DEAS 899: 2016

ICS 67.120.30

DRAFT EAST AFRICAN STANDARD

Tuna canned in oil — Specification

EAST AFRICAN COMMUNITY

First Edition 2016

Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

In order to achieve this objective, the Community established an East African Standards Committee mandated to develop and issue East African Standards.

The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

DEAS 899 was prepared by Technical Committee EAS/TC 003, *Fish and fishery products.*

Tuna canned in oil — Specification

1 Scope

This East African Standard specifies the requirements and the methods of sampling and test for tuna canned in oil

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.

AOAC 952.13, *Arsenic in food — Silver diethyldibocarbamate method*

AOAC 972.23, *Lead in fish —– Atomic absorption spectrophotometric method*

AOAC 973.34*, Cadmium in food — Atomic absorption spectrophotometric method*

AOAC 977.13, *Histamine in sea food — Fluorometric method*

AOAC 983.20, *Mercury (methyl) in fish and shellfish — Gas chromatographic method*

EAS 35, *Edible salt — Specification*

EAS 38, *Labelling of prepackaged foods — Specification*

EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

EAS 321, *Edible fats and oils (general) — Specification*

EAS 803, *Nutrition labelling — Requirements*

EAS 804, *Claims on foods — Requirements*

EAS 805, *Use of nutritional and health claims — Requirements*

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

CAC/GL 50, *General guidelines on sampling*

CODEX STAN 192, *General standard for food additives*

ISO 17240, *Fruit and vegetable products — Determination of tin content — Method using flame atomic absorption spectrometry*

ISO 17919, *Microbiology of the food chain — Polymerase chain reaction (PCR) for the detection of food-borne pathogens — Detection of botulinum type A, B, E and F neurotoxin-producing clostridia*

3 Terms and definitions

For the purposes of this standard, the following terms and definitions shall apply

3.1
tuna canned in oil
tuna which have been processed, preserved using oil and sealed in an airtight tin can subjected to heat.

3.2
solid (skin-on or skinless)
fish cut into transverse segments to which no free fragments are added.

3.3
chunk
pieces of fish most of which have dimensions of not less than 1.2 cm in each direction and in which the original muscle structure is retained

3.4
flake or flakes
a mixture of particles and pieces of fish most of which have dimensions less than 1.2 cm in each direction but in which the muscular structure of the flesh is retained

3.5
grated or shredded
a mixture of particles of cooked fish that have been reduced to a uniform size, in which particles are discrete and do not comprise a paste

3.6
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 requirement

4.1.1 Raw material

The raw material used for preparation of canned tuna shall be fresh or frozen, sound, wholesome fish, properly cleaned and free from entrails.

4.1.2 Other ingredients

All other ingredients used shall be of food grade quality and conforms to all applicable standards, which may include but not limited to the following:

a) salt conforming to EAS 35 shall be used for canning at GMP levels;

b) oil used shall conform to EAS 321

4.2 Finished product

Tuna canned in oil shall:

a) have colour characteristic of the species which may be either white, pink or light brown.

b) have a reasonably firm texture

c) have pleasant flavour and odour.

d) not show any appreciable disintegration of the can contents on opening.

e) be free from artificial colouring matter.

f) Be presented with or without skin in either solid, chunk, flakes, grated or shredded

4.2 Specific requirements

4.2.1 Tuna canned in oil shall comply with specific requirements given in Table 1.

Table 2 —Specific requirement for tuna canned in oil

S/NO	Parameter	Limit	Test method
i	**Vacuum,** mm Hg, max	150	
ii	**Drained mass, %, m/m, max**	70	Annex A

4.2.2 When tested in accordance with AOAC 977.13, the level of histamine shall not exceed 20 mg per 100 g

5 Food additive

Food additives may be used in tuna canned in oil in accordance with CODEX STAN 192 except colouring agents.

6 Hygiene

6.1 Tuna canned in oil shall be produced and handled in a hygienic manner in accordance with EAS 39 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 ^{0}C for seven days.

6.3 When tested as per ISO 17919, *Clostridium botulinum* shall be absent in tuna canned oil.

7 Contaminants

Heavy metals

Tuna canned in oil shall comply with the heavy metal limits given in Table 2.

Table 2 —Heavy metal limits for tuna canned in oil

S/N	Contaminant	Maximum limit, mg/kg	Test method
i	Arsenic	0.1	AOAC 952.13

ii	Lead	0.3	AOAC 972.23
iii	Cadmium	0.3	AOAC 973.34
iv	Mehtyl mercury	1.0	AOAC 983.20
v	Tin (if tin plated can used)	250	ISO 17240

8 Weights and measures

The weight of the product shall comply with Weights and Measures regulations of the Partner States.

9 Packaging

Tuna canned in oil shall be packaged in food grade containers which will safeguard the hygienic, nutritional, and organoleptic qualities of the product

10 Labelling

9.1 In addition to the requirements in EAS 38, the following specific labelling requirements shall apply and shall be legibly and indelibly marked:

a) the name of the product shall be "tuna canned in oil" and may be followed by the common name of the species;

b) the colour of the product, as "white" "light" "dark" and "blend";

c) the red meat pieces of tuna, if canned separately from white pieces, shall be so labelled on the can;

d) the form of presentation may be provided as solid, chunks, flakes, grated or shredded;

e) date of manufacture;

f) expiry date";

g) name and address of the manufacturer;

h) drained weight in metric units;

i) batch or lot number;

j) the packing medium used; and

k) list of ingredients.

9.2 Nutrition labelling and health claims

Nutritional labelling, nutrition and health claims may be made in accordance with EAS 803, EAS 804 and EAS 805

11 Sampling

Sampling shall be done in accordance with CAC/GL 50.

Annex A
(normative)

Determination of drained weight

A.1 Apparatus

A.1.1 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.

Annex B
(informative)

Product definition

Canned Tuna and Bonito are the products consisting of the flesh of any of the appropriate species listed below, packed in hermetically sealed containers.

1. *Euthynnus alletteratus* (little tunny)
2. *Euthynnus lineatus* (little tunny or black skipjack)
3. *Euthynnus yaito* or *Euthynnus affinis* (kawakawa or little tuna)
4. *Katsuwonus pelamis* (skipjack)
5. *Neothunnus macropterus* or *Thunnus albacares* (yellow-fin tuna)
6. *Thunnus tonggol* or *Neothunnus rarus* (longtailed tuna or northern bluefin tuna)
7. *Para thunnus mebachi* or *Thunnus obesus* (big-eyed tuna)
8. *Thunnus atlanticus* (black-fin tuna)
9. *Thunnus germo* or *Thunnus alalunga* (albacore)
10. *Thunnus maccoyii* (southern bluefin tuna)
11. *Thunnus orientalis* (oriental tuna)
12. *Thunnus thynnus* (bluefin tuna)

The species of fish *Sarda chiliensis*, *Sarda lineolata* or *Sarda sarda* after it has been canned, shall be designated as "Bonito" or "Bonito Tuna".

