

Tentative Translation

JAS
1132

JAPANESE AGRICULTURAL
STANDARD

Boiled and dried small fishes

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Ministry of Agriculture, Forestry and Fisheries

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Food and Agricultural Materials Inspection Center, Incorporated Administrative Agency

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Foreword

This Japanese Agricultural Standard has been revised by the Minister of Agriculture, Forestry and Fisheries through deliberations at the Council for the Japanese Agricultural Standards as the result of proposal for revision of Japanese Agricultural Standard submitted by National Boiled and Dried Fishes Association with the original bill being attached, based on the provision of Article 4, paragraph (1) of the Act on Japanese Agricultural Standards as applied mutatis mutandis pursuant to the provision of Article 5 of the Act. This edition replaces the previous edition of JAS for Boiled and dried small fishes (JAS 1132:2024), which has been technically revised.

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Boiled and dried small fishes

1 Scope

This document specifies the quality of boiled and dried small fishes.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. The latest edition of the referenced document (including any amendments) applies.

CODEX STAN 192, *General Standard for Food Additives*

JIS K 8001, *General rules for test methods of reagents*

JIS R 3503, *Glass apparatus for chemical analysis*

JIS Z 8801-1, *Test sieves Part 1: Test sieves of metal wire cloth*

3 Terms and definitions

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

3.1

boiled and dried small fishes

fishes that has been boiled to coagulate the protein and dried

3.2

belly-blown fish

fish with torn stomach and organs fallen out

3.3

headless fish

fish whose head has fallen off

4 Quality

The quality of boiled and dried small fishes shall conform to the quality criteria for each classification of Table 1.

Table 1 — Quality criteria for each classification of boiled and dried small fishes

Category	Criteria	
	Superior grade	Normal grade
Form	Being as follows: a) There are excellent firm flesh and undamaged skin; percentage of belly-blown fish being 10 % or less;	Being as follows: a) There are good firm flesh and undamaged skin; percentage of belly-blown fish being 30 % or less; b) There are a few headless fish.

	b) There are few headless fish; c) Body lengths are mostly the same.	
Color and luster	The unique color and luster being in excellent condition; yellowing due to oxidized oil stain being minimal	The unique color and luster being in good condition; yellowing due to oxidized oil stain being limited
Flavor	The unique flavor being in excellent condition; odor of oxidized oil stain not being present	The unique flavor being in excellent condition; odor of oxidized oil stain being minimal
Edible organic extraneous matters	Almost none	
Crude fat	5 % or less when tested by the method specified in 5.3	8 % or less when tested by the method specified in 5.3
Moisture content	18 % or less when tested by the method specified in 5.2	
Ingredients	Not using ingredients other than those listed below: a) sardine(<i>Sardinops melanostictus</i>), anchovy(<i>Engraulis japonicus</i>), round herring(<i>Etrumeus micropus</i>) and jack mackerel(<i>Trachurus japonicus</i>); b) salt (limited to use when boiling fish).	
Additives	Being as follows: a) They conform to the provisions of 3.2 of CODEX STAN 192, and the conditions of use conform to the provisions of 3.3 of the document; b) The amounts of use are accurately recorded and the record is kept; c) Information that the additives conform to the provision of a) is provided to general consumers by one of the following methods; provided, however, that this does not apply to the cases where additives are added to products for business use: <ol style="list-style-type: none"> 1) methods of making it available for public inspection via the internet; 2) methods of displaying it on brochures, leaflets and any other publications where it is easily seen by general consumers; 3) methods of displaying it at a place where it is easily seen by general consumers in stores; 4) methods of providing it to general consumers at their request, while clearly indicating the contact address on the products. 	
Net contents	Conform to the declared weight	

5 Test methods

5.1 General

Reagents and apparatus for the testing shall be as follows:

- a) Reagents**, conforming to standards such as the special grade of Japanese Industrial Standards;
- b) Test sieve**, specified in JIS Z 8801-1;
- c) Weighing can**, made of aluminum, 50 mm or more in bottom diameter, 25 mm or more in height, with a lid;
- d) Constant temperature drying oven**, with a precision in temperature adjustment of within plus

± 2 °C, when setting the constant temperature drying oven at 105 °C;

- e) **Desiccator**, nominal size 240 mm or 300 mm specified in JIS R 3503 and specified in JIS K 8001;
- f) **Aluminum foil cup**, made by cutting out a circle with a diameter of about 15 cm from an aluminum foil and shaping it to a cup using a 100 mL beaker specified in JIS R 3503, or a cup with a base of 50 mm in diameter and can be folded at the top to seal it;
- g) **Soxhlet extractor**, specified in JIS R 3503 or of equivalent quality.

5.2 Moisture content

5.2.1 preparation of sample

Samples shall be pulverized using a grinder or similar equipment. Powdered samples that pass through a sieve with a mesh size of 850 μm shall be used as test samples.

5.2.2 Measurement

The measurement shall be as follows:

a) Measurement using a weighing can:

- 1) Place the weighing can, with the lid opened, in a constant temperature drying oven that has been preheated to 105 °C. Confirm that the temperature inside the oven is 105 °C on the display and heat the weighing can for 1 hour. Put the lid on the weighing can in the constant temperature drying oven. Transfer the weighing can to the desiccator and let it cool down to room temperature. Once the temperature of the weighing can reaches room temperature, immediately weigh it to the nearest 0,1 mg. Repeat these steps to obtain the constant weight of the weighing can;
- 2) Weigh approximately 2 g of the test sample to the nearest 0,1 mg in the weighing can for which the constant weight has been measured;
- 3) Open the lid of the weighing can which the test sample was put in. Place the weighing can and the lid in a constant temperature drying oven that has been preheated to 105 °C. Confirm that the temperature inside the oven is 105 °C on the display and heat the sample for 5 hours;
- 4) Put the lid on the weighing can in the constant temperature drying oven. Transfer the weighing can to the desiccator and let it cool down to room temperature. Once the temperature of the weighing can reaches room temperature, immediately weigh it to the nearest 0,1 mg;

b) Measurement using an aluminum foil cup:

- 1) Weigh the aluminum foil cup to the nearest 0,1 mg;
- 2) Weigh approximately 2 g of the test sample to the nearest 0,1 mg in the aluminum foil cup;
- 3) Place the cup in a constant temperature drying oven that has been preheated to 105 °C. Confirm that the temperature inside the oven is 105 °C on the display and heat the sample for 5 hours;
- 4) Fold the top of the aluminum foil cup in the constant temperature drying oven to seal the cup. Transfer the cup to the desiccator and let it cool down to room temperature. Once the temperature of the cup reaches room temperature, immediately weigh it to the nearest 0,1 mg.

5.2.3 Calculation

The moisture content is given by the following formula:

$$M = \frac{W_1 - (W_2 - W_0)}{W_1} \times 100$$

where

M is the moisture content (%);

W_0 is the mass of the drying container (g);

W_1 is the mass of the test sample before drying (g);

W_2 is the mass of test sample and the drying container after drying (g).

5.3 Crude fat

5.3.1 preparation of sample

Samples shall be pulverized using a grinder or similar equipment. Powdered samples that pass through a test sieve with a mesh size of 850 μm shall be used as test samples.

5.3.2 Extraction of fat

The extraction of fat shall be as follows:

- a) Place the extraction flask in a constant temperature drying oven that has been preheated to 105 °C. Confirm that the temperature inside the oven is 105 °C on the display and heat the extraction flask for 1 hour. Transfer the extraction flask to the desiccator and let it cool down to room temperature. Once the temperature of the extraction flask reaches room temperature, immediately weigh it to the nearest 0,1 mg. Repeat these steps to obtain the constant weight of the extraction flask;
- b) Weigh approximately 5 g of the test sample to the nearest 0,1 mg in a filter paper thimble. Put a piece of absorbent cotton inside the filter paper thimble so that it covers the test sample. Place the filter paper thimble in a constant temperature drying oven that has been preheated to 105 °C. Confirm that the temperature inside the oven is 105 °C on the display and heat the sample for 3 hours. Transfer the filter paper thimble to the desiccator and let it cool down to room temperature;
- c) Pour about 150 mL of diethyl ether in the extraction flask mentioned in a). Put the filter paper thimble mentioned in b) in the Soxhlet extractor, connect the extraction tube of the Soxhlet extractor to the flask, and attach a cooling tube. Adjust the temperature of the constant temperature water bath (about 55 to 65 °C) so that the diethyl ether drips at a constant speed of 5 to 6 drops per second. Extract the fat for 4 hours;
- d) After extraction is complete, remove the extraction flask and dispose of the diethyl ether. Place the extraction flask in a constant temperature drying oven that has been preheated to 105 °C. Confirm that the temperature inside the oven is 105 °C on the display and heat the flask for 1 hour. Transfer the flask to the desiccator and let it cool down to room temperature. Once the temperature of the extraction flask reaches room temperature, immediately weigh it to the nearest 0,1 mg.

5.3.3 Calculation

The crude fat content is given by the following formula:

$$F = \frac{W - W_0}{S} \times 100$$

where

- F is the crude fat content (%);
- W is the mass of extraction flask after extraction (g);
- W_0 is the mass of extraction flask before extraction (g);
- S is the mass of the test sample in the filter paper thimble (g).