

Draft Tanzania Standard

Canned finfish – Specification

Draft Standard for comments only

TANZANIA BUREAU OF STANDARDS

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0. Foreword

Finfish is any fish other than shell fish and flat fish. Canned finfish is the product produced from the flesh of any species of finfish which is suitable for human consumption and may contain a mixture of species, with similar sensory properties, from within the same genus. This product has been in use thus the need to ensure its safety and quality.

In preparation of this Tanzania standard assistance was drawn from CODEX STAN 119: 2013- Standard for canned finfish published by Codex Alimentarius Commission.

In reporting the result of a test or analysis made in accordance with this standard, if the final value observed or calculated, is to be rounded off, it shall be done in accordance with TZS 4 (See clause 2).

1 Scope

This Tanzania standard specifies requirements, methods of sampling and test for canned finfish packed in water, oil or other suitable packing medium. It does not apply to specialty products where the canned finfish constitutes less than 50% m/m of the net contents of the can.

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.

TZS 4:2009 - Rounding off numerical values
TZS 50 (4th Ed) Sunflower oil – Specification

TZS 53 Edible cotton seed oil – Specification
TZS 109- Food processing units - Code of hygiene – General

TZS 121 Method for microbiological examination of *Clostridium botulinum* and *Clostridium botulinum* toxin in foodstuffs
TZS 132 Edible common salt – Specification

TZS 271 Edible palm oil specification

TZS 447- Fish and fishery products - determination of histamine

TZS 538 Packaging and labelling of foods

TZS 1492Fruit and vegetable products —Determination of tin content

TZS 2230 Lead determination in fish and fishery product

AOAC 2015.01, Heavy metals in food

CXG 31-1999- Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories

CAC/GL 50, General guidelines on sampling

CAC/RCP 52, Code of practice for fish and fishery products

3 Terms and definitions

For the purpose of this standard the following terms and definitions shall apply;

3.1 canned finfish

finfish preserved by canning

3.2 canning

processing treatment applicable in food products packed in suitable media and hermetically sealed to ensure commercial sterility

3.3 food grade material

material that will not transfer non-food chemicals into the food and contains no chemicals which would be hazardous to human health

3.4 foreign matter

any matter present in the sample, which has not been derived from finfish or the packing medium that does not pose a threat to human health and is readily recognized without magnification

3.5 commercial sterility

conditions achieved by application of heat which renders such food free from microorganisms capable of growing in the food at temperatures at which the food is likely to be held during manufacture, distribution and storage

4 Requirements

4.1 General requirements

4.1.1 Raw material

4.1.1.1 The product shall be prepared from sound finfish from which the heads, tails and viscera have been removed.

4.1.1.2 All other ingredients used shall be of food grade quality and conform to applicable Tanzania standards.

4.1.2 Finished product

4.1.2.1 The product shall be free from any foreign material that compromise safety and quality. The product shall be free from container integrity defects which may compromise the hermetic seal.

4.2 Specific requirements

Canned finfish will be considered defective when it exhibits any of the following properties:

- i. Presence of foreign matter determined by visual method.
- ii. Objectionable odours or flavours indicative of decomposition or rancidity determined as per CXS/GL 31;
- iii. Excessive mushy or tough flesh texture uncharacteristic of the species in the presentation determined as per CXS/GL 31;
- iv. Distinct discoloration indicative of decomposition or rancidity or by sulphide staining of the flesh exceeding 5% of the net contents determined as per CXS/GL 31;
- v. If the average net weight and the average drained weight where appropriate of all sample units examined is less than the declared weight or drained weight determined as per Annex A; and
- vi. When tested in accordance with TZS 447, the level of histamine shall not exceed 20 mg per 100 g.

5 Contaminants

Heavy metals

Canned finfish shall comply with the heavy metal limits given in Table 1.

Table 1 — Heavy metal limits for canned finfish

S/No.	Heavy metal	Maximum limit, mg/kg	Test method
i.	Lead	0.3	TZS 2230
ii.	Cadmium	0.3	AOAC 2015.01
iii.	Mercury	0.5	
iv.	Tin	250	TZS 1492

5.2 Pesticide residues

Canned finfish shall conform to maximum residue limits for pesticide residues established by the Codex Alimentarius Commission for this commodity.

6 Hygiene

6.1 Canned finfish shall be produced and handled in a hygienic manner in accordance with TZS 109 and CAC/RCP 52.

6.2 The product shall pass the commercial sterility test which is evidenced by bulging or swelling of the can at 37 °C for seven days.

6.3 When tested in accordance with TZS 121, *Clostridium botulinum* shall be absent in canned finfish.

7 Sampling and test

7.1 Sampling

Sampling of canned finfish shall be done according to the Codex general guideline on sampling (CAC/GL 50).

7.2 Test

Testing of canned finfish shall be done according to test methods prescribed in Table 1 and in other parts of this standard.

8 Food additives

Additive	Maximum Level in the Final Product
Thickening or Gelling Agents (for use in packing media only)	GMP
400 Alginic acid	
401 Sodium alginate	
402 Potassium alginate	
404 Calcium alginate	
406 Agar	
407 Carrageenan and its Na, K, and NH ₄ salts (including furcelleran	
407a Processed <i>Euchemma</i> Seaweed (PES)	
410 Carob bean gum	
412 Guar gum	
413 Tragacanth gum	
415 Xanthan gum	
440 Pectins	
466 Sodium carboxymethylcellulose	
Modified Starches	
1401 Acid treated starches (including white and yellow dextrins)	
1402 Alkaline treated starches	
1404 Oxidized starches	
1410 Monostarch phosphate	
1412 Distarch phosphate, esterified	
1414 Acetylated distarch phosphate	
1413 Phosphated distarch	

phosphate	
1420/1421 Starch acetate	
1422 Acetylated distarch adipate	
1440 Hydroxypropyl starch	
1440 Hydroxypropyl starch	
1442 Hydroxypropyl starch phosphate	
Acidity Regulators	GMP
260 Acetic acid	
270 Lactic acid (L-, D-, and DL-)	
330 Citric acid	
Acidity Regulators	
Natural Flavours	
Spice oils Spice extracts Smoke flavours (Natural smoke solutions and extracts)	GMP

9 Weights and Measures

Canned finfish shall be packaged in accordance with Weights and Measures requirements of the destination country.

10 Packing, marking and labeling

10.1 Packing

Canned finfish shall be packed in suitable food grade materials.

10.2 Marking and labeling

In addition to the requirements of TZS 538; the following labeling requirements shall apply and shall be legibly and indelibly marked

- a) name of the product as "Canned finfish" and common or species name or mixture thereof
- b) date of production;
- c) date of expiry;
- d) name and physical address of the processor;
- e) drained weight in Système International (SI) units (metric units);
- f) batch or lot number;
- g) packing medium used;
- h) list of ingredients in descending order of proportion;
- i) Instruction for use; and
- j) The language on the label shall be Swahili and/or English Another language may be used depending on the designated market.

10.3 The containers may also be marked with the TBS Standards Mark of Quality.

NOTE: The TBS Standards Mark of Quality may be used by the manufacturers only under license from TBS. Particulars of conditions under which the licenses are granted, may be obtained from TBS.

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Annex A (normative)

Determination of drained weight

A.1 Apparatus

Test sieve 200 (Aperture 2.00 mm) — BS Sieve 8 or Tyler Sieve 9 or ASA Sieve 10 (same as ASTM Test Sieve), may also be used.

A.2 Procedure

A.2.1 Carefully weigh the clean and dry sieve and transfer the contents of the can to the sieve. Allow to drain for five minutes and weigh the sieve with the contents. The difference between the two weights gives the drained weight. Calculate the drained weight as percentage of the water capacity of the can. Retain the residue on the sieve as well as the drained liquid.

A.2.2 Determine the water capacity of the can by the procedure given in A.2.2.1 to A.2.2.4.

A.2.2.1 Cut out the lid without removing or altering the height of the double seam.

A.2.2.2 Wash, dry and weigh the empty can.

A.2.2.3 Fill the container with distilled water at 20 °C to 4 mm vertical distance below the top level of the container and weigh.

A.2.2.4 Subtract the weight in A.2.2.2 from the weight in A.2.2.3. The difference shall be considered to be the weight of water required to fill the container.