



The National Standard of the People's Republic of China

National Food Safety Standard
Hygienic Standard for Irradiated Frozen Packaged Meat of
Livestock and Poultry

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Preface

This standard is a part of the series hygiene standards for irradiated food categories.

This standard was proposed by the Ministry of Health of the People's Republic of China.

This standard was drafted by the Beijing Health and Epidemic Prevention Station, Huaxi Medical University, Henan Provincial Health and Epidemic Prevention Station, and Institute of Nutrition and Food Hygiene, Chinese Academy of Preventive Medicine.

The main drafters of this standard: Xu Jikang, Zeng Lingfu, Ma Luo Cheng, Hanchi, and Zhang Zheng.

This standard is interpreted by the Chinese Academy of Preventive Medicine, which is entrusted by the Ministry of Health.

National Food Safety Standard

Hygienic Standard for Irradiated Frozen Packaged Meat of Livestock and Poultry

1 Scope

This standard specifies the irradiation dose, hygiene requirements and test methods for frozen packaged livestock and poultry meat such as pigs, cattle, sheep, chickens and ducks irradiated by radiation ^{60}Co or ^{137}Cs γ or electron beams less than 10 MeV generated by electron accelerators.

This standard applies to frozen packaged meat that is irradiated for the purpose of killing Salmonella in livestock and poultry meat.

2 Reference standards

The provisions contained in the following standards constitute provisions of this standard by reference in this standard. At the time of publication, the editions indicated were valid. All standards will be revised and parties using this standard should explore the possibility of using the latest version of the following standards.

GB 4789.4- 94 Microbiological Examination of Food Hygiene – Examination of Salmonella

GB 5009.17-1996 Method for Determination of Total Mercury in Foods.

GB 5009. 44-1996 Method for Analysis of Hygienic Standard of Meat and Meat Products

GB 7718- 94 General Standard for Food Labels

GB12694-90 Hygienic Specifications of Meat Packing Plant

3 Hygienic requirements

3.1 Raw material requirements

The raw meat for irradiation and sterilization shall be a good quality frozen packaged meat produced according to GB1 2694.

3.2 Irradiation dose and irradiation requirements

3.2.1 Irradiation dose: The average absorbed dose of irradiated frozen packaged livestock and poultry meat is not more than 2.5 kGy.

3.2.2 Irradiation requirements: uniform irradiation, accurate dose, unevenness of absorbed dose ≤ 2.0 .

3.3 Sensory requirements

The sensory indicators such as color, tissue state, viscosity, odor and boiled broth after irradiation of frozen packaged livestock and poultry meat should be consistent with hygienic standards for similar frozen meats that are not irradiated.

3.4 Physical and chemical indicators

The physical and chemical indicators should meet the requirements of Table 1.

Table 1 Physical and Chemical Indicators

| Items | Indicator |
|--|-----------|
| Total volatile base nitrogen, mg/kg \leq | 20 |
| Mercury (in Hg), mg/kg \leq | 0.05 |

3.5 Microbial indicator

Salmonella should not be detected in irradiated frozen packaged livestock and poultry meat.

4. Packaging and mark

4.1 Frozen segmented livestock and poultry meat should be sealed with composite plastic film for food packaging before irradiation. The carton used for the outer packaging is sealed with waterproof tape.

4.2 The package of irradiated frozen segmented livestock and poultry meat should be affixed to the uniform printed irradiation food mark, and in line with the provisions of GB 7718.

5 Test methods

5. 1 Total volatile base nitrogen detection is carried out in accordance with the

provisions of GB 5009. 44.

5.2 Mercury detection is carried out in accordance with the provisions of GB 5009.17

5. 3 Salmonella detection is carried out in accordance with the provisions of GB 4789.4