

COMMISSION OF THE EUROPEAN COMMUNITIES

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REPORT FROM THE COMMISSION

ON FOOD IRRADIATION FOR THE YEAR 2002

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SUMMARY

According to Article 7 (3) of 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, the Member States shall forward to the Commission every year

– the results of checks carried out in the irradiation facilities, in particular regarding the categories and quantities of products treated and the dose administered and

– the results of checks carried out at the product marketing stage and the methods used to detect irradiated foods.

In 2002, irradiation facilities had approval in seven Member States, but some Member States did not provide all the information requested with respect to food categories treated, quantities or doses.

As in 2001, eight Member States performed checks on foods placed on the market, whereas seven did not perform analytical checks during the period covered. In total, about 5000 food samples have been checked in 2002. Again the number of samples analysed differs widely from one to another Member State. About 1.4 % of products (without dietary supplements) on the market were found to be irradiated and not labelled. These products are herbs and spices or compound foods containing herbs and spices, frog legs, aquatic animal products, mushrooms, fresh fruits, tea, coffee, sauces and similar products. In 2002, four Member States (United Kingdom, Ireland, Germany and The Netherlands) performed checks on dietary supplements and still found that 29.4 % of the products checked had been irradiated. As the treatment of these products by ionising radiation is not allowed in the EU, the Commission expects that the numbers of checks of these products are increased in all Member States and that irradiated dietary supplements are withdrawn from the EU market.

On the basis of the available information, the Commission concludes that overall the situation has not changed compared to 2001. Also, the number of Member States carrying out controls has not increased, except for dietary supplements.

1. LEGAL BASIS AND BACKGROUND

According to Article 7 (3) of 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[1] the Member States shall forward to the Commission every year :

[1] OJ L 66, 13.3.1999, p. 16.

the results of checks carried out in the irradiation facilities, in particular regarding the categories and quantities of products treated and the dose administered

and

the results of checks carried out at the product marketing stage and the methods used to detect irradiated foods.

The Commission has to publish the results in annual reports in the *Official Journal of the European Union.*

This report covers the period from 1 January 2002 to 31 December 2002.

Information on general aspects of food irradiation, on EU legislation, national authorisations, approved irradiation facilities in the Member States and third countries, competent authorities as well as on standardised analytical methods for the detection of irradiated foods is available on the web site of the Directorate-General Health and Consumer Protection of the European Commission[2].

1.1. Irradiation facilities

According to Article 3 (2) of Directive 1999/2/EC food may only be irradiated in approved irradiation facilities. In order to obtain approval, the facilities have to comply with the requirements of the Joint FAO/WHO Codex Alimentarius Commission Recommended International Code of Practice for the operation of irradiation facilities used for the treatment of foods. For facilities in the EU, approval is given by the competent authorities of the Member States[2]. The Member States have to inform the Commission about their approved irradiation facilities (Article 7 (1)).

The list of authorised facilities in the Member States has been published by the Commission[3].

1.2. Irradiated foods

The irradiation of dried aromatic herbs, spices and vegetable seasonings is authorised in the EU (Directive 1999/3/EC of the European Parliament and of the Council of 22 February 1999 on the establishment of a Community list of food and food ingredients treated with ionising radiation[4]). In addition, five Member States maintain national authorisations for certain foods in accordance with Article 4 (4) of Directive 1999/2/EC. The list of national authorisations has been published by the Commission[5].

According to Article 6 of Directive 1999/2/EC any irradiated food or any irradiated food ingredient of a compound food must be labelled with the words “irradiated” or “treated with ionising radiation”.

For the enforcement of the 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 European Commission.

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2 http://europa.eu.int/comm/food/fs/sfp/fi_index_en.html
3 OJ C 187, 7.8.2003, p. 13.
4 OJ L 66, 13.3.1999, p. 6.
5 OJ C 56, 11.3.2003, p. 5

2. RESULTS OF CHECKS CARRIED OUT IN THE IRRADIATION FACILITIES

The Member States submitted the following information:

2.1. Belgium

The Belgian competent Authority approved the irradiation plant IBA Mediris S.A. in Fleurus on 28 May 2003, according to Directive 1999/2/EC. No inspection has been performed in 2002.

The following table provides the categories and quantities of foods irradiated in the company IBA Mediris in 2002.

No information regarding the doses has been submitted.

Food	Amount (t)
Spices, seasonings	570.1
Dehydrated vegetables	20.8
Cheese	216.2
Fish	177.6
Grilled onions	8.5
Frozen vegetables	223.6
Frozen seafood	768.3
Frozen poultry	130.7
Frozen meat	303.8
Frozen frog's legs	2873.7
Herbal tea	62.2
Proteins	54.5
Dried fruits	65
Meat	1.4
Poultry	0.9
Other frozen products	156.2
Eggs	122.5
Starch	76.8
Other products[6]	773.9
Papain	6.3
Total	**6613**

[6] No detailed information has been provided

2.2. Germany

a) Gamma Service Produktbestrahlung GmbH, Radeberg

An inspection by the competent authority of the Bundesland Sachsen in 2002 confirmed compliance with the requirements of Directive 1999/2/EC.

The following table provides the categories and quantities of foods irradiated in the company Gamma Service, with the overall average absorbed doses.

Food	Amount (t)	Overall average absorbed radiation dose (kGy)
Dried aromatic herbs and spices	334	5 - 9
Vegetables and vegetable powder[7]	28	7 - 8[7]
Herbal tea[8]	126	6-9
Oil seeds (poppy, sesame, linseed) [9]	6.4	7-8
Total	**494.4**	

b) Isotron Deutschland GmbH, Allershausen[10]

An inspection by the competent authority of the Bundesland Bayern has been carried out on 26 November 2002.

The following table provides the categories and quantities of foods irradiated in the company Isotron Deutschland GmbH.

Food	Amount (t)	Overall average absorbed radiation dose (kGy)
Spices	97.2	9.2
Herbs	203.7	9.2
Total	**300.9**	

c) Beta-Gamma-Service GmbH&Co. KG, Bruchsal

No food has been irradiated in the facility in 2002.

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7 Vegetables were exported to Poland and vegetable powder to Rusia

8 Products were exported to Poland.

9 Sesame and poppy seeds were exported to Croatia and linseeds to Poland.

10 Former company name: Gammamaster Deutschland GmbH

2.3. Denmark

During 2002, the Danish Veterinary and Food Administration (DVFA) approved the irradiation facility LR Plast for irradiation of dried aromatic herbs and spices in accordance with Article 7 (2) of Directive 1999/2/EC.

No food has been irradiated in the facility in 2002.

2.4. Spain

No information has been submitted.

2.5. France

All approved irradiation facilities have been inspected in 2002. They complied with the provisions of Directive 1999/2/EC.

The following table provides the categories and quantities of foods irradiated in France in 2002, with the overall average absorbed doses.

Food	Amount (t)	Overall average absorbed radiation dose (kGy)
Spices, aromatic herbs, dehydrated vegetables	1265	10
Deep frozen aromatic herbs	10	10
Dried fruits	14	1
Gum arabic	146	3
Mechanically recovered chicken meat, meat and offal of chicken	2812	5
Frozen frog legs	882	5
Total	**5129**	

2.6. The Netherlands

The following table provides the categories and quantities of foods irradiated in the two production facilities in the period from 1 October 2001 until 30 September 2002.

No information regarding the doses has been submitted.

Food	Amount (t)[11]
Spices, herbs	1705.6
Dehydrated vegetables	2402.4
Dried fruits	117.6
Poultry meat (frozen)	914.4
Shrimps (frozen)	136.8
Frog parts	373.6
Egg whites (cooled)	625.61
Food[12]	838.4
Total	**7114.4**

2.7. The United Kingdom

The company Isotron plc is licensed to irradiate certain herbs and spices. An inspection by the competent authority confirmed compliance with the licence and with the requirements of Directive 1999/2/EC.

No food has been irradiated in the facility in 2002.

2.8. The following countries have no approved food irradiation facilities: Austria, Finland, Greece, Ireland, Italy, Luxembourg, Portugal and Sweden.

2.9. Summary for the EU

The exact amount of foods irradiated in the EU during the period covered is not known due to incomplete reporting. Available reports account for approximately 20 000 t. Part of this amount has been irradiated for export. The Directive does not require breakdown between the portion which is placed on the Internal Market and that which is exported.

3. RESULTS OF CHECKS CARRIED OUT AT THE PRODUCT MARKETING STAGE AND THE METHODS USED TO DETECT IRRADIATED FOODS

The Member States submitted the following information:

3.1. Austria

60 food samples were examined. None of them were found to be irradiated.

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[11] The amounts have been reported as "boards" with an average weight per board of 800 kg

[12] Products intended for export to third countries

Food analysed	Number of analysed samples		CEN method used
	Result: non-irradiated	Result: irradiated, not correctly labelled	
Spices	15	0	EN 1788
Poultry (duck, pheasant, goose, chicken, turkey)	44	0	EN 1786
Mushrooms	1	0	EN 1788
Total	**60**	**0**	
Total in % of analysed samples	**100**	**0**	

3.2. Belgium

In 2002, no analytical checks have been performed in Belgium.

3.3. Germany

About 3350 food samples were examined of which 26 (0.8 %) were found to be irradiated but not labelled. These results are similar to the results in 2001. A high portion of food supplements has been found to be irradiated (18 %), although the treatment is not authorised.

Food analysed	Number of analysed samples		CEN method used
	Result: non-irradiated	Result: irradiated, not correctly labelled (origin)	
Cheese	36	0	EN1784 EN1788
Cheese with herbs[13]	88	3	EN1784 EN1787 EN1788 EN13751
Butter with herbs	3	0	EN1787 EN1788

[13] Spices and herbs were irradiated but not labelled.

Egg, egg products	18	0	
Meat (incl. frozen meat)	35	0	EN1784 EN1786 EN1787
Meat products (except sausages)	16	0	EN1787
Sausages[13]	174	6	EN1784 EN1787 EN1788
Poultry, game	137	0	EN1784 EN1787
Fish, fish products	68	0	EN1786
Crustaceans	160	0	EN1785 EN1787 EN1788
Crustaceans, shell fish, molluscs and other aquatic animals and their products	113	5	EN1787 EN1788
Pulses	166	0	EN1787 EN1788
Soups, sauces	3	0	EN1784
Cereals, cereal products	75	0	EN1784 EN1788 EN13751
Oil seeds	7	0	EN1787
Nuts	156	0	EN1784 EN1787 EN1788
Potatoes, parts of plants with high starch content	76	0	EN1788
Fresh vegetables, salad	49	0	EN1784 EN1787 EN1788
Dried vegetables, vegetable products	63	0	EN1787 EN1788

Mushrooms, fresh	85	0	EN1788
Mushrooms, dried or products	146	2	EN1787 EN1788
Fresh fruits	308	2	EN1784 EN1787 EN1788
Dried fruits or fruit products	236	0	EN1787 EN1788
Cocoa powder	9	0	EN1787 EN1788
Coffee, raw	4	0	EN1787 EN1788
Tea, tea-like products[14]	94	2	EN1787 EN1788
Ready-to-serve meals	13	0	EN1784 EN1787
Spices, incl. preparations and seasoning salts	341	1	EN1784 EN1787 EN1788 EN13751
Spices and herbs	644	2	EN1787 EN1788 EN13751
Asian noodle snacks, party snacks, pizza, TV snacks	13	0	EN1788 EN13751
Chocolate	1	0	EN1784
Food supplements[15]	14	3	EN1788
Total	**3351**	**26**	
Total in % of analysed samples	**99.2**	**0.8**	

[14] The results of analyses indicate that only part of the ingredients of two ginger-lemon tea products were irradiated (RASFF 2002/BNP). It was however not possible to identify these ingredients.

[15] One sample of "Spirulina" pills, one sample of "pill with fruit- and vegetable powder" (RASFF 2003/ABO) and one sample of "vegetable powder for the preparation of a drink" (RASFF 2003/ABO) were irradiated. These products are not authorised for irradiation in the EU. The latter two samples had been imported from US via UK.

3.4. Denmark

In 2002 (as in 2001), the Danish Veterinary and Food Administration have not carried out analytical control to specifically check for irradiated foods at the marketing stage. There are two main reasons for this:

1. All Danish food producers, importers and retailers are obliged to carry out auto-controls in order to document to the authorities that they comply with the current legislation. An integral part of inspections carried out by the Danish Veterinary and Food Administration is the document control ensuring that all operators can demonstrate that they only use or market products containing irradiated dried aromatic herbs or spices if they are properly labelled.

2. In Denmark, an indirect approach to check for unlabelled or non-authorised irradiated foods has been chosen: On a continuous basis, a broad selection of foodstuffs is analytically monitored for their microbial quality. The results are also used as a first screening procedure to check whether dried aromatic herbs and spices have undergone irradiation. If a sample deviates significantly from the background, it is taken out for further analysis in order to determine if it has been irradiated or not. During the period of 1 January 2002 to 31 December 2002, this process has not identified any sample, which might have been irradiated.

3.5. Spain

In 2002, no analytical checks have been performed in Spain.

3.6. Finland

The checks focused on seafood products, herbal tea products and spices. Of the 122 samples that were taken, 3 were found to be irradiated, without having been labelled. The latter were taken off the market and notified to the Rapid Alert System for Food and Feed. The total result is similar to the result in 2001.

Food analysed	**Number of analysed samples**		**CEN method used**
	Result: non-irradiated	**Result: irradiated, not correctly labelled**	
Shellfish and mussels	27	2	EN13751 for screening purposes, confirmation by EN1788
Frog legs	2	1	
Herbal tea products	20	0	
Spices	73	0	
Total	**122**	**3**	
Total in % of analysed samples	**97.6**	**2.4**	

3.7. France

France approved a private laboratory to perform targeted surveys to check whether foods have been irradiated and/or correctly labelled. Four samples were analysed by the method EN 1788: onion powder from India, and from Egypt, mushrooms from Eastern European countries and garlic powder from China. No irradiation treatment was detected. However, it was discovered that certain companies in France using irradiation are not applying the labelling provisions on foods and food ingredients. Accordingly, the companies were reminded of the labeling provisions by the French competent authorities. The products concerned were dry mushrooms (75 % were not labelled) and gum arabic.

3.8. Greece

In 2002, no analytical checks have been performed in Greece because of the results of the corresponding control during the year 2001: all 99 samples analysed were not irradiated. The priorities for the year 2002 included other types of controls with respect to food safety. For the year 2003, a random survey on irradiated foods at the import points is scheduled.

3.9. Italy

No information has been submitted.

3.10. Ireland

The checks focused on herbs and spices and herbal supplements. Of the 356 samples that were taken, 46 were found to be irradiated and not labelled.

Nearly 13 % of samples tested, including 40 % of herbal supplements tested, were found to be irradiated and not labelled.

Food analysed	**Number of analysed samples**		**CEN method used**
	Result: non-irradiated	**Result: irradiated, not correctly labelled**	
Herbs and spices	254	11	EN13751 EN1788
Herbal supplements[16]	45	30	EN13751 EN1788
Miscellaneous (Tea, Coffee, Sauces, etc.)[16]	11	5	EN13751 EN1788
Total	**310**	**46**	
Total in % of analysed samples	**87.1**	**12.9**	

[16] Not authorised for irradiation in the Community.

3.11. Luxembourg

In 2002, no analytical checks have been performed in Luxembourg.

3.12. The Netherlands

In 2002, 888 samples were taken according to a planned programme. The results of the analysis of the different products and the methods used are shown in table.

None of the irradiated samples were correctly labelled. The producers of frog legs and herbs and spices received as a resulted an official report for the offences. The dietary supplements were sampled and researched within the framework of a monitoring exercise, therefore no official report was made.

Food analysed	**Number of analysed samples**		**CEN method used**
	Result: non-irradiated	**Result: irradiated, not correctly labelled (origin)**	
Nile perch	11	0	EN1785
Frog legs	23	7	EN1785
Dietary supplements	93	31	EN13751 EN1788
Spices and herbs	706	17	EN13751 EN1788
Total	**833**	**55**	
Total in % of analysed samples	**93.8**	**6.2**	

3.13. Portugal

In 2002, no analytical checks have been performed in Portugal. The first analytical checks have been carried out in 2003.

3.14. Sweden

During the year 2002, five samples have been taken in shops selling meat, mainly from poultry, and analysed by the method EN 1784. None of them were found to be irradiated.

3.15. The United Kingdom

In addition to herbs, spices and vegetable seasonings, checks were performed on mushrooms/edible fungi, prawns/shrimps, dietary supplements and strawberries. Of 237 samples, 7 were identified as irradiated and not labelled. A further 21 samples tested as "intermediate" using CEN method EN13751 and are inconclusive because they were not analysed further. The results for dietary supplements are similar to those reported in 2001 where a high proportion was identified as irradiated.

Food analysed	**Number of analysed samples**			**CEN method used**
	Result: non-irradiated	**Result: Inconclusive**	**Result: irradiated, not correctly labelled**	
Dried herbs and spices and vegetable seasonings	147	15	0	EN13751
Fresh herbs and spices	6	0	0	EN13751
Strawberries	2	0	0	EN13751
Mushrooms and edible fungi	9	1	1	EN13751
Prawns and shrimps	29	2	0	EN13751
Dietary supplements[16]	16	3	6	EN13751 EN1788
Total	**209**	**21**	**7**	
Total in % of analysed samples	**88.2**	**8.9**	**2.9**	

3.16. Summary for the EU

The following table summarises the samples analysed and the results obtained for the whole EU:

Member State	Number of analysed samples	
	Result: non-irradiated	**Result: irradiated, not correctly labelled**
A	60	0
B	-	-
D	3351	26
DK	-	-
E	-	-
FIN	122	3
F	4	0
EL	-	-
I	-	-
IRL	310	46
L	-	-
NL	833	55
P	-	-
S	5	0
UK	209	7
Total	**4894**	**137**
Total in % of analysed samples	**97.3**	**2.7**
Total in % of analysed samples without dietary supplements	**98.6**	**1.4**

4. CONCLUSIONS

4.1. Results of checks carried out in the irradiation facilities

Directive 1999/2/EC requires the Member States to inform the Commission about results of checks in irradiation facilities, about the categories and quantities of foods irradiated and about the average doses applied.

In 2002, irradiation facilities had approval in seven Member States, but some Member States did not provide all the information requested with respect to food categories treated, quantities or doses.

The precise amount of foods irradiated in the EU during 2002 is not exactly known due to incomplete reporting. Available reports account for approximately 20 000 t. Part of this amount has been irradiated for export. The Directive does not require reporting of the portions which are placed on the EU market or which are exported.

4.2. Results of checks carried out at the product marketing stage

Directive 1999/2/EC requires the Member States to inform about results of checks carried out at the product marketing stage and the analytical methods used to detect irradiated foods.

As in 2001, eight Member States submitted the requested data, whereas seven did not perform analytical checks during the period covered. The Commission asks all Member States to perform checks in the future in order to ensure compliance with the provisions of the Directive in the whole EU. To this end, the Commission will write formally to the Member States.

The situation in 2002 is similar to 2001. Again the number of samples analysed differs widely from one Member State to another. Few products on the market were found to be irradiated and not labelled. These products are mainly dietary supplements, herbs and spices or compound foods containing herbs and spices. Also, a few samples of non-labelled irradiated frog legs, aquatic animal products, mushrooms, fresh fruits, tea, coffee, sauces and similar products have been detected.

In 2001, the United Kingdom authorities found that 42% of certain dietary supplements on its market were irradiated. As the treatment of most of these products by ionising radiation is not allowed in the EU, other Member States have been asked to check this sector in order to ensure that the requirements of the Directive are respected. In 2002, four Member States (United Kingdom, Ireland, Germany and The Netherlands) performed checks on dietary supplements and still found that 29,4% of the products checked were irradiated. The Commission expects that the numbers of checks of these products are increased in all Member States and that irradiated products are withdrawn from the EU market. Member States are also invited to remind the food sector of the EU requirements with respect to food irradiation.

In total, about 5000 food samples have been checked of which about 2.7 % (including the irradiated dietary supplements in the United Kingdom, Ireland, Germany and the Netherlands) were irradiated but not labelled and some of them not authorised for irradiation. This is almost double the detections in 2001 where they were 1.4%. Excluding dietary supplements, about 1.4 % of the samples were found to be irradiated which is also an increase in comparison to 2001 (0.6%). In both cases, this may be accounted for by a more targeted nature of the sampling.

4.3. Deadline for the submission of results of checks for the report 2003

The deadline for the submission of results of checks to the Commission performed in 2003, according to Article 7 (3) of Directive 1999/2/EC, is 30 April 2004.