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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 18525.9-2026

Replacing GB/T 18526.7-2001

**Irradiation processing practice for agricultural products - Part
9: Chilled meat**

农产品辐照工艺 第9部分：冷却肉

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Table of Contents

- 4 Irradiation device
- 5 Requirements before irradiation
- 5.5 Establish loading mode and process documents
- 6 Irradiation process
- 7 Requirements after irradiation
- 7.1 Product Release
- 9 Chilled Meat

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 9 of GB/T 18525 "Irradiation Processes for Agricultural Products". GB/T 18525 has already published the following parts.

- 1. Legumes and their products;
- 2. Cereals and their products;
- Irradiation process for insect control and mold prevention in dried shiitake mushrooms (GB/T 18525.5);
- 6. Dehydrated Vegetables;
- 7. Spices and Seasonings;
- 8. Cooked Meat Products;
- 11. Dried Longan;
- 12. Pollen. This document supersedes GB/T 18526.7-2001 "Irradiation Sterilization Process for Cooled Packaging and Cut Pork" and is consistent with GB/T 18526.7-2001. Compared to previous versions, aside from structural adjustments and editorial changes, the main technical changes are as follows:
 - a) The scope of application has been changed (see Chapter 1, Chapter 1 of the 2001 edition);
 - b) Terms and definitions have been changed (see Chapter 3, Chapter 3 of the 2001 edition);

- c) Increased requirements for irradiation facilities (see Chapter 4);
- d) Pre-irradiation requirements have been changed (see Chapter 5, Chapter 4 of the 2001 edition);

4 Irradiation device

4.1 Irradiation devices shall comply with the relevant provisions of GB/T 17568 and GB/T 25306.

4.2 The irradiation device shall be a gamma-ray device that produces ^{60}Co or ^{137}Cs radionuclides, or an accelerator with an electron beam energy not exceeding 10 MeV. The device and the X-ray device that meets the relevant standards.

5 Requirements before irradiation

5.1 Product Requirements Chilled meat should comply with the relevant provisions of GB/T 40464. Product manufacturers should provide the irradiation processing unit with the product name and production batch number. The number, quantity, packaging size, irradiation requirements, and storage requirements before and after irradiation, etc.

5.2 Packaging The specifications and form of product packaging should facilitate irradiation processing, effectively prevent recontamination after irradiation processing, and comply with relevant regulations. The standard stipulates.

5.3 Selection of Irradiation Device The appropriate irradiation device should be selected based on the purpose of irradiation, the product state, and the physicochemical properties of the cooled meat to be irradiated.

5.4 Storage and Transportation The storage and transportation temperature of chilled meat before irradiation should be between 0°C and 4°C .

5.5 Establish loading mode and process documents

5.5.1 Dosage distribution testing should be conducted and the location of monitoring dosimeters should be determined according to the type, packaging, and requirements of chilled meat.

5.5.2 The minimum effective dose for chilled meat is 2kGy – 4kGy , which can be determined according to the type of chilled meat and the initial bacterial count. The maximum effective dose is... The dose received is 7 kGy ; the process dose should be set between the minimum effective dose and the maximum tolerable dose, and the specific value can be determined based on the actual irradiation purpose and quality. Determine; and minimize dosage non-uniformity.

5.5.3 The loading mode should be determined based on the packaging specifications of the

chilled meat, the irradiation device, and the form of the irradiation container.

5.5.4 The operating parameters of the irradiation device should be set according to the process dose and loading mode.

5.5.5 Irradiation process documentation shall be developed, including but not limited to process dose, loading mode, irradiation device operating parameters, and dose measurement... Measurement system, monitoring the location of dosimeters.

6 Irradiation process

6.1 Irradiation Operation Irradiation processing was organized according to the irradiation process documentation. The process included parameter setting, product loading and unloading, and dose monitoring. The irradiation was then monitored. The device and related parameters are monitored and recorded.

6.2 Dose Monitoring According to the irradiation process documentation, monitoring dosimeters are deployed for measurement and recording. The dosimeter measurement system is selected according to GB/T 16640. Select and regularly trace back to the national absorbed dose standard.

6.3 Irradiation Interruption If the irradiation process is interrupted, the impact on the absorbed dose of the chilled meat should be assessed, and subsequent treatment should be carried out and recorded.

6.4 Temperature Control The temperature during the irradiation of cooled meat should be controlled as much as possible and should not exceed 10°C.

7.1 Product Release

7.1.1 The irradiated product can only be released after confirming that the absorbed dose meets the process dose requirements and that there are no other abnormalities in the irradiation process.

7.1.2 When non-compliance with process dosage requirements or other non-conforming situations occur, they shall be handled in accordance with the non-conforming product management procedure.

7.2 Storage Irradiated chilled meat should be separated from unirradiated products and meet the requirements of GB/T 40464.

8. Record and File Management All records should be properly kept and retained for one year after the irradiation treatment.

9 Chilled Meat

1. Scope This document specifies the requirements for pre-irradiation, irradiation process,

post-irradiation, record keeping, and document management in the irradiation process of chilled meat. This document applies to the irradiation of chilled meat (pork, beef, mutton, chicken, duck, goose, etc.) after cutting and packaging for the purpose of controlling microorganisms.

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