# Report from the Commission on food irradiation for the period September 2000 to December 2001

*(COM(2002) 549 final)*

(2002/C 255/02)

**SUMMARY**

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 became applicable on 20 September 2000. Since 20 March 2001 all irradiated foods on the market have to comply with the requirements of Directive 1999/2/EC. According to its Article 7(3) 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.

During the period covered by this report (September 2000 to December 2001) only six Member States had given an approval to facilities on their territory to irradiate foods. However four of these Member States had not yet transposed the Directive into national law. The individual reports of the Member States indicate that all facilities complied with most of the requirements of the Directive. The level of detail of these reports differed however substantially. For future reports the Commission will establish clear guidelines for a harmonised reporting format.

Eight Member States performed checks on foods placed on the market. The food types included in these checks varied between the Member States. The results show that in general only a few irradiated products are on the market which are not labelled as 'irradiated' (about 0,5 %). These products are herbs, spices or foods containing herbs or spices, frog legs, shrimps, prawns and vegetables. However, in the United Kingdom authorities found that 42 % of certain dietary supplements on the market are irradiated. Most of these products are not very common (aloe vera, alfalfa, cat's claw, devil's claw, garlic, ginger, ginkgo biloba, ginseng, guarana, kava kava, saw palmetto, silymarin, turmeric). 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 total more than 6 500 EUR food samples have been checked of which about 1,5 % (including the irradiated dietary supplements in the United Kingdom) were irradiated but not labelled. Some of them, in particular most of the dietary supplements, are not authorised for treatment by ionising radiation in the EU. The Commission expects that the number of irradiated dietary supplements will decrease sharply in consequence of additional checks performed by food control authorities of the Member States.

On the basis of the available information, the Commission concludes that, in general, the provisions of Directive 1999/2/EC are respected, in particular the labelling requirements that food business operators must indicate on each product whether it is irradiated or contains irradiated ingredients. Now that all Member States have transposed the Directives into national law, the Commission expects that compliance will improve even further.

## 1. LEGAL BASIS AND BACKGROUND

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] became applicable on 20 September 2000. All irradiated foods on the market have to comply with the requirements of Directive 1999/2/EC since 20 March 2001. According to its Article 7(3) 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.

Some Member States did not transpose Directive 1999/2/EC into national law in time, i.e. before 20 September 2000. The Commission launched therefore infringement procedures against some Member States. Since June 2002, the Directives have been transposed in all Member States. Due to the delayed transposition, not all checks have been performed according to the requirements of the Directive during the period covered by this report.

For practical reasons, this first report covers the period from 20 September 2000 to 31 December 2001. The following reports should then cover one full calendar year.

Information on general aspects of food irradiation, on EU legislation and on standardised analytical methods for the detection of irradiated foods is available on the website 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)).

At the beginning of the period covered by this report, six Member States had given approval to facilities to irradiate foods. Only the Netherlands and the United Kingdom had approved their facilities according to Directive 1999/2/EC. Belgium, Germany, Denmark and France had not yet transposed the Directive into national law and, therefore, their approvals were based on former national provisions. The list of authorised facilities in the Member States has been published and updated by the Commission [3], [4], [5].

### 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 [6]). 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 and up-dated by the Commission [7], [8], [9].

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

For the enforcement of the correct labelling or to detect non-authorised products, several analytical methods [2] have been standardised by the European Committee for Standardisation (CEN), following a mandate given by the Commission.

---

[2] http://europa.eu.int/comm/food/fs/sfp/fi_index_en.html

[3] OJ C 128, 28.4.2001, p. 7.

[4] OJ C 38, 12.2.2002, p. 17.

[5] OJ C 145, 18.6.2002, p. 5.

[6] OJ L 66, 13.3.1999, p. 24.

[7] OJ C 128, 28.4.2001, p. 6.

[8] OJ C 43, 16.2.2002, p. 18.

[9] OJ C 174, 20.7.2002, p. 3.

## 2. **RESULTS OF CHECKS CARRIED OUT IN THE IRRADIATION FACILITIES**

The Member States submitted the following information:

### 2.1. **Belgium**

IBA-Mediris, Fleurus, reported to the Belgium Federal Agency for Nuclear Control that 5 836 t of food has been irradiated in 2001.

### 2.2. **Germany**

Germany had approved two irradiation facilities during the period covered by this report:

(a) Gamma Service, Radeberg

The following table provides the categories and quantities of foods irradiated in the company Gamma Service, with the average absorbed doses. The vegetables were irradiated for export to non-EU countries.

| Food | Amount (t) | Average absorbed dose (kGy) |
|---|---|---|
| Spices, seasonings | 440 | 7-9 |
| Vegetables | 32 | 7-10 (*) |
| **Total** | **472 t** | |

(*) Not authorised in the Community.

(b) Gammaster Deutschland GmbH, Allershausen ([4])

An inspection by the competent authority on 9 October 2001 confirmed compliance with the requirements of Directive 1999/2/EC.

The company irradiated exclusively food for export to third countries.

### 2.3. **Denmark**

The Danish irradiation facilities authorised under the previous national authorisation agreed to stop irradiating foods until they were approved in accordance with Directive 1999/2/EC. Therefore, no checks were performed by the Danish competent authority during the period 20 September 2000 and 31 March 2002.

### 2.4. **France**

In France, six facilities were approved under national regulations during the period covered by this report. No checks were performed since the approval of the facilities according to Directive 1999/2/EC was ongoing.

The following table provides the categories and quantities of foods irradiated in France during 2001:

| Food | Amount (t) | Average absorbed dose (kGy) |
|---|---|---|
| Spices, herbs, dehydrated vegetables | 1 218 | 10 |
| Dried fruits | 17 | 1 |
| Gum arabic | 543 | 3 |

| Food | Amount (t) | Average absorbed dose (kGy) |
|---|---|---|
| Mechanically recovered chicken meat, meat and offal of chicken | 4 222 | 5 |
| Frozen frog legs | 878 | 5 |
| Dehydrated blood | 38 | 10 |
| **Total** | **6 925 t** (*) | |

(*) 8 853 t were treated during the year 2000.

## 2.5. **The Netherlands**

In the Netherlands there are two facilities in Ede and Etten-Leur, owned by the company Gammaster BV, which are licensed for performing irradiation by the Ministry of Public Health, Welfare and Sports. Inspections have been carried out by the Dutch Food Inspection Service (Keuringsdienst van Waren).

In general, the facilities complied with most of the requirements of Directive 1999/2/EC. The shortcomings identified during the inspection were discussed between the company and the competent authority. Follow-up by the Food Inspection Service has been foreseen in order to check whether the shortcomings are adequately addressed.

The following table provides the categories and quantities of foods irradiated in the Netherlands between 1 October 2000 until 30 September 2001:

| Food | Amount (t) in Ede | Amount (t) in Etten-Leur | Average absorbed dose (kGy) |
|---|---|---|---|
| Spices, herbs | 2 609 | 30 | No information submitted |
| Dehydrated vegetables | 656 | 1 245 | |
| Food additives (*) | 66 | 915 | |
| Dried fruits | 138 | — | |
| Flavourings (*) | 45 | — | |
| Poultry meat | 1 539 | 479 | |
| Shrimps | 116 | 27 | |
| Frog parts | 135 | 33 | |
| Egg whites | 95 | 673 | |
| Samples (*) | 33 | — | |
| **Total** | **8 843 t** | | |

(*) Not authorised in the Community.

## 2.6. **United Kingdom**

The company Isotron is licensed to irradiate certain spices and herbs. No food has been irradiated since 1999. An inspection, performed on 17 May 2001 by the competent authority, confirmed compliance with the requirements of Directive 1999/2/EC.

### 2.7. **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 22 000 t. Part of this amount has been irradiated for export, however the Directive does not require to report the portion which is placed on the internal market or 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**

| Food analysed | Number of analysed samples | | CEN method used |
|---|---|---|---|
| | Result: non-irradiated | Result: irradiated, not correctly labelled | |
| Spices | 21 | 0 | EN 1788 |
| **Total in % of analysed samples** | **100** | **0** | |

### 3.2. **Belgium**

No analytical checks have been performed.

### 3.3. **Germany**

| Food analysed | Number of analysed samples | | CEN method used |
|---|---|---|---|
| | Result: non-irradiated | Result: irradiated, not correctly labelled (origin) | |
| Milk products | 5 | 0 | |
| Cheese | 21 | 0 | EN 1784, EN 1788 |
| Cheese with herbs | 190 | 3 cream cheese with herbs | EN 1784, EN 1787, EN 1788, prEN 13751 |
| Butter with herbs | 10 | 0 | EN 1787, EN 1788 |
| Egg, egg products | 51 | 0 | |
| Meat (including frozen meat) | 165 | 0 | EN 1784, EN 1786, EN 1787 |
| Meat products (except sausages) | 37 | 0 | EN 1786 |
| Sausages | 108 | 0 | EN 1784, EN 1787, EN 1788 |
| Poultry, game | 46 | 0 | EN 1784, EN 1787 |
| Meat, poultry, game | 118 | 0 | EN 1784, EN 1786 |
| Fish, fish products | 120 | 0 | EN 1786 |
| Crustaceans | 341 | 0 | EN 1785, EN 1787, EN 1788 |

| Food analysed | Number of analysed samples | | CEN method used |
|---|---|---|---|
| | Result: non-irradiated | Result: irradiated, not correctly labelled (origin) | |
| Crustaceans, shell fish, molluscs and other aquatic animals and their products | 197 | 3 frog legs (1 Indonesia, 2 unknown origin) | EN 1787, EN 1788 |
| Pulses | 49 | 0 | EN 1787, EN 1788 |
| Soups, sauce | 68 | 0 | EN 1784 |
| Cereals, cereal products | 33 | 0 | EN 1784, EN 1788, prEN 13751 |
| Oil seeds | 38 | 0 | EN 1787 |
| Nuts | 186 | 1 pistachio (US, California) | EN 1784, EN 1787, EN 1788 |
| Potatoes, parts of plants with high starch content | 94 | 0 | EN 1788 |
| Fresh vegetables, salad | 77 | 0 | EN 1784, EN 1787, EN 1788 |
| Dried vegetables, vegetable products | 73 | 0 | EN 1787, EN 1788 |
| Mushrooms, fresh | 98 | 0 | EN 1788 |
| Mushrooms, dried or products | 175 | 2 mushrooms 1 cep | EN 1787, EN 1788 |
| Fresh fruits | 505 | 0 | EN 1784, EN 1787, EN 1788 |
| Dried fruits or fruit products | 305 | 0 | EN 1787, EN 1788 |
| Cacao powder | 39 | 0 | EN 1787, EN 1788 |
| Coffee, raw | 1 | 0 | |
| Tea, tea-like products | 131 | 0 | EN 1787, EN 1788 |
| Ready-to-serve meals | 39 | 0 | EN 1784, EN 1787 |
| Seasonings, including preparations and seasoning salts | 256 | 1 seasoning salt (Germany), contained also curry, coriander, paprika, spices | EN 1784, EN 1787, EN 1788, prEN 13751 |
| Spices and herbs | 1 897 | 1 ground chilli (US, California) 4 marjoram (2 from Hungary, 2 unknown origin), 7 paprika, 2 caraway, 1 basil | EN 1787, EN 1788, prEN 13751 |
| Asian noodle snacks, party snacks, pizza, TV snacks | 9 | 0 | EN 1788, prEN 13751 |
| Alcoholic beverages | 9 | 0 | EN 1784 |
| **Total** | **5 491** | **26** | |
| **Total in % of analysed samples** | **99,5** | **0,5** | |

3.4. **Denmark**

The Danish Veterinary and Food Administration have not on a routine basis 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 document 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 20 September 2000 to 31 March 2002, this process has not identified any sample which might have been irradiated.

3.5. **Spain**

No analytical checks have been performed.

3.6. **Finland**

| Food analysed | Number of analysed samples | | CEN method used |
|---|---|---|---|
| | Result: non-irradiated | Result: irradiated, not correctly labelled | |
| Marinated meat products | 20 | 4 | pr EN13751, if positive, confirmation by EN 1788 |
| Spices | 133 | 0 | |
| **Total** | **153** | **4** | |
| **Total in % of analysed samples** | **97,5** | **2,5** | |

The checks focused on the use of irradiated spices in marinated meat products and the possible irradiation of spices sold directly to the consumer. By traceability studies it was found that the same irradiated paprika powder had been used in the manufacture of all four irradiated non-labelled samples of marinated meat products.

3.7. **France**

No analytical checks have been performed.

3.8. **Greece**

| Food analysed | Number of analysed samples | | CEN method used |
|---|---|---|---|
| | Result: non-irradiated | Result: irradiated, not correctly labelled | |
| Spices | 99 | 0 | prEN 13751 |
| **Total in % of analysed samples** | **100** | **0** | |

3.9. **Italy**

No analytical checks have been performed. However, a training course for staff of public laboratories is foreseen for the second half of 2002.

3.10. **Ireland**

| Food analysed | Number of analysed samples | | CEN method used |
|---|---|---|---|
| | Result: non-irradiated | Result: irradiated, not correctly labelled | |
| Spices | 315 | 1 basil, 1 nutmeg | prEN 13751 |
| **Total in % of analysed samples** | **99,4** | **0,6** | |

3.11. **Luxembourg**

No analytical checks have been performed as there was no analytical equipment available.

3.12. **The Netherlands**

| Food analysed | Number of analysed samples | | CEN method used |
|---|---|---|---|
| | Result: non-irradiated | Result: irradiated, not correctly labelled | |
| Shrimps | 88 | 0 | prEN 13751, EN 1788 |
| **Total in % of analysed samples** | **100** | **0** | |

3.13. **Portugal**

No analytical checks have been performed.

3.14. **Sweden**

| Food analysed | Number of analysed samples | | CEN method used |
|---|---|---|---|
| | Result: non-irradiated | Result: irradiated, not correctly labelled | |
| Chicken meat | 5 | 1 | EN 1784 |
| **Total in % of analysed samples** | **83** | **17** | |

3.15. **United Kingdom**

In the United Kingdom checks were performed on herbs and spices, prawns and shrimps as well as on dietary supplements ([10]). Authorities found that 42 % of checked dietary supplements on the market were irradiated. The irradiation of most of these products is not authorised in the EU ([11]). Some of these products, most of which are not very common, are also sold as medicinal products.

([10]) Products like: aloe vera, alfalfa, cat's claw, devil's claw, garlic, ginger, ginkgo biloba, ginseng, guarana, kava kava, saw palmetto, silymarin (milk thistle), turmeric.

([11]) Garlic is authorised in some Member States (see footnote 9). Some products can be considered as spices which are authorised for radiation treatment in the whole EU.

Of the 64 samples which were found to be irradiated and unlabelled, 58 were dietary supplements. Detailed information is available on the Internet ([12]).

| Food analysed | Number of analysed samples | | CEN method used |
|---|---|---|---|
| | Result: non-irradiated | Result: irradiated, not correctly labelled | |
| Herbs and spices | 202 | 1 containing irradiated components | prEN 13751, if positive or intermediate EN 1788 |
| Prawns and shrimps | 197 | 1 irradiated whole, 4 containing irradiated components | prEN 13751, if positive or intermediate EN 1788 |
| Dietary supplements | 80 | 44 irradiated whole, 14 containing irradiated components (*) | prEN 13751, if positive or intermediate EN 1788 |
| **Total** | **479** | **64** | |
| **Total in % of analysed samples** | **88,2** | **11,8** | |
| **Total in % of analysed samples without dietary supplements** | **98,5** | **1,5** | |

(*) Not authorised in the Community.

3.16. **Summary for the EU**

The following table adds 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 | 21 | 0 |
| B | — | — |
| D | 5 491 | 26 |
| DK | — | — |
| E | — | — |
| FIN | 153 | 4 |
| F | — | — |
| EL | 99 | 0 |
| I | — | — |
| IRL | 315 | 2 |
| L | — | — |
| NL | 88 | 0 |

([12]) http://www.food.gov.uk/news/newsarchive/68301.

| Member State | Number of analysed samples | |
|---|---|---|
| | Result: non-irradiated | Result: irradiated, not correctly labelled |
| P | — | — |
| S | 5 | 1 |
| UK | 479 | 64 |
| **Total** | **6 651** | **97** |
| **Total in % of analysed samples** | **98,6** | **1,4** |
| **Total in % of analysed samples without dietary supplements analysed in the UK** | **99,4** | **0,6** |

## 4. **CONCLUSIONS**

Most Member States transposed Directive 1999/2/EC only during the period covered by this report. Therefore, certain requirements of Directive 1999/2/EC had not been enforced at national level for the whole period.

### 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.

Six Member States had given approval to irradiation facilities on their territory during the period covered by this report. However only in the Netherlands and in the United Kingdom were approvals given according to Directive 1999/2/EC. Approvals in Belgium, Germany and France were based on former national rules.

The Directive does not specify the level of detail for the reports. Consequently, the reports of the Member States differed substantially. Some Member States did not provide all the information requested with respect to categories, quantities or doses and gave only general statements. The checked facilities complied with most of the requirements of Directive 1999/2/EC.

In order to get complete information and comparable reports in the future, the Commission will set up a check list and will specify which results should be reported. The checks should be performed on a regular basis.

### 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.

Eight Member States submitted the requested data, whereas seven did not perform analytical checks during the period covered. The Commission expects that in the future all Member States perform checks in order to ensure compliance with the provisions of the Directive in the whole EU.

The results in the eight Member States are similar, although the number of samples analysed differs widely. Only a few products on the market were found to be irradiated and not labelled. These products are mainly herbs and spices or compound foods containing herbs and spices. Also, a few samples of non-labelled irradiated frog legs, shrimps, prawns and vegetables have been detected.

The United Kingdom also performed checks on dietary supplements. The results indicated that 42 % of the products checked were irradiated. Most of these products are also sold as medicinal products. However, care was taken during sampling to focus on the products which were sold as food. As most of these products are not authorised for treatment by ionising radiation in the EU, other Member States were asked by the Commission to check this sector in order to ensure that the requirements of the Directive are respected.

In total more than 6 500 food samples have been checked of which about 1,5 % (including the irradiated dietary supplements in the United Kingdom) were irradiated but not labelled. Some of them, in particular most of the dietary supplements ([11]), are not authorised for treatment by ionising radiation in the EU. The Commission expects that the number of irradiated dietary supplements will decrease sharply as a consequence of additional checks by the food control authorities of the Member States, now that the problem has been identified.

### 4.3. **General conclusions**

In general, it can be stated that compliance with the provisions of Directive 1999/2/EC is good. The checked irradiation facilities complied with most of the provisions and only a very limited number of irradiated samples have been detected which were not labelled or which were not authorised for irradiation treatment, with the exception of dietary supplements. For the latter, the Commission asked the Member States to control this sector and expects a sharp decrease of the number of irradiated dietary supplements as a result of these checks.

The Commission invites the Member States to regularly perform the necessary checks on irradiation facilities and on food products in order to enforce the requirements of the Directive in the whole EU. The Commission will develop guidelines to ensure more uniform reporting of results.

---

## Notice of the expiry of certain anti-dumping measures

(2002/C 255/03)

Further to the publication of a notice of impending expiry ([1]), following which no request for a review was received, the Commission gives notice that the anti-dumping measures mentioned below will shortly expire.

This notice is published in accordance with Article 11(2) of Council Regulation (EC) No 384/96 of 22 December 1995 ([2]) on protection against dumped imports from countries not members of the European Community.

| Product | Country(ies) of origin or exportation | Measures | Reference | Date of expiry |
|---|---|---|---|---|
| Footwear (with textile uppers) | People's Republic of China<br>Indonesia | Duty | Council Regulation (EC) No 2155/97<br>(OJ L 298, 1.11.1997) | 1.11.2002 |

([1]) OJ C 29, 1.2.2002, p. 2.
([2]) OJ L 56, 6.3.1996, p. 1, as last amended by Regulation (EC) No 2238/2000 (OJ L 257, 11.10.2000, p. 2).

---