

# **STANDARD 1.5.3**

## **IRRADIATION OF FOOD**

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### **Purpose**

This Standard prohibits irradiation of food unless an express permission is given. All permissions in the Standard are subject to dosage requirements, and only apply where irradiation is undertaken for a permitted purpose.

Irradiation of foods must be carried out in facilities that are appropriately licensed and registered for the purpose of irradiation. There are various State, Territory, Commonwealth, New Zealand and International laws governing radiation control, and the operation of irradiation facilities. Other relevant Codes of Practice such as the Codex Alimentarius General Standard for Irradiated Foods 1983, and its associated Code of Practice for the Operation of Irradiation Facilities Used for the Treatment of Foods, also apply to irradiation processes.

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### **Clauses**

#### **1 Definitions**

In this Standard –

**irradiation** means the processing of food by subjecting it to the action of ionising radiation, but does not include ionising radiation imparted to food by measuring or inspection instruments, and ‘irradiate’ and ‘irradiated’ have corresponding meanings.

#### **2 General prohibition on irradiation of food**

Food must not be irradiated unless there is a specific permission in this Standard to irradiate the food.

#### **3 Permitted sources of radiation**

Where this Standard permits a food to be irradiated, the ionising radiation must be either –

- (a) gamma rays from the radionuclide cobalt 60; or
- (b) X-rays generated by or from machine sources operated at an energy level not exceeding 5 megaelectronvolts; or
- (c) electrons generated by or from machine sources operated at an energy level not exceeding 10 megaelectronvolts.

#### **4 Foods permitted to be irradiated**

A food listed in column 1 of the Table to this clause may be irradiated, provided that –

- (a) irradiation is only carried out for a purpose or purposes listed in column 3 of the Table to this clause; and

- (b) the absorbed dose of radiation is not below the minimum dose value or above the maximum dose value specified in column 2 of the Table to this clause.

**Table to clause 4**

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<b>Food</b>	<b>Minimum and Maximum Dose (kGy)</b>	<b>Purpose</b>
Apple Apricot Bread fruit Capsicum Carambola Cherry Custard apple Honeydew Litchi Longan Mango Mangosteen Nectarine Papaya (Paw paw) Peach Persimmon Plum Rambutan Rockmelon Scallopini Strawberry Table Grape Tomato Zucchini (courgette)	Minimum: 150 Gy Maximum: 1 kGy	Pest disinfestation for a phytosanitary objective.
Herbs and spices as described in Schedule 4 to Standard 1.4.2  Herbal infusions – fresh, dried or fermented leaves, flowers and other parts of plants used to make beverages, excluding tea	Minimum: none Maximum: 6 kGy	Control of sprouting and pest disinfestation, including control of weeds.
Herbs and spices as described in Schedule 4 to Standard 1.4.2	Minimum: 2 kGy Maximum: 30 kGy	Bacterial decontamination.
Herbal infusions – fresh, dried or fermented leaves, flowers and other parts of plants used to make beverages, excluding tea	Minimum: 2 kGy Maximum: 10 kGy	Bacterial decontamination.

## **5 Permission to irradiate**

- (1) A permission to irradiate a food is not a permission to irradiate the food more than once.
- (2) However, subclause (1) does not prohibit the irradiation of a food –
- (a) which is prepared from materials that have been irradiated at levels not exceeding in any case 1 kGy; or
  - (b) which contains less than 50 g/kg of irradiated ingredients; or
  - (c) where the required full dose of ionising radiation is applied to the food in divided doses for a specific technological reason.

## 6 Labelling

(1) The label on a package of irradiated food must include a statement to the effect that the irradiated food has been treated with ionising radiation.

### Examples:

'TREATED WITH IONISING RADIATION'

'IRRADIATED (name of food)'

(2) The label on a package of food containing an irradiated food as an ingredient or component, must include a statement that the ingredient or component has been treated with ionising radiation, either as part of the declaration of that ingredient or component in an ingredient list or elsewhere on the label.

(3) Where an irradiated food, or a food containing an irradiated food as an ingredient or component, is not required to bear a label pursuant to subclause 2(1) of Standard 1.2.1, there must be displayed on or in connection with the display of the food a statement that the food has been treated with ionising radiation, or that it contains an ingredient or component that has been treated with ionising radiation, as the case may be.

## 7 Record keeping

(1) Records must be kept at a facility where food is irradiated in relation to –

- (a) the nature and quality of the food treated; and
- (b) lot identification; and
- (c) the minimum durable life of the food treated; and
- (d) the process used; and
- (e) compliance with the process used; and
- (f) the minimum and maximum dose absorbed by the food; and
- (g) an indication whether or not the product has been irradiated previously and if so, details of such treatment; and
- (h) date of irradiation.

(2) The records required to be kept by subclause (1) must be kept for a period of time that exceeds the minimum durable life of the irradiated food by 1 year.

## Amendment History

The Amendment History provides information about each amendment to the Standard. The information includes commencement or cessation information for relevant amendments.

These amendments are made under section 92 of the *Food Standards Australia New Zealand Act 1991* unless otherwise indicated. Amendments do not have a specific date for cessation unless indicated as such.

### About this compilation

This is a compilation of Standard 1.5.3 as in force on **26 February 2015** (up to Amendment No. 153). It includes any commenced amendment affecting the compilation to that date.

Prepared by Food Standards Australia New Zealand on **26 February 2015**.

### Uncommenced amendments or provisions ceasing to have effect

To assist stakeholders, the effect of any uncommenced amendments or provisions which will cease to have effect, may be reflected in the Standard as shaded boxed text with the relevant commencement or cessation date. These amendments will be reflected in a compilation registered on the Federal Register of Legislative Instruments including or omitting those amendments and provided in the Amendment History once the date is passed.

The following abbreviations may be used in the table below:

ad = added or inserted	am = amended
exp = expired or ceased to have effect	rep = repealed
rs = repealed and substituted	

**Standard 1.5.3** was published in the Commonwealth of Australia Gazette No. P 30 on 20 December 2000 as part of Amendment No. 53 (F2008B00629 – 2 October 2008) and has been amended as follows:

Clause affected	A'ment No.	FRLI registration Gazette	Commencement (Cessation)	How affected	Description of amendment
Purpose	136	F2012L02175 12 Nov 2012 FSC 78 15 Nov 2012	15 Nov 2012	rs	Purpose to improve clarity.
1	136	F2012L02175 12 Nov 2012 FSC 78 15 Nov 2012	15 Nov 2012	rep	Definitions of 're-irradiate' and 'technological need'.
2	136	F2012L02175 12 Nov 2012 FSC 78 15 Nov 2012	15 Nov 2012	rs	Clause to improve clarity.
4	136	F2012L02175 12 Nov 2012 FSC 78 15 Nov 2012	15 Nov 2012	rs	Clause to improve clarity.
Table to clause 4	56	F2008B00794 9 Dec 2008 P 24 20 Sept 2001	20 Sept 2001	ad	Permission for the irradiation of herbs, herbal infusions and spices.
Table to clause 4	65	F2008B00812 23 Dec 2008 FSC 7 27 Feb 2003	27 Feb 2003	ad	Permission for the irradiation of specific tropical fruit.

Clause affected	A'ment No.	FRLI registration Gazette	Commencement (Cessation)	How affected	Description of amendment
Table to clause 4	101	F2008L03058 14 Aug 2008 FSC 43 14 Aug 2008	14 Aug 2008	rep	Editorial note following Table.
Table to clause 4	136	F2012L02175 12 Nov 2012 FSC 78 15 Nov 2012	15 Nov 2012	rs	Table, permission for the irradiation of persimmon also included.
Table to clause 4	141	F2013L00809 21 May 2013 FSC 83 23 May 2013	23 May 2013	ad	Permissions for the irradiation of capsicums and tomatoes.
Table to clause 4	150	F2014L01427 28 Oct 2014 FSC92 30 Oct 2014	30 Oct 2014	am	Correct wrong alphabetical order.
Table to clause 4	153	F2015L00196 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	Permissions for a number of fruits and vegetables.
5	136	F2012L02175 12 Nov 2012 FSC 78 15 Nov 2012	15 Nov 2012	rs	Clause to improve clarity.
6(1)	88	F2006L03270 5 Oct 2006 FSC 30 5 Oct 2006	5 Oct 2006	rs	Subclause to correct an inconsistent use of terminology.
6(1), (3)	136	F2012L02175 12 Nov 2012 FSC 78 15 Nov 2012	15 Nov 2012	am	Subclauses to improve clarity, including deletion of second example in subclause (1).
6(3)	150	F2014L01427 28 Oct 2014 FSC92 30 Oct 2014	30 Oct 2014	am	Correct typographical error.
6(4)	136	F2012L02175 12 Nov 2012 FSC 78 15 Nov 2012	15 Nov 2012	rep	Subclause.
7	136	F2012L02175 12 Nov 2012 FSC 78 15 Nov 2012	15 Nov 2012	ad	Clause to improve clarity.