MAURITIAN STANDARD

MS ISO 14470:2011

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Food irradiation — Requirements for the development, validation and routine control of the process of irradiation using ionizing radiation for the treatment of food

ICS 67.020

Mauritius Standards Bureau
Moka

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National foreword

This Mauritian Standard is identical with the International Standard **ISO 14470:2011,** *Food irradiation — Requirements for the development, validation and routine control of the process of irradiation using ionizing radiation for the treatment of food* published by the International Organization for Standardization (ISO). It was adopted by the Mauritius Standards Bureau in 2011 on the recommendation of the **Food Products Standards Committee** through its **Subcommittee on Food Hygiene** and approval of the **Standards Council** on **29 May 2013**. It was notified in the Government Gazette on **22 June 2013***.

For the purposes of this standard the following change should be made:

The words “International Standard” should be replaced by “Mauritian Standard”.

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Introduction

Food irradiation is the process where food is exposed to ionizing radiation in order to improve its safety and quality. It is intended to be used only on food that has been produced under good management practice (GMP) principles. Many countries are using irradiation as a technological choice at some stage in food processing, making relevant the establishment of standards to assist customers, irradiator operators, and consumers.

The irradiation of food can be used for different purposes including control of pathogenic microorganisms and parasites, reduction of the number of spoilage microorganisms, inhibition of the sprouting of bulbs, tubers and root crops, extension of product shelf life or phytosanitary treatment.

When applicable, food irradiation should be incorporated as part of a food safety management system (ISO 22000). The irradiation of food is a critical control point (CCP) of a Hazard Analysis and Critical Control Points (HACCP) programme, contributing to the minimization of risks from the transmission of pathogenic microorganisms to consumers.

The main purposes of this International Standard are to:

a) provide requirements for the irradiation of food consistent with current standards and practices;

b) provide directions for a technical agreement between the customer and the irradiator operator;

c) establish a documentation system to support the controls on the food irradiation process.

To facilitate the application of this International Standard, it has been constructed in a form that can be used by internal and external parties, including certification bodies, for auditing an irradiator operator to assess its ability to fulfil all requirements for the irradiation of food.

Food irradiation — Requirements for the development, validation and routine control of the ionizing radiation used for the treatment of food

1 Scope

This International Standard specifies requirements for the development, validation and routine control of the ionizing radiation process used for the treatment of food and establishes guidelines for meeting the requirements.

NOTE 1 Requirements in this International Standard are consistent with those developed by the Codex Alimentarius Commission (CAC/RCP 19-1979, Rev. 2-2003[21], and CODEX STAN 106-1983, Rev. 1-2003[22]).

This International Standard covers irradiation processes using the radionuclides ^{60}Co or ^{137}Cs, electron beams or X-ray generators.

The requirements given in this International Standard are the minimum necessary to control the food irradiation process.

NOTE 2 The requirements can be addressed by a food safety management system (see ISO 22000).

This International Standard does not specify requirements for the primary production and/or harvesting, post-harvest treatment, storage and shipment, and packaging for foods that are to be irradiated. Only those aspects of the food production directly related to the irradiation process that may affect the safety or quality of the irradiated food are addressed.

This International Standard does not specify requirements for occupational safety associated with the design and operation of irradiation facilities.

This International Standard does not cover measuring or inspection devices that utilize ionizing radiation.

The application of this International Standard does not exempt the user from compliance with current and applicable legislation.

IMPORTANT Attention is drawn to regulatory and legal requirements that possibly exist for the irradiation and sale of irradiated food and the requirement for authorization to irradiate food.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10012, *Measurement management systems — Requirements for measurement processes and measuring equipment*

ISO 22000, *Food safety management systems — Requirements for any organization in the food chain*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
absorbed dose
quantity of ionizing radiation energy imparted per unit mass of a specified material

NOTE 1 The unit of absorbed dose is the gray (Gy) where 1 Gy is equivalent to the absorption of 1 J/kg.