Pesticide Residue Control Results

**Year: 2021**

**Country: Slovenia**

1. Country

Slovenia

* 1. Name of the national competent authority/organisation

Administration of the Republic of Slovenia for Food Safety, Veterinary Sector and Plant Protection

1. Objective and design of the national control programme

The national control program is defined in accordance with Article 30 of Regulation 396/2005/ES. Administration of the Republic of Slovenia for Food Safety, Veterinary Sector and Plant Protection prepare a Multi-annual national control program of pesticide residues in food, previously coordinated with representatives of governmental and non-governmental organizations. It constitutes the basis for carrying out official sampling for checking the conformity of foods.

For the implementation of the program and reporting to the European Food Safety Authority in accordance with Article 31 of the Regulation 396/2005/ES are responsible the Administration of the Republic of Slovenia for Food Safety, Veterinary Sector and Plant Protection and the Health Inspectorate of the Republic of Slovenia, each in accordance with their respective competences.

The set of pesticides to be determined in 2021 were selected on the basis of the EU coordinated program defined by Commission Implementing Regulation (EU) 2020/585 on a coordinated multiannual Union program, the SANCO work program, data on the registration and sale of pesticides in Slovenia and national data on the authorization of plant protection products.

The selection of foodstuffs in which pesticide residues will be determined is based on the following criteria:

* the permanent part of the program, which includes children's food and foods that Slovenians enjoy the most. These are apples, potatoes, lettuce, baby food, flour or cereals and milk. Pesticide residues in these foods are identified annually and these foods may coincide with the selection of foods in the European coordinated program;
* rotating part of the program because all foods can not be included in the annual control program and the selected samples of fruit and products from fruit, vegetables and products from vegetables, cereals and their products and foodstuffs of animal origin are examined during the three-year cycle. Some foods from the rotating program are also part of the European Coordinated Control Program;
* EU coordinated pesticide residue monitoring program ("EU" in the tables), which is fully integrated into the Control Program;
* tracing foods where in past years (2020) the pesticide content exceeded the maximum residue levels or MRLs (from the "maximum residue level") or other relevant informations;
* additional controls, which include the inclusion of problematic foods (regular exceeding of MRLs or increased pesticide burden in the past), the topicality of problematic foods or the inclusion of additional pesticides, given the current issues;
* a review of the condition, which means the inclusion of individual foods in order to check the situation.
  1. Objective

When Slovenia defining the food products to be analysed in the national control programmes high or low importance was given to one or several factors listed below:

* relevance of a food product in diet or in national agricultural production;
* food products with high non-compliance rate identified in the previous years/ high RASFF notification rate;
* unprocessed or processed products;
* food relevant for sensitive group of consumers (e.g. baby food);
* organic or conventional products;
* sampling of products during main marketing season/outside of main marketing season (e.g. strawberries during winter);
* sample origin reflecting geographic distribution of food products consumed (e.g. domestic, EU, third countries);or focussing on countries with high non-compliance rate in the past;
* food commodities not included in EU coordinated programme.
  1. Design

For defining pesticides that should be included in national control programmes the following aspects were taken into consideration:

* RASFF notifications for a pesticide;
* use pattern of pesticide;
* toxicity of the active substance;
* cost of analysis (single method/ multiple method);
* capacity of the labs.

In 2021 were in national control included 944 food samples, which were examined for the content of pesticide residues. There are foods of animal origin (such as milk, beef fat and eggs) and foods of non-animal origin, such as vegetables, fruit (fresh or frozen), cereals and cereal products, processed foods such as baby food, tea, canned vegetables, dried fruits and spices.

In 50 samples (5.3 %), the levels of pesticides found, even taking into account measurement uncertainty, exceeded the limit values. The samples did not comply with the provisions of legislation.

An overview of the results of the national control program for 2021 is shown in Table 1.

1. Summary results **of the national control program from Administration of the Republic of Slovenia for Food Safety, Veterinary Sector and Plant Protection for 2021**

| samples | number of samples | Not exceedingMRL | non compliant samples | Percentage non compliant samples |
| --- | --- | --- | --- | --- |
| Animal products | **50** | **50** | **0** | **0** |
| Cereals | **63** | **62** | **1** | **0,1** |
| Baby food | **10** | **10** | **0** | **0** |
| Processed products | **187** | **150** | **2** | **0,2** |
| Fruits, vegetables, other plant products | **634** | **544** | **47** | **5,0** |
| total | **944** | **828** | **50** | **5,3** |

By origin, there were 250 samples (26,5 %) from Slovenia, 394 samples (41,8 %) from other EU countries and 286 samples (30,3 %) from third countries and 4 samples from EU countries and non EU countries (0,4 %).

An overview of the summary of samples taken in 2021 by region of origin is shown in Table 2.

1. **Summary of samples taken in 2021 by region of origin**

|  |  |  |  |
| --- | --- | --- | --- |
|  | |  | |
| origin | number of samples | non compliant samples | % |
| SLO | 250 | 5 | 0,53 |
| other countries EU | 394 | 5 | 0,53 |
| outside EU | 286 | 40 | 4,24 |
| unknown | 4 | 0 | 0 |
| **total** | **944** | **50** | **5,3** |

1. EU – European Union
2. TC – third countries

1. Key findings, interpretation of the results and comparability with the previous year results

In 2021 there were 50 food samples which were not compliant with limit values for pesticide residues set by Regulation 396/2005/ES. It representing 5,3 % of all tested samples taken for pesticide residue analysis.

In previous year (2020) there were 23 food samples which were not compliant by Regulation 396/2005/ES, which represent 2,7 % of all tested samples.

The share of non-compliant foods has grown compared to previous years. The most important contributors to this were from the imported products. There were 15 samples of oranges from Egypt and 13 samples of grapefruit, lemons or tangerines from Turkey, which were non-compliant. We will continue to monitor these foods more closely also in the coming years.

* 1. Key findings

An overview of the summary of non compliant and not safety samples taken in 2021 is shown in Table 3.

1. **Summary results** **of non compliant and not safety samples taken in 2021**

|  |  |  |  |
| --- | --- | --- | --- |
| samples | number of samples | non compliant | not safety |
| Animal products | **50** | **0** | **0** |
| Baby food | **10** | **0** | **0** |
| Cereals | **63** | **1** | **0** |
| Processed products | **187** | **1** | **0** |
| Fruits, vegetables, other products | **634** | **48** | **2** |
| total | **944** | **50** | **2** |

* 1. Interpretation of the results

In 2021, 944 food samples were tested from Slovenia. There were:

* + 634 samples (67,2 %) of vegetables (fresh or frozen), fruit (fresh or frozen), and other products,
  + 10 samples (1,0 %) of baby food,
  + 63 samples (6,7 %) of cereals,
  + 187 samples (19,8 %) of processed foods and
  + 50 samples (5,3 %) of food of animal origin.

In 1 sample of strawbweries the content of formetanate was determined (origin from Italy). and in 1 sample of green tuber the content of linuron was determined (origin from Slovenia). Bouth of samples was not safe under Article 14 of the Regulation 178/2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety.

In 49 convencional food samples the levels of pesticides found, even taking into account measurement uncertainty, exceeded the limit values, the samples did not comply with the provisions of Regulation (EC) No. 396/2005.

In 1 sample of organic garlic (origin: Spain), the content of azoxystrobin was determined. The sample did not comply with the provisions laid down for organic products in Commission Regulation (EC) No. 889/2008.

The samples which not comply with legislation are:

* 1. 37 samples of fruit:
* 15x oranges,
* 8x grapefruits,
* 6x lemons,
* 3x strawberries,
* 2x tangerines,
* 1x pomegranates,
* 1x persimmons,
* 1x apples.
  1. 7 samples of vegetables:

- 2x sweet peppers,

- 1x celery roof,

- 1x garlic,

- 1x parsley leaf

- 1x cucumbers

- 1x dry beans.

3.) 1 sample of cereals.

- 1x spelt flour.

4.) 5 samples of other food products:

- 1x sesame seeds,

- 1x pumpkin oil,

- 1x stevia leaf powder,

- 1x green tea,

- 1x ginger.

* 1. Comparability with the previous year results

In 2021 there were 5,3 % of the samples (50 samples in total, from 944 samples taken) were found non-compliant with the EU or national legislation. The following follow-up actions were taken for non-compliant samples.

In 2020, 2,7 % of the samples (23 samples in total, from 862 samples taken) were found non-compliant with the EU or national legislation. It was similar in the year 2019 when 2,8 % of the samples (samples in total, from 865 samples taken) were found non-compliant with the EU or national legislation.

In 2021 were more non-compliant foods than previous years. The most important contributors to this were from the imported products, especially citrus fruits, where the limit value is often exceeded for not approved pesticide residues chlorpyrifos and chlorpyrifos – methyl (MRL for them was changed in august 2020 from Commission Regulation (EU) 2020/1085).

1. Non-compliant samples: possible reasons, ARfD exceedances and actions taken

If we identify non-compliant samples we according to instructions usually batch is seized and prevented from entering the market.

For all samples which exceedance of the MRLs we introduce the appropriate measures according to the risk for the consumer. We also taken follow-up actions to verify the violation and to identify its cause.

When we identified non-compliant samples we drawned up official report.

Foods sampled at import will normally be rejected at the border in the event of inconsistent results with our legislation.

* 1. Possible reasons for non-compliant samples

In 2021 there are six non-compliant samples origin from Slovenia. The reasons for non-compliance was that GAP was not respected according to the EU or national legislation, use of a pesticide not approved in organic food legislation, residues resulting from other sources than plant protection product (e.g. biocides, veterinary drugs, bio fuel) or use of an approved pesticide, but application rate, number of treatments, application method or PHI not respected.

There are also other non-compliant samples from EU countries and third countries. The main reasons are use of a pesticide on food imported from third countries for which no import tolerance was set. Other reasons for non-compliant mainly remain unknown. As the highest proportion of non-compliant samples occurs in products from third countries.

* 1. ARfD exceedances

Health risk assessment in Slovenia is carried out by the National Laboratory for Health, Environment and Food. As part of the assessment, it determines the risk to the health of adults and children, calculates exposure and ARfD.

In 2021 one sample exceeded ARfD because of Formetanate in Strawberries from Italy.

1. Quality assurance

The laboratories performing analysis for the official controls in the pesticide residues area meet the requirements of the technical standard ISO 17025. The laboratories are accredited by the Slovenian Institute for Accreditation. They regularly examine control samples both at national and international levels and the methods of analysis used are validated.

An overview of the laboratories involved in the pesticide residues program is shown in Table 6.

**Table 4: Laboratories participation in the national control program**

| Country | Laboratory | | Accreditation | | Participation in proficiency tests or inter-laboratory tests | |
| --- | --- | --- | --- | --- | --- | --- |
| Name | Code | Date | Body |
| **Slovenia** | National laboratory of Health, Environment and Food | LP-014 | 25.3.2019 | Slovenian Accreditation | 1.) EUPT-FV20  2.) EUPT-SM10  3.) EUPT-AO13  4.) EUPT-CF12  5.) EUPT-SRM13 |

1. Processing Factors (PF)

Processing factors are applied when necessary to verify compliance of processed products with EU MRLs according to Article 20 of Regulation 396/2005. The processing factors that were reported by national competent authorities to verify compliance of processed products with EU MRLs.

In addition to these, factors based on water content from food composition tables in fresh versus dried commodities were used for dried samples where MRL was set on the fresh commodity. Processing factors were mainly applied to cover the dehydration of fruits, oil production using pressing, polishing of rice.

An overview of the processing factors used in the pesticide residues program is shown in Table 7.

**Table 5:** **Processing factors**

| Pesticide  (report name)(a) | Unprocessed product (RAC) | Processed product | Processing factor (b) | Comments |
| --- | --- | --- | --- | --- |
| Dimoxystrobin | Pumpkin seeds | Pumpkin oil | 1 | Treatment: compression |
| All | Spelt grains | Spelt flour | 1 | Treatment: grinding |

1. Report name as specified in the MatrixTool
2. Processing factor for the enforcement residue definition.