Draft Tanzania Standard

Canned salmon – Specification

TANZANIA BUREAU OF STANDARDS

Canned salmon - Specification

0. Foreword

Salmon is the common name of several species of ray-fined fish mainly found in temperate regions. Canned salmon are products that have been processed, sealed in an airtight container such as tin can, and subjected to heat until it attains commercial sterility. These products produced need to ensure its safety and quality.

In preparation of this Tanzania standard assistance was drawn from CXS 3-2013 - Standard for canned salmon 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 salmon intended for human consumption.

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 - Rounding off numerical values
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 538 Packaging and labelling of foods

TZS 1492 / ISO 2447- Fruit and vegetable products —Determination of tin content
TZS 2230 Lead determination in fish and fishery product

TZS 2231 Determination of methylmercury in fish and shellfish

AOAC 2015.01, Heavy metals in food
CAC/GL 50, General guidelines on sampling

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

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

3 Terms and definitions

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

3.1 canned salmon

salmon preserved by canning of any of the species such as.
- *Salmo salar*
- *Oncorhynchus nerka*
- *Oncorhynchus kisutch*
- *Oncorhynchus tschawytscha*
- *Oncorhynchus gorbuscha*
- *Oncorhynchus keta*
- *Oncorhynchus masou*

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

3.2 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

3.3 foreign matter

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

3.4 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 salmon fish of the species as indicated under 3.1

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.

4.1.2.2 Free from can ends distortion.

4.2 Specific requirements

Canned salmon will be considered defective when it exhibits any of the properties below:

i. Presence of foreign matter determined by visual;

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 discolouration indicative of decomposition or rancidity or by sulphide staining of the flesh exceeding 5% of the net contents determined as per CXS/GL 31; and

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.

5 Contaminants

5.1 Heavy metals

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

Table 1 — Heavy metal limits for canned salmon

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 Pesticides residues

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

6 Hygiene

6.1 Canned salmon 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 salmon.

7 Sampling and test

7.1 Sampling

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

7.2 Test

Canned salmon shall be done according to test methods prescribed in Table 1 and in other parts of this standard.

8 Food additives

No additives are permitted in this product.

9 Weights and Measures

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

10 Packing, marking and labeling

10.1Packing

Canned salmon 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 salmon" and common or species name
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; and
h) list of ingredients in descending order of proportion.
i) Instruction for use
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.

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.