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Overview of EFSA reporting tools for the continuous collection of chemical contaminants occurrence data

Roberto Brazão
Monitoring and Surveillance Unit of the Food and Nutrition Department
National Institute of Health Doutor Ricardo Jorge, IP (INSA, IP)
(roberto.brazao@insa.min-saude.pt)

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Framework

Member States have the responsibility to transmit to EFSA all the data produced in the context of the official control of food and feed chain;

> Share your data with EFSA.
> Contribute to food safety in Europe.

EFSA _ Calls for data

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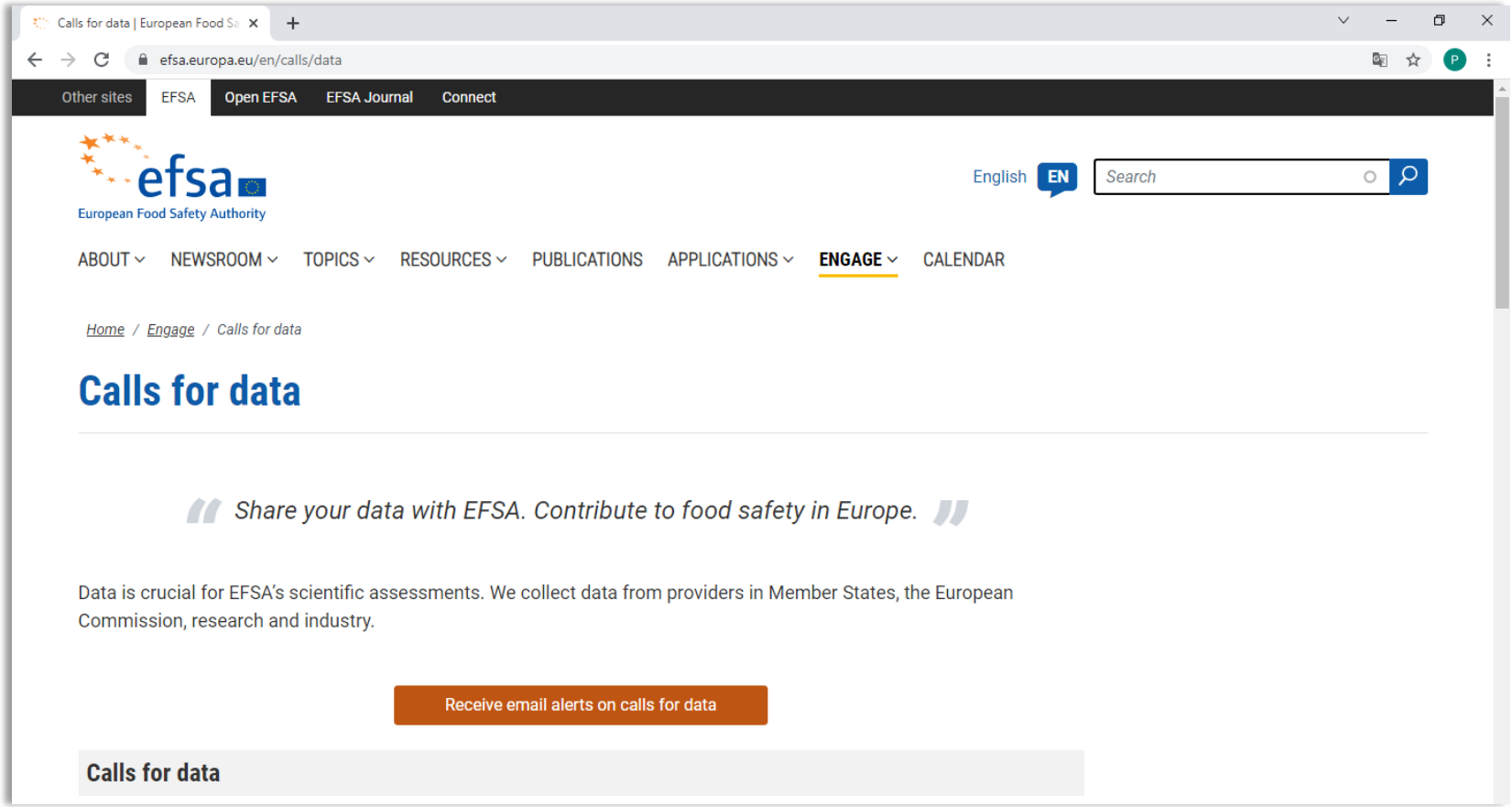
EFSA gathers data through continuous calls to multiple providers in Member States



EFSA _ Calls for data

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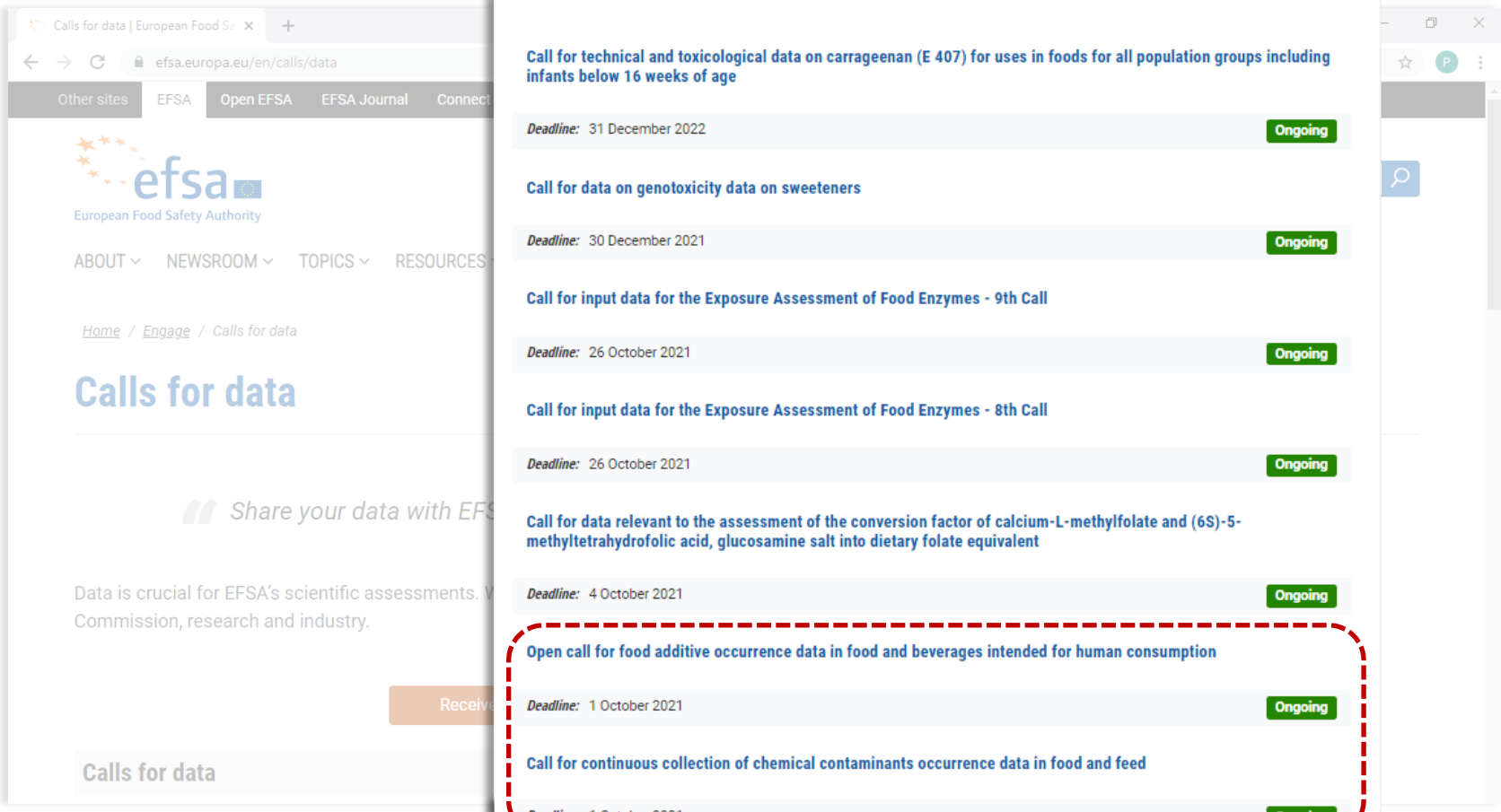
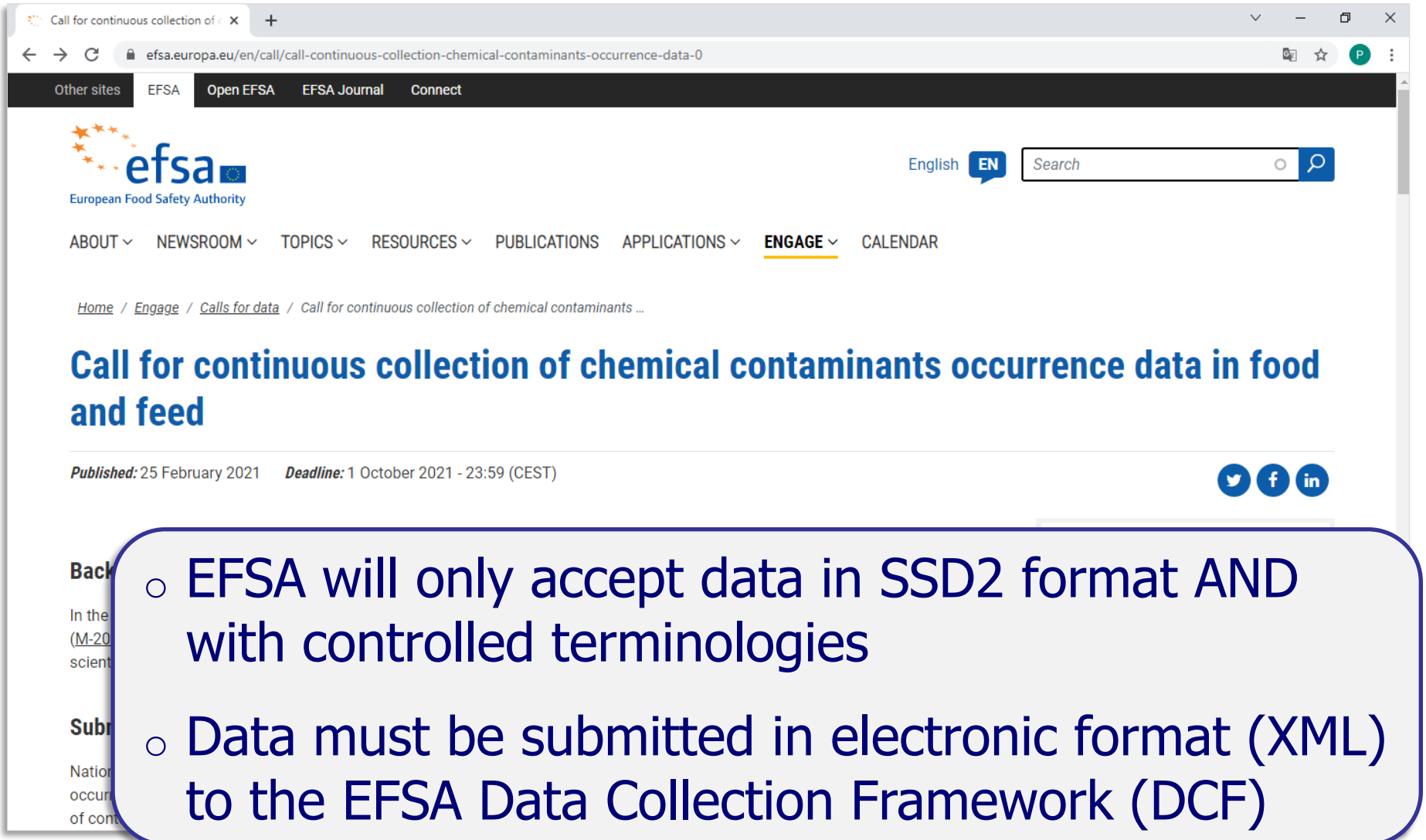
EFSA gathers data
multiple providers



EFSA _ Calls for data



- EFSA will only accept data in SSD2 format AND with controlled terminologies
- Data must be submitted in electronic format (XML) to the EFSA Data Collection Framework (DCF)

Excel reporting tools

Excel reporting tools for generating XML files for chemical monitoring

- Excel workbooks specifically customized to support data providers in compiling and reporting chemical monitoring residues data (chemical contaminants, additives, pesticides, and veterinary medicinal product residues (VMPR)) to EFSA according to the SSD2 controlled terminologies.

Excel reporting tools

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- Simple and usable tools that allow Member States to create files in line with the SSD2 (Standard Sample Description 2) data model and to generate XML files with the correct structure for harmonised data transmission to EFSA via the DCF (Data Collection Framework).

  [Detailed description of the SSD2 data model - *Standard Sample Description ver. 2.0*]

  [Technical details and specifications for valid SSD2 XML files - *Guidance on Data Exchange version 2.0*]

Excel reporting tools

EU-FORA Fellowship Programme

- Comprehensive tools that allow data elements to be filled in more easily according to the specific catalogue of controlled terminologies and also to be validated locally and immediately to check if the controlled terminology catalogues are correctly applied, improving the overall quality, consistency and integrity of the data submitted to EFSA

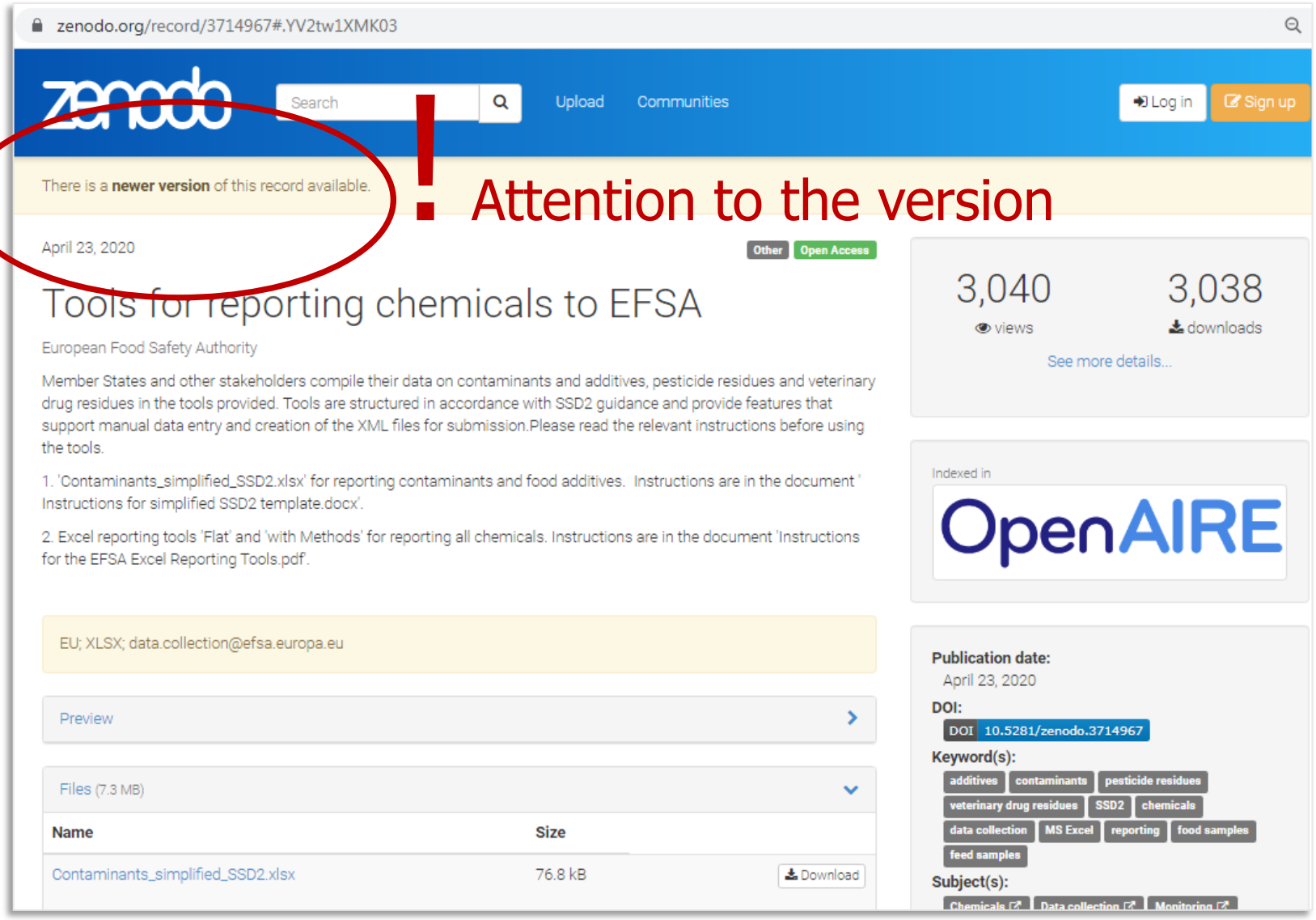
Excel reporting tools - Types

EFSA made available **three types of Excel reporting tools** for XML creation with chemical monitoring data:

- **Excel tool FLAT for SSD2 data collection**
- **Excel tool WITH METHODS for SSD2 data collection**
- **Excel simplified tool for SSD2 data collection**

Available in: https://zenodo.org/record/3714967#.YV2iC1XMK02

Excel reporting tools - Types



Excel reporting tools - Types

- The **Excel tool FLAT** and the **Excel tool WITH METHODS** contain all the SSD2 mandatory fields and most relevant optional fields to a valid XML file creation.

  They have in common several functionalities, including internal validation procedure and the XML creation procedure, despite the data reporting schema of the tools is completely different;

Excel reporting tools - Types

- The **Excel tool FLAT** is used to report contaminants and additives;

  and

- The **Excel tool WITH METHODS** can be used for reporting screening results, mainly in the residues of pesticides and of veterinary medicinal products domains;

Excel reporting tools - Types

- The **Excel simplified tool** (not considered in this presentation) contains the minimum reporting requirements to achieve a valid file transmission.

  It is primarily aimed to data providers with little experience of compiling and sending data to EFSA.

Excel reporting tools
STRUCTURE

- The **Excel tool FLAT** is conceived for a simpler usage with a straightforward structure of the input: each record includes samples attributes, laboratory information and analytical results on the same line of a database that has the flat structure of an ordinary Excel table;

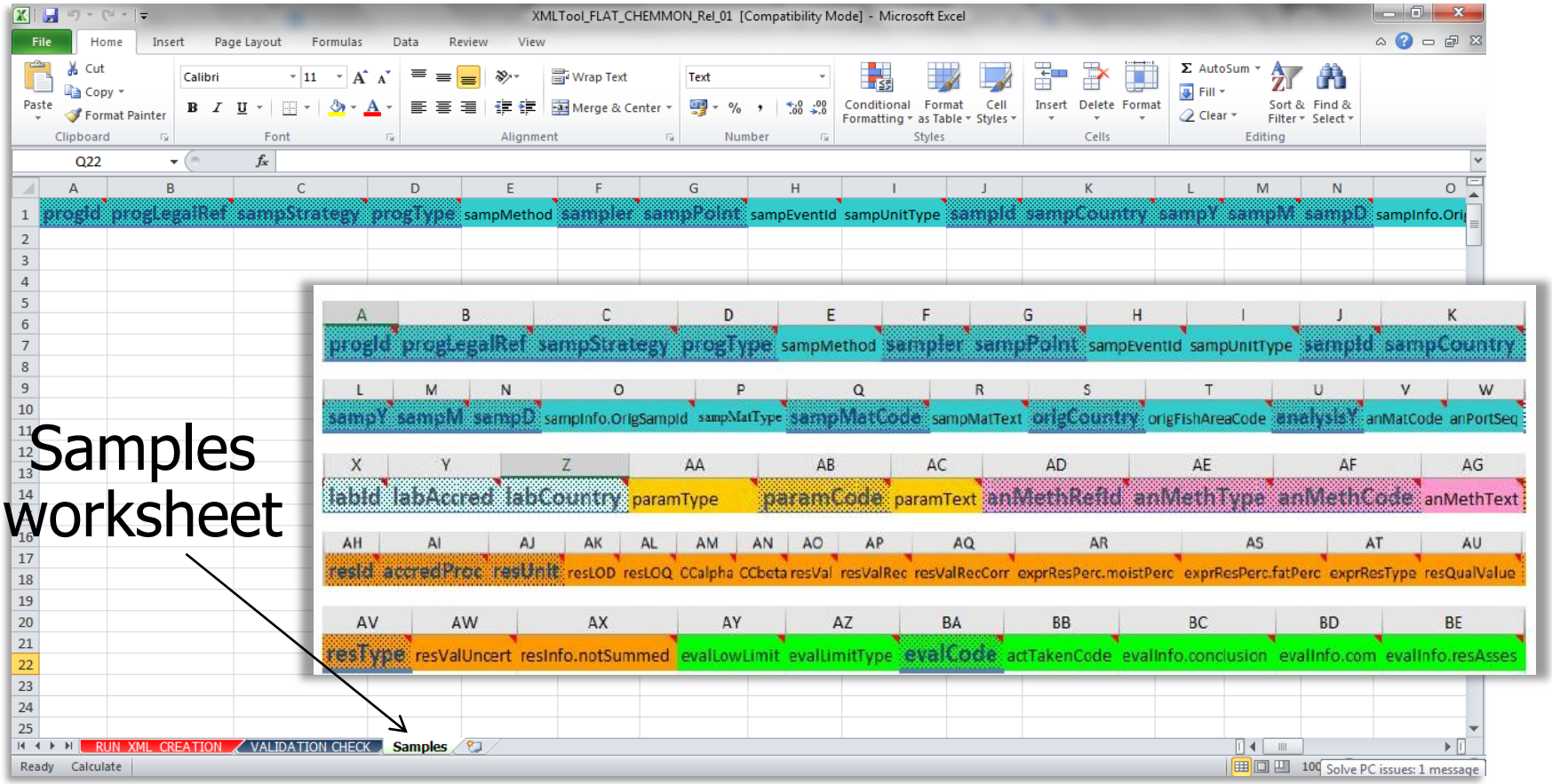
- The **Excel tool WITH METHODS** has the input information related to samples, analytical methods and positive detections saved in three separated types of worksheets;

Excel reporting tools
STRUCTURE

- The excel reporting tools do not contain all the data elements of the SSD2 data model but only those mandatory, dependent mandatory and relevant for chemical monitoring data collection;
    - This SSD2 data elements are listed in the "Chemical monitoring reporting guidance: 2021 data collection";
- The content of some data elements must be in accordance to specific catalogues of controlled terminologies, while for others it's free of control.

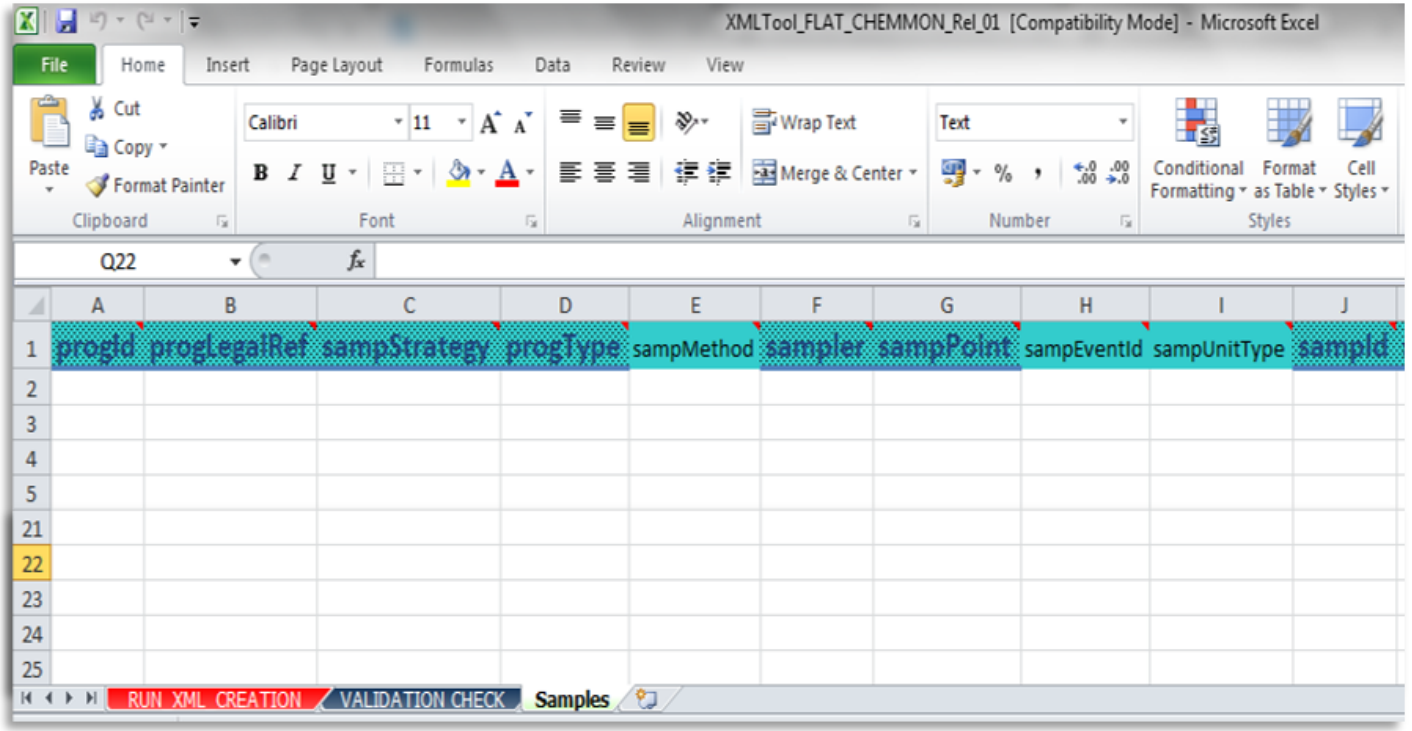
Excel tool FLAT - Worksheets

The mandatory and relevant SSD2 data elements are included as columns in the same worksheet.



Excel tool FLAT - Worksheets

The **FLAT** reporting tool consists of three worksheets:



- **Samples:** the worksheet compiled with all the data to be converted in XML format;

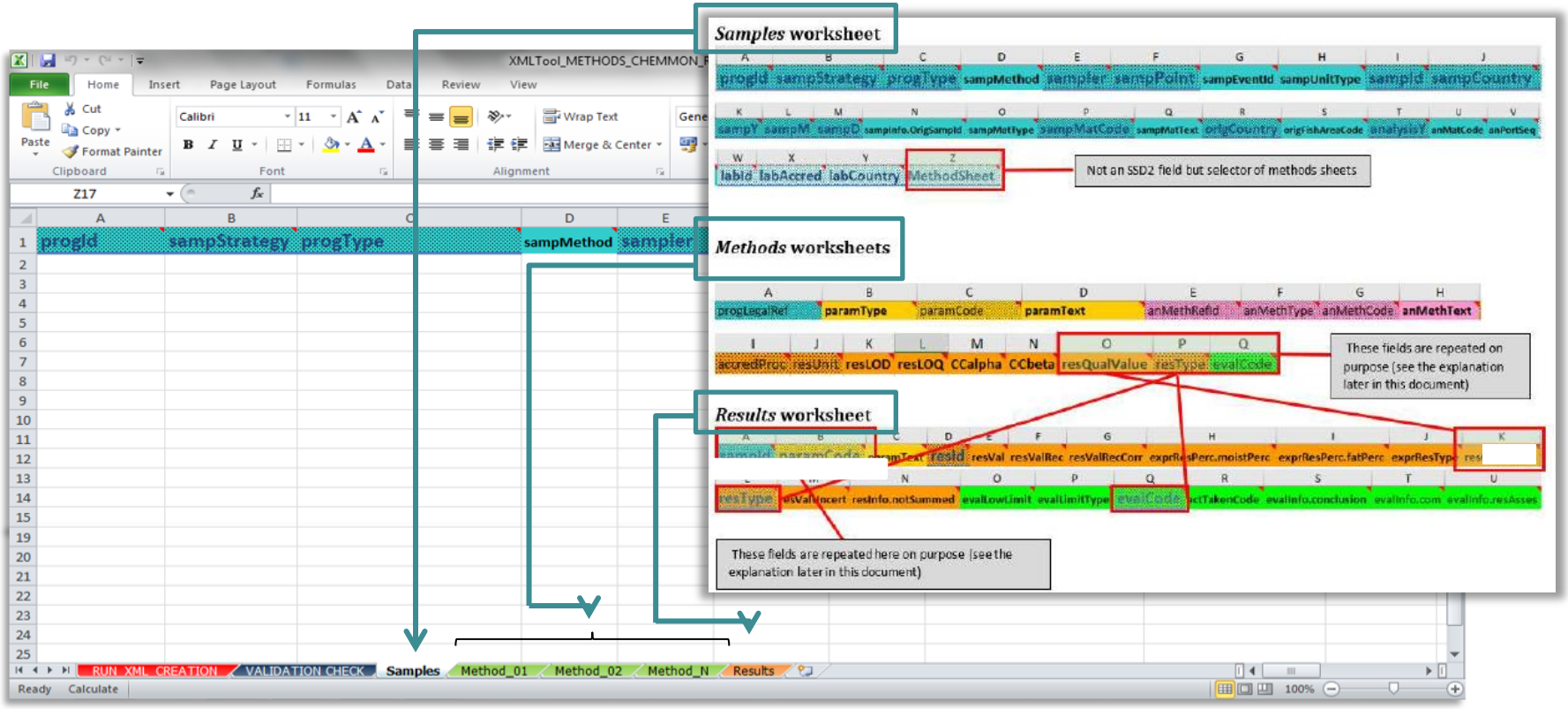
Excel tool FLAT - Worksheets

- **VALIDATION CHECK:** a console for running the validation procedure that checks if the controlled terminology catalogues are correctly applied in the Samples worksheet and returns a list of cells that failed the control;

- **RUN_XML_CREATION:** a console to run the code that automatically generates the XML file and returns the feedback on the files created.

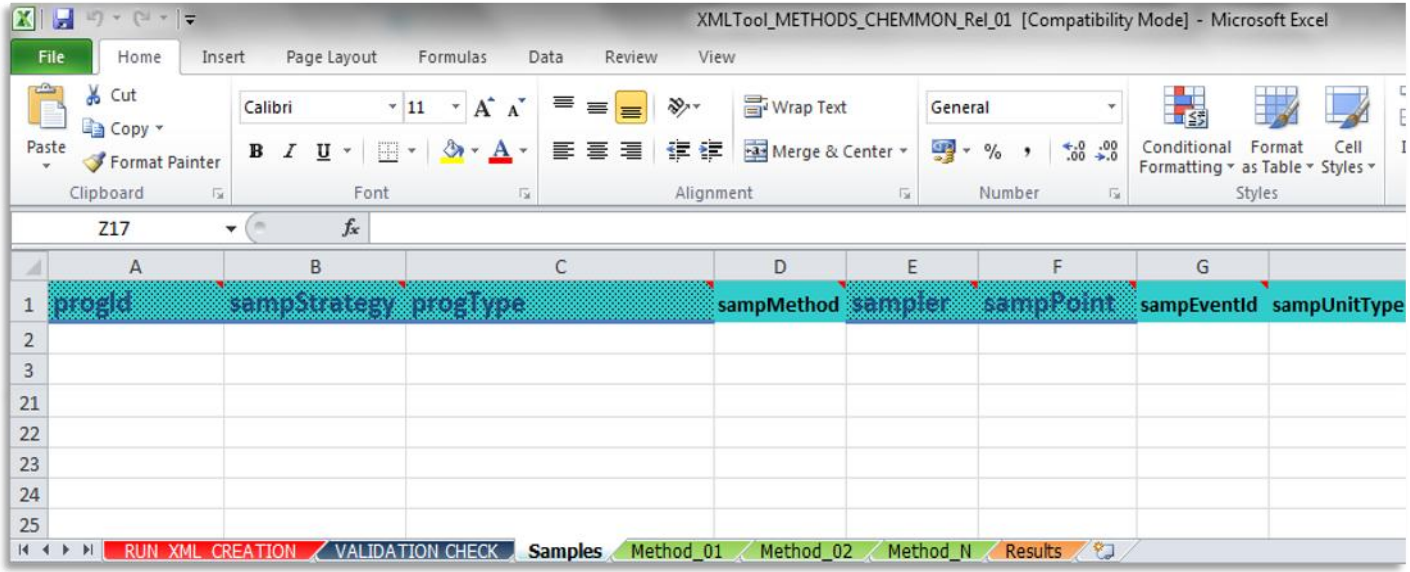
Excel tool WITH METHODS - Worksheets

The SSD2 data elements are divided in three groups and included as columns over three different main types of worksheets.



Excel tool WITH METHODS - Worksheets

The **WITH METHODS** reporting tool consists of five different types of worksheets:



- **Samples:** working area for reporting information at sample level. All the samples reported are listed and described once in this worksheet;

Excel tool WITH METHODS - Worksheets

- **Methods:** working area for reporting the descriptors of a single laboratory method. This type of worksheet will be replicated as many times as the laboratory methods reported.

- **Results:** working area for reporting positive detections. Each positive result reported in this table has to be linked to a sample and to a specific substance reported in one of the laboratory methods sheets.

Excel tool WITH METHODS - Worksheets

- **VALIDATION CHECK:** a console for running the validation procedure that checks if the controlled terminology catalogues are correctly applied in the Samples worksheet and returns a list of cells that failed the control.

- **RUN_XML_CREATION:** a console to run the code that automatically generates the XML file and returns the feedback on the files created.

Excel reporting tools
STRUCTURE

- The data reporting schema of the tools and the order of the data elements follows the order of the "Chemical monitoring reporting guidance" for an easier reference;

- Colours, font and special labels in the headers are meant to provide additional support to the user when compiling the data:

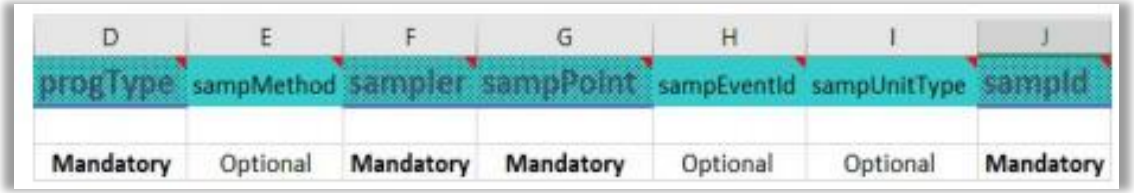
Excel reporting tools
STRUCTURE

- Background colours are meant to evidence the SSD2 section to which each field belongs.

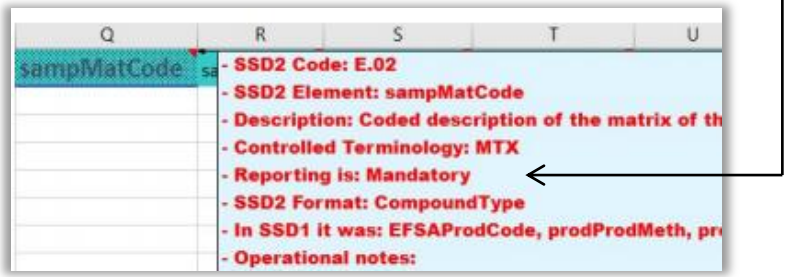
Section_code	Section	Color
A	Local organization	(Not included)
B	Sampling programme	
C	Sampling event	
D	Sample taken	
E	Matrix sampled	
F	Sample analysed	
G	Matrix analysed	
H	Sample analysed portion	
I	Isolate	(Not included)
J	Laboratory	
K	Parameter	
L	Analytical Method	
M	Result	
N	Evaluation	

Excel reporting tools
STRUCTURE

- Darker background colours and larger/bold font of the header names are meant to identify the fields that are mandatory or dependent mandatory.



- The Mandatory/Optional status of each field is also reported in the special labels associated to each column header (specified in line 5).

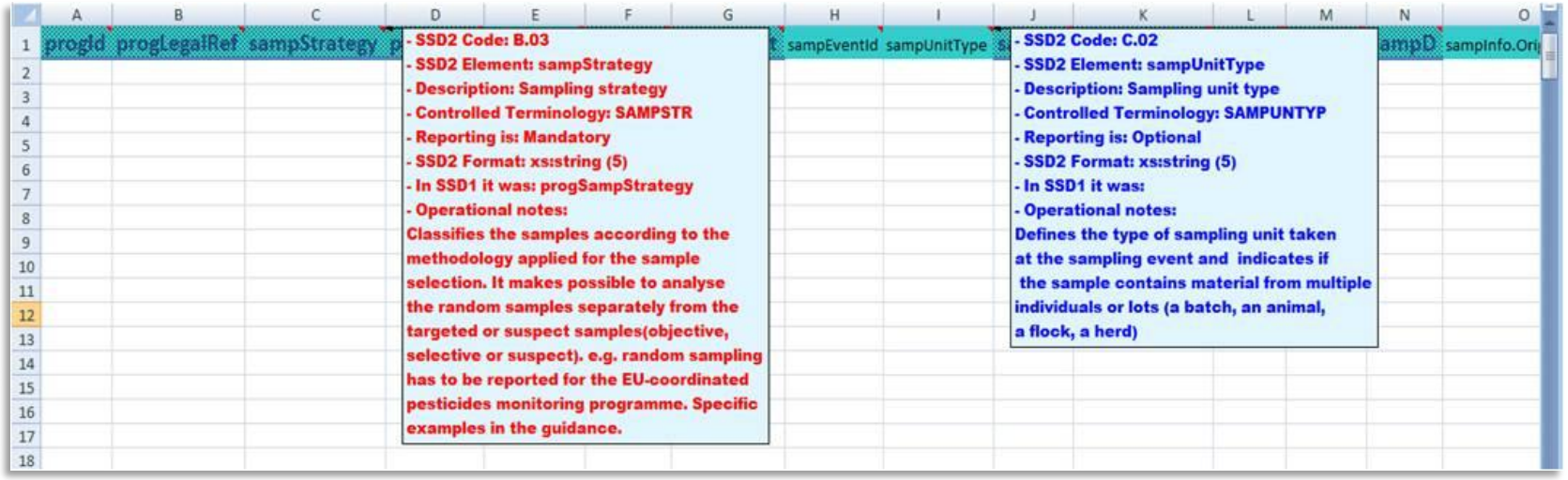


Excel reporting tools
MAIN FUNCTIONALITIES

- Chemical monitoring data to be reported in XML can be easily prepared in the Excel tools;
- All the SSD2 mandatory fields and most relevant optional fields are already included in the tools;
- The reporting hierarchies of all the SSD2 controlled terminology catalogues are embedded in the reporting tools;

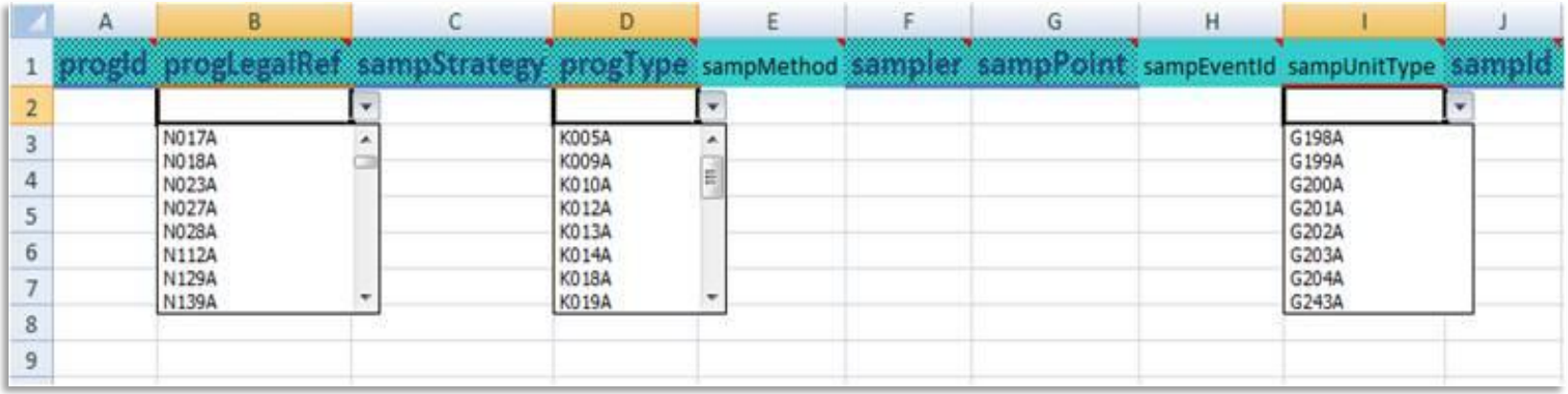
Excel reporting tools
MAIN FUNCTIONALITIES

- Descriptive comments are present on each header of the Excel tools spreadsheets;



Excel reporting tools
MAIN FUNCTIONALITIES

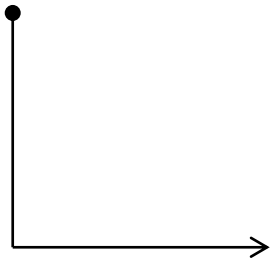
- The valid reportable SSD2 codes can be selected from validation drop-down lists that are present in every cell related to SSD2 variables with a controlled terminology.



Each drop-down list is performing the double role of guided input for the user and validation rule.

Excel reporting tools
MAIN FUNCTIONALITIES

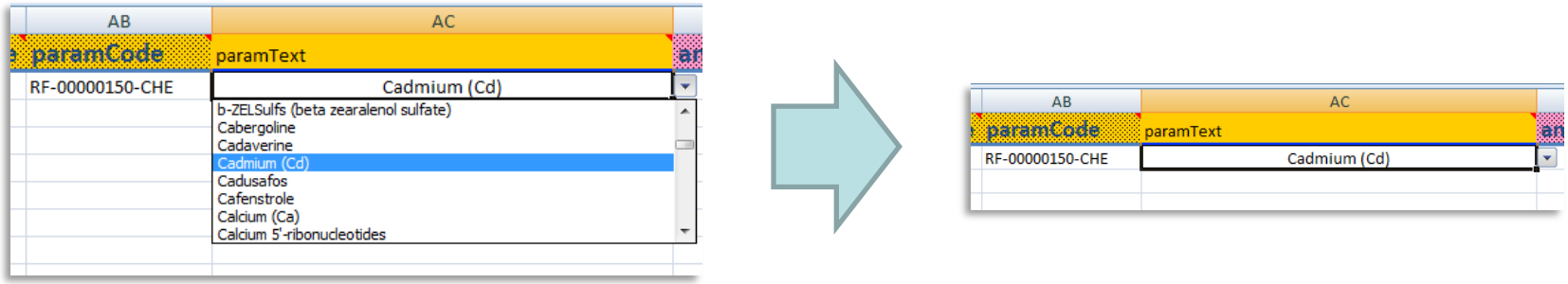
- Each cell can also be populated entering the codes manually or by copying-pasting codes from another worksheet, with the possibility to run the catalogues validation afterwards;



The best option and the one that is in use (and that will be most used) for the majority of the Portuguese data.

Excel reporting tools
MAIN FUNCTIONALITIES

- The *"paramCode"* can be retrieved by selecting the names* of substances from a specific dropdown list;

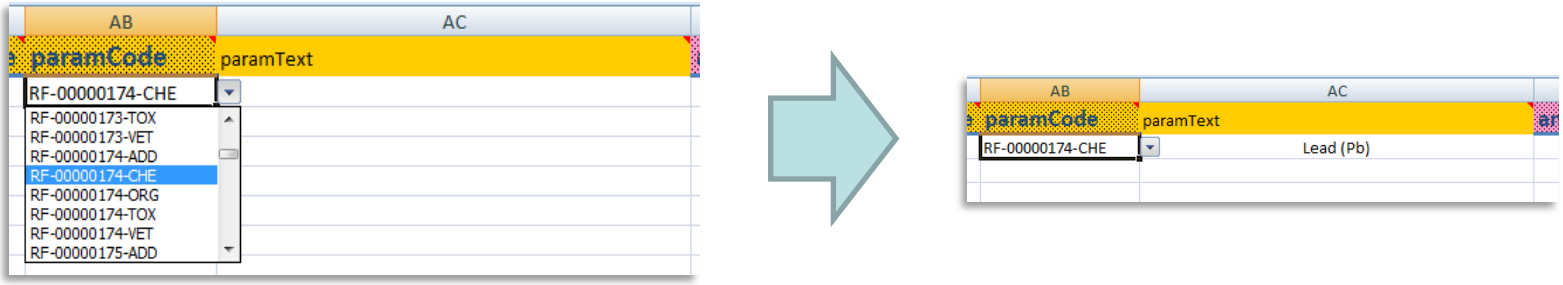


* The option to select the analysed chemicals *("paramCode")* by name and not by code was a request of the users.

Excel reporting tools
MAIN FUNCTIONALITIES

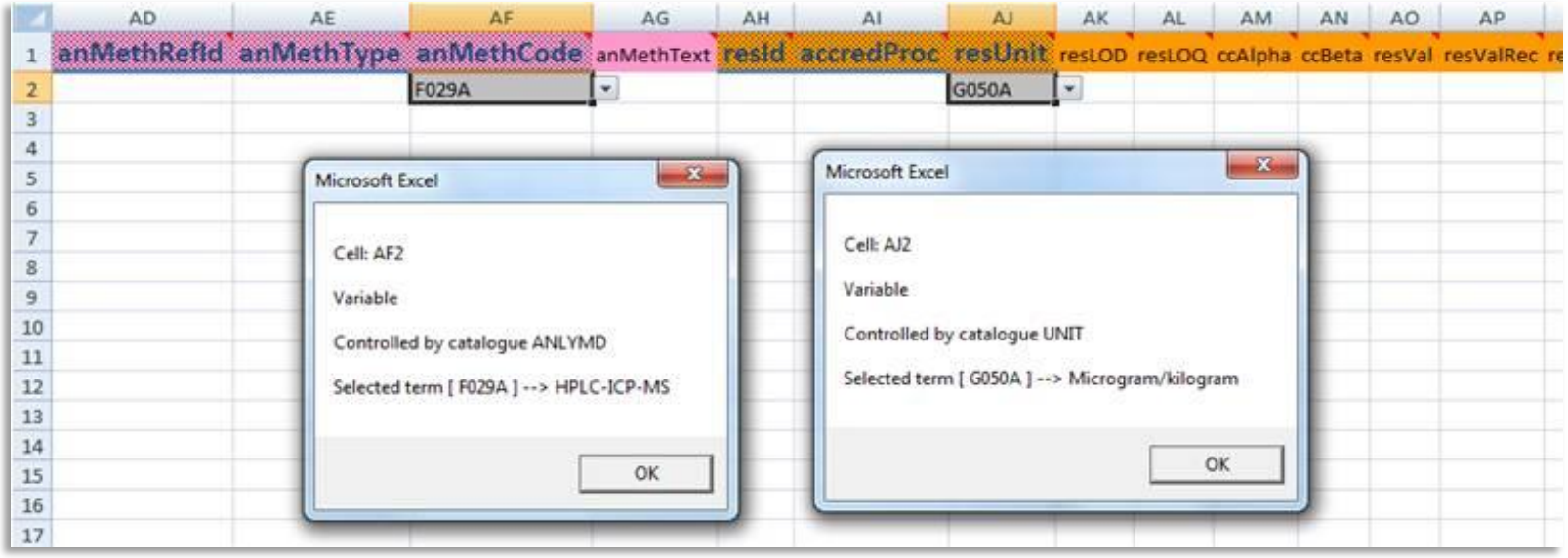
An exception was introduced in the Tools using the *"paramText"* field as a space to list chemical names that, once selected, are converted in codes in the *"paramCode"* cell.

This also works in the opposite way - selecting a *"paramCode"*, the tool automatically returns the name in the *"paramText"* column);



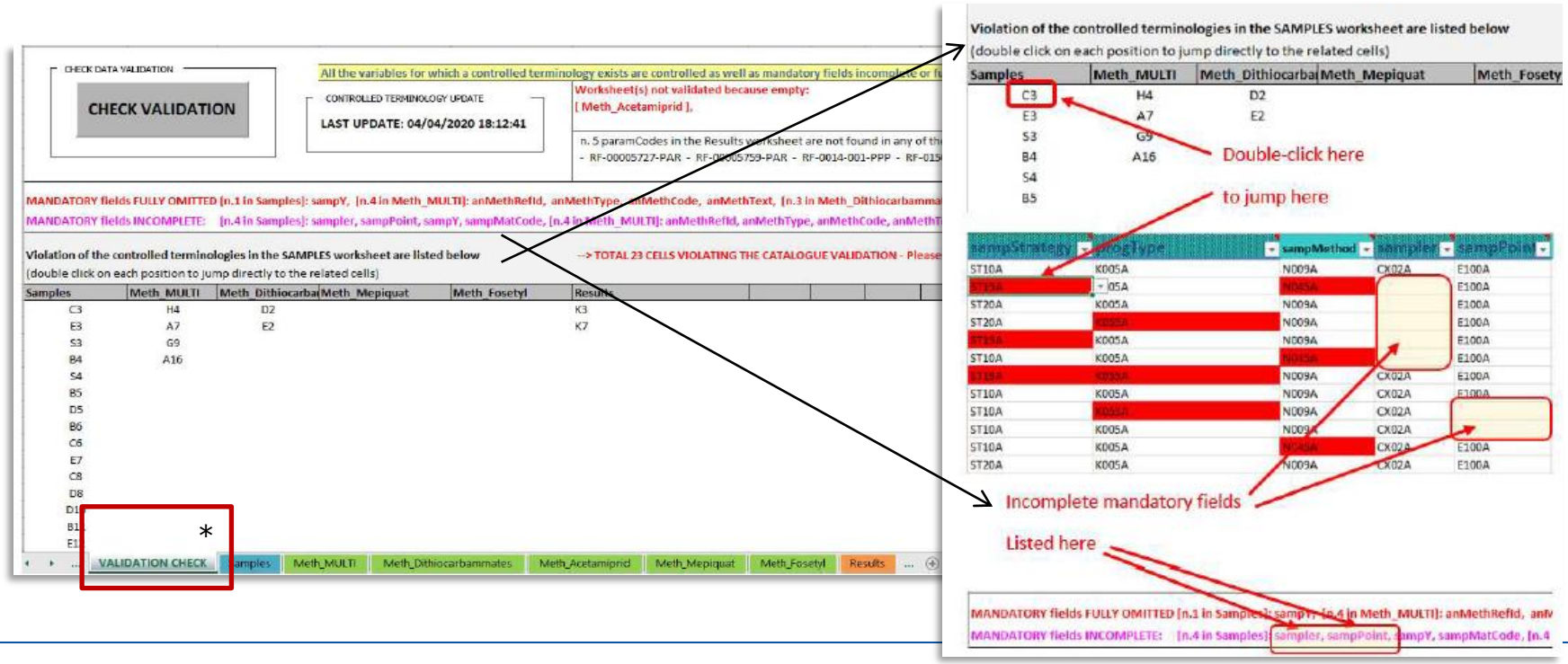
Excel reporting tools
MAIN FUNCTIONALITIES

- The tools include a helpful functionality for decoding codes already entered in the cells. A double click on the cells with controlled terminology returns the corresponding catalogue description of the code in that cell.



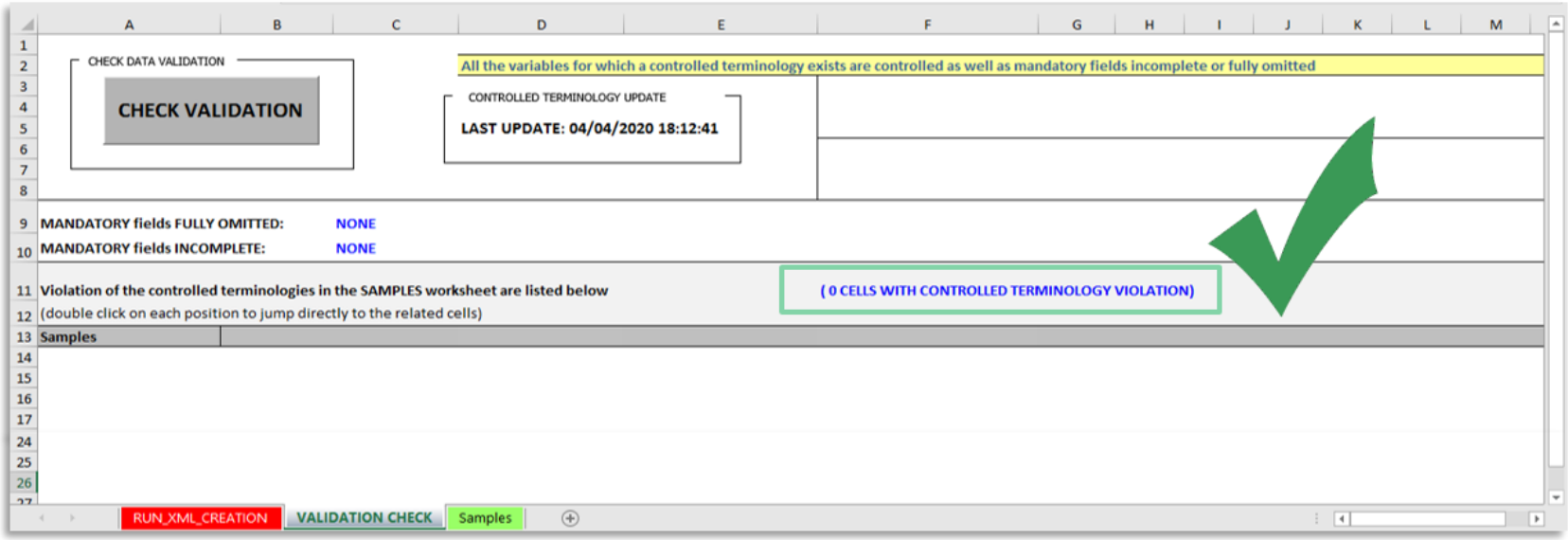
Excel reporting tools
MAIN FUNCTIONALITIES

- It provides a validation check functionality* together with other useful controls, that parses the entire content of the worksheets re-applying the validation criteria in all the cells where the rules were overwritten.



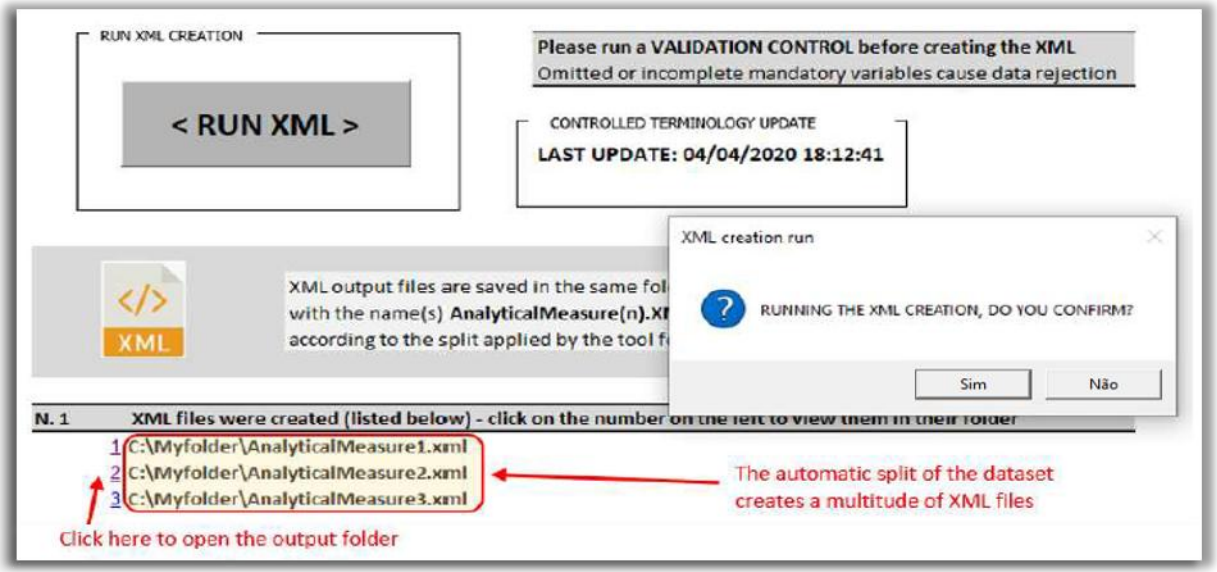
Excel reporting tools
MAIN FUNCTIONALITIES

- It is strongly recommended to run the validation check procedure frequently in order to have the controlled terminology drop-down always updated and to identify possible mistakes during the data compilation, in particular before running the XML creation procedure.



Excel reporting tools
MAIN FUNCTIONALITIES

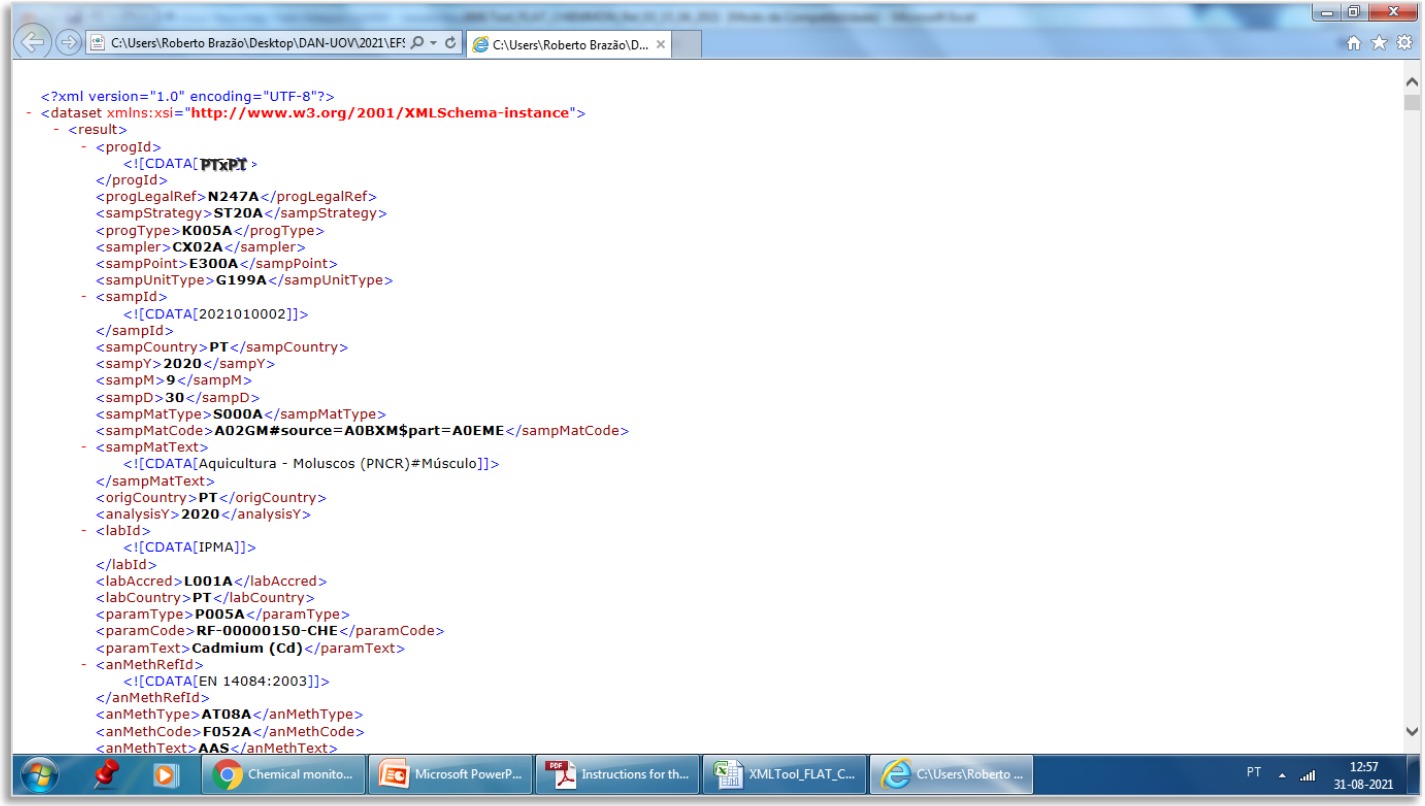
- The last step to be performed with the reporting tools is the export of the data compiled in the XML files.



The tools automatically split the dataset inserted in the workbooks and creates XML files of suitable size (max 20.000 records per file) for the upload to the DCF.

Excel reporting tools
MAIN FUNCTIONALITIES

- Example of subset of data elements from a XML file generated with the **SSD2 Excel Tool FLAT**:



Questions & Answers

Questions & Answers

The Excel reporting tools allow Member States to create files in line with the SSD2 (Standard Sample Description 2) data model and to generate …

- XHTML files?
- HTML files?
- XML files?

…with the correct structure for harmonised data transmission to EFSA via the DCF.

Questions & Answers

The Excel reporting tools allow Member States to create files in line with the SSD2 (Standard Sample Description 2) data model and to generate …

- XHTML files?
- HTML files?
- XML files;

…with the correct structure for harmonised data transmission to EFSA via the DCF.

Questions & Answers

The Excel reporting tools contains

- the data elements of the SSD2 data model that are mandatory and dependent mandatory?
- the data elements of the SSD2 data model that are mandatory, dependent mandatory and relevant for chemical monitoring data collection?
- all the data elements of the SSD2 data model?

Questions & Answers

The Excel reporting tools contains

- the data elements of the SSD2 data model that are mandatory and dependent mandatory?
- the data elements of the SSD2 data model that are mandatory, dependent mandatory and relevant for chemical monitoring data collection;
- all the data elements of the SSD2 data model?

Questions & Answers

In both Excel reporting tools (FLAT & WITH METHODS) the valid reportable SSD2 codes can be selected from validation drop-down lists that are present

- in every cell related to SSD2 variables that are mandatory?
- in every cell related to SSD2 variables that are mandatory and dependent mandatory?
- in every cell related to SSD2 variables with a controlled terminology?

Questions & Answers

In both Excel reporting tools (FLAT & WITH METHODS) the valid reportable SSD2 codes can be selected from validation drop-down lists that are present

- in every cell related to SSD2 variables that are mandatory?
- in every cell related to SSD2 variables that are mandatory and dependent mandatory?
- in every cell related to SSD2 variables with a controlled terminology;

Thank you for your attention!