

STANDARD 1.5.3

IRRADIATION OF FOOD

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

Column 1	Column 2	Column 3
Food	Minimum and Maximum Dose (kGy)	Purpose
Bread fruit Capsicum Carambola Custard apple Longan Litchi Mango Mangosteen Papaya (Paw paw) Persimmon Rambutan Tomato	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 clause 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.

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