

User Guide – Dashboard on *Listeria monocytogenes*

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1. INTRODUCTION

This user guide describes the content and functionalities of the dashboard on *Listeria monocytogenes* pathogen and provides detailed indications to make full use of this interactive tool.

The dashboard is designed to interactively visualise the *Listeria monocytogenes* data reported each year to EFSA by EU Member States and other reporting countries. It shows metric values such as number of reporting countries, number of samples tested and number of positive samples, grouped by one or more attributes into separate friendly visualisations. Information on the following attributes is available in the dashboard: reporting year, EU and non-EU, reporting country, food category, sampler, sampling unit and sampling context. To optimize the data visualisation in the dashboard, different levels of aggregation are defined for some of these attributes.

In the EFSA dashboard, the *Listeria monocytogenes* data (since 2019) and related statistics can be displayed interactively using charts, graphs, and maps. The main statistics can also be visualised (and downloaded) in a tabular format.

2. STRUCTURE OF THE DASHBOARD

The dashboard on *Listeria monocytogenes* is composed of the following five pages on:

1. Cover page.
2. Units tested.
3. Official sampling results (at distribution).
4. Official sampling results (at manufacturing).
5. Other food monitoring data.

The user can browse the different pages using the tabs located at the top of the dashboard (Figure 1). The selected tab is highlighted in bold, as shown in Figure 1.

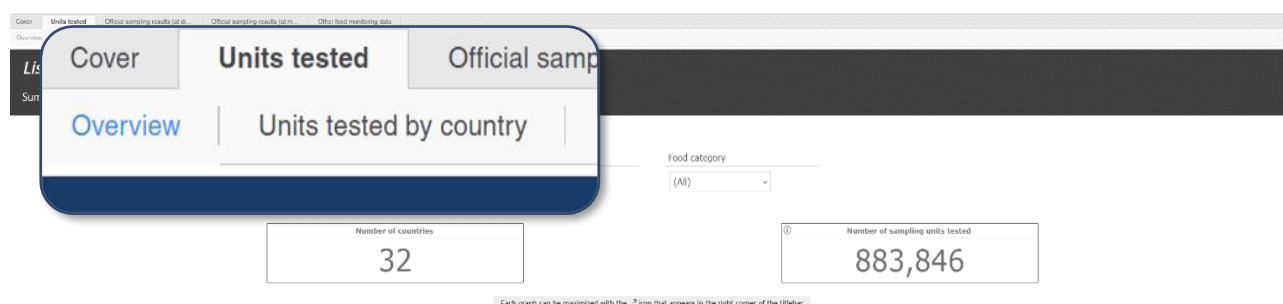


Figure 1: Screenshot of tabs of the dashboard pages



All the dashboard pages (except for the cover page) have a common structure, consisting of the title (Figure 2) and the caution icon (Figure 3), the filter area (Figure 4), the main statistics area (Figure 5), the graphical area (Figure 6), and the footer area (Figure 7).

The **page title** is located at the top side of each dashboard page (Figure 2), just below the main dashboard title.

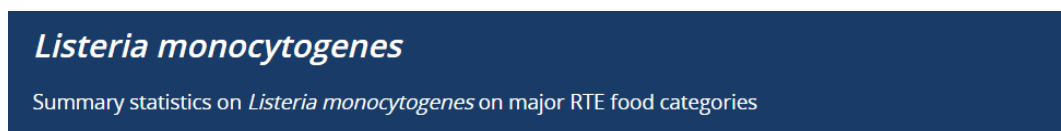


Figure 2: Screenshot of dashboard page title

Under the page title, the '**caution**' icon (Figure 3) could be visualised, to show relevant information about data interpretation. Users can access the detailed message just clicking on the icon ⚠️ , or on the "Caution in data interpretation" text.

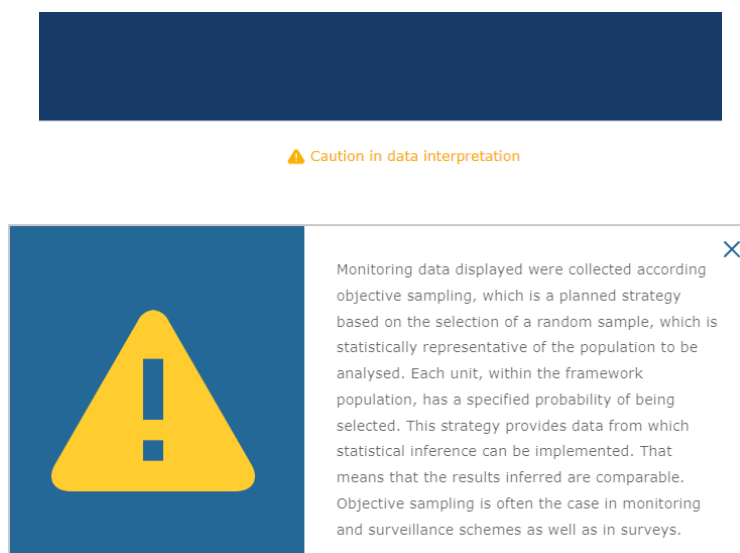


Figure 3: Screenshot of 'caution' icon

Figure 4 shows a screenshot of the **filter area** located under the page title. Users can select one or more terms in each filter to retrieve a particular set of data. Some filters (i.e. Reporting year) available in the different pages are associated with an '**information**' icon, which provides information about the specific filters. Users can access the detailed message just clicking on the 'information' icon.

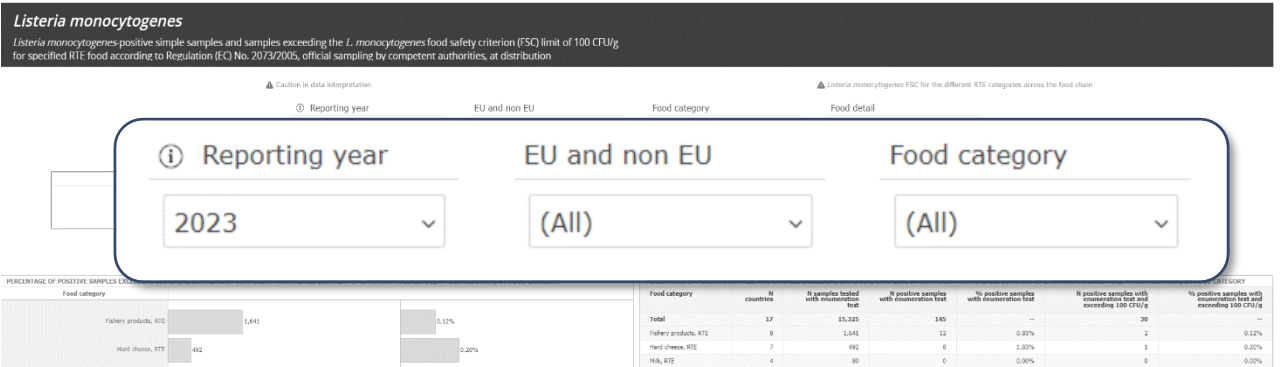


Figure 4: Screenshot of the filter area showing some of the filters included.

Figure 5 shows a screenshot of the **main statistics area** (e.g. the number of countries, number of samples tested, Percentage of positive samples and Percentage of positive samples for enumeration test and exceeding 100 CFU/g). These values depend on the filters applied in the page.



Figure 5: Screenshot of the main statistics area

The central part of each dashboard page is dedicated to the **tabular/graphical area** (Figure 6), which contains different types of charts and may also contain summary tables of the relevant statistics. Data visualised in the graphs (and tables) depends on the filters' selection. The user can select one or more terms in each filter, to retrieve a particular set of data. All graphs provide some interaction tools that are described in detail in this manual.

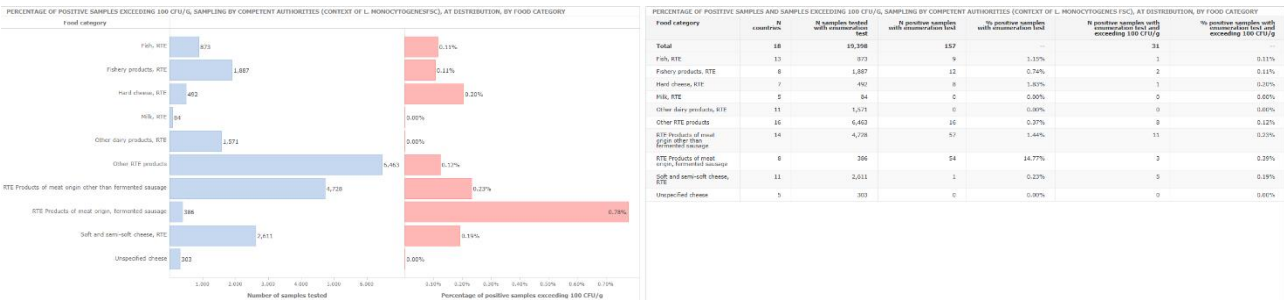


Figure 6: Screenshot of the tabular/graphical area



At the bottom of the dashboard page there is the **footer area** (Figure 7), which contains additional information, as well as the icons with links to the EU One Health Zoonoses Report, user guide and the EFSA story map on Brucella.

On 1 February 2020, the United Kingdom became a third country. Data from the United Kingdom are included in the EU statistics for 2019...[\(read more\)](#)
Validated data on food and animals displayed in the dashboard were extracted from the EFSA zoonoses database on 1 December 2024.
Please note that the data visualised are affected by the selected filters. Additionally, please note that 'Ready-to-eat foods intended for infants and ready-to-eat foods for special medical purposes' are not included in this dashboard due to their unique food safety requirements. For information on these food categories, please refer to the EU One Health Zoonoses Report cited in the references. If you have any questions on this dashboard, please contact zoonoses@efsa.europa.eu

[EU One Health Zoonoses Report](#) [User guide](#) [Story map](#)

Figure 7: Screenshot of the footer area

3. FUNCTIONALITIES OF THE DASHBOARD

3.1 FILTERING

Different filters can be selected to retrieve a particular set of data. The selected filters work only within each dashboard page.

The user can do a single or multiple selection of the filter items. When one or more filter options are selected, the page refreshes and graphs report only data satisfying the selected filters. If no data is available for the selected filters, the graphical area shows the following message: "Filter excludes all data."

3.1.1 FILTERING IN THE FILTER AREA


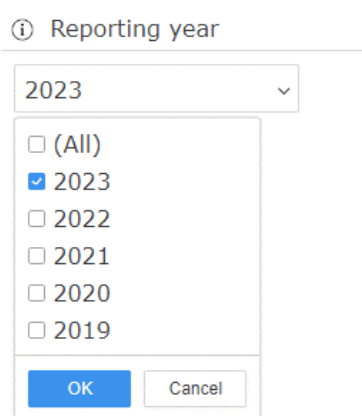
In the filter area of each dashboard page the user finds drop-down filters (Figure 8); by clicking  on the icon of each filter, a list of terms is visualised; one or more options can be selected; by clicking the OK button the user confirms the selection and the drop-down list will be closed.

Figure 8 shows a screenshot of the drop-down list available for the filter 'Reporting year'.



Reporting year

2023

- ☐ (All)
- ☒ 2023
- ☐ 2022
- ☐ 2021
- ☐ 2020
- ☐ 2019

OK Cancel

Figure 8: Screenshot of the drop-down list available for the filter 'Reporting year'



Figure 9 shows in green the filters available in each dashboard page.

FILTERS	DASHBOARD PAGES				
	Cover page	Units tested	Official sampling results (at distribution)	Official sampling results (at manufacturing)	Other food monitoring data
REPORTING YEAR					
EU AND NON-EU					
REPORTING COUNTRY					
FOOD CATEGORY					
FOOD CATEGORY DETAIL					
SAMPLER					
SAMPLING UNIT					
SAMPLING CONTEXT					

Green: filter available.

Figure 9: Filters available in each of the dashboard page

3.2 INTERACTION WITH GRAPHS

3.2.1 GRAPH TYPES

Several types of graphs are available in the graphical area of the different dashboard's pages, as listed and described below.

The **bar chart** presents horizontal or vertical bars of different length, showing the value of a metric grouped by a specific attribute (see Figure 10).

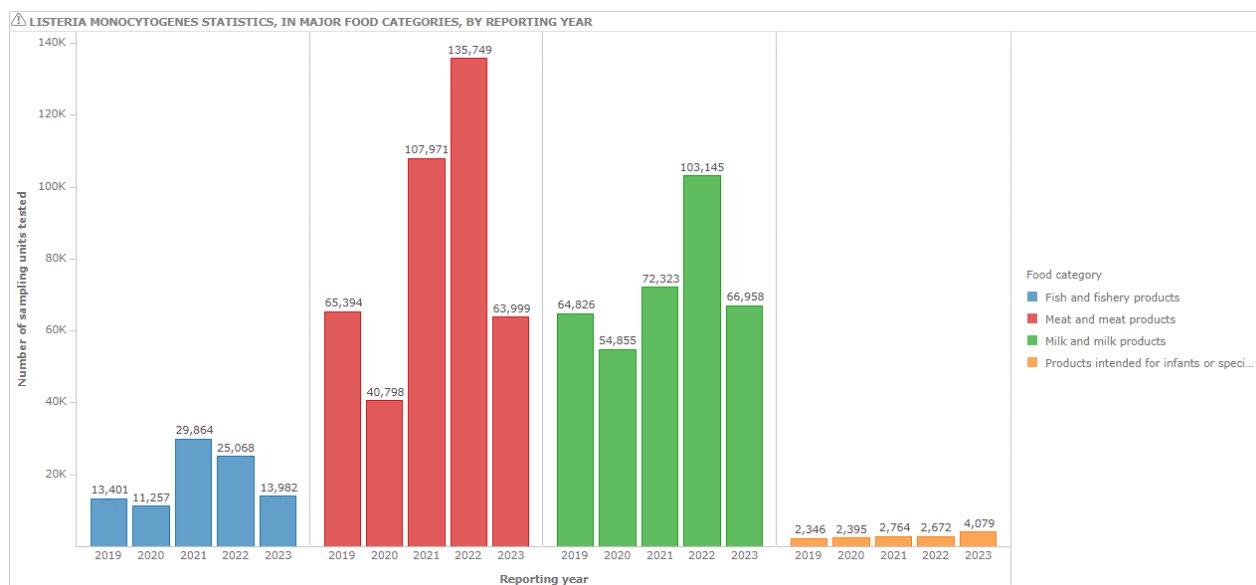


Figure 10: Trends of number of sampling units tested by food category.



Please note that the scale of the graph is set to “row/column”: it shows the selected metrics using the same minimum and maximum Y-axis values across each column of graphs, and the same X-axis values across each row of graphs.

Users can visualise the information shown in the graphs also in a **tabular form (grid)**.

Figure 11 shows an example of grid, where data are presented in a tabular form (see also Section 3.2.7)

① LISTERIA MONOCYTOGENES STATISTICS, IN MAJOR FOOD CATEGORIES, BY REPORTING YEAR			
Reporting year	Food category	N countries	N sampling units tested
2023	Total	30	149,018
	Milk and milk products	29	66,958
	Meat and meat products	28	63,999
	Fish and fishery products	26	13,982
	Products intended for infants or special medical purposes	19	4,079
2022	Total	31	266,634
	Meat and meat products	28	135,749
	Milk and milk products	29	103,145
	Fish and fishery products	27	25,068
	Products intended for infants or special medical purposes	19	2,672
2021	Total	30	212,922
	Meat and meat products	27	107,971
	Milk and milk products	28	72,323
	Fish and fishery products	29	29,864
	Products intended for infants or special medical purposes	19	2,764
2020	Total	30	109,305
	Milk and milk products	28	54,855
	Meat and meat products	26	40,798
	Fish and fishery products	26	11,257
	Products intended for infants or special medical purposes	20	2,395
2019	Total	29	145,967

Figure 11: Example of data shown in tabular form (grid)



3.2.2 TOOLTIP INFORMATION

Several types of interaction/functionalities are available in the graphical area of the different dashboard's pages, as listed and described in the next sections of the document.

The **tooltip** information is visible when the mouse pointer is placed on graph element and shows more detailed data (e.g. Reporting year and Number of sampling units tested).

An Example of tooltip message is shown in Figure 12.

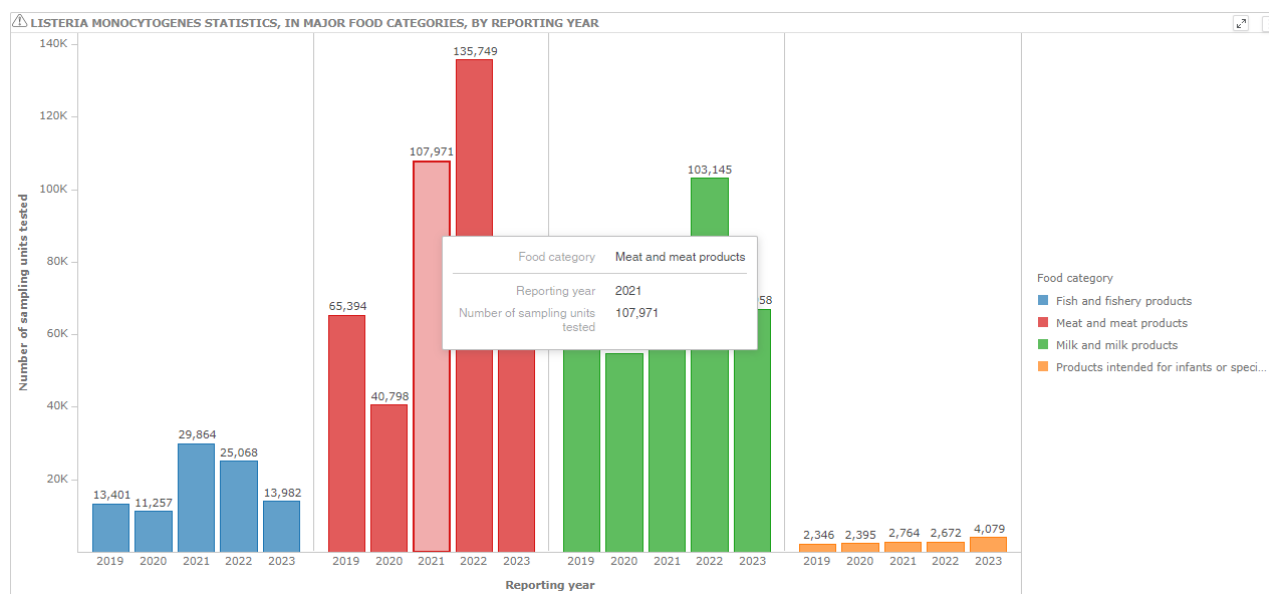


Figure 12: Example of tooltips in a bar chart

3.2.3 GRAPH LEGEND

The **legend**, placed on the right or bottom side of the graphs, describes the variables shown (see Figure 13).

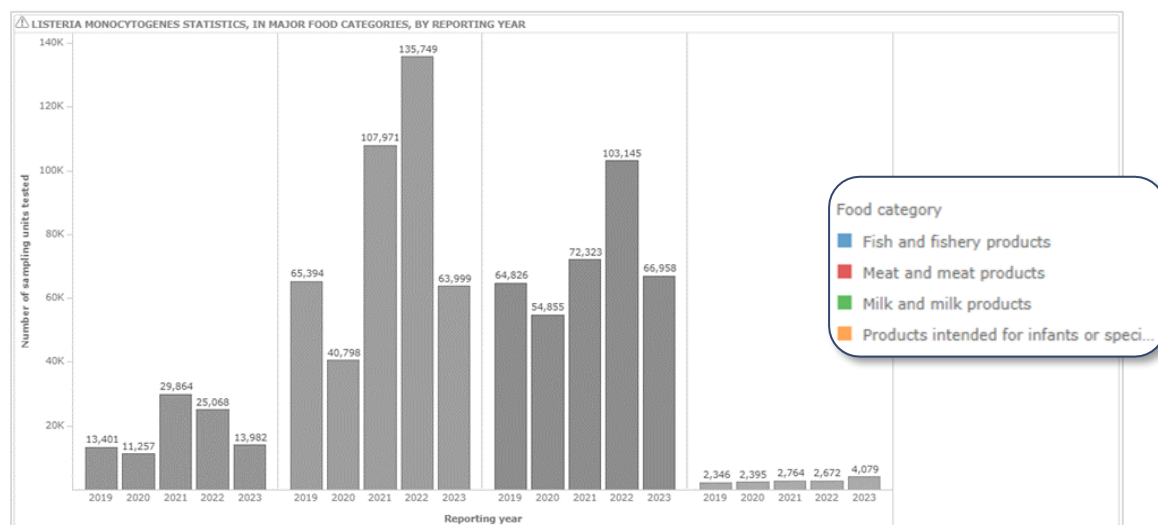


Figure 13: Example of legend in a bar chart



Users can minimize or hide the legend of a graph, by clicking on the following icons (also shown in Figure 14):

▶ to minimize the legend

✕ to hide the legend

When the legend is hidden, users must right click on graphical area and select the **Show Legend** option, to display legend again (Figure 14).

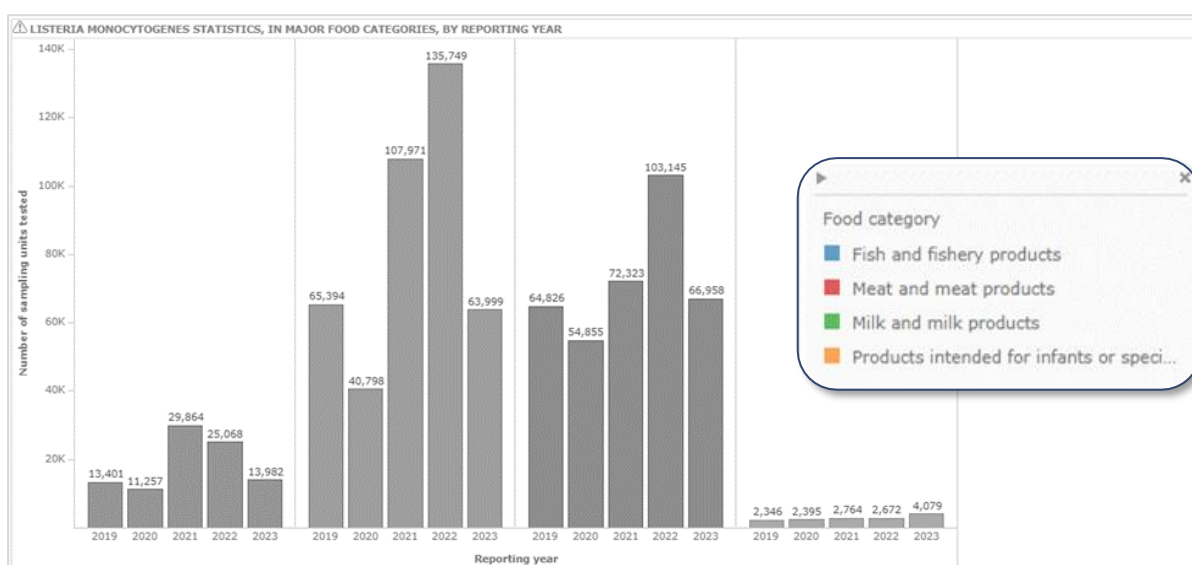



Figure 14: Example of interaction with legend options

3.2.4 MAXIMIZE GRAPHS

On the upper right of each graph the user can find two important icons, which allow maximising the graph (Figure 15) and showing the data in a tabular form (Section 3.2.7, Figures 24 and 25).

The **Maximize** option can be enabled by clicking the  icon visible on the upper right side of the graph (see Figure 15). After the selection, the graph will be shown in full-page mode.

Please note that the  icon becomes visible only when the mouse pointer is moved over the graph.

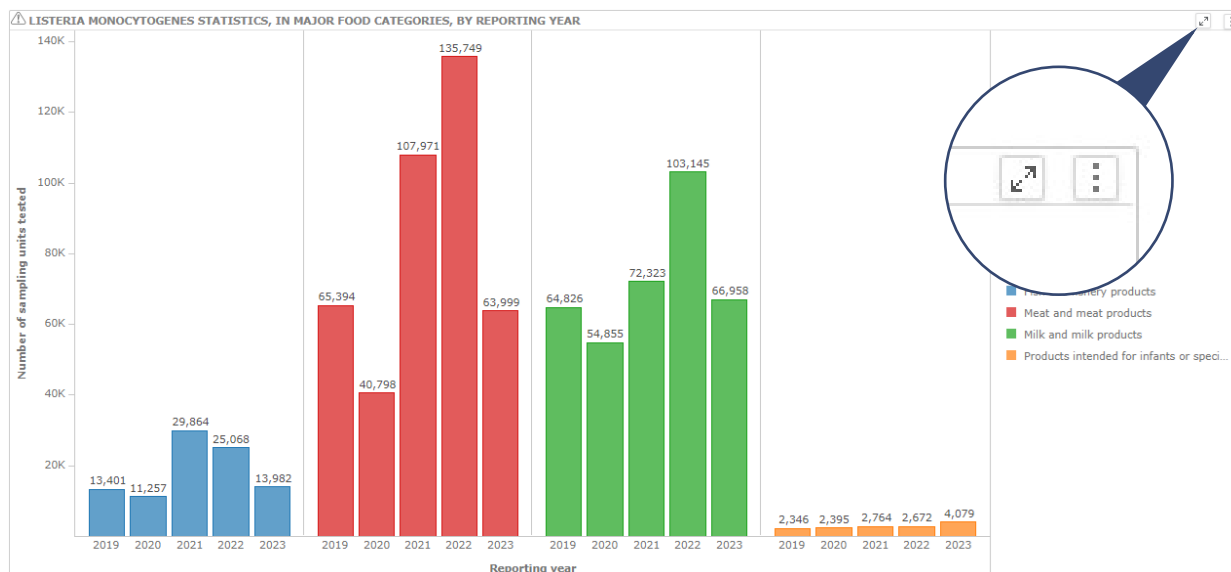


Figure 15: Example of maximise option.

3.2.5 SORTING DATA

The **sorting data** option can be activated on X or Y axes, to show data in ascending or descending mode. The graph visualisation will change depending on the sorting option selected.

Users can order the information shown in the x-axis, using the sorting menu by right clicking on the x-axis label.

Figures 16 and 17 show an example of the ascending and descending ordering, respectively, applied on reporting year shown in the x-axis.

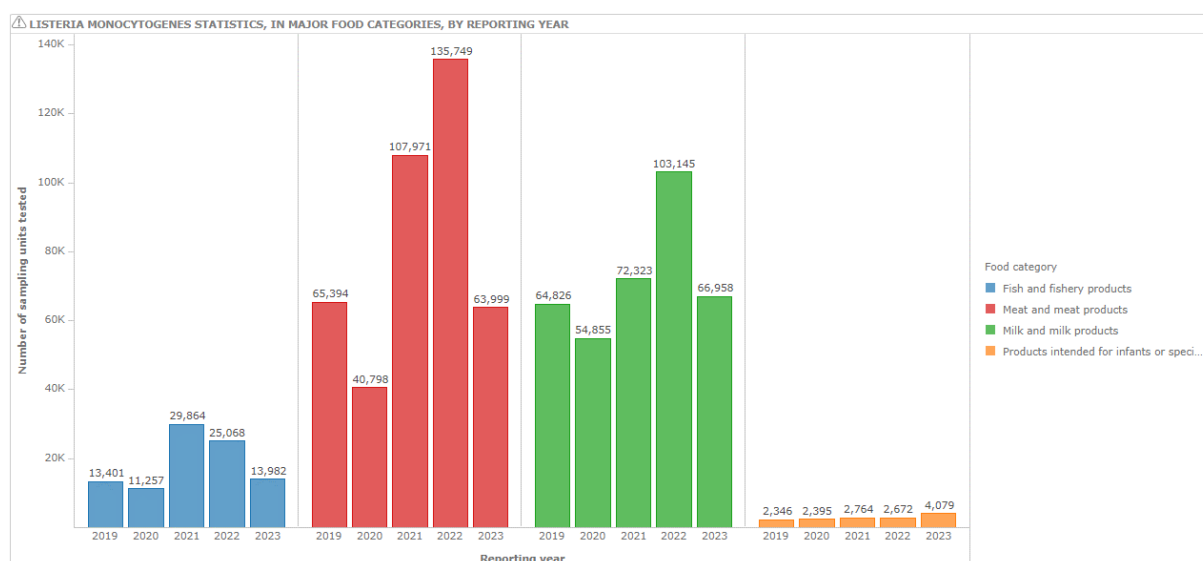


Figure 16: Example of x-axis ascending sorting

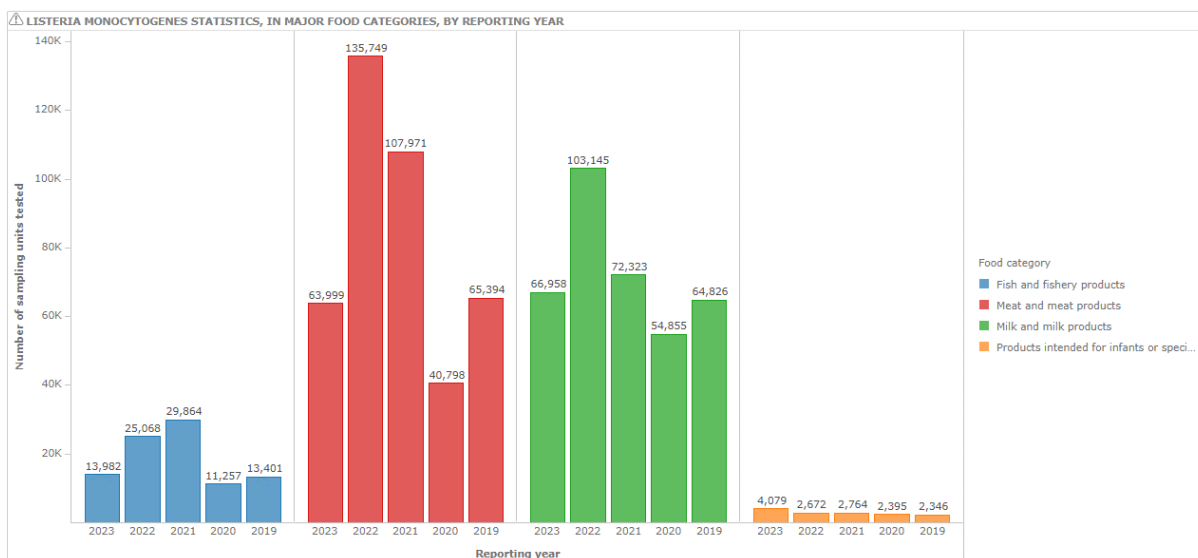


Figure 17: Example of x-axis descending sorting

In the same way, users can order the information shown in the y-axis, using the sorting option by right clicking on the y-axis label. Figure 18 shows an example of ascending order applied to Number of sampling units tested. In this case, the ascending order will order values from lowest to highest.

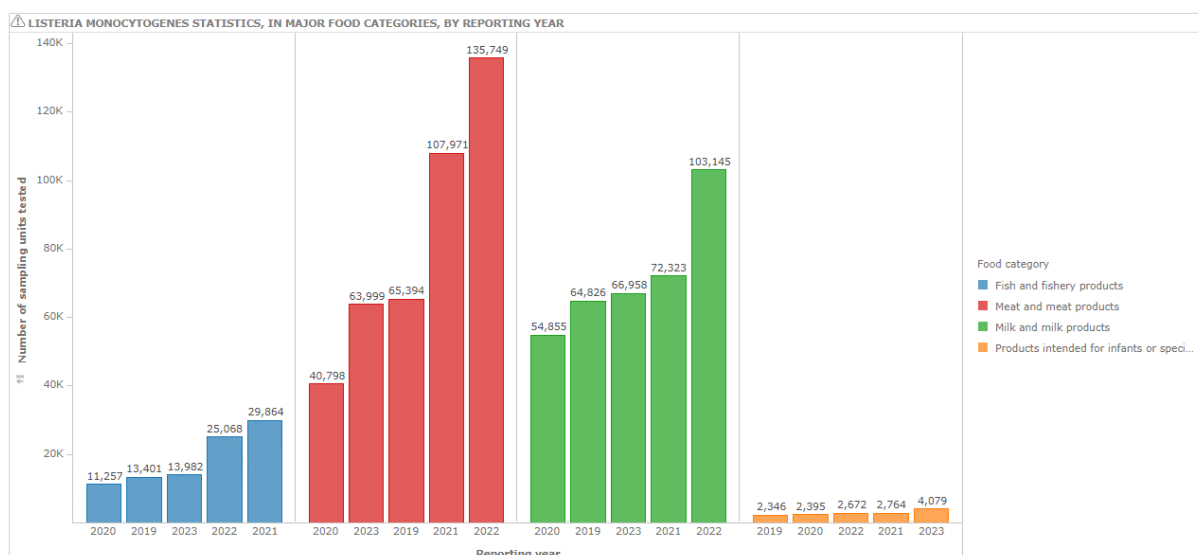


Figure 18: Example of y-axis sorting applied on Number of sampling units tested.

3.2.6 DATA FEATURE MENU

Users can access the data feature menu, by right clicking on one of the elements in bar or line charts. The data feature menu allows selecting the '**Keep only**,' '**Exclude**,' '**Show data**' or '**Data labels**' options.

Figure 19 shows an example of data feature menu in a bar chart.

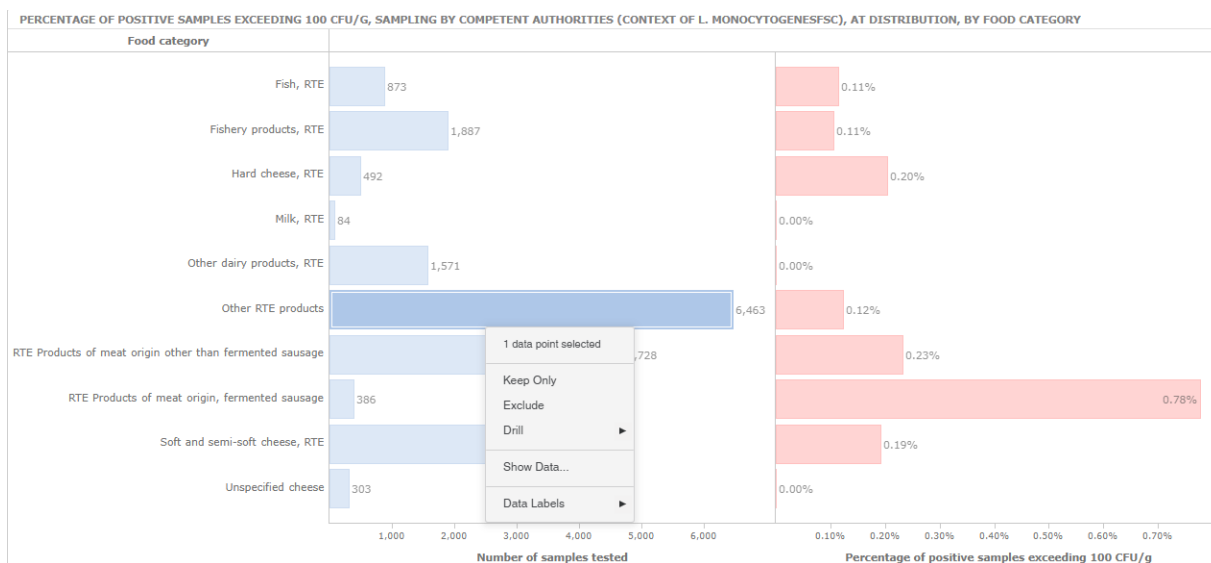


Figure 19: Example of data feature menu in a bar chart.

The '**Keep only**' option excludes all items in the graph, except the one selected (see Figure 20).

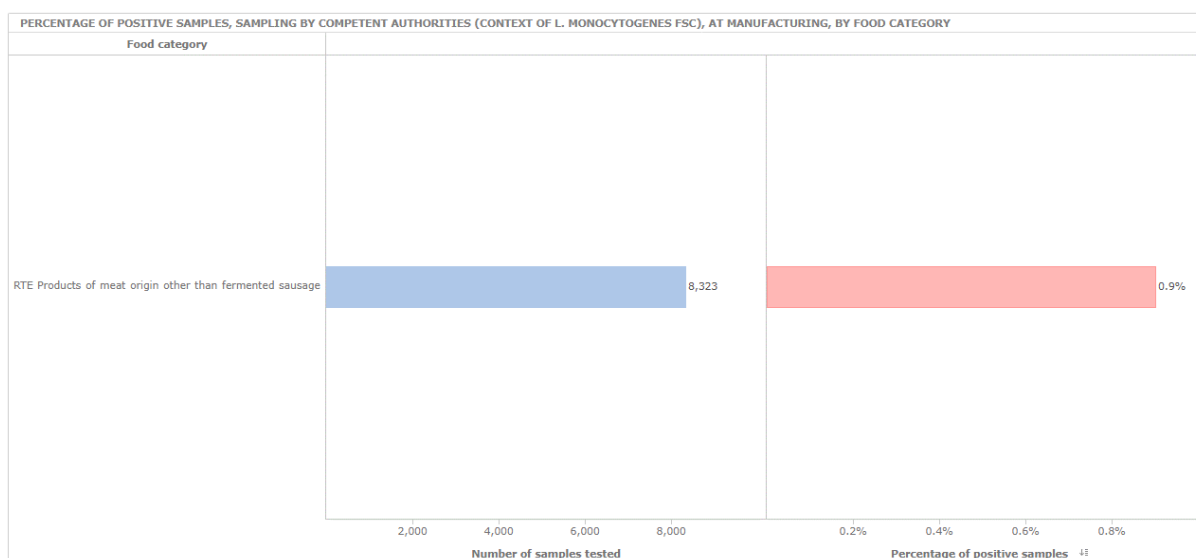


Figure 20: Example of 'keep only' option applied to 'Numbers of samples' tested for 'RTE Products of meat origin other than fermented sausage'.

The '**Exclude**' option excludes the selected item from the graph (see Figure 21 where the 'RTE Products of meat origin other than fermented sausage' item was excluded).

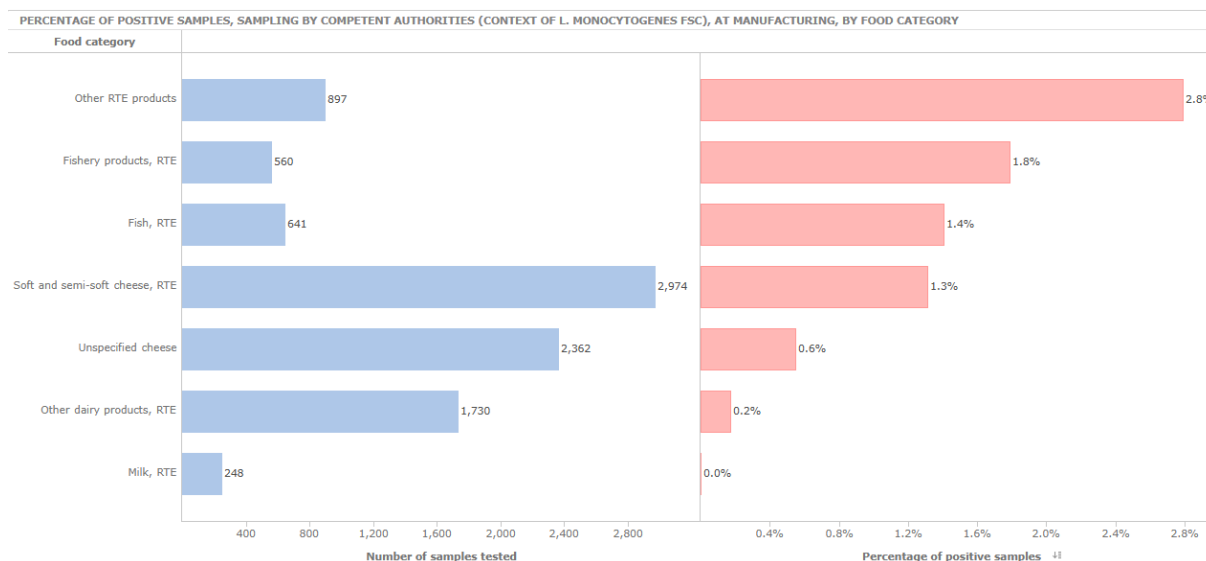




Figure 21: Example of 'exclude' option applied to 'RTE Products of meat origin other than fermented sausage' food category.

To cancel the filters applied using "exclude" or "keep only" options, use the icon  available on the upper left side of the graph, and then select one of the "clear" options listed. Please note that the  icon becomes visible only when the mouse pointer is moved over the graph. See Figure 22 for more details.

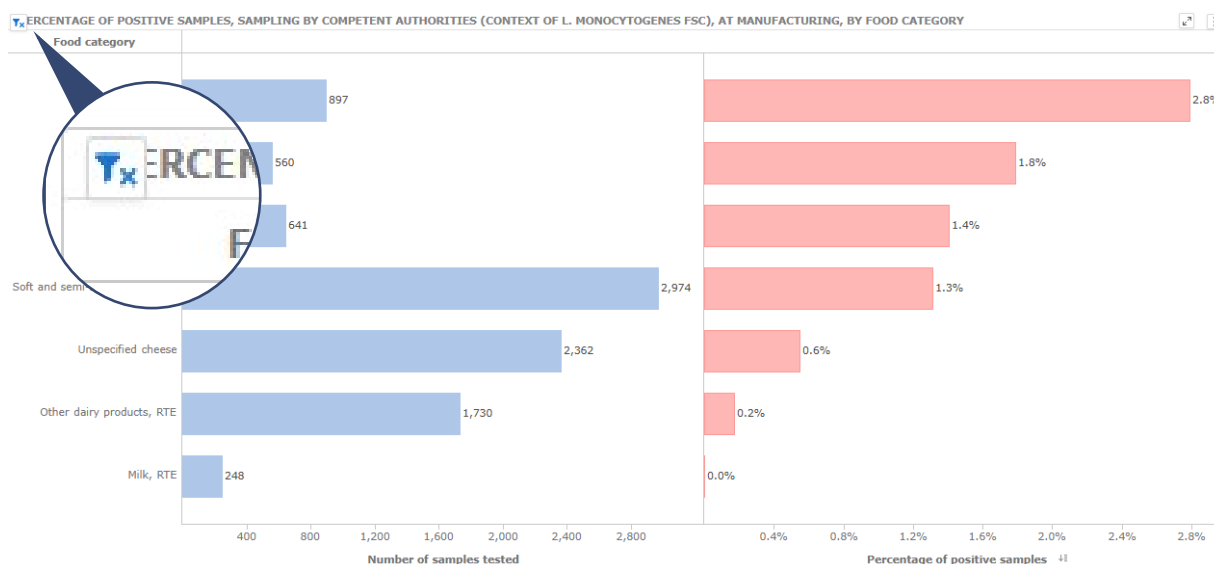


Figure 22: Example of filters removal

The '**Show data**' option opens a pop-up window showing data related to the item selected, which can be exported.

Figure 23 shows an example of data option applied to the 'RTE Products of meat origin other than fermented sausage'.

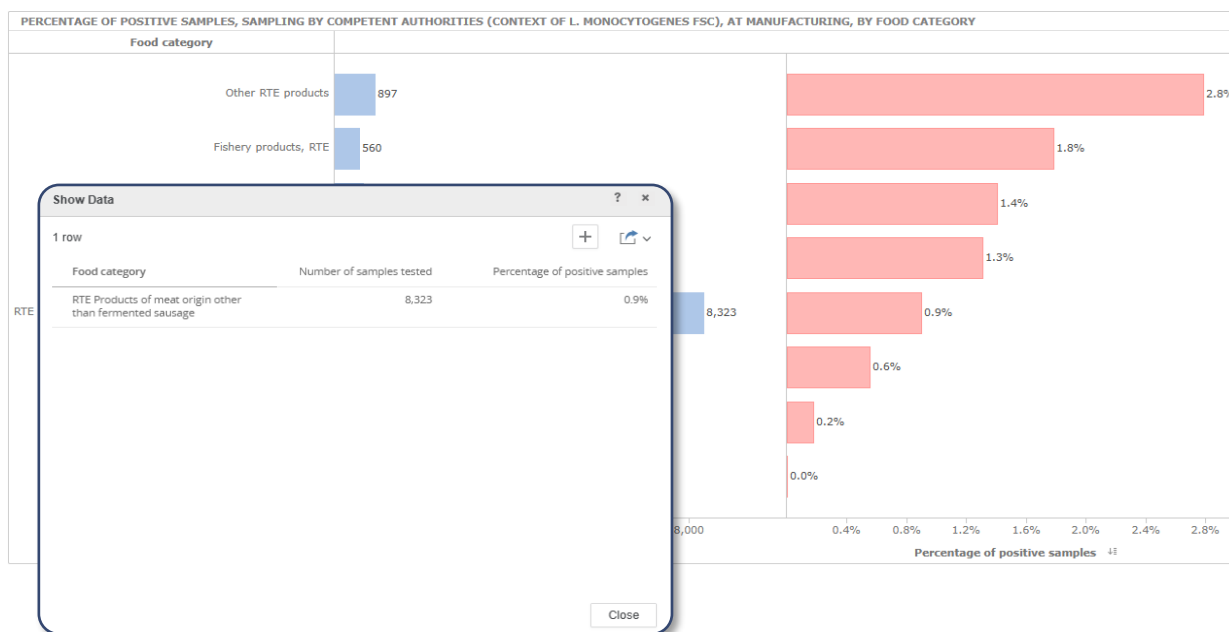


Figure 23: Example of show data option applied to 'RTE Products of meat origin other than fermented sausage' (graph available in the dashboard page 'Official sampling results (at manufacturing)').

The '**Data labels**' option shows the numeric values for each item in the graph. This option is enabled by default when the data is loaded.

3.2.7 VISUALIZE DATA IN TABULAR FORM ('SHOW DATA' OPTION)

The '**show data**' option can be enabled by clicking the  icon visible on the upper right side of the graph (see Figure 24).

This option will return a tabular form of the data visualized in the graph (see Figure 25); the data shown are affected by the filter selection applied on the dashboard pages.

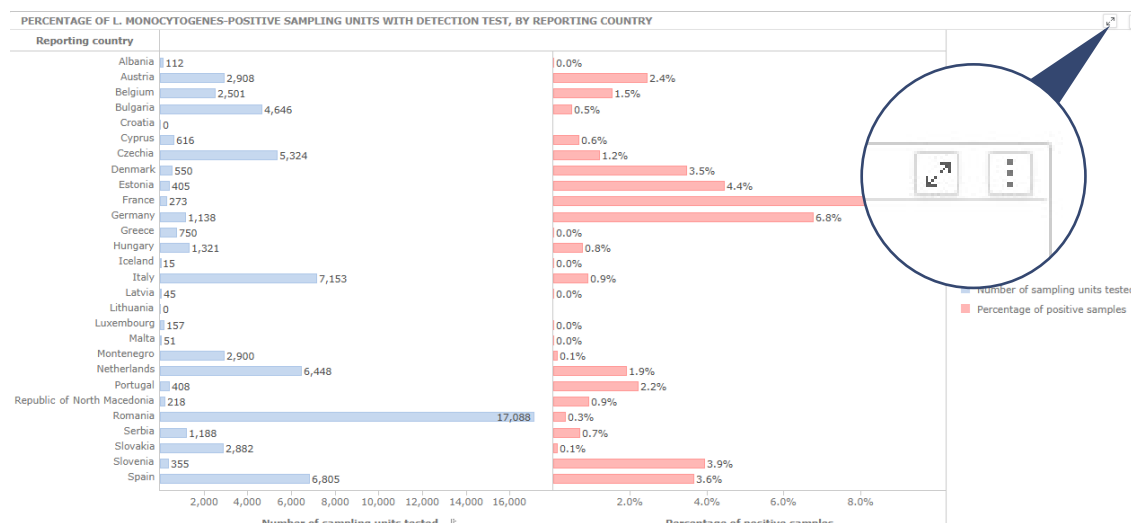


Figure 24: Example of 'show data' option (icon)

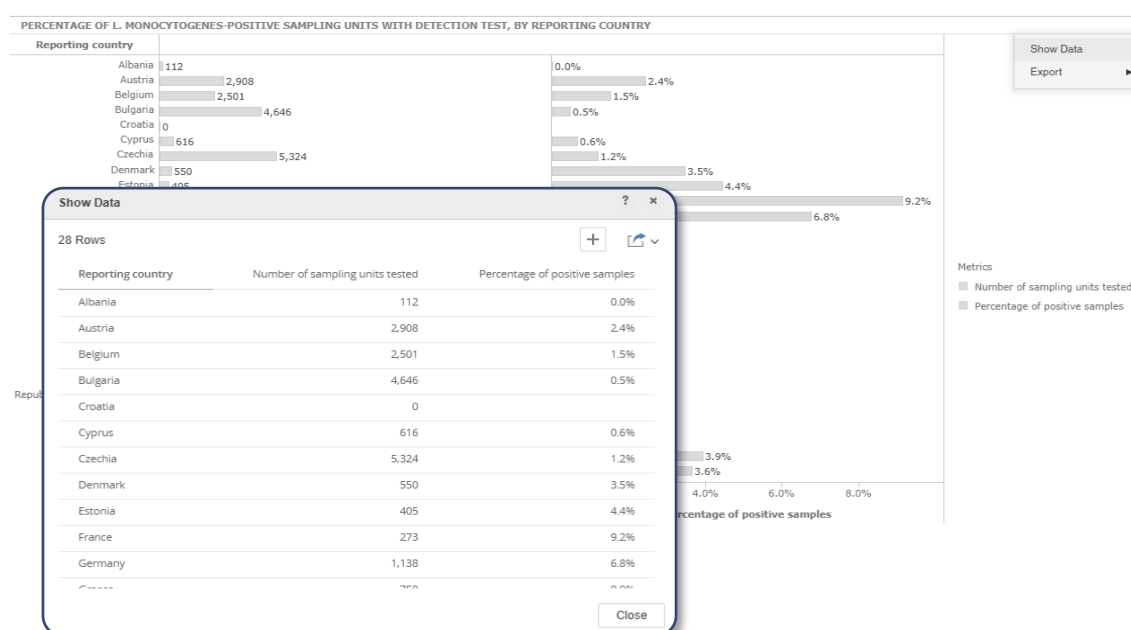


Figure 25: Example of 'Show Data' option (tabular form)

After the selection of the 'Show Data' option and the visualisation of the data in a tabular form, data can be ordered by clicking on the column's name. A triangle icon will indicate the type of ordering (ascending or descending). Figure 26 shows an example of ordering applied to the second column of the data table.



Show Data ? x

28 Rows + [Export Icon] v

Reporting country	Number of sampling units tested	Percentage of positive samples
Croatia	0	
Lithuania	0	
Iceland	15	0.0%
Latvia		0.0%
Malta		0.0%
Albania		0.0%
Luxembourg	157	0.0%
Republic of North Macedonia	218	0.9%
France	273	9.2%
Slovenia	355	3.9%
Estonia	405	4.4%

Close

Figure 26: Example of data ordering

3.2.8 EXPORT OF DATA AND GRAPHS

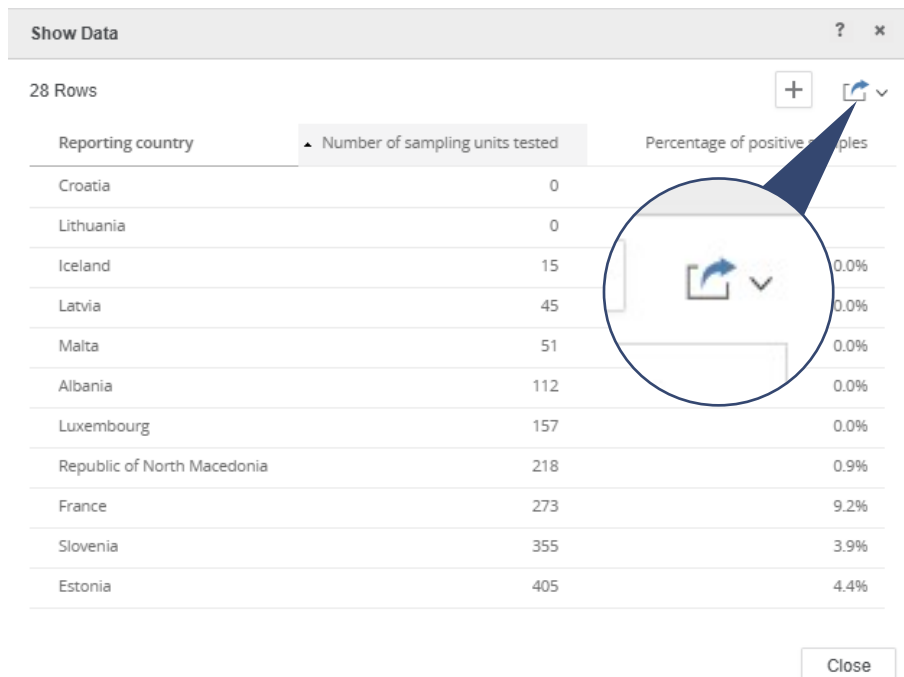
Several types of data export are available in the graphical area of the different dashboard's pages. Users can download data as described below.

After the selection of '**Show Data**' option (see Figure 27), data can be exported in three different formats:

- Excel
- PDF
- CSV (option labelled "Data")

The export data option includes all the attributes originally shown in the table and any information added by the user. Please note that the export action depends on the filter terms selected on the dashboard page.

Figure 27 shows an example of data export.



Reporting country	Number of sampling units tested	Percentage of positive samples
Croatia	0	
Lithuania	0	
Iceland	15	0.0%
Latvia	45	0.0%
Malta	51	0.0%
Albania	112	0.0%
Luxembourg	157	0.0%
Republic of North Macedonia	218	0.9%
France	273	9.2%
Slovenia	355	3.9%
Estonia	405	4.4%

Figure 27: Example of data export

After the selection of the data export function, users can save information selecting the target output file (Excel, PDF, CSV).

The 'export as pdf' option is currently not working for maps. This functionality will be fixed as soon as possible.