

**PESTICIDE RESIDUE CONTROL RESULTS**

**NATIONAL SUMMARY REPORT**

**Year: 2016**

**Country: Finland**

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## Table of contents

1.	National competent authorities .....	3
2.	Objective and design of the national control programme .....	3
3.	Key findings, interpretation of the results and comparability with the previous year results.....	4
4.	Non-compliant samples: possible reasons, ARfD exceedances and actions taken.....	5
5.	Quality assurance.....	6
6.	Processing Factors (PF) .....	6

## 1. National competent authorities

The national competent authorities of pesticide controls in Finland are Finnish Food Safety Authority Evira and Finnish Customs.

Web address where the national annual report is published: <https://www.evira.fi/yhteiset/vierasaineet/kasvinsuojeluainejaamat/valvonta/>.

## 2. Objective and design of the national control programme

The Finnish pesticide residue control programme is coordinated by Finnish Food Safety Authority Evira and carried out in collaboration with the Finnish Customs, Helsinki Environment Centre and National Supervisory Authority for Welfare and Health (Valvira).

The control programme consists of two parts: the EU coordinated multiannual control programme (EUCP, Commission Regulation (EU) No 2015/595) and separate national control programmes of the above mentioned authorities based mainly on the dietary intake patterns of Finnish consumers. The control programme consist of two strategies: surveillance of plant and animal origin products randomly sampled for the presence of pesticide residues and enforcement of pesticide residue legislation (e.g. where targeting of samples with a history of non-compliances and commodities listed in Regulation (EC) No 669/2009 for pesticide residues).

When defining the food products to be analysed in the national control programmes importance was given to factors listed below:

- EU Commissions Regulation concerning a coordinated multiannual control programme of the Union;
- relevance of a food product in national diet and in national agricultural production;
- food products with high non-compliance rate identified in the previous years;
- high RASFF notification rate;
- organic or conventional products;
- origin of the food product (e.g. domestic, EU, third countries);
- co-operation possibilities in sampling with different contaminant projects and organic control programme;
- needs of the national risk assessment projects.

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

- Pesticides listed in the Regulation concerning a coordinated multiannual control programme are included as far as possible.
- RASFF notifications for a pesticide and frequency of pesticide findings in the EU monitoring reports are used as selection criteria.
- Use pattern of pesticide. Those pesticides which are commonly used and which are known to leave residues in foods are included.
- Pesticides that are authorized for use in Finland are included into the program when relevant.
- Toxicity of the active substances is considered. E.g. many toxic organophosphate compounds which are not commonly used anymore are still included (they may occur in samples originating from the developing countries).
- Cost of analysis. Multiple residue methods are preferred, as the cost of analysis in case of single residue methods is higher. If many single residue analyses are performed the total number of samples to be analysed is decreased.

- Capacity of the labs. Single residue methods are run as required by the EU coordinated programme and a limited number of other samples. Instrument and personnel capacity in the laboratories is limiting the number of single residue analyses.

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

The total number of samples analysed under the EU coordinated and national programmes was 1969, which is about 10 % less than previous year. This total number includes 40 follow-up enforcement samples or samples based on the Regulation (EC) No 669/2009.

The distribution of all the samples by origin was: domestic 16 %, EU 44 %, third countries 38 % and unknown 2 %.

47 % of all samples had residues of one or more pesticide active ingredients. Exceedances of MRLs were found in 65 samples and 37 of them were non-compliant (measurement uncertainty taken in to consideration; including surveillance and enforcement samples). The total percentage of non-compliances (1.9 %) is the same as in the previous year. The non-complying lots originated from 14 different countries. Highest number of non-compliances was in products from Egypt (4) and Netherlands (4) products. Several non-complying samples were found also in products of China (3), Israel (3), India (3) and Taiwan (3). Six non-complying samples originated from EU countries. Domestic samples were all compliant to the regulations.

The number of samples above MRL was highest in the food group fruits and nuts, vegetables and other plant products. The product with most exceedances of MRL was teas (5 samples). One cereal sample of 139 samples had exceedance of MRL. All the samples of animal products and baby food were without residues.

This year a total of 40 enforcement samples were taken from fruits and nuts (7), vegetables (28) (from which 12 were sweet peppers) and other plant products (5). 3 enforcement samples were from EU countries. The number of samples above MRL of the enforcement samples was 4.

A total of 383 samples from organic production were analysed. 14 samples of them had residues above reporting level. In 5 samples the residues exceeded the MRLs and also were non-compliant.

The number of multiresidue compounds analysed from samples of plant origin was 351 active ingredients and metabolites. From animal products 67 (cow's milk) or 78 (swine fat) compounds were analysed.

**Table 1:** Summary of samples taken in 2016 by product class.

<b>Samples</b>	<b>Total</b>	<b>Without Residues</b>	<b>%</b>	<b>With Residues below MRL</b>	<b>%</b>	<b>Exceeding MRL</b>	<b>%</b>	<b>Non-Compliant</b>	<b>%</b>
Animal products	30	30	100	0	0	0	0	0	0
Cereals	112	77	69	34	30	1	1	0	0
Baby food	49	49	100	0	0	0	0	0	0
Other products	6	6	100	0	0	0	0	0	0
Fruits and nuts, vegetables and other plant products	1537	723	47	758	49	56	4	31	2
Processed products	235	166	71	61	26	8	3	6	3
	<b>1969</b>	<b>1051</b>	<b>53</b>	<b>853</b>	<b>43</b>	<b>65</b>	<b>3</b>	<b>37</b>	<b>2</b>

**Table 2:** Summary of samples taken in 2016 by region of origin.

Origin	Samples	%	Exceeding MRL	%	Non-Compliant	%
Domestic	307	16	0	0	0	0
EU	867	44	13	2	6	1
Third countries	748	38	50	7	30	4
Unknown	47	2	2	4	1	2

**Table 3:** Summary of organic samples taken in 2016 by product class and results.

Samples	Total	Without Residues	%	With Residues below MRL	%	Exceeding MRL	%	Non-Compliant	%
Fruits and nuts, vegetables and other plant products	278	265	95	7	3	4	1	4	1
Cereals	47	45	96	2	4	0	0	0	0
Baby food	23	23	100	0	0	0	0	0	0
animal products	3	3	100	0	0	0	0	0	0
Other products	29	28	97	0	0	1	3	1	3
	<b>380</b>	<b>364</b>	<b>96</b>	<b>9</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>1</b>

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

In 2016, 2 % of the samples (37 samples in total) were found to be non-compliant with the EU MRLs. For 11 samples RASFF notifications and for 7 organic samples OFIS notifications were issued.

The following follow-up actions were taken in case of sample non-compliant with the EU MRL (measurement uncertainty taken into consideration):

**Table 4:** Actions taken

Action taken	Number of non-compliant samples concerned	Comments
Rapid Alert Notification	11	
OFIS Notifications	7	
Lot recalled or withdrawn from the market	3	
Rejection of a non-compliant lot at the border	16	
Destruction of non-compliant lot		data not available
Follow-up (suspect) sampling of similar products, samples of same producer or country of origin		Follow-up sampling is regular procedure after rejection but there is no numerical data available.
Warnings to responsible food business operator	47	
Other follow-up investigations to identify reason of non-compliance or responsible food business operator	8	The lot partly or totally consumed. The remaining part detained and destroyed or sent back to the seller by permission of authorities in the country of origin. Enforcement sampling on next coming import lots.
Marketing as organic prohibited	12	Unintentional use of conventional ingredients in organic products

## 5. Quality assurance

**Table 5:** Laboratories participation in the national control program

Country	Laboratory		Accreditation		Participation in proficiency tests or inter-laboratory tests
	Name	Code	Date	Body	
FI	Finnish Customs Laboratory	FI01	18/08/2017	FINAS-Espoo, Finland	EUPT-FV18, EUPT-CF10, EUPT-FV-SM08, EUPT-SRM11, EUPT-FV-BF01, BIPEA 10-2919, BIPEA 08-2619
FI	MetropoliLab Oy	FI02	24/05/2016	Finnish Accreditation Service	FAPAS19219, EUPT-FV-18, FAPAS19217
FI	Finnish Food Safety Authority	FI03	29/11/2013	FINAS-Espoo, Finland	EUPT-AO11, FAPAS 05114, FAPAS 09100, EUPT-SRM11, EUPT-CF10

## 6. Processing Factors (PF)

In the table below the processing factors are compiled that were used by national competent authorities to verify compliance of processed products with EU MRLs.

**Table 6:** Processing factors

Pesticide (report name) <sup>(a)</sup>	Unprocessed product (RAC)	Processed product	Processing factor <sup>(b)</sup>	Comments
All pesticides	Fresh herbs	Dried herbs	10	factors are used for first estimation, in case of
All pesticides	Fresh vegetables	Dried vegetables	10	
All pesticides	Fresh fruits	Dried fruits	5	non-compliance, more detailed information is requested from the stake holder

a) Report name as specified in the MatrixTool2016

b) Processing factor for the enforcement residue definition