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REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

on food and food ingredients treated with ionising radiation for the years 2022-2023

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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[1] on the approximation of the laws of the Member States concerning foods and food ingredients treated with ionising radiation, the Member States must forward to the Commission every year:

– the results of checks carried out in ionising irradiation facilities, including 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.

Article 7(4) of the Directive requires the Commission to publish in the Official Journal of the European Union a report on the information provided every year by the national supervisory authorities.

This report covers the period from 1 January 2022 to 31 December 2023. It contains a compilation of the information sent to the Commission by EU Member States and Northern Ireland.

Three EU Member States and the EFTA countries did not submit data in 2022 and 2023.

Period: 1/1/2022 – 31/12/2023

Countries concerned: EU Member States and Northern Ireland

Irradiation facilities:

– Number of countries with approved facilities: 13 Member States & Norway

– Number of approved facilities: 23

– Number of closed facilities: 0

– Number of countries irradiating: 10 Member States

Treatment data:

– Quantity of products treated: 4198.2 tonnes (-16.5 % compared to 2020-2021)

– Main commodities treated: 'Frozen frog legs' (70.31 %), 'Dried aromatic herbs, spices and vegetables seasoning' (27.62 %) and 'Mechanically recovered poultry meat' (2.07 %).

– Main place of irradiation: Belgium (69.9%)

Checks at marketing stage:

– Number of samples analysed: 7205

– Number of non-compliant samples: 51 (0.71 %)

– Main commodities analysed: 'Herbs and spices' (46.97 %) and 'Cereals, seed, vegetables, fruits and their products' (23.36 %)

1 BACKGROUND

Food irradiation is the treatment of foodstuffs by a certain type of radiant energy known as ionising radiation. Radiant energy has differing wavelengths and degrees of power and

[1] 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 066 13.3.1999, p. 16). ELI: http://data.europa.eu/eli/dir/1999/2/2008-12-11

disappears when the energy source is removed. Irradiation is used for sanitary and phytosanitary purposes to kill pathogenic bacteria (such as *Salmonella*, *Campylobacter* and *E. coli*) that can cause food poisoning and to eliminate organisms harmful to plant or plant products such as insects and other pests. It is also used to delay fruit ripening, to stop vegetables (such as onions and potatoes) from sprouting or germination, and ultimately to extend the shelf life of foodstuffs. Irradiation of food cannot replace proper food handling. Irradiated foods still require appropriate refrigeration and cooking prior to consumption when necessary.

The EU regulatory framework for irradiation of food ('food irradiation directives') consists of:

– Directive 1999/2/EC (framework Directive). It lays down provisions for the manufacturing, marketing and importation of foods and food ingredients treated with ionising radiation.

– Directive 1999/3/EC (implementing Directive) 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 radiation[2]. This list currently includes only one category of food: dried aromatic herbs, spices and vegetable seasonings.

In addition, the list of national authorisations of other food and food ingredients which may be treated with ionising radiation is published by the Commission in the Official Journal of the European Union.

Food and food ingredients can be treated with ionising radiation only in approved irradiation facilities. For facilities based on the territory of the EU, approval is given by the competent authorities of the Member States. Article 7(3) of Directive 1999/2/EC requires Member States to inform the Commission of the list of their approved irradiation facilities. This list is published in the Official Journal of the European Union[3].

Under 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’.

To control the correct implementation of this labelling requirement and detect foods which may have been illegally treated with ionising radiation, several analytical methods have been standardised by the European Committee for Standardisation (CEN).

2 APPROVED IRRADIATION FACILITIES

At the end of the reporting period (1 January 2022 - 31 December 2023), there were 23 approved irradiation facilities in the EU, which were located in 13 Member States: France (5), Germany (5), Bulgaria (2), the Netherlands (2), Spain (1), Belgium (1), Czech Republic (1), Croatia (1), Estonia (1), Italy (1), Hungary (1), Poland (1) and Romania (1).

Of those 13 Member States equipped with irradiation facilities, two did not irradiate any foodstuffs over the 2022-2023 period and one did not submit data.

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

[3] OJ C 37, 30.1.2019, p. 6–10

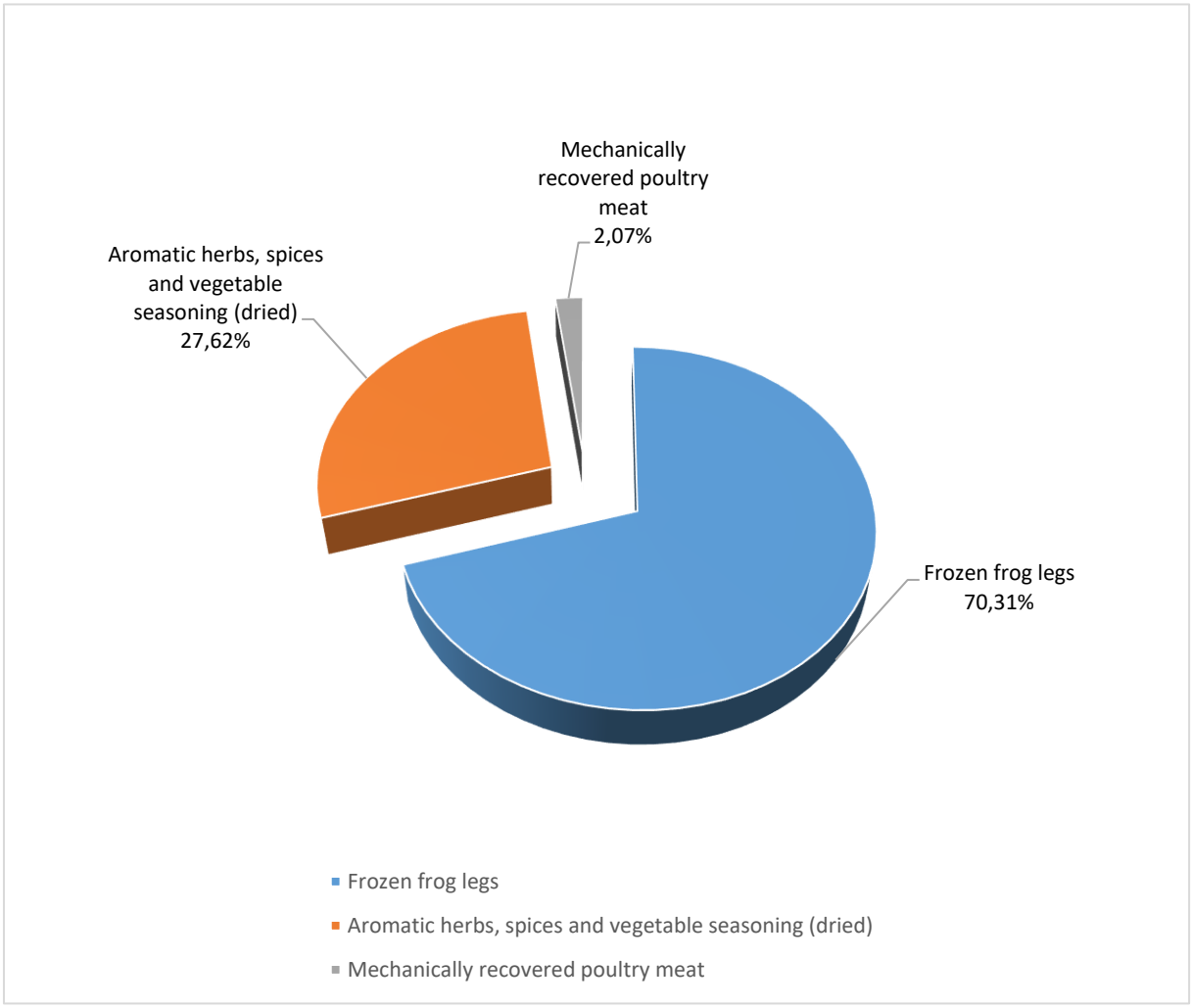
3 RESULTS OF CHECKS CARRIED OUT IN IRRADIATION FACILITIES IN 2022-2023

A total quantity of 4 198.2 tonnes of foodstuffs were treated with ionising irradiation in EU Member States during the years 2022 and 2023. The treatment took place mainly in Belgium, which treated 69.9% of the irradiated food of the EU.

The three main commodities irradiated in the EU were frozen frog legs (70.31%), dried aromatic herbs, spices and vegetables seasoning (27.62%) and mechanically recovered poultry meat (2.07%).

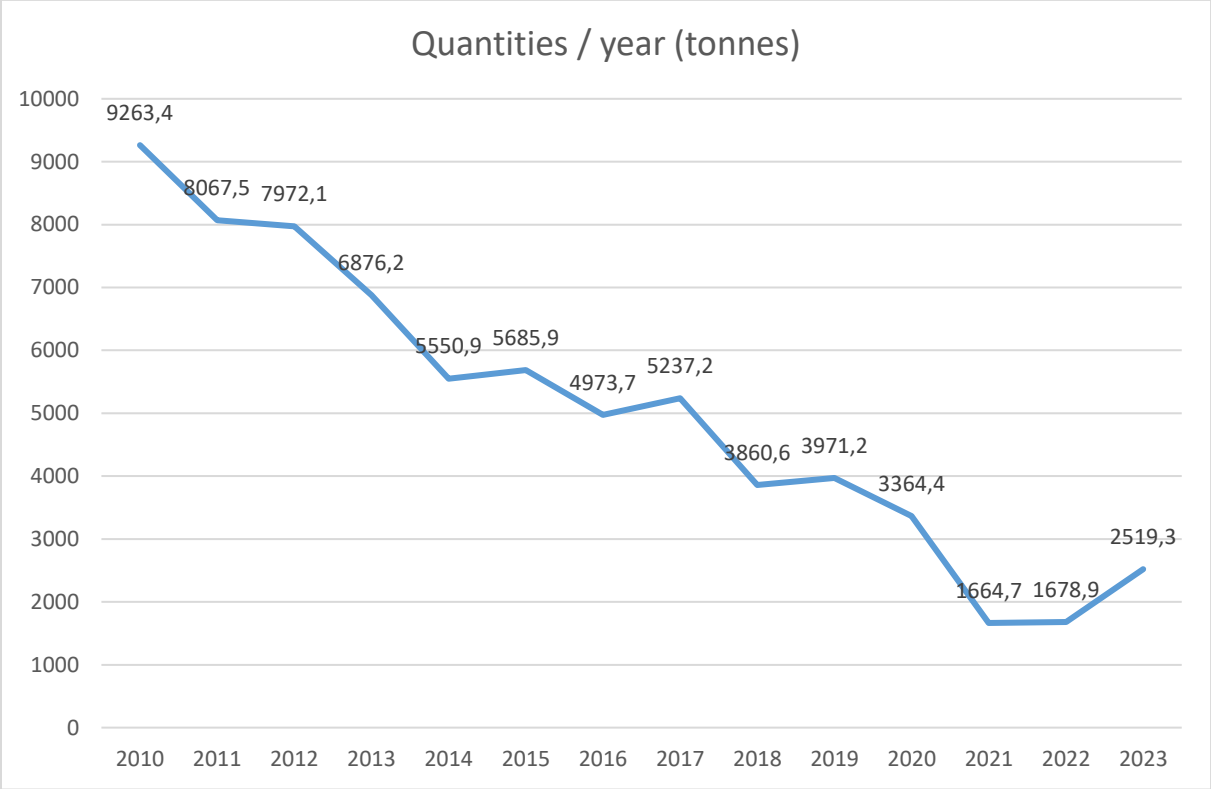
Figure 1 shows the distribution of products irradiated in approved facilities in the EU Member States in 2022 and 2023.

Figure 1 – Distribution by category of irradiated foodstuffs in the EU in 2022-2023



The quantities of foodstuffs (in tonnes) treated by ionising radiation in the EU are overall decreasing since 2010 as shown in Figure 2.

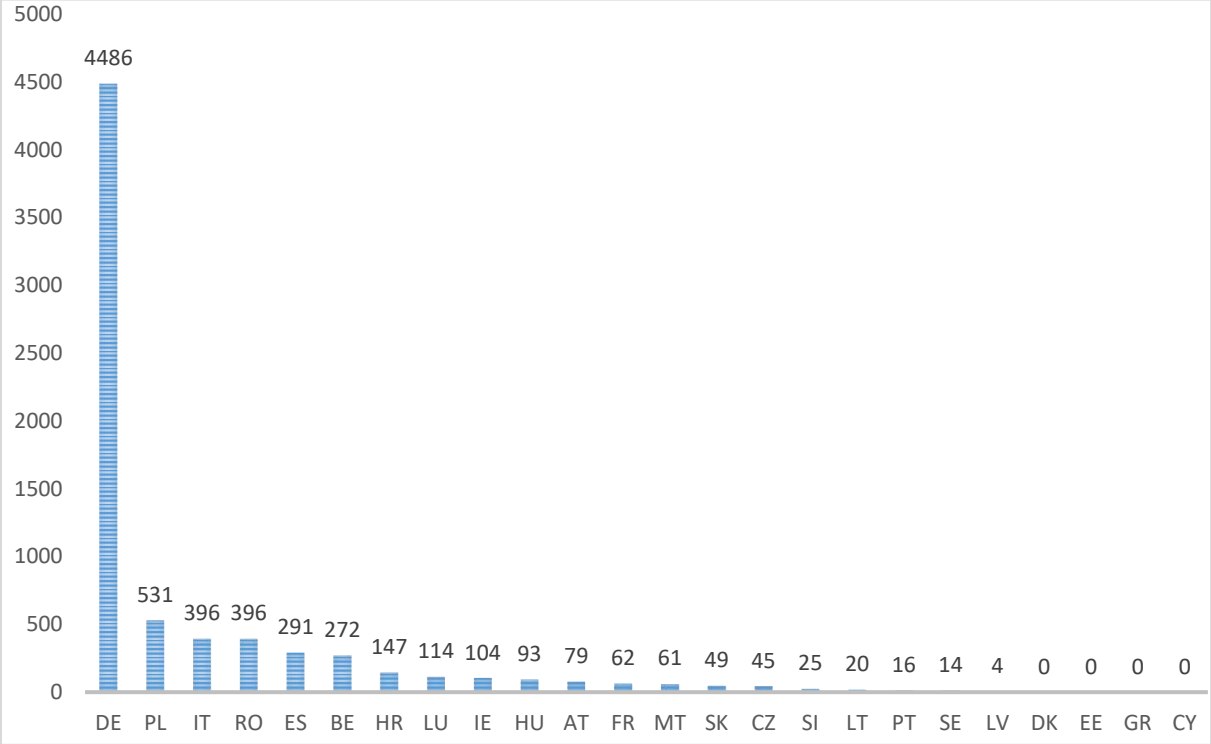
Figure 2 – Quantities of foodstuffs treated by ionising radiation in approved irradiation establishments within the European Union since 2010



4 RESULTS OF CHECKS AT PRODUCT MARKETING STAGE

For the period 2022-2023, 7 205 samples were analysed by 20 EU Member States for the detection of ionised foodstuffs at marketing stage (including foodstuffs imported from non-EU countries), i.e. overall 6% less in average than in 2020-2021. The data for each EU Member State are available in Annex II and summarised in Figure 3.

Figure 3 – Samples analysed at product marketing stage within each Member State in 2022-2023



Four Member States did not perform analytical checks at product marketing stage in 2022-2023 due to lack of laboratory capacity (Cyprus and Greece), staff restrictions (Estonia) or other reasons (Denmark).

From the total of 7205 samples analysed, 51 were not compliant (0.71%) and 105 (1.46%) gave inconclusive results. The non-compliances observed were mainly incorrect labelling and forbidden irradiation. The percentage of non-compliance (0.71%) was slightly lower than in the previous reporting period 2020-2021 (0.9%).

At marketing stage, as illustrated in Figure 4, the main foodstuffs analysed were 'herbs and spices' (46.97%) followed by 'cereals, seed, vegetables, fruit and their products' (23.36%).

Figure 4 – Foodstuffs category analysed at product marketing stage within the European Union in 2022-2023

