

ICS 67.120.30

CCS X 20



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

GB/T 36395-2024

Replacing GB/T 36395-2018

Technical specification for the processing of frozen surimi

冷冻鱼糜加工技术规范

Issued on: June 29, 2024

Implemented on: January 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

1	Scope
2	Normative references
3	Terms and definitions
4	Basic requirements
5	Requirements for the processing operation
5.1	Process flow
5.2	Acceptance of the raw fish
5.3	Pretreatment
5.4	Meat separation
5.5	Washing
5.6	Fine filtration and dewatering
5.7	Mixing
5.8	Inner packaging and weighing
5.9	Quick freezing
5.10	Metal detection
5.11	Outer packaging
5.12	Storage
5.13	Inspection
6	Records

1 Scope

The document sets the basic requirements for the processing of frozen surimi and the technical requirements applying to the processing operation, and describes the corresponding methods of substantiation.

It applies to the production of frozen surimi from live, chilled or frozen fish.

3 Terms and definitions

The terms and definitions given in GB/T 36187 and GB/T 36193 apply to the document; no further term is defined in it.

4 Basic requirements

4.1 The water used in processing and for making ice is to meet GB 5749.

4.2 White granulated sugar is to meet GB/T 317, and other auxiliary materials are to meet the corresponding standards.

4.3 The temperature of the processing workshop is preferably not higher than 20 °C.

5 Requirements for the processing operation

5.1 The process flow for frozen surimi is given in Figure 1. The figure is an image and its content could not be read from the extracted text; the sequence of operations is however set out clause by clause in 5.2 to 5.13.

5.2 The raw fish is to be live, chilled or frozen fish. Live fish are to be clean and free of contamination, fresh marine fish are to meet GB/T 18108 and frozen fish GB/T 18109; the source of the raw fish and the supply documents are checked on receipt, and every batch is to be accepted before it is taken in. Accepted raw fish is stored by species and processed as soon as possible: fresh raw fish is preferably covered with crushed ice or held at 0 °C to 4 °C before processing, preferably for no longer than 3 d, while frozen fish is held in a cold store no warmer than -18 °C and processed in turn on a first in, first out basis.

5.3 Frozen raw material is thawed first, and the fish is to be no warmer than 10 °C after thawing. The raw fish is washed clean and the scales, head, viscera and black membrane are removed completely, the fish being split where necessary. The water temperature during washing is preferably held below 15 °C.

5.4 The mesh aperture of the meat separator is preferably 3 mm to 5 mm, and the temperature of the minced flesh is preferably held below 10 °C.

5.5 The minced flesh is to be washed, preferably at a water temperature below 10 °C. The number of washes, from one to three, is set by the species, the freshness and the product required, and the ratio of flesh to water in washing is preferably from 1 to 5 up to 1 to 10; red-fleshed fish is preferably washed with weakly alkaline water. Edible salt or another dewatering aid may be added at the last wash, the salt concentration preferably not exceeding 0.3 % as a mass fraction.

5.6 A fine filter is used to remove residual small bones, skin and scales from the flesh, its mesh diameter preferably 0.5 mm to 2.0 mm. A dewatering machine removes the surplus water so that the moisture content of the flesh is no higher than 80 %, its mesh diameter preferably 0.2 mm to 0.6 mm. The temperature of the flesh during fine filtration and dewatering is to be held below 10 °C.

5.7 The filtered and dewatered surimi is transferred to a mixer or a chopper and a suitable amount of white granulated sugar and other cryoprotectants is mixed in evenly. The temperature of the surimi during mixing is preferably held below 10 °C.

5.8 The mixed surimi is formed into rectangular blocks or other shapes. The inner packaging is to be clean, strong, non-toxic and free of off-odours, and its colour is to be clearly different from that of the surimi. The maximum capacity of the weighing instrument used is preferably not more than five times the weight being weighed, and the net content is to meet JJF 1070.

5.9 The weighed surimi is quick frozen as soon as possible, and the core temperature after freezing is to reach $-18\text{ }^{\circ}\text{C}$ or below.

5.10 The product is checked with a metal detector before it is boxed. Where a product is found to contain metal it is picked out, marked conspicuously and dealt with separately, and steps are taken to find where the metal came from.

5.11 The outer packaging is to meet SC/T 3035, and the label is to show the quality grade of the product.

5.12 Packed product is stored in a clean, hygienic cold store free of off-odours and protected from pests, contamination by harmful substances and other damage. Products of different species, size and batch are stacked separately and marked clearly, raised on pallets not less than 10 cm from the floor and not less than 30 cm from the store wall, the stack height being such that the cartons are not deformed under load; goods move in and out on a first in, first out basis. The cold store is to be no warmer than $-18\text{ }^{\circ}\text{C}$ and its temperature is to vary by no more than $\pm 2\text{ }^{\circ}\text{C}$.

5.13 Every batch of processed product is subject to delivery inspection, carried out as laid down in GB/T 36187, and the inspection records are kept.

6 Records

6.1 A record keeping system is to be set up covering the acceptance of the raw fish, the processing operation and the requirements on the product leaving the factory.

6.2 The record of raw fish acceptance covers at least the date of receipt, the species, the source, the size, the quantity and the outcome of inspection and acceptance.

6.3 The record of the processing operation covers the temperature control at every step: the temperature of the fish at acceptance, the temperature of the fish and of the water at pretreatment, the temperature of the flesh at meat separation, the temperature of the wash water at washing, and the temperature of the flesh at fine filtration, dewatering and mixing.

6.4 The product record covers the production batch number, the production date, the shift, the quantity and size of the product and the inspection record of the finished goods.

6.5 All records are kept for not less than 2 years.