3rd verification program : 'Verifications template\_step\_3'

C. Part 3 : Indicators and statistics production program



WORK Package 5 – Reformulation and processed food monitoring

**'R\_setup' program**

**Presentation of the 'R\_setup' program :**

Just after installing the R and R studio software and before starting the verification programs, you will need to run the 'R\_setup' program just once. This will allow the installation of packages that contain functions that will be needed for data verification and the creation of indicators.

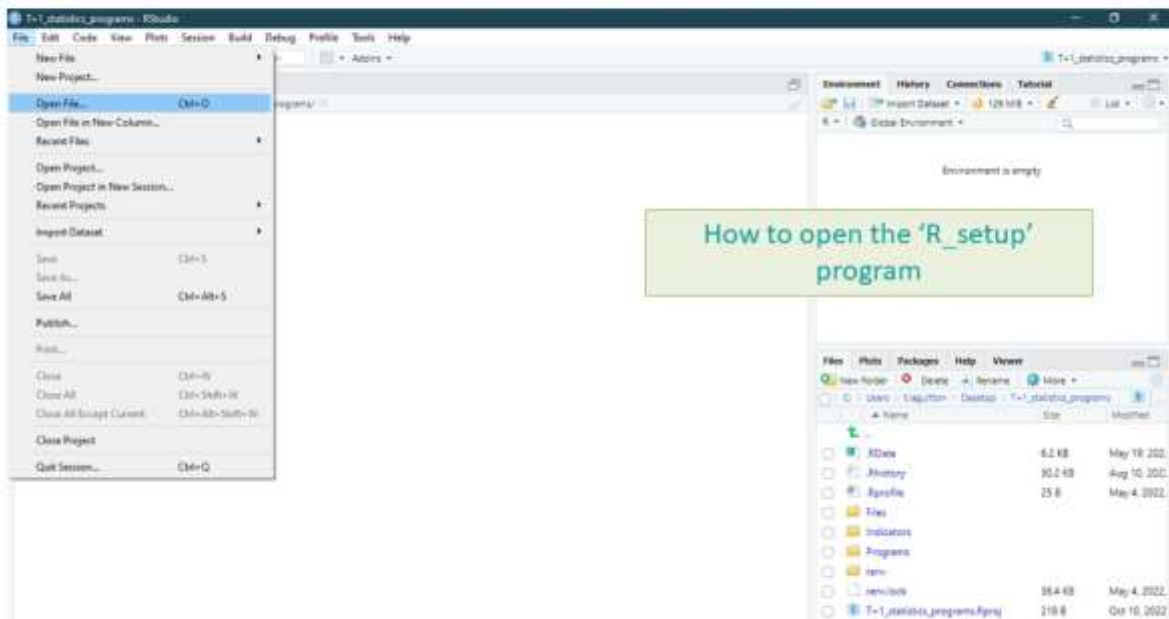
**Requirements before starting the program 'R\_setup' :**

- Before running the 'R\_setup' program, you must ensure that you have **downloaded** the **R** and **Rstudio** software.
- You must also ensure that you are working on the Rstudio interface called **T+1\_statistics\_programs.Rproj** located in the 'T+1\_statistics\_programs' folder on your desktop (see 2<sup>nd</sup> preliminary step [pages 28-29](#))



WORK Package 5 – Reformulation and processed food monitoring

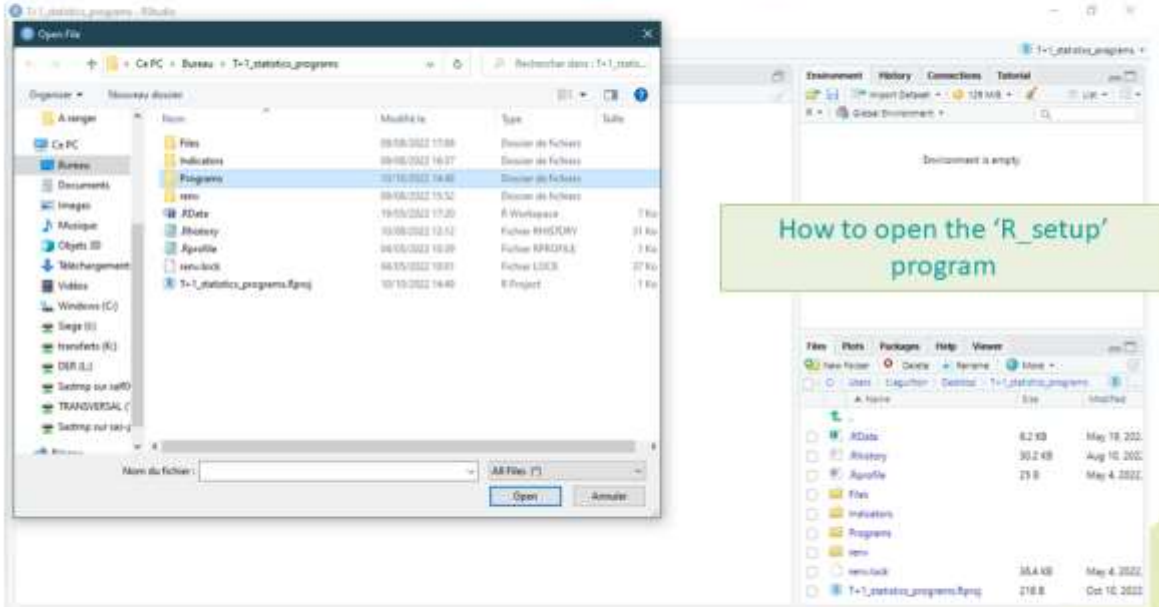
**Running the 'R\_setup' program**





WORK Package 5 – Reformulation and processed food monitoring

Running the 'R\_setup' program



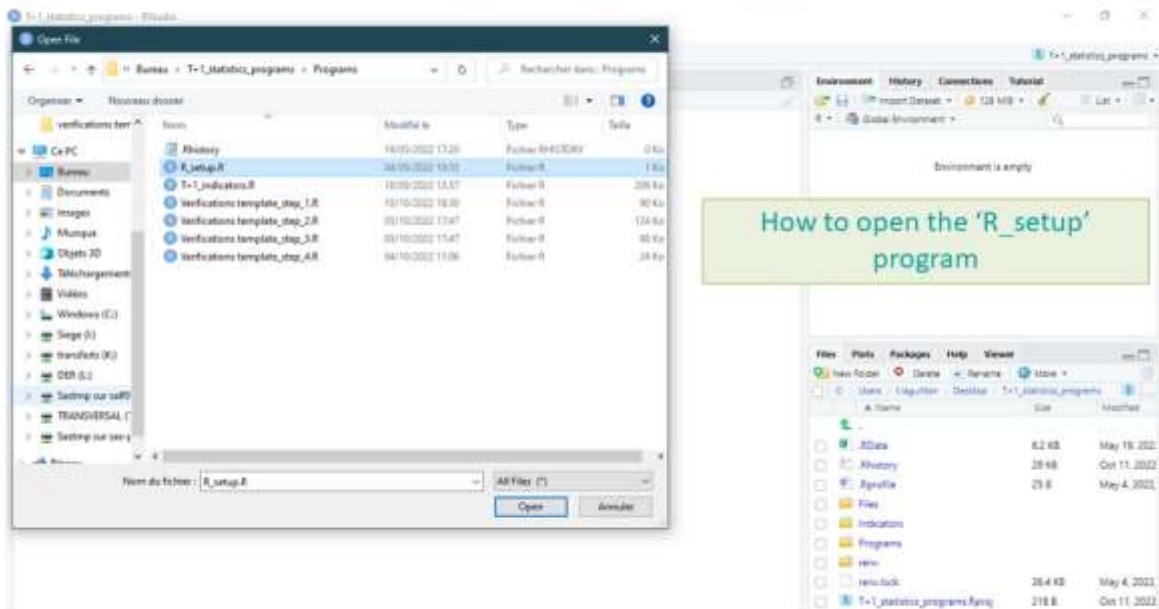
The screenshot shows the RStudio interface. On the left, the 'Open File' dialog is open, displaying a file explorer view of the 'T-1\_statistic\_programs' directory. The 'Programs' folder is selected. On the right, the 'Environment' pane shows an empty environment. Below the environment pane, a file explorer shows the contents of the 'Programs' folder, including files like 'RData', 'Rhistory', 'Rprofile', 'Files', 'Indicators', 'Programs', 'renv', 'renv.lock', and 'T-1\_statistic\_programs.Rproj'.

**How to open the 'R\_setup' program**



WORK Package 5 – Reformulation and processed food monitoring

Running the 'R\_setup' program



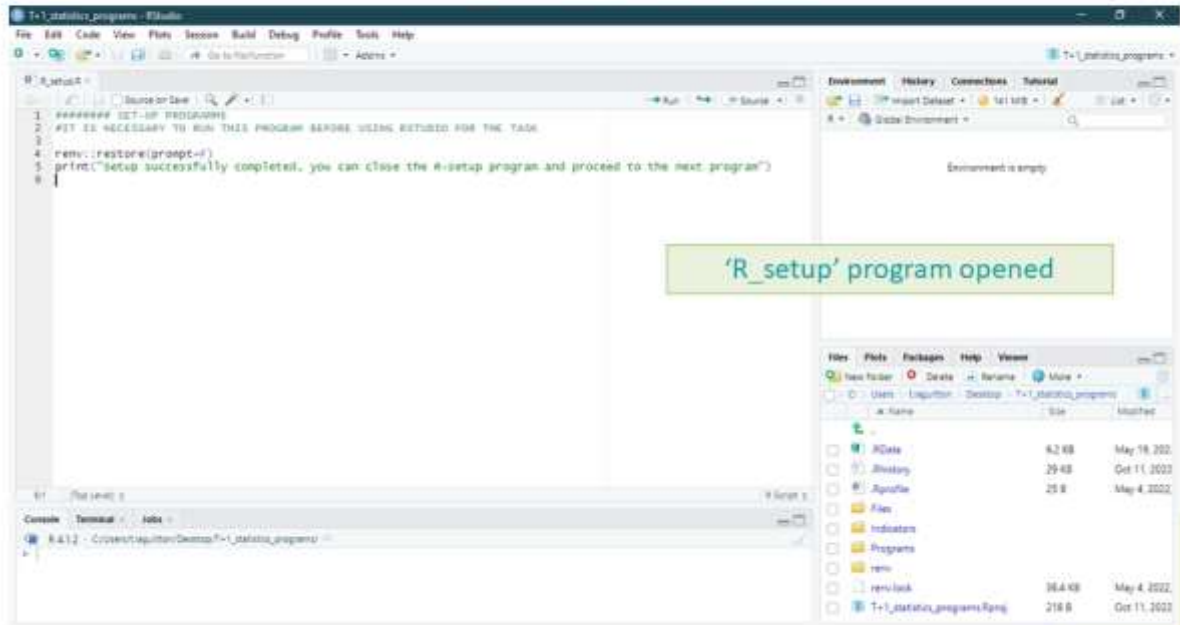
The screenshot shows the RStudio interface. On the left, the 'Open File' dialog is open, displaying a file explorer view of the 'Programs' folder. The file 'R\_setup.R' is selected. On the right, the 'Environment' pane shows an empty environment. Below the environment pane, a file explorer shows the contents of the 'Programs' folder, including files like 'RData', 'Rhistory', 'Rprofile', 'Files', 'Indicators', 'Programs', 'renv', 'renv.lock', and 'T-1\_statistic\_programs.Rproj'.

**How to open the 'R\_setup' program**



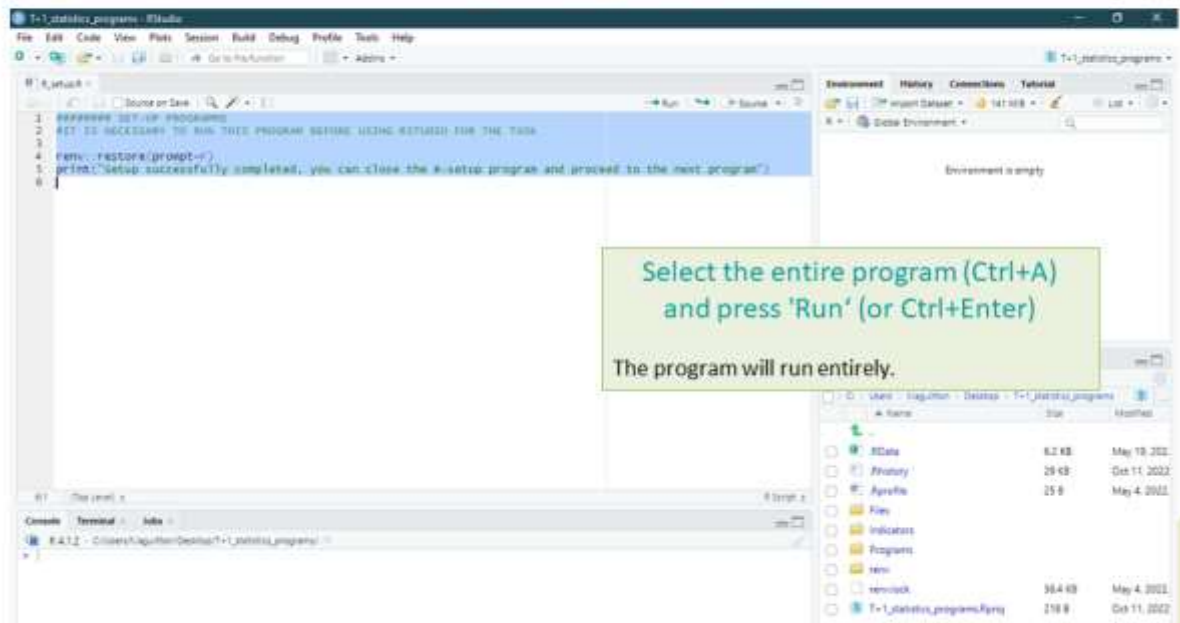
WORK Package 5 – Reformulation and processed food monitoring

Running the 'R\_setup' program



WORK Package 5 – Reformulation and processed food monitoring

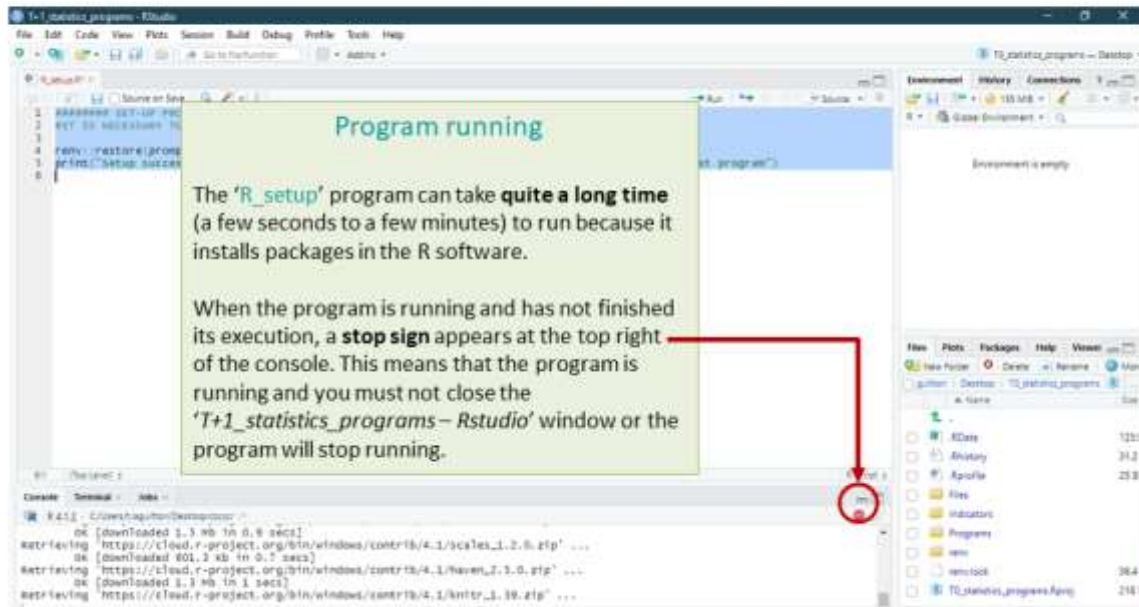
Running the 'R\_setup' program





WORK Package 5 – Reformulation and processed food monitoring

Running the 'R\_setup' program



**Program running**

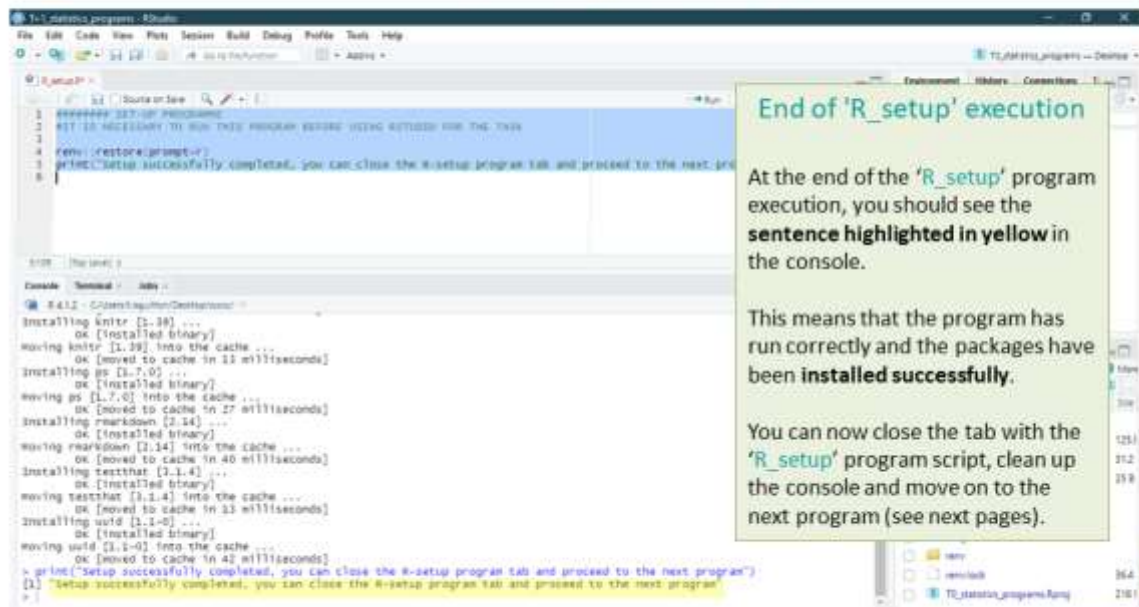
The 'R\_setup' program can take **quite a long time** (a few seconds to a few minutes) to run because it installs packages in the R software.

When the program is running and has not finished its execution, a **stop sign** appears at the top right of the console. This means that the program is running and you must not close the 'T+1\_statistics\_programs - Rstudio' window or the program will stop running.



WORK Package 5 – Reformulation and processed food monitoring

Running the 'R\_setup' program



**End of 'R\_setup' execution**

At the end of the 'R\_setup' program execution, you should see the **sentence highlighted in yellow** in the console.

This means that the program has run correctly and the packages have been **installed successfully**.

You can now close the tab with the 'R\_setup' program script, clean up the console and move on to the next program (see next pages).







## WORK Package 5 – Reformulation and processed food monitoring

### 'R\_setup' program

#### Tutorial video to run the Rsetup program

→ This video is available at any time on the Best ReMaP intranet in the WP5 section  
[https://portal.nijz.si/ssf/a/c/p\\_name/ssf\\_forum/p\\_action/1/entityType/folderEntry/action/view\\_permalink/entryId/77696/novl\\_url/1](https://portal.nijz.si/ssf/a/c/p_name/ssf_forum/p_action/1/entityType/folderEntry/action/view_permalink/entryId/77696/novl_url/1)



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## WORK Package 5 – Reformulation and processed food monitoring

### 3) Running of the verification programs

#### A. Part 1: R setup program

#### B. Part 2: Verification programs and template cleaning/standardization

- i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1' [\[page 86\]](#)
- ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2' [\[page 115\]](#)
- iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3' [\[page 140\]](#)
- iv. 4<sup>th</sup> verification program : 'Verifications template\_step\_4' [\[page 162\]](#)



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## WORK Package 5 – Reformulation and processed food monitoring

### Verification programs

- In this part, you will run 4 verification programs on your file : T+1\_data\_collection\_country.csv
- This part is very important because it will check that there are no input errors in the template and that the data can be used for creating indicators.

You will need to run these programs in the following order:

- 1) Verifications template\_step\_1.R
- 2) Verifications template\_step\_2.R
- 3) Verifications template\_step\_3.R
- 4) Verifications template\_step\_4.R

- The only information that verification programs cannot check is the **accuracy** of the **Best-ReMaP category and subcategory classification** of the collected products. We therefore suggest that you carefully check the classification of your products collected before starting the verification programs.



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## WORK Package 5 – Reformulation and processed food monitoring

### 3) Running of the verification programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1'

ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2'

iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

iv. 4<sup>th</sup> verification program : 'Verifications template\_step\_4'



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## WORK Package 5 – Reformulation and processed food monitoring

### 1<sup>st</sup> verification program : 'Verifications template\_step\_1'

#### Presentation of the 'Verifications template step\_1' program :

- This is the first out of the 4 programs of verification of the data entered in your template.
- In this program, data entry problems are checked (misspelling of information, missing mandatory fields, ...)

#### Requirements before starting the program 'Verifications template\_step\_1' :

- Before running the program, you need to make sure that **a copy** of your T+1 collection template is saved in .csv format in the folder 'Files' in the 'T+1\_statistics\_programs' folder that you have saved on your desktop.
- You need to make sure that your template have been renamed :  
T+1\_data\_collection\_country.csv (with the name of your own country)
- You need to make sure that the barcodes in your file T+1\_data\_collection\_country.csv appear in full and not in scientific format (see procedure [pages 20→24](#))

Your Rstudio interface must have been cleaned up before running the program.  
All cleaning steps are described on [pages 58→64](#).

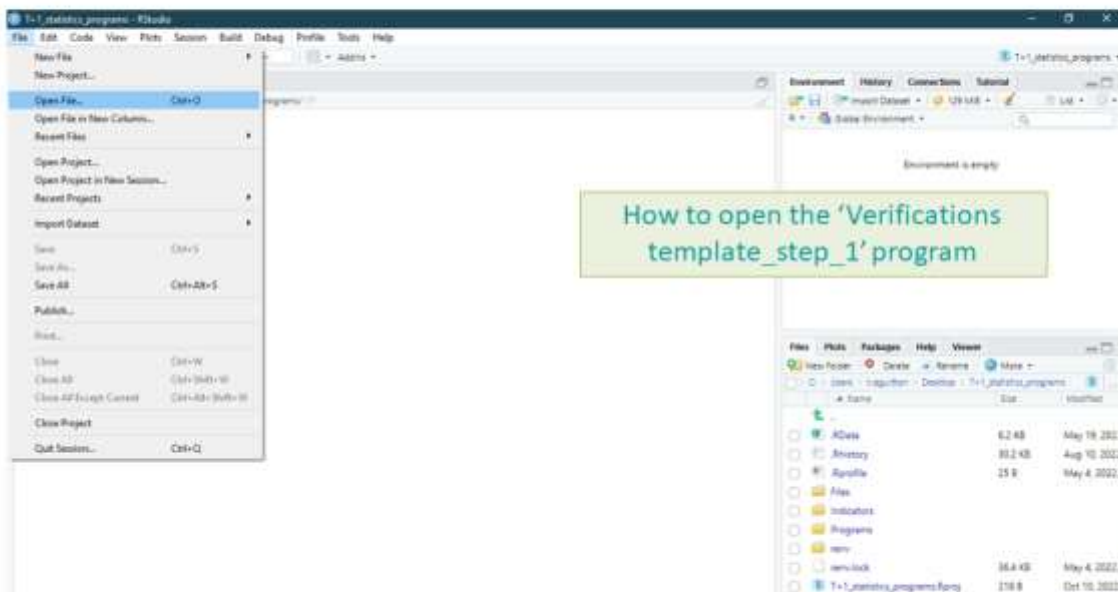


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## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



The screenshot shows the RStudio application window titled 'T+1\_statistics\_programs - RStudio'. The 'File' menu is open, and 'Open File...' is highlighted. The 'Environment' pane on the right shows 'Environment is empty'. The 'Files' pane at the bottom shows a file explorer view of the 'T+1\_statistics\_programs' folder, listing files like 'AClass', 'Inventory', 'Rprofile', 'Files', 'Indicators', 'Programs', 'new', 'new.lock', and 'T+1\_statistics\_programs.Rproj'.

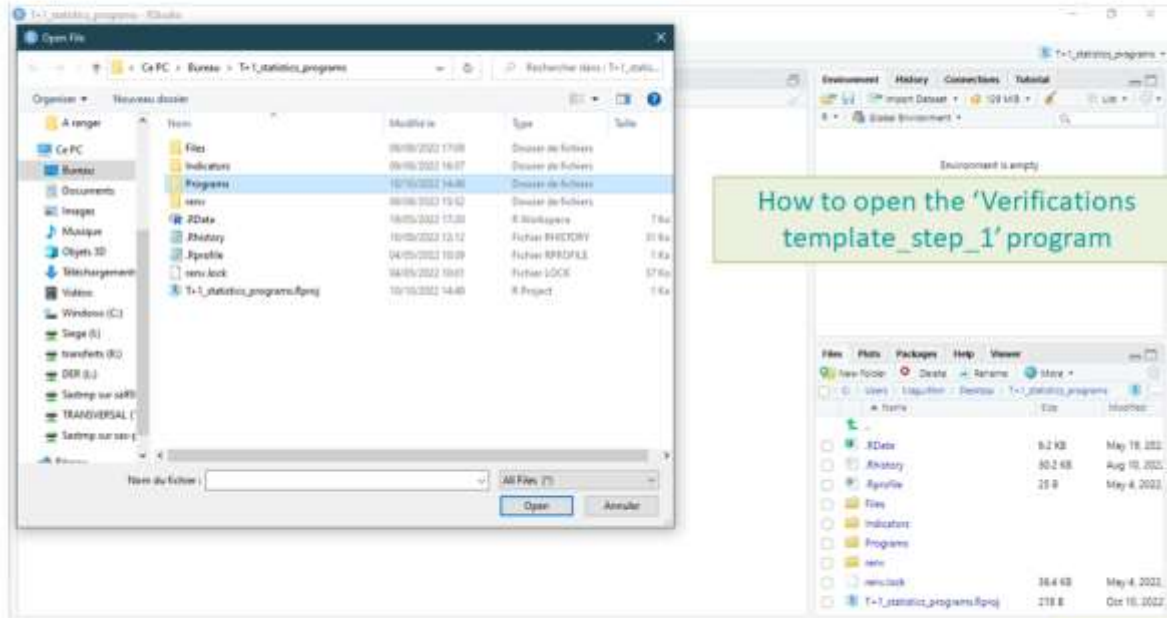


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WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_1' program



Environment History Connections Tutorial  
Import Dataset 129 MB  
Data Environment

Environment is empty

File Edit Package Help View

New Folder Desktop Run Home Store

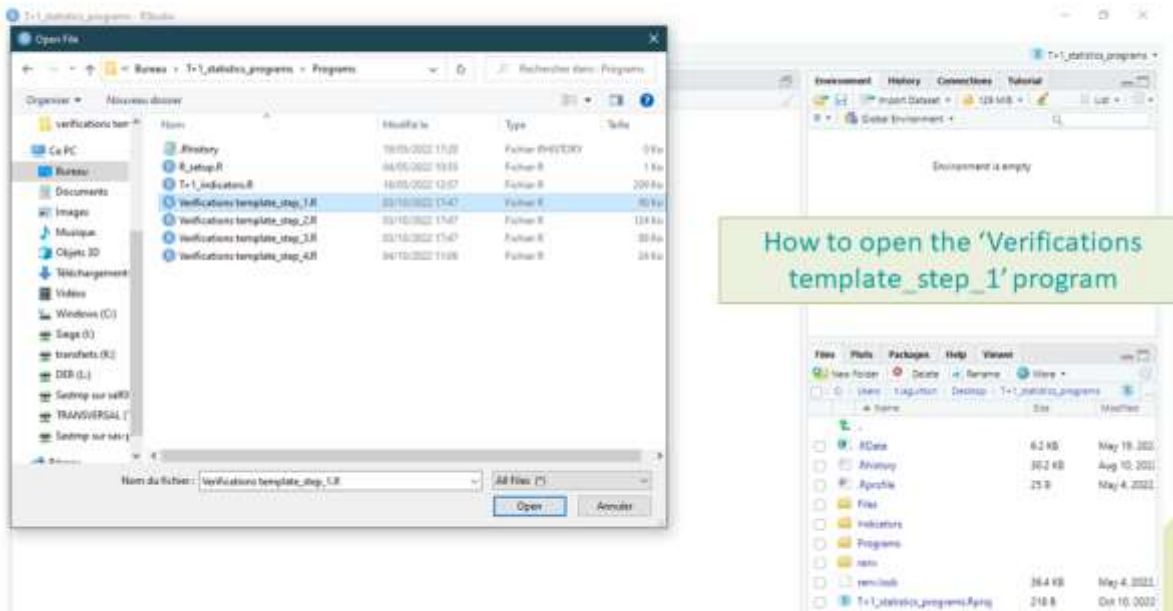
Users Inauguration Desktop T-1\_statistics\_programs

Item	Size	Modified
EDData	6.2 KB	May 18, 2022
EHHistory	30.2 KB	Aug 10, 2021
EPProfile	25 B	May 4, 2022
Files		
Indicators		
Programs		
new		
new.lock	36.4 KB	May 4, 2022
T-1_statistics_programs.fproj	218 B	Oct 10, 2022



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_1' program



Environment History Connections Tutorial  
Import Dataset 129 MB  
Data Environment

Environment is empty

File Edit Package Help View

New Folder Desktop Run Home Store

Users Inauguration Desktop T-1\_statistics\_programs

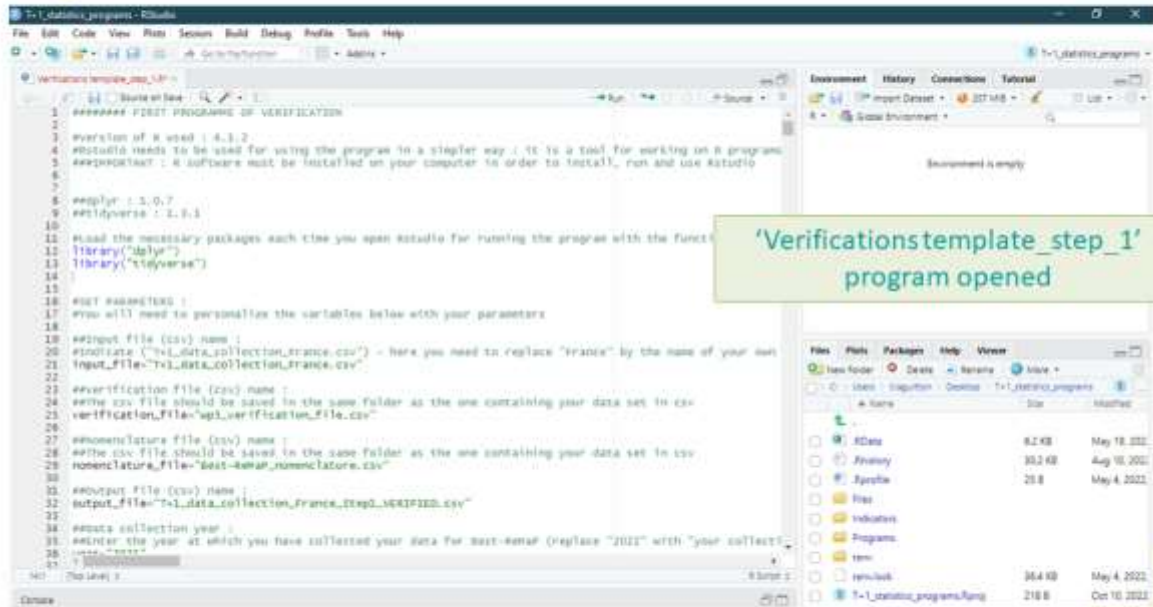
Item	Size	Modified
EDData	6.2 KB	May 18, 2022
EHHistory	30.2 KB	Aug 10, 2021
EPProfile	25 B	May 4, 2022
Files		
Indicators		
Programs		
new		
new.lock	36.4 KB	May 4, 2022
T-1_statistics_programs.fproj	218 B	Oct 10, 2022





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program

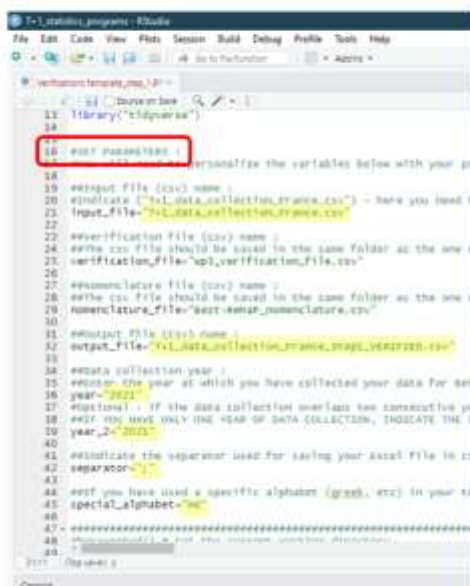


**'Verifications template\_step\_1' program opened**



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



#### Beginning of each verification program

At the beginning of each verification program, there is a set parameters part (line 16). It is only in this part that you should change information.

In the first run of the verification program 1, you need to change the name of the country with your own country name in the input file (line 21) and the output file (line 32) of the R script.

You must indicate the year in which your T+1 data was collected. If the collection was carried out in the same year, you must enter this year twice (line 36 and 39). If your collection took place in two different years, you must enter both years.

You also need to indicate the separator used in your csv file (line 42). You have the choice only between ";" and ",". In Europe, the most commonly used separator in the csv format is the ";" (pre-filled in the program).

You also need to indicate if you have used a specific alphabet in your template (line 45). This field only concerns countries with a specific alphabet and is therefore pre-filled as "NO".

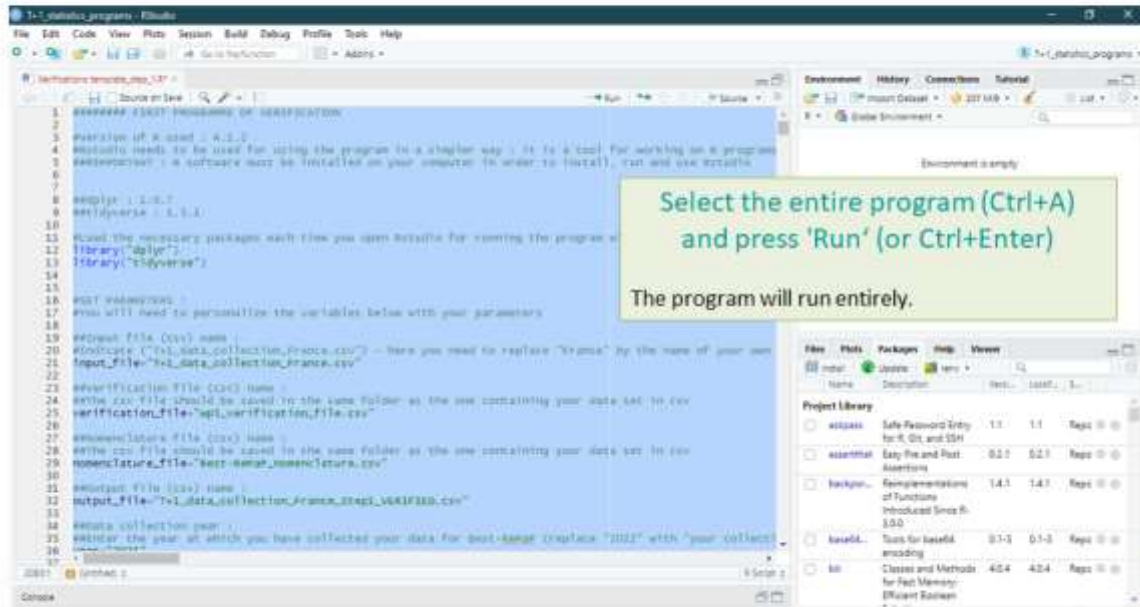
*Example :*

- **input file** = "T+1\_data\_collection\_ireland.csv"
- **output file** = "T+1\_data\_collection\_ireland\_Step1\_VERIFIED.csv"
- **year** = "2021"
- **year\_2** = "2022"
- **Separator** = ";"
- **Special\_alphabet** = "NO"



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



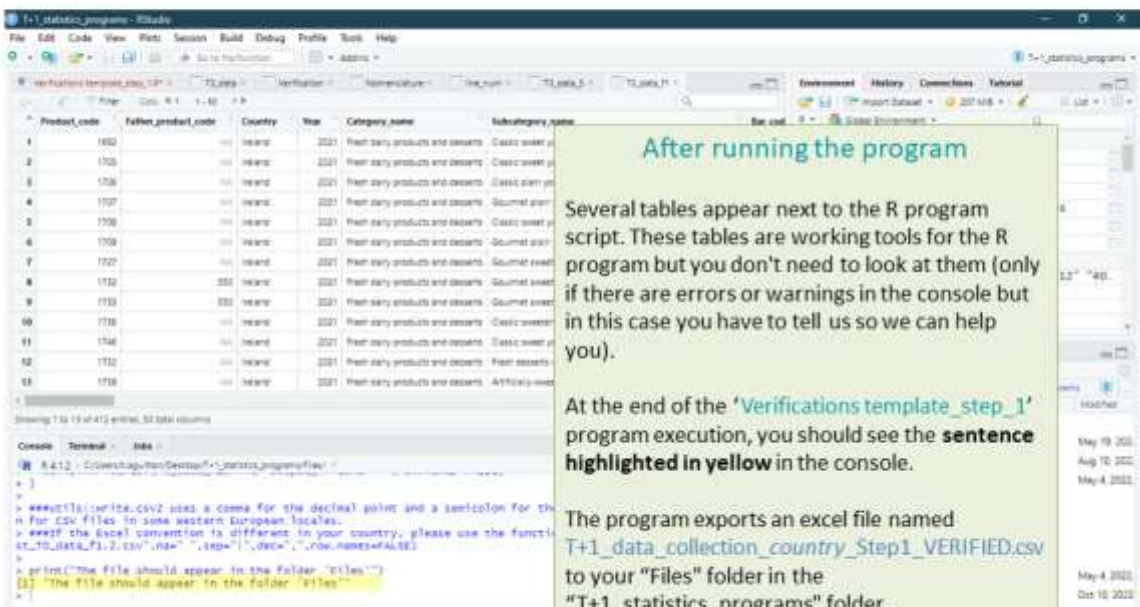
Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter)

The program will run entirely.



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



After running the program

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

At the end of the 'Verifications template\_step\_1' program execution, you should see the **sentence highlighted in yellow** in the console.

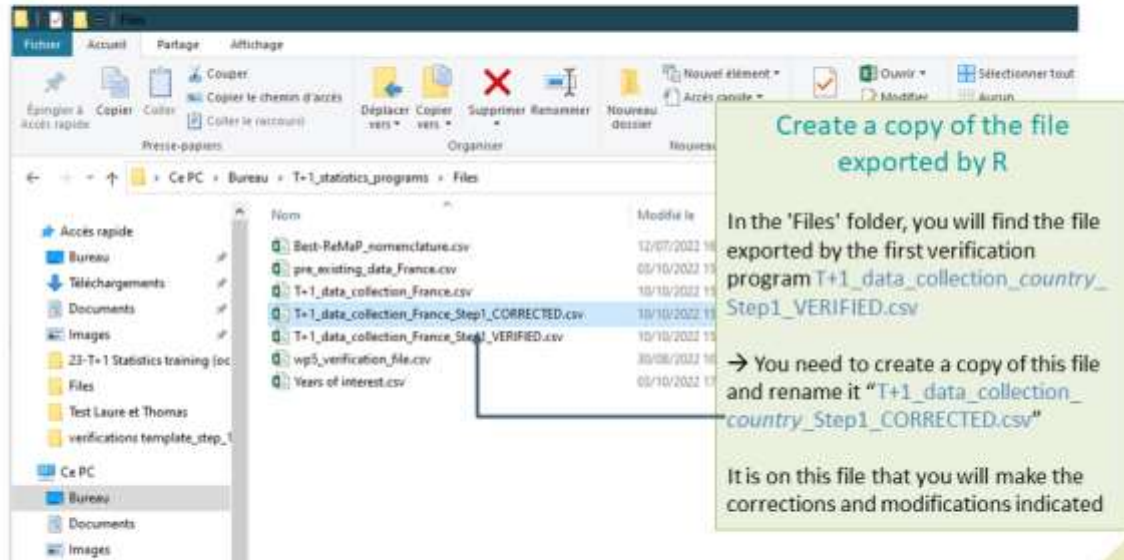
The program exports an excel file named `T+1_data_collection_country_Step1_VERIFIED.csv` to your "Files" folder in the "T+1\_statistics\_programs" folder.





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_1' program



**Create a copy of the file exported by R**

In the 'Files' folder, you will find the file exported by the first verification program `T+1_data_collection_country_Step1_VERIFIED.csv`

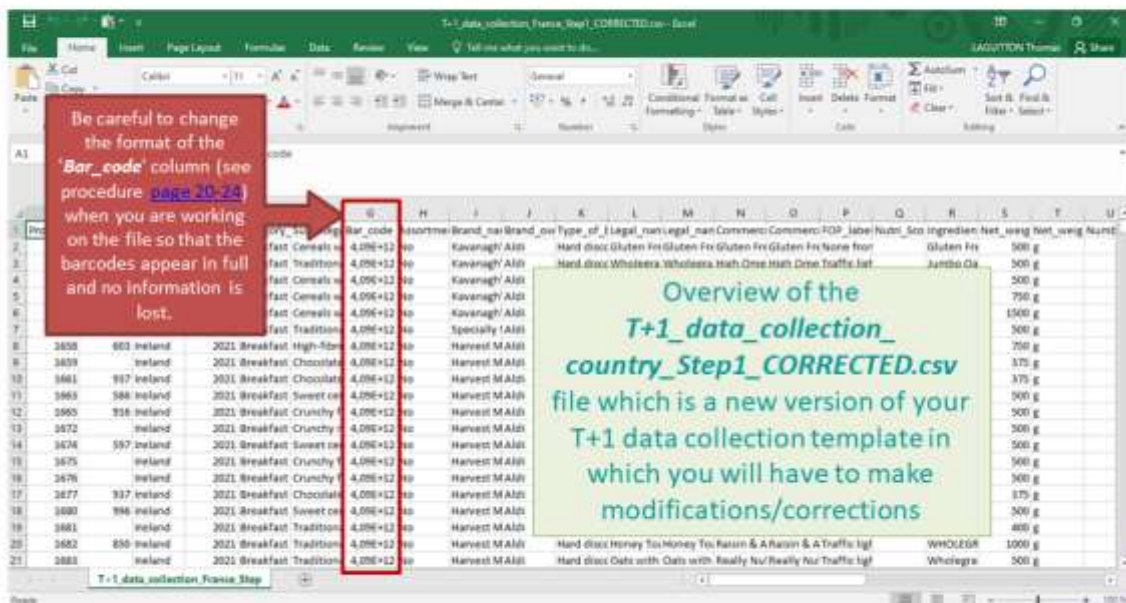
→ You need to create a copy of this file and rename it "`T+1_data_collection_country_Step1_CORRECTED.csv`"

It is on this file that you will make the corrections and modifications indicated



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program



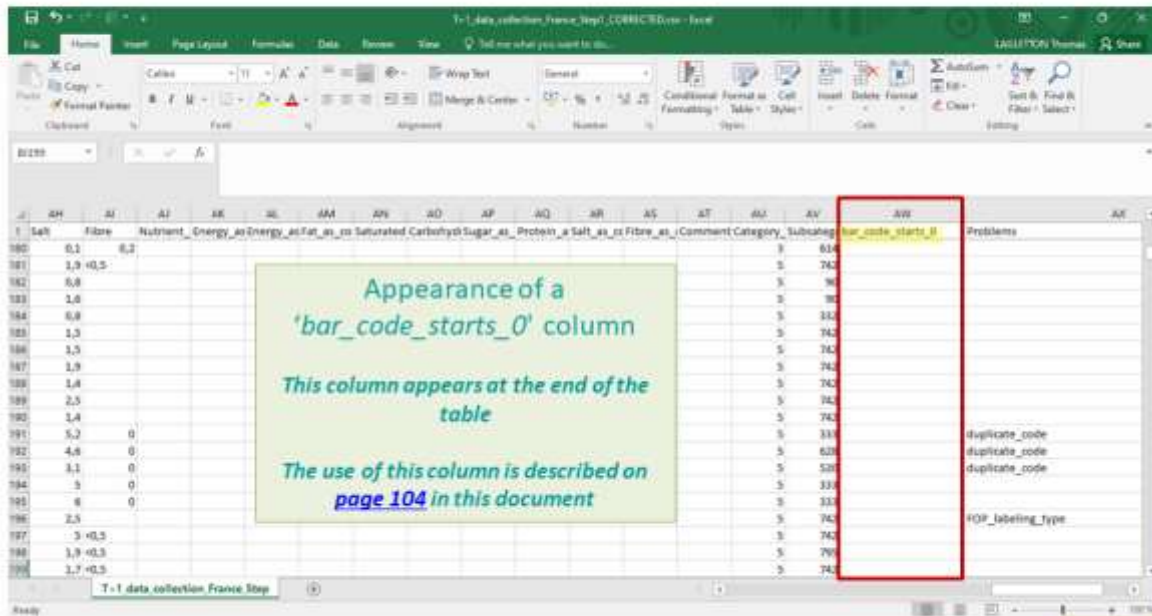
Be careful to change the format of the 'Bar\_code' column (see procedure [page 20-24](#)) when you are working on the file so that the barcodes appear in full and no information is lost.

**Overview of the `T+1_data_collection_country_Step1_CORRECTED.csv` file which is a new version of your T+1 data collection template in which you will have to make modifications/corrections**

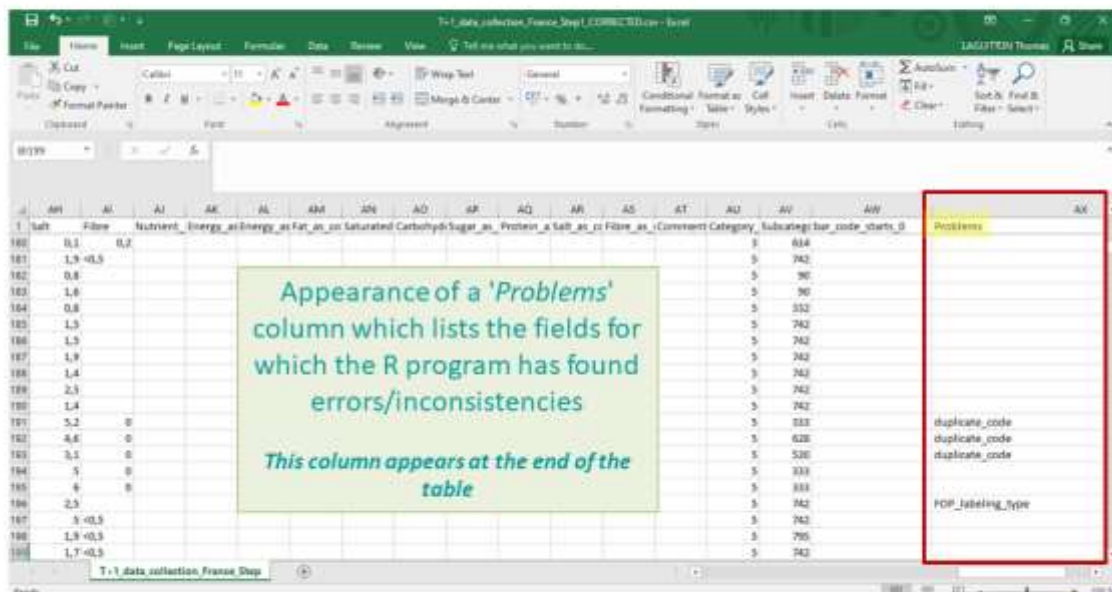
Product	Bar_code	Shortname	Brand	Type	Legal	Comments	Nutr	Ingredient	Net_wgt	Name
1	4095+12	Fast Cereals w	Kavenagh/ Aids	Hand d	Gluten Fr	Gluten Fr	Gluten Fr	Gluten Fr	500 g	Gluten Fr
2	4095+12	Fast Tradition	Kavenagh/ Aids	Hand d	Gluten Fr	Gluten Fr	Gluten Fr	Gluten Fr	500 g	Gluten Fr
3	4095+12	Fast Cereals w	Kavenagh/ Aids	Hand d	Gluten Fr	Gluten Fr	Gluten Fr	Gluten Fr	500 g	Gluten Fr
4	4095+12	Fast Cereals w	Kavenagh/ Aids	Hand d	Gluten Fr	Gluten Fr	Gluten Fr	Gluten Fr	750 g	Gluten Fr
5	4095+12	Fast Cereals w	Kavenagh/ Aids	Hand d	Gluten Fr	Gluten Fr	Gluten Fr	Gluten Fr	1500 g	Gluten Fr
6	4095+12	Fast Tradition	Kavenagh/ Aids	Hand d	Gluten Fr	Gluten Fr	Gluten Fr	Gluten Fr	500 g	Gluten Fr
7	4095+12	Fast Tradition	Kavenagh/ Aids	Hand d	Gluten Fr	Gluten Fr	Gluten Fr	Gluten Fr	750 g	Gluten Fr
8	3495	863 Ireland	2021 Breakfast	High-fib	4,095+12	no	Harvest M Aids		375 g	
9	3499	863 Ireland	2021 Breakfast	Chocolate	4,095+12	no	Harvest M Aids		375 g	
10	3461	867 Ireland	2021 Breakfast	Chocolate	4,095+12	no	Harvest M Aids		375 g	
11	3465	868 Ireland	2021 Breakfast	Sweet ce	4,095+12	no	Harvest M Aids		500 g	
12	3465	858 Ireland	2021 Breakfast	Crunchy	4,095+12	no	Harvest M Aids		500 g	
13	3472	862 Ireland	2021 Breakfast	Crunchy	4,095+12	no	Harvest M Aids		500 g	
14	3474	897 Ireland	2021 Breakfast	Sweet ce	4,095+10	no	Harvest M Aids		500 g	
15	3475	862 Ireland	2021 Breakfast	Crunchy	4,095+12	no	Harvest M Aids		500 g	
16	2476	862 Ireland	2021 Breakfast	Crunchy	4,095+12	no	Harvest M Aids		500 g	
17	2477	937 Ireland	2021 Breakfast	Chocolate	4,095+12	no	Harvest M Aids		375 g	
18	3480	898 Ireland	2021 Breakfast	Sweet ce	4,095+12	no	Harvest M Aids		500 g	
19	3481	862 Ireland	2021 Breakfast	Tradition	4,095+10	no	Harvest M Aids		400 g	
20	2482	850 Ireland	2021 Breakfast	Tradition	4,095+10	no	Harvest M Aids	Hand d	1000 g	WHOLEGR
21	2483	862 Ireland	2021 Breakfast	Tradition	4,095+12	no	Harvest M Aids	Hand d	500 g	Wholegr



WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_1' program



WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_1' program

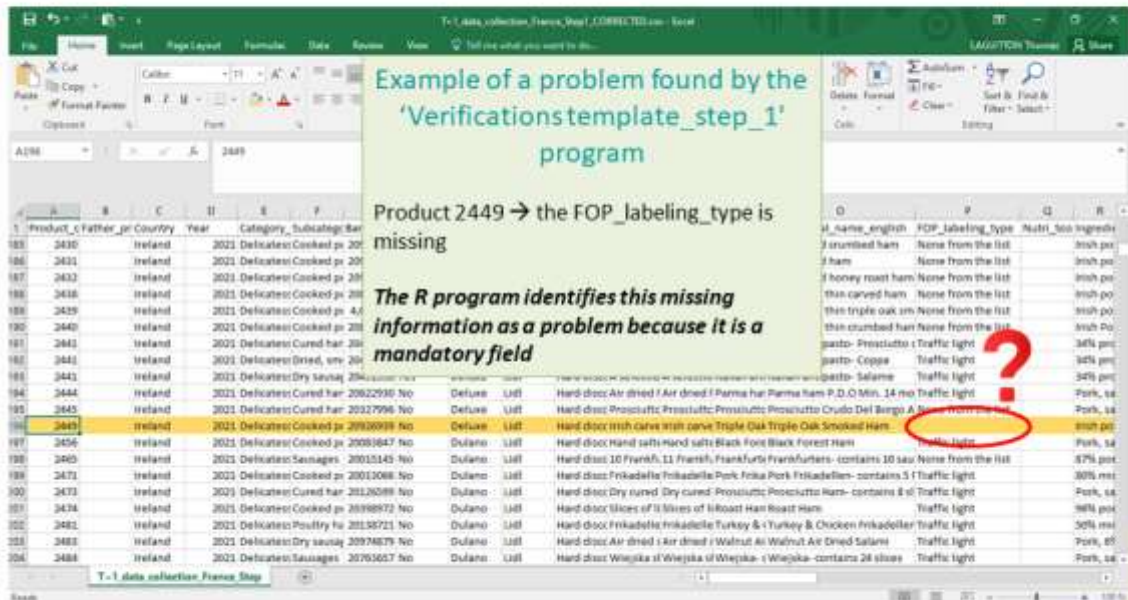






WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program



**Example of a problem found by the 'Verifications template\_step\_1' program**

Product 2449 → the FOP\_labeling\_type is missing

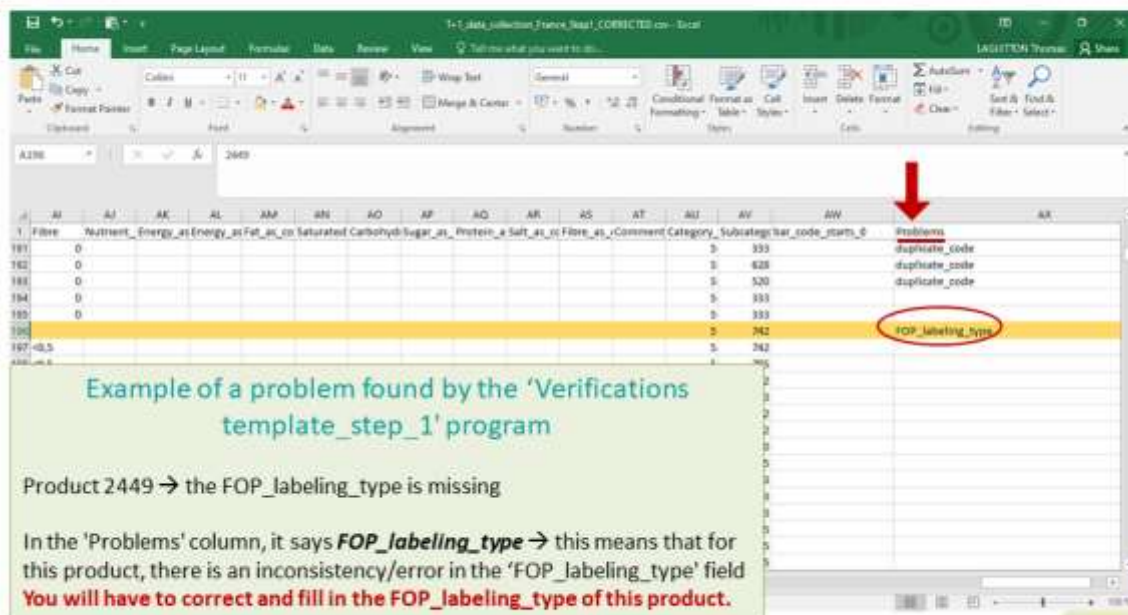
The R program identifies this missing information as a problem because it is a mandatory field

Product_c_Father_pr	Country	Year	Category_Subcategory	...	FOP_labeling_type
2449	Ireland	2021	Delicatessen Cooked pr	...	



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program



**Example of a problem found by the 'Verifications template\_step\_1' program**

Product 2449 → the FOP\_labeling\_type is missing

In the 'Problems' column, it says **FOP\_labeling\_type** → this means that for this product, there is an inconsistency/error in the 'FOP\_labeling\_type' field  
**You will have to correct and fill in the FOP\_labeling\_type of this product.**

Product_c_Father_pr	Country	Year	Category_Subcategory	...	Problems
2449	Ireland	2021	Delicatessen Cooked pr	...	FOP_labeling_type



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

- In the following slides all the terms that can appear in the problem column and how to make corrections will be presented.
- Please note that the verification program 'Verifications template\_step\_1' is **case sensitive** (upper and lower case letters are important). Any information entered that does not match the **spelling** and **case** of the elements in the drop-down lists of the initial data entry template will appear as an error.
- If a line is completely empty (no fields filled) but errors for all fields appear after running the program, then this line should be deleted.  
*Empty rows are normally deleted by the program, but some may still be imported.*
- The program 'verifications template\_step\_1' and all other programs take into account if you have used the template containing only one 'FOP\_labeling\_type' field or if you have used the latest version of the template containing several 'FOP\_labeling\_type' fields



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action	
<b>Duplicate_code</b>	Different products have the same product code	→ You must change the product code so that all products have a unique code	'Product_code' is a mandatory field
<b>Empty_product_code</b>	The product does not have a unique product code	→ You must create a unique product code that does not already exist for the product	
<b>Country</b>	Incorrect country name (i.e. not contained in the closed list of the input template) or missing country name	→ You must check the spelling of the country by comparing it with the <b>closed list of the input template</b> or add the country name if it is missing	'Country' is a mandatory field
<b>Year</b>	year different from that/those indicated in the 'set parameters' part of the program	→ You must correct the collection year that does not match your collection year(s) or add it if it is missing	'Year' is a mandatory field
<b>Category_name</b>	Incorrect category name (i.e. not contained in the closed list of the input template) or missing category name	→ You must check the spelling of the category name by comparing it with the <b>closed list of the input template</b> or add the category name if it is missing	'Category_name' is a mandatory field
<b>Category_code</b>	Category code that does not exist or missing category code	→ You must check the category code exists by comparing it with the classification guides of the 5 food categories or add the category code if it is missing	'Category_code' is a mandatory field





### WORK Package 5 – Reformulation and processed food monitoring

#### Excel file to modify after 'Verifications template\_step\_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template step 1' program, their meaning and what to do

Problem	Meaning	Action	
<b>Subcategory_name</b>	Incorrect subcategory name (i.e. not contained in the closed list of the input template) or missing subcategory name	→ You must check the spelling of the subcategory name by comparing it with the closed list of the input template or add the subcategory name if it is missing	'Subcategory_name' is a mandatory field
<b>Subcategory_code</b>	Category code that does not exist or missing category code	→ You must check the subcategory code exists by comparing it with the classification guides of the 5 food categories or add the subcategory code if it is missing	'Subcategory_code' is a mandatory field
<b>Bar_code_length_or_empty</b>	The barcode does not have 8, 12, 13, 14, or 15 digits or is missing	→ You must go back to the product pictures and correct the barcode or add the barcode if you have forgotten it. If the barcode does not appear on the product pictures or is the same as in the picture, you must indicate in the 'Comments' field: "barcode checked".	
<b>Bar_code_chr</b>	The barcode contains characters other than numbers that are unwanted	→ You must go back to the product pictures and correct the barcode as there can be no characters other than numbers in a barcode	



### WORK Package 5 – Reformulation and processed food monitoring

#### Excel file to modify after 'Verifications template\_step\_1' program



- if the problem **bar\_code\_length\_or\_empty** or **bar\_code\_chr** appears in the '**Problems**' column, you need to look at the product pictures to correct the barcode entered.

If you see that the barcode to be corrected **starts with a number "0"**, you must indicate in the column '**bar\_code\_starts\_0**' → **"Yes"**

AT	AU	AV	AW	AX	AY
					Problems
		853			
		853			
		853			
		848			
		848			
		848			bar_code_length_or_empty
		848			bar_code_length_or_empty
		848		Yes	
		869			
		888			
		846			
		846			bar_code_chr
		846		Yes	
		846			
		846			
		845			
		845			

*You don't need to enter the 0 at the beginning of the barcode in the 'bar\_code' field as this will be removed by Excel (the csv format doesn't take 0's at the beginning of a number into account) but this important information will be kept thanks to the 'bar\_code\_starts\_0' column.*





## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

#### Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action	
<b>Brand_name</b>	Brand name is missing	→ You must go back to the product pictures and add the brand name of the product if you have forgotten it. If the brand name does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: " <i>brand name checked and unreadable/not existing</i> ".	
<b>Type_of_brand</b>	Incorrect type of brand (i.e. not contained in the closed list of the input template) or missing type of brand	→ You must check the spelling of the type of brand by comparing it with the closed list of the input template or add the type of brand if it is missing by looking at the product's brand name	'Type_of_brand' is a mandatory field
<ul style="list-style-type: none"> <li>• <b>Legal_name</b></li> <li>• <b>Legal_name_english</b></li> </ul>	Legal name is missing Legal name in english is missing	→ You must go back to the product pictures and add the legal name of the product if you have forgotten it. If the legal name does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: " <i>legal name checked and unreadable/not existing</i> ". → If the legal name in English is missing, you must translate the legal name and add it to the template	



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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

#### Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action	
<ul style="list-style-type: none"> <li>• <b>Commercial_name</b></li> <li>• <b>Commercial_name_english</b></li> </ul>	Commercial name is missing Commercial name in english is missing	→ You must go back to the product pictures and add the commercial name of the product if you have forgotten it. If the commercial name does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: " <i>commercial name checked and unreadable/not existing</i> ". → If the commercial name in English is missing, you must translate the commercial name and add it to the template	
<ul style="list-style-type: none"> <li>• <b>FOP_labeling_type</b></li> <li>• <b>FOP_labeling_type_2</b></li> <li>• <b>FOP_labeling_type_3</b></li> <li>• <b>FOP_labeling_type_4</b></li> </ul> <p>can appear if you use the latest version of the template</p>	Incorrect FOP labeling type (i.e. not contained in the closed list of the input template) or missing FOP labeling type	→ You must check the spelling of the FOP labeling type by comparing it with the closed list of the input template or add the FOP labeling type if it is missing by looking at the product's pictures. If there is no FOP labeling type of interest on the pictures of the product, you must enter 'None from the list'. → When this problem occurs, it can affect the 'FOP_labeling_type' field and also the 'FOP_labeling_type_2/3/4' fields for those using the latest version of the template. In this case, it is necessary to check the spelling of the field concerned.	'FOP_labeling_type' is a mandatory field
<b>Nutri_score</b>	Incorrect nutri-score (not a letter between A and E)	→ You must go back to the product pictures and find the correct nutri-score of the product and enter it in the template	

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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

#### Terms that may appear in the 'Problems' field following the 'R verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action
<b>Ingredient_list</b>	Ingredient list is missing	→ You must go back to the product pictures and add the ingredient list of the product. If you have forgotten it. If the ingredient list does not appear on the product pictures or is unreadable, you must indicate in the 'Comments' field: "ingredient list checked and unreadable/not existing".
<b>Net_weight</b>	The net weight contains characters other than numbers that are unwanted	→ You must go back to the product pictures and correct the net weight as there can be no characters other than numbers in the 'net_weight' field.
<b>Net_weight_unit</b>	The net weight unit is different from « g » or « mL » (i.e. not contained in the closed list of the input template)	→ You must check the spelling of the net weight unit by paying attention to upper and lower case. It should be entered as "g" or "mL".
<b>Number_of_units</b>	The number of units contains characters other than numbers that are unwanted	→ You must correct the number of units as there can be no characters other than numbers in the 'number_of_units' field
<b>Portion_size</b>	The portion size contains characters other than numbers that are unwanted	→ You must go back to the product pictures and correct the portion size as there can be no characters other than numbers in the 'portion_size' field.

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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_1' program, their meaning and what to do

Problem	Meaning	Action
<b>Portion_size_unit</b>	The portion size unit is different from « g » or « mL »	→ You must check the spelling of the net weight unit by paying attention to upper and lower case. It must be entered "g" or "mL" and not something else.
<b>Nutrient_content_expression_unit</b>	The nutrient content expression unit is different from « 100g » or « 100mL »	→ You must check the spelling of the nutrient content expression unit. It must be entered « 100g » or « 100mL » and not something else.
<ul style="list-style-type: none"> <li>• Energy_kCal</li> <li>• Energy_kJ</li> <li>• Fat</li> <li>• Saturated_fat</li> <li>• Carbohydrates</li> <li>• Sugar</li> <li>• Protein</li> <li>• Salt</li> <li>• Fibre</li> </ul>	The fields contain characters other than numbers (except "<" and "traces") that are unwanted.	→ You must correct so that only numbers remain and no other characters  → if you have any doubt about the values when correcting, go back to the product photos
<b>Nutrient_content_expression_unit_as_consumed</b>	The nutrient content expression unit for products to be reconstituted is different from « 100g » or « 100mL »	→ You must check the spelling of the nutrient content expression unit as consumed. It must be entered « 100g » or « 100mL » and not something else

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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

Terms that may appear in the 'Problems' field following the 'R verifications template step 1' program, their meaning and what to do

Problem	Meaning	Action
<ul style="list-style-type: none"> <li>• Energy_as_consumed_kCal</li> <li>• Energy_as_consumed_kJ</li> <li>• Fat_as_consumed</li> <li>• Saturated_fat_as_consumed</li> <li>• Carbohydrates_as_consumed</li> <li>• Sugar_as_consumed</li> <li>• Protein_as_consumed</li> <li>• Salt_as_consumed</li> <li>• Fibre_as_consumed</li> </ul>	<p>The fields contain characters other than numbers (except "&lt;" and "traces") that are unwanted</p>	<p>→ You must correct so that only numbers remain and no other characters</p> <p>→ If you have any doubt about the values when correcting, go back to the product photos</p>



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_1' program

- Fields that are indicated as mandatory in the previous table and that show a problem when information is missing  
 → **You must correct or enter information for these fields.**
- For nutritional values containing the word "traces", it is also necessary to **check by hand** and **standardize** the spelling of "traces" (so you don't have "Traces", "trace", ...)
- For products where a problem appears but the information entered is correct or missing, you must indicate in the 'Comments' field that the problem has been checked (see the 'Action' column in the previous tables).  
 → **This way, when you will run the verification program again, you will be able to identify problems that appear without being a problem (and have already been verified).**



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_1' program

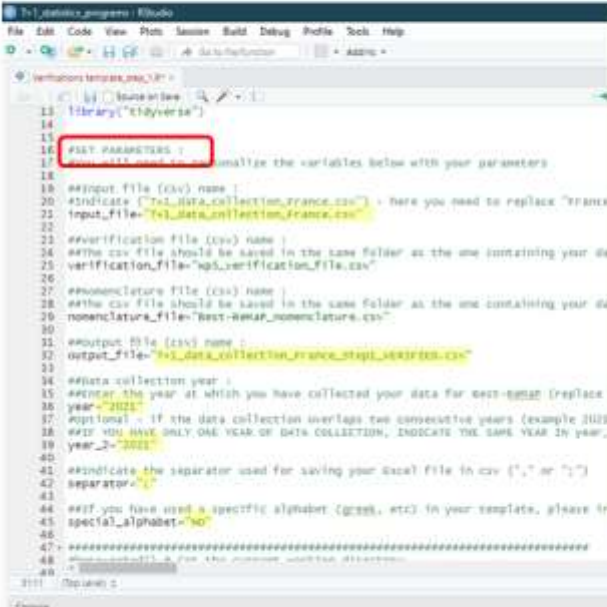
- **Be careful! When saving the file, you must be sure that the barcodes appear in full and not in scientific format. If this is the case, you must repeat the procedure on pages 20→24.**
- Once the corrections have been made and the barcodes are in the correct format, you can save the file *T+1\_data\_collection\_country\_Step1\_CORRECTED.csv* and close it.
- You will have to run this corrected file again in the 'Verifications template\_step\_1' program to make sure you haven't missed a check.

Your Rstudio interface must be cleaned up before running the 'Verifications template\_step\_1' program again.  
All cleaning steps are described on pages 58→64.



WORK Package 5 – Reformulation and processed food monitoring

2<sup>nd</sup> running of 'Verifications template\_step\_1' program



**Setting parameters of the second running of 'Verifications template\_step\_1' program**

For this second running of the 'Verifications template\_step\_1', the only fields you need to change are the names of the input file and the output file.

**Input\_file =**  
"T+1\_data\_collection\_country\_Step1\_CORRECTED.csv"

**Output\_file =**  
"T+1\_data\_collection\_country\_Step1\_VERIFIED2.csv"

You must also indicate the year/years of your collection, the separator and if you have a specific alphabet as in the first run of the program.



WORK Package 5 – Reformulation and processed food monitoring

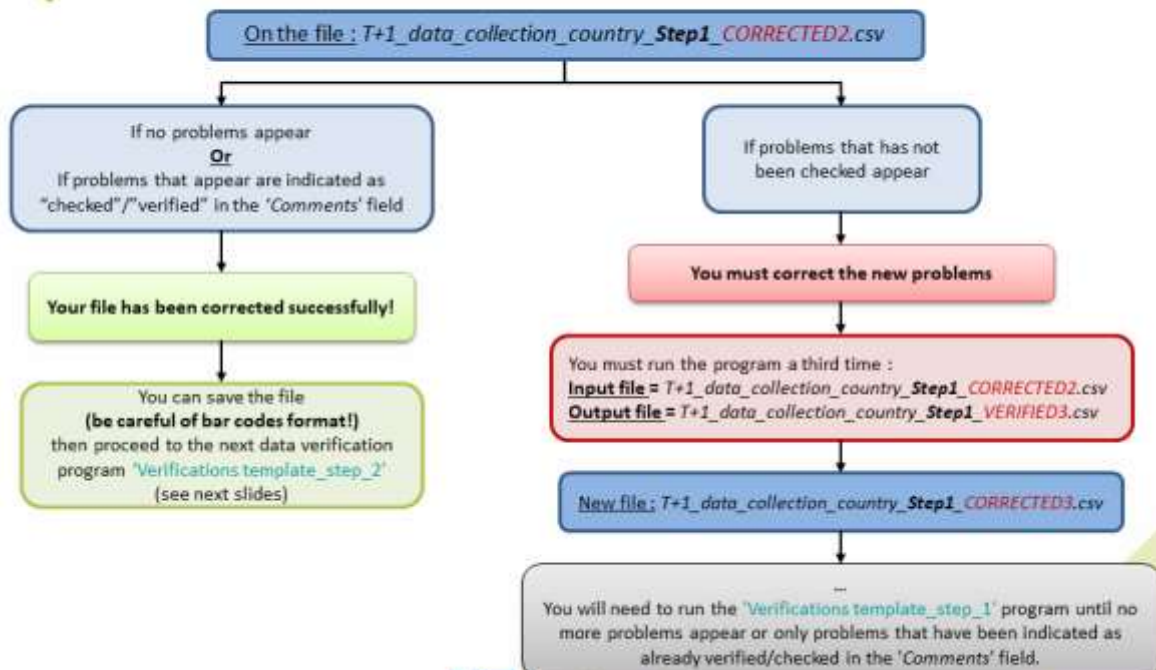
2<sup>nd</sup> running of 'Verifications template\_step\_1' program

- At the end of this second run, you get in the "**Files**" folder a file called:  
"T+1\_data\_collection\_country\_Step1\_VERIFIED2.csv"
  - You must create a copy of this file and call it :  
"T+1\_data\_collection\_country\_Step1\_CORRECTED2.csv"
- It is on this file that you will make the modifications following the checks



WORK Package 5 – Reformulation and processed food monitoring

2<sup>nd</sup> running of 'Verifications template\_step\_1' program







## WORK Package 5 – Reformulation and processed food monitoring

### 3) Running of the verification programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning/standardization

i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1'

ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2'

iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

iv. 4<sup>th</sup> verification program : 'Verifications template\_step\_4'



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## WORK Package 5 – Reformulation and processed food monitoring

### 2<sup>nd</sup> verification program : 'Verifications template\_step\_2'

#### **Presentation of the 'Verifications template step\_2' program :**

- In this second verification program, consistency problems will be highlighted: consistency of categories and their codes, sub-categories and their codes, values and their units, etc.

#### **Requirements before starting the program 'Verifications template step\_2' :**

- The program 'Verifications template\_step\_1' should have been run on your data
- You should no longer have any problems appearing or only problems that have been notified as verified after running the program 'Verifications template\_step\_1'
- You must have your template in your possession and it must now be called:  
 T+1\_data\_collection\_country\_Step1\_CORRECTED(X).csv (with the name of your own country)  
 ( X) is the number of the last file exported and corrected after the last run of the first verification program )
- You need to make sure that the barcodes in your file  
 T+1\_data\_collection\_country\_Step1\_CORRECTED(X).csv appear in full and not in scientific format (see procedure [pages 20→24](#))

Your Rstudio interface must have been cleaned up before running the program.  
 All cleaning steps are described on [pages 58→64](#).

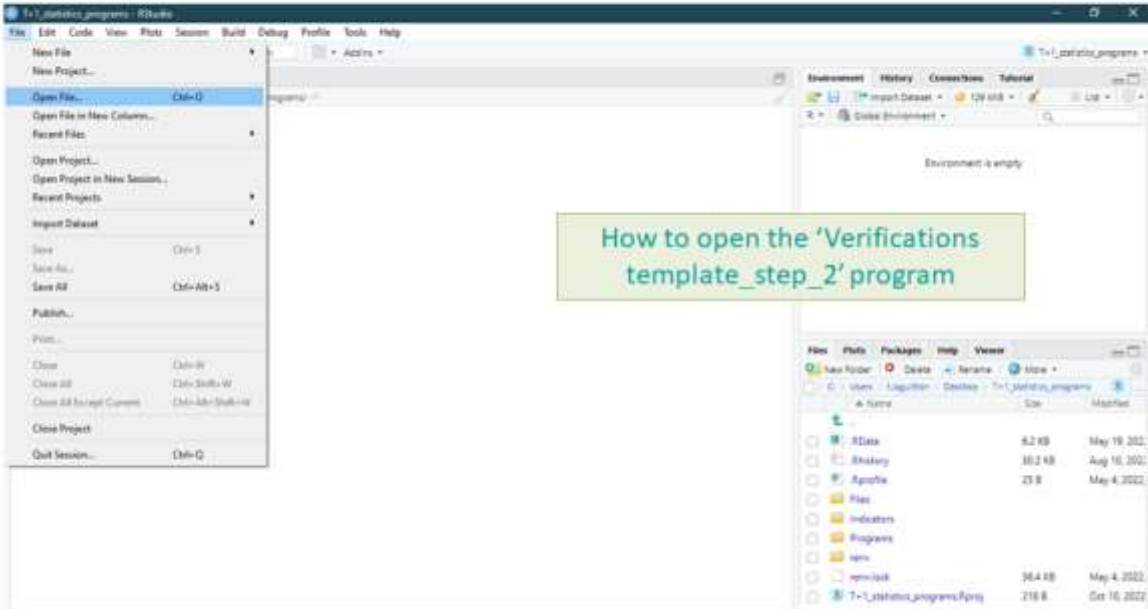


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WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_2' program

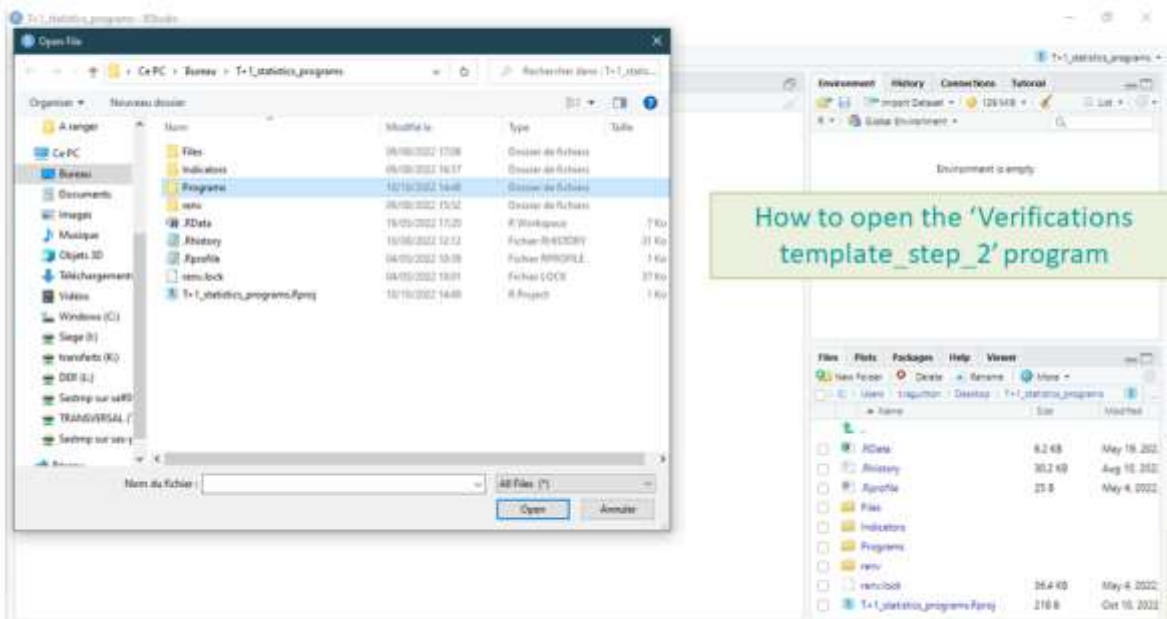


Co-funded by the European Union's  
Health Programme (2014-2020)



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_2' program

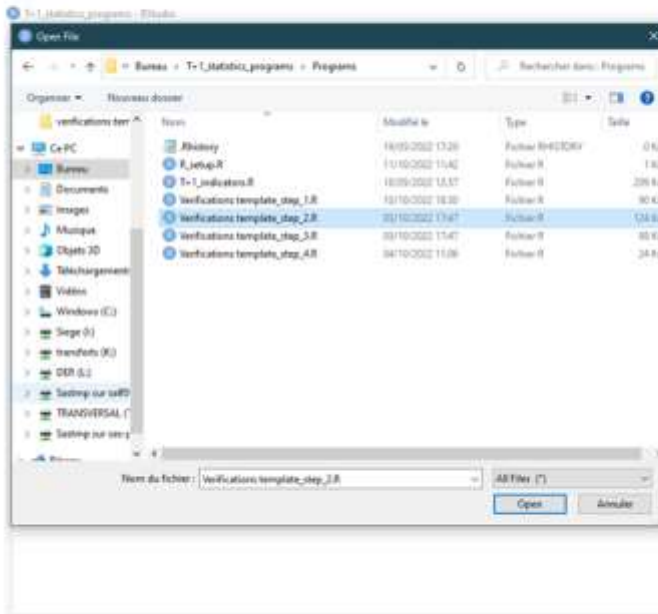


Co-funded by the European Union's  
Health Programme (2014-2020)

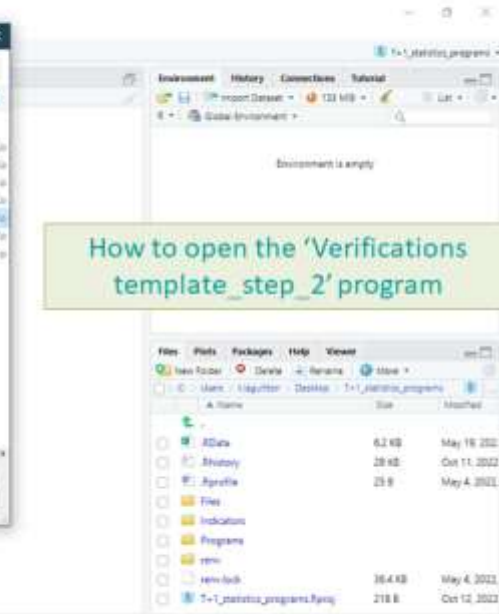


## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_2' program

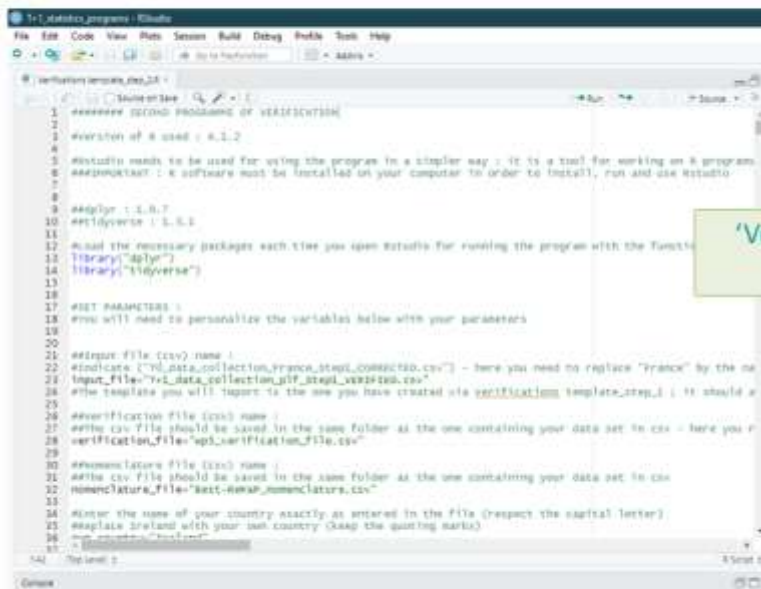


How to open the 'Verifications template\_step\_2' program

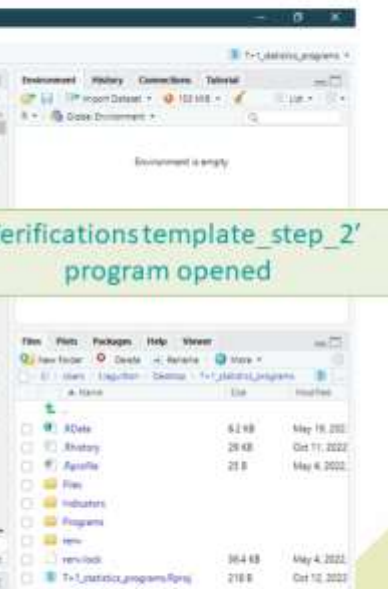



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_2' program



'Verifications template\_step\_2' program opened






## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_2' program

```

17 #POST PARAMETERS :
18 #You will need to personalise the variables below with your parameters
19
20 #input file (csv) name :
21 #Indicate ("RD_data_collection_france_step1_CORRECTED.csv") - here
22 #input_file="RD_data_collection_france_step1_CORRECTED(X).csv"
23 #the template you will import is the one you have created via excel
24
25 #verification file (csv) name :
26 #the csv file should be saved in the same folder as the one containing
27 #verification_file="aps_verification_file.csv"
28
29 #nomenclature file (csv) name :
30 #the csv file should be saved in the same folder as the one containing
31 #nomenclature_file="best-remap_nomenclature.csv"
32
33 #enter the name of your country exactly as entered in the file (keep
34 #replace it along with your own country (keep the quoting marks)
35 #own_country="france"
36
37 #before the output file name :
38 #output_file="T+1_Data_collection_france_step2_VERIFIED.csv"
39
40 #indicate the separator used for saving your excel file in csv (";"
41 #separator=";"
42
43 #if you have used a specific alphabet (greek, etc) in your template
44 #special_alphabet="NO"
45
46
47
48
    
```

#### Setting parameters of the 2<sup>nd</sup> verification program

In the first run of the 2<sup>nd</sup> verification program, you need to change the name of the country with your own country name in the input file (line 23) and the output file (line 39) of the R script + line 36 ('own\_country=')

You must also indicate the separator and if you have a specific alphabet as in the program 'Verifications template\_step\_1'.

Example :

- **Input\_file** =  
"T+1\_data\_collection\_Ireland\_Step1\_CORRECTED(X).csv"  
(X) is the number of the last file exported and corrected after the last run of the first verification program )
- **Own\_country** = "Ireland" (same spelling as in the country name in the template)
- **Output\_file** = "T+1\_data\_collection\_Ireland\_Step2\_VERIFIED.csv"
- **Separator** = ";"
- **Special\_alphabet** = "NO"



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## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_2' program

Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter)

The program will run entirely.

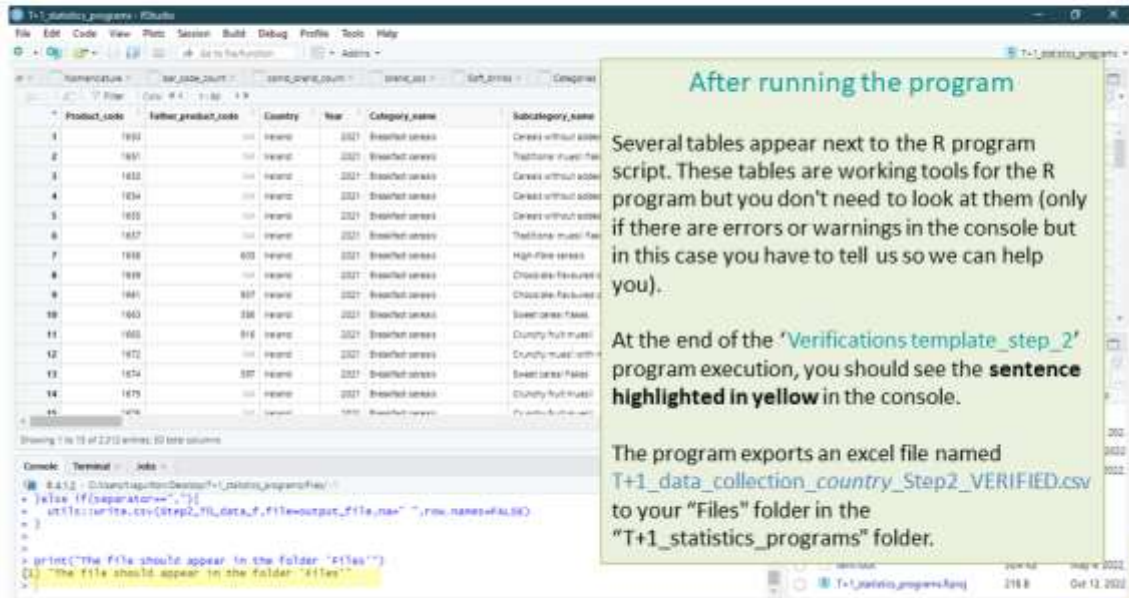


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## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_2' program



**After running the program**

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

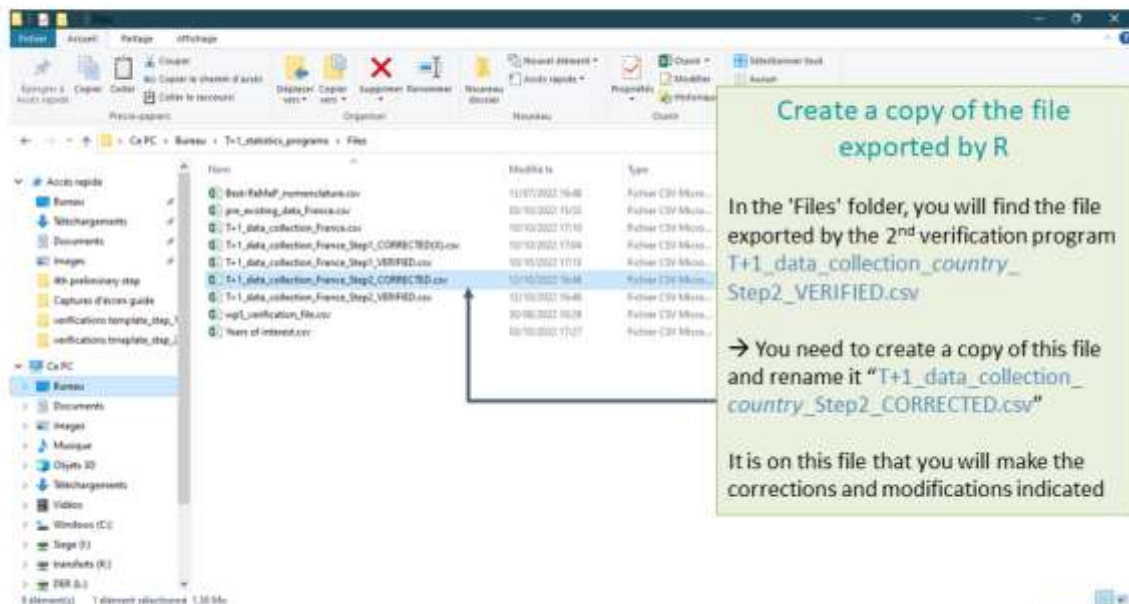
At the end of the 'Verifications template\_step\_2' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports an excel file named `T+1_data_collection_country_Step2_VERIFIED.csv` to your "Files" folder in the "T+1\_statistics\_programs" folder.



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_2' program



**Create a copy of the file exported by R**

In the 'Files' folder, you will find the file exported by the 2<sup>nd</sup> verification program `T+1_data_collection_country_Step2_VERIFIED.csv`

→ You need to create a copy of this file and rename it "`T+1_data_collection_country_Step2_CORRECTED.csv`"

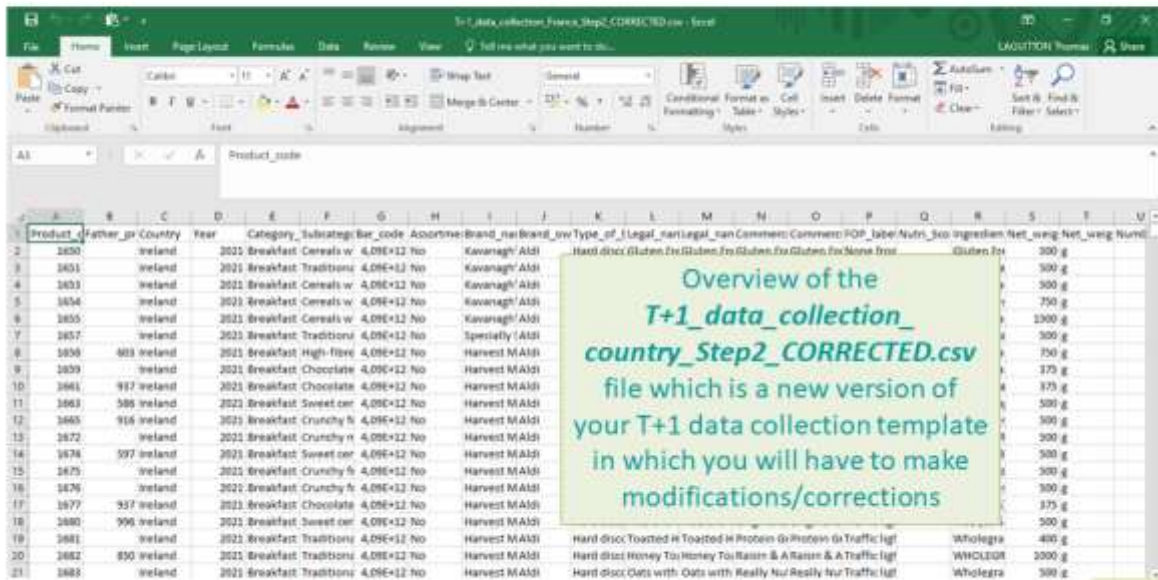
It is on this file that you will make the corrections and modifications indicated





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_2' program



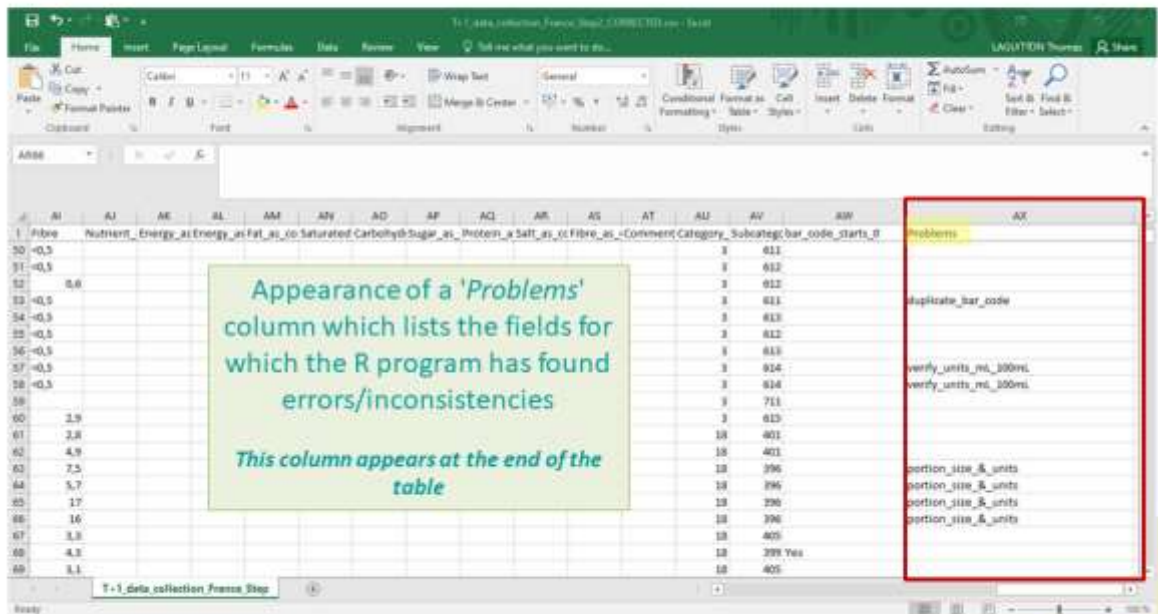
**Overview of the T+1\_data\_collection\_country\_Step2\_CORRECTED.csv file which is a new version of your T+1 data collection template in which you will have to make modifications/corrections**

Product	Country	Year	Category	Subcategory	bar_code	Asortime	Brand_nar	Brand_ovr	Type_of_f	Legal_nar	Legal_ovr	Comment	Comment POP	label	Nutrs_Sec	Ingredient	Net_wing	Net_wing Numd	
1030	Ireland	2021	Breakfast	Cereals w	4,09E+12	No	Kavanagh	Aldi				Hard disc: Gluten	Fr:Gluten	Fr:Gluten	Fr:Gluten	Fr:Gluten	Fr:Gluten	Fr:Gluten	Fr:Gluten
1031	Ireland	2021	Breakfast	Traditio	4,09E+12	No	Kavanagh	Aldi				Hard disc: Honey	To: Honey	To: Honey	To: Raisin	& A Raisin	& A Raisin	& A Raisin	& A Raisin
1033	Ireland	2021	Breakfast	Cereals w	4,09E+12	No	Kavanagh	Aldi				Hard disc: Oats	with Oats	with Really Nu	Really Nu	Really Nu	Really Nu	Really Nu	Really Nu



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_2' program



**Appearance of a 'Problems' column which lists the fields for which the R program has found errors/inconsistencies**

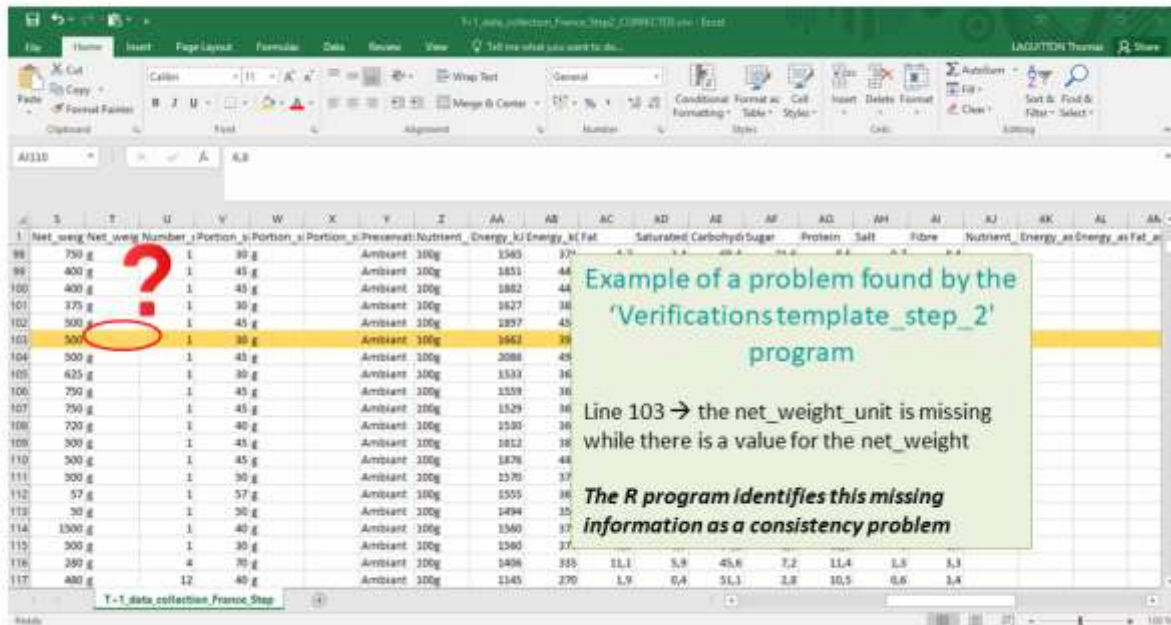
*This column appears at the end of the table*

Fibre	Nutrient	Energy	asEnergy	asFat	asCo	Saturated	Carbohydr	Sugar	asProtein	asSalt	asFibre	asComment	Category	Subcategory	bar_code	starts	if	Problems
0	<0.5																	
1	<0.5																	duplicate_bar_code
2	<0.5	0.8																verify_units_ms_100ml
3	<0.5																	verify_units_ms_100ml
4	<0.5																	portion_size_&_units
5	<0.5																	portion_size_&_units
6	<0.5																	portion_size_&_units
7	<0.5																	portion_size_&_units
8	<0.5																	portion_size_&_units
9	<0.5																	portion_size_&_units
10	3.9																	
11	3.8																	
12	4.9																	
13	7.5																	
14	5.7																	
15	17																	
16	16																	
17	3.3																	
18	4.3																	
19	3.1																	



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_2' program



Example of a problem found by the 'Verifications template\_step\_2' program

Line 103 → the net\_weight\_unit is missing while there is a value for the net\_weight

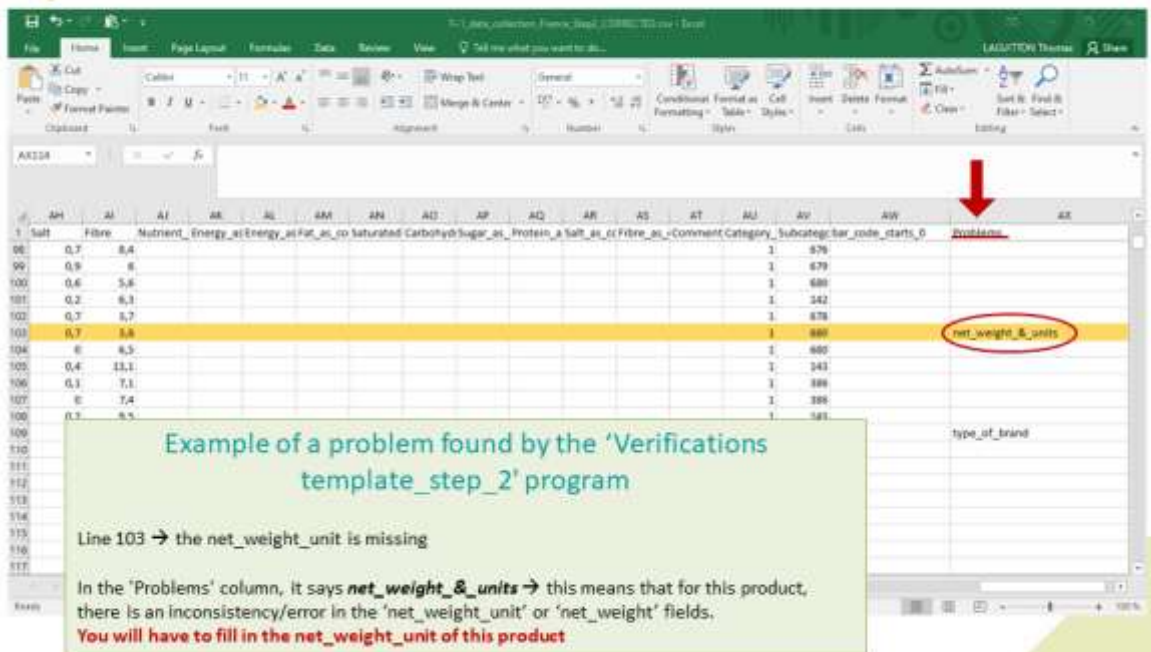
The R program identifies this missing information as a consistency problem

	Net_weight	Net_weight_unit	Number	Portion_s	Portion_u	Portion_p	Preservat	Nutrient	Energy_kj	Energy_kj_Fat	Saturated	Carbohydr	Sugar	Protein	Salt	Fibre	Nutrient_Energy_as	Energy_as_Fat_as
98	750 g		1	30 g			Ambiant	100g	1540	37								
99	400 g		1	43 g			Ambiant	100g	1851	44								
100	400 g		1	43 g			Ambiant	100g	1882	44								
101	375 g		1	30 g			Ambiant	100g	1627	38								
102	500 g		1	45 g			Ambiant	100g	1937	45								
103	500		1	30 g			Ambiant	100g	1642	39								
104	500 g		1	43 g			Ambiant	100g	2088	49								
105	425 g		1	30 g			Ambiant	100g	1533	36								
106	750 g		1	43 g			Ambiant	100g	2338	36								
107	750 g		1	43 g			Ambiant	100g	1529	36								
108	700 g		1	40 g			Ambiant	100g	1930	36								
109	500 g		1	43 g			Ambiant	100g	1812	38								
110	500 g		1	45 g			Ambiant	100g	1876	44								
111	500 g		1	30 g			Ambiant	100g	1570	37								
112	57 g		1	57 g			Ambiant	100g	1555	36								
113	30 g		1	50 g			Ambiant	100g	1494	35								
114	1300 g		1	40 g			Ambiant	100g	1540	37								
115	500 g		1	30 g			Ambiant	100g	1560	37								
116	380 g		4	30 g			Ambiant	100g	1408	35	11,1	5,9	45,6	7,2	11,4	1,5	5,3	
117	480 g		12	40 g			Ambiant	100g	1345	270	1,9	0,4	51,3	2,8	10,5	0,6	3,4	



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_2' program



Example of a problem found by the 'Verifications template\_step\_2' program

Line 103 → the net\_weight\_unit is missing

In the 'Problems' column, it says **net\_weight & units** → this means that for this product, there is an inconsistency/error in the 'net\_weight\_unit' or 'net\_weight' fields.  
**You will have to fill in the net\_weight\_unit of this product**

	Salt	Fibre	Nutrient_energy_as	Energy_as_Fat_as	co_saturated	Carbohydr_sugar_as	Protein_a	Salt_as	Fibre_as	Comment	Category	Subcategory	bar_code_start_0	Problems
98	0,7	8,4											1	679
99	0,9	8											1	679
100	0,6	5,8											1	680
101	0,2	6,3											1	342
102	0,7	5,7											1	678
103	0,7	5,8											1	680
104	0	6,5											1	680
105	0,4	13,1											1	343
106	0,3	7,1											1	686
107	0	7,4											1	388
108	0,3	6,5											1	343
109														
110														type_of_brand
111														
112														
113														
114														
115														
116														
117														



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>nomenclature</b>	Wrong association between 'Category_name', 'Category_code', 'Subcategory_name' and 'Subcategory_code'	→ Check the 4 fields and correct those (or the one) that are not correctly associated
<b>Net_weight_&amp;_units</b>	<ul style="list-style-type: none"> <li>The <b>net weight</b> is filled but there is no associated <b>net weight unit</b></li> <li><b>or</b></li> <li>The <b>net weight unit</b> is filled but there is no associated <b>net weight</b></li> </ul>	<ul style="list-style-type: none"> <li>→ If there is a value in the 'net_weight' field, you must add the unit « g » or « mL » in the 'net_weight_unit' field</li> <li>→ If there is a unit in the field 'net_weight_unit', you must go back to the pictures of the product and add the value of the portion size. If there is no net weight for this product, it must be an input error and you can delete the unit.</li> <li>→ When you have any doubts, you must go back to the pictures of the product to be sure of what to enter</li> </ul>
<b>Portion_size_&amp;_units</b>	<ul style="list-style-type: none"> <li>The <b>portion size</b> is filled but there is no associated <b>portion size unit</b></li> <li><b>or</b></li> <li>The <b>portion size unit</b> is filled but there is no associated <b>portion size</b></li> </ul>	<ul style="list-style-type: none"> <li>→ If there is a value in the 'portion_size' field, you must add the unit « g » or « mL » in the 'portion_size_unit' field</li> <li>→ If there is a unit in the field 'portion_size_unit', you must go back to the pictures of the product and add the value of the portion size. If there is no portion size for this product, it must be an input error and you can delete the unit.</li> <li>→ When you have any doubts, you must go back to the pictures of the product to be sure of what to enter</li> </ul>



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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>Nutritional_values_&amp;_units</b>	<ul style="list-style-type: none"> <li>The <b>nutrient content expression unit</b> is filled but there are no associated <b>nutritional values</b> for the nutrients</li> <li><b>or</b></li> <li>There are <b>nutritional values</b> for the nutrients but there is no associated <b>nutrient content expression unit</b></li> </ul>	<ul style="list-style-type: none"> <li>→ If there are nutritional values for the nutrients, you must add the unit « 100g » or « 100mL » in the 'nutrient_content_expression_unit' field</li> <li>→ If there is a unit in the field 'nutrient_content_expression_unit', you must go back to the pictures of the product and add the nutritional values of each nutrient. If there is nutritional values for this product, it must be an input error and you can delete the unit.</li> <li>→ When you have any doubts, you must go back to the pictures of the product to be sure of what to enter</li> </ul>
<b>Nutritional_values_as_consumed_&amp;_units</b>	<ul style="list-style-type: none"> <li>The <b>nutrient content expression unit for products to be reconstituted</b> is filled but there is no associated <b>nutritional values for the nutrients as consumed</b></li> <li><b>or</b></li> <li>There are <b>nutritional values for the nutrients as consumed</b> but there is no associated <b>nutrient content expression unit for products to be reconstituted</b></li> </ul>	<ul style="list-style-type: none"> <li>→ If there are nutritional values as consumed for the nutrients, you must add the unit « 100g » or « 100mL » in the 'nutrient_content_expression_unit_as_consumed' field</li> <li>→ If there is a unit in the field 'nutrient_content_expression_unit_as_consumed', you must go back to the pictures of the product and add the nutritional values as consumed of each nutrient. If there is no nutritional values as consumed for this product, it must be an input error and you can delete the unit.</li> <li>→ When you have any doubts, you must go back to the pictures of the product to be sure of what to enter</li> </ul>



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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>Wrong_country</b>	This is not the name of your country	→ You must enter the name of your own country, making sure that this is the same spelling as the closed list of the input template
<b>Duplicate_bar_code</b>	Same bar code has been found for 2 or more products	→ If the products have the same bar code and are <b>similar</b> (= duplicates = same bar code + same information for all the fields), you must delete one of the products to keep only one.  → If the products have the same bar code but are <b>different</b> , you must check if it is an input error by going back to the pictures of the products. <ul style="list-style-type: none"> <li>• If it is an input error, you must enter the correct bar code.</li> <li>• If the products really have the same bar code, you must keep them in the template and indicate in the 'Comments' field : « bar code checked and same for several different products »</li> </ul>
<b>Type_of_brand</b>	The same brand has been associated with several types of brand. (This problem appears for all products of a same brand if they have been associated with different types of brand)	→ You must filter in the Excel file on a brand name that shows the problem « <i>Type_of_brand</i> », then you must select the correct type of brand and apply it to all the products of the same brand name.



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>Carbohydrates_or_sugar_content</b>	The <b>sugar</b> content is greater than the <b>carbohydrates</b> content	→ You must go back to the pictures of the product and look at the sugar and carbohydrates content to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product
<b>Carbohydrates_or_sugar_as_consumed_content</b>	The <b>sugar as consumed</b> content is greater than the <b>carbohydrates as consumed</b> content for products to be reconstituted	→ You must go back to the pictures of the product and look at the sugar and carbohydrates content as consumed to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product
<b>Fat_or_saturated_fat_content</b>	The <b>saturated fat</b> content is greater than the <b>fat</b> content	→ You must go back to the pictures of the product and look at the fat and saturated fat content to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product
<b>Fat_or_saturated_fat_as_consumed_content</b>	The <b>saturated fat as consumed</b> content is greater than the <b>fat as consumed</b> content for products to be reconstituted	→ You must go back to the pictures of the product and look at the fat and saturated fat content as consumed to correct this error. → If the error is on the product label, do not change anything and leave what is written on the product



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>Verify_units_g_100g</b>	a unit in "g" appears for a product belonging to the 'Soft drinks' category	<ul style="list-style-type: none"> <li>→ You must look at all the fields of the product that have units and find the unit "g". (Net_weight_unit, Portion_size_unit, Nutrient_content_expression_unit, Nutrient_content_expression_unit_as_consumed)</li> <li>→ You must compare with the pictures of the product to check if this is an input error and correct it if necessary.</li> <li>→ <b>It is not necessarily an input error as some milk beverages can have units in g.</b></li> </ul>
<b>Verify_units_ml_100ml</b>	a unit in "ml" appears for a product belonging to a <b>category other than the 'Soft drinks' category</b>	<ul style="list-style-type: none"> <li>→ You must look at all the fields of the product that have units and find the unit "ml". (Net_weight_unit, Portion_size_unit, Nutrient_content_expression_unit, Nutrient_content_expression_unit_as_consumed)</li> <li>→ You must compare with the pictures of the product to check if this is an input error and correct it if necessary.</li> <li>→ <b>It is not necessarily an input error as some yoghourts can have units in mL.</b></li> </ul>



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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

Problem	Meaning	Action
<b>Enter_Nutri_score</b>	The 'FOP labeling type' field indicates <i>Nutriscore</i> but there is no associated nutri-score in the 'Nutriscore' field	<ul style="list-style-type: none"> <li>→ You must go back to the pictures of the product and enter the letter of the nutri-score that appears on the package.</li> <li>→ If there is no nutri-score on the picture, you must correct the entry in the field 'FOP_labeling_type' by choosing another FOP labeling type or <i>none of the list</i> (mandatory field)</li> </ul>
<b>Remove_Nutri_score</b>	<ul style="list-style-type: none"> <li>• A nutri score is filled in the 'Nutriscore' field but the 'FOP labeling type' does not indicate <i>Nutriscore</i>.</li> </ul>	<ul style="list-style-type: none"> <li>→ You must go back to the pictures of the product and check if there is a nutri-score on the package           <ul style="list-style-type: none"> <li>• If there is a nutri-score on the package, you must indicate <i>Nutriscore</i> in the 'FOP_labeling_type' field and check that the letter of the nutri-score entered is the right one</li> <li>• If there is no nutri-score on the picture, you must delete the letter in the 'Nutriscore' field and choose a FOP labeling type or <i>none of the list</i> in the field 'FOP_labeling_type' (mandatory field)</li> </ul> </li> </ul>



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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_2' program, their meaning and what to do

This problem can only occur if you are working on the latest version of the template which includes several fields for FOP labeling types (FOP\_labeling\_type2, FOP\_labeling\_type3, FOP\_labeling\_type4)

Problem	Meaning	Action
<b>Incorrect_FOPs</b>	<p>The first field 'FOP_labeling_type' indicates <i>None from the list</i> but not the other fields 'FOP_labeling_type2/3/4'.</p> <p>When the first field 'FOP_labeling_type' indicates <i>None from the list</i>, the other fields 'FOP_labeling_type2/3/4' must also indicate <i>None from the list</i>.</p>	<p>→ If one or more of the fields 'FOP_labeling_2/3/4' is empty, then you must enter <i>None from the list</i> in those fields.</p> <p>→ If another FOP label (nutriscore, reference intake, ...) is indicated in the field 'FOP_labeling_type2/3 or 4', you have to check on the product pictures that this is not an error and if there is indeed an FOP label on the product, it must be indicated in the first field 'FOP_labeling_type' and the other 2/3/4 must indicate 'none from the list'.</p>



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_2' program

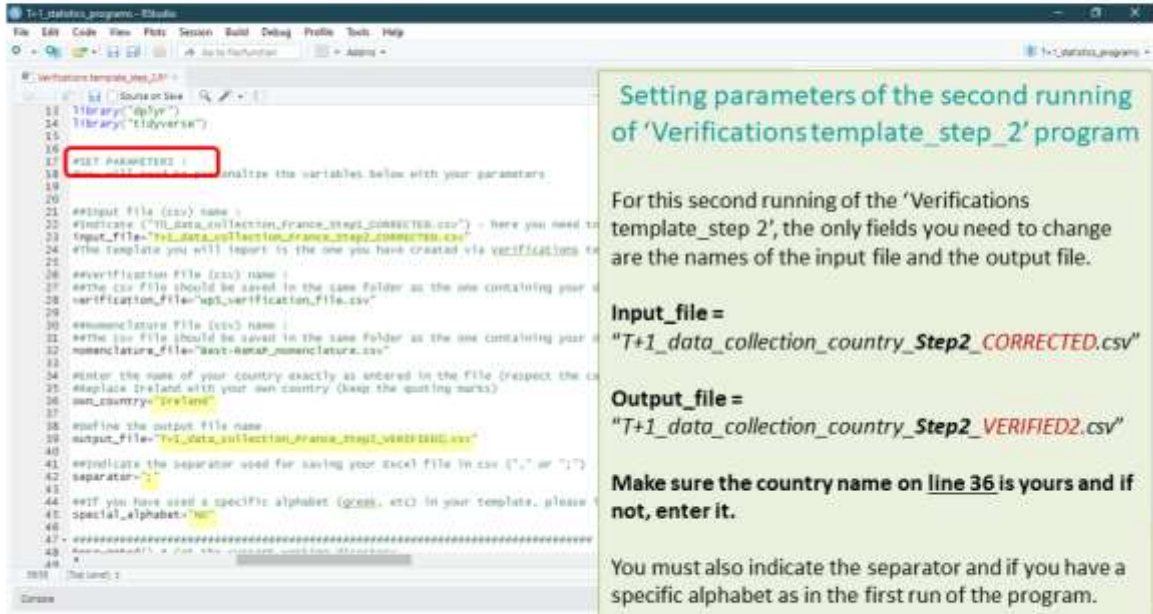
- **Be careful! When saving the file, you must be sure that the barcodes appear in full and not in scientific format. If this is the case, you must repeat the procedure on [pages 20→24](#).**
- Once the corrections have been made and the barcodes are in the correct format, you can save the file *T+1\_data\_collection\_country\_Step2\_CORRECTED.csv* and close it.
- You will have to run this corrected file again in the 'Verifications template\_step\_2' program to make sure you haven't missed a check.

Your Rstudio interface must be cleaned up before running the 'Verifications template\_step\_2' program again.  
 All cleaning steps are described on [pages 58→64](#).



WORK Package 5 – Reformulation and processed food monitoring

2<sup>nd</sup> running of 'Verifications template\_step\_2' program



**Setting parameters of the second running of 'Verifications template\_step\_2' program**

For this second running of the 'Verifications template\_step\_2', the only fields you need to change are the names of the input file and the output file.

**Input\_file =**  
"T+1\_data\_collection\_country\_Step2\_CORRECTED.csv"

**Output\_file =**  
"T+1\_data\_collection\_country\_Step2\_VERIFIED2.csv"

**Make sure the country name on line 36 is yours and if not, enter it.**

You must also indicate the separator and if you have a specific alphabet as in the first run of the program.



WORK Package 5 – Reformulation and processed food monitoring

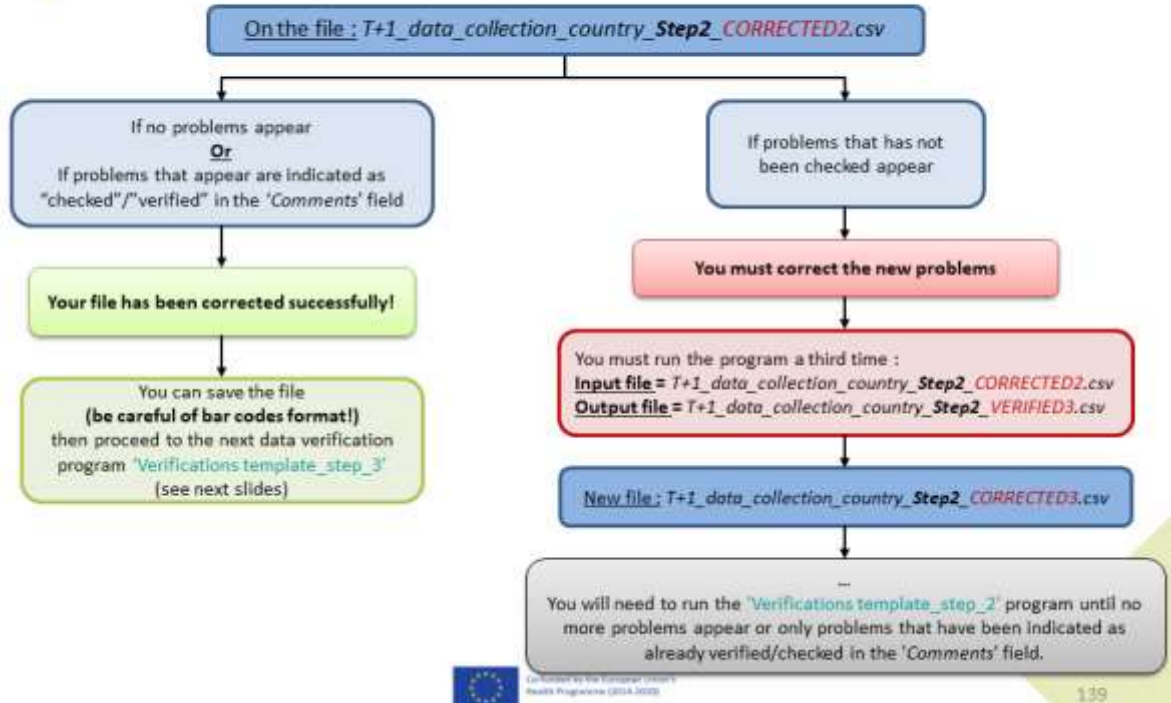
2<sup>nd</sup> running of 'Verifications template\_step\_2' program

- At the end of this second run, you get in your "files" folder a file called:  
"T+1\_data\_collection\_country\_Step2\_VERIFIED2.csv"
  - You must create a copy of this file and call it :  
"T+1\_data\_collection\_country\_Step2\_CORRECTED2.csv"
- It is on this file that you will make the modifications following the checks



WORK Package 5 – Reformulation and processed food monitoring

2<sup>nd</sup> running of 'Verifications template\_step\_2' program



WORK Package 5 – Reformulation and processed food monitoring

3) Running of the verification programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template cleaning /standardization

i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1'

ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2'

iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

iv. 4<sup>th</sup> verification program : 'Verifications template\_step\_4'



## WORK Package 5 – Reformulation and processed food monitoring

### 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

#### **Presentation of the 'Verifications template\_step\_3' program :**

- Third verification program : verification of outliers in your nutritional values
  - For each nutrient in each subcategory, the following position indicators will be calculated :
    - 1st quartile (Q1)
    - 3rd quartile (Q3)
    - Interquartile range (IQR=Q3-Q1)
- Nutrient values will be considered outliers if they are below  $Q1-(IQR*1.5)$  and above  $Q3+(IQR*1.5)$ .



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## WORK Package 5 – Reformulation and processed food monitoring

### 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

#### **Requirements before starting the program 'Verifications template\_step\_3' :**

- The programs 'Verifications template\_step\_1' and 'Verifications template\_step\_2' should have been run on your data
- You should no longer have any problems appearing or only problems that have been notified as verified after running the program 'Verifications template\_step\_2'
- You must have your template in your possession and it must now be called:  
`T+1_data_collection_country_Step2_CORRECTED(X).csv` (with the name of your own country)  
 ( X) is the number of the last file exported and corrected after the last run of the first verification program )
- You need to make sure that the barcodes in your file  
`T+1_data_collection_country_Step2_CORRECTED(X).csv` appear in full and not in scientific format (see procedure [pages 20→24](#))

Your Rstudio interface must have been cleaned up before running the program.  
 All cleaning steps are described on [pages 58→64](#).

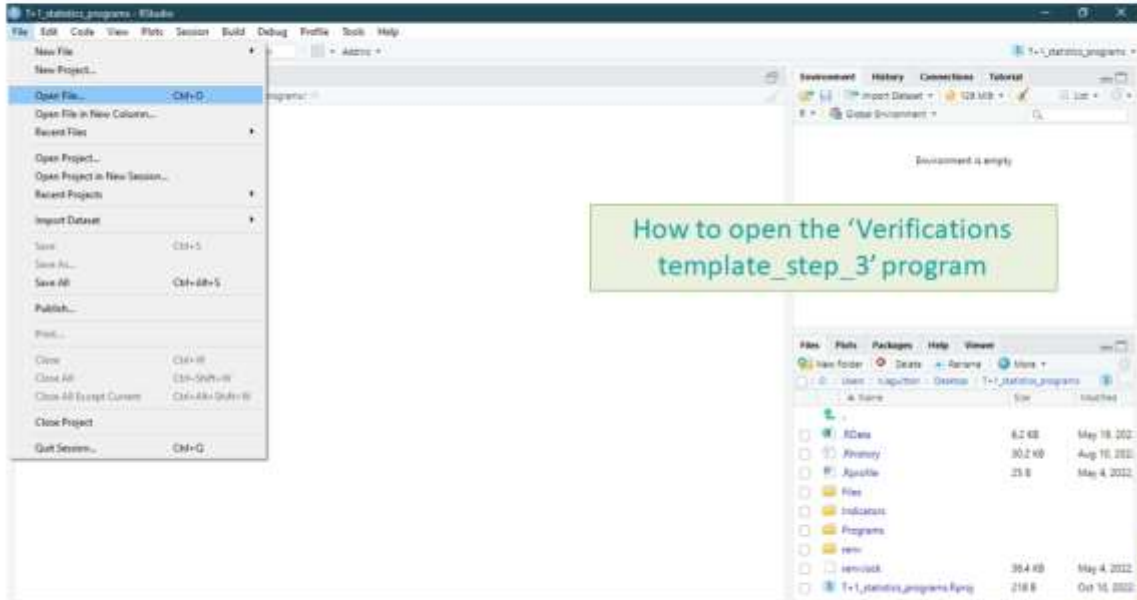


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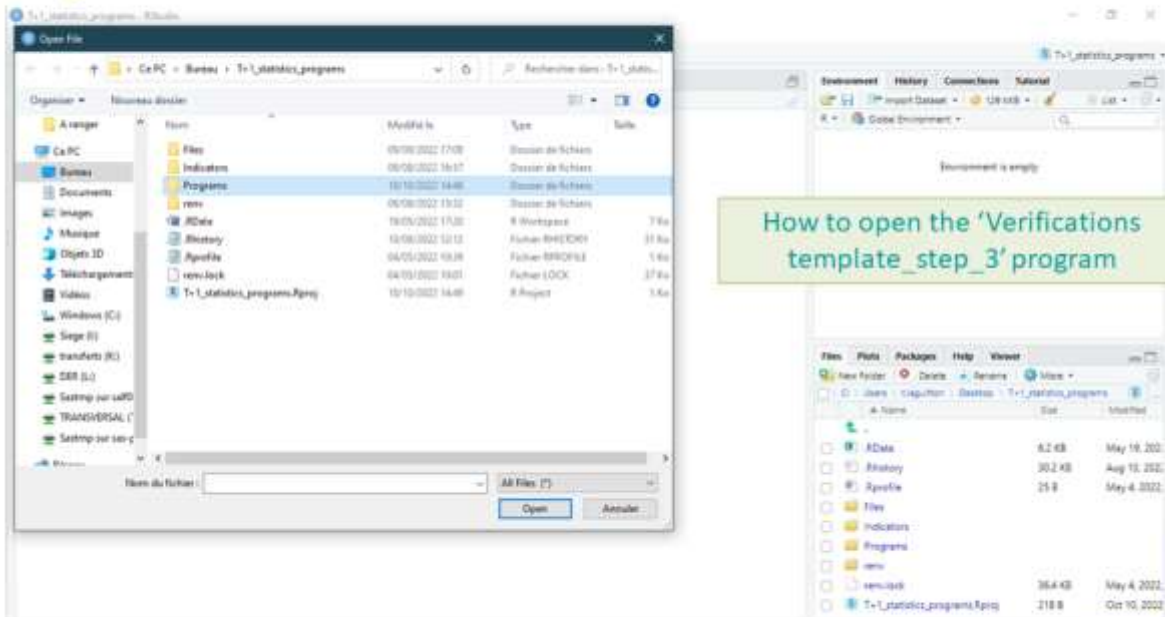
WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_3' program



WORK Package 5 – Reformulation and processed food monitoring

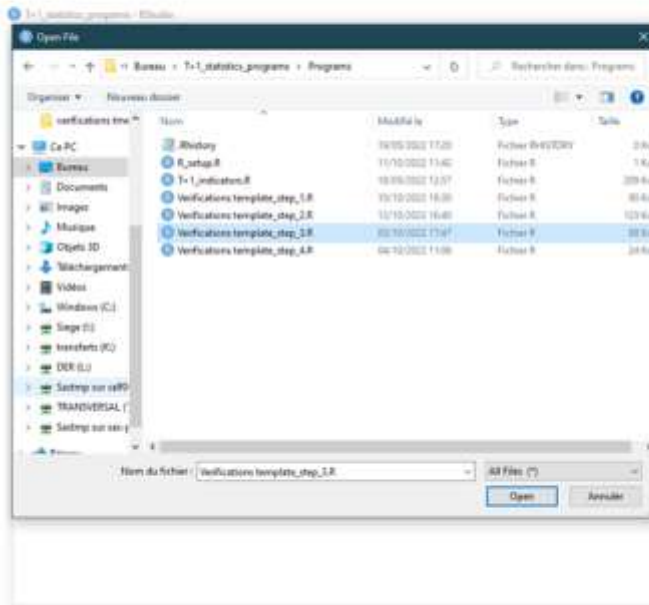
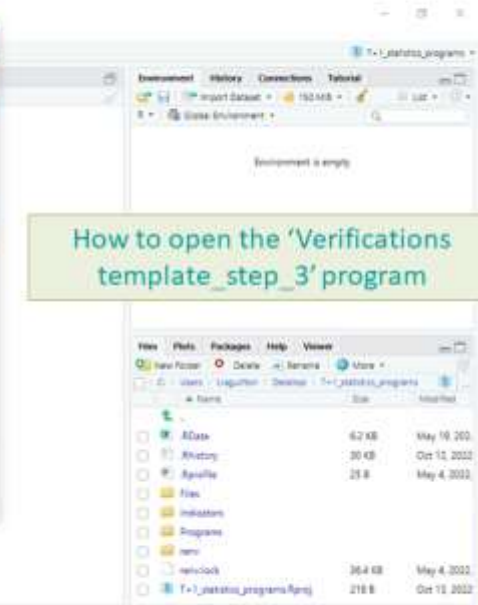
Running of 'Verifications template\_step\_3' program





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_3' program

How to open the 'Verifications template\_step\_3' program

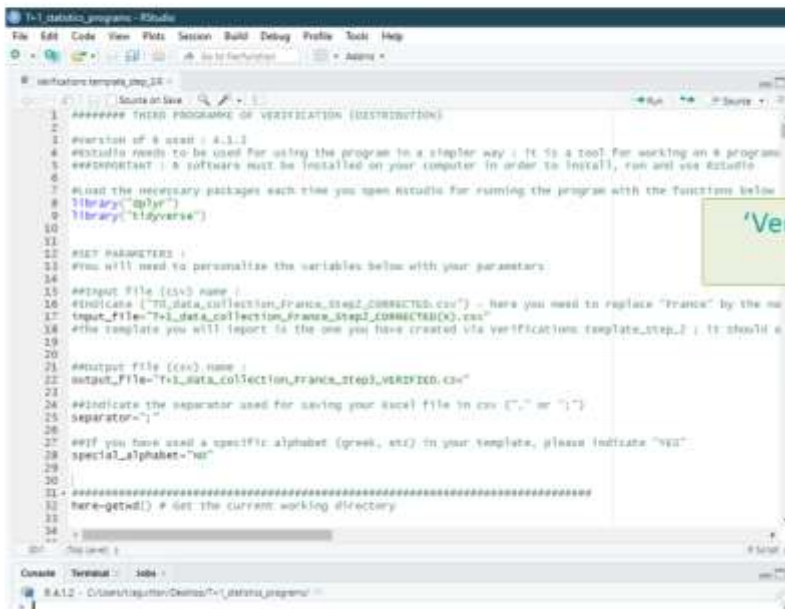



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WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_3' program

'Verifications template\_step\_3' program opened

```

1 ##### THIS PROGRAM IS VERIFICATION (DISTRIBUTION)
2
3 version of R used : 4.1.1
4 #Rstudio needs to be used for using the program in a step-by-step way : it is a tool for working on R program
5 #IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
6
7 load the necessary packages each time you open Rstudio for running the program with the functions below
8 library("dplyr")
9 library("tidyverse")
10
11
12 ##SET PARAMETERS :
13 #you will need to personalize the variables below with your parameters
14
15 ##input file (csv) name :
16 #indicate ("T0_data_collection_france_step3_CORRECTED.csv" - here you need to replace "France" by the nu
17 input_file="T-1_data_collection_france_step3_CORRECTED.csv"
18 #the template you will report to the one you have created via verifications_template_step_2 : it should a
19
20
21 ##output file (csv) name :
22 output_file="T-1_data_collection_france_step3_VERIFIED.csv"
23
24 ##indicate the separator used for saving your excel file in csv (";" or ",")
25 separator=";"
26
27 ##if you have used a specific alphabet (greek, etc) in your template, please indicate "yes"
28 special_alphabet="no"
29
30
31 #####
32 here-getwd() # get the current working directory
33
34
    
```



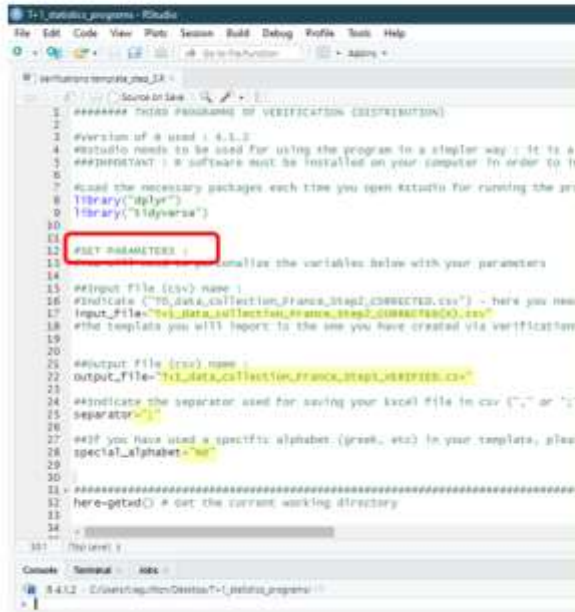
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WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_3' program



### Setting parameters of the 3<sup>rd</sup> verification program

In the first run of the 3<sup>rd</sup> verification program, you need to change the name of the country with your own country name in the input file (line 17) and the output file (line 22)

You must also indicate the separator and if you have a specific alphabet as in the program "Verifications template\_step\_1" and "Verifications template\_step\_2".

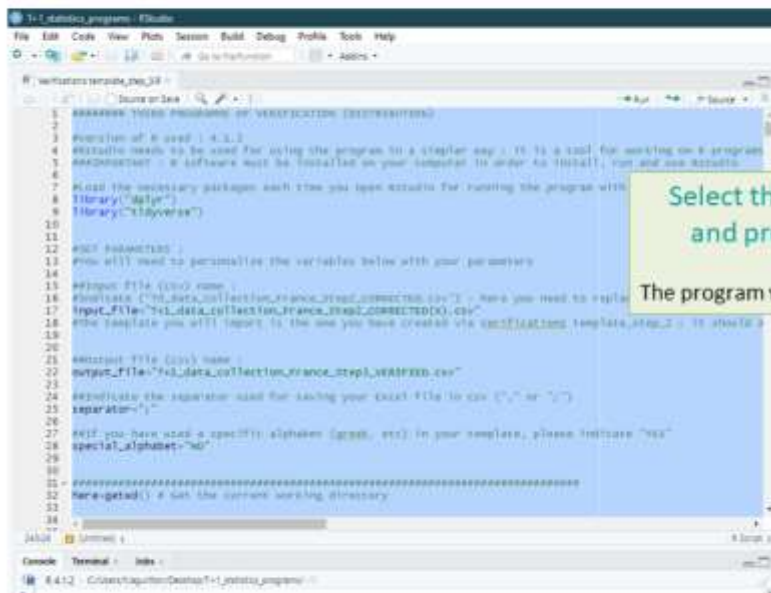
*Example :*

- **Input\_file** = "T+1\_data\_collection\_Ireland\_Step2\_CORRECTED(X).csv" ((X) is the number of the last file exported and corrected after the last run of the second verification program )
- **Output\_file** = "T+1\_data\_collection\_Ireland\_Step3\_VERIFIED.csv"
- **Separator** = ";"
- **Special\_alphabet** = "NO"



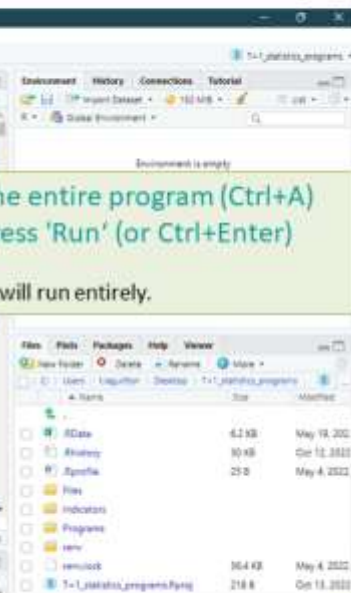
WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_3' program



Select the entire program (Ctrl+A)  
and press 'Run' (or Ctrl+Enter)

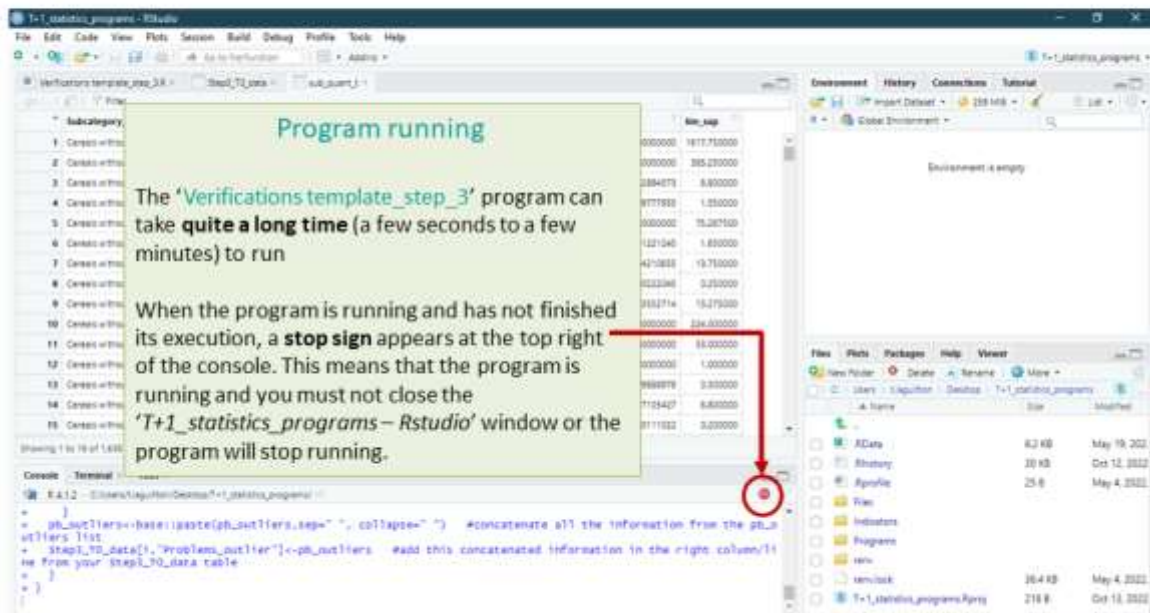
The program will run entirely.





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_3' program



**Program running**

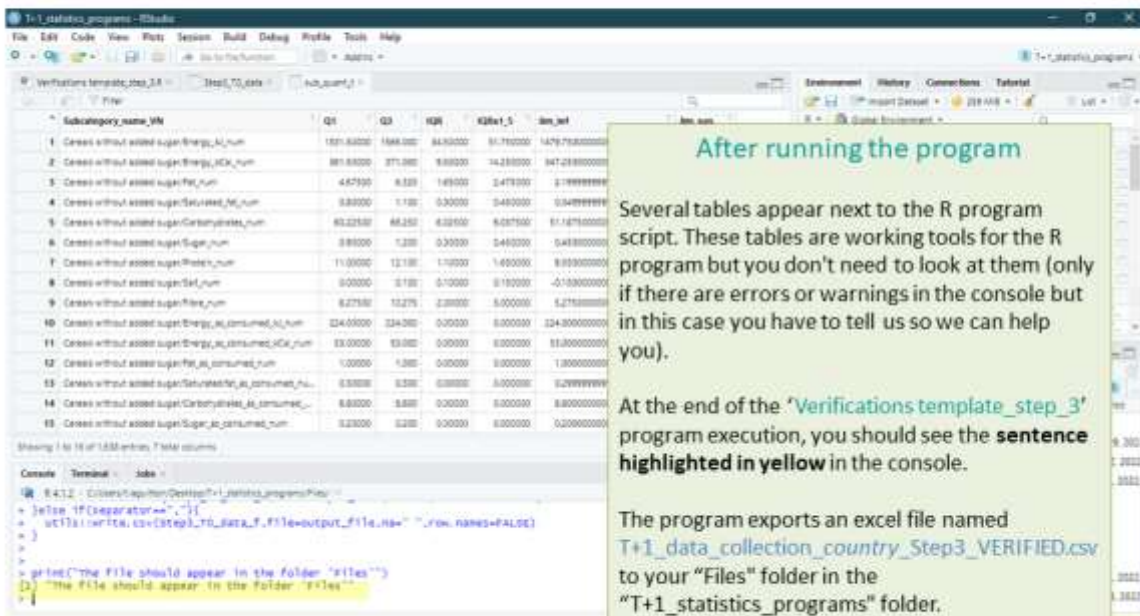
The 'Verifications template\_step\_3' program can take quite a long time (a few seconds to a few minutes) to run

When the program is running and has not finished its execution, a **stop sign** appears at the top right of the console. This means that the program is running and you must not close the 'T+1\_statistics\_programs - Rstudio' window or the program will stop running.



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_3' program



**After running the program**

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

At the end of the 'Verifications template\_step\_3' program execution, you should see the **sentence highlighted in yellow** in the console.

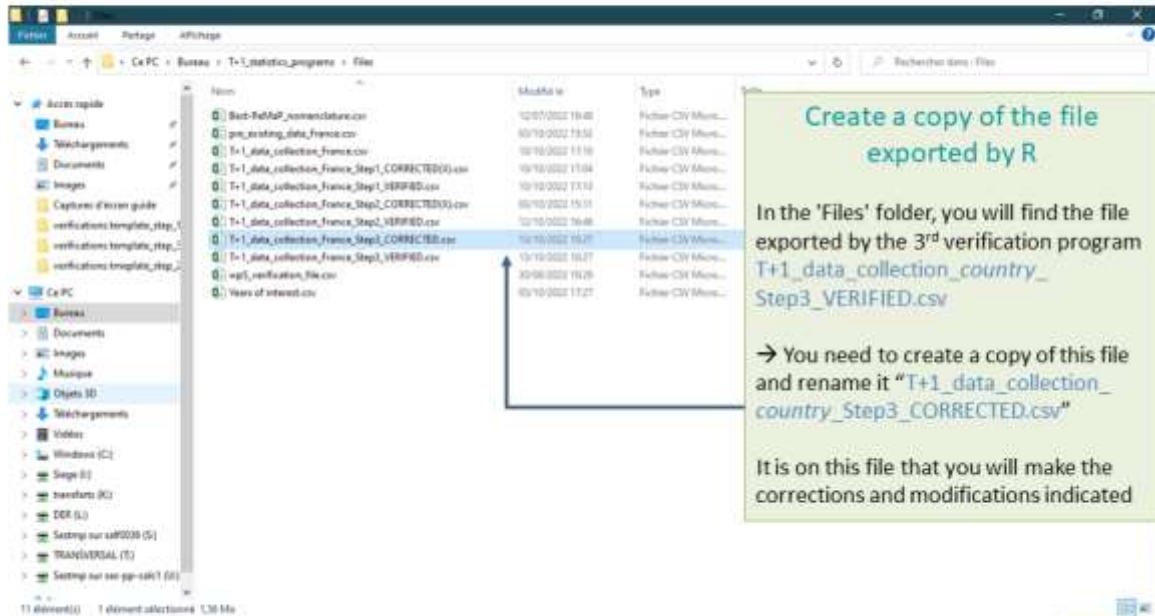
The program exports an excel file named **T+1\_data\_collection\_country\_Step3\_VERIFIED.csv** to your "Files" folder in the "T+1\_statistics\_programs" folder.





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_3' program



**Create a copy of the file exported by R**

In the 'Files' folder, you will find the file exported by the 3<sup>rd</sup> verification program **T+1\_data\_collection\_country\_Step3\_VERIFIED.csv**

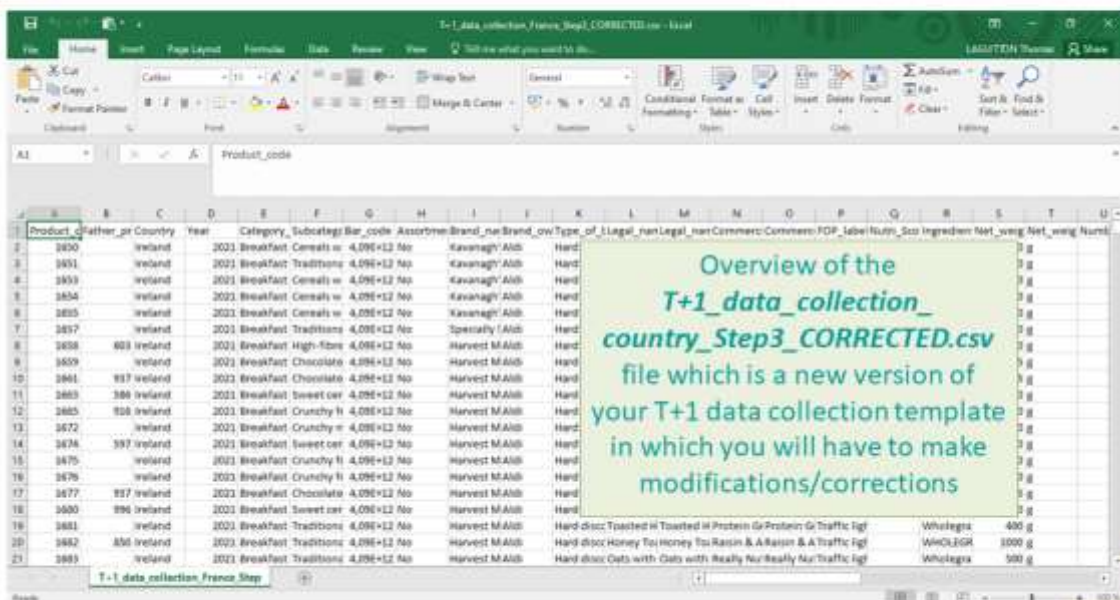
→ You need to create a copy of this file and rename it "**T+1\_data\_collection\_country\_Step3\_CORRECTED.csv**"

It is on this file that you will make the corrections and modifications indicated



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_3' program



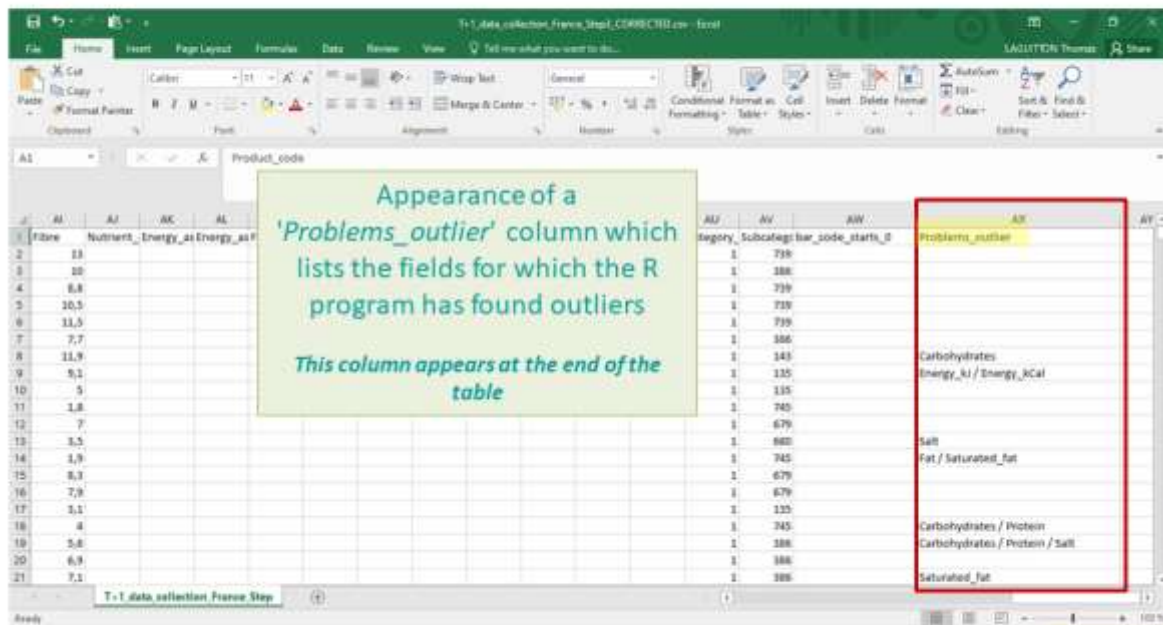
**Overview of the T+1\_data\_collection\_country\_Step3\_CORRECTED.csv file which is a new version of your T+1 data collection template in which you will have to make modifications/corrections**

Product_code	Father_pr	Country	Year	Category	Subcategory	Bar_code	Assorbn	Brand_n	Brand_ov	Type_of	Legal_n	Legal_n	Commerc	Commerc	FOP	Label	Label	Scor	Ingredient	Net_wing	Net_wing	Numr			
3830		Ireland	2021	Breakfast	Cereals w	4,096+12	No	Kavanagh	Alib	Hard															
3831		Ireland	2021	Breakfast	Traditions	4,096+12	No	Kavanagh	Alib	Hard															
3833		Ireland	2021	Breakfast	Cereals w	4,096+12	No	Kavanagh	Alib	Hard															
3834		Ireland	2021	Breakfast	Cereals w	4,096+12	No	Kavanagh	Alib	Hard															
3835		Ireland	2021	Breakfast	Cereals w	4,096+12	No	Kavanagh	Alib	Hard															
3837		Ireland	2021	Breakfast	Traditions	4,096+12	No	Specialty	Alib	Hard															
3838	803	Ireland	2021	Breakfast	High-fibre	4,096+12	No	Harvest	MAIB	Hard															
3839		Ireland	2021	Breakfast	Chocolate	4,096+12	No	Harvest	MAIB	Hard															
3841	837	Ireland	2021	Breakfast	Chocolate	4,096+12	No	Harvest	MAIB	Hard															
3843	388	Ireland	2021	Breakfast	Sweet car	4,096+12	No	Harvest	MAIB	Hard															
3845	808	Ireland	2021	Breakfast	Crunchy fi	4,096+12	No	Harvest	MAIB	Hard															
3872		Ireland	2021	Breakfast	Crunchy w	4,096+12	No	Harvest	MAIB	Hard															
3874	387	Ireland	2021	Breakfast	Sweet car	4,096+12	No	Harvest	MAIB	Hard															
3875		Ireland	2021	Breakfast	Crunchy fi	4,096+12	No	Harvest	MAIB	Hard															
3876		Ireland	2021	Breakfast	Crunchy fi	4,096+12	No	Harvest	MAIB	Hard															
3877	837	Ireland	2021	Breakfast	Chocolate	4,096+12	No	Harvest	MAIB	Hard															
3880	896	Ireland	2021	Breakfast	Sweet car	4,096+12	No	Harvest	MAIB	Hard															
3881		Ireland	2021	Breakfast	Traditions	4,096+12	No	Harvest	MAIB	Hard	disc	Toasted	W	Toasted	W	Protein	G	Protein	G	Traffic	lgt	Wholegr	480 g		
3882	836	Ireland	2021	Breakfast	Traditions	4,096+12	No	Harvest	MAIB	Hard	disc	Honey	To	Honey	To	Raisin	&	A	Raisin	&	A	Traffic	lgt	Wholegr	3000 g
3883		Ireland	2021	Breakfast	Traditions	4,096+12	No	Harvest	MAIB	Hard	disc	Oats	with	Oats	with	Really	Neu	Really	Neu	Traffic	lgt	Wholegr	900 g		





WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_3' program



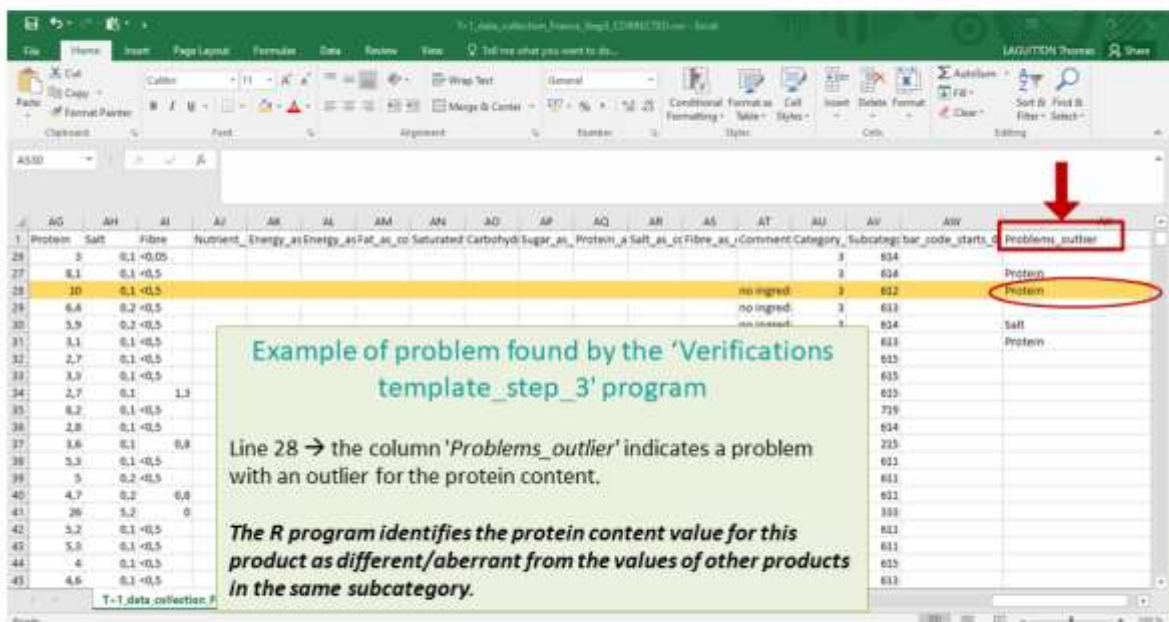
Appearance of a 'Problems\_outlier' column which lists the fields for which the R program has found outliers

This column appears at the end of the table

Product_code	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY
1	Fibre	Nutrient_Energy_asEnergy_asF														Problems_outlier	
2	13																
3	10																
4	8,8																
5	10,5																
6	11,5																
7	7,7																
8	11,9																
9	5,1																
10	5																
11	1,8																
12	7																
13	3,5																
14	1,9																
15	8,1																
16	7,9																
17	5,1																
18	4																
19	5,8																
20	6,9																
21	7,1																



WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_3' program



Example of problem found by the 'Verifications template\_step\_3' program

Line 28 → the column 'Problems\_outlier' indicates a problem with an outlier for the protein content.

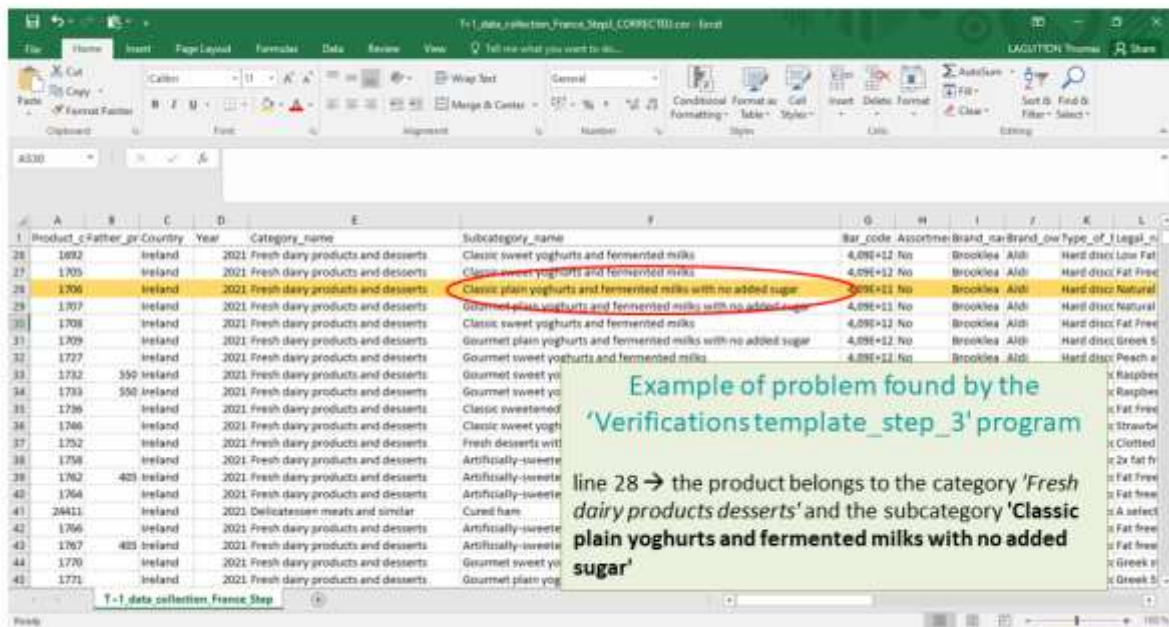
The R program identifies the protein content value for this product as different/aberrant from the values of other products in the same subcategory.

Product_code	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY
1	Protein	Salt	Fibre	Nutrient_Energy_asEnergy_asFat_as_co	Saturated	Carbohydr	sugar_as	Protein_a	Salt_as	Fibre_as	Comment	Category	Subcategory	bar_code_start			
26	5	0,1	-0,05														
27	8,1	0,1	-0,5														
28	10	0,1	-0,5					no ingred									Problems_outlier
29	6,4	0,2	-0,5					no ingred									Protein
30	3,9	0,2	-0,5					no ingred									Protein
31	3,1	0,1	-0,5														
32	2,7	0,1	-0,5														
33	1,9	0,1	-0,5														
34	2,7	0,1		1,3													
35	8,2	0,1	-0,5														
36	2,8	0,1	-0,5														
37	1,6	0,1		0,8													
38	5,3	0,1	-0,5														
39	5	0,2	-0,5														
40	4,7	0,2		0,8													
41	26	5,2		0													
42	5,2	0,1	-0,5														
43	5,9	0,1	-0,5														
44	4	0,1	-0,5														
45	4,6	0,1	-0,5														



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_3' program



**Example of problem found by the 'Verifications template\_step\_3' program**

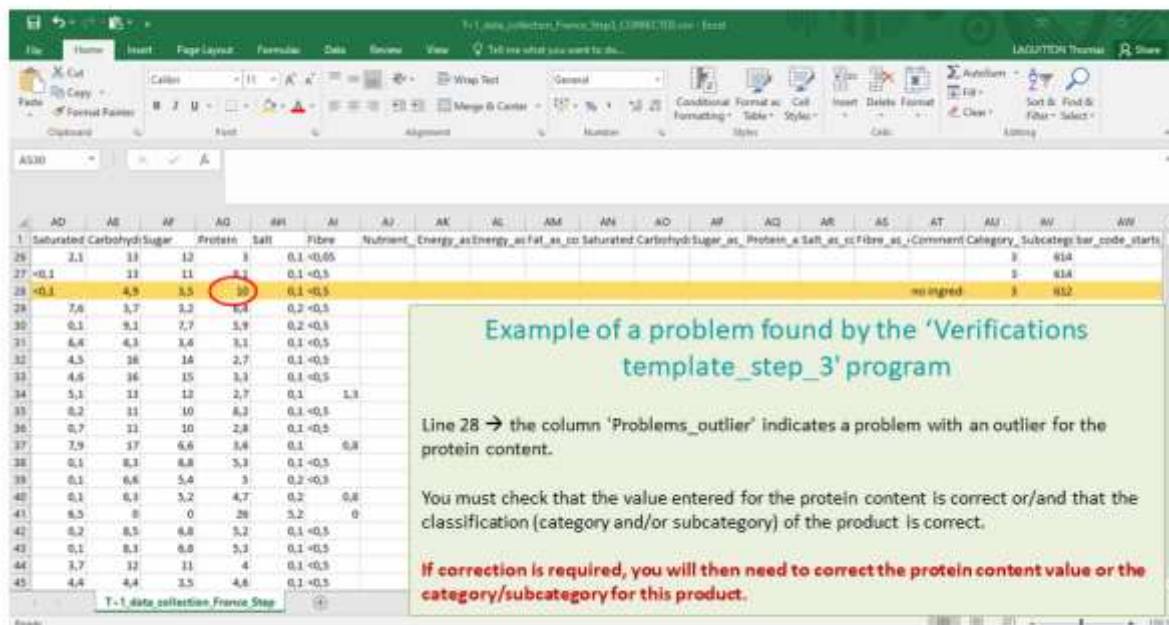
line 28 → the product belongs to the category 'Fresh dairy products desserts' and the subcategory 'Classic plain yoghurts and fermented milks with no added sugar'

Product_c	Father_or_Country	Year	Category_name	Subcategory_name	Bar_code	Assortme	Brand_n	Brand_ov	Type_of_Legal_n
1692	Ireland	2021	Fresh dairy products and desserts	Classic sweet yoghurts and fermented milks	4.09E+12	No	Brooklea	Aldi	Hard disc Low Fat
1705	Ireland	2021	Fresh dairy products and desserts	Classic sweet yoghurts and fermented milks	4.09E+12	No	Brooklea	Aldi	Hard disc Fat Free
1706	Ireland	2021	Fresh dairy products and desserts	Classic plain yoghurts and fermented milks with no added sugar	4.09E+12	No	Brooklea	Aldi	Hard disc Natural
1707	Ireland	2021	Fresh dairy products and desserts	Gourmet plain yoghurts and fermented milks with no added sugar	4.09E+12	No	Brooklea	Aldi	Hard disc Natural
1708	Ireland	2021	Fresh dairy products and desserts	Classic sweet yoghurts and fermented milks	4.09E+12	No	Brooklea	Aldi	Hard disc Fat Free
1709	Ireland	2021	Fresh dairy products and desserts	Gourmet plain yoghurts and fermented milks with no added sugar	4.09E+12	No	Brooklea	Aldi	Hard disc Greek S
1727	Ireland	2021	Fresh dairy products and desserts	Gourmet sweet yoghurts and fermented milks	4.09E+12	No	Brooklea	Aldi	Hard disc Peach a
1732	550 Ireland	2021	Fresh dairy products and desserts	Gourmet sweet yo					Raspber
1733	550 Ireland	2021	Fresh dairy products and desserts	Gourmet sweet yo					2x Fat fr
1736	Ireland	2021	Fresh dairy products and desserts	Classic sweetened					Clothes
1740	Ireland	2021	Fresh dairy products and desserts	Classic sweet yogh					Strawbe
1752	Ireland	2021	Fresh dairy products and desserts	Fresh desserts with					Artificia
1758	Ireland	2021	Fresh dairy products and desserts	Artificially-sweete					Fat free
1762	403 Ireland	2021	Fresh dairy products and desserts	Artificially-sweete					Fat free
1764	Ireland	2021	Fresh dairy products and desserts	Artificially-sweete					Fat free
24411	Ireland	2021	Delicatessen meats and similar	Cured ham					A select
1766	Ireland	2021	Fresh dairy products and desserts	Artificially-sweete					Fat free
1767	403 Ireland	2021	Fresh dairy products and desserts	Artificially-sweete					Fat free
1770	Ireland	2021	Fresh dairy products and desserts	Gourmet sweet yo					Greek S
1771	Ireland	2021	Fresh dairy products and desserts	Gourmet plain yog					Greek S



## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_3' program



**Example of a problem found by the 'Verifications template\_step\_3' program**

Line 28 → the column 'Problems\_outlier' indicates a problem with an outlier for the protein content.

You must check that the value entered for the protein content is correct or/and that the classification (category and/or subcategory) of the product is correct.

**If correction is required, you will then need to correct the protein content value or the category/subcategory for this product.**

Saturated Carbohydr	Sugar	Protein	Salt	Fibre	Nutrient_Energy_asEnergy_asFat_as	Saturated Carbohydr	Sugar	Protein	Salt	Fibre	Comment	Category	Subcateg	bar_code_start
2.1	3.3	1.2	3	0.1	-0.05									834
0.1	3.3	1.1	3	0.1	-0.5									834
0.1	4.5	3.5	20	0.1	-0.5						no ingred			832
7.6	5.7	3.3	6.4	0.2	-0.5									
0.1	9.1	2.7	5.9	0.2	-0.5									
6.4	4.3	3.6	3.1	0.1	-0.5									
4.5	3.8	3.6	2.7	0.1	-0.5									
4.6	3.6	3.3	3.3	0.1	-0.5									
5.1	3.3	1.2	2.7	0.1	1.3									
0.2	3.3	1.0	8.3	0.1	-0.5									
0.7	3.3	1.0	2.8	0.1	-0.5									
7.9	3.7	6.6	3.6	0.1	0.8									
0.1	8.3	6.8	5.3	0.1	-0.5									
0.1	6.6	5.4	3	0.2	-0.5									
0.1	0.1	3.2	4.7	0.2	0.8									
6.5	0	0	26	3.2	0									
0.2	8.3	6.8	5.2	0.1	-0.5									
0.1	8.3	6.8	5.3	0.1	-0.5									
3.7	3.2	3.1	4	0.1	-0.5									
4.4	4.4	3.5	4.8	0.1	-0.5									



## WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_3' program

Terms that may appear in the 'Problems outlier' field following the 'Verifications template\_step\_3' program, their meaning and what to do

Problem	Meaning	Solution
<ul style="list-style-type: none"> <li>• Energy_kCal</li> <li>• Energy_kJ</li> <li>• Fat</li> <li>• Saturated_fat</li> <li>• Carbohydrates</li> <li>• Sugar</li> <li>• Protein</li> <li>• Salt</li> <li>• Fibre</li>   <li>• Energy_as_consumed_kCal</li> <li>• Energy_as_consumed_kJ</li> <li>• Fat_as_consumed</li> <li>• Saturated_fat_as_consumed</li> <li>• Carbohydrates_as_consumed</li> <li>• Sugar_as_consumed</li> <li>• Protein_as_consumed</li> <li>• Salt_as_consumed</li> <li>• Fibre_as_consumed</li> </ul>	<ul style="list-style-type: none"> <li>• The nutritional value of the product for this nutrient appears to be an outlier compared to the nutritional value for this nutrient of other products in the same subcategory.</li> </ul>	<p>→ Check the pictures of the product, to be sure that the value entered in the template is the correct one. If not, you must enter the correct value directly in the Excel file in .csv format.</p> <p><b>And/or</b></p> <p>→ Check that the category and subcategory associated to the product are the correct ones (you can help you with the WP5 classification guidelines that have been created for each food category). If not, you must enter the correct information (category name + code and/or subcategory name + code) directly in the Excel file in .csv format.</p> <p><b>Else</b></p> <p>→ Nutritional value and subcategory entered for this product are the correct ones, no correction is needed. You must indicate in the 'Comments' field: "outliers checked".</p> <p><b>Be careful! A product can have wrong values + wrong classification, it is important to check both for the product.</b></p>

 Health Programme (2014-2020)

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## WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_3' program

- **Be careful! When saving the file, you must be sure that the barcodes appear in full and not in scientific format. If this is the case, you must repeat the procedure on [pages 20→24](#).**
- Once the corrections have been made and the barcodes are in the correct format, you can save the file *T+1\_data\_collection\_country\_Step3\_CORRECTED.csv* and close it.
- You will have to run this corrected file again in the 'Verifications template\_step\_3' program to make sure you haven't missed a check.

Your Rstudio interface must be cleaned up before running the 'Verifications template\_step\_3' program again.  
 All cleaning steps are described on [pages 58→64](#).

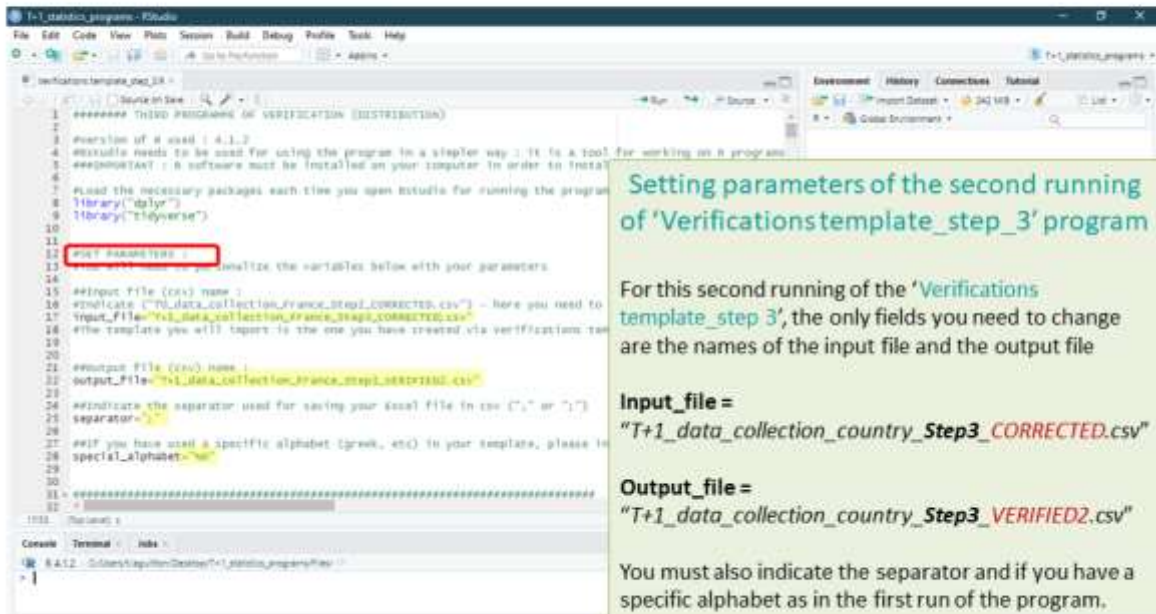
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## WORK Package 5 – Reformulation and processed food monitoring

### 2<sup>nd</sup> running of 'Verifications template\_step\_3' program



**Setting parameters of the second running of 'Verifications template\_step\_3' program**

For this second running of the 'Verifications template\_step\_3', the only fields you need to change are the names of the input file and the output file

**Input\_file =**  
 "T+1\_data\_collection\_country\_Step3\_CORRECTED.csv"

**Output\_file =**  
 "T+1\_data\_collection\_country\_Step3\_VERIFIED2.csv"

You must also indicate the separator and if you have a specific alphabet as in the first run of the program.



## WORK Package 5 – Reformulation and processed food monitoring

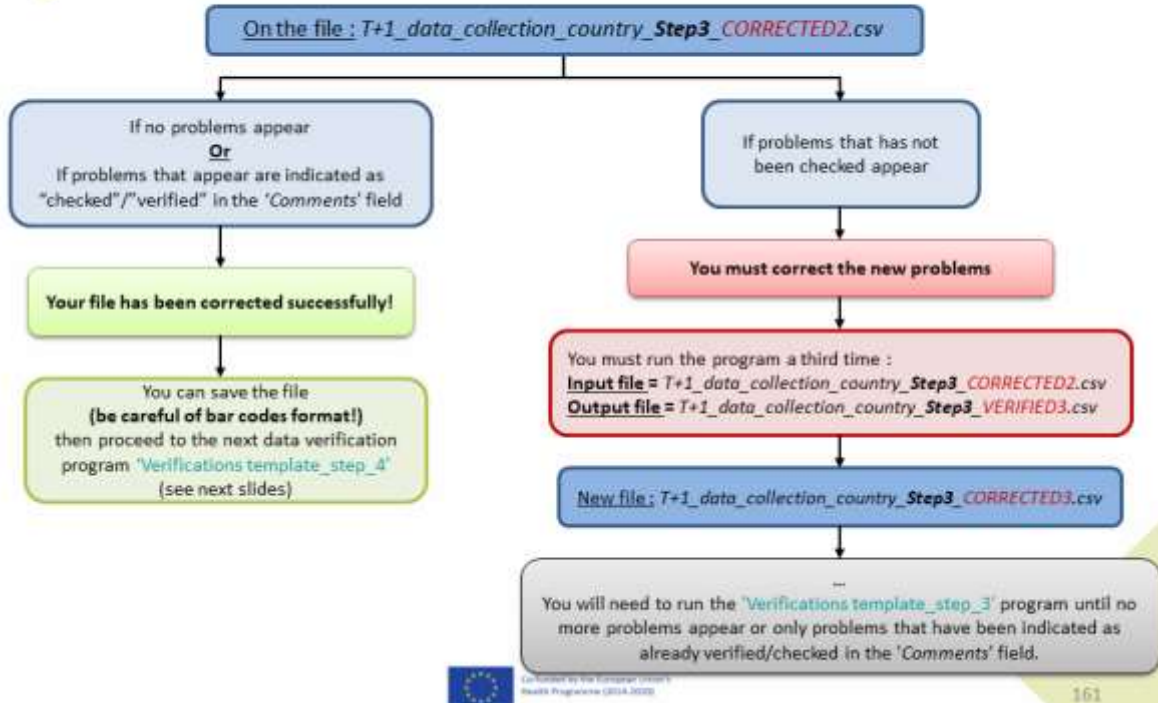
### 2<sup>nd</sup> running of 'Verifications template\_step\_3' program

- At the end of this second run, you get in your "files" folder a file called:  
 "T+1\_data\_collection\_country\_Step3\_VERIFIED2.csv"
  - You must create a copy of this file and call it :  
 "T+1\_data\_collection\_country\_Step3\_CORRECTED2.csv"
- It is on this file that you will make the modifications following the checks



WORK Package 5 – Reformulation and processed food monitoring

2<sup>nd</sup> running of 'Verifications template\_step\_3' program



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WORK Package 5 – Reformulation and processed food monitoring

3) Running of the verification programs

A. Part 1 : R setup program

B. Part 2 : Verification programs and template  
cleaning/standardization

i. 1<sup>st</sup> verification program : 'Verifications template\_step\_1'

ii. 2<sup>nd</sup> verification program : 'Verifications template\_step\_2'

iii. 3<sup>rd</sup> verification program : 'Verifications template\_step\_3'

iv. 4<sup>th</sup> verification program : 'Verifications template\_step\_4'



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## WORK Package 5 – Reformulation and processed food monitoring

### 4<sup>th</sup> verification program : 'Verifications template\_step\_4'

#### **Presentation of the 'Verifications template\_step\_4' program :**

- The 4th verification program allows you to highlight problems in the pairing of your T+1 data with your pre-existing data.
- This program will allow, for example, to :
  - Check that the information entered matches between 2 paired products (Brand, category name and code, subcategory name and code)
  - Check that the father\_product\_codes indicated in the T+1 data do exist in the pre-existing data file.
  - Check that unique products\_code given in your T+1 data doesn't exist in your pre-existing data
  - ...



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## WORK Package 5 – Reformulation and processed food monitoring

### 4<sup>th</sup> verification program : 'Verifications template\_step\_4'

#### **Requirements before starting the program 'Verifications template\_step\_4' :**

- The programs 'Verifications template\_step\_1', 'Verifications template\_step\_2' and 'Verifications template\_step\_3' should have been run on your data
- You should no longer have any problems appearing or only problems that have been notified as verified after running the program 'Verifications template\_step\_3'
- You must have your template in your possession and it must now be called:  
 T+1\_data\_collection\_country\_Step3\_CORRECTED(X).csv (with the name of your own country)  
 ( X) is the number of the last file exported and corrected after the last run of the first verification program )  
  
 You need to make sure that the barcodes in this file appear in full and not in scientific format (see procedure [pages 20→24](#))
- You must also have in your possession your pre-existing data file in **.csv format** called pre\_existing\_data\_country.csv and your file Years\_of\_interest.csv that must have been filled in indicating the years chosen in your pre-existing data for pairing with the T+1 data,

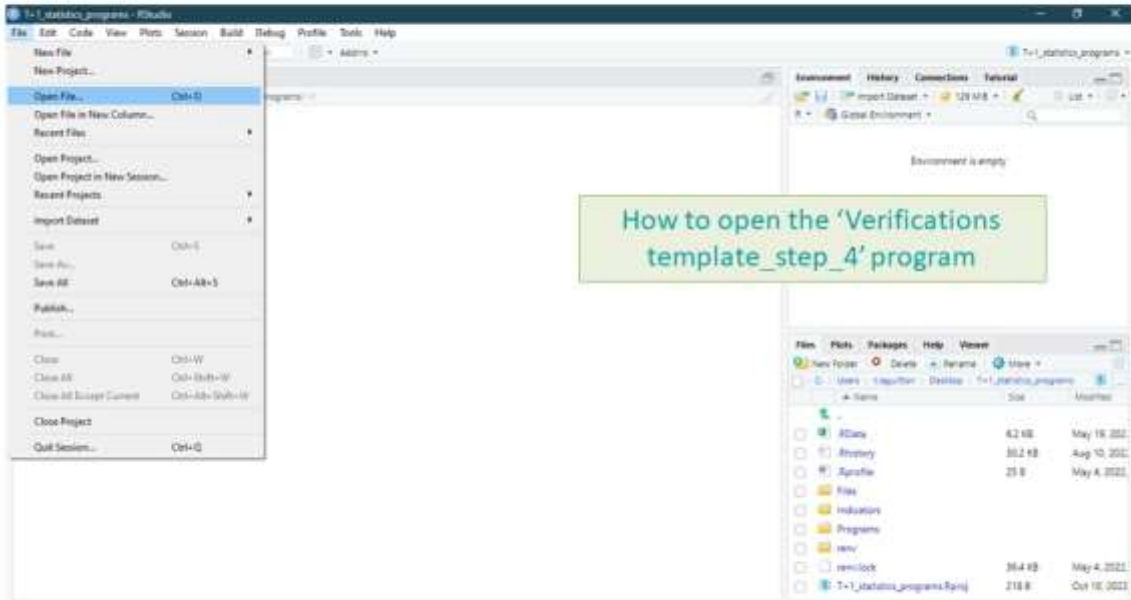
Your Rstudio interface must have been cleaned up before running the program.  
 All cleaning steps are described on [pages 58→64](#).

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WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_4' program

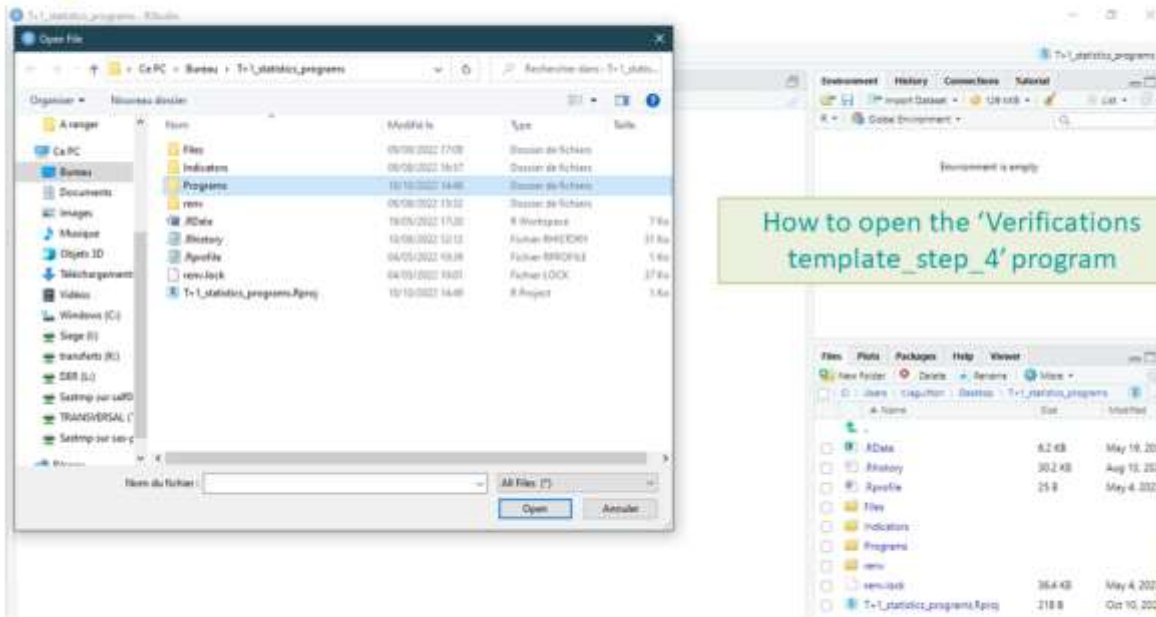


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WORK Package 5 – Reformulation and processed food monitoring

Running of 'Verifications template\_step\_4' program

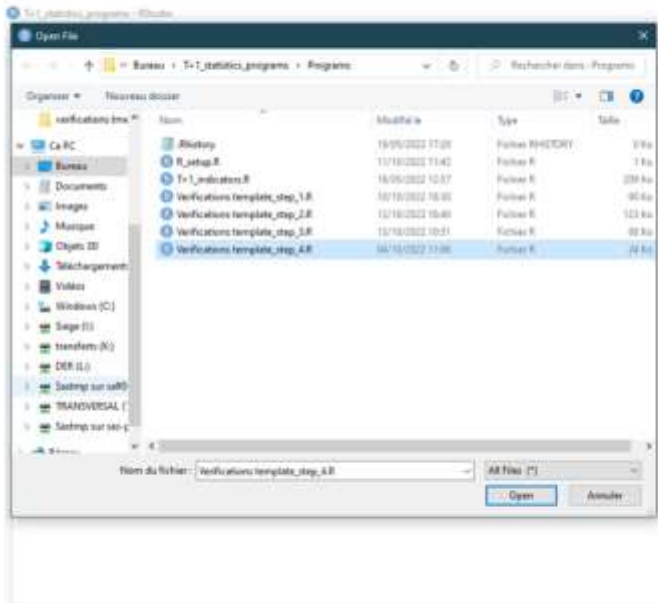
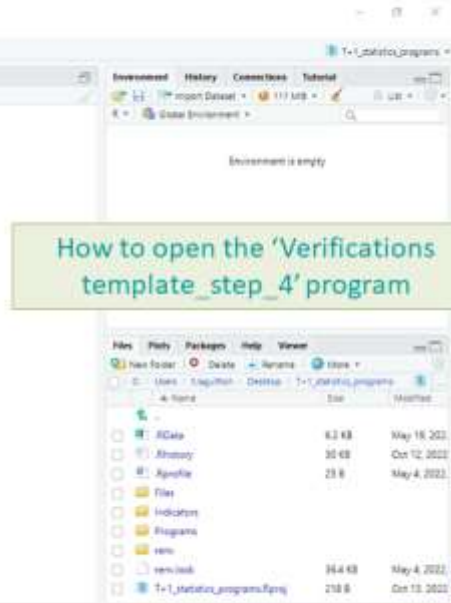


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## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_4' program

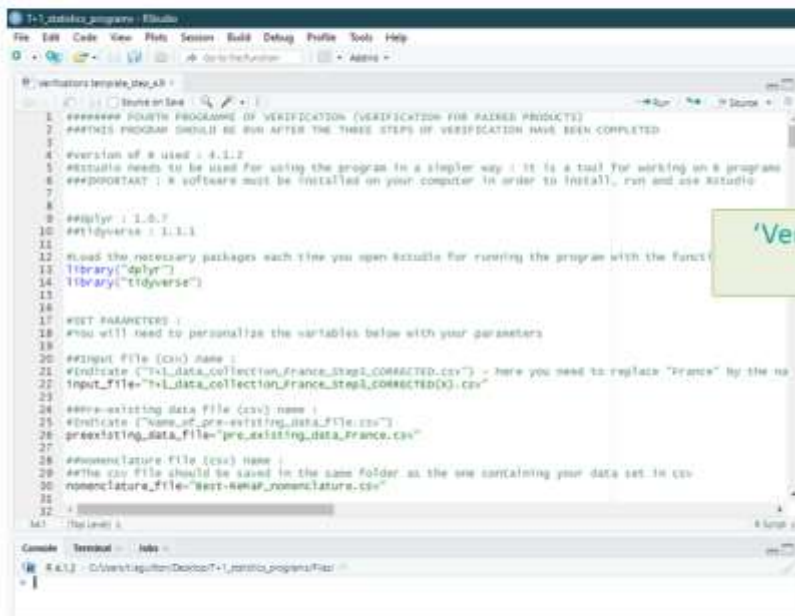




**How to open the 'Verifications template\_step\_4' program**



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_4' program

**'Verifications template\_step\_4' program opened**

```

1 ##### FOURTH PROGRAMME OF VERIFICATION (VERIFICATION FOR PACKED PRODUCTS)
2 ##### THIS PROGRAM SHOULD BE RUN AFTER THE THREE STEPS OF VERIFICATION HAVE BEEN COMPLETED
3
4 version of R used : 4.1.2
5 #install2files needs to be used for using the program in a simpler way : it is a tool for writing an R program
6 ##IMPORTANT : R software must be installed on your computer in order to install, run and use Rstudio
7
8
9 ##qplyr : 1.0.7
10 ##tidyverse : 1.1.1
11
12 #load the necessary packages each time you open Rstudio for running the program with the function
13 library("qplyr")
14 library("tidyverse")
15
16
17 #SET PARAMETERS :
18 #you will need to personalize the variables below with your parameters
19
20 #INPUT FILE (csv) name :
21 #indicate ("T+1_data_collection_france_step1_CONNECTED.csv" - here you need to replace "france" by the
22 #input_file="T+1_data_collection_france_step1_CONNECTED(X).csv"
23
24 #pre-existing data file (csv) name :
25 #indicate ("name_of_pre-existing_data_file.csv")
26 #preexisting_data_file="pre-existing_data_france.csv"
27
28 #nomenclature file (csv) name :
29 #the csv file should be saved in the same folder as the one containing your data set in csv
30 #nomenclature_file="best-remap_nomenclature.csv"
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## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_4' program

```

14 #SET PARAMETERS
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```

#### Setting parameters of the 4th verification program

In the first run of the 4th verification program, you need to change the name of the country with your own country name in the input file (line 17) and the output file (line 33)

In this program, you will also need to import your pre-existing data file. To do this, you need to enter the name of your own country in the file name line 26.

You must also indicate the separator and if you have a specific alphabet as in the program 'Verifications template\_step\_1', 'Verifications template\_step\_2' and 'Verifications template\_step\_3';

- Example:*
- **Input\_file** = "T+1\_data\_collection\_Ireland\_Step2\_CORRECTED(X).csv" (X) is the number of the last file exported and corrected after the last run of the second verification program )
  - **Preexisting\_data\_file** = "pre\_existing\_data\_Ireland.csv"
  - **Output\_file** = "T+1\_data\_collection\_Ireland\_Step3\_VERIFIED.csv"
  - **Separator** = ";"
  - **Special\_alphabet** = "NO"



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_4' program

```

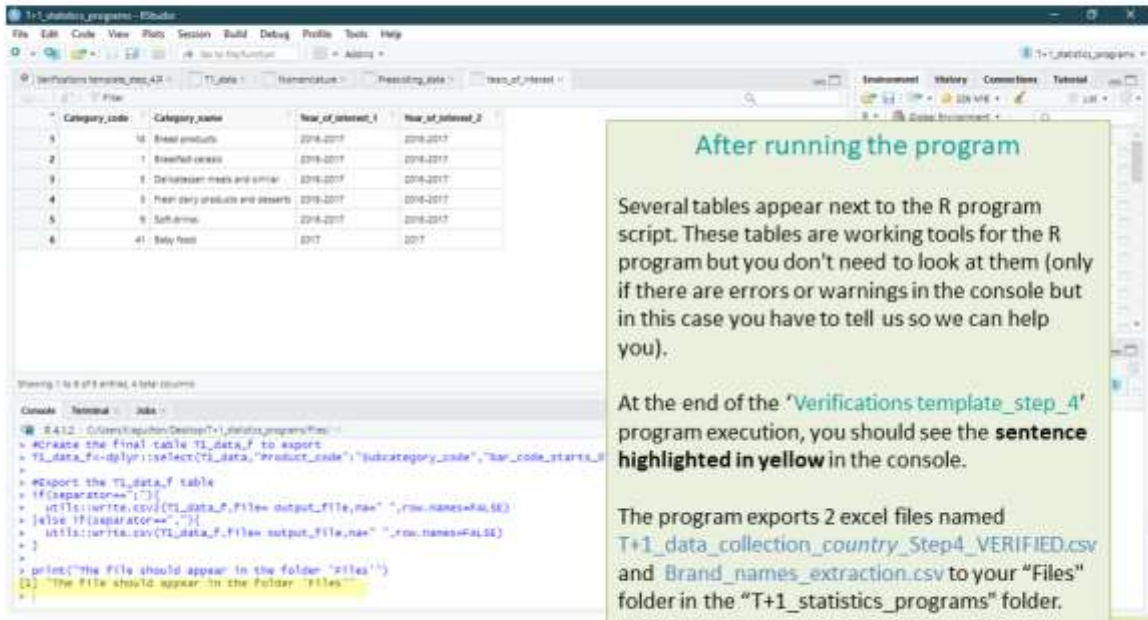
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Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter)  
The program will run entirely.



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_3' program



Category_code	Category_name	Year_of_interest_1	Year_of_interest_2
3	Bread products	2016-2017	2016-2017
2	Bread/bakery cereals	2016-2017	2016-2017
9	Dairy-based drinks and similar	2016-2017	2016-2017
4	Non dairy products and desserts	2016-2017	2016-2017
5	Sauces/creams	2016-2017	2016-2017
6	Baby food	2017	2017

**After running the program**

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

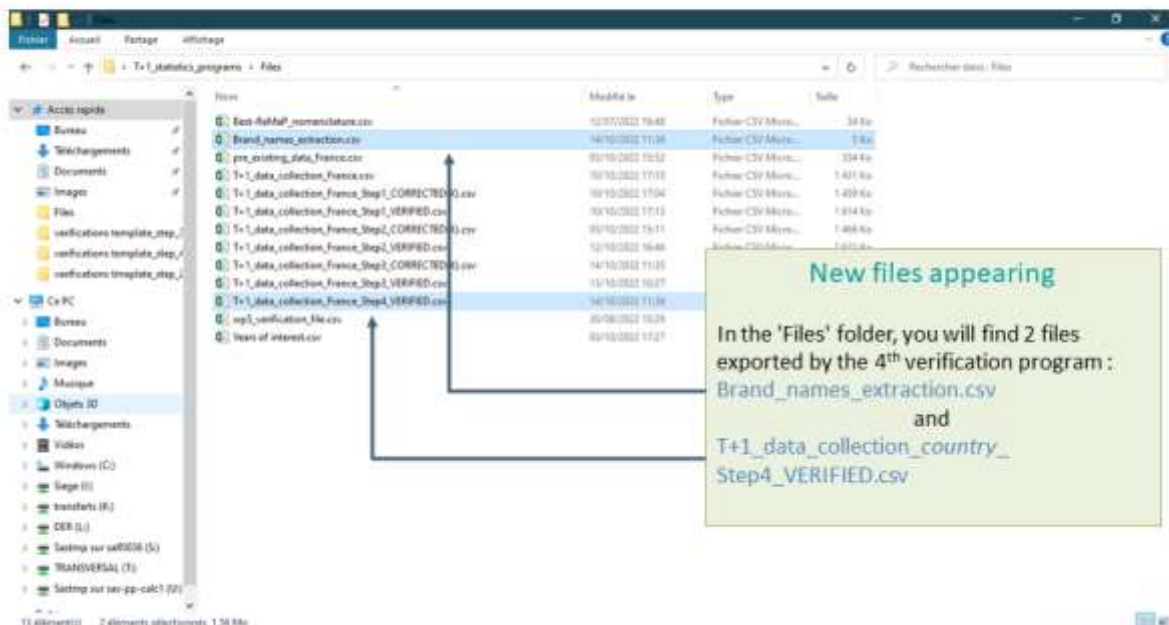
At the end of the 'Verifications template\_step\_4' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports 2 excel files named **T+1\_data\_collection\_country\_Step4\_VERIFIED.csv** and **Brand\_names\_extraction.csv** to your "Files" folder in the "T+1\_statistics\_programs" folder.



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_4' program



**New files appearing**

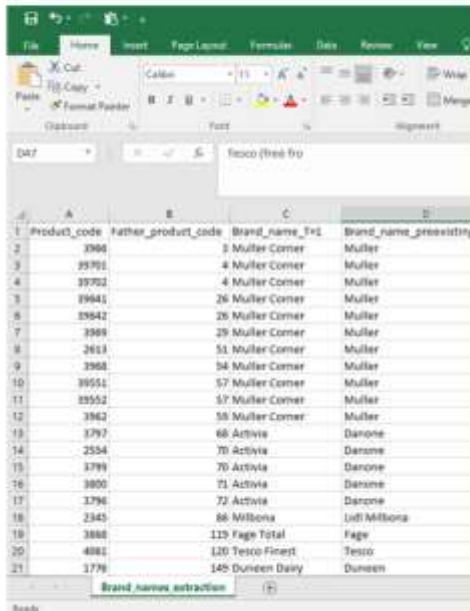
In the 'Files' folder, you will find 2 files exported by the 4<sup>th</sup> verification program :

**Brand\_names\_extraction.csv**  
and  
**T+1\_data\_collection\_country\_Step4\_VERIFIED.csv**



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_4' program



Product_code	Father_product_code	Brand_name_T+1	Brand_name_preexisting
3966	3	Muller Corner	Muller
39761	4	Muller Corner	Muller
39762	4	Muller Corner	Muller
39641	26	Muller Corner	Muller
39642	26	Muller Corner	Muller
3969	29	Muller Corner	Muller
2613	51	Muller Corner	Muller
3968	54	Muller Corner	Muller
39551	57	Muller Corner	Muller
39552	57	Muller Corner	Muller
3962	58	Muller Corner	Muller
3797	66	Activia	Danone
2554	70	Activia	Danone
3799	70	Activia	Danone
3800	71	Activia	Danone
3796	72	Activia	Danone
2345	86	Milbona	Lidl Milbona
3888	119	Page Total	Page
4882	120	Tesco Finest	Tesco
1776	145	Duneeen Dairy	Duneeen

#### "Brand\_names\_extraction.csv" file

This file shows the products paired between your pre-existing data and your T+1 data that have 'brand\_names' which are not identical.

→ This file is only used to check if there are **no major pairing errors**.  
*Example :*

brand\_name\_preexisting\_data = *Kellogg's*  
brand\_name\_T+1 = *Carrefour*

In this case, you need to check the matching of the two products: maybe the product has been matched to the wrong product in the pre-existing data and you need to find the right product in the pre-existing data, maybe there is a typing error in the father\_product\_code, etc.

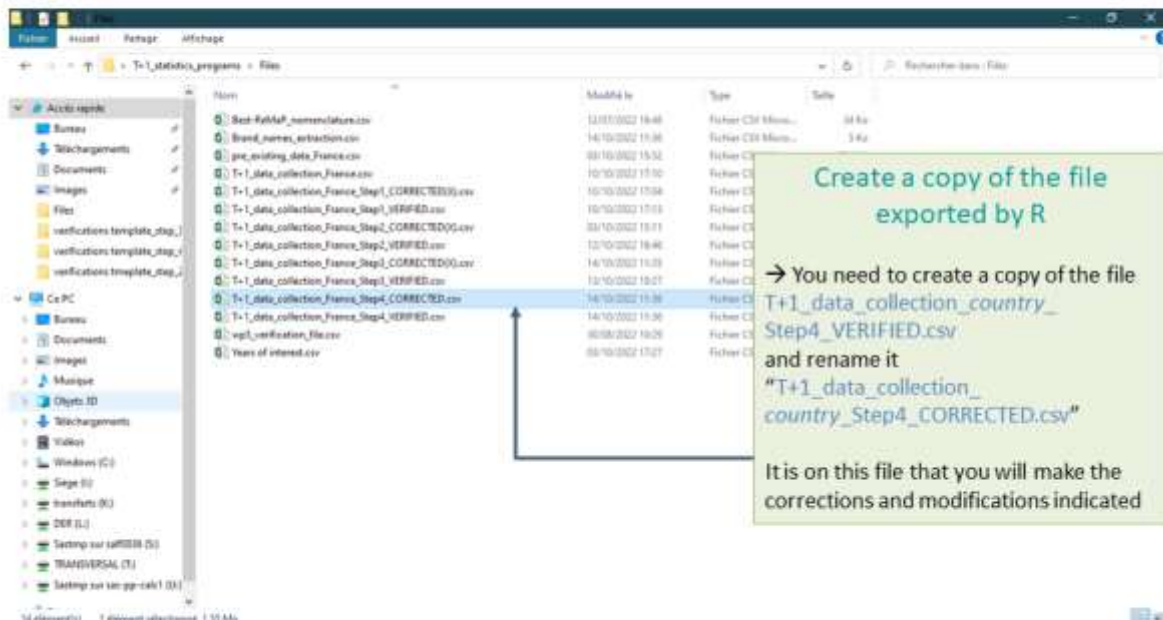
→ If two brand names are different but it is a **slight difference** ("Lidl Milbona" vs. "Milbona", "Muller" vs. "Muller Corner", "Kellogg's" vs. "Kelloggs", etc.), then you do **not need to modify** the information.

We advise you not to change the 'brand\_name' in your pre-existing data as you may no longer have the product pictures in your possession to be sure of what you are changing.



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Verifications template\_step\_4' program



**Create a copy of the file exported by R**

→ You need to create a copy of the file `T+1_data_collection_country_Step4_VERIFIED.csv` and rename it `"T+1_data_collection_country_Step4_CORRECTED.csv"`

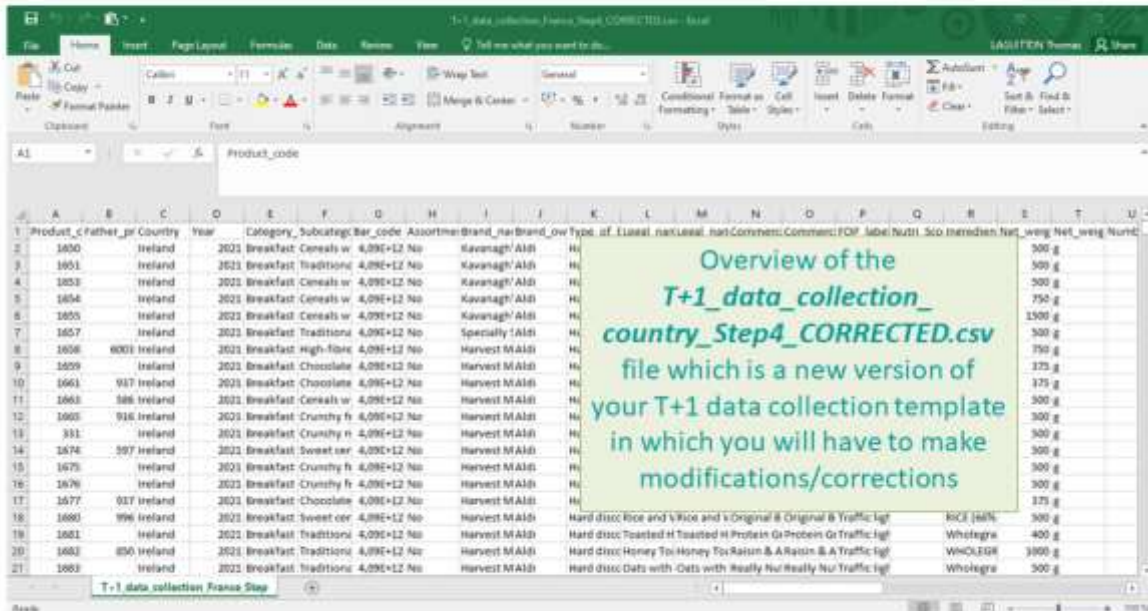
It is on this file that you will make the corrections and modifications indicated





WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_4' program

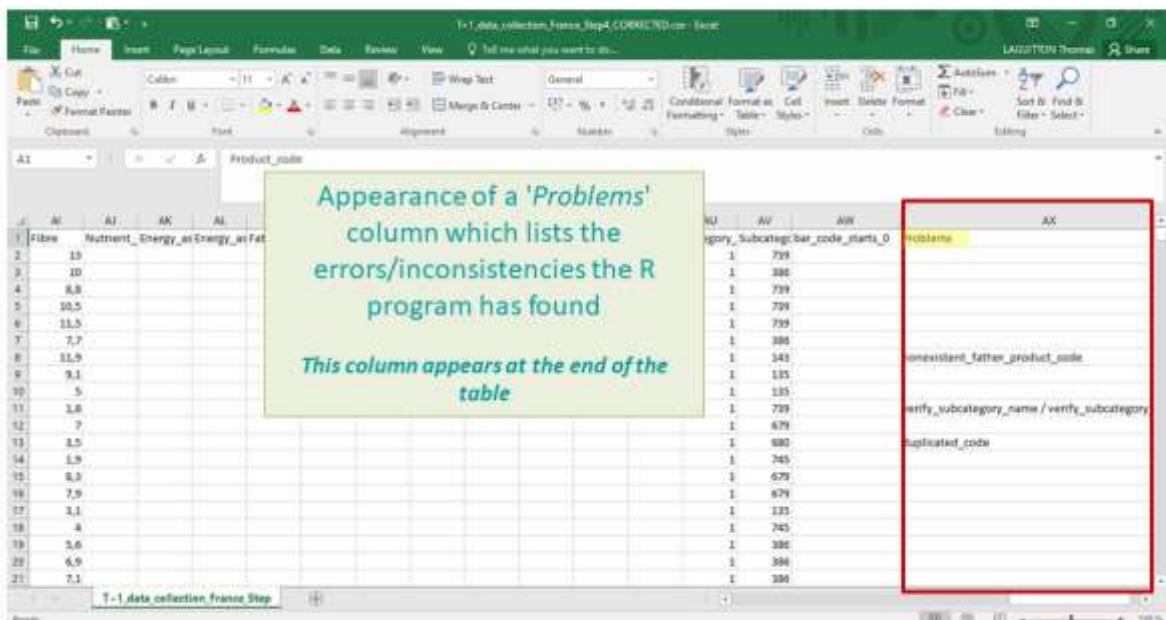


Overview of the *T+1\_data\_collection\_country\_Step4\_CORRECTED.csv* file which is a new version of your T+1 data collection template in which you will have to make modifications/corrections



WORK Package 5 – Reformulation and processed food monitoring

Excel file to modify after 'Verifications template\_step\_4' program

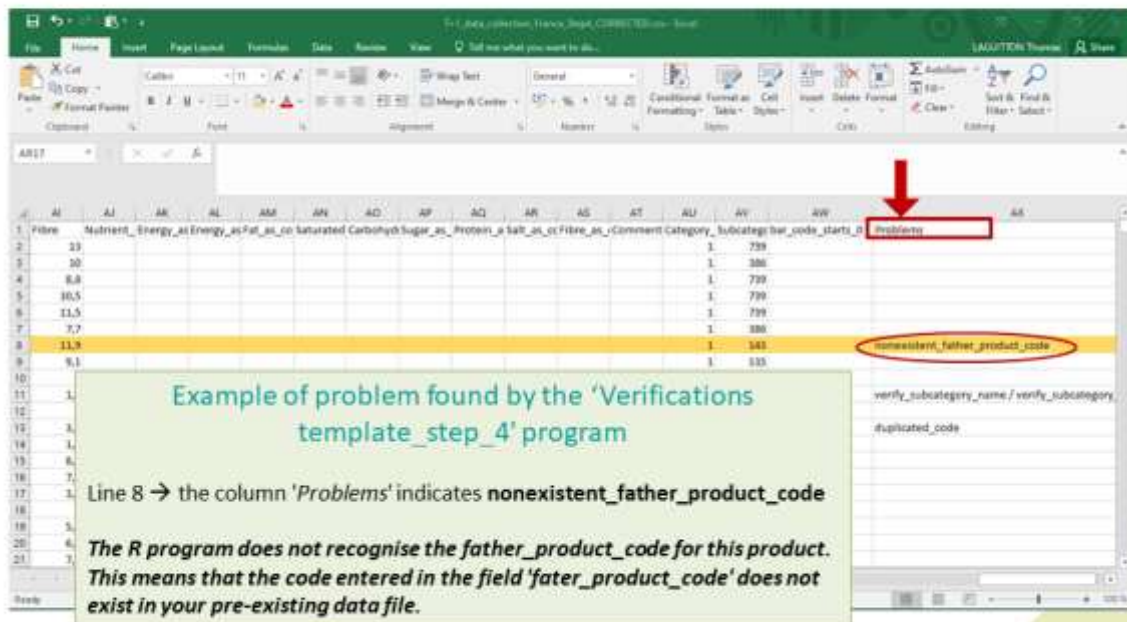


Appearance of a 'Problems' column which lists the errors/inconsistencies the R program has found. This column appears at the end of the table.





WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_4' program



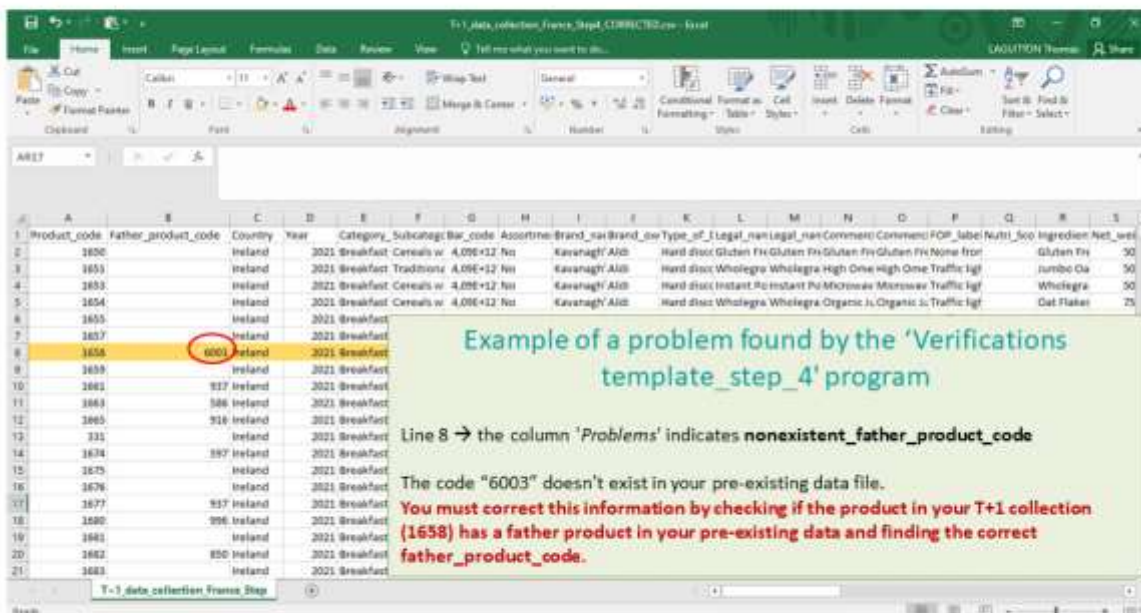
**Example of problem found by the 'Verifications template\_step\_4' program**

Line 8 → the column 'Problems' indicates `nonexistent_father_product_code`

*The R program does not recognise the father\_product\_code for this product. This means that the code entered in the field 'fater\_product\_code' does not exist in your pre-existing data file.*



WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_4' program



**Example of a problem found by the 'Verifications template\_step\_4' program**

Line 8 → the column 'Problems' indicates `nonexistent_father_product_code`

The code "6003" doesn't exist in your pre-existing data file.  
**You must correct this information by checking if the product in your T+1 collection (1658) has a father product in your pre-existing data and finding the correct father\_product\_code.**





## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_4' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_4' program, their meaning and what to do

Problem	Meaning	Action
<b>Nonexistent_father_product_code</b>	The <b>father_product_code</b> associated with this product does not exist in your pre-existing data.	<p>→ Check if the product has a father product in the pre-existing data file using information such as the product's subcategory, brand name, commercial_name elements, etc.</p> <p>→ If the product has a father product, enter the correct product_code from the pre-existing data in the 'father_product_code' field.</p> <p>→ If the product does not have a father product, delete the wrong father_product_code that has been entered.</p>
<b>Duplicated_code</b>	The <b>product_code</b> of this product is already assigned to a product in your pre-existing data.	→ You must assign a new product code to this product, making sure that it does not exist in your 'T+1_data_collection_eentry_step_4_CORRECTED.csv' file or in your pre-existing data file.
<b>Not_paired_with_year_of_interest</b>	<ul style="list-style-type: none"> <li>The <b>father product</b> does not belong to the pre-existing data collection year of interest chosen to make comparisons/indicators with T+1 data. This means that this pairing will not be taken into account for making the indicators.</li> </ul>	<p>→ You must check if the T+1 product cannot be paired with another product in your preexisting data file which has been collected on the year of interest for the category.</p> <p><i>Please note that the products not paired with the year of interest will not be considered as paired products for the computing of indicators (the pairing will not be taken into account for this work)</i></p>

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## WORK Package 5 – Reformulation and processed food monitoring

### Excel file to modify after 'Verifications template\_step\_4' program

#### Terms that may appear in the 'Problems' field following the 'Verifications template\_step\_4' program, their meaning and what to do

Problem	Meaning	Action
<ul style="list-style-type: none"> <li><b>Verify_category_name</b></li> <li><b>Verify_category_code</b></li> </ul>	The product and its father product have <b>different category names and codes</b>	<p>→ You must check that you have classified the product of your T+1 Best-ReMaP collection in the <b>right category</b>.</p> <p>→ If the problem is with a product in your pre-existing data that is classified in the wrong category, you must correct the error in your pre-existing data and return the file to us.</p>
<ul style="list-style-type: none"> <li><b>Verify_subcategory_name</b></li> <li><b>Verify_subcategory_code</b></li> </ul>	The product and its father product have <b>different subcategory names and codes</b>	<p>→ You must check that you have classified the product of your T+1 Best-ReMaP collection in the <b>right subcategory</b>.</p> <p>→ If the problem is with a product in your pre-existing data that is classified in the wrong category, you must correct the error in your pre-existing data and return the file to us.</p>



**WARNING!** This is not necessarily an error, the product of the T+1 Best-ReMaP collection may have changed subcategory compared to the pre-existing data.

Example: the product has been reformulated and the sugar has been removed, etc

**You must still check that you have not made a classification mistake.**

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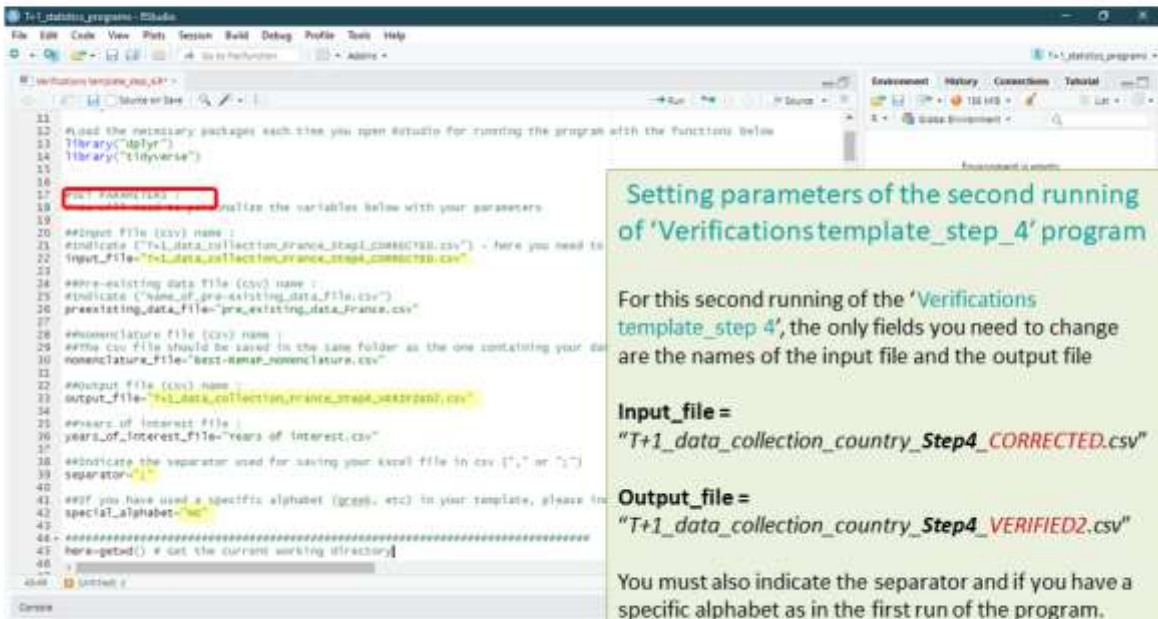
WORK Package 5 – Reformulation and processed food monitoring  
Excel file to modify after 'Verifications template\_step\_4' program

- **Be careful! When saving the file, you must be sure that the barcodes appear in full and not in scientific format. If this is the case, you must repeat the procedure on pages 20→24.**
- Once the corrections have been made and the barcodes are in the correct format, you can save the file *T+1\_data\_collection\_country\_Step3\_CORRECTED.csv* and close it.
- You will have to run this corrected file again in the 'Verifications template\_step\_4' program to make sure you haven't missed a check.

Your Rstudio interface must be cleaned up before running the 'Verifications template\_step\_4' program again.  
All cleaning steps are described on pages 58→64.



WORK Package 5 – Reformulation and processed food monitoring  
2<sup>nd</sup> running of 'Verifications template\_step\_4' program



**Setting parameters of the second running of 'Verifications template\_step\_4' program**

For this second running of the 'Verifications template\_step\_4', the only fields you need to change are the names of the input file and the output file

**Input\_file =**  
"T+1\_data\_collection\_country\_Step4\_CORRECTED.csv"

**Output\_file =**  
"T+1\_data\_collection\_country\_Step4\_VERIFIED2.csv"

You must also indicate the separator and if you have a specific alphabet as in the first run of the program.



WORK Package 5 – Reformulation and processed food monitoring

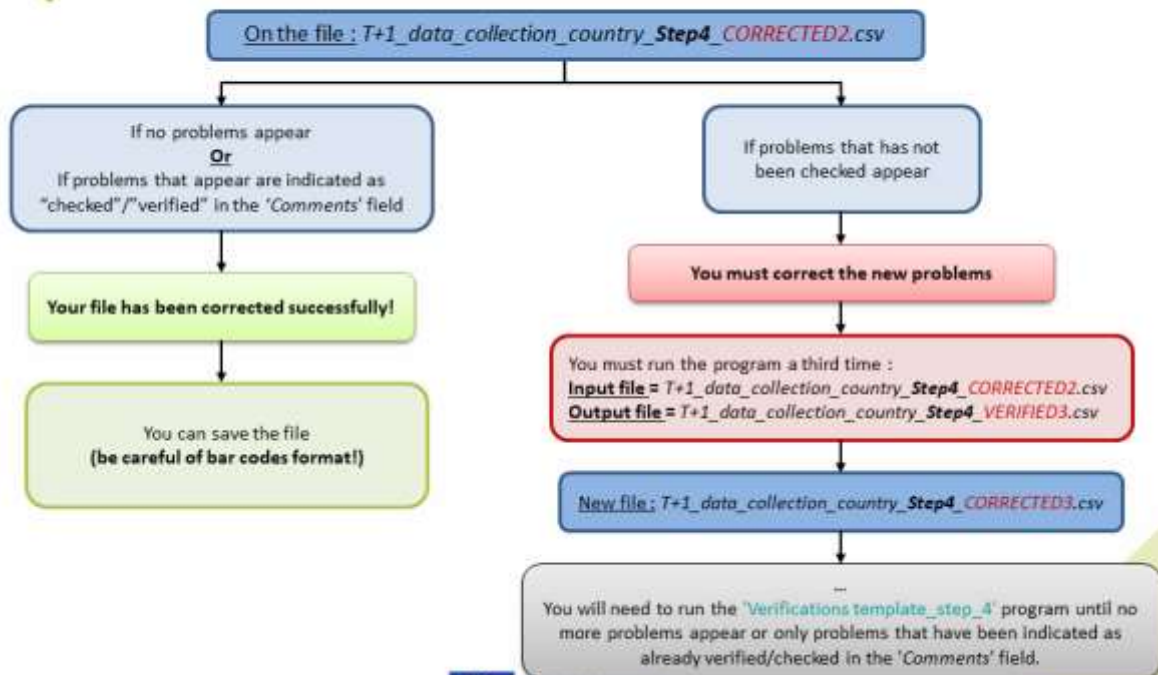
2<sup>nd</sup> running of 'Verifications template\_step\_4' program

- At the end of this second run, you get in your "files" folder a file called:  
"T+1\_data\_collection\_country\_Step4\_VERIFIED2.csv"
  - You must create a copy of this file and call it :  
"T+1\_data\_collection\_country\_Step4\_CORRECTED2.csv"
- It is on this file that you will make the modifications following the checks



WORK Package 5 – Reformulation and processed food monitoring

2<sup>nd</sup> running of 'Verifications template\_step\_4' program





## WORK Package 5 – Reformulation and processed food monitoring

### End of the 4 verification programs

→ You should now have a file called : *T+1\_data\_collection\_country\_Step4\_CORRECTED(X).csv*  
( X ) is the number of the last file exported and corrected after the last run of the second verification program )

This file is the final version of your data collection template after you have done all the checks and corrected all the errors.

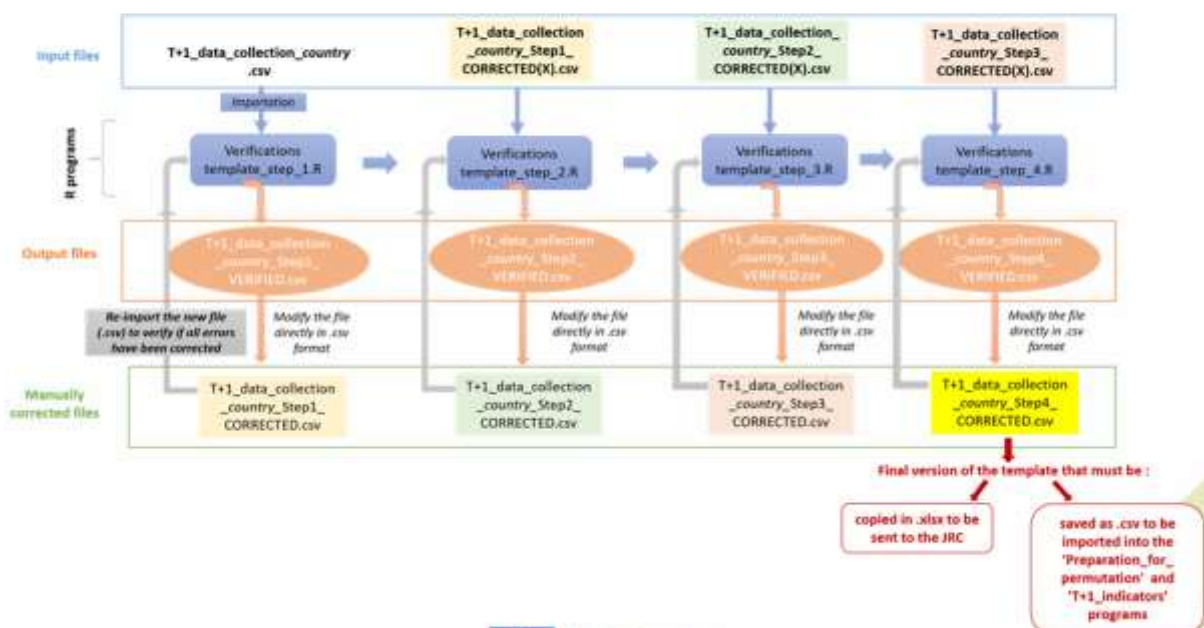
→ You must create a copy of this file and save it in **.xlsx format**  
(You can call this file : *T+1\_data\_collection\_country\_final.xlsx* for example)

This copy in **.xlsx format** will be the final version of your data collection template that will be transmitted to the **JRC**.



## WORK Package 5 – Reformulation and processed food monitoring

### Summary of the 4 verification programs





WORK Package 5 – Reformulation and processed food monitoring

4) Introduction to the creation of statistical indicators

A. Explanation of the steps [\(page 188\)](#)

B. Installation/update of the necessary equipment [\(page 192\)](#)



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WORK Package 5 – Reformulation and processed food monitoring

4) Introduction to the creation of statistical indicators

A. Explanation of the steps

B. Installation/update of the necessary equipment



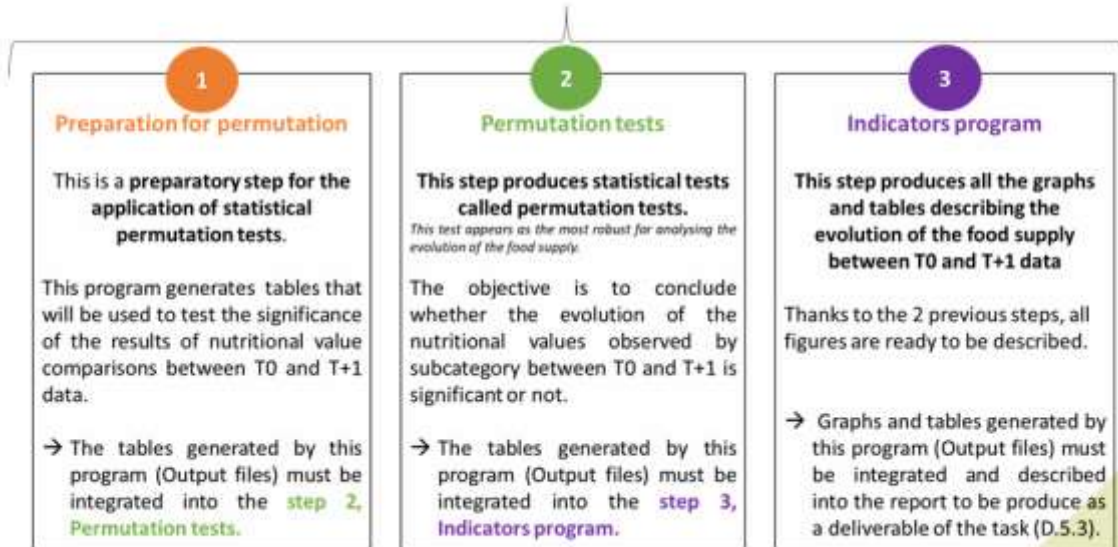
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WORK Package 5 – Reformulation and processed food monitoring

Explanation of the steps

**Creation of indicators**  
= 3 steps to follow in a strict order



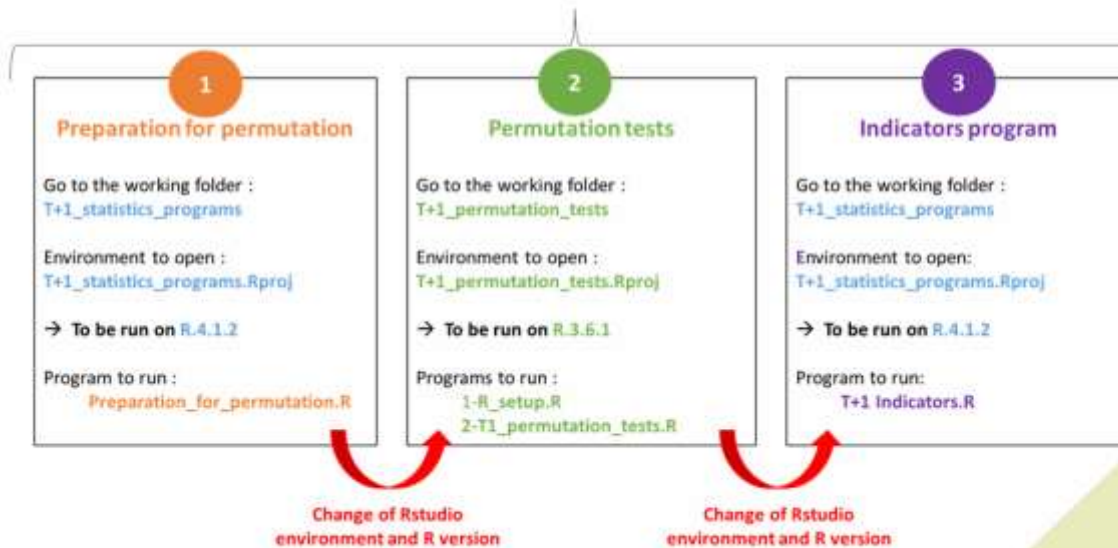
Co-funded by the European Union's Health Programme (2014-2020)



WORK Package 5 – Reformulation and processed food monitoring

Explanation of the steps

**Creation of indicators**  
= 3 steps to follow in a strict order



Co-funded by the European Union's Health Programme (2014-2020)



WORK Package 5 – Reformulation and processed food monitoring

Explanation of the steps

**Clarification:**

- All R programs (verifications, permutations, T+1 indicators) have been designed to work on data entered in the templates created for the Best-ReMaP project (template for entering pre-existing data and template for data collection during Best-ReMaP).
- If you wish to use these programs in the future on data entered in different templates than those used during Best-ReMaP, modifications/adjustments will have to be made in the R program scripts.

**Best-ReMaP template for entering pre-existing data**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Product code	Year	Father_product_code	Country	Category_code	Category_name	Subcategory_code	Subcategory_name	Bar code	Brand name	Legal name	Commercial name	Flavor (when needed)	Net weight	Net weight unit (g or mg)	Portion
2																
3																

**Template for entering data collected during the Best-ReMaP project**

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Product code	Father_product_code	Country	Year	Category_name	Subcategory_name	Bar code	Assortment	Brand_name	Brand_owner	Type_of_brand	Legal_name	Legal_name_english
2													
3													
4													
5													



WORK Package 5 – Reformulation and processed food monitoring

4) Introduction to the creation of statistical indicators

A. Explanation of the steps

B. Installation/update of the necessary equipment

i. Downloading a new version of R ([page 193](#))

ii. Downloading of a new working folder for permutation tests ([page 197](#))





WORK Package 5 – Reformulation and processed food monitoring

4) Introduction to the creation of statistical indicators

- A. Explanation of the steps
- B. Installation/update of the necessary equipment
  - i. Downloading a new version of R
  - ii. Downloading of a new working folder for permutation tests



WORK Package 5 – Reformulation and processed food monitoring

Downloading of a new version of R

- **Download the R software:**  
Follow this link and select **version 3.6.1** (which is not the latest version but a version that will be needed for the task):  
<https://cran.r-project.org/bin/windows/base/old/>

**Previous Releases of R for Windows**

This directory contains previous binary releases of R for Windows.

The current release, and links to development snapshots, are available [here](#). Source code for these releases and others is available [here](#).

In this directory:

- [R 4.2.2](#) (October, 2022)
- [R 4.2.1](#) (June, 2022)
- [R 4.2.0](#) (April, 2022)
- [R 4.1.3](#) (March, 2022)
- [R 4.1.2](#) (November, 2021)
- [R 4.1.1](#) (August, 2021)
- [R 4.1.0](#) (May, 2021)
- [R 4.0.5](#) (March, 2021)
- [R 4.0.4](#) (February, 2021)
- [R 4.0.3](#) (October, 2020)
- [R 4.0.2](#) (June, 2020)
- [R 4.0.1](#) (June, 2020)
- [R 3.9.0](#) (April, 2020)
- [R 3.6.3](#) (February, 2020)
- [R 3.6.2](#) (December, 2019)
- [R 3.6.1](#)** (July, 2019)
- [R 3.6.0](#) (April, 2019)
- [R 3.5.1](#) (March, 2019)
- [R 3.5.0](#) (December, 2018)

Version of R to download (click on the link)

→ You will have 2 versions of R on your computer: the previously downloaded version 4.1.2 and version 3.6.1

see the following slide for next step







## WORK Package 5 – Reformulation and processed food monitoring

### Downloading of a new version of R

- **Download the R software:**

Follow this link and select **version 3.6.1** (which is not the latest version but a version that will be needed for the task):

<https://cran.r-project.org/bin/windows/base/old/>



The screenshot shows the R download page for Windows. A red box highlights the 'Download R 3.6.1 for Windows' link. A red arrow points from this link to a green callout box containing instructions: 'Click to download this .exe file.', 'Once you have downloaded this file, you can open it and click on 'Run'.', and 'The new version of R will then be installed on your computer.' Below the callout, there are several bullet points: 'Does R run under my version of Windows?', 'How do I update packages in my previous version of R?', and 'Should I use 32-bit or 64-bit R?'. At the bottom, there is a note about the R FAQ and Windows FAQ.

*During the software installation, accept all the basic settings by clicking 'next' at each step*



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## WORK Package 5 – Reformulation and processed food monitoring

### Downloading of a new version of R

#### Tutorial video to download and install R version 3.6.1

→ This video is available at any time on the Best ReMaP intranet in the WP5 section  
<https://portal.nijz.si/ssf/s/readFile/folderEntry/78207/ff80808282b055810184a4dfdb536336/1666364186000/lastView/R.3.6.1.mp4>



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WORK Package 5 – Reformulation and processed food monitoring

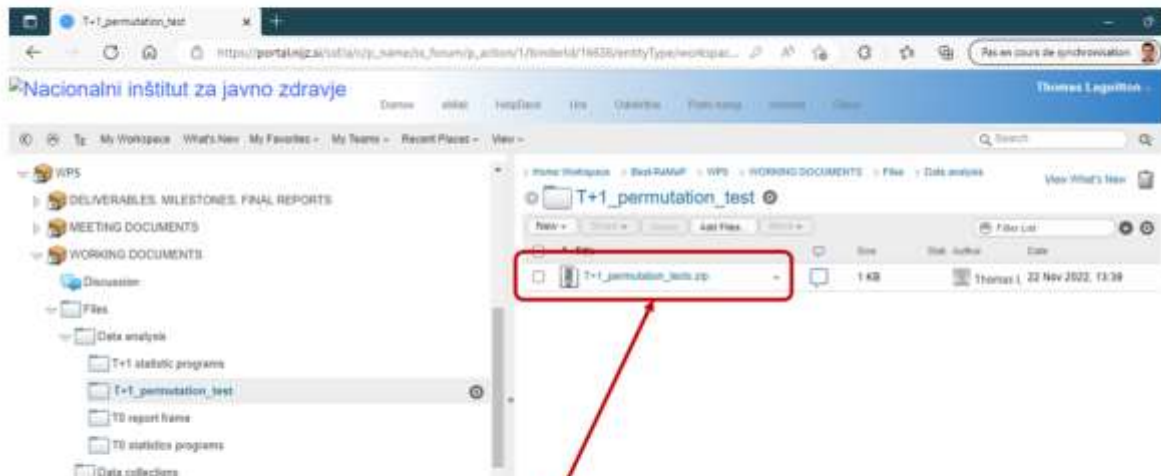
4) Introduction to the creation of statistical indicators

- A. Explanation of the steps
- B. Installation/update of the necessary equipment**
  - i. Downloading of a new version of it
  - ii. Downloading of a new working folder for permutation tests**



WORK Package 5 – Reformulation and processed food monitoring

Downloading of a new working folder

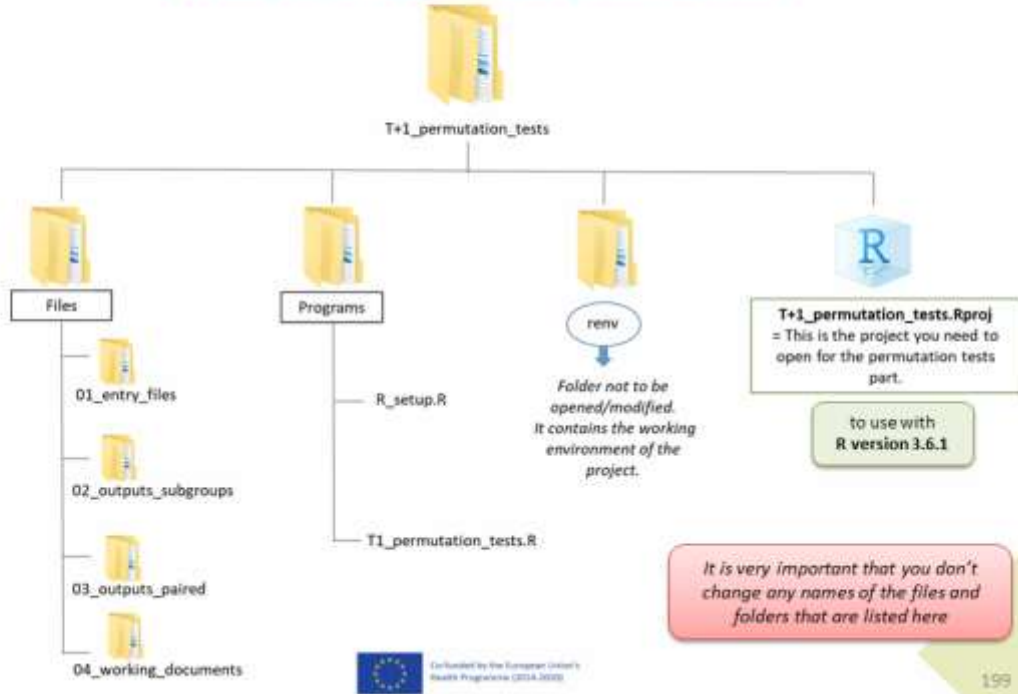


- You must download the zip folder called 'T+1\_permutation\_tests.zip' from the Best-ReMaP intranet and copy it on your desktop  
[https://portal.nljz.si/ssf/a/c/p\\_name/ss\\_forum/p\\_action/1/binderId/21932/entityType/folder/action/view\\_permalink/novl\\_url/1](https://portal.nljz.si/ssf/a/c/p_name/ss_forum/p_action/1/binderId/21932/entityType/folder/action/view_permalink/novl_url/1)
- You must unzip this folder before using it

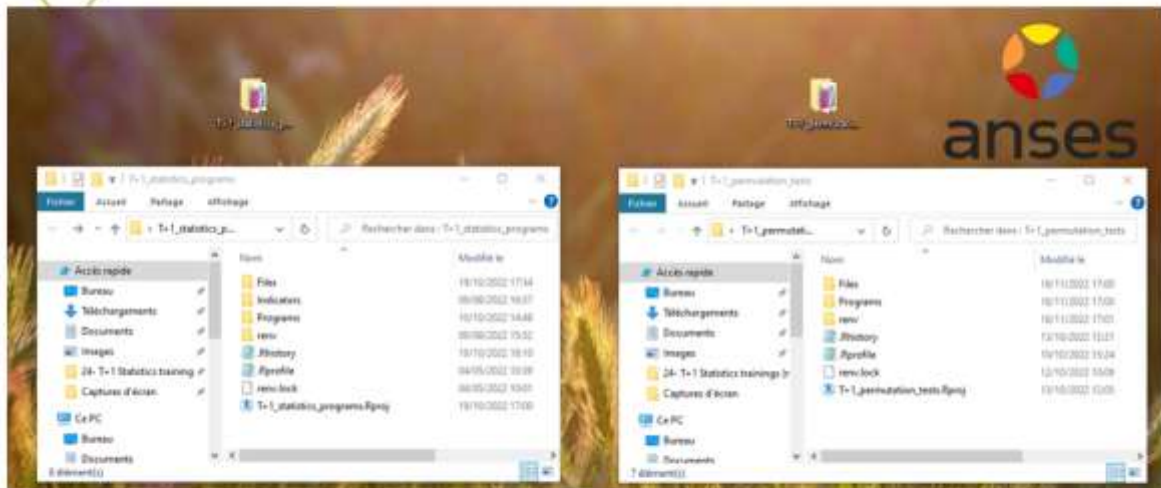


WORK Package 5 – Reformulation and processed food monitoring

Downloading of a new working folder



WORK Package 5 – Reformulation and processed food monitoring



You now have 2 working folders on your desktop:

- a folder called *T+1\_statistics\_programs*
- a folder called *T+1\_permutation\_tests*



WORK Package 5 – Reformulation and processed food monitoring

**5) Running of the programs for the creation of indicators**

A. Entry tables generated for statistical tests [\(page 202\)](#)

B. Permutation tests [\(page 223\)](#)

C. Creation of statistical indicators [\(page 258\)](#)



WORK Package 5 – Reformulation and processed food monitoring

**5) Running of the programs for the creation of indicators**

A. Entry tables generated for statistical tests

B. Permutation tests

C. Creation of statistical indicators





## WORK Package 5 – Reformulation and processed food monitoring

### Entry tables generated for statistical tests

#### Presentation of the 'Preparation\_for\_permutation' program :

- This program allows you to generate the input tables for performing statistical tests on your data. These tests will be necessary for the analysis of some of the comparison indicators.
- This program has to be run in the Rstudio environment *T+1\_statistics\_programs.Rproj* with R version **4.1.2**.

#### Requirements before starting the program 'Preparation\_for\_permutation' :

- Before running the program, you need to make sure that you have the final version of your template called *T+1\_data\_collection\_country\_Step4\_CORRECTED(X).csv* in the folder '**Files**' in the *T+1\_statistics\_programs* working folder that you have on your desktop.
- You need to check that the R program '*Preparation\_for\_permutation.R*' is present in the folder '**Programs**' in the *T+1\_statistics\_programs* working folder.
- You need to check that the excel file '*Nutrients\_of\_interest.csv*' and the folder '*Tables\_for\_permutation\_tests*' are present in the folder '**Files**' in the *T+1\_statistics\_programs* working folder.

Your Rstudio interface must have been cleaned up before running the program.  
 All cleaning steps are described in part "2)" of this document.



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## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Preparation\_for\_permutation' program

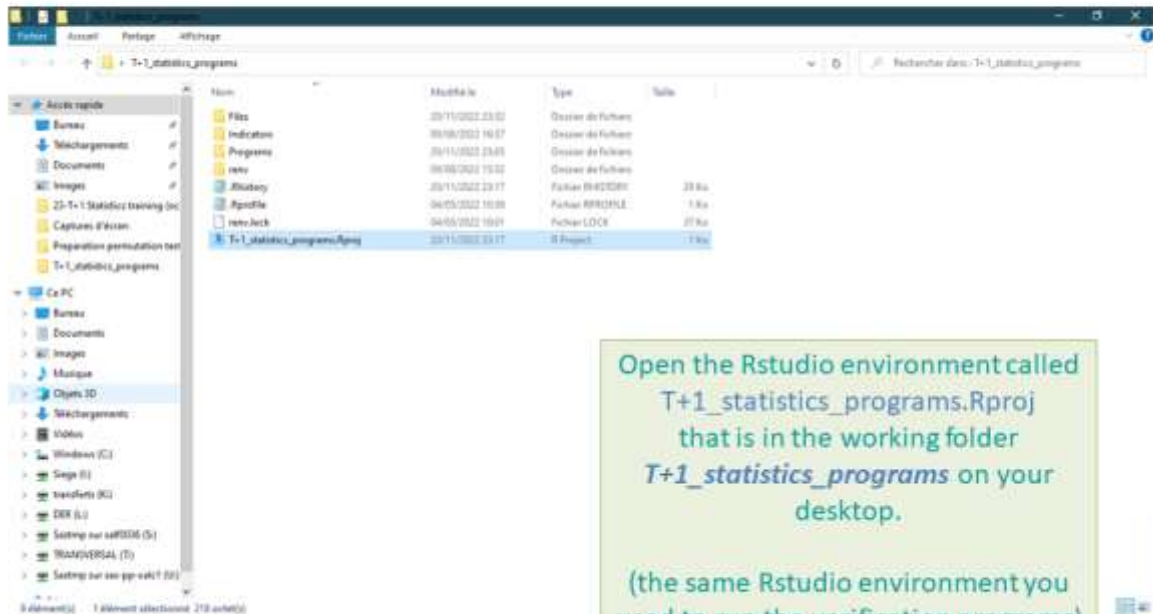


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WORK Package 5 – Reformulation and processed food monitoring

Running of 'Preparation\_for\_permutation' program



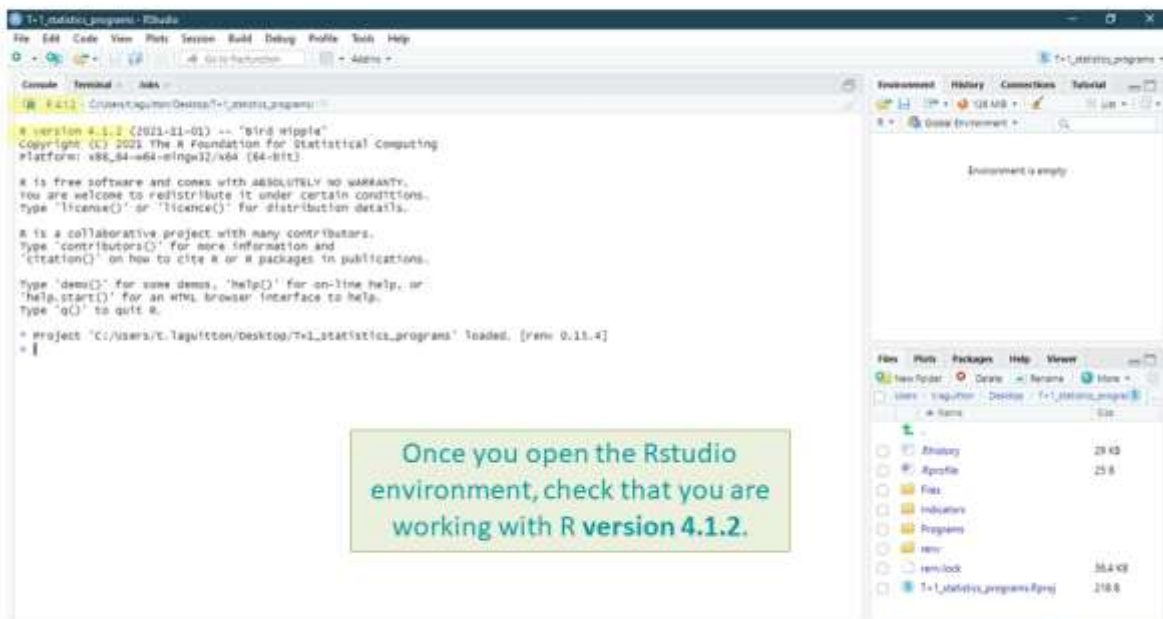
Open the Rstudio environment called **T+1\_statistics\_programs.Rproj** that is in the working folder **T+1\_statistics\_programs** on your desktop.  
  
(the same Rstudio environment you used to run the verification programs)

T+1\_statistics\_programs  
R (4.1.2)



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Preparation\_for\_permutation' program



Once you open the Rstudio environment, check that you are working with **R version 4.1.2**.

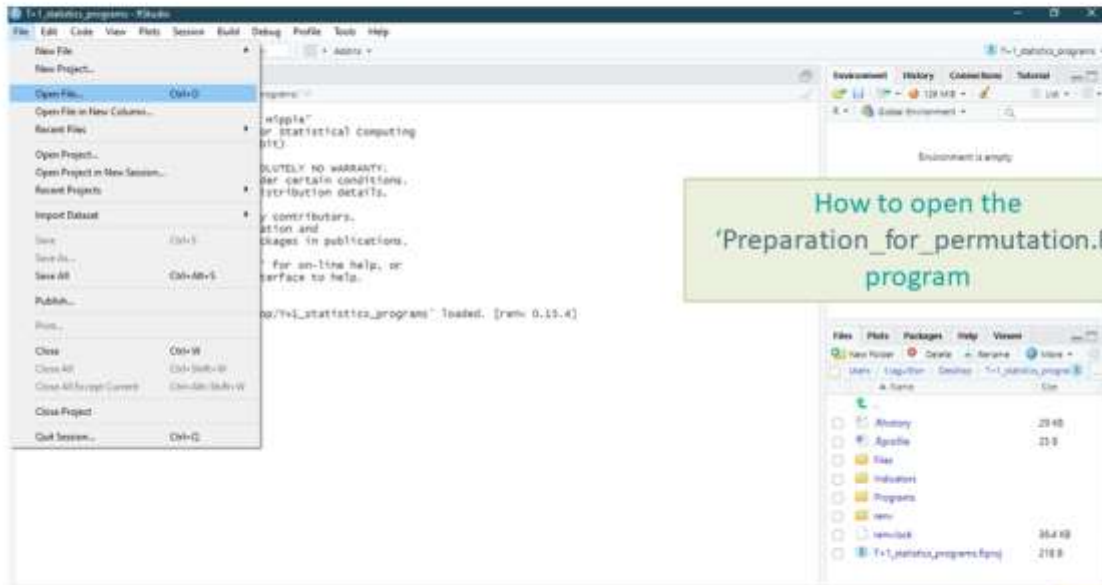
T+1\_statistics\_programs  
R (4.1.2)





WORK Package 5 – Reformulation and processed food monitoring

Running of 'Preparation\_for\_permutation' program

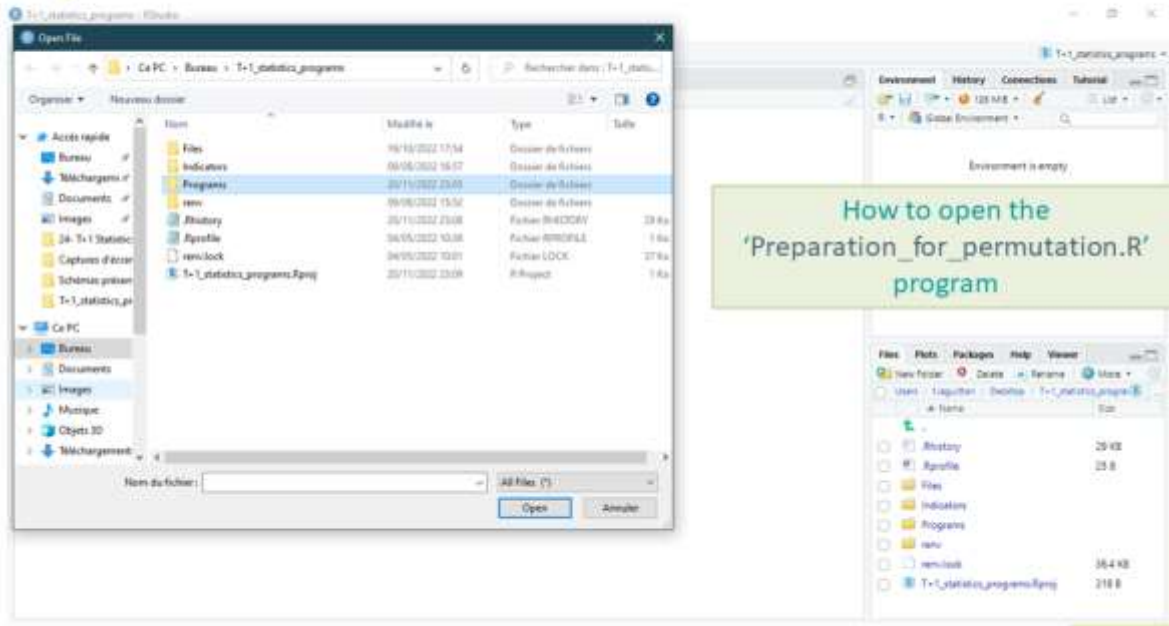


T4-1\_statistics\_programs  
II (4.1.2)



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Preparation\_for\_permutation' program



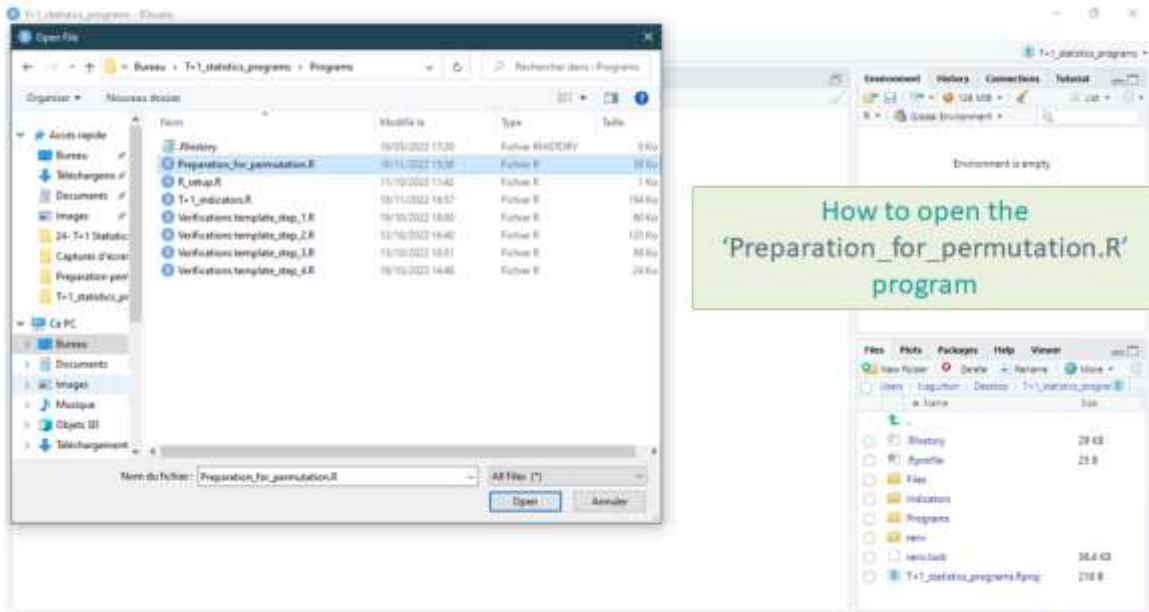
T4-1\_statistics\_programs  
II (4.1.2)





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Preparation\_for\_permutation' program



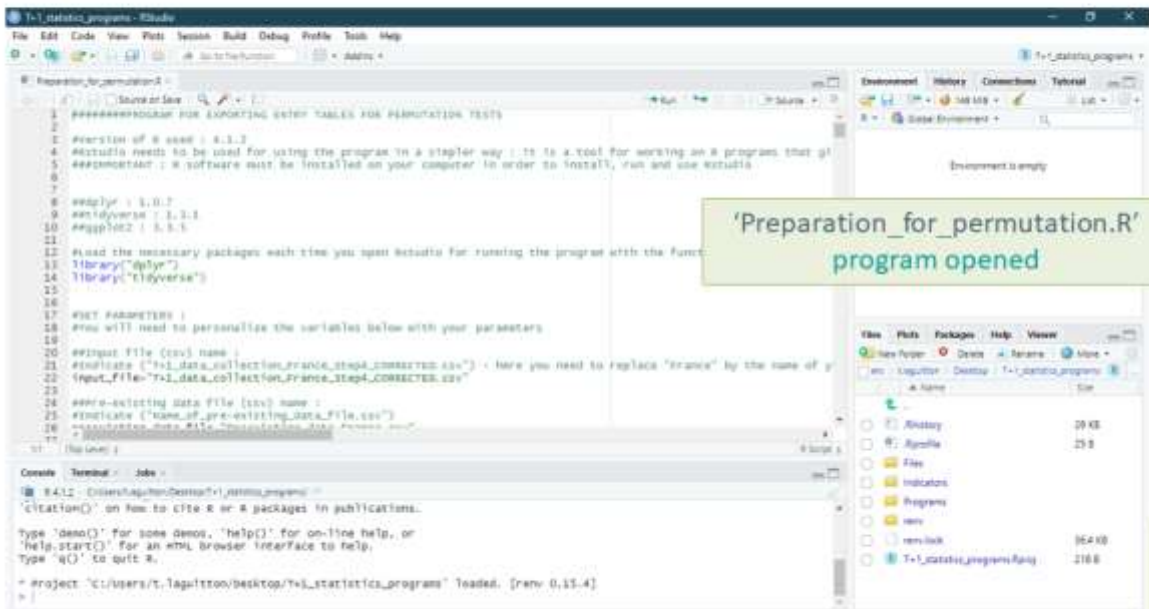
How to open the 'Preparation\_for\_permutation.R' program

T41\_statistics\_programs  
II (4.1.2)



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'Preparation\_for\_permutation' program



'Preparation\_for\_permutation.R' program opened

T41\_statistics\_programs  
II (4.1.2)

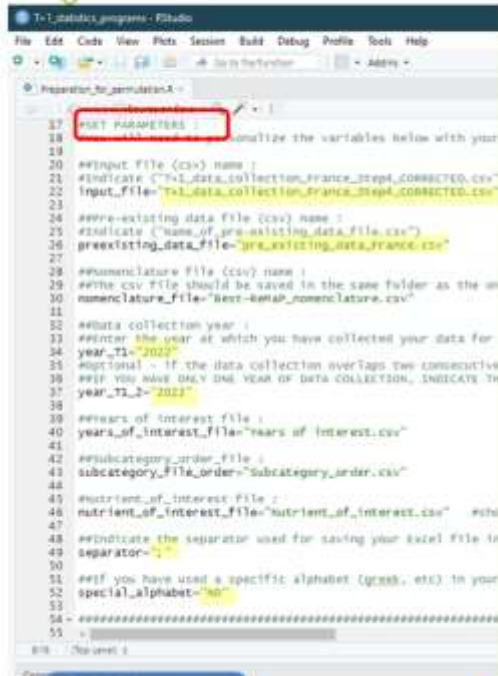






WORK Package 5 – Reformulation and processed food monitoring

Running of 'Preparation\_for\_permutation' program



```

17 SET PARAMETERS :
18 #You will need to personalize the variables below with your
19
20 #input file (csv) name :
21 #indicate ("T+1_data_collection_france_step4_CORRECTED.csv" -> here you need to replace "france" by the name of y
22 input_file="T+1_data_collection_france_step4_CORRECTED.csv"
23
24 #pre-existing data file (csv) name :
25 #indicate ("name_of_pre-existing_data_file.csv")
26 preexisting_data_file="pre_existing_data_france.csv"
27
28 #nomenclature file (csv) name :
29 #this csv file should be saved in the same folder as the one containing your data set in csv
30 nomenclature_file="best-remap_nomenclature.csv"
31
32 #data collection year :
33 #enter the year at which you have collected your data for best-remap (replace "2021" with "your collection year"
34 year_T1="2021"
35 #optional - if the data collection overlaps two consecutive
36 #IF YOU HAVE ONLY ONE YEAR OF DATA COLLECTION, INDICATE THE
37 year_T1_2="2021"
38
39 #years of interest file :
40 years_of_interest_file="years_of_interest.csv"
41
42 #subcategory order file :
43 subcategory_file_order="Subcategory_order.csv"
44
45 #nutrient of interest file :
46 nutrient_of_interest_file="nutrient_of_interest.csv" #sho
47
48 #indicate the separator used for saving your excel file in
49 separator=";"
50
51 #if you have used a specific alphabet (grass, etc) in your
52 special_alphabet="no"
53
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100
    
```

Setting parameters for 'Preparation\_for\_permutation.R' program

In the "set parameters" section, you must fill in as *input file* the name of your final template after the 4 verification programs (line 22). You must also enter the name of your pre-existing data template in csv format (line 26)

You must indicate the year in which your T+1 data was collected. If the collection was carried out in the same year, you must enter this year twice (line 34 and 37). If your collection took place in two different years, you must enter both years.

You also need to indicate the separator used in your csv file (line 49). You have the choice only between ";" and ",". In Europe, the most commonly used separator in the csv format is the ";" (pre-filled in the program).

You also need to indicate if you have used a specific alphabet in your template (line 52). This field only concerns countries with a specific alphabet and is therefore pre-filled as "NO".

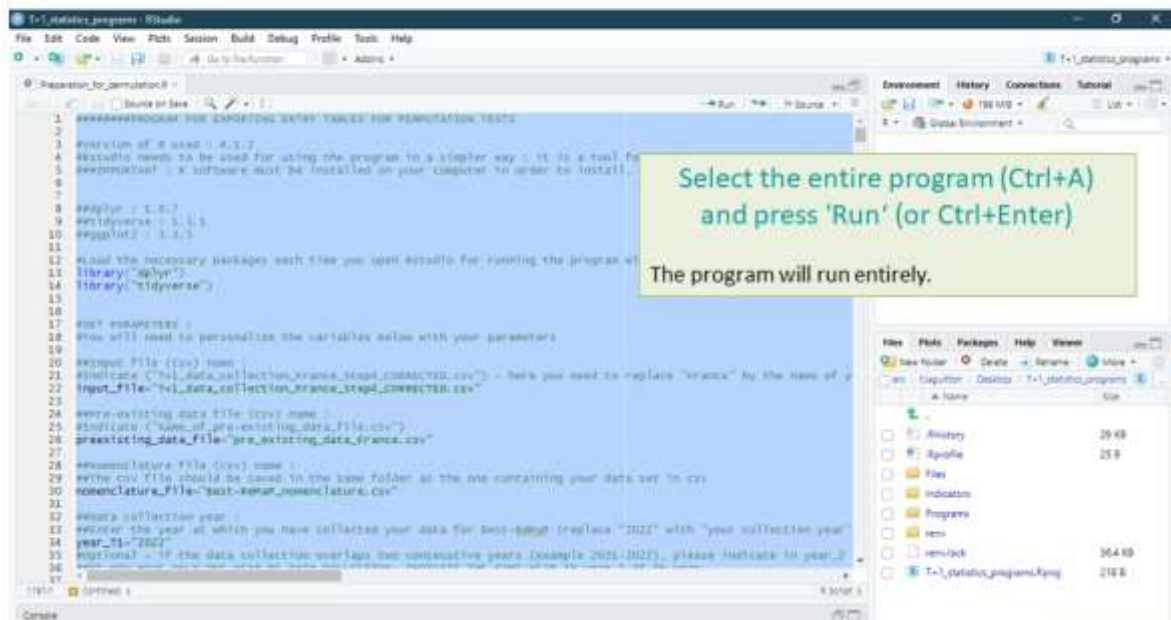
Example :

- **input file** = "T+1\_data\_collection\_Ireland\_Step4\_CORRECTED(X).csv"
- **Year\_T1** = "2021"
- **year\_T1\_2** = "2022"
- **Separator** = ";"
- **Special\_alphabet** = "NO"



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Preparation\_for\_permutation' program



```

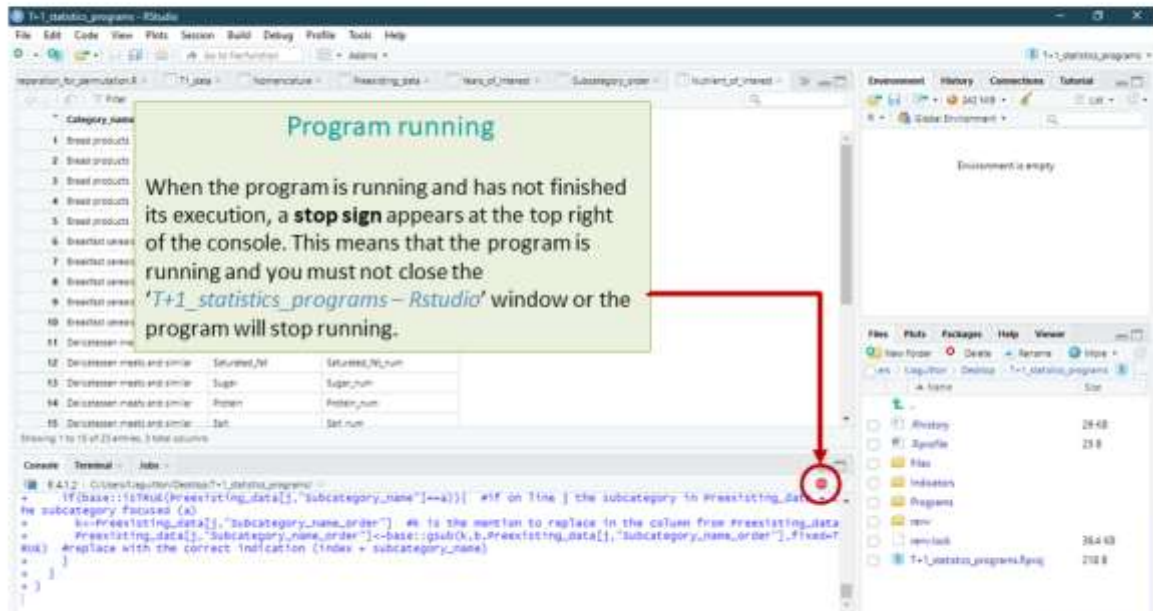
1 #####PROGRAM FOR EXISTING DATA FILES FOR PERMUTATION TESTS
2
3 #version of R used : 4.3.2
4 #studio needs to be used for using the program in a simpler way : it is a tool for
5 #programming : a software must be installed on your computer in order to install
6
7
8 #applyn : 3.3.7
9 #tidyverse : 1.3.1
10 #ggplot2 : 3.3.3
11
12 #load the necessary packages each time you open studio for running the program
13 library("applyn")
14 library("tidyverse")
15
16
17 SET PARAMETERS :
18 #You will need to personalize the variables below with your parameters
19
20 #input file (csv) name :
21 #indicate ("T+1_data_collection_france_step4_CORRECTED.csv" -> here you need to replace "france" by the name of y
22 input_file="T+1_data_collection_france_step4_CORRECTED.csv"
23
24 #pre-existing data file (csv) name :
25 #indicate ("name_of_pre-existing_data_file.csv")
26 preexisting_data_file="pre_existing_data_france.csv"
27
28 #nomenclature file (csv) name :
29 #this csv file should be saved in the same folder as the one containing your data set in csv
30 nomenclature_file="best-remap_nomenclature.csv"
31
32 #data collection year :
33 #enter the year at which you have collected your data for best-remap (replace "2021" with "your collection year"
34 year_T1="2021"
35 #optional - if the data collection overlaps two consecutive years (example 2021-2022), please indicate in year_2
36 year_T1_2="2021"
37
38 #years of interest file :
39 years_of_interest_file="years_of_interest.csv"
40
41 #subcategory order file :
42 subcategory_file_order="Subcategory_order.csv"
43
44 #nutrient of interest file :
45 nutrient_of_interest_file="nutrient_of_interest.csv" #sho
46
47 #indicate the separator used for saving your excel file in
48 separator=";"
49
50 #if you have used a specific alphabet (grass, etc) in your
51 special_alphabet="no"
52
53
54
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```

Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter)  
The program will run entirely.



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Preparation\_for\_permutation' program



**Program running**

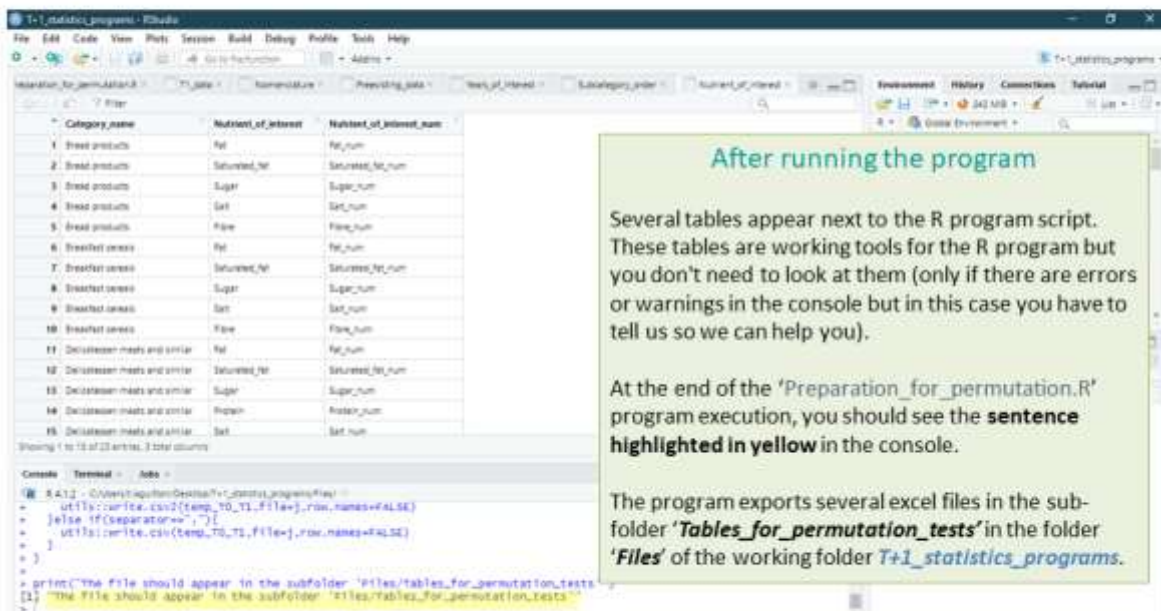
When the program is running and has not finished its execution, a **stop sign** appears at the top right of the console. This means that the program is running and you must not close the 'T+1\_statistics\_programs - Rstudio' window or the program will stop running.

T+1\_statistics\_programs  
R (4.3.2)



WORK Package 5 – Reformulation and processed food monitoring

Running of 'Preparation\_for\_permutation' program



**After running the program**

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

At the end of the 'Preparation\_for\_permutation.R' program execution, you should see the **sentence highlighted in yellow** in the console.

The program exports several excel files in the subfolder '**Tables\_for\_permutation\_tests**' in the folder '**Files**' of the working folder 'T+1\_statistics\_programs'.

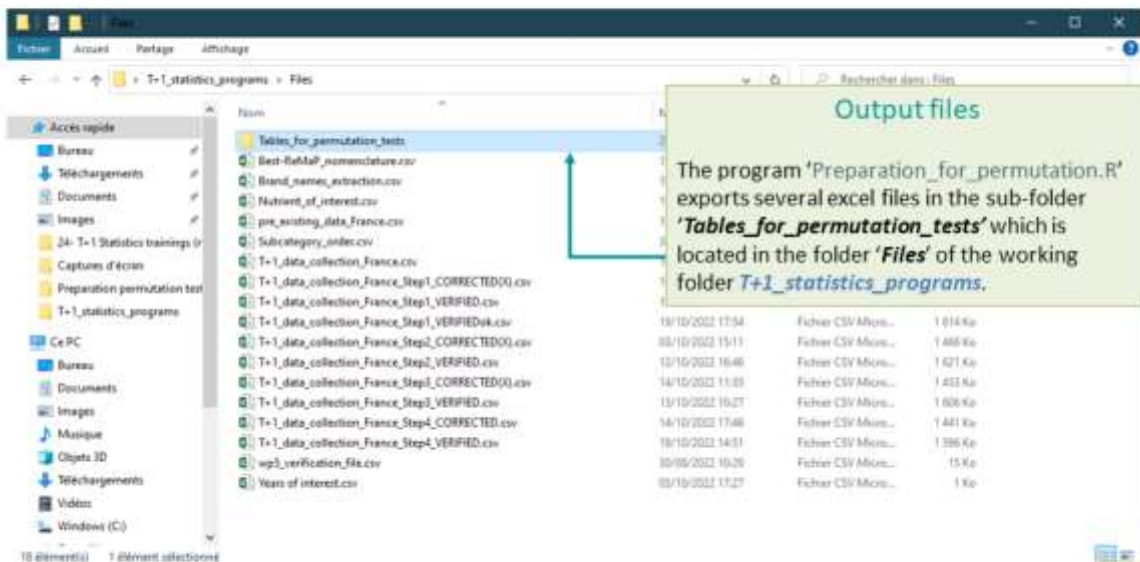
T+1\_statistics\_programs  
R (4.3.2)





## WORK Package 5 – Reformulation and processed food monitoring

### Entry tables generated for statistical tests



**Output files**

The program 'Preparation\_for\_permutation.R' exports several excel files in the sub-folder 'Tables\_for\_permutation\_tests' which is located in the folder 'Files' of the working folder T+1\_statistics\_programs.

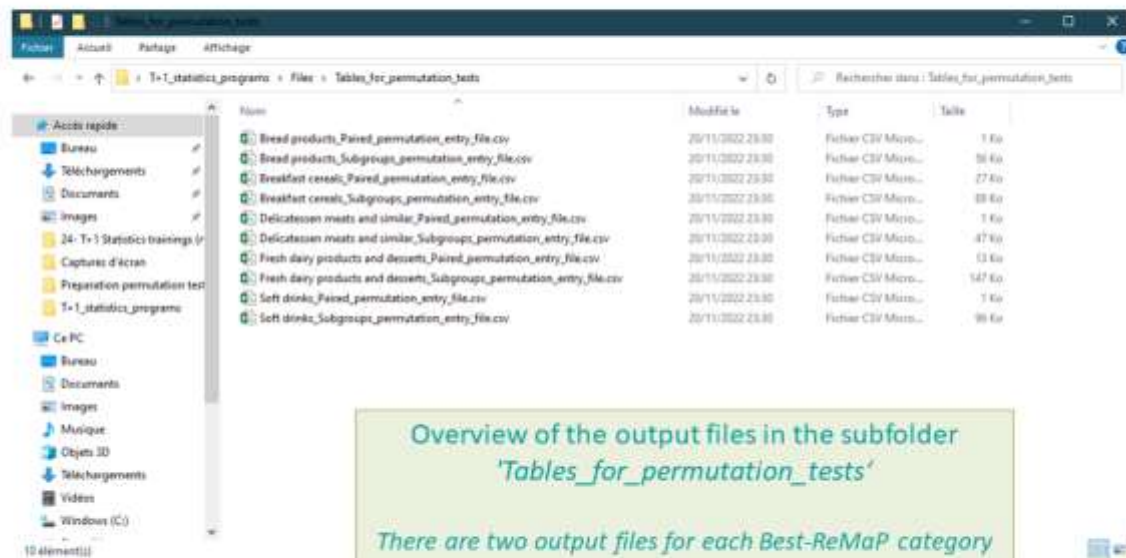
File Name	Modification Date	Type	Size
Best-ReMaP_nomenclature.csv	08/10/2022 15:11	Fichier CSV Micro...	1 486 Ko
Brand_names_extraction.csv	10/10/2022 16:46	Fichier CSV Micro...	1 621 Ko
Nutrient_of_interest.csv	14/10/2022 11:05	Fichier CSV Micro...	1 433 Ko
pre_writing_data_France.csv	13/10/2022 16:27	Fichier CSV Micro...	1 606 Ko
Subcategory_index.csv	14/10/2022 17:48	Fichier CSV Micro...	1 441 Ko
T+1_data_collection_France.csv	18/10/2022 14:01	Fichier CSV Micro...	1 395 Ko
T+1_data_collection_France_Step1_CORRECTED().csv	30/06/2022 10:26	Fichier CSV Micro...	15 Ko
T+1_data_collection_France_Step1_VERIFIED.csv	03/10/2022 17:27	Fichier CSV Micro...	1 Ko
T+1_data_collection_France_Step2_CORRECTED().csv			
T+1_data_collection_France_Step2_VERIFIED.csv			
T+1_data_collection_France_Step3_CORRECTED().csv			
T+1_data_collection_France_Step3_VERIFIED.csv			
T+1_data_collection_France_Step4_CORRECTED().csv			
T+1_data_collection_France_Step4_VERIFIED.csv			
wp1_verification_file.csv			
Years of interest.csv			

T+1\_statistics\_programs II (4.3.2)



## WORK Package 5 – Reformulation and processed food monitoring

### Entry tables generated for statistical tests



**Overview of the output files in the subfolder 'Tables\_for\_permutation\_tests'**

There are two output files for each Best-ReMaP category

→ You do not have to make any changes to these files

File Name	Modification Date	Type	Size
Bread products_Paired_permutation_entry_file.csv	20/11/2022 23:30	Fichier CSV Micro...	1 Ko
Bread products_Subgroups_permutation_entry_file.csv	20/11/2022 23:30	Fichier CSV Micro...	86 Ko
Breakfast cereals_Paired_permutation_entry_file.csv	20/11/2022 23:30	Fichier CSV Micro...	77 Ko
Breakfast cereals_Subgroups_permutation_entry_file.csv	20/11/2022 23:30	Fichier CSV Micro...	89 Ko
Delicatessen meats and similar_Paired_permutation_entry_file.csv	20/11/2022 23:30	Fichier CSV Micro...	1 Ko
Delicatessen meats and similar_Subgroups_permutation_entry_file.csv	20/11/2022 23:30	Fichier CSV Micro...	47 Ko
Fresh dairy products and desserts_Paired_permutation_entry_file.csv	20/11/2022 23:30	Fichier CSV Micro...	13 Ko
Fresh dairy products and desserts_Subgroups_permutation_entry_file.csv	20/11/2022 23:30	Fichier CSV Micro...	147 Ko
Soft drinks_Paired_permutation_entry_file.csv	20/11/2022 23:30	Fichier CSV Micro...	1 Ko
Soft drinks_Subgroups_permutation_entry_file.csv	20/11/2022 23:30	Fichier CSV Micro...	96 Ko

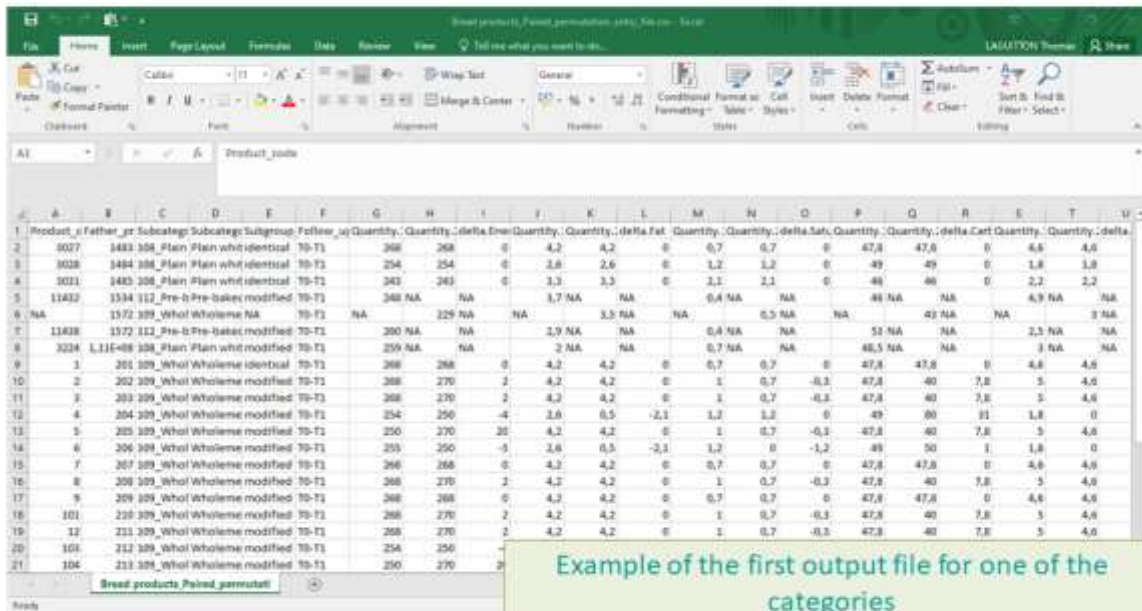
T+1\_statistics\_programs II (4.3.2)





## WORK Package 5 – Reformulation and processed food monitoring

### Entry tables generated for statistical tests



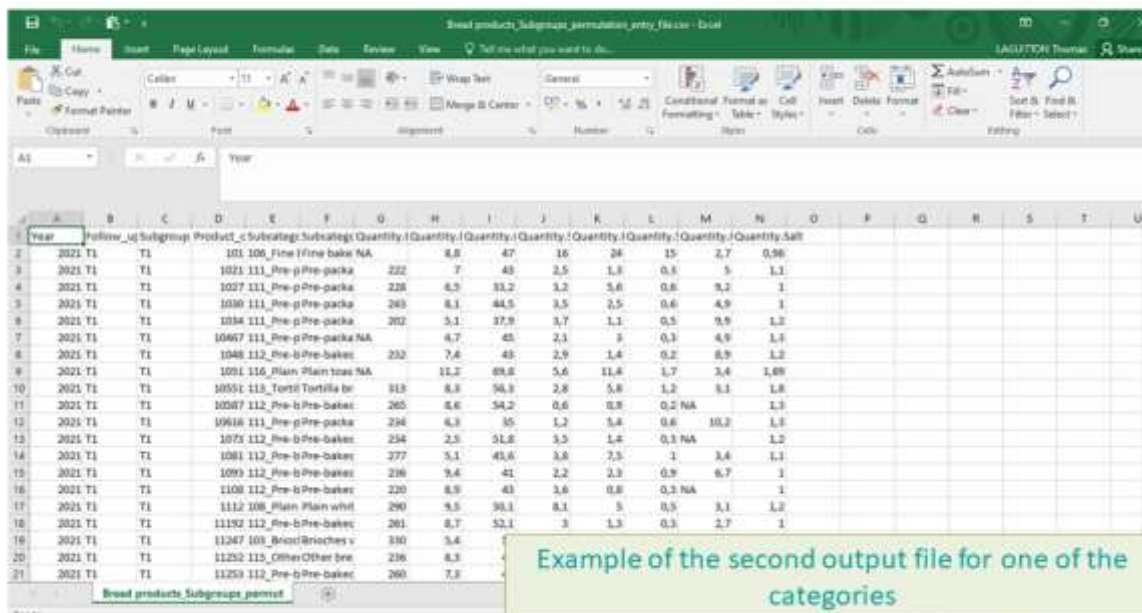
Example of the first output file for one of the categories

T41\_statistics\_programs  
II (4.3.2)



## WORK Package 5 – Reformulation and processed food monitoring

### Entry tables generated for statistical tests



Example of the second output file for one of the categories

T41\_statistics\_programs  
II (4.3.2)





WORK Package 5 – Reformulation and processed food monitoring

Entry tables generated for statistical tests

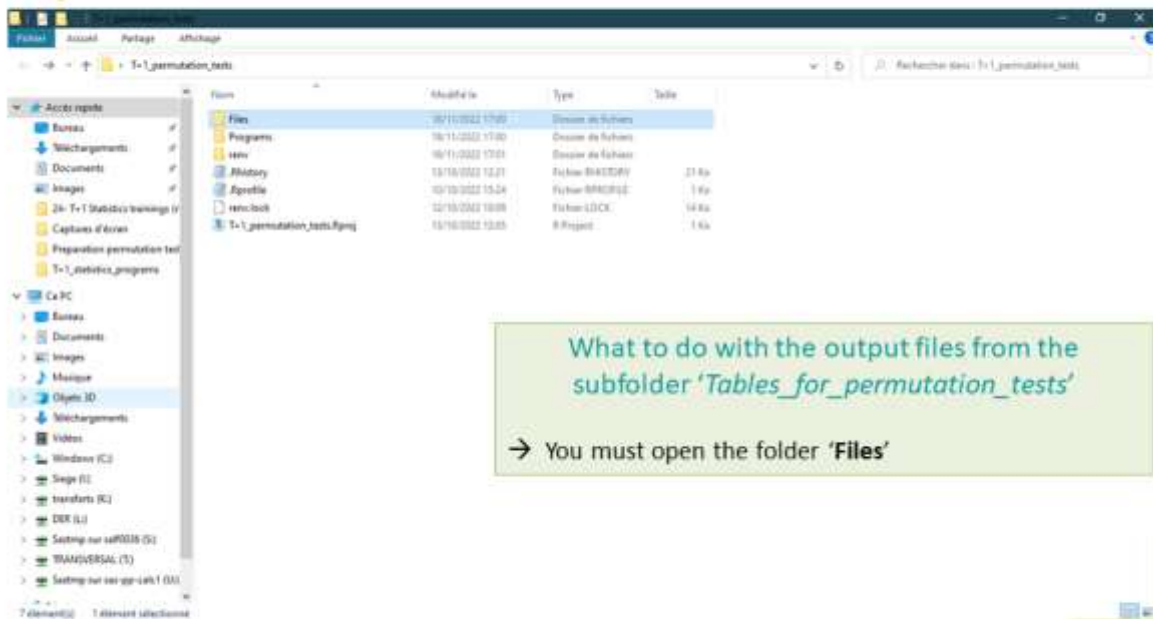


Co-funded by the European Union's Health Programme (2014-2020)



WORK Package 5 – Reformulation and processed food monitoring

Entry tables generated for statistical tests



T+1\_permutation\_tests  
II (5-6-1)

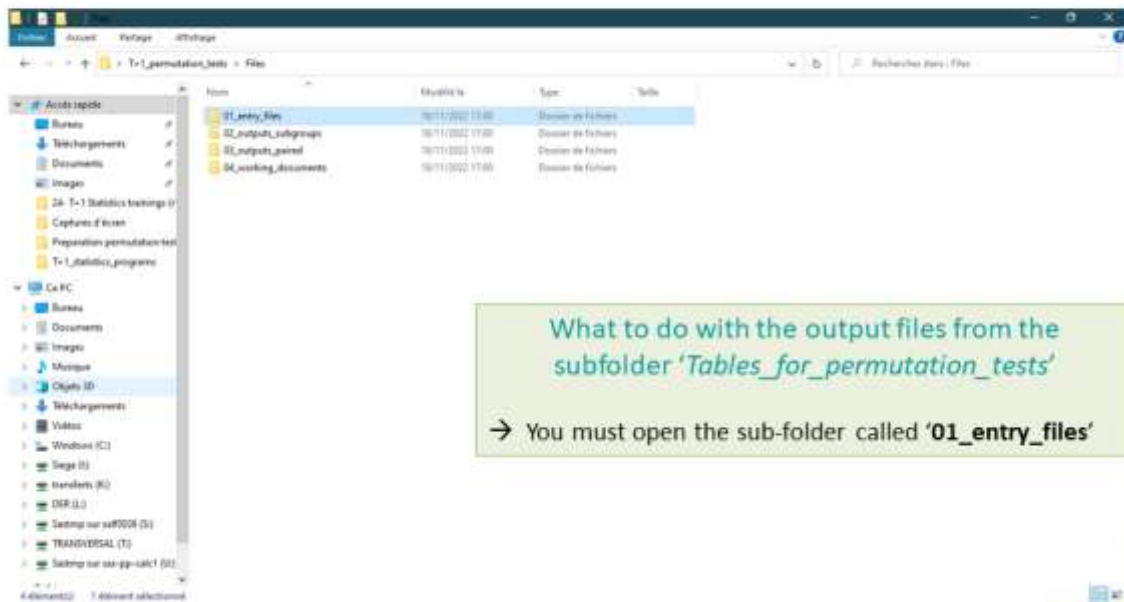


Co-funded by the European Union's Health Programme (2014-2020)



WORK Package 5 – Reformulation and processed food monitoring

Entry tables generated for statistical tests



What to do with the output files from the subfolder 'Tables\_for\_permutation\_tests'

→ You must open the sub-folder called '01\_entry\_files'

T+1\_permutation\_tests II (5.6.1)

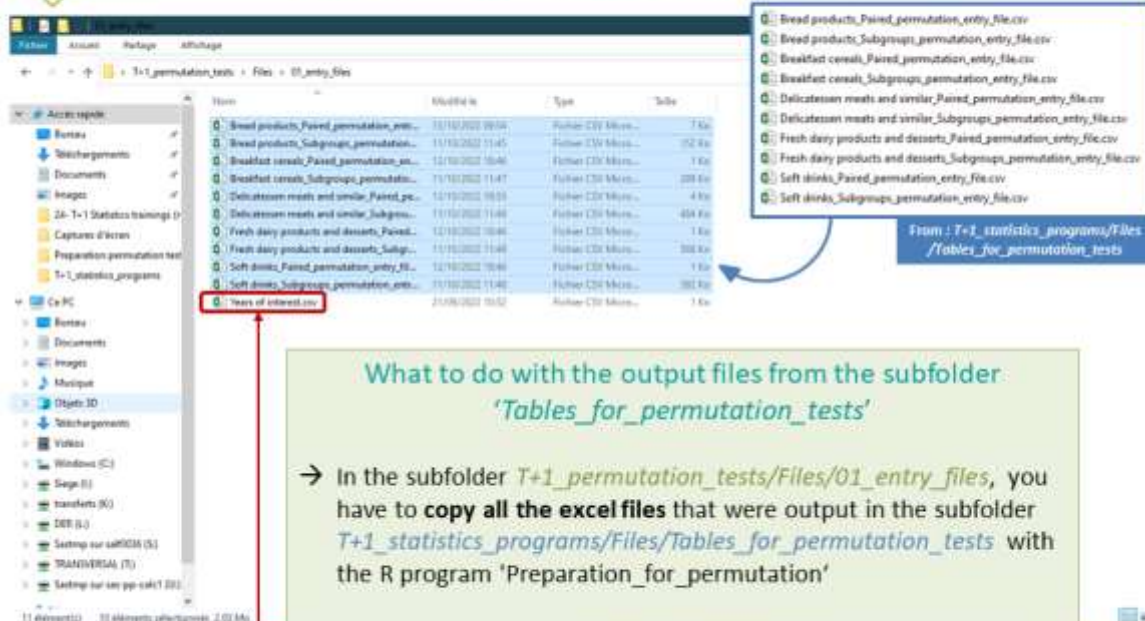


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WORK Package 5 – Reformulation and processed food monitoring

Entry tables generated for statistical tests



What to do with the output files from the subfolder 'Tables\_for\_permutation\_tests'

→ In the subfolder *T+1\_permutation\_tests/Files/01\_entry\_files*, you have to **copy all the excel files** that were output in the subfolder *T+1\_statistics\_programs/Files/Tables\_for\_permutation\_tests* with the R program 'Preparation\_for\_permutation'

→ You must also copy the 'Years of interest.csv' file from the folder *T+1\_statistics\_programs/Files* into the subfolder *T+1\_permutation\_tests/Files/01\_entry\_files*.

T+1\_permutation\_tests II (5.6.1)

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## WORK Package 5 – Reformulation and processed food monitoring

### 5) Running of the programs for the creation of indicators

A. Entry tables generated for statistical tests

**B. Permutation tests**

C. Creation of statistical indicators



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## WORK Package 5 – Reformulation and processed food monitoring

### Permutation tests

#### Presentation of the working folder “T+1\_permutation\_tests” :

- In this working folder you will find a program `R_setup.R` and a program `T1_permutation_tests.R` to perform the statistical tests.
- These programs have to be run in the Rstudio environment `T+1_permutation_tests.Rproj` with R version **3.6.1**.

#### Requirements before starting to work in the working folder “T+1\_permutation\_tests” :

- You must ensure that you have downloaded **version 3.6.1** of R to your computer.
- You must have run the program `Preparation_for_permutation.R` and copied the output files of the program (from the folder `T+1_statistics_programs/Files/Tables_for_permutation_tests`) to the folder `T+1_permutation_tests/Files/01_entry_files`.
- You should also make sure that you have copied the file 'Years of interest.csv' (filled in during the verification steps) into the folder `T+1_permutation_tests/Files/01_entry_files`

Your Rstudio interface must have been cleaned up before running the program.  
All cleaning steps are described in part “2)” of this document.



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WORK Package 5 – Reformulation and processed food monitoring

Permutation tests



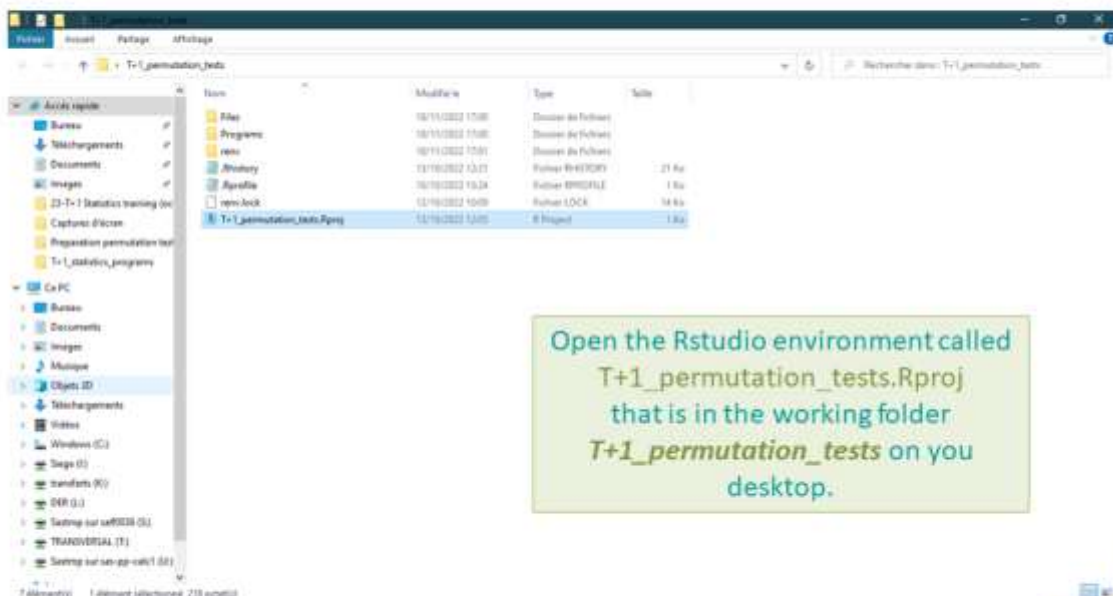
Co-funded by the European Union's Health Programme (2014-2020)

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WORK Package 5 – Reformulation and processed food monitoring

Permutation tests



T+1\_permutation\_tests  
R (5-6-1)



Co-funded by the European Union's Health Programme (2014-2020)

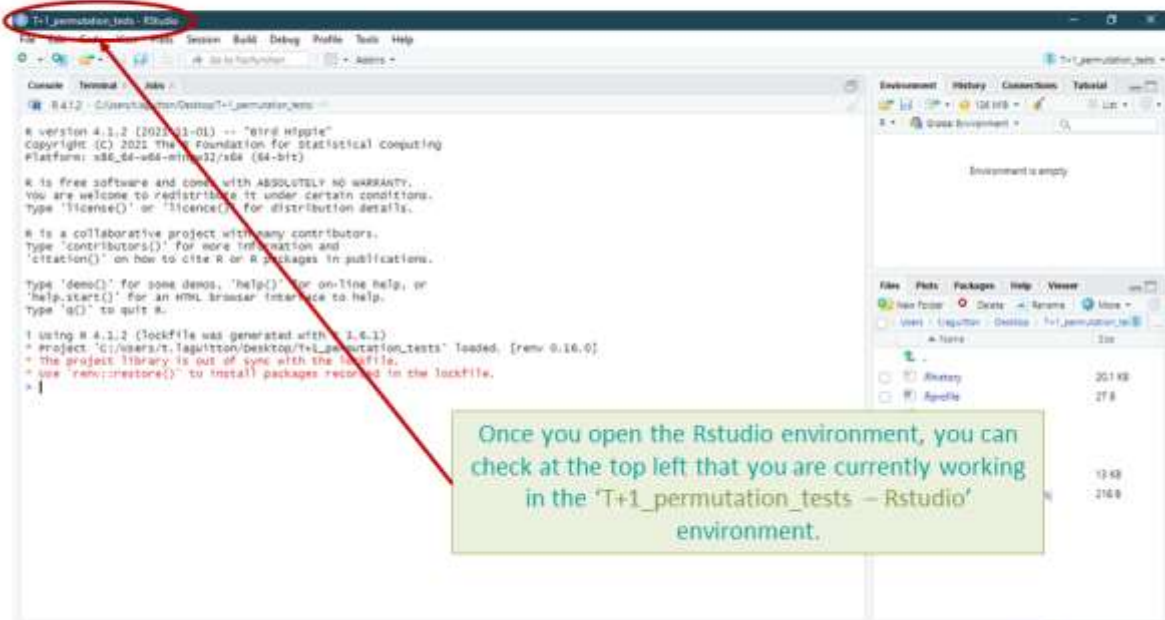
226





## WORK Package 5 – Reformulation and processed food monitoring

### Permutation tests



Once you open the Rstudio environment, you can check at the top left that you are currently working in the 'T+1\_permutation\_tests – Rstudio' environment.

T+1\_permutation\_tests  
R (3.6.1)



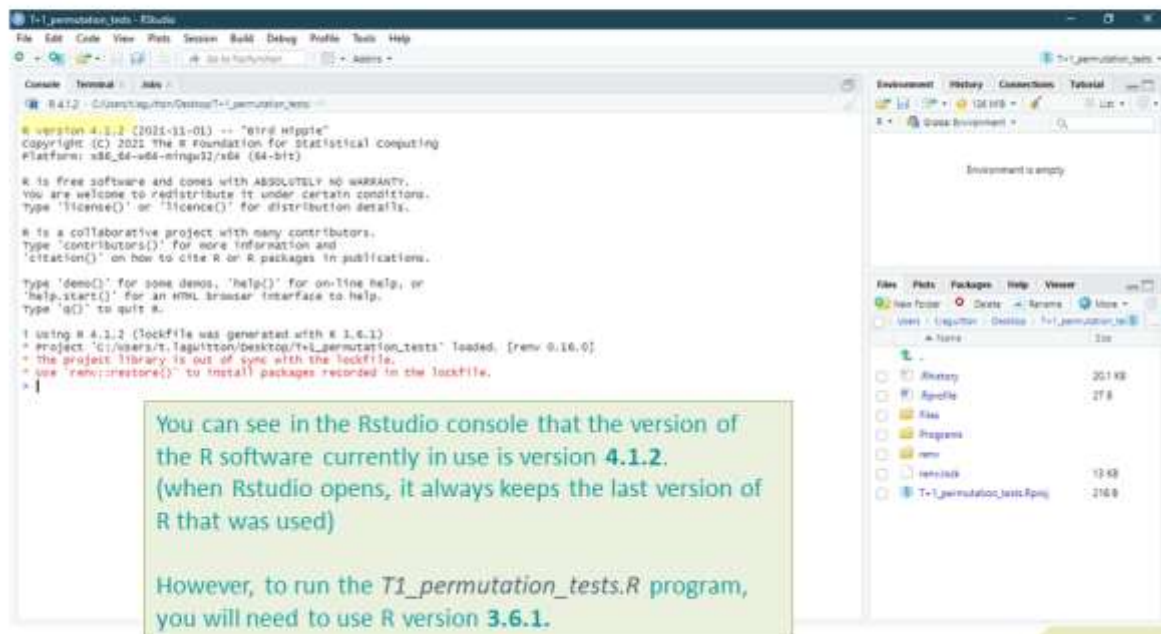
Co-funded by the European Union's  
Health Programme (2014-2020)

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## WORK Package 5 – Reformulation and processed food monitoring

### Permutation tests



You can see in the Rstudio console that the version of the R software currently in use is version 4.1.2. (when Rstudio opens, it always keeps the last version of R that was used)

However, to run the *T1\_permutation\_tests.R* program, you will need to use R version 3.6.1.

T+1\_permutation\_tests  
R (3.6.1)



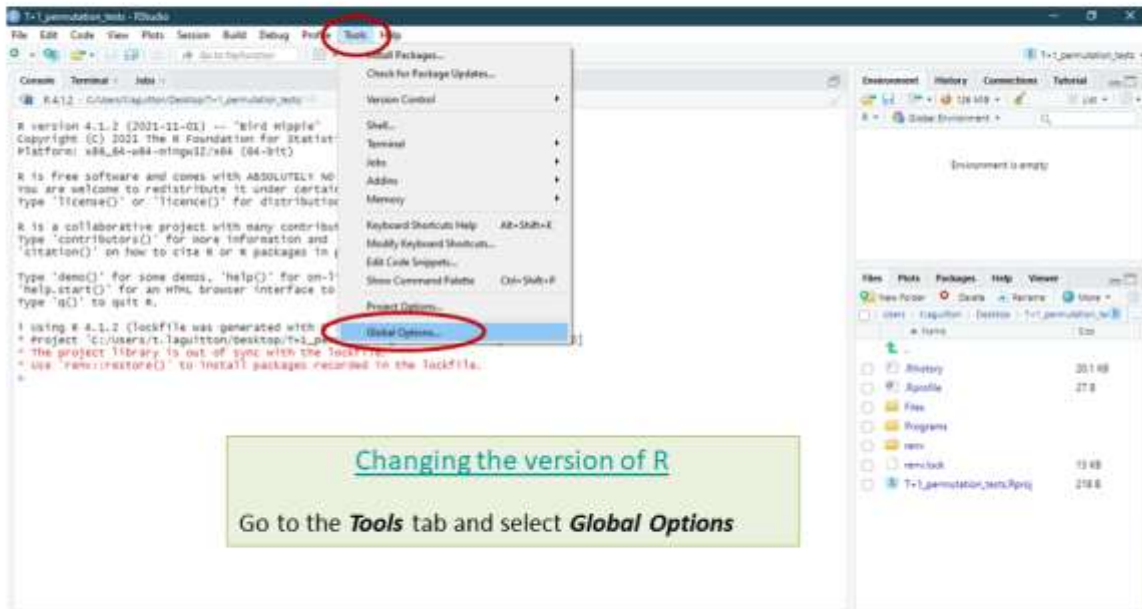
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WORK Package 5 – Reformulation and processed food monitoring

Permutation tests



The screenshot shows the RStudio IDE with the 'Tools' menu open. The 'Global Options...' option is highlighted with a red circle. The main editor window shows the R version 4.1.2 (2021-11-01) and the 'Global Options' dialog box is open.

Changing the version of R

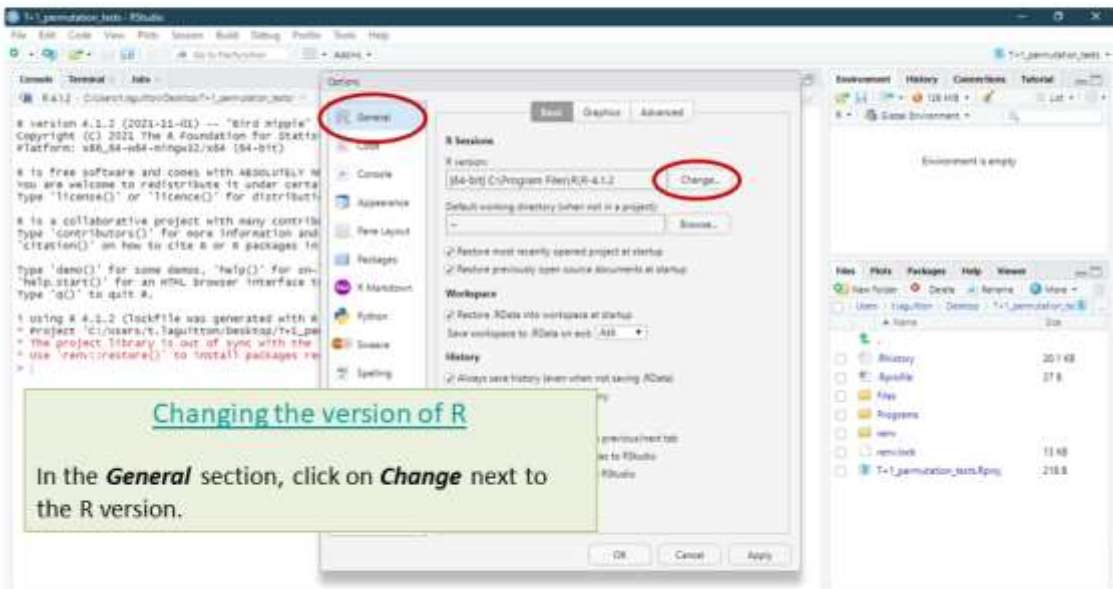
Go to the **Tools** tab and select **Global Options**

T43\_permutation\_tests  
II (3.6.1)



WORK Package 5 – Reformulation and processed food monitoring

Permutation tests



The screenshot shows the 'Options' dialog box in RStudio, specifically the 'General' tab. The 'R version:' field is set to '(64-bit) CRAN (File) R/4.1.2' and the 'Change...' button next to it is circled in red. The 'Global Options' dialog box is also visible in the background.

Changing the version of R

In the **General** section, click on **Change** next to the R version.

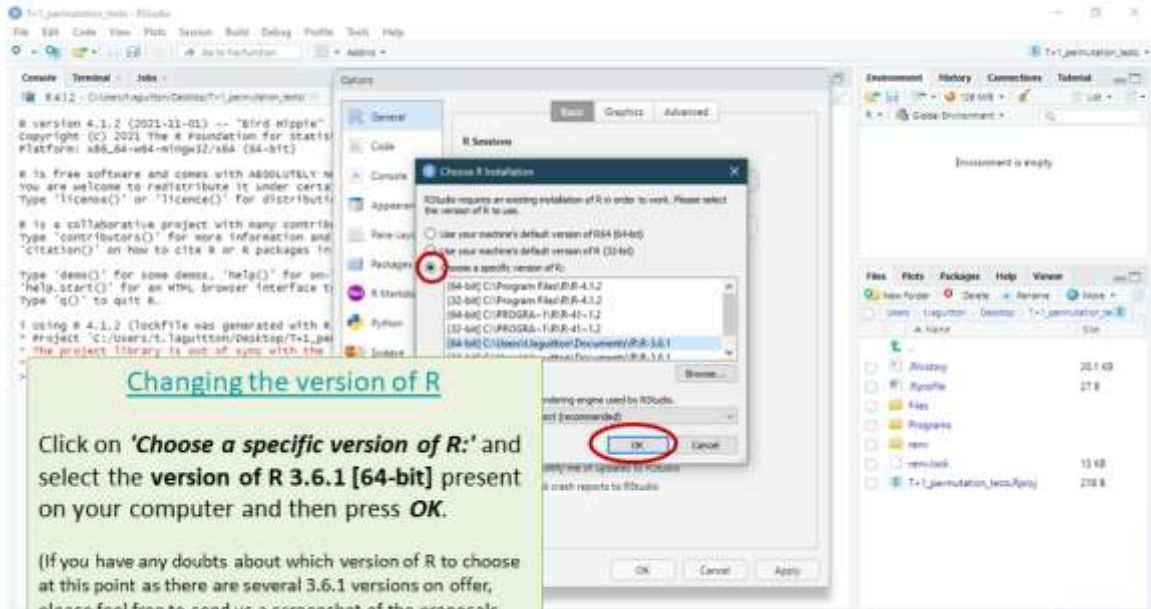
T43\_permutation\_tests  
II (3.6.1)





## WORK Package 5 – Reformulation and processed food monitoring

### Permutation tests



**Changing the version of R**

Click on **'Choose a specific version of R:'** and select the **version of R 3.6.1 [64-bit]** present on your computer and then press **OK**.

(If you have any doubts about which version of R to choose at this point as there are several 3.6.1 versions on offer, please feel free to send us a screenshot of the proposals made and we will help you choose)

T+1\_permutation\_tests  
R (3.6.1)

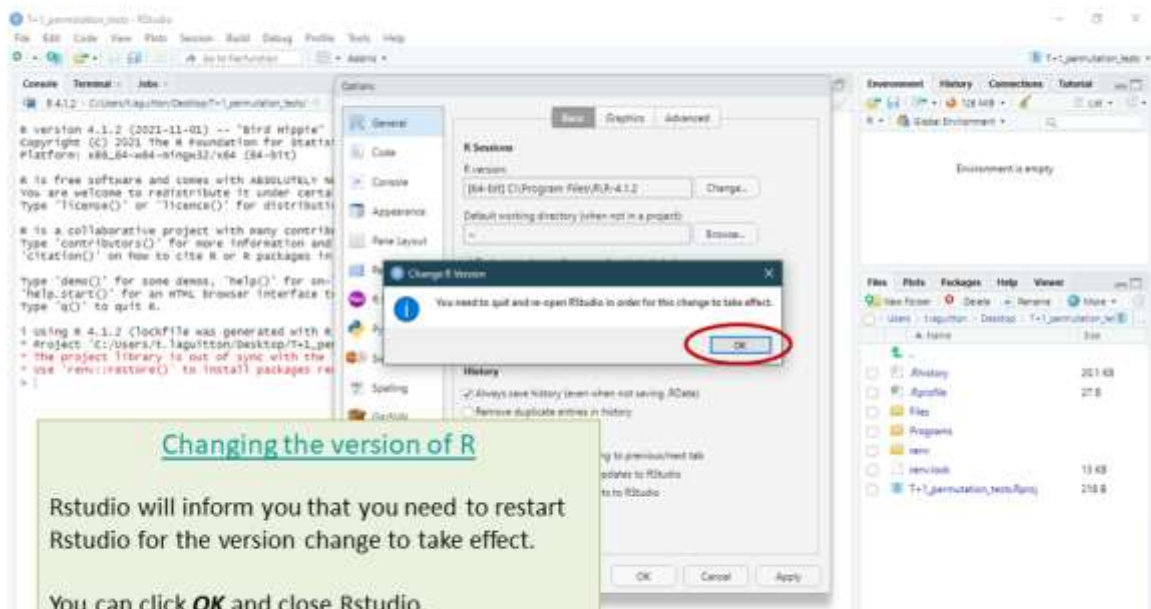


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## WORK Package 5 – Reformulation and processed food monitoring

### Permutation tests



**Changing the version of R**

Rstudio will inform you that you need to restart Rstudio for the version change to take effect.

You can click **OK** and close Rstudio.

T+1\_permutation\_tests  
R (3.6.1)

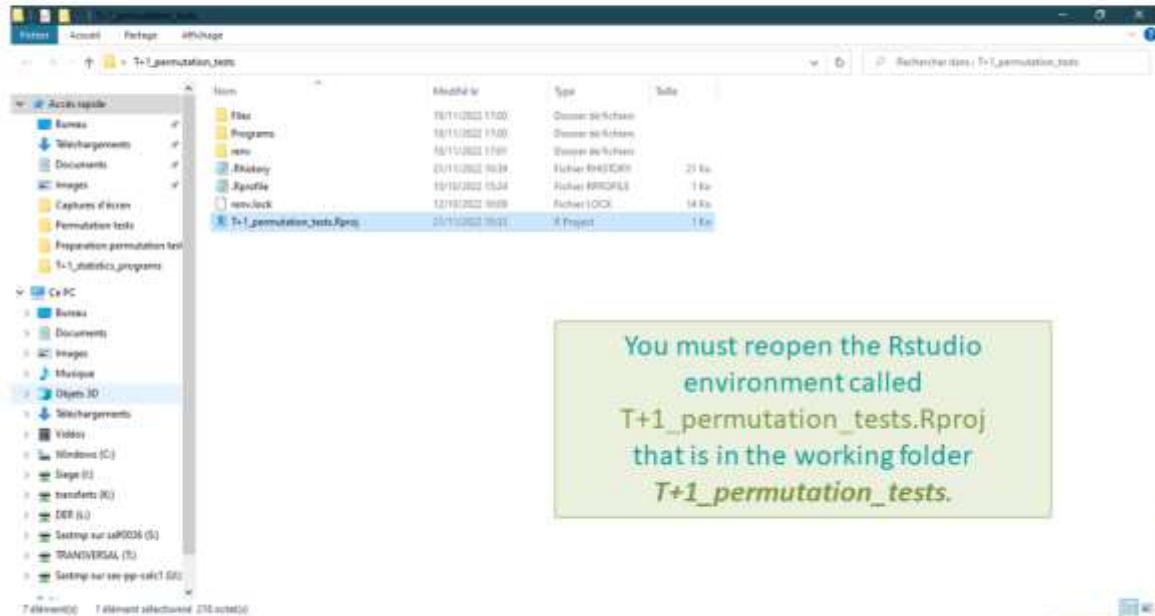


Co-funded by the European Union's  
Health Programme (2014-2020)



## WORK Package 5 – Reformulation and processed food monitoring

### Permutation tests



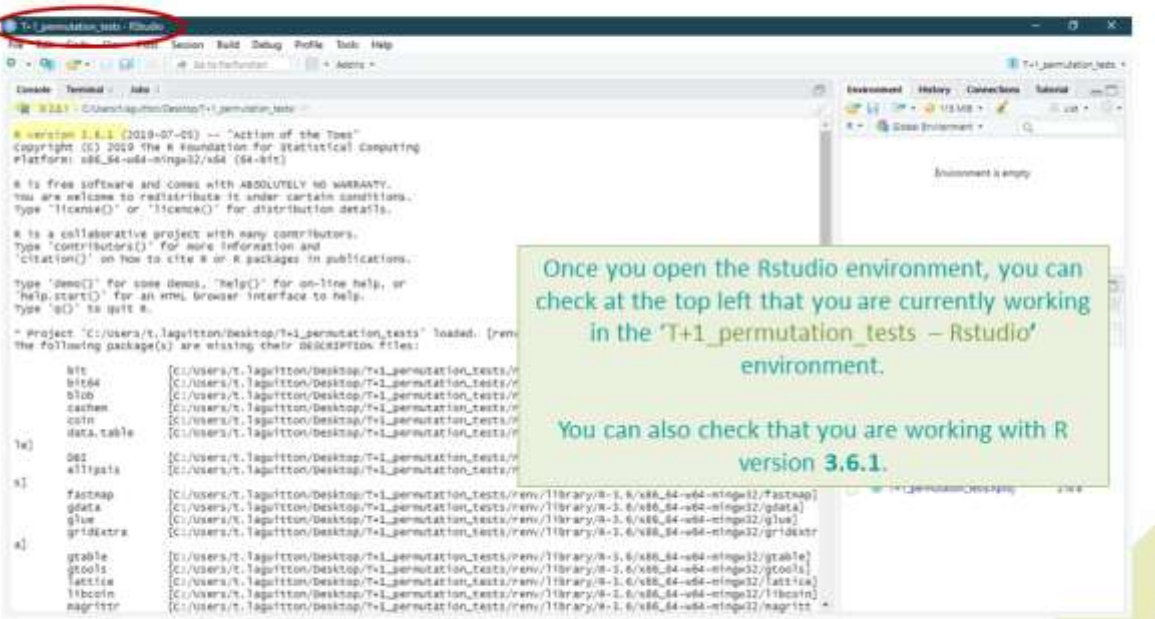
You must reopen the Rstudio environment called T+1\_permutation\_tests.Rproj that is in the working folder T+1\_permutation\_tests.

T+1\_permutation\_tests R (3.6.1)



## WORK Package 5 – Reformulation and processed food monitoring

### Permutation tests



Once you open the Rstudio environment, you can check at the top left that you are currently working in the 'T+1\_permutation\_tests - Rstudio' environment.  
You can also check that you are working with R version 3.6.1.

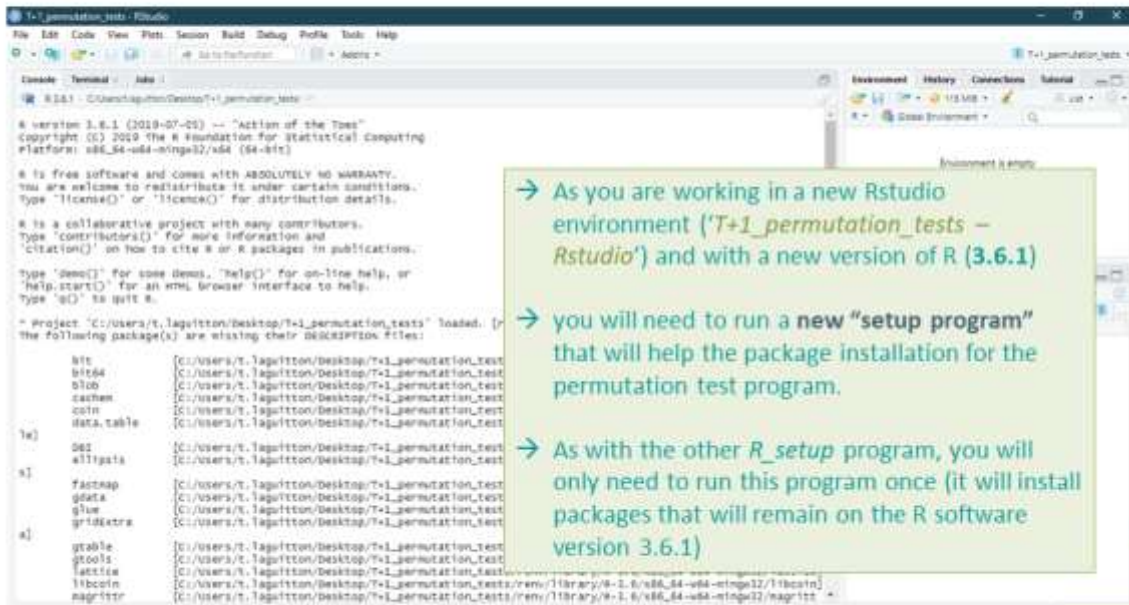
T+1\_permutation\_tests R (3.6.1)





## WORK Package 5 – Reformulation and processed food monitoring

### Running of a new 'R\_setup' program



→ As you are working in a new Rstudio environment ('T+1\_permutation\_tests - Rstudio') and with a new version of R (3.6.1)

→ you will need to run a new "setup program" that will help the package installation for the permutation test program.

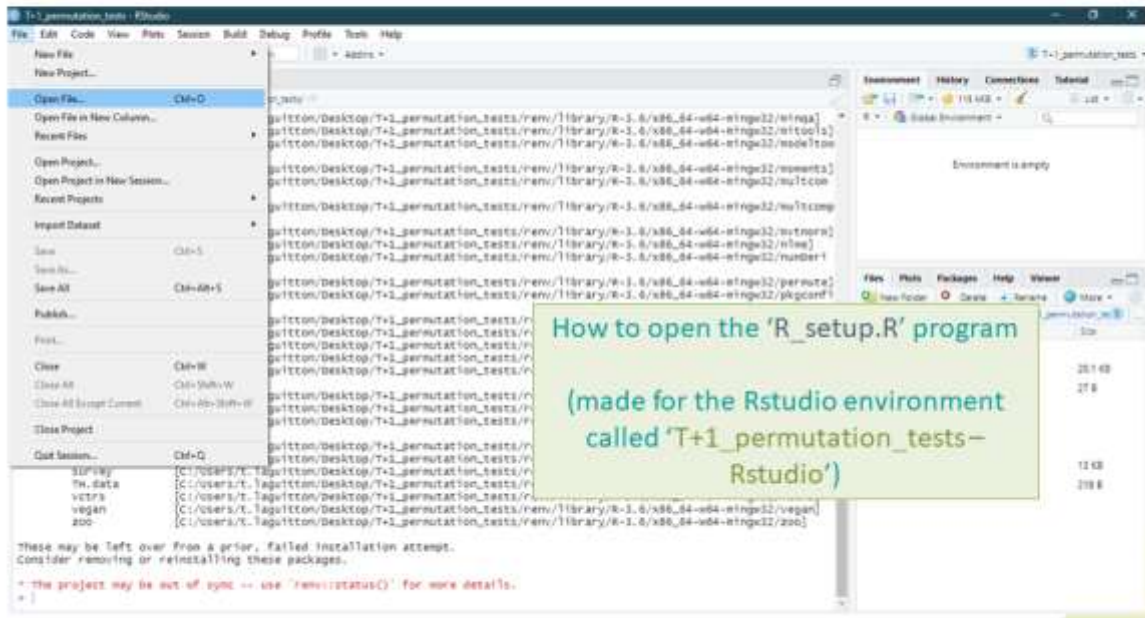
→ As with the other R\_setup program, you will only need to run this program once (it will install packages that will remain on the R software version 3.6.1)

T+1\_permutation\_tests  
R (3.6.1)



## WORK Package 5 – Reformulation and processed food monitoring

### Running of a new 'R\_setup' program



How to open the 'R\_setup.R' program  
(made for the Rstudio environment called 'T+1\_permutation\_tests - Rstudio')

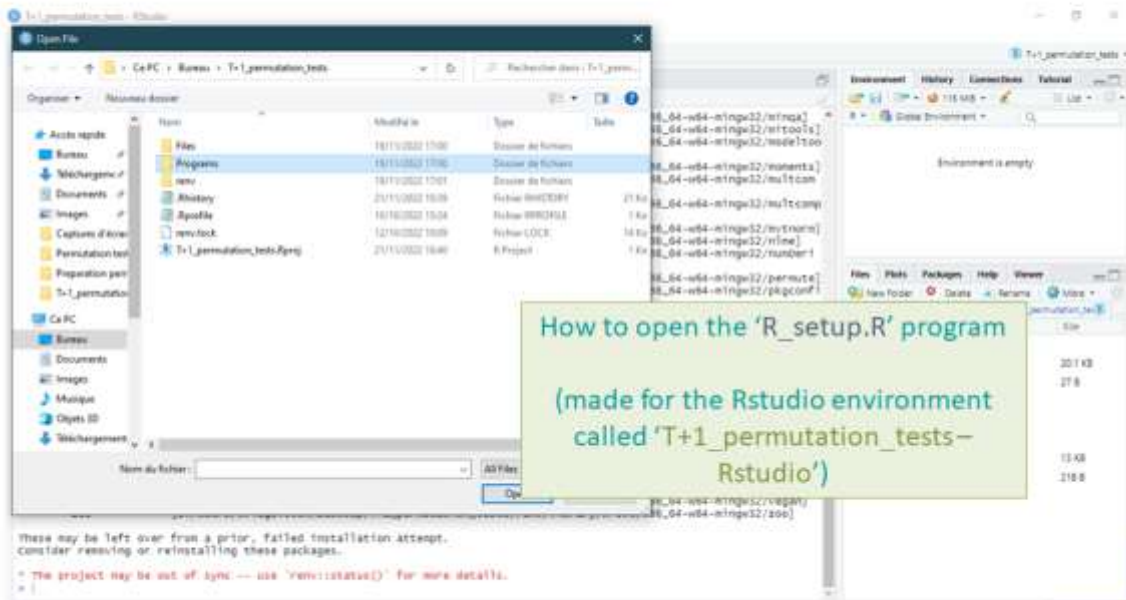
T+1\_permutation\_tests  
R (3.6.1)





WORK Package 5 – Reformulation and processed food monitoring

Running of a new 'R\_setup' program



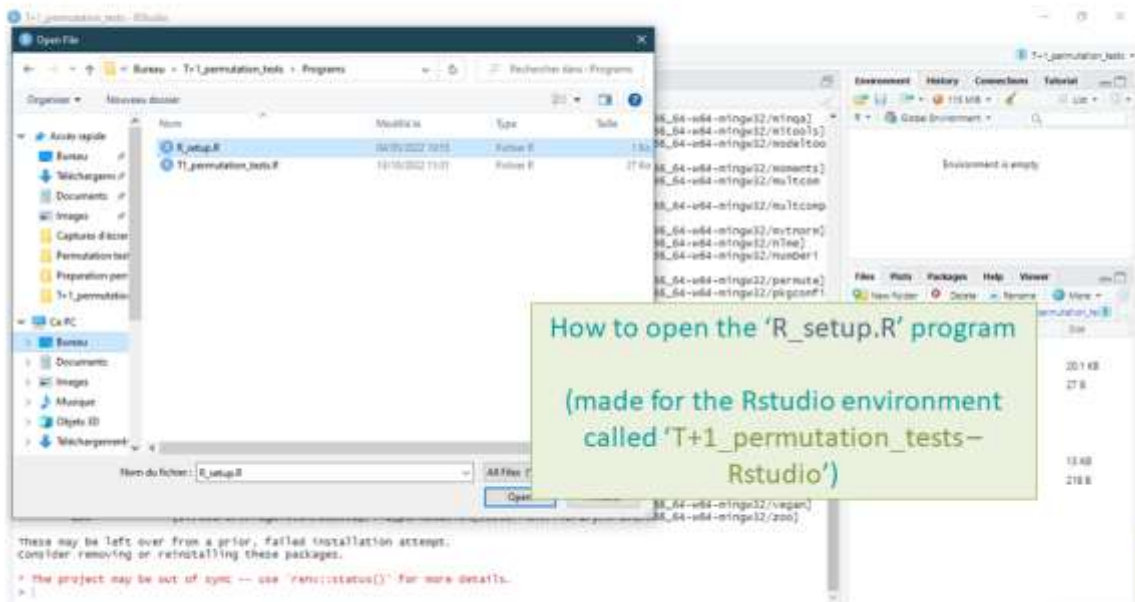
How to open the 'R\_setup.R' program  
(made for the Rstudio environment called 'T+1\_permutation\_tests-Rstudio')

T+1\_permutation\_tests  
II (5.6.1)



WORK Package 5 – Reformulation and processed food monitoring

Running of a new 'R\_setup' program



How to open the 'R\_setup.R' program  
(made for the Rstudio environment called 'T+1\_permutation\_tests-Rstudio')

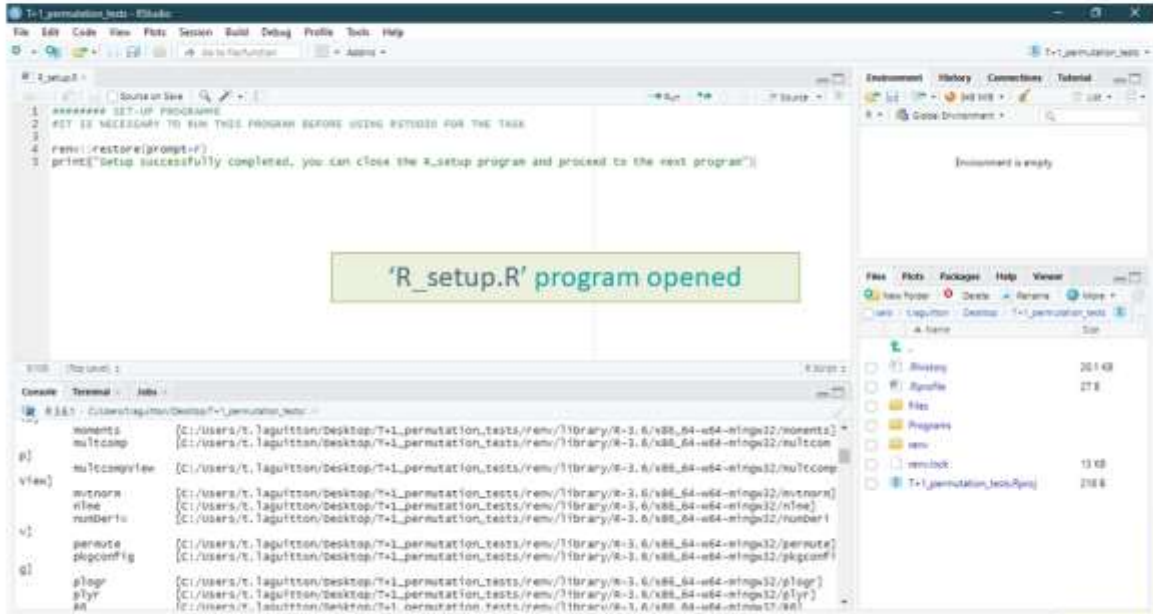
T+1\_permutation\_tests  
II (5.6.1)





WORK Package 5 – Reformulation and processed food monitoring

Running of a new 'R\_setup' program



```

1 ##### SET-UP PROGRAM
2 SET IS NECESSARY TO RUN THIS PROGRAM BEFORE BEING USED FOR THE TASK
3
4 rm(list=c("prompt"))
5 print("Setup successfully completed, you can close the R_setup program and proceed to the next program")
    
```

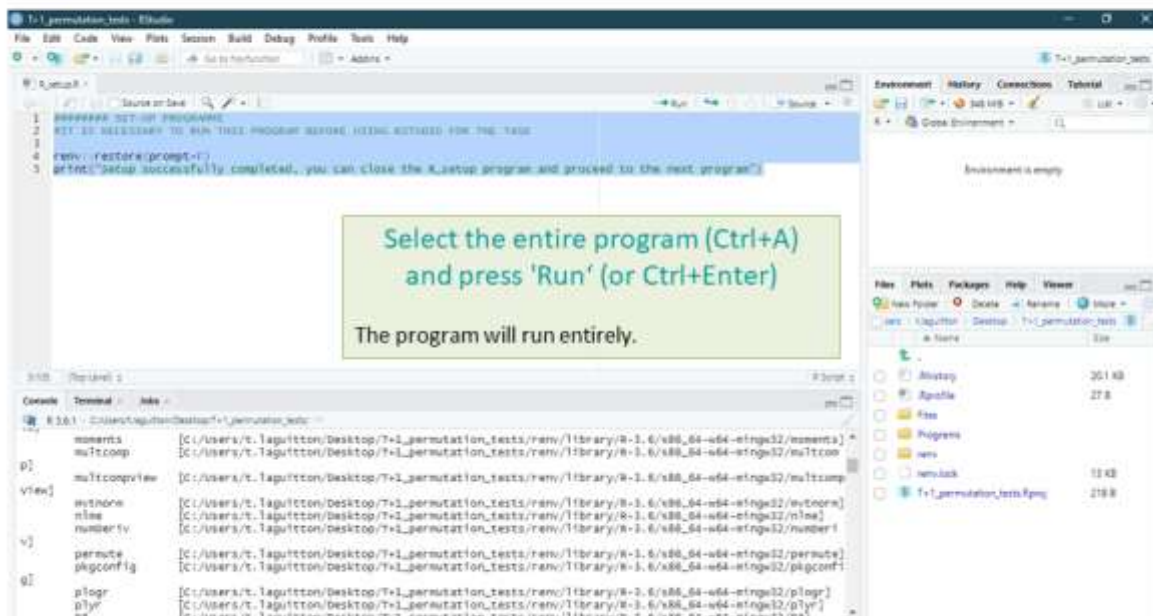
**'R\_setup.R' program opened**

T+1\_permutation\_tests  
R (3.6.1)



WORK Package 5 – Reformulation and processed food monitoring

Running of a new 'R\_setup' program



**Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter)**

**The program will run entirely.**

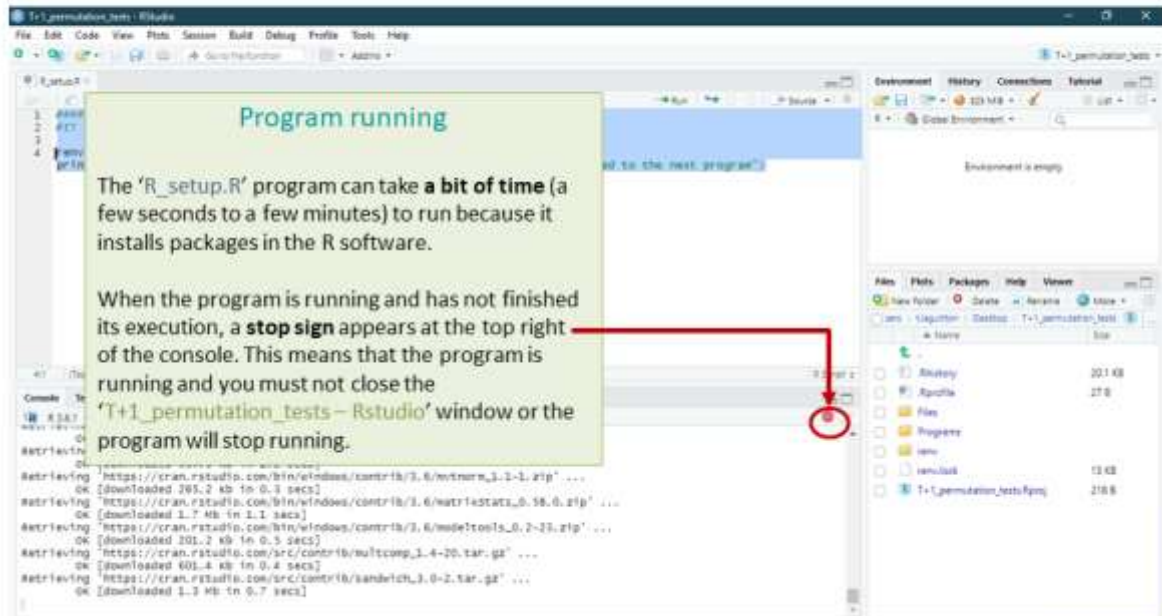
T+1\_permutation\_tests  
R (3.6.1)





WORK Package 5 – Reformulation and processed food monitoring

Running of a new 'R\_setup' program



**Program running**

The 'R\_setup.R' program can take a bit of time (a few seconds to a few minutes) to run because it installs packages in the R software.

When the program is running and has not finished its execution, a **stop sign** appears at the top right of the console. This means that the program is running and you must not close the 'T+1\_permutation\_tests - Rstudio' window or the program will stop running.

```

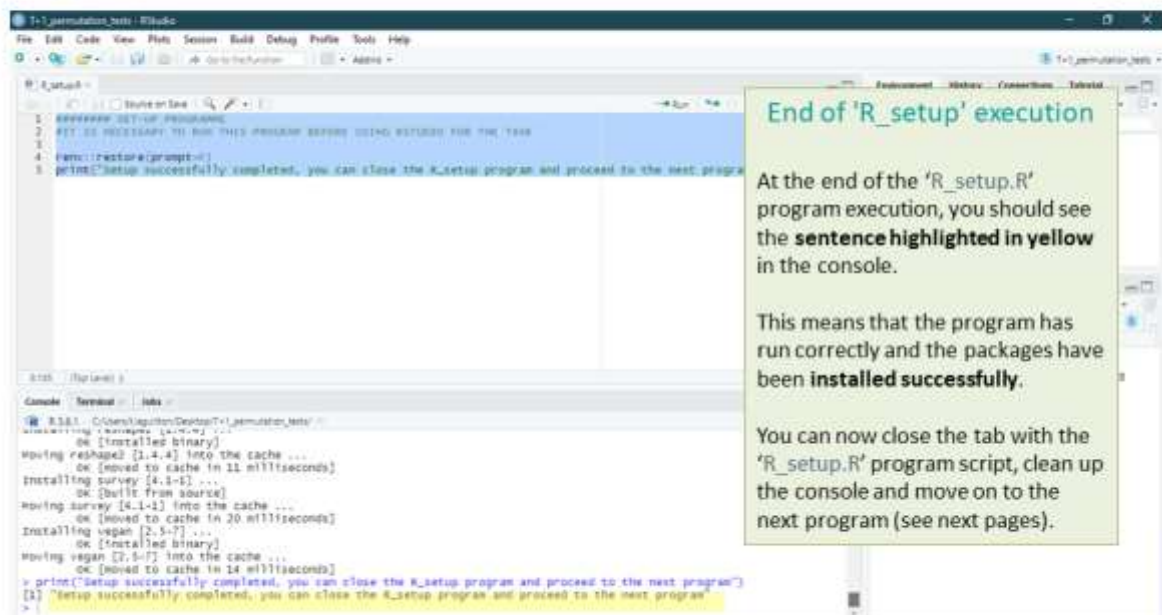
Retrieving https://cran.rstudio.com/bin/windows/contrib/3.6/mvtnorm_3.2-1.zip ...
OK [downloaded 295.2 kb in 0.3 secs]
Retrieving https://cran.rstudio.com/bin/windows/contrib/3.6/waterstats_0.56.0.zip ...
OK [downloaded 1.7 Mb in 1.1 secs]
Retrieving https://cran.rstudio.com/bin/windows/contrib/3.6/wadetools_0.2-23.zip ...
OK [downloaded 201.2 kb in 0.5 secs]
Retrieving https://cran.rstudio.com/src/contrib/multcomp_3.4-20.tar.gz ...
OK [downloaded 605.4 kb in 0.4 secs]
Retrieving https://cran.rstudio.com/src/contrib/sandwich_3.0-2.tar.gz ...
OK [downloaded 1.3 Mb in 0.7 secs]
    
```

T+1\_permutation\_tests  
R (3.6.1)



WORK Package 5 – Reformulation and processed food monitoring

Running of a new 'R\_setup' program



**End of 'R\_setup' execution**

At the end of the 'R\_setup.R' program execution, you should see the **sentence highlighted in yellow** in the console.

This means that the program has run correctly and the packages have been **installed successfully**.

You can now close the tab with the 'R\_setup.R' program script, clean up the console and move on to the next program (see next pages).

```

##### SET UP PROGRAMING
# IT IS NECESSARY TO RUN THIS PROGRAM BEFORE USING STUDIO FOR THE TASK
#
# 1. Run:::restart(prompt=)
# 2. print("Setup successfully completed, you can close the R_setup program and proceed to the next program")
#
> print("Setup successfully completed, you can close the R_setup program and proceed to the next program")
[1] "Setup successfully completed, you can close the R_setup program and proceed to the next program"
>
    
```

T+1\_permutation\_tests  
R (3.6.1)







WORK Package 5 – Reformulation and processed food monitoring

'R\_setup' program

**Tutorial video to run the Rsetup program**

→ This video is available at any time on the Best ReMaP intranet in the WP5 section  
[https://portal.nijz.si/ssf/s/readFile/folderEntry/78208/ff80808282b055810184a4e09d73633c/1666364889000/lastView/Restup\\_permutations.mp4](https://portal.nijz.si/ssf/s/readFile/folderEntry/78208/ff80808282b055810184a4e09d73633c/1666364889000/lastView/Restup_permutations.mp4)

T1\_permutation\_tests  
II (5-6-3)

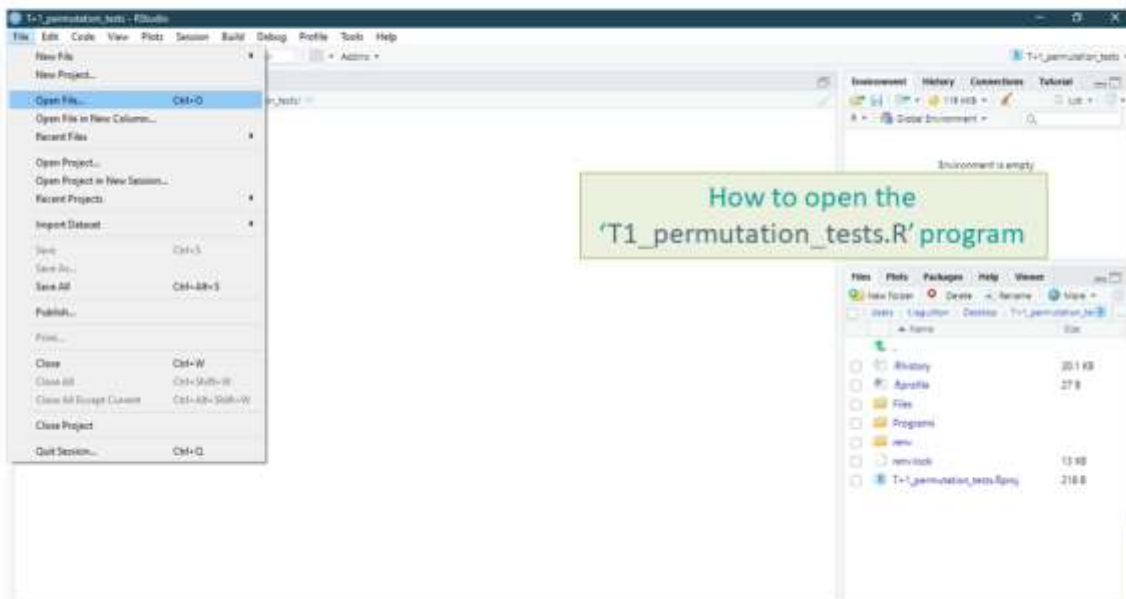


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WORK Package 5 – Reformulation and processed food monitoring

Running of 'T1\_permutation\_tests' program



T1\_permutation\_tests  
II (5-6-3)

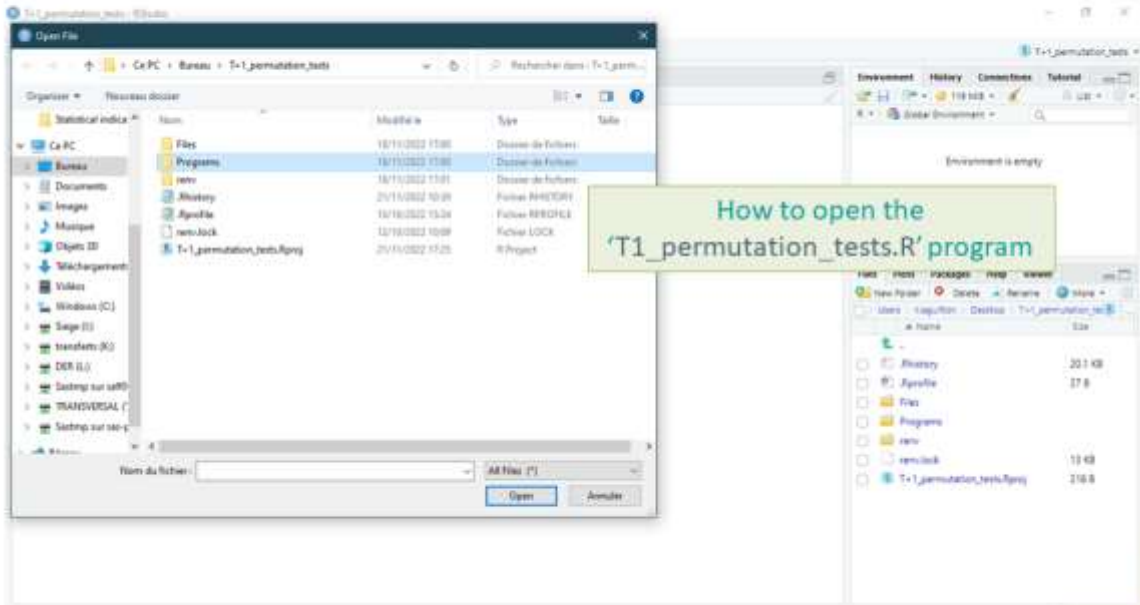


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WORK Package 5 – Reformulation and processed food monitoring

Running of 'T1\_permutation\_tests' program



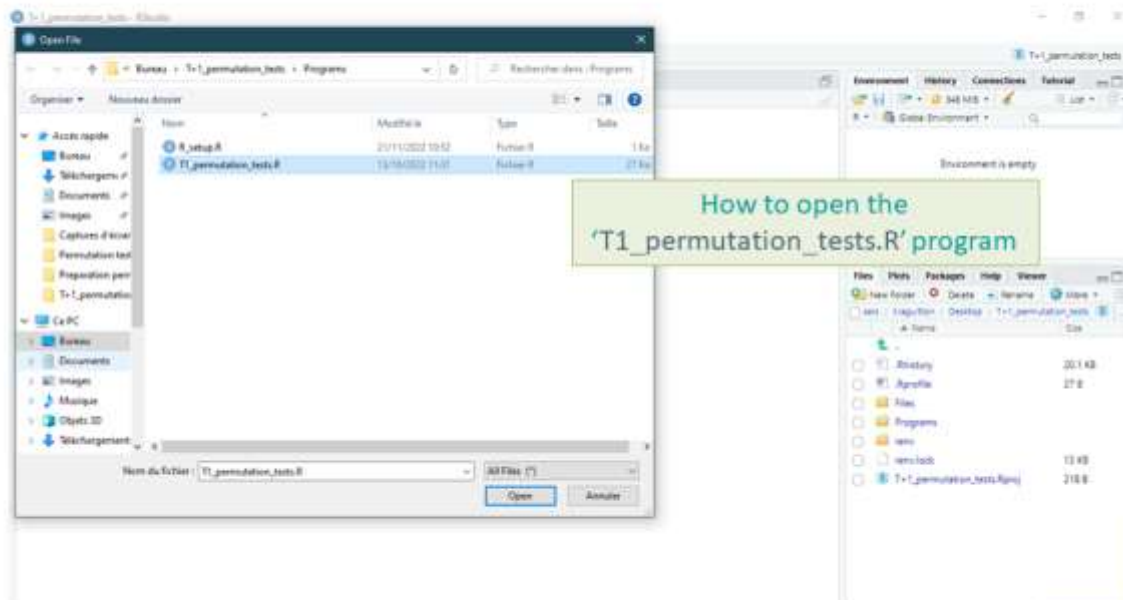
**How to open the 'T1\_permutation\_tests.R' program**

T-1\_permutation\_tests  
II (5-6-1)



WORK Package 5 – Reformulation and processed food monitoring

Running of 'T1\_permutation\_tests' program



**How to open the 'T1\_permutation\_tests.R' program**

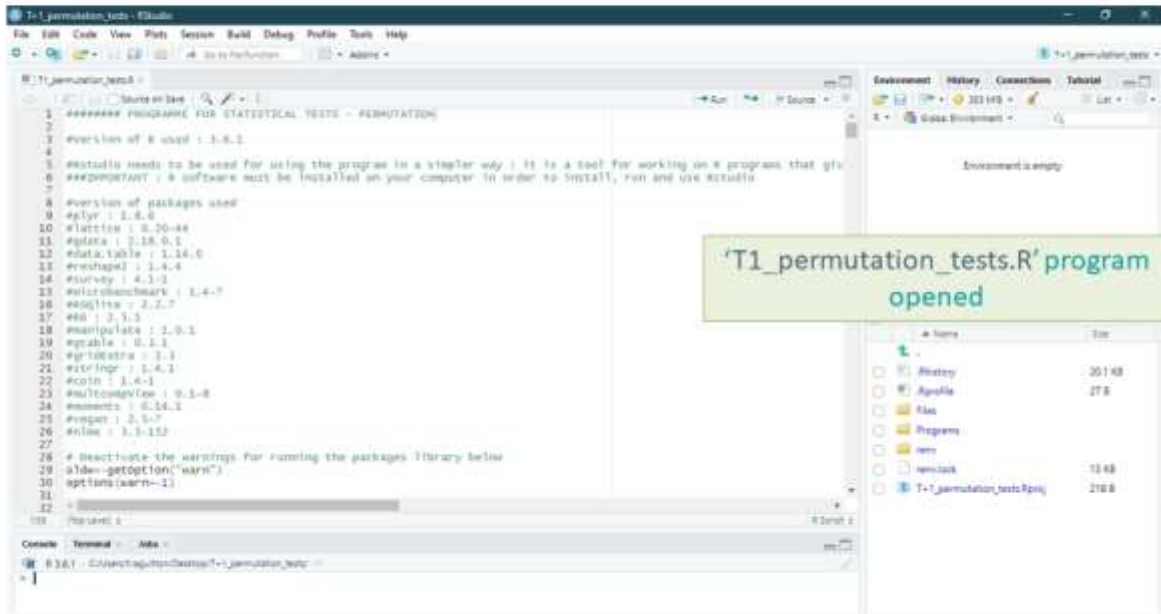
T-1\_permutation\_tests  
II (5-6-1)





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T1\_permutation\_tests' program



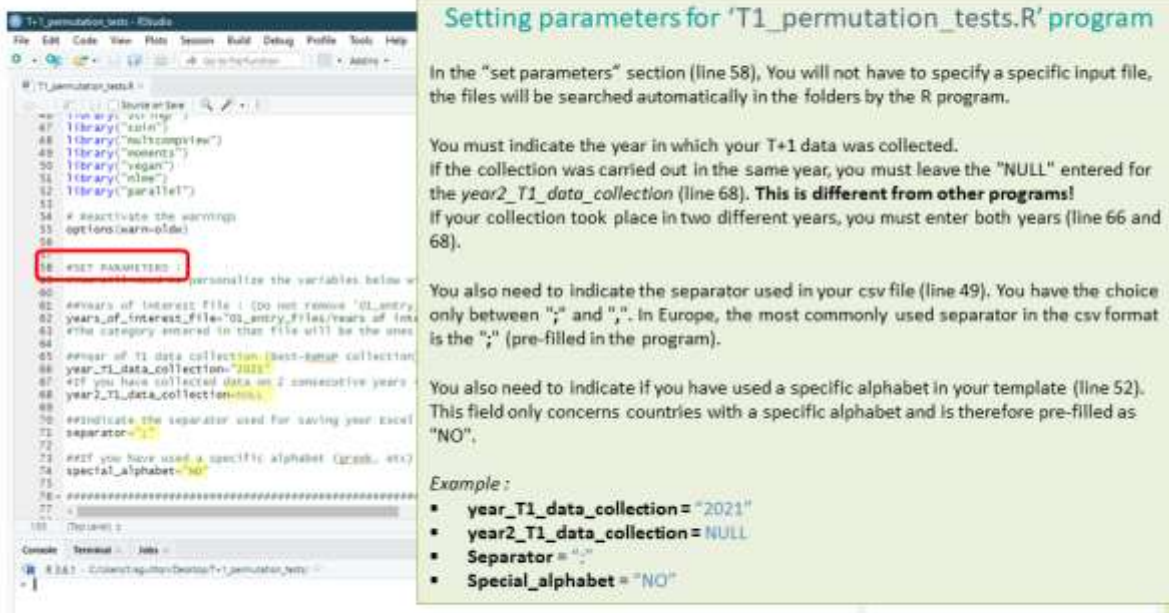
**'T1\_permutation\_tests.R' program opened**

T1\_permutation\_tests  
R (3.6.1)



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T1\_permutation\_tests' program



**Setting parameters for 'T1\_permutation\_tests.R' program**

In the "set parameters" section (line 58), You will not have to specify a specific input file, the files will be searched automatically in the folders by the R program.

You must indicate the year in which your T+1 data was collected. If the collection was carried out in the same year, you must leave the "NULL" entered for the `year2_T1_data_collection` (line 68). **This is different from other programs!** If your collection took place in two different years, you must enter both years (line 66 and 68).

You also need to indicate the separator used in your csv file (line 49). You have the choice only between ";" and ",". In Europe, the most commonly used separator in the csv format is the ";" (pre-filled in the program).

You also need to indicate if you have used a specific alphabet in your template (line 52). This field only concerns countries with a specific alphabet and is therefore pre-filled as "NO".

**Example:**

- `year_T1_data_collection = "2021"`
- `year2_T1_data_collection = NULL`
- `Separator = ";"`
- `Special_alphabet = "NO"`

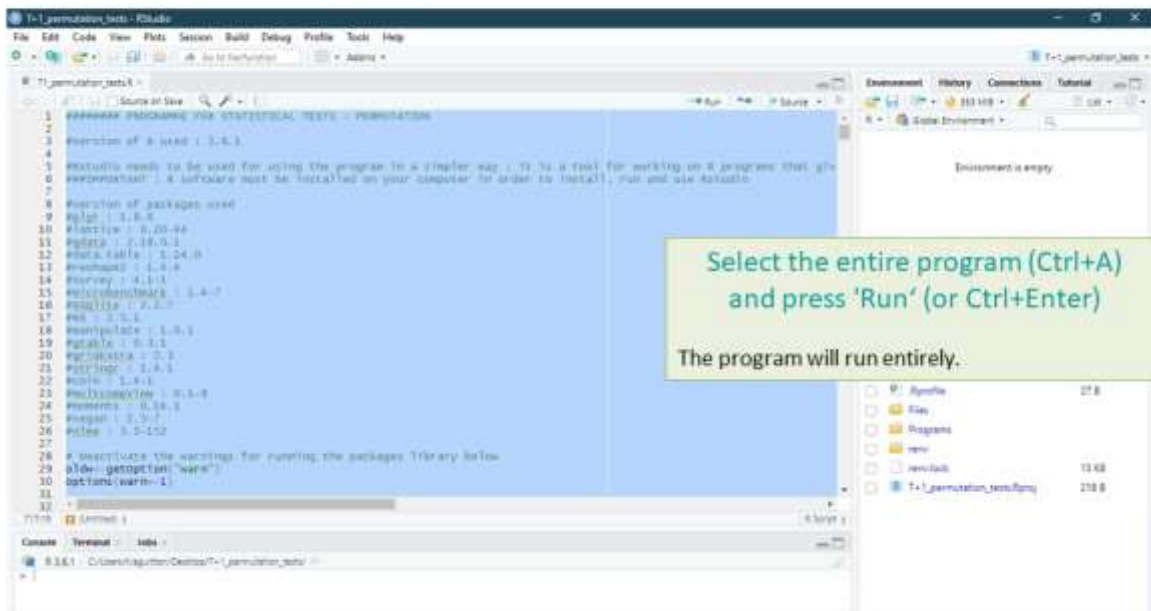
T1\_permutation\_tests  
R (3.6.1)





WORK Package 5 – Reformulation and processed food monitoring

Running of 'T1\_permutation\_tests' program

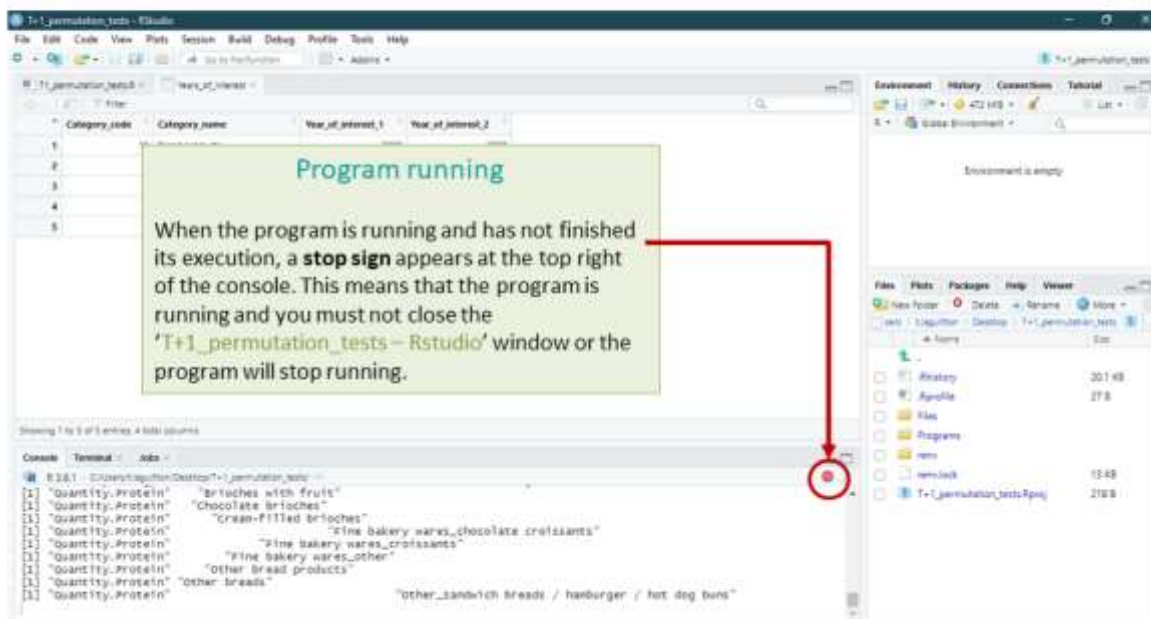


T1\_permutation\_tests  
R (3.6.1)



WORK Package 5 – Reformulation and processed food monitoring

Running of 'T1\_permutation\_tests' program



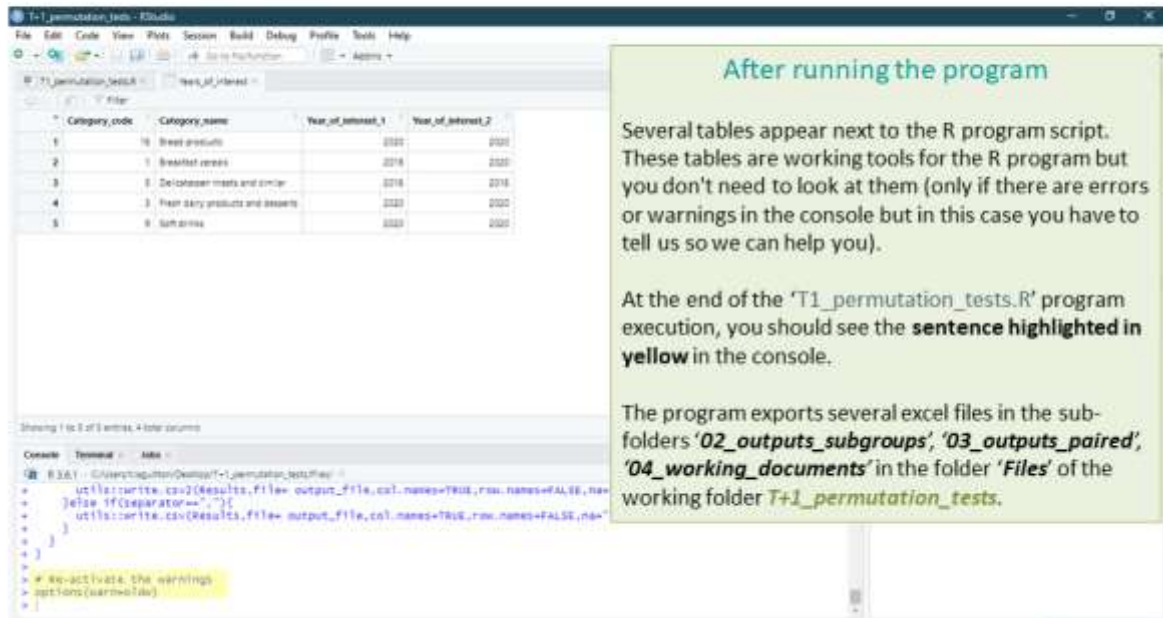
T1\_permutation\_tests  
R (3.6.1)





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T1\_permutation\_tests' program



Category_code	Category_name	Year_of_interest_1	Year_of_interest_2
1	Bread products	2018	2020
2	Breakfast cereals	2018	2020
3	Delicious meats and similar	2018	2018
4	Fresh dairy products and desserts	2020	2020
5	Salt drinks	2020	2020

**After running the program**

Several tables appear next to the R program script. These tables are working tools for the R program but you don't need to look at them (only if there are errors or warnings in the console but in this case you have to tell us so we can help you).

At the end of the 'T1\_permutation\_tests.R' program execution, you should see the **sentence highlighted in yellow** in the console.

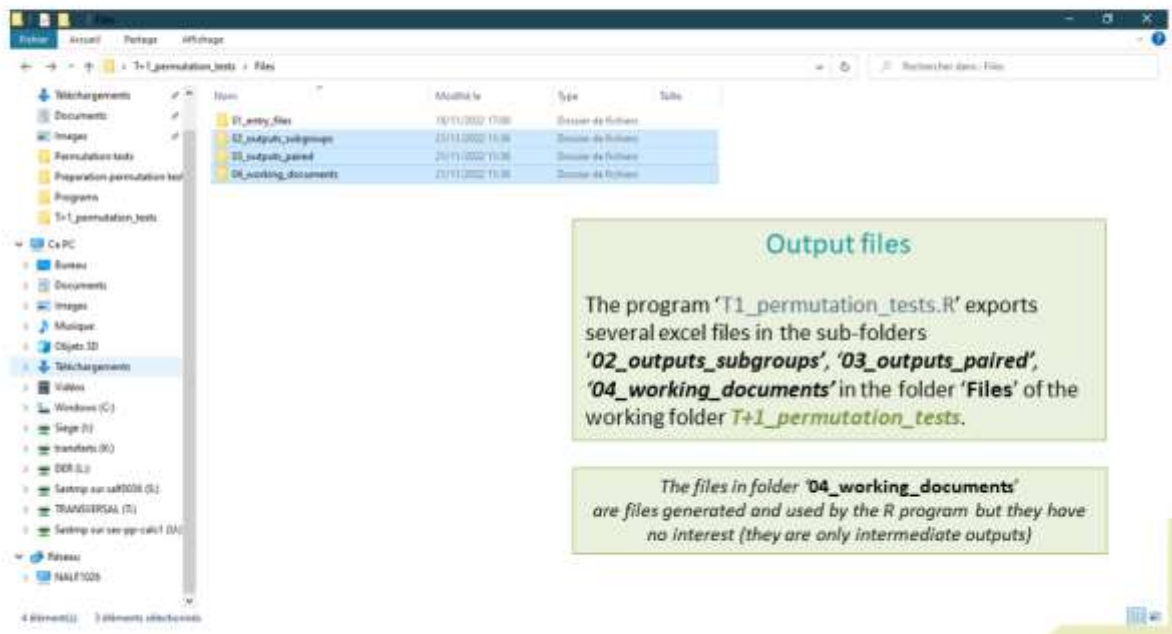
The program exports several excel files in the sub-folders '**02\_outputs\_subgroups**', '**03\_outputs\_paired**', '**04\_working\_documents**' in the folder '**Files**' of the working folder **T+1\_permutation\_tests**.

T+1\_permutation\_tests  
R (3.6.3)



## WORK Package 5 – Reformulation and processed food monitoring

### Results of permutation tests



**Output files**

The program 'T1\_permutation\_tests.R' exports several excel files in the sub-folders '**02\_outputs\_subgroups**', '**03\_outputs\_paired**', '**04\_working\_documents**' in the folder '**Files**' of the working folder **T+1\_permutation\_tests**.

*The files in folder '04\_working\_documents' are files generated and used by the R program but they have no interest (they are only intermediate outputs)*

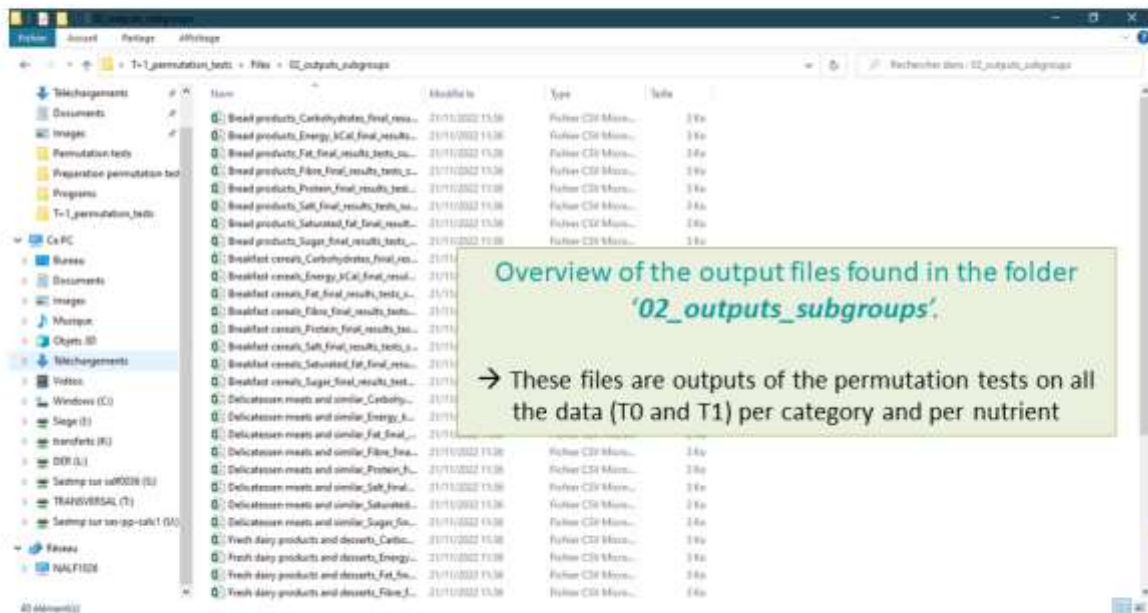
T+1\_permutation\_tests  
R (3.6.3)





## WORK Package 5 – Reformulation and processed food monitoring

### Results of permutation tests



Overview of the output files found in the folder '02\_outputs\_subgroups'.

→ These files are outputs of the permutation tests on all the data (T0 and T1) per category and per nutrient

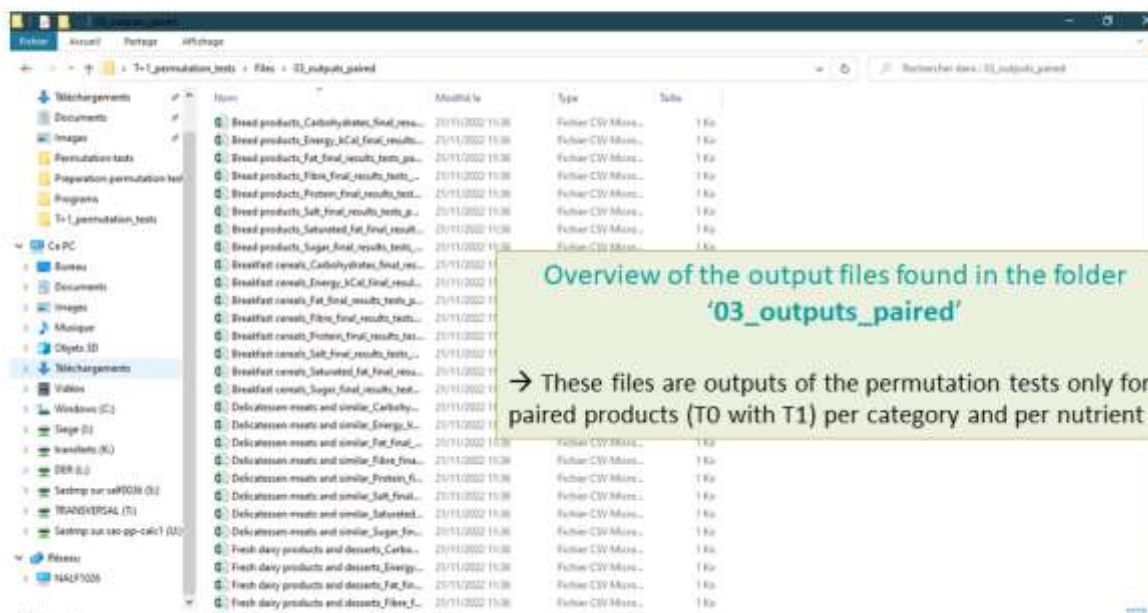
Name	Modified	Type	Size
Bread products_Carbohydrates_final_resu...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Energy_kCal_final_results...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Fat_final_results_tests_...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Fibre_final_results_tests_...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Protein_final_results_test...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Salt_final_results_tests_...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Saturated_fat_final_resul...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Sugar_final_results_tests...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Carbohydrates_final_res...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Energy_kCal_final_resul...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Fat_final_results_tests_...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Fibre_final_results_tests...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Protein_final_results_tes...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Salt_final_results_tests...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Saturated_fat_final_resu...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Sugar_final_results_test...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Carbohy...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Energy_k...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Fat_final_...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Fibre_fina...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Protein_f...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Salt_fina...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Saturated...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Sugar_fi...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Fresh dairy products and desserts_Carbo...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Fresh dairy products and desserts_Energy...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Fresh dairy products and desserts_Fat_fi...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Fresh dairy products and desserts_Fibre_f...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb

T1\_permutation\_tests II (5.6.1)



## WORK Package 5 – Reformulation and processed food monitoring

### Results of permutation tests



Overview of the output files found in the folder '03\_outputs\_paired'.

→ These files are outputs of the permutation tests only for paired products (T0 with T1) per category and per nutrient

Name	Modified	Type	Size
Bread products_Carbohydrates_final_resu...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Energy_kCal_final_results...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Fat_final_results_tests_...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Fibre_final_results_tests_...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Protein_final_results_test...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Salt_final_results_tests_...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Saturated_fat_final_resul...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Bread products_Sugar_final_results_tests...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Carbohydrates_final_res...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Energy_kCal_final_resul...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Fat_final_results_tests_...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Fibre_final_results_tests...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Protein_final_results_tes...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Salt_final_results_tests...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Saturated_fat_final_resu...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Breakfast cereals_Sugar_final_results_test...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Carbohy...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Energy_k...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Fat_final_...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Fibre_fina...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Protein_f...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Salt_fina...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Saturated...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Delicatessen meats and similar_Sugar_fi...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Fresh dairy products and desserts_Carbo...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Fresh dairy products and desserts_Energy...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Fresh dairy products and desserts_Fat_fi...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb
Fresh dairy products and desserts_Fibre_f...	25/11/2022 15:36	Fichier CSV Micro...	1 Kb

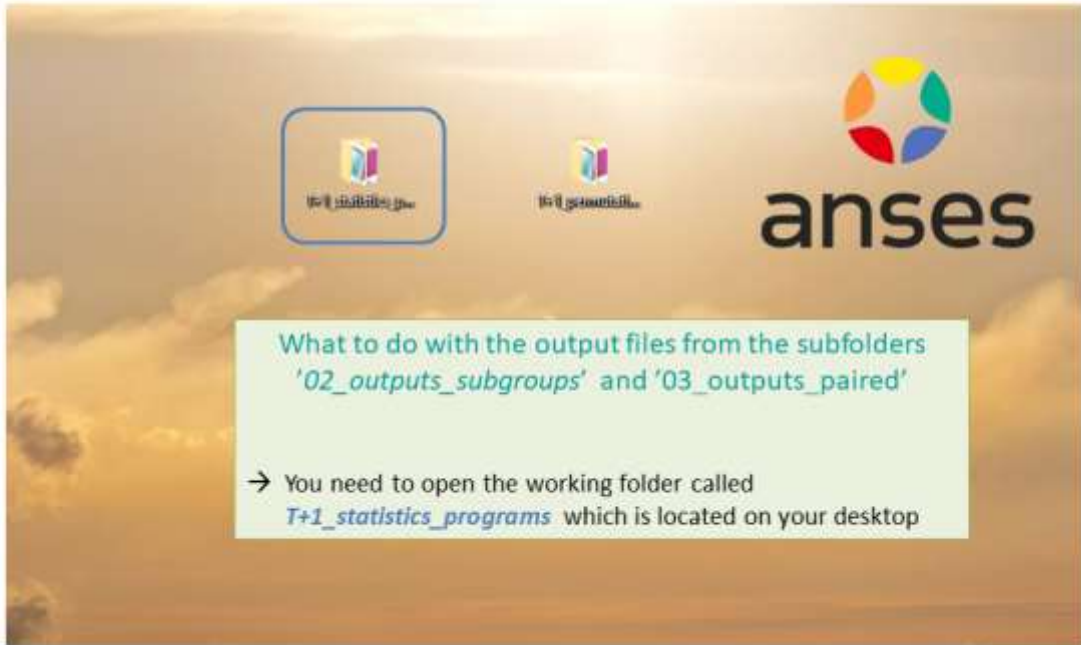
T1\_permutation\_tests II (5.6.1)





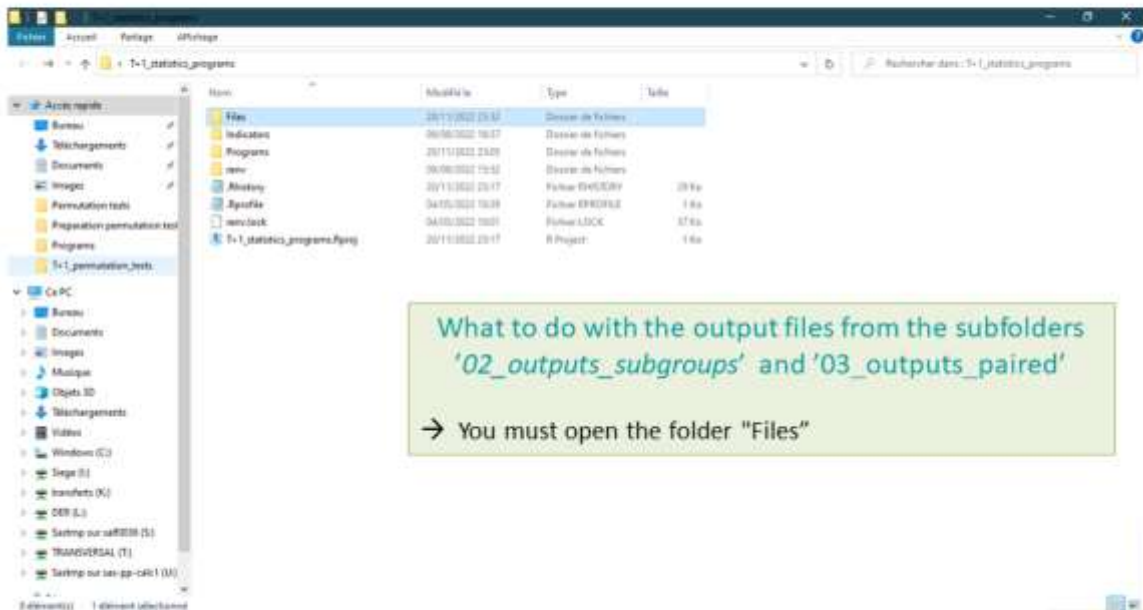
WORK Package 5 – Reformulation and processed food monitoring

Results of permutation tests



WORK Package 5 – Reformulation and processed food monitoring

Results of permutation tests





WORK Package 5 – Reformulation and processed food monitoring

Results of permutation tests

**What to do with the output files from the subfolders '02\_outputs\_subgroups' and '03\_outputs\_paired'**

→ In the folder *T+1\_statistics\_program/Files*, you have to **copy the 2 subfolders '02\_outputs\_subgroups' and '03\_outputs\_paired'** (with all their files) that were output in the folder *T+1\_permutation\_tests/Files* with the R program 'T1\_permutation\_tests.R'

T+1\_statistics\_programs II (4.3.2)



WORK Package 5 – Reformulation and processed food monitoring

5) Running of the programs for the creation of indicators

- A. Entry tables generated for statistical tests
- B. Permutation tests
- C. Creation of statistical indicators







## WORK Package 5 – Reformulation and processed food monitoring

### Creation of statistical indicators

#### Presentation of the 'T+1 indicators' program :

- This program allows you to create the T+1 indicators and output the graphs and tables.
- This program has to be run in the Rstudio environment '`T+1_statistics_programs.Rproj`' with R version **4.1.2**.

#### Requirements before starting the program 'T+1 indicators' :

- Before running the program, you must ensure that you have run the programs `preparation_for_permutation.R` and `T1_permutation_tests.R`.
- You need to check that the R program `T+1_indicators.R` is present in the folder '**Programs**' in the `T+1_statistics_programs` working folder.
- You should also make sure that the folders "**02\_outputs\_subgroups**" and "**03\_outputs\_paired**" with the output files of the permutation tests have been copied to the folder `T+1_statistics_programs/Files`.

Your Rstudio interface must have been cleaned up before running the program.  
 All cleaning steps are described in part "2)" of this document.



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## WORK Package 5 – Reformulation and processed food monitoring

### Creation of statistical indicators

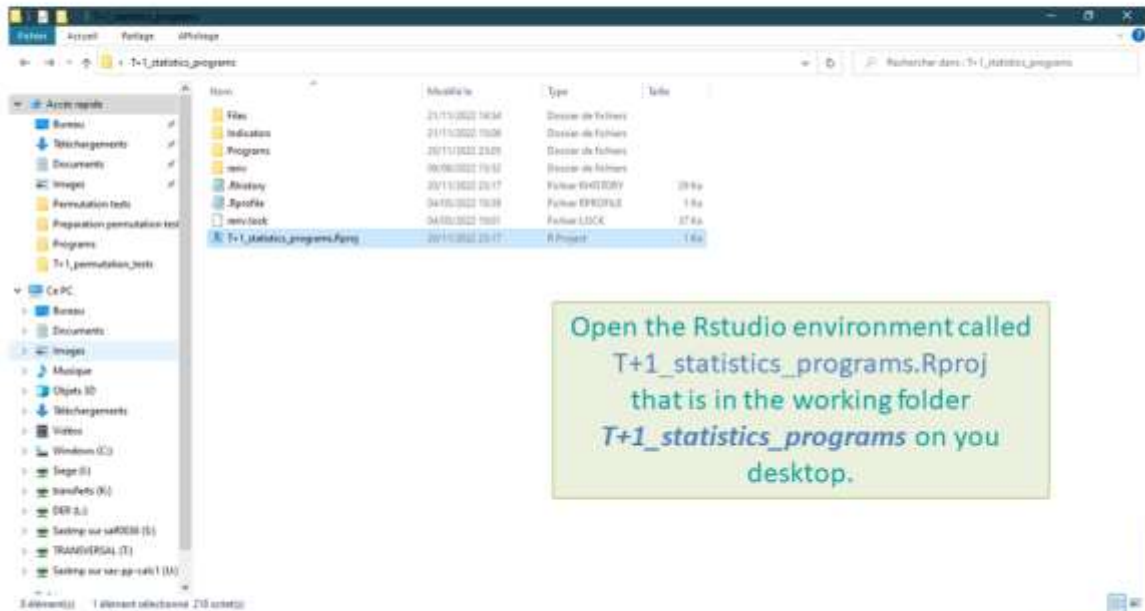


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## WORK Package 5 – Reformulation and processed food monitoring

### Creation of statistical indicators



Open the Rstudio environment called **T+1\_statistics\_programs.Rproj** that is in the working folder **T+1\_statistics\_programs** on you desktop.

T+1\_statistics\_programs  
R (4.1.2)



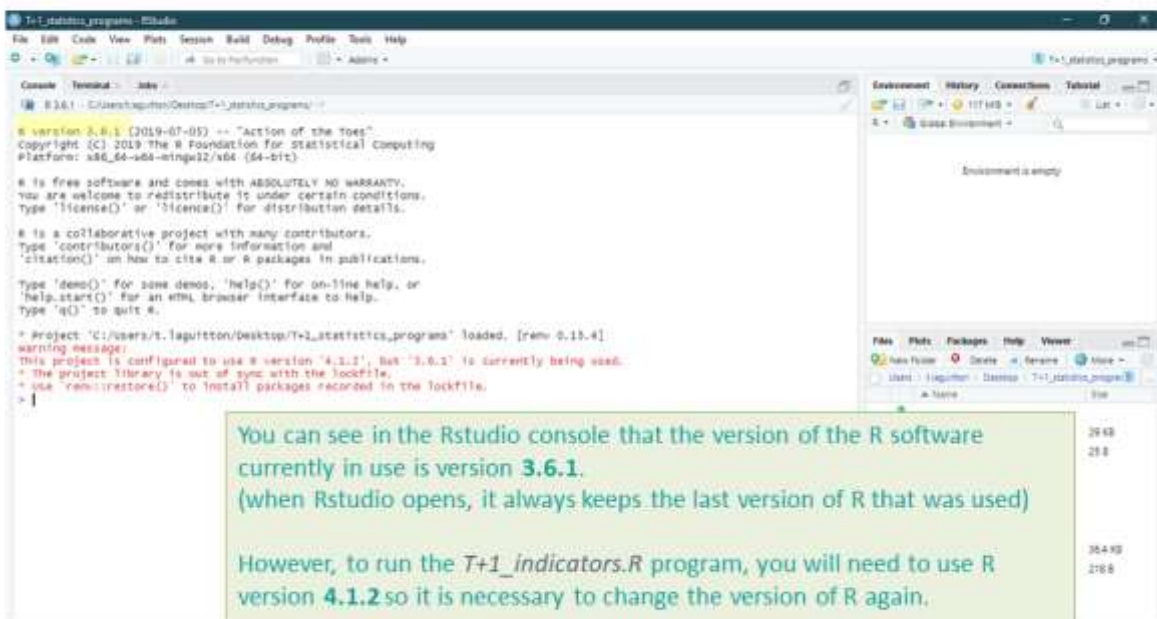
Co-funded by the European Union's  
Health Programme (2014-2020)

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## WORK Package 5 – Reformulation and processed food monitoring

### Creation of statistical indicators



You can see in the Rstudio console that the version of the R software currently in use is version **3.6.1**.  
(when Rstudio opens, it always keeps the last version of R that was used)

However, to run the **T+1\_indicators.R** program, you will need to use R version **4.1.2** so it is necessary to change the version of R again.

(You can also see in the console that Rstudio is telling you that the Rstudio environment 'T+1\_statistics\_programs' is configured for version 4.1.2 and not 3.6.1.)

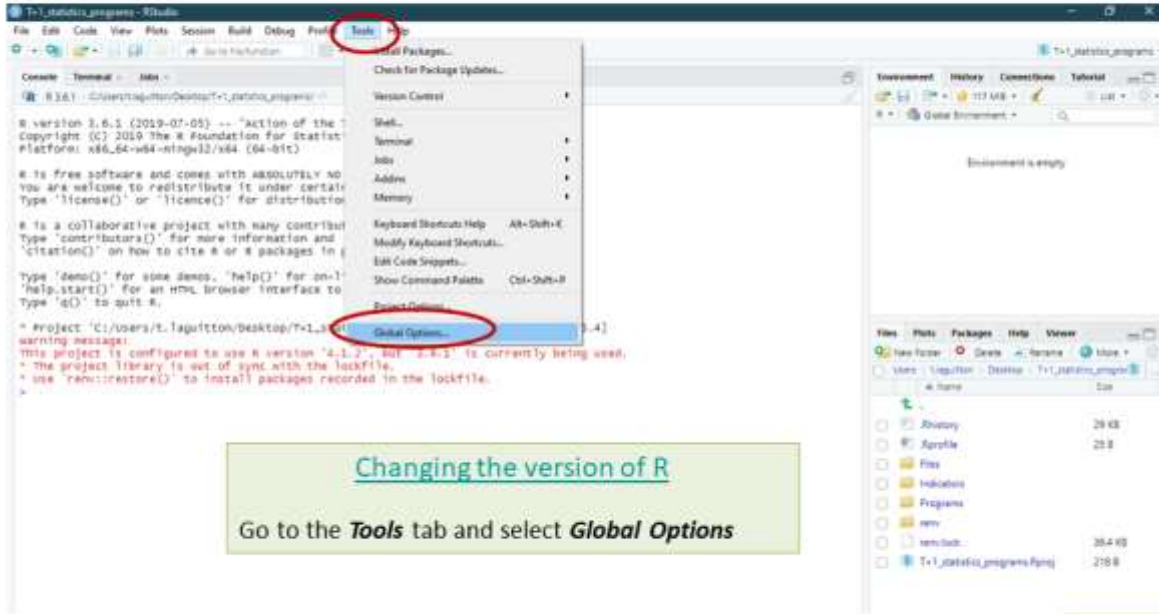
T+1\_statistics\_programs  
R (4.1.2)

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## WORK Package 5 – Reformulation and processed food monitoring

### Creation of statistical indicators



The screenshot shows the RStudio interface. The 'Tools' menu is open, and 'Global Options...' is highlighted. The terminal window shows R version 3.6.1 (2019-07-05) and a warning message about the project library being out of sync with the lockfile.

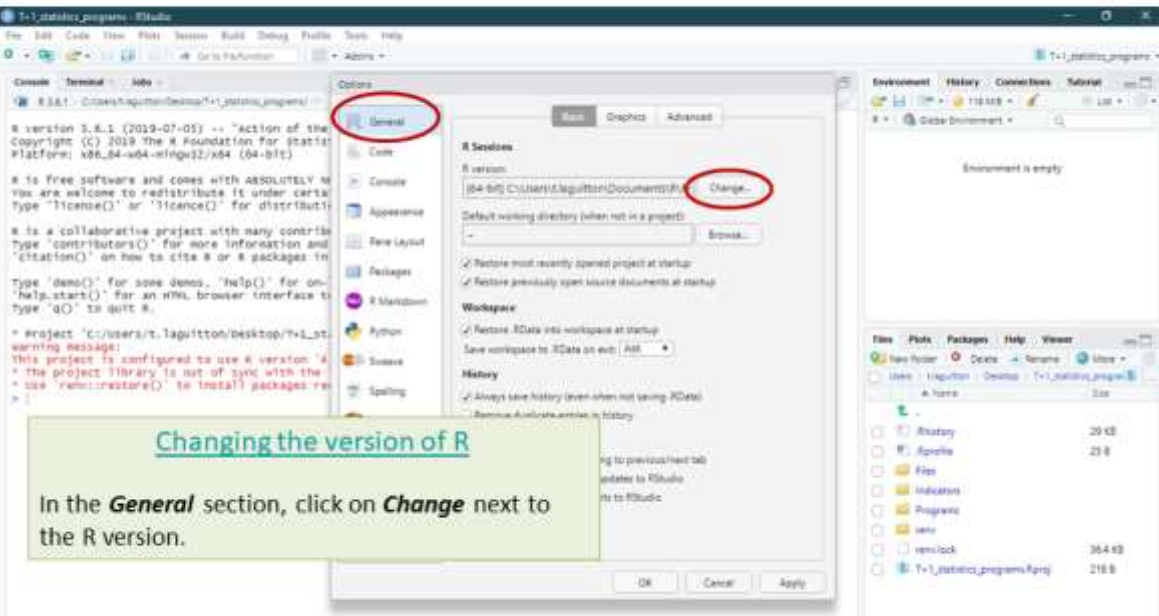
Changing the version of R  
Go to the **Tools** tab and select **Global Options**

T+1\_statistics\_programs  
R (4.3.2)



## WORK Package 5 – Reformulation and processed food monitoring

### Creation of statistical indicators



The screenshot shows the RStudio interface with the 'Global Options' dialog box open. The 'General' tab is selected, and the 'R version' field is set to '3.6.1 (64-bit) C:\Users\t.laguitton\Documents\...'. A 'Change...' button is highlighted next to the version field.

Changing the version of R  
In the **General** section, click on **Change** next to the R version.

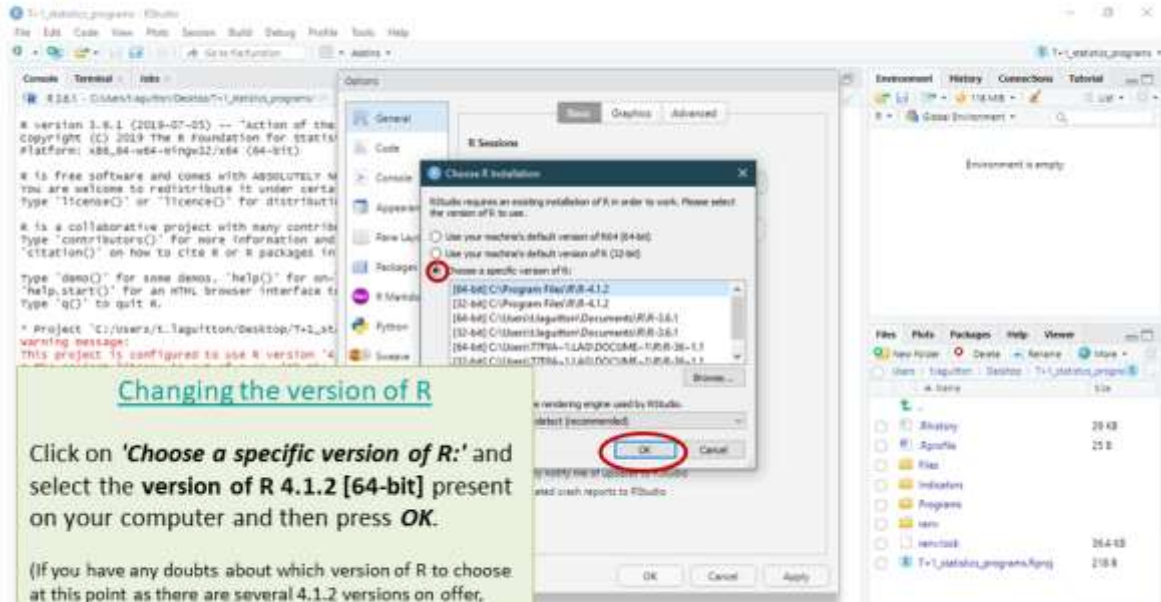
T+1\_statistics\_programs  
R (4.3.2)





## WORK Package 5 – Reformulation and processed food monitoring

### Creation of statistical indicators



**Changing the version of R**

Click on **'Choose a specific version of R:'** and select the **version of R 4.1.2 [64-bit]** present on your computer and then press **OK**.

(If you have any doubts about which version of R to choose at this point as there are several 4.1.2 versions on offer, please feel free to send us a screenshot of the proposals made and we will help you choose)

T41\_statistics\_programs  
R (4.1.2)

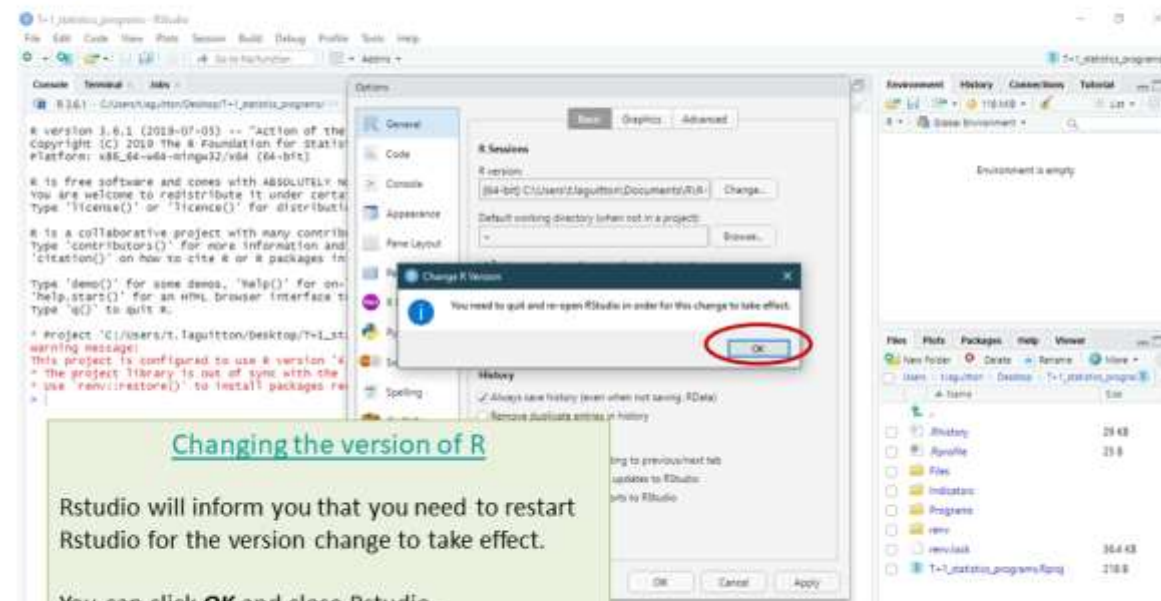
Co-funded by the European Union's  
Health Programme (2014-2020)

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## WORK Package 5 – Reformulation and processed food monitoring

### Creation of statistical indicators



**Changing the version of R**

Rstudio will inform you that you need to restart Rstudio for the version change to take effect.

You can click **OK** and close Rstudio.

T41\_statistics\_programs  
R (4.1.2)

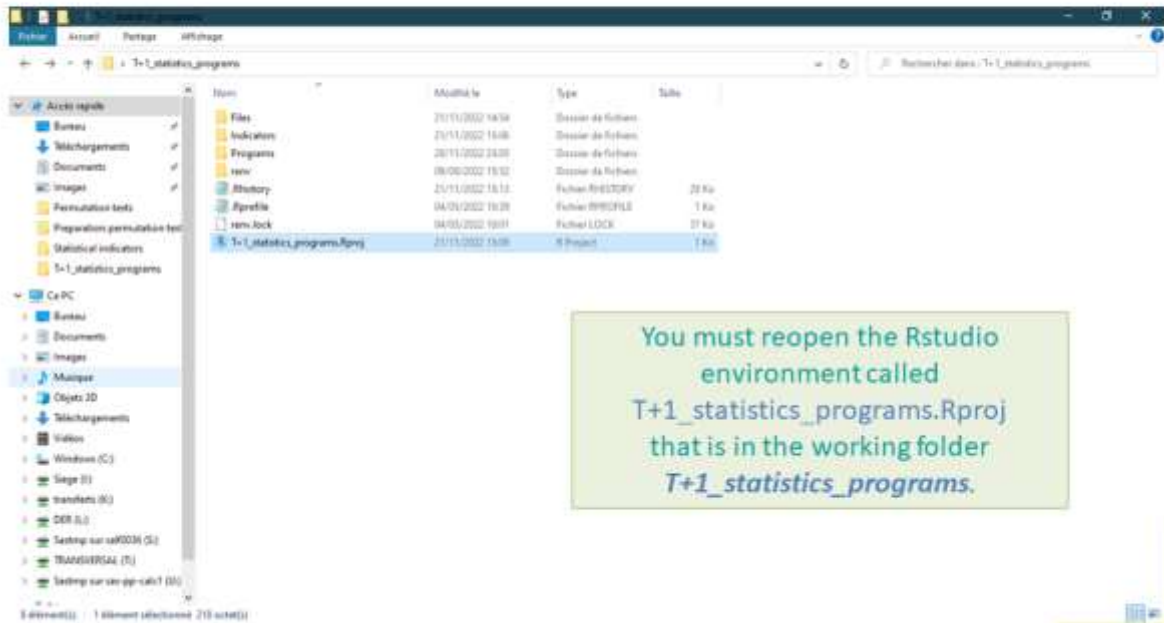
Co-funded by the European Union's  
Health Programme (2014-2020)

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WORK Package 5 – Reformulation and processed food monitoring

Running of 'T+1\_indicators' program



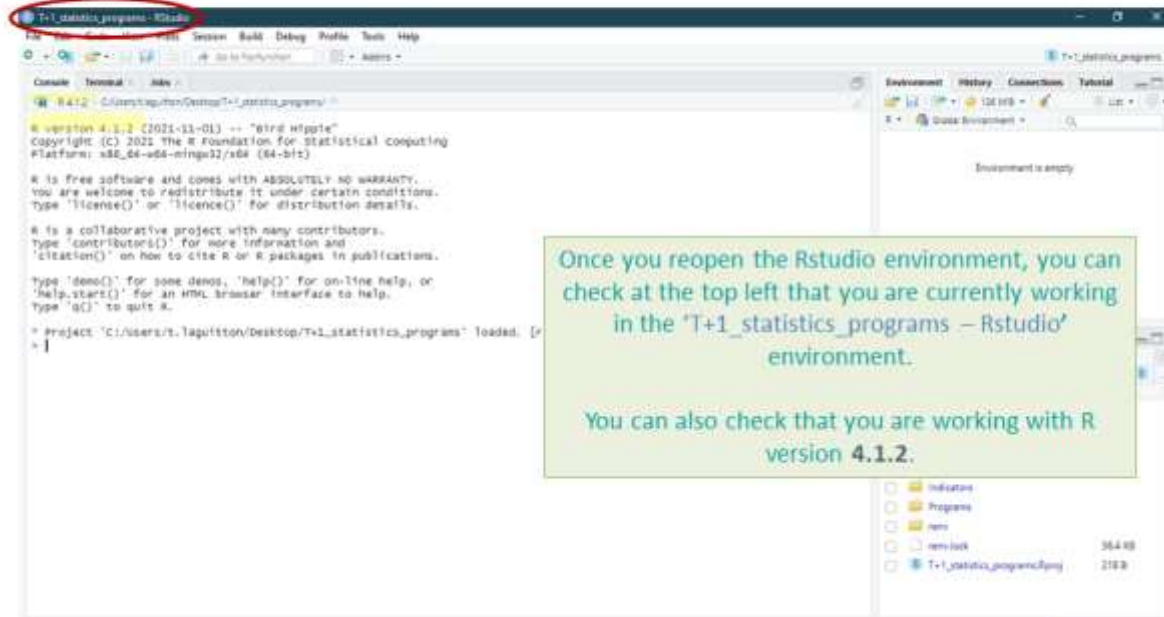
You must reopen the Rstudio environment called T+1\_statistics\_programs.Rproj that is in the working folder T+1\_statistics\_programs.

T+1\_statistics\_programs (4.1.2)



WORK Package 5 – Reformulation and processed food monitoring

Running of 'T+1\_indicators' program



Once you reopen the Rstudio environment, you can check at the top left that you are currently working in the 'T+1\_statistics\_programs – Rstudio' environment. You can also check that you are working with R version 4.1.2.

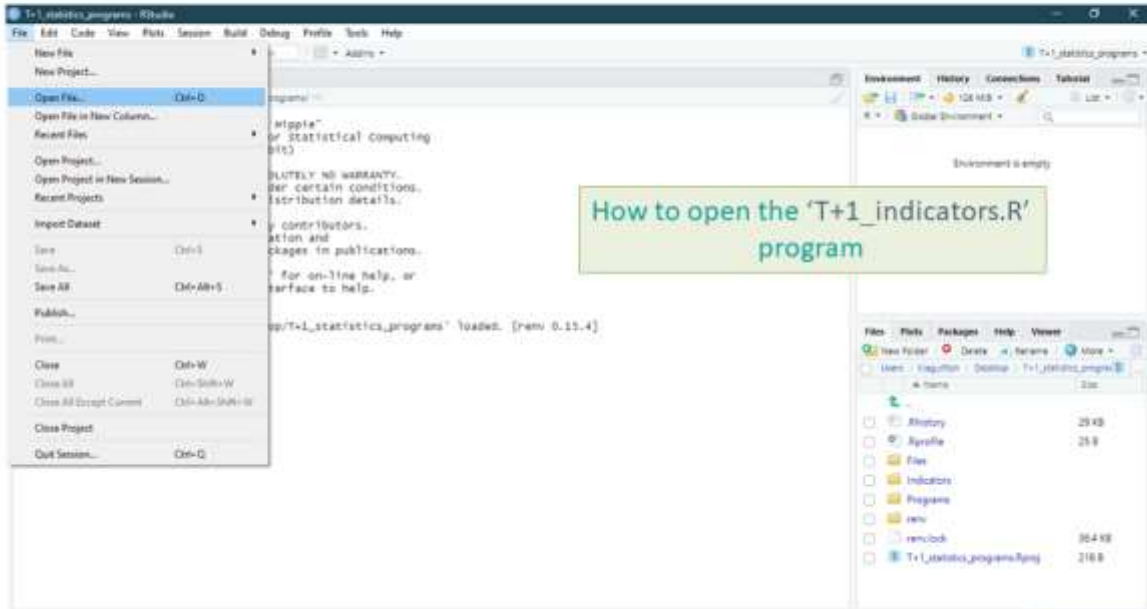
T+1\_statistics\_programs (4.1.2)





WORK Package 5 – Reformulation and processed food monitoring

Running of 'T+1\_indicators' program

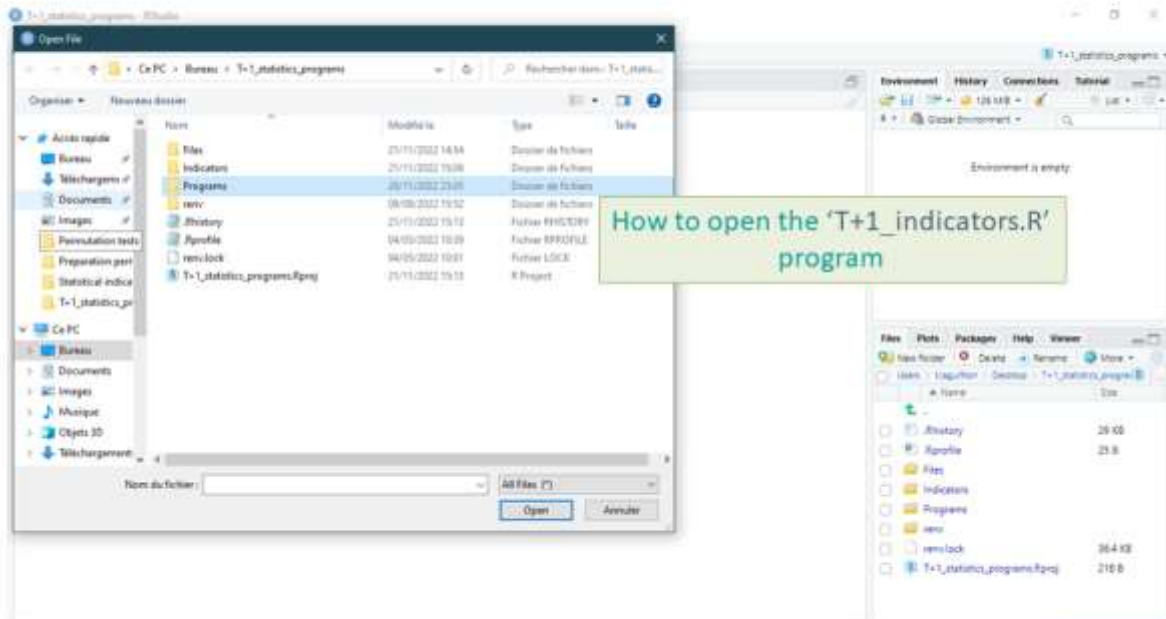


T+1\_statistics\_programs  
II (4.3.2)



WORK Package 5 – Reformulation and processed food monitoring

Running of 'T+1\_indicators' program



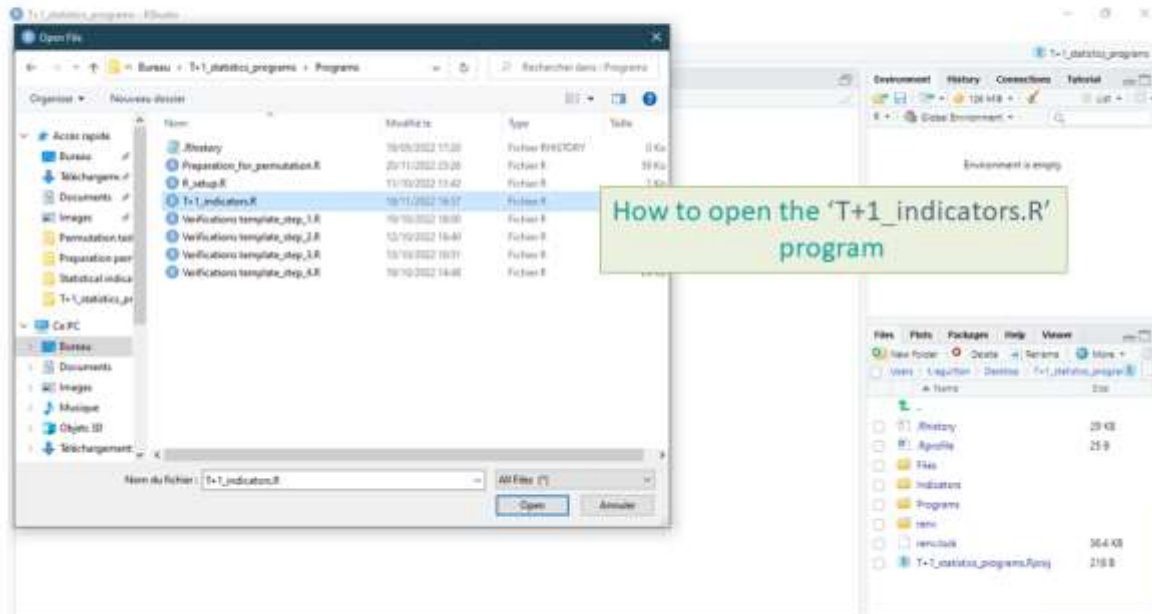
T+1\_statistics\_programs  
II (4.3.2)





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T+1\_indicators' program



T+1\_statistics\_programs  
R (4.3.2)

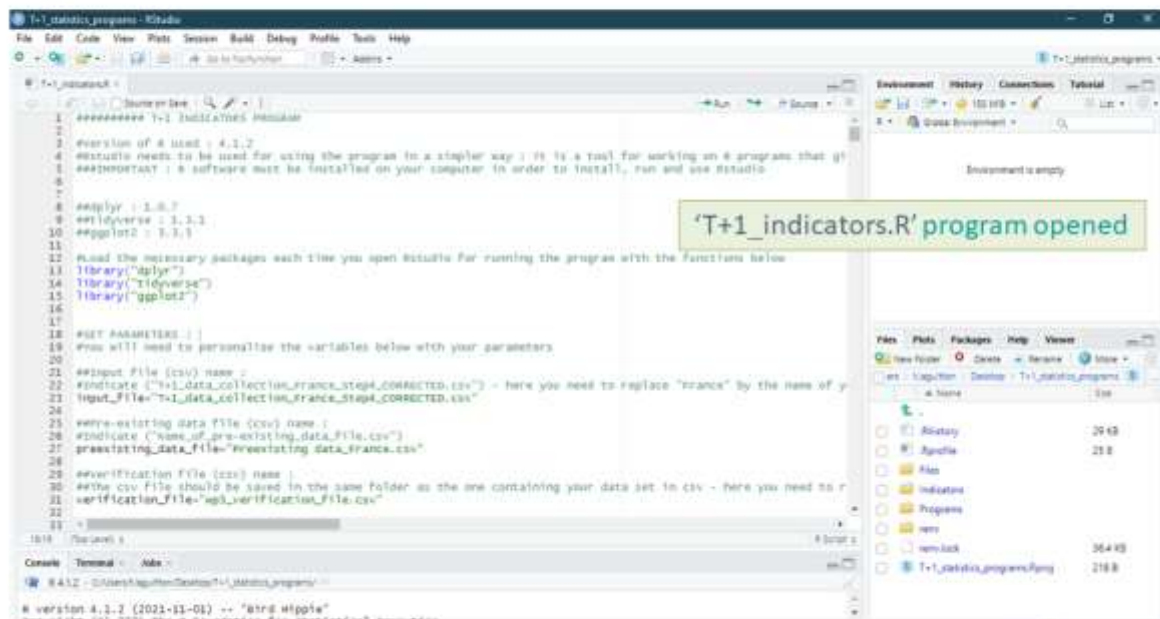


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## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T+1\_indicators' program



T+1\_statistics\_programs  
R (4.3.2)



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WORK Package 5 – Reformulation and processed food monitoring

Running of 'T+1\_indicators' program



```

18 #set parameters
19 #you will need to personalise the variables below with your parameters
20
21 #input file (csv) name :
22 #input_file = "T+1_data_collection_france_step4_corrected.csv" # for
23 #input_file = "T+1_data_collection_france_step4_corrected.csv"
24
25 #pre-existing data file (csv) name :
26 #input_file = "home_of_pre-existing_data_file.csv"
27 #pre-existing_data_file = "pre-existing_data_france.csv"
28
29 #verification file (csv) name :
30 #this csv file should be saved in the same folder as the one conta
31 #verification_file = "opt_verification_file.csv"
32
33 #nomenclature file (csv) name :
34 #this csv file should be saved in the same folder as the one conta
35 #nomenclature_file = "best-remap_nomenclature.csv"
36
37 #sets collection year :
38 #enter the year at which you have collected your data for post-00
39 #year_T1 = "2021"
40 #year_T2 = "2022" # if the data collection overlaps two consecutive years
41 #if you have only one year of data collection, indicate the same
42 #year_T1_2 = "2021"
43
44 #years of interest file :
45 #years_of_interest_file = "years_of_interest.csv"
46
47 #subcategory_order file :
48 #subcategory_file_order = "subcategory_order.csv"
49
50 #nutrient_of_interest file :
51 #nutrient_of_interest_file = "nutrient_of_interest.csv" #should cont
52
53 #indicate the separator used for saving your excel file to csv ("
54 #separator = ";"
55
56 #if you have used a specific alphabet (gb2312, etc.) in your sample
57 #special_alphabet = "NO"
58
59
60
61
    
```

Setting parameters of the 'T+1\_indicators.R' program

In the "set parameters" section, you must fill in as *input\_file* the name of your final template after the 4 verification programs (line 23). You must also enter the name of your pre-existing data template in csv format (line 27)

You must indicate the year in which your T+1 data was collected. If the collection was carried out in the same year, you must enter this year twice (line 39 and 42). If your collection took place in two different years, you must enter both years.

You must also indicate the separator and if you have a specific alphabet as in the verification programs.

Example :

- **Input\_file** = "T+1\_data\_collection\_Ireland\_Step4\_CORRECTED(X).csv"
- **Year\_T1** = "2021"
- **year\_T1\_2** = "2022"
- **Separator** = ";"
- **Special\_alphabet** = "NO"

→ There is no output file to set up here as the program outputs are automatically named and stored in the 'Indicators' folder of the 'T+1\_statistics\_programs' folder on your desktop.

T+1\_statistics\_programs  
II (4.1.2)

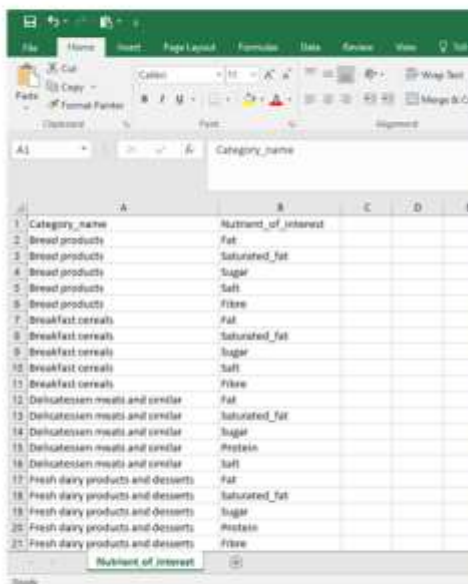
Health Programme (2014-2020)

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WORK Package 5 – Reformulation and processed food monitoring

Running of 'Preparation\_for\_permutation' program



Category_name	Nutrient_of_interest
1. Bread products	Fat
2. Bread products	Saturated_fat
3. Bread products	Sugar
4. Bread products	Salt
5. Bread products	Fibre
6. Breakfast cereals	Fat
7. Breakfast cereals	Saturated_fat
8. Breakfast cereals	Sugar
9. Breakfast cereals	Salt
10. Breakfast cereals	Fibre
11. Dehydrated meats and cereals	Fat
12. Dehydrated meats and cereals	Saturated_fat
13. Dehydrated meats and cereals	Sugar
14. Dehydrated meats and cereals	Protein
15. Dehydrated meats and cereals	Salt
16. Fresh dairy products and desserts	Fat
17. Fresh dairy products and desserts	Saturated_fat
18. Fresh dairy products and desserts	Sugar
19. Fresh dairy products and desserts	Protein
20. Fresh dairy products and desserts	Fibre

Precision on the "set parameters" section of the program and the 'Nutrient\_of\_interest.csv' file

In the "Set parameters" section, you can see that the support file 'Nutrient\_of\_interest.csv' is imported (previous page, line 46 of the R program).

This file is already present in the working folder *T+1\_statistics\_program* that you downloaded on your desktop in the subfolder 'Files' (or you must have copied it to this folder).

This file is already filled in and indicates the nutrients of interest (for the comparison of nutritional values) for the 5 categories studied in the Best-ReMaP project.

If you wish to study other Best-ReMaP categories outside the 5 categories prioritised for the Best-ReMaP project, you will have to indicate them in this file on the same model as for the other categories: one line per nutrient of interest + the name of the category on each line.

T+1\_statistics\_programs  
II (4.1.2)

Co-funded by the European Union's  
Health Programme (2014-2020)

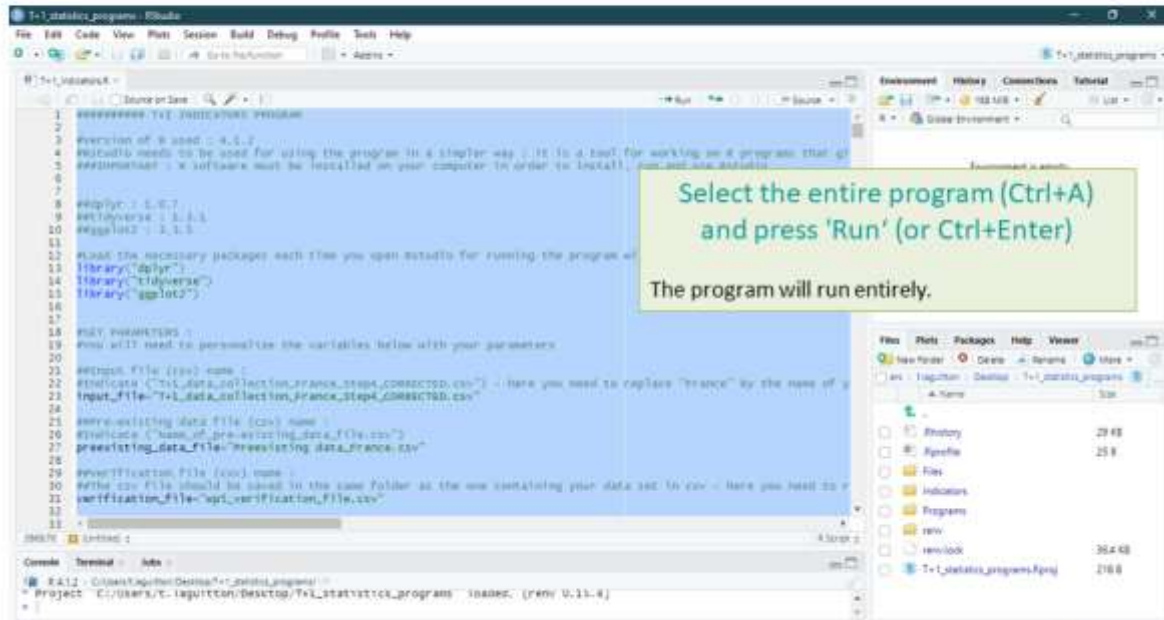
274





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T+1\_indicators' program



**Select the entire program (Ctrl+A) and press 'Run' (or Ctrl+Enter)**

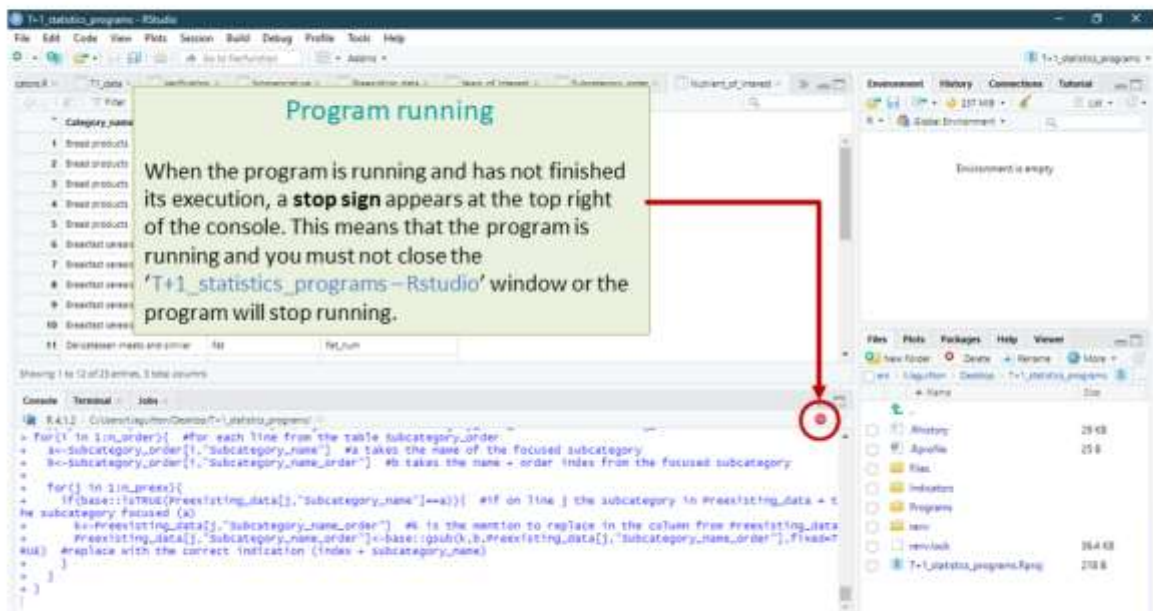
The program will run entirely.

T+1\_statistics\_programs  
R (4.3.2)



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T+1\_indicators' program



**Program running**

When the program is running and has not finished its execution, a **stop sign** appears at the top right of the console. This means that the program is running and you must not close the 'T+1\_statistics\_programs - Rstudio' window or the program will stop running.

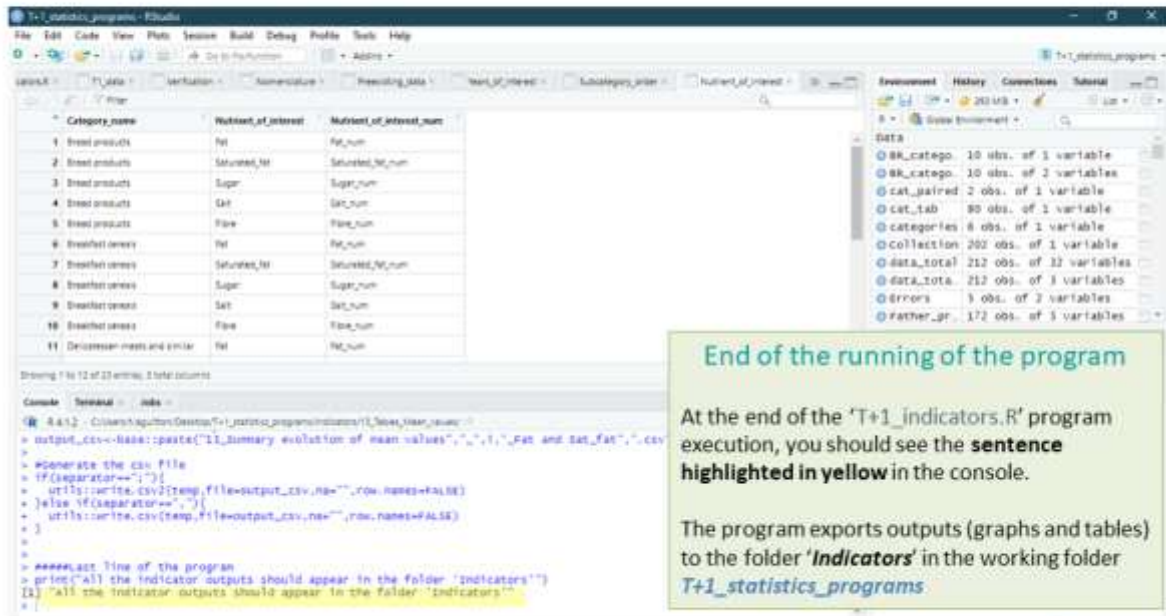
T+1\_statistics\_programs  
R (4.3.2)





## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T+1\_indicators' program



**End of the running of the program**

At the end of the 'T+1\_indicators.R' program execution, you should see the **sentence highlighted in yellow** in the console.

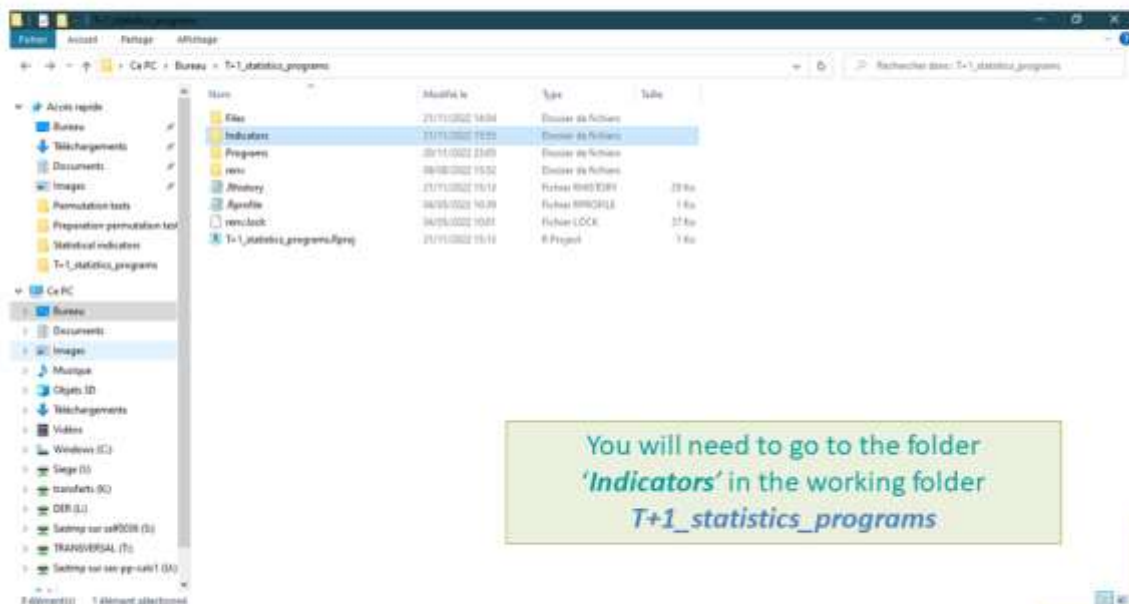
The program exports outputs (graphs and tables) to the folder '**Indicators**' in the working folder **T+1\_statistics\_programs**

T+1\_statistics\_programs  
II (4.3.2)



## WORK Package 5 – Reformulation and processed food monitoring

### Running of 'T+1\_indicators' program



**You will need to go to the folder 'Indicators' in the working folder T+1\_statistics\_programs**

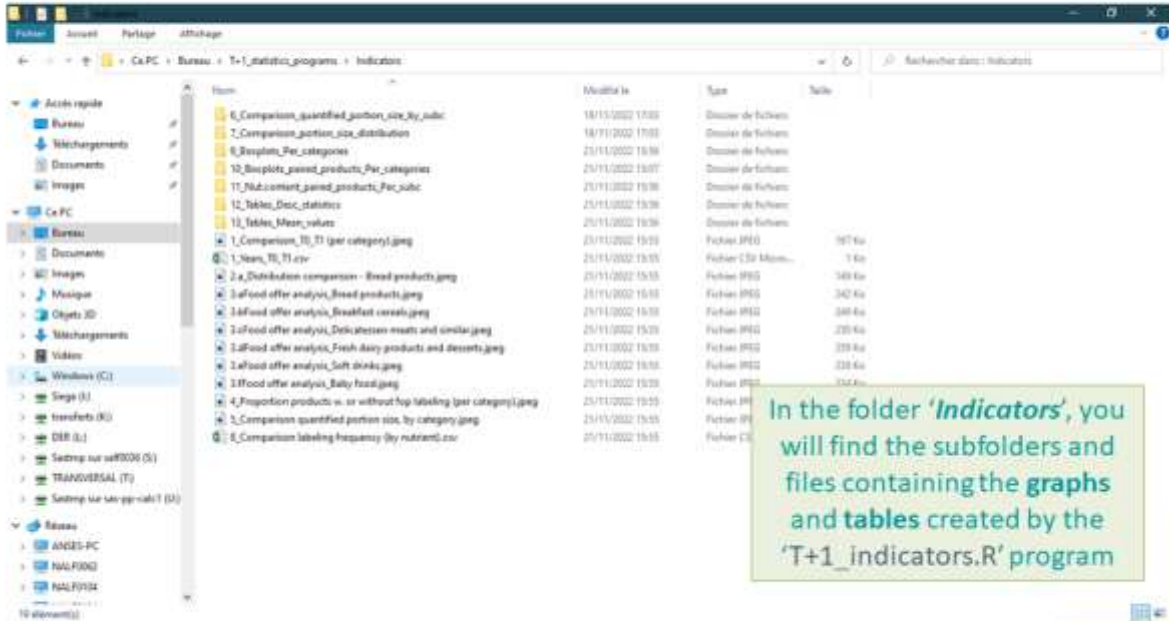
T+1\_statistics\_programs  
II (4.3.2)





WORK Package 5 – Reformulation and processed food monitoring

Running of 'T+1\_indicators' program



Item	Modifié le	Type	Taille
6_Comparison_quantified_portion_size_by_subc	18/11/2022 13:03	Dossier de fichiers	
7_Comparison_portion_size_distribution	18/11/2022 13:03	Dossier de fichiers	
8_Recipes_Fer_categories	23/11/2022 16:38	Dossier de fichiers	
10_Reciplets_paired_products_Fer_categories	25/11/2022 15:07	Dossier de fichiers	
11_Nutrient_paired_products_Fer_subc	25/11/2022 15:36	Dossier de fichiers	
12_Tables_Desc_statistics	25/11/2022 15:36	Dossier de fichiers	
13_Tables_Mean_values	25/11/2022 15:36	Dossier de fichiers	
1_Comparison_T0_T1 (per category).jpeg	23/11/2022 15:29	Fichier JPEG	197 Ko
1_Nean_T0_T1.csv	25/11/2022 15:55	Fichier CSV (Microsoft)	1 Ko
2_x_Distribution comparison - Bread products.jpeg	25/11/2022 15:55	Fichier JPEG	148 Ko
3_Food offer analysis_Bread products.jpeg	25/11/2022 15:55	Fichier JPEG	142 Ko
3_Food offer analysis_Breadfast cereals.jpeg	25/11/2022 15:55	Fichier JPEG	148 Ko
3_Food offer analysis_Delicatessen meats and similar.jpeg	25/11/2022 15:29	Fichier JPEG	235 Ko
3_Food offer analysis_Fresh dairy products and desserts.jpeg	25/11/2022 15:29	Fichier JPEG	239 Ko
3_Food offer analysis_Soft drinks.jpeg	25/11/2022 15:55	Fichier JPEG	238 Ko
3_Food offer analysis_Salty food.jpeg	25/11/2022 15:29	Fichier JPEG	134 Ko
4_Proportion products w. or without top labeling (per category).jpeg	25/11/2022 15:29	Fichier JPEG	
5_Comparison quantified portion size, by category.jpeg	25/11/2022 15:55	Fichier JPEG	
6_Comparison labeling frequency (by nutrient).csv	25/11/2022 15:55	Fichier CSV	

In the folder 'Indicators', you will find the subfolders and files containing the graphs and tables created by the 'T+1\_indicators.R' program

T+1\_statistics\_programs  
II (4.3.2)



WORK Package 5 – Reformulation and processed food monitoring

Creation of statistical indicators

Examples of output from the T+1\_indicators.R program (graphs and tables)

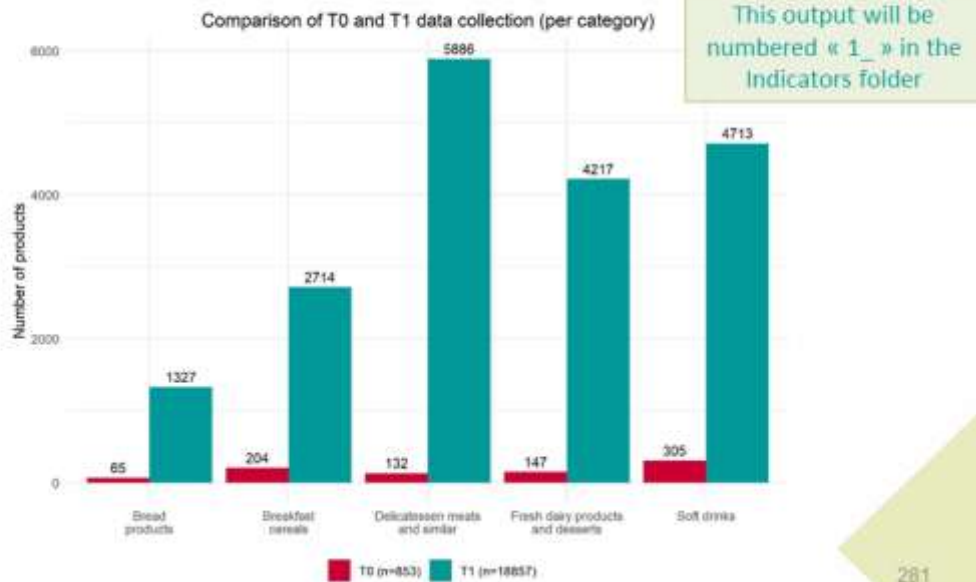




WORK Package 5 – Reformulation and processed food monitoring

**COMPARISON OF THE DATA COLLECTIONS**

- For each country :
  - ❖ Comparison of the number of reference collected per category



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WORK Package 5 – Reformulation and processed food monitoring

**COMPARISON OF THE DATA COLLECTIONS**

- For each country :
  - ❖ Comparison of the number of reference collected per category

1 Years T0 T1.csv

Category name	T0 data collection year	T1 data collection year
Bread products	2020	2022
Breakfast cereals	2019-2020	2022
Delicatessen meats and similar	2018	2022
Fresh dairy products and desserts	2020	2022
Soft drinks	2020	2022

This output (in .csv) will be numbered « 1\_ » in the Indicators folder

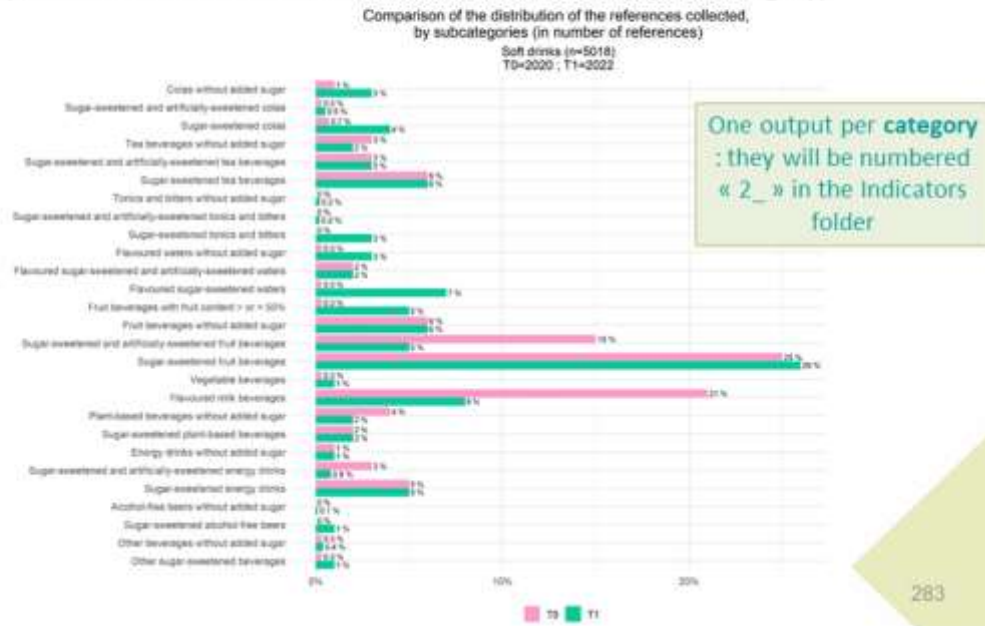
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WORK Package 5 – Reformulation and processed food monitoring

**COMPARISON OF THE DATA COLLECTIONS**

- For each country and for each category:
  - ❖ Comparison of the distribution of collected references (by subcategory)



WORK Package 5 – Reformulation and processed food monitoring

**DEFINITION OF BEST-REMAP'S GROUPS**

→ Necessary for characterizing the food offer at T1

Groups based on the pairing of products (with father product codes) and on the nutritional values comparison from T0 and T+1 data  
Parameters other than nutritional values (FOP labels, portion sizes, etc) are not taken into account here

**Products removed from the market:**

Products which are present at T0 (=pre-existing data) but absent at T+1 (removed products or products which have not been collected at T+1)

**New products:**

Products which are not present at T0 but present at T+1 (new products or products which have not been collected at T0)

**Identical products :**

Products which have been collected at T0 and at T+1 and presenting exactly identical nutritional values (on common nutrients)

**Reformulated products :**

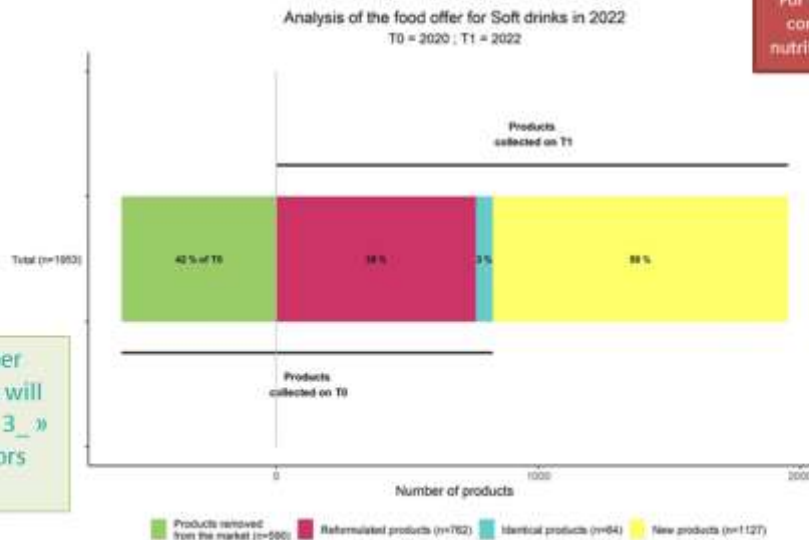
Products which have been collected at T0 and at T+1 with at least one nutritional value which has evolved between both years, regardless of the nutrient (on common nutrients)



WORK Package 5 – Reformulation and processed food monitoring

**EVOLUTION OF THE FOOD OFFER – COMPARISON OF THE DATA COLLECTIONS**

- For each country and for each category:
  - ❖ Analysis of the food offer at T1



For paired products, comparison of the nutritional values only

One output per category : they will be numbered « 3\_ » in the Indicators folder



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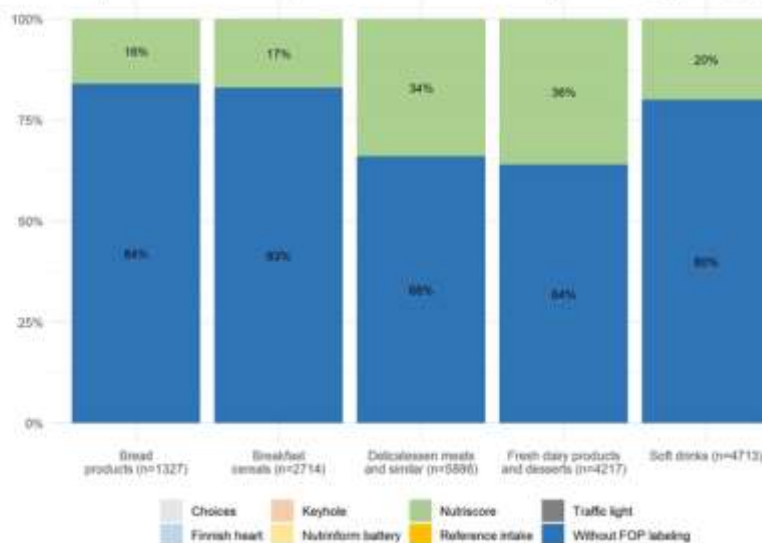
WORK Package 5 – Reformulation and processed food monitoring

**STUDY OF THE LABELING PARAMETERS**

**Front of pack labeling**

- For each country :
  - ❖ Distribution of the presence or absence of front of pack labeling (per category)

Proportion of T1 collected products with or without front of pack labeling, by category



Only for the T+1 data, characterization of the FOP labeling

This output will be numbered « 4\_ » in the Indicators folder



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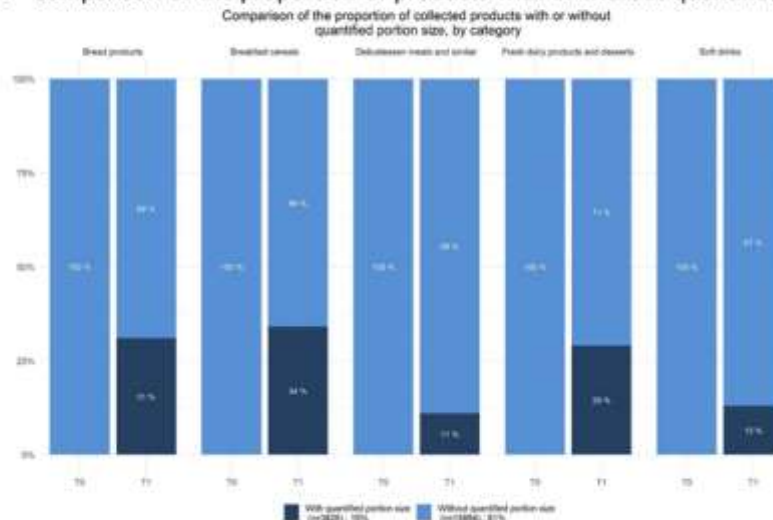


WORK Package 5 – Reformulation and processed food monitoring

EVOLUTION OF THE LABELING PARAMETERS

Portion size

- For each country :
  - ❖ Comparison of the proportion of products with or without quantified portion size, by category



This output will be numbered « 5\_ » in the Indicators folder

These outputs will be numbered « 6\_ » and « 7\_ » in the indicators folder

- ❖ Comparison of the proportion of products with or without quantified portion size, by subcategory
- ❖ Comparison of the portion size distribution, when available



WORK Package 5 – Reformulation and processed food monitoring

EVOLUTION OF THE LABELED NUTRITIONAL VALUES

- For each country:
  - ❖ Comparison of the labeling frequency (by nutrient) : particularly for fibres

Category_name	Fat.T0	Fat.T1	Fat.delta	Saturated_fat.T0	Saturated_fat.T1	Saturated_fat.delta
Bread products (T0 : n=0 ; T1 : n=1327)	-	100%	-	-	98%	-
Breakfast cereals (T0 : n=204 ; T1 : n=2714)	100%	99%	-1%	100%	98%	-2%
Delicatessen meats and similar (T0 : n=132 ; T1 : n=5886)	100%	100%	0%	100%	100%	0%
Fresh dairy products and desserts (T0 : n=147 ; T1 : n=4217)	100%	100%	0%	100%	100%	0%
Soft drinks (T0 : n=305 ; T1 : n=4713)	89%	97%	8%	89%	97%	8%

Sugar.T0	Sugar.T1	Sugar.delta	Protein.T0	Protein.T1	Protein.delta	Salt.T0	Salt.T1	Salt.delta	Fibre.T0	Fibre.T1	Fibre.delta
-	99%	-	-	100%	-	-	100%	-	-	68%	-
100%	98%	-2%	100%	99%	-1%	100%	98%	-2%	95%	86%	-9%
100%	100%	0%	100%	100%	0%	100%	100%	0%	8%	19%	11%
100%	100%	0%	100%	100%	0%	100%	85%	-15%	17%	22%	5%
99%	99%	0%	89%	97%	8%	94%	97%	3%	19%	16%	-3%

This output (in .csv) will be numbered « 8\_ » in the Indicators folder



WORK Package 5 – Reformulation and processed food monitoring

EVOLUTION OF THE LABELED NUTRITIONAL VALUES

Evolution of the nutritional composition

Nutrients of interest for each category :

	Fat	Saturated fat	Sugar	Protein	Fibre	Salt
Bread products	X	X	X		X	X
Breakfast cereals	X	X	X		X	X
Delicatessen meats and similar	X	X	X	X		X
Fresh dairy products and desserts	X	X	X	X	X	
Soft drinks	X	X	X		X	X

Only for milk and plant based beverages

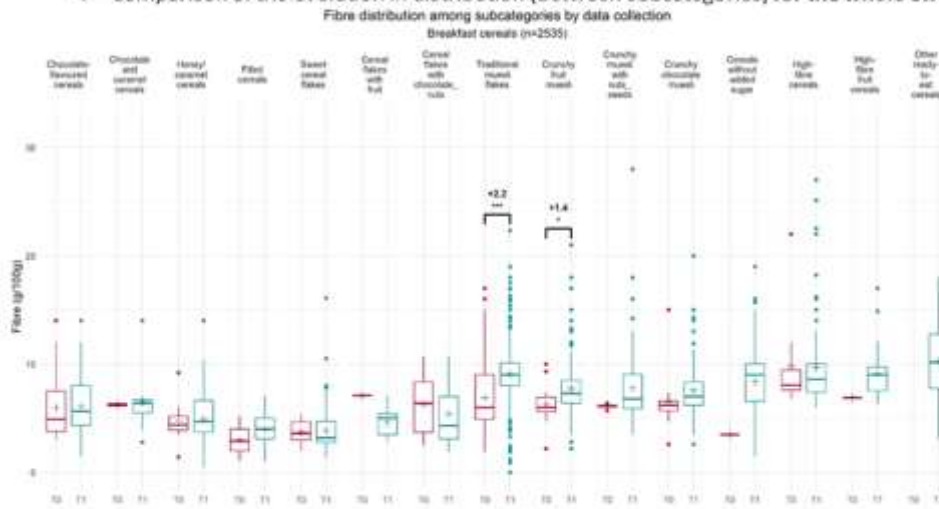


WORK Package 5 – Reformulation and processed food monitoring

EVOLUTION OF THE LABELED NUTRITIONAL VALUES

Evolution of the nutritional composition

- For each country, category and nutrient of interest (cf. table) :
  - ❖ Comparison of the evolution in distribution (between subcategories) for the whole offer (T0 vs T+1)



One output per nutrient of interest for each category : they will be numbered « 9\_ » in the Indicators folder

One output per nutrient of interest for each category : they will be numbered « 10\_ » in the Indicators folder

- ❖ Comparison of the evolution in distribution and mean values (between subcategories) for paired products (T0 and T+1)





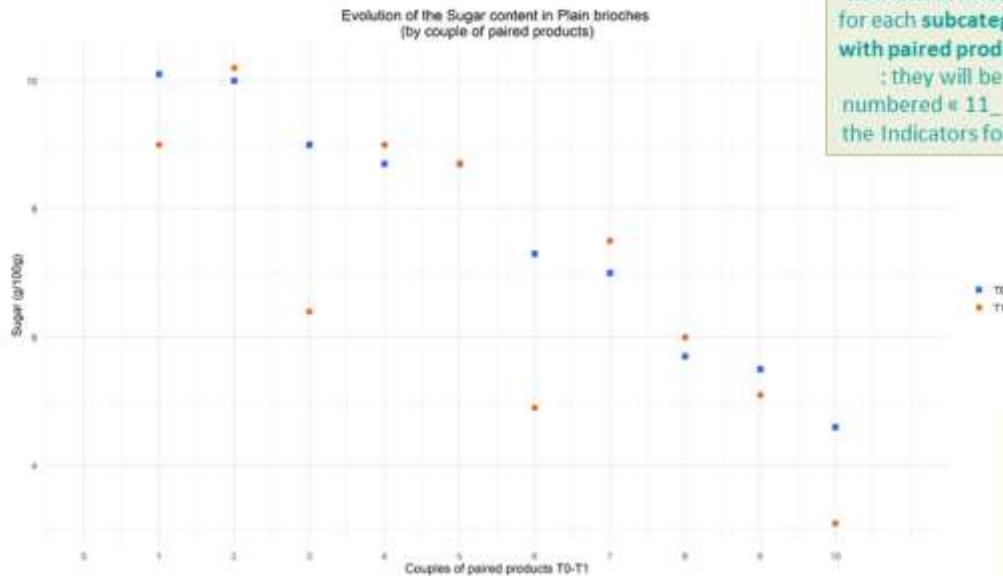
WORK Package 5 – Reformulation and processed food monitoring

EVOLUTION OF THE LABELED NUTRITIONAL VALUES

Evolution of the nutritional composition

- For each country, category and nutrient of interest (cf. table) :
  - ❖ Evolution of the nutrient content (/couple = paired products)

One output per nutrient of interest for each subcategory with paired products : they will be numbered « 11\_ » in the Indicators folder



WORK Package 5 – Reformulation and processed food monitoring

EVOLUTION OF THE LABELED NUTRITIONAL VALUES

Evolution of the nutritional composition

- For each country, category and nutrient of interest (cf. table) :
  - ❖ Comparison of the evolution of the descriptive statistics (by subcategory and by nutrient of interest)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Sugar (g/100g)	Number of products	Minimum T0	Maximum T0	First quartile Median T0	Third quartile Mean T0	Standard deviation T0	Number of products	Minimum T1	Maximum T1	First quartile Median T1	Third quartile Mean T1	Standard deviation T1	Mean value evolution (%)						
2	Chocolates#	20	2,1	37	22	24,9	31	24,8	8,7	212	2,1	40	22	24,9	26,5	24,7	5,8	-0,1	-0,004%	
3	Chocolates#	2	27	29	27,5	28	29,5	29	1,4	28	23	32	25	27	29	27,1	3,4	-0,9	-0,03%	
4	Wafers/biscuits	9	14,7	32	24,8	25	27	26,7	3,1	190	2,2	48	22,7	29	29	25,1	8	-1,8	-0,06%	
5	Filled bread	11	21,4	44	38	32,3	38	32,4	8,7	81	21	44	37,8	38	34	30,4	3,2	-0,8	-0,06%	
6	Sweet cakes	7	8,1	37	9,8	13,9	18,8	16,7	11	131	9	37	9,8	9,3	17	12,8	9,8	-0,8	-0,2%	
7	Cake/biscuits	1	25,9	25,9	25,9	25,9	25,9	25,9	0	19	7,1	28	14	15,8	18	16,8	1,1	0,3	-0,4%	
8	Cake/biscuits	7	11,1	38	16,5	21,8	28,9	22,8	9,7	34	11,1	39	19,9	22	28,2	19,5	4,4	0,8	0,04%	
9	Traditional	89	0,8	16,7	6,8	15	24	15,3	8	886	0,4	33	8,8	24	19,7	14,9	7,1	-1	-0,01%	
10	Crunchy-biscuits	24	10	33	17,8	21,5	23,8	21,9	9,4	121	2,8	41,4	15	19	23	19,1	6	-0,8	-0,1%	
11	Crunchy-biscuits	8	17,4	20,8	19	19	20	19,2	1,2	139	1,8	39	18,4	17,4	20	18,2	8,2	-0,2	-0,2%	
12	Crunchy-biscuits	33	17	28,1	21	22,8	24	22,6	2,4	131	1,8	31,1	17	21	24	20,2	3,5	-0,4	-0,1%	
13	Caramelized	3	0,4	2,9	0,9	1,4	2,1	1,6	1,1	222	0	11,3	0,6	1,1	1,5	1,1	-0,3	-0,1%		
14	Highly-sweet	10	11	27	17	18,5	19,4	18,4	9	114	1,8	28,4	10,8	14	18	13,7	6	-1,7	-0,1%	
15	Caramelized	1	24,8	24,8	24,8	24,8	24,8	24,8	0	40	2,8	32	14,2	20	24	19,3	6,9	-0,7	-0,1%	
16	Other ready	0								0										
17	Other ready	0								9	1,7	21,8	9	6,4	9,8	8,9	8,2			

One output (in .csv) per category and per nutrient of interest : they will be numbered « 12\_ » in the Indicators folder



WORK Package 5 – Reformulation and processed food monitoring

**EVOLUTION OF THE LABELED NUTRITIONAL VALUES**

Evolution of the nutritional composition

- For each country, category and nutrient of interest (cf. table) :
  - ❖ Summary of the evolution of mean values (by subcategory and by nutrient of interest)

Subcategory	Sugar.All_gm	Sugar.All_gm	Sugar.All_gm	Sugar.Paired	Sugar.Paired	Sugar.Paired	Salt.All_groc	Salt.All_groc	Salt.All_groc	Salt.Paired	Salt.Paired	Salt.Paired	Fibre.All_gm	Fibre.All_gm	Fibre.All_gm	Fibre.Paired
1 Colas without	0,1						0,02 -0,03		-0,6 %							0,1
2 Sugar-sweet	4,4-0,1		0,02 %				0,02									0
3 Sugar-sweet	9,9-1,2		-0,1 %				0,02 0,02									
4 Tea beverage	1,8-1,6*						0,03 -0,06*		-0,7 %							
5 Sugar-sweet	4,3-0,8*		-0,2 %				0,07 0,04		1,33 %							
6 Sugar-sweet	6,4-1*		-0,1 %				0,06 0,01		0,2 %							
7 Tonics and b	0,1						0,02									
8 Sugar-sweet	5,7						0									
9 Sugar-sweet	6,6						0,01									
10 Flavoured w	0		0				0,02									
11 Flavoured w	4,2-1,6*		-0,3 %				0,01 -0,03		-0,8 %							0
12 Flavoured w	7,2-1,8		-0,3 %				0,36 0,33		11%							0,1
13 Fruit beverage	7,2-4,3		-0,4 %				0,02 0,01									0,6
14 Fruit beverage	2,5-1,7*		2,1 %				0,03 -0,06**		-0,7 %							0,2
15 Sugar-sweet	4,9-0,4		-0,06 %				0,06 0,05		5%							0
16 Sugar-sweet	8,1-1,2***		-0,1 %				0,02 0,01		2%							0,1 -0,2** -0,3 %
17 Vegetable b	8,5-0,7		-0,08 %				0,08 0,03		3,6 %							1,1 -0,1 -0,08 %
18 Flavoured m	8,8 0,2		0,02 %				0,34 0,01		0,06 %							0,6 0,1 0,2 %
19 Plant-based	4,4-0,2		-0,04 %			0 -1,9	-2%		0,11		0	0%	0,07 -0,06	-0,3 %		0,9 0,3 1,2 %
20 Sugar-sweet	4,8 0,7		0,2 %				0,33 0,02		0,2 %							0,5 0 0%
21 Energy drink	2,7-2,7						0,1 0,05		1%							0,4 0,4
22 Sugar-sweet	6,6 0,4		0,06 %				0,1		0		0%					0 0 0
23 Sugar-sweet	5,8-1,6*		-0,1 %				0,08 -0,03		-0,3 %							0 0 0
24 Alcohol-free	3						0,04									0,1
25 Sugar-sweet	6,4						0,02									0,1
26 Other bever	2,7-2,3						0,06 0,02		-0,3 %							0,1
27 Other suga-	6,8-0,2		-0,03 %				0,13 0,13									0

One output (in .csv) per category : they will be numbered « 13\_ » in the Indicators folder





**Best-ReMaP**  
Healthy Food for a Healthy Future

**Thank you  
for your attention!**

ANSES

[wp5\\_bestremap@anses.fr](mailto:wp5_bestremap@anses.fr)

The Joint Action focusing on the implementation of validated best practices in nutrition – Best-ReMaP

This presentation arises from the Joint Action Best-ReMaP. This JA is addressing the adaption, replication and implementation of effective health interventions, based on practices that have been proven to work in the areas of food reformulation, framing of food marketing and public procurement of healthy food in public settings. This presentation was funded by the European Union's Health Programme (2014-2020). The content of this presentation represents the views of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the Consumers, Health, Agriculture and Food Executive Agency (CHAFEA) or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.