ChemKAP Public reports

Guidance document V1.0

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Introduction

The Quality Programme for Agricultural Products (KAP) collects data obtained from different annual monitoring programmes and ad-hoc surveys in the field of chemical food safety. The Dutch Food and Consumer Product Safety Authority (NVWA) and Wageningen Food Safety Research (WFSR) provide data from the monitoring programmes to the KAP-project. The KAP-project ensures systematic data storage in the KAP-database, making the correct data accessible for intake calculations and risk assessments. Data stored in the database are also used for trend analyses and for questions regarding the food chain. In addition, the KAP-project takes care of the transfer of the Dutch monitoring data to the European Food Safety Authority (EFSA) and thus acts as a central collection point. The data in the KAP-database are used by various parties to gain insight into the occurrence and risks of chemicals in food and animal feed. RIVM provides support in (policy) evaluation for the purpose of avoiding, controlling and, if necessary, reducing levels of known and less known chemicals.

The KAP-programme has his own webpage on the rivm.nl website and can be visited via: https://www.rivm.nl/en/chemkap. The results on residue monitoring in the Netherlands are presented here: https://www.rivm.nl/en/chemkap/reports. In 2024 a new way of data visualization is applied via Power BI, which is a data virtualization and visualization tool from Microsoft. The data collected in the KAP-database are sent to EFSA on a yearly basis. Overviews of this data are available in the Power BI reports. The purpose of the public reports is to visualize the data we send to EFSA with understandable tables and figures. RIVM wants to be transparent as possible and to be able to show the public the type of data that is collected and what the data is used for.

Terminology

In the reports multiple terms and synonyms are used for the filter options and data (e.g. column names). Also it is possible that the data contains terminology/names used by the RIVM, NVWA or WFSR.

Below an overview of the abbreviations and terms can be found.

Terminology/Synonyms	Meaning
Supergroup, Substance Superg, Substance Supergr, Substance Supergro, Sub Supergr	The Substance Supergroup is the main category to which a substance belongs to. Example: heavy metals, mycotoxins, pesticides, veterinary medicine product residues, etc.
Product Gr	The Product Group is the main category to which a product belongs to. Example: fruit, meat, fish, grains, vegetables, etc.
Substance Subgr, Subgroup, Sub Subgr	The Substance Subgroup is the subcategory to which a substance belongs to. Example: growth inhibitors, growth hormones, insecticides, herbicides, etc.
Sampling Strat, Sample Strat	The Sampling Strategy is the method of sampling performed by the samplers. Example: selective, objective, suspect, convenient.
Selective sampling	Sampling strategy based on the selection of a random sample from a subpopulation (or more frequently from subpopulations) of a population on which the data are reported. The subpopulations are determined on a risk basis.
Objective sampling	Sampling strategy based on the selection of a random sample from a population on which the data are reported.
Suspect sampling	Selection of an individual product or establishment in order to confirm or reject a suspicion of non-conformity. It's a not random sampling. The data reported refer themselves to suspect units of the population.
Convenient sampling	Strategy based on the selection of a sample for which units are selected only on the basis of feasibility or ease of data collection. It's a not random sampling. The data reported refer themselves to units selected according to this strategy. This "new" typology was added as included in sampling strategies used in data collected by EFSA
Country, Country name	Name of the country. Example: Netherlands, China, India, Turkey, Spain, etc.
Country Region, Country Reg, Region	The region on a aggregated level. The categories NL, EU, and Import were made to create an easy to understand overview of the

	data and to distinguish between NL and Import (from EU or outside EU).
FoodEx2Code	EFSA SSD2 coding for products.
MatrixCode	European Commission (EC) coding for products
ParamCode	EFSA SSD2 coding for substances
Bmp_cd_extern	Stands for "bemonsteringscode_extern", which concatenates the information "sampId" and "volgnummer" provided by NVWA/WFSR. It is used as a unique code for one sample.
Value, ResVal	The reported value of a measurement. If this information is absent, it means the measurement was below the level of quantification.
LOQ	Level of quantification is the minimum concentration of a compound that can be quantified by the analytical method.
LOD	Level of detection is the minimum concentration of a compound that can be detected by the analytical method.
MRL	A maximum residue limit is the highest concentration of a pesticide residue that is legally tolerated.
ML	The maximum level is the highest acceptable concentration of a contaminant that is legally tolerated.
TYPE	The Type gives information about the type of value reported to EFSA. Example: VAL (a value is reported), LOQ (no value is reported) or LOD (no value is reported).
ResEval	Evaluation of a sample: is the sample registered as conform or non-conform. It is also possible to provide additional explanation on why an sample is considered conform or non-conform and which action is taken in the case of an non-conform sample. Example: taken of the market, fining, RASFF number, etc.

How to find the reports

The **first** step is to go to the KAP-webpage on RIVM.nl https://www.rivm.nl/en/chemkap/reports. Here you will be able to see an overview of all the available data visualisation reports (see figures below).

The **second** step is to select the report that you wish to visit. Currently, there are two different reports available: chemical contaminants and veterinary medicine product residues (VMPR). The report of chemical contaminants contains at the moment data on heavy metals, mycotoxins and pesticides in food. And the report of VMPR contains data on veterinary medicine product residues in food. This categorisation of substances might change over the course of updates published. Currently, the reports do not cover all the substances and data that we send to EFSA. In the upcoming year(s) we will expand the data presented in the reports to eventually cover all the data that we send to EFSA.

How to navigate to different sections of the reports

The reports consist of two different sections (i.e. tabs) containing different data visualisations (tabulated or by figure). Section one contains the tabulated (aggregated) data and section two contains the interactive figure.

You can switch between the different sections by clicking on the arrows on the left side of the 1 and right side of the 2 (see figure above).

What information can be retrieved from the reports

Section 1

Section 1 is a table in which aggregated information can be requested based on your filter options. You can filter the data based on Substance Supergroup (e.g. heavy metal, mycotoxins, pesticides, VMPR, etc.), Product Group (e.g. fruit, vegetable, meat, fish, grains, etc.), Product (e.g. apple, cucumber, salmon, beef, etc.), Year (possible to request data from the previous 5 years), and Country region (e.g. countries are divided into three different categories: "NL", "EU" and "IMPORT" (outside EU)). This table can be used to gain information on the number of samples of a product that have exceeded the legal limit (e.g. ML, MRL, AL, etc.). The table includes data on year, product (product supergroup, product group, product, FoodEx2, MatrixCode), country region, substance supergroup, number of samples, number of positive samples, number of samples below the level of quantification (LOQ), number of samples between the LOQ and the maximum (residue) level (M(R)L) and number of samples above the M(R)L. The results in the table show the sum of all the samples of a product that are below or greater than the legal limit. So for example if you select the following filter options:

Filter name	Filter option
Substance Supergroup	Mycotoxins
Product Group	Grain and grain products
Product	Rice
Year	All
Country Region	All

After selecting the above filter options you will see the following results in section 1:

Section 2

Section 2 is an interactive figure that can be used as a quick overview of which product has a high percentage of samples above the legal limit. Data can be filtered based on Substance Supergroup, Product Group, Product, Year and Country region. In the interactive figure you can see multiple spheres. Each sphere corresponds to a food product. By selecting a Product Group you will see all the different food products that have been analysed depicted as a sphere. Within a sphere you can see the product name and the number of samples analysed for that product. The larger the size of the sphere, the more samples have been analysed for a product. The interactive figure will change based on the filter options you have selected. The figure can also be moved, zoomed in, zoomed out

and copy pasted into Excel or Word (described further in the instruction manual). After selecting the filter options (you must have selected at least the first three options from left to right) you will see that a small table with results pops up on the left side of the interactive figure. For example if you select the following filter options:

Filter name	Filter option
Substance Supergroup	Mycotoxins
Product Group	Grain and grain products
Product	Rice
Year	All
Country Region	All

After selecting the above filter options you will get the following results in section 2:
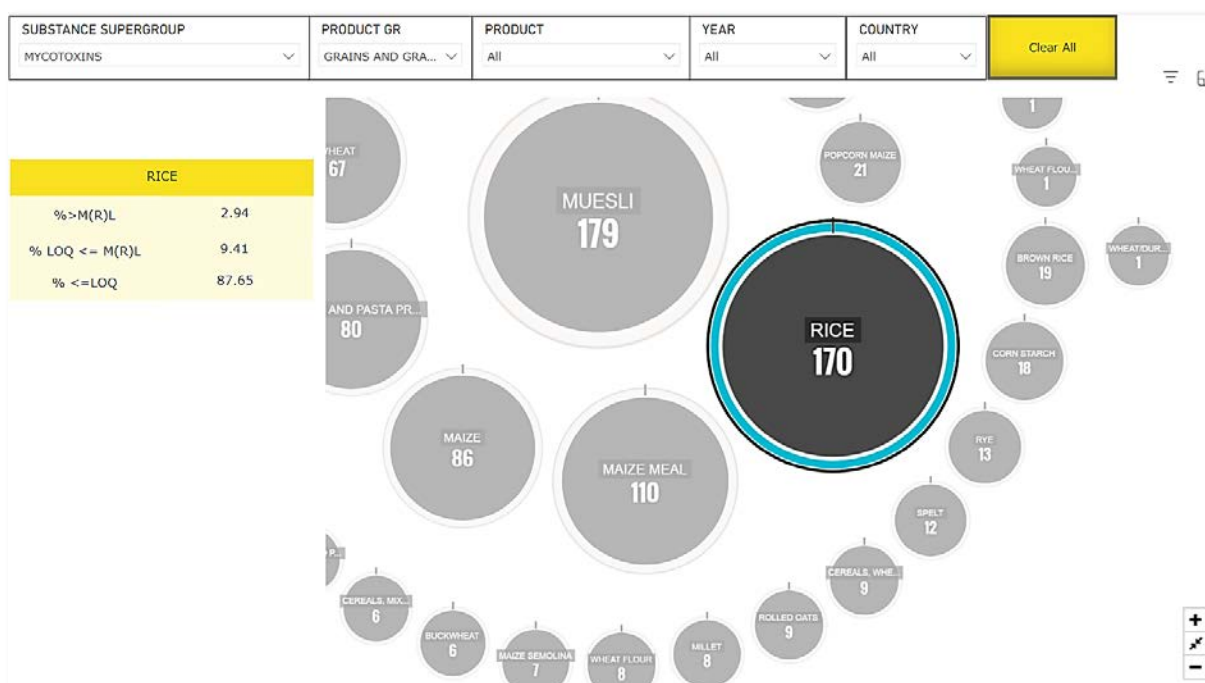
Differences in presentation of the data between public versus private reports

There are differences in how the data are presented between the public and private reports. The most important differences are listed in the table below.

Public reports	Private reports
Aggregated information	Detailed information
Exclude suspect samples	Include suspect sampling
No individual measurement results	Contains individual measurements per sample
Data cannot be downloaded directly	Tabulated data can be downloaded directly
Pre-made overviews of data	Tailor-made overviews of data

The public reports contain highly aggregated information, whereas the private reports contain detailed information (e.g. the country of origin of a product or the analytical methods used). Furthermore, the private reports have "tailor-made" overviews based on the feedback from the data providers. It was also decided to leave out the suspect samples from the results of the public reports. Certain products contain high amounts of suspect samples with high concentrations of a contaminant (e.g. arsenic in rice). This might skew the results shown in the reports, and consequently this might create a misconception that rice should not be eaten. The private reports also contain an overview with all the individual measurements for each sample combined with information on the analytical method and EFSA coding (FoodEx2 and ParamCode). In addition, in the private reports tabulated data can be exported.

## How to navigate through the filter options and obtain data

When you use the filter options, you always first need to start by selecting the Substance Supergroup (see figure below). Data will not be shown if the Substance Supergroup is not selected.

After selecting the Substance Supergroup it is recommended to use the other filter options starting from the left side to the right side. As example, see the figure below. After the Substance Supergroup the filter option Product Group should be selected, after that the filter option Product, after that Year, etc.

It is important to notice that for the interactive figure to see correct results (the percentage of samples above or below the legal limit), it is mandatory to select the following filter options: Substance Supergroup, Product Group, Product (can be either selected as filter option or by clicking on one of the spheres within the figure). These three filter options are mandatory.
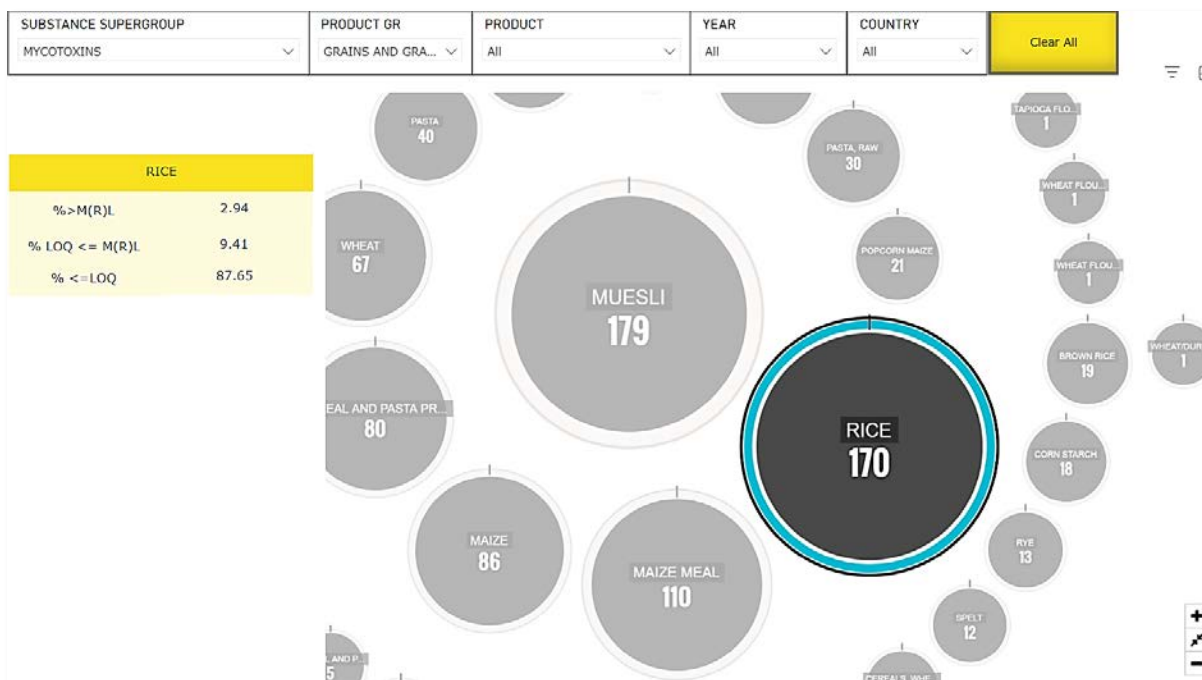
If the three mandatory filter options are not selected, you will not see any percentages show up or the table will not be filled with data. Each section of the report will show a red warning message if you have not selected the mandatory filter options (as shown in figure below).
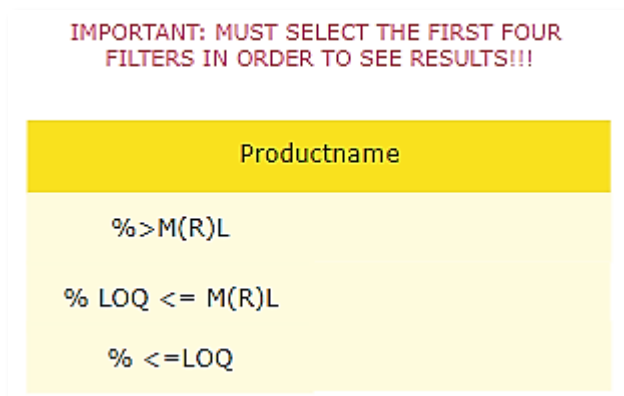
It is possible to select multiple options within a filter option by pressing ctrl+left mouse button and click on the options you want to select . For example, in the filter "Year" you can select multiple years if you want to filter your data based on the years 2020 and 2022 (see figure below).
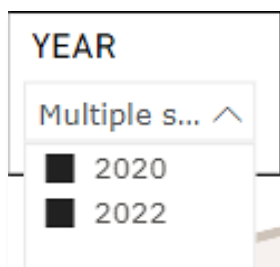
The tabulated data also contain a search bar, which can be used as an alternative for the Product and Substance filter option (see figure below). For example you can type in the search bar the word "apple" (notice the data is in English) after you filtered for a specific Substance Supergroup. The table will show ALL data of products with the name containing apple in it (e.g. apple, apple juice, pineapple, pineapple juice, etc.). The same logic applies if you put in a substance name in the search bar. You can clear the search bar by clicking on the eraser next to it (see figure below).


All sections are also provided with an "Clear All" button, which can be used to instantly clear all the filter options that were selected. Only use this option if you want to reselect ALL the filter options. However, this does not include the search bar described above.
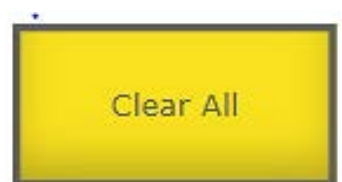
How to move and zoom in and out of the figure

In the section 2 it is possible to drag the interactive figure (see figure below) along your screen and to zoom in, zoom out or even enlarge the figure. In order to drag the figure, click on the figure with your left mouse button and drag your mouse there where you want to move the figure.
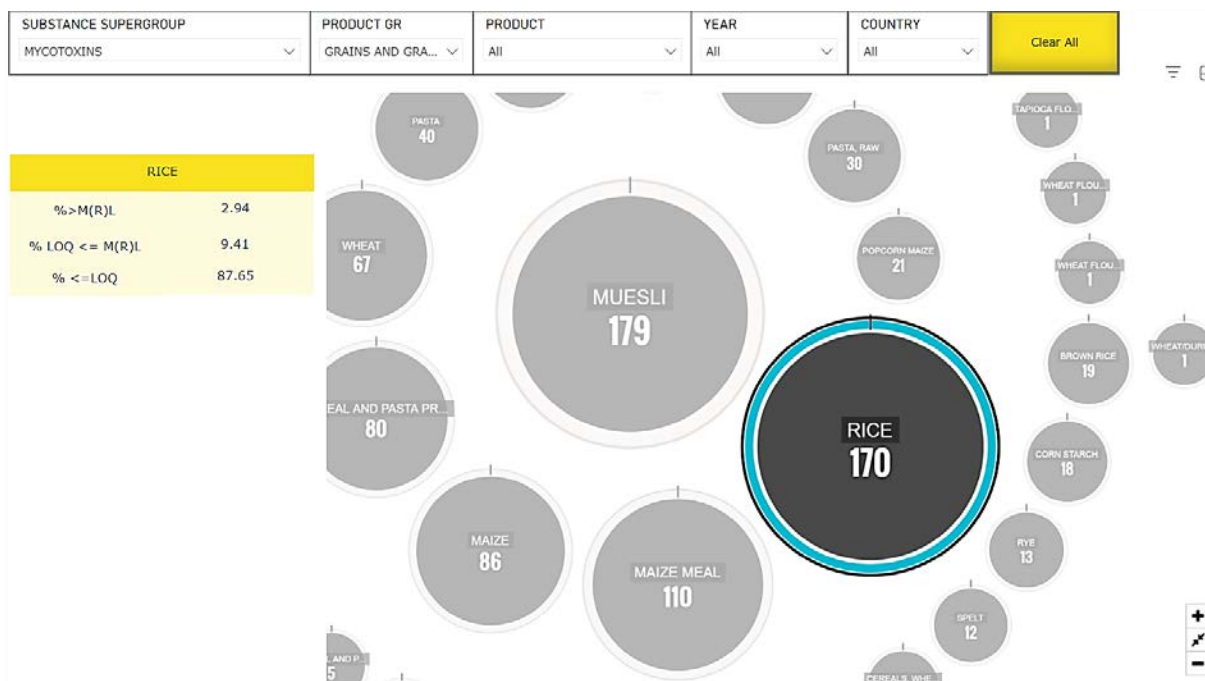

There are also options to zoom in (see the plus-sign in the figure below), zoom out (see the minus-sign in the figure below) and return the figure back to the original place before dragging (see the two arrows in the figure below).
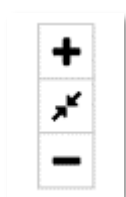
In order to enlarge the figure you can also click on the middle option provided below (see figure below). This will pop out the figure on your screen. You can right click on the figure with your mouse and select "copy image" to copy and paste the figure in a Word or Excel document.
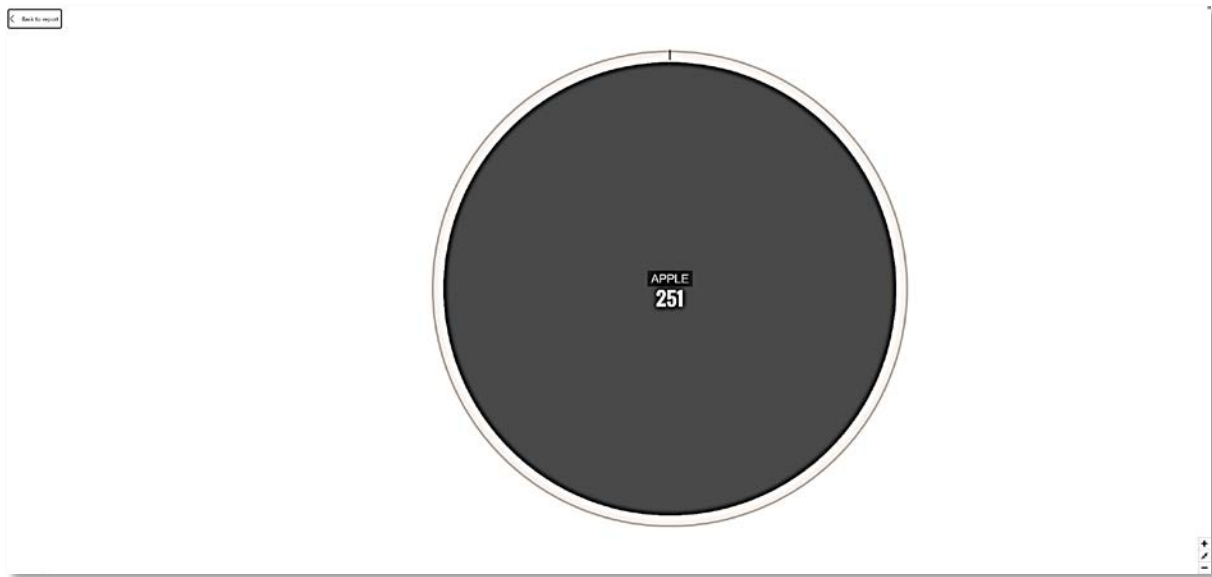
If you want to return to the report with all the filter options you can click on the "Back to report" button on the top left side of the screen (see figure above and below).

The results table with the percentage of samples above or below the legal limit cannot be enlarged or copy-pasted. We recommend to use Snipping tool (standard provided for all Windows computers) to make an image of the results with the percentages (together with the interactive figure) if you want to show this in Word or Excel.

Contact information

For any suggestions or questions related to the Power BI reports please contact us through:

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