



Brussels, 25.11.2016  
COM(2016) 738 final

**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND  
THE COUNCIL**

**ON FOOD AND FOOD INGREDIENTS TREATED WITH IONISING RADIATION  
FOR THE YEAR 2015**

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## 1. SUMMARY

According to Article 7(3) of Directive 1999/2/EC, the Member States shall forward to the Commission every year the results of checks carried out in ionising irradiation facilities, including, in particular, the categories and quantities of foodstuff treated with ionising radiation and the doses administered, and the results of checks carried out at product marketing stage.

The checks performed by the Member States in 2015 show almost total compliance of products controlled with the EU legislation.

<b>Period:</b>	1/1/2015 – 31/12/2015
<b>Countries concerned:</b>	EU Member States and EFTA countries
<b>Source:</b>	All 28 Member States and Norway
<b>Irradiation facilities:</b>	
– Number of countries equipped:	14 Member States & Norway
– Number of approved facilities:	26
– Number of new facilities:	One in Croatia and one in Norway
– Number of closed facilities:	None
– Number of countries irradiating:	10 Member States & Norway
<b>Treatment data:</b>	
– Quantity of products treated:	5,686 tonnes (+9.7% compared to 2014)
– Main commodities treated:	Frog legs (54.8%) and dried aromatic herbs, spices and vegetables seasoning (16.1%)
– Main place of irradiation:	Belgium (68.9%) and the Netherlands (11.1%)
<b>Checks at marketing stage:</b>	
– Number of samples analysed:	5,973
– Number of non compliant samples:	104 (1.7%)
– Main commodities analysed:	Herbs and spices (45.6%) Cereals, seed, vegetables, fruits and their products (21%)

## 2. BACKGROUND

Ionising radiation of foods and food ingredients is a physical technique used for several purposes, *e.g.* to reduce the incidence of food-borne diseases by reducing pathogenic organisms, to reduce loss of food by premature ripening, germination or sprouting and to get food rid of organisms harmful to plant or plant products. Information on general aspects of food irradiation is available on the website of the European Commission's Directorate-General for Health and Food Safety<sup>1</sup>.

Directive 1999/2/EC of the European Parliament and of the Council of 22 February 1999 on the approximation of the laws of the Member States concerning foods and food ingredients treated with ionising radiation<sup>2</sup> lays down specific provisions for the manufacturing, marketing and importation of treated foods and food ingredients. The Directive introduced a stepwise harmonised listing of food, authorised for irradiation, starting from existing national authorisations.

Directive 1999/3/EC of the European Parliament and of the Council of 22 February 1999 on the establishment of a Community list of foods and food ingredients treated with ionising treatment<sup>3</sup> listed one category of food authorised at EU level: dried aromatic herbs, spices and vegetable seasonings. Other food categories authorised at national level prior to 1999 are maintained in seven Member States in accordance with its Article 4(4) but can no longer be extended. The list of national authorisations has been published by the Commission<sup>4</sup>.

Food and food ingredients may be irradiated only in approved irradiation facilities. For facilities in the EU, approval is given by the competent authorities of the Member State. Article 7(3) of Directive 1999/2/EC requires Member States to inform the Commission on the list of their approved irradiation facilities. The list of approved irradiation facilities in Member States is published by the Commission<sup>5</sup>.

Any irradiated foodstuff containing one or more irradiated food ingredient must be labelled with the words “irradiated” or “treated with ionising radiation”. If an irradiated product is used as an ingredient in a compound food, the same words shall accompany its designation in the list of ingredients. In the case of products sold in bulk, these words shall appear together with the name of the product on a display or notice above or beside the container in which the products are placed. To enforce correct labelling or to detect non-authorised products, several analytical methods have been standardised by the European Committee for Standardisation (CEN), following a mandate given by the Commission.

In accordance with Article 7(3) of Directive 1999/2/EC, Member States forward to the Commission every year:

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<sup>1</sup> [http://ec.europa.eu/food/safety/biosafety/irradiation/index\\_en.htm](http://ec.europa.eu/food/safety/biosafety/irradiation/index_en.htm)

<sup>2</sup> Directive 1999/2/EC of the European Parliament and of the Council of 22 February 1999 on the approximation of the laws of the Member States concerning foods and food ingredients treated with ionising radiation (OJ L 66, 13.3.1999, p. 16).

<sup>3</sup> Directive 1999/3/EC of the European Parliament and of the Council of 22 February 1999 on the establishment of a Community list of foods and food ingredients treated with ionising treatment (OJ L 66, 13.3.1999, p. 24).

<sup>4</sup> OJ C 283, 24.11.2009, p. 5.

<sup>5</sup> OJ C 51, 13.2.2015, p. 59–63

- the results of their checks carried out in the ionising radiation facilities, in particular regarding the categories and quantities of food and food ingredients treated and the doses administered,
- and
- the results of their checks carried out at the product marketing stage and the methods used to detect treatment with ionising radiation.

Article 7(4) of the same Directive requires the Commission to subsequently publish annually in the *Official Journal of the European Union*:

- the details of the approved irradiation facilities in the Member States, as well as any changes in their status;
- a report on the information provided every year by the national supervisory authorities.

The present report, produced accordingly, covers the period from 1<sup>st</sup> January to 31<sup>st</sup> December 2015 and includes the information forwarded to the European Commission by the 28 Member States and one EFTA country (Norway).

### 3. APPROVED IRRADIATION FACILITIES

26 irradiation facilities are approved in the European Union and are located in 14 Member States: five in France, four in Germany, three in Spain, two in Bulgaria, the Netherlands and Poland, one in Belgium, Czech Republic, Estonia, Croatia (a new facility), Italy, Hungary, Romania and United Kingdom. There are no approved facilities in the other Member States. No approved irradiation facilities have been closed.

Of the 14 Member States equipped with irradiation facilities, ten, as well as one EFTA country (Norway), irradiated foodstuffs in 2015, as illustrated in Figure 1.

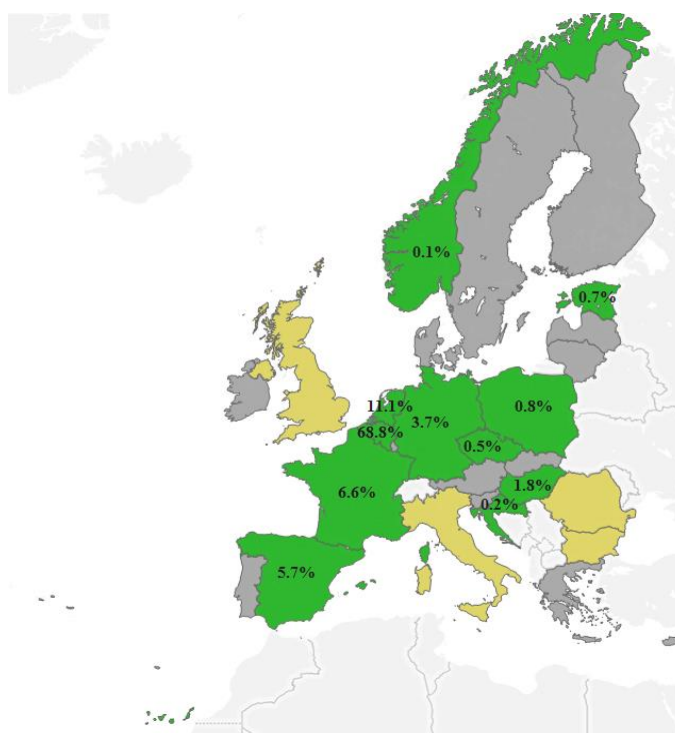


Figure 1 – Percentage of irradiated foodstuffs within each Member State and Norway in 2015

Green: countries with approved irradiation facilities and food irradiation;

Yellow: countries with approved irradiation facilities and no food irradiation;

Grey: countries without approved irradiation facilities)

#### 4. RESULTS OF CHECKS IN IRRADIATION FACILITIES

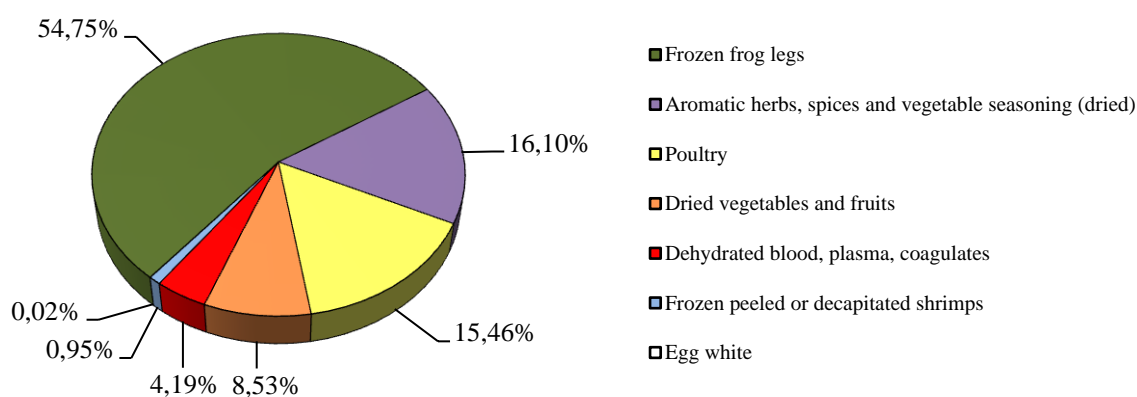
Official Controls carried out by the competent authorities confirmed the compliance of the approved irradiation facilities with the requirements of Directive 1999/2/EC which are based on the Joint FAO/WHO Codex Alimentarius Commission Recommended International Code of Practice for the operation of irradiation facilities used for the treatment of foods<sup>6</sup>.

The range of the average absorbed dose reported for the irradiated food in the EU in 2015 is 1-10 kGy, the categories of products irradiated and the doses administered for each Member State are listed in Annex.

A total quantity of 5,685.9 tonnes of products were treated with ionising irradiation in EU Member States, 80% of which were irradiated mainly in two Member States: Belgium (68.9%) and the Netherlands (11.1%).

Figure 2 summarises the categories of foodstuffs submitted to irradiation. The two main commodities irradiated in the EU are frog legs (54.75%) and dried aromatic herbs, spices and vegetables seasoning (16.10%).

Figure 2 – Distribution by category of irradiated foodstuffs in the EU in 2015

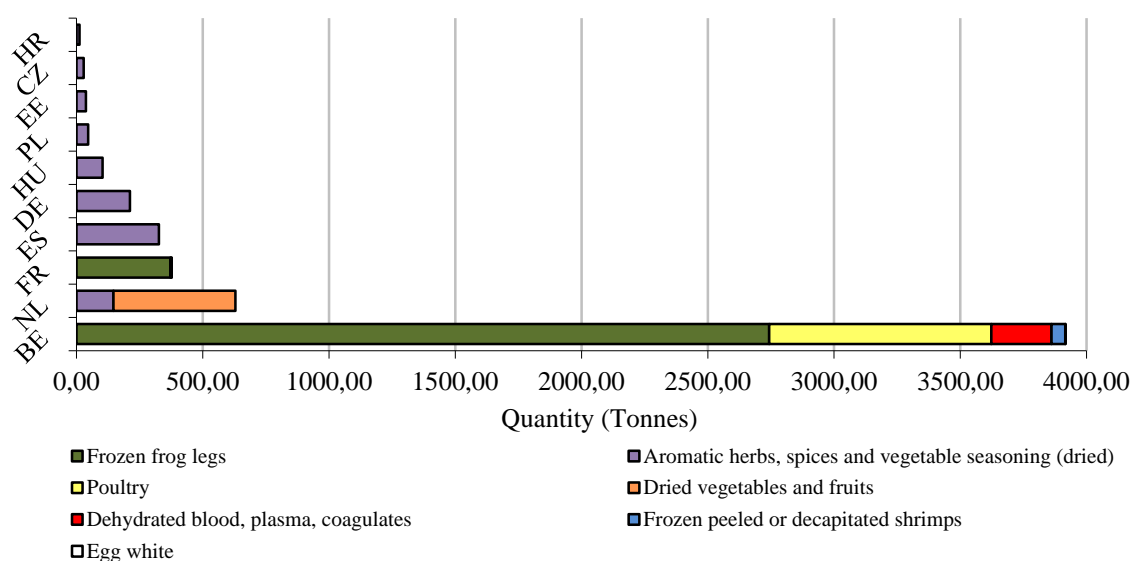


Since Directives 1999/2/EC and 1999/3/EC have become applicable in the Member States, the quantities of food irradiated have decreased, though a slight increase of 9.7% is noted in 2015 compared to 2014.

Figure 3 shows the distribution of irradiated foodstuffs (in tonnes) by Member State in 2015.

<sup>6</sup> Reference FAO/WHO/CAC, vol. XV edition 1.

Figure 3 – Quantity and category of foodstuffs irradiated in approved facilities within each Member State in 2015.

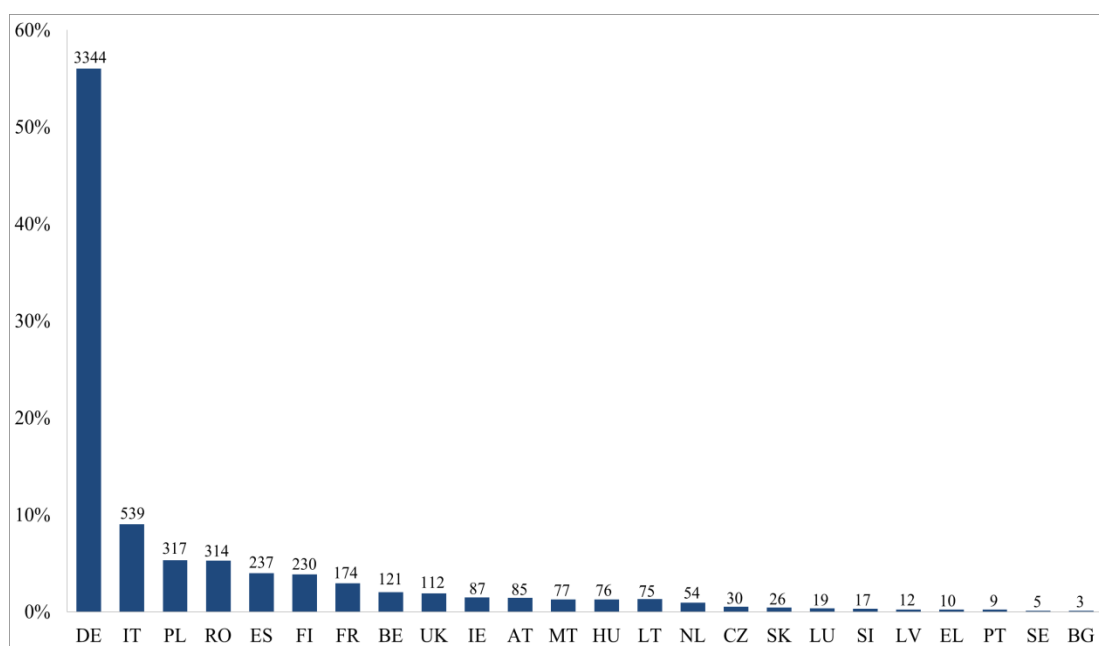


## 5. RESULTS OF CHECKS AT PRODUCT MARKETING STAGE

5,973 samples were analysed by 24 Member States in 2015, i.e. overall 3.4% more than in 2014.

Four Member States accounted for 75.6% of the samples (Germany 56%, Italy 9%, Poland 5.3% and Romania 5.3%), as illustrated in Figure 4. Five countries (four Member States and Norway) did not perform any analytical checks at product marketing stage in 2015 for different reasons: budgetary restrictions in Denmark, lack of laboratory capacity for such analyses in Estonia, Croatia, Cyprus and Norway.

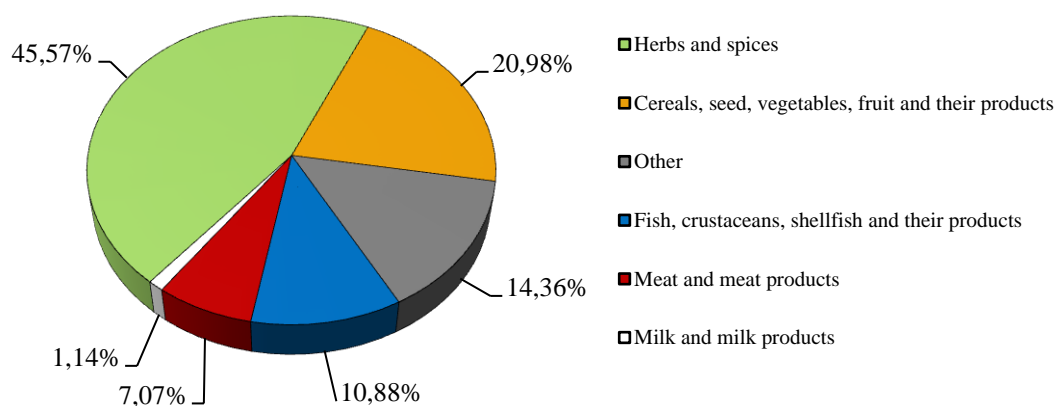
Figure 4 – Percentage of checks and total samples analysed at product marketing stage within each Member States in 2015.





Among the products analysed in the European Union in 2015, the two main categories are “herbs and spices” (45.54%) and “cereals, seed, vegetables, fruit and their products” (21.01%). Details are given in the tables reporting the tests carried out for each Member State (Annex). The category “other” includes mainly food supplements (45.92%) and soup and sauces (30.89%).

Figure 5 – Foodstuffs category analysed at product marketing stage within the European Union in 2015



For 2015, 5,802 samples (97.1%) were compliant with EU requirements, 104 (1.7%) non-compliant, and 67 samples (1.1%) gave inconclusive results. The two main reasons for non-compliance of tested samples were similar to the previous years, namely, incorrect labelling and forbidden irradiation, irradiation in facilities not approved by the EU. Details by Member State are available in annex.

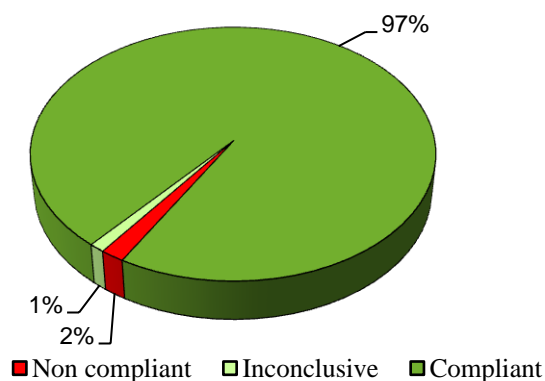


Figure 6 – Percentage of compliant, non-compliant and inconclusive results of checks carried out at product marketing stage within the European Union for the year 2015

## 6. CONCLUSION

The data submitted by the 28 EU Member States for 2015 show a 9.7% increase of the quantity of foodstuffs submitted to irradiation in the EU, compared to 2014 and a concomitant 3.4% increase of the checks performed at product marketing stage by competent authorities. The checks showed almost full respect of EU legislation, with less than 2% of products found to be non-compliant.

In Europe, the main commodity irradiated is frog legs, followed, though in much lower quantities, by dried aromatic herbs, spices and vegetables seasoning. Around 70% of the commodities are irradiated in Belgium, which remains the leading irradiating country within the EU.

In terms of control at marketing stage, the main commodity checked in the EU remains herbs and spices (45.6%) followed by cereals, seed, vegetables and fruits (21%), with Germany leading in the number of controls carried out representing alone more than all other Member States together.

Finally, the use of this decontamination technique stays marginal in Europe when compared to other regions of the world, where the use of irradiation for decontamination purposes is steadily increasing mainly in American and Asian countries.

Annex – Food irradiation data collection 2015

Quantities of foodstuffs (in tonnes) treated by ionising radiation  
in approved irradiation facilities (EU and EFTA)

Country	Number of approved facilities	Treated quantity (tonnes)
Belgium	1	3,916.9
Bulgaria	2	No food irradiated
Croatia	1	12.0
Czech Republic	1	28.3
Estonia	1	36.9
France	5	376.6
Germany	4	211.1
Hungary	1	103.0
Italy	1	No food irradiated
The Netherlands	2	629.2
Poland	2	45.9
Romania	1	No food irradiated
Spain	3	326.0
United Kingdom	1	No food irradiated
Total EU	26	5,685.9
Norway	1	4.2
Total EU-EFTA	27	5,690.1

Categories of products irradiated and respective doses administered, by country.

Country	Foodstuffs	Absorbed dose (kGy)
Belgium	Dehydrated blood, plasma, coagulates	5.0 - 6.7
	Egg white	4.3 - 5.0
	Frozen frog legs	4.4 - 5.7
	Frozen peeled or decapitated shrimps	4.0 - 4.3
	Poultry	3.7 - 4.3
Croatia	Aromatic herbs, spices and vegetable seasoning (dried)	10
Czech Republic	Aromatic herbs, spices and vegetable seasoning (dried)	6.3
Estonia	Aromatic herbs, spices and vegetable seasoning (dried)	10
France	Aromatic herbs, spices and vegetable seasoning (dried)	5 - 10
	Dried vegetables and fruits	1 - 10
	Frozen frog legs	1 - 10
Germany	Aromatic herbs, spices and vegetable seasoning (dried)	10
Hungary	Aromatic herbs, spices and vegetable seasoning (dried)	2 - 10
The Netherlands	Aromatic herbs, spices and vegetable seasoning (dried)	6
	Dried vegetables and fruits	6
Poland	Aromatic herbs, spices and vegetable seasoning (dried)	5
Spain	Aromatic herbs, spices and vegetable seasoning (dried)	8.6 – 9.5
Norway	Aromatic herbs, spices and vegetable seasoning (dried)	10

Samples analysed and results obtained for the European Union:

Country	Compliant	Inconclusive	Non-compliant	Total samples	% of total EU samples
Austria	83	0	2	85	1.4%
Belgium	110	8	3	121	2.0%
Bulgaria	3	0	0	3	0.1%
Croatia	NCP	NCP	NCP	NCP	NCP
Cyprus	NCP	NCP	NCP	NCP	NCP
Czech Republic	25	4	1	30	0.5%
Denmark	NCP	NCP	NCP	NCP	NCP
Estonia	NCP	NCP	NCP	NCP	NCP
France	160	3	11	174	2.9%
Finland	213	9	8	230	3.9%
Germany	3,281	24	39	3344	56.0%
Greece	10	0	0	10	0.2%
Hungary	75	0	1	76	1.3%
Ireland	86	1	0	87	1.5%
Italy	532	0	7	539	9.0%
Latvia	11	0	1	12	0.2%
Lithuania	75	0	0	75	1.3%
Luxembourg	18	1	0	19	0.3%
Malta	69	3	5	77	1.3%
Netherlands	54	0	0	54	0.9%
Poland	315	0	2	317	5.3%
Portugal	9	0	0	9	0.2%
Romania	297	7	10	314	5.3%
Slovakia	26	0	0	26	0.4%
Slovenia	17	0	0	17	0.3%
Spain	235	2	0	237	4.0%
Sweden	5	0	0	5	0.1%
United Kingdom	93	5	14	112	1.9%
Total EU	5,802	67	104	5,973	100%
	97.1%	1.1%	1.8%	100.0%	
Norway	NCP	NCP	NCP	NCP	NCP

NCP: no check performed

Results of checks at product marketing stage in Europe  
and methods used to detect ionising treatment.

Austria

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Berries	29	0	0	EN 1787
Fish, crustaceans. Shellfish and their products	Crustaceans, shellfish, mussels and other aquatic animals (including their products)	25	0	0	EN 1786
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	29	0	2*	EN 1788
Total (85)		83	0	2	
Total % of analysed samples		97.6%	0%	2.4%	

\*erroneously labelled

Belgium

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Cereals, seed, vegetables and fruit	8	0	0	EN 1788
	Fruit (dried)	10	0	0	EN 1788
Fish, crustaceans. Shellfish and their products	Crustaceans, shellfish, mussels and other aquatic animals (including their products)	33	2	1*	EN 1788
Herbs and spices	Herbs and spices (frozen)	13	2	0	EN 1788
	Tea	22	0	0	EN 1788
Meat / meat products	Frog legs	7	2	2*	EN 1788
Other	Food supplements	17	2	0	EN 1788
Total (121)		110	8	3	
Total % of analysed samples		90.9%	6.6%	2.5%	

\*erroneously labelled

Bulgaria

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	2	0	0	EN 13751
	Tea	1	0	0	EN 13751
Total (3)		3	0	0	
Total % of analysed samples		100%	0%	0%	

Croatia

Due to lack of laboratories carrying out analyses for ionising radiation, no checks were performed at product marketing stage in Croatia during the year 2015.

Cyprus

Due to lack of laboratories carrying out analyses for ionising radiation, no checks were performed at product marketing stage in Cyprus during the year 2015.

## Czech Republic

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Mushrooms or mushrooms products (dried)	2	0	0	EN 1788
	Vegetables and vegetable products (dried)	1	0	0	EN 1788
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	7	0	0	EN 1788
	Herbal teas / Infusions	1	0	0	EN 1788
Other	Food supplements	5	2	1*	EN 1788
	Soup	9	2	0	EN 1788
Total (30)		25	4	1	
Total % of analysed samples		83.4%	13.3%	3.3%	

\*irradiation not allowed

## Denmark

Due to budgetary restrictions, no checks were performed at product marketing stage in Denmark during the year 2015.

## Estonia

Due to lack of laboratories carrying out analyses for ionising radiation, no checks were performed at product marketing stage in Estonia during the year 2015.

## France

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Cereals, seed, vegetables and fruit	59	0	1*	EN 1787
	Food supplements	7	1	0	EN 1788
Fish, crustaceans, shellfish and their products	Crustaceans or molluscs (frozen)	21	0	3**	EN 1786
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	36	0	5*	EN 1788
Meat and meat products	Frog legs	11	0	1*	EN 1786
	Meat and meat products	26	2	1*	EN 1784
Total (174)		160	3	11	
Total % of analysed samples		92.0%	1.7%	6.3%	

\*erroneously labelled

\*\*erroneously labelled and/or irradiation not allowed

## Finland

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Berries	3	1	0	EN 1788; EN 13751
	Cereal products	3	0	0	EN 13751
	Mushrooms or mushrooms products (dried)	4	0	0	EN 13751
	Onions	3	0	0	EN 13751
	Seaweeds (dried)	3	0	0	EN 13751
	Pasta products	2	0	0	EN 13751
	Rice (flour)	1	0	0	EN 13751
	Seeds	4	0	0	EN 13751

	Vegetables and vegetable products (dried)	25	2	0	EN 1788; EN 13751
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	99	4	4*	EN 1788; EN 13751
	Herbal teas / Infusions	6	2	0	EN 1788; EN 13751
	Tea	13	0	0	EN 13751
Other	Cocoa	1	0	0	EN 13751
	Coffee	1	0	0	EN 13751
	Food supplements	28	0	3**	EN 1788; EN 13751
	Meals and dishes (prepared)	3	0	0	EN 13751
	Other	1	0	0	EN 13751
	Sauces and soups (dehydrated)	13	0	1**	EN 1788; EN 13751
Total (230)		213	9	8	
Total % of analysed samples		92.6%	3.9%	3.5%	

\*erroneously labelled and/or irradiation in facilities not approved by the EU

\*\*irradiation not allowed

### Germany

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Cereal products	3	0	0	EN 1788; EN 1787
	Fruit (dried)	133	0	9***	EN 13708; EN 1788; EN 1787; EN 13751
	Fruits (fresh)	81	0	0	EN 13708; EN 1788; EN 1787; EN 13751
	Mushrooms (fresh)	2	0	0	EN 1788;
	Mushrooms or mushrooms products (dried)	140	0	0	EN 1788; EN 1787; EN 13751
	Potatoes	9	0	0	EN 1788
	Pulses	110	0	0	EN 1784; EN 1788; EN 1787; EN 13751
	Vegetables and vegetable products (dried)	44	0	0	EN 1788; EN 1786; EN 1787; EN 13751
Vegetables (fresh)	21	0	0	EN 1787; EN 1788; EN 13751	
Fish, crustaceans, shellfish and their products	Crustaceans, shellfish, mussels and other aquatic animals (including their products)	273	0	5**	EN13708; EN 1786; EN 1788; EN 1787; EN 13751
	Fish and fish products	58	0	8***	EN 1786; EN 1788
Herbs and spices	Aromatic herbs, spices and	1,254	10	2*	EN 1788;

	vegetable seasoning (dried)				EN 1787; EN 13751
	Seasoning	303	2	0	EN 13708; EN 1788; EN 1785; EN 1787; EN 13751
	Tea	195	0	1***	EN 13708; EN 1788; EN 1785; EN 1787; EN 13751
Meat and meat products	Meat (except poultry and game)	14	0	0	EN 1784; EN 1786
	Meat (from different birds, kangaroo, hare)	2	0	0	EN 1786
	Meat products (except sausages)	32	0	0	EN 1784; EN 1786
	Poultry meat	142	0	0	EN 1784; EN 1786
	Sausage products	27	0	0	EN 1786
Milk and milk products	Cheese (containing spices/herbs)	33	0	0	EN 1784; EN 1788; EN 1787; EN 13751
Other	Food supplements	168	0	3***	EN 1788; EN 13751
	Meals and dishes (prepared)	29	2	0	EN 1788; EN 1786
	Eggs and eggs products	14	0	0	EN 1784
	Various food	35	0	0	EN 13708; EN 1788; EN 13751
	Sauces and soups (dehydrated)	159	10	11**	EN 1784; EN 1788; EN 1785; EN 13751
Total (3,344)		3,281	24	39	
Total % of analysed samples		98.1%	0.7%	1.2%	

\*erroneously labelled

\*\*erroneously labelled and/or irradiation not allowed

\*\*\*irradiation not allowed

### Greece

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	10	0	0	EN 13751
Total (10)		10	0	0	
Total % of analysed samples		100%	0%	0%	

### Hungary

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	75	0	1*	EN 1788
Total (76)		75	0	1	
Total % of analysed samples		98.7%	0%	1.3%	

\*erroneously labelled



### Ireland

<b>Foodstuff category</b>	<b>Foodstuffs</b>	<b>Compliant</b>	<b>Inconclusive</b>	<b>Non-Compliant</b>	<b>CEN method</b>
Cereals, seed, vegetables, fruit and their products	Berries	4	0	0	EN 13751
	Peanut bars	1	0	0	EN 13751
Herbs and spices	Herbal teas / Infusions	1	0	0	EN 13751
	Herbs and spices (fresh)	1	0	0	EN 13751
	Other: Basil (3), Bay leaves (1), Oregano (1), Spice mixture for pickling cucumber (1), Smoked paprika (1), Garam Masala (1), Organic hot paprika (1), Ground cinnamon (1), Ground mace (1), Herbs and spices (1)	12	0	0	EN 13751
Other	Food for particular nutritional uses	35	0	0	EN 13751
	Food supplements	31	1	0	EN 13751
	Soy sauces	1	0	0	EN 13751
Total (87)		86	1	0	
Total % of analysed samples		98.9%	1.1%	0%	

### Italy

<b>Foodstuff category</b>	<b>Foodstuffs</b>	<b>Compliant</b>	<b>Inconclusive</b>	<b>Non-Compliant</b>	<b>CEN method</b>
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	82	0	0	EN 1788; EN 13784; EN 1787; EN 13751
	Herbal teas / Infusions	5	0	0	EN 1787; EN 13751
	Tea	8	0	0	EN 1788; EN 1787; EN 13751
Meat and meat products	Frog legs	21	0	0	EN 1786
	Meat (except poultry and game)	16	0	0	EN 1786; EN 13784
	Poultry meat	37	0	0	EN 13784; EN 1786; EN 1785
Fish, crustaceans, shellfish and their products	Crustaceans or molluscs (frozen)	109	0	0	EN 1788; EN 1786; EN 13751
	Fish and fish products	44	0	1*	EN 13784; EN 1786; EN 1785
Cereals, seed, vegetables, fruit and their products	Cereals	18	0	0	EN 1788; EN 13751
	Fruit (dried)	18	0	0	EN 13708; EN 1788; EN 1787
	Fruits (fresh)	11	0	0	EN 13708; EN 1788; EN13784; EN 1787

	Garlic	14	0	0	EN 13784; EN 1788; EN 13751
	Mushrooms or mushrooms products (dried)	22	0	0	EN 1788; EN 1787; EN 13751
	Nuts	32	0	0	EN 13784; EN 1788; EN 1787
	Oil seeds	3	0	0	EN 13751
	Onions	16	0	0	EN 13784; EN 1788; EN 13751
	Tomatoes and carrots	2	0	0	EN 13751
	Potatoes	18	0	0	EN 1788; EN 13751
	Pulses	14	0	0	EN 13784; EN 1788; EN 13751
Other	Food supplements	2	0	1**	EN 1788; EN 1787
	Raw material of plant origin, intended for use as an ingredient in plant food supplements	34	0	5**	EN 1788; EN 1787; EN 13751
	sauces and soups (dehydrated)	6	0	0	EN 1787; EN 13751
Total (539)		532	0	7	
Total % of analysed samples		98.7%	0.7%	1.3%	

\*erroneously labelled

\*\*erroneously labelled and/or irradiation not allowed

### Latvia

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	4	0	0	EN 1788
Other	Food supplements	7	0	1*	EN 1788
Total (12)		11	0	1	
Total % of analysed samples		91.7%	0%	8.3%	

\*irradiation not allowed

### Lithuania

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	6	0	0	EN 13783
	Herbal teas / Infusions	5	0	0	EN 13783
Other	Food supplements	62	0	0	EN 13783
	Vegetables, vegetable products and mushrooms, dried seaweed (raw material for food production)	2	0	0	EN 13783
Total (75)		75	0	0	
Total % of analysed samples		100%	0%	0%	

### Luxembourg

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Fish, crustaceans, shellfish and their products	Crustaceans or molluscs (frozen)	3	0	0	EN 1788
	Crustaceans, shellfish, mussels and other aquatic animals (including their products)	6	0	0	EN 1788
Other	Sauces and soups (dehydrated)	9	1	0	EN 1788
Total (19)		18	1	0	
Total % of analysed samples		94.7%	5.3%	0%	

### Malta

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Cereals, seed, vegetables and fruit	4	0	0	EN 13751
	Fruit (dried)	12	0	0	EN 13751
	Instant noodles	8	2	0	EN 13751
	Mushrooms or mushrooms products (dried)	1	0	0	EN 13751
	Onions	1	0	0	EN 13751
	Dried seaweed	3	0	0	EN 13751
Fish, crustaceans, shellfish and their products	Fish and seafood (dried)	1	0	3*	EN 1788; EN 13751
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	11	0	0	EN 13751
	Herbal teas / Infusions	17	0	1**	EN 1788; EN 13751
	Tea	3	0	0	EN 13751
Other	Soup	8	1	1**	EN 1788; EN 13751
Total (77)		69	3	5	
Total % of analysed samples		89.6%	3.9%	6.5%	

\*irradiation not allowed

\*\*erroneously labelled

### Netherlands

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Cereals products	6	0	0	EN 1788; EN 13751
	Cereals, seed, vegetables and fruit	4	0	0	EN 1788; EN 13751
	Mushrooms or mushrooms products (dried)	2	0	0	EN 1788; EN 13751
	Nuts	6	0	0	EN 1788; EN 13751
	Vegetables and vegetable products (dried)	4	0	0	EN 1788; EN 13751
Fish, crustaceans, shellfish and their products	Shrimps	5	0	0	EN 1788; EN 13751
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	8	0	0	EN 1788; EN 13751
Meat and meat products	Poultry meat	6	0	0	EN 1788; EN 13751

Other	Chips	6	0	0	EN 1788; EN 13751
	Soup	7	0	0	EN 1788; EN 13751
Total (54)		54	0	0	
Total % of analysed samples		100%	0%	0%	

Poland

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Fruit (dried)	8	0	0	EN 13708
	Fruits (fresh)	7	0	0	EN 1788; EN 1787
	Fruit (tropical)	1	0	0	EN 1788
	Garlic	6	0	0	EN 1788; EN 13708
	Instant noodles	6	0	0	EN 13751
	Mushrooms (fresh)	4	0	0	EN 1788; EN 13751
	Mushrooms or mushrooms products (dried)	12	0	0	EN 1788
	Nuts	10	0	0	EN 1787
	Onions	1	0	0	EN 1788
	Pasta with spinach	1	0	0	EN 13751
	Pasta products	9	0	0	EN 13751
	Potatoes	1	0	0	EN 1788
	Pulses	1	0	0	EN 1788
	Vegetables and vegetable products (dried)	6	0	0	EN 1788; EN 13751
Vegetables (fresh)	1	0	0	EN 1788	
Fish, crustaceans, shellfish and their products	Crustaceans or molluscs (frozen)	1	0	0	EN 1786
	Crustaceans, shellfish, mussels and other aquatic animals (including their products)	6	0	0	EN 1786; EN 1788
	Fish and fish products	14	0	0	EN 1786
	Shrimp broth	0	0	1*	EN 1788
	Shrimps	3	0	0	EN 1788; EN 13751
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	48	0	0	EN 1788; EN 13751
	Tea	12	0	0	EN 1788; EN 13751
Milk and milk products	Cheese (containing spices/herbs)	27	0	0	EN 1788; EN 13751
	Cheese (cottage)	5	0	0	EN 1788
	Cheese (ripened)	2	0	0	EN 1788
Meat and meat products	Chicken broth	3	0	0	EN 1788
	Frog legs	2	0	0	EN 1786
	Meat	20	0	0	EN 1786
	Meat and meat products	2	0	0	EN 1786
	Meat (except poultry and game)	3	0	0	EN 1784; EN 1786
	Meat (from different birds, kangaroo, hare)	12	0	0	EN 1784; EN 1786

	Meat, offal, meat products	3	0	0	EN 1784; EN 1786
	Poultry meat	14	0	0	EN 1784; EN 1786
Other	Cocoa	1	0	0	EN 1788
	Coffee	3	0	0	EN 1788
	Food for particular nutritional uses	16	0	1*	EN 1788; EN 13751
	Food supplements	16	0	0	EN 1788; EN 13751
	Other: Barbecue sauce (1), vegetable broth (1), paste of coriander (1), seasoning for chicken soup (1), instant for noodle dish (1), vegetable stock cube (1), fix oriental dish with chicken (1), instant soup flavour chicken curry with noodle (1)	8	0	0	EN 1788; EN 13751
	Sauces and soups (dehydrated)	20	0	0	EN 1788; EN 13751
Total (317)		315	0	2	
Total % of analysed samples		99.4%	0%	0.6%	

\*erroneously labelled

#### Portugal

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	1	0	0	EN 13751
	Plant parts (senna pod, chamomile flower and moringa)	3	0	0	EN 13751
Other	Enzymes	1	0	0	EN 13751
	Food supplements	3	0	0	EN 13751
	Ginseng extract	1	0	0	EN 13751
Total (9)		9	0	0	
Total % of analysed samples		100%	0%	0%	

#### Romania

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Fruit (dried)	2	0	0	EN 13751
	Mushrooms or mushrooms products (dried)	3	0	0	EN 13751
	Vegetables and vegetable products (dried)	86	0	2*	EN 13751
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	143	1	8*	EN 13751
	Herbal teas / Infusions	32	0	0	EN 13751
	Tea	9	0	0	EN 13751
Other	Food supplements	22	6	0	EN 13751
Total (314)		297	7	10	
Total % of analysed samples		94.6%	2.2%	3.2%	

\*irradiation in facilities not approved by the EU

#### Slovakia

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Nuts	17	0	0	EN 1784
	Oil seeds	1	0	0	EN 1784
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	5	0	0	EN 1788
Meat and meat products	Salmon fillets	2	0	0	EN 1784
Milk and milk products	Cheese (ripened)	1	0	0	EN 1784
Total (314)		26	0	0	
Total % of analysed samples		100%	0%	0%	

### Slovenia

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Garlic	5	0	0	EN 1788; EN 13751
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	4	0	0	EN 13751
	Tea	4	0	0	EN 13751
Meat and meat products	Poultry meat	2	0	0	EN 1786
Other	Sauces and soups (dehydrated)	2	0	0	EN 1788; EN 13751
Total (17)		17	0	0	
Total % of analysed samples		100%	0%	0%	

### Spain

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Fruit (dried)	16	0	0	EN 13708
	Mushrooms or mushrooms products (dried)	8	0	0	EN 13751
	Nuts	16	0	0	EN 1787
	Oil seeds	14	0	0	EN 1788; EN 13751
	Vegetables and vegetable products (dried)	32	0	0	EN 1788; EN 1787; EN 13751
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	91	2	0	EN 1787; EN 13751
	Herbal teas / Infusions	32	0	0	EN 13751
Fish, crustaceans, shellfish and their products	Crustaceans, shellfish, mussels and other aquatic animals (including their products)	16	0	0	EN 1786
	Fish and fish products	5	0	0	EN 1786
Meat and meat products	Poultry meat	5	0	0	EN 1786
Total (237)		235	2	0	
Total % of analysed samples		99.2%	0.8%	0%	

### Sweden

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Meat and meat products	Meat	5	0	0	EN 1784
Total (5)		5	0	0	
Total % of analysed samples		100%	0%	0%	

### United Kingdom

Foodstuff category	Foodstuffs	Compliant	Inconclusive	Non-Compliant	CEN method
Cereals, seed, vegetables, fruit and their products	Fruit (tropical)	1	0	0	EN 1788; EN 13751
	Instant noodles	20	3	6*	EN 1788; EN 13751
Fish, crustaceans, shellfish and their products	Crustaceans or molluscs (frozen)	1	0	0	EN 1788; EN 13751
	Fish and fish products	1	0	1**	EN 1788; EN 13751
Herbs and spices	Aromatic herbs, spices and vegetable seasoning (dried)	56	1	4*	EN 1788; EN 13751
	Tea	0	0	1**	EN 1788; EN 13751
Other	Food supplements	11	1	1**	EN 1788; EN 13751
	Sauces and soups (dehydrated)	1	0	0	EN 1788; EN 13751
	Soup	2	0	1**	EN 1788; EN 13751
Total (112)		93	5	14	
Total % of analysed samples		83.0%	4.5%	12.5%	

\*erroneously labelled and/or irradiation in facilities not approved by the EU

\*\*irradiation not allowed

### Norway

Due to lack of laboratories carrying out analyses for ionising radiation, no checks were performed at product marketing stage in Norway during the year 2015.