DEAS 300:2025
ICS 67.200

EAST AFRICAN STANDARD

Edible groundnut/Peanut oil — Specification

DRAFT

EAST AFRICAN COMMUNITY

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East African Community
P.O. Box 1096,
Arusha
Tanzania
Tel: + 255 27 2162100
Fax: + 255 27 2162190
E-mail: eac@eachq.org
Web: www.eac-quality.net

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Foreword

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

In order to achieve this objective, the Partner States in the Community through their National Bureaux of Standards, have established an East African Standards Committee.

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.

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East African Community

P O Box 1096

Arusha

Tanzania

Tel: 255 27 2504253/8

Fax: 255-27-2504481/2504255

E-Mail: eac@eachq.org

Web: www.each.int

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Edible Groundnut/Peanut oil — Specification

1. Scope

This East Africa standard specifies the requirements, sampling and test methods for edible groundnut/peanut oils derived from groundnuts (seeds of *Arachis hypogaea* L.) intended for human consumption.

2. Normative references

The following standards contain provisions, which, through reference in this text constitute provisions of this standard. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this standard are encouraged to take steps to ensure the use of the most recent editions of the standard indicated below. Information on currently valid national and international standards may be obtained from the corresponding Bureau of standards.

CXG 66, *Guidelines for the use of flavorings*

CXS 192, *General standard for food additives*

EAS 38, *Labelling of pre-packaged foods — General requirements*

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

EAS 769, *Fortified edible fats and oils — Specification*

EAS 803, *Nutrition labelling — Requirements*

EAS 804, *Claims on foods — General requirements*

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

ISO 660, *Animal and vegetable fats and oils — Determination of acid value and acidity*

ISO 661, *Animal and vegetable fats and oils — Preparation of test sample*

ISO 662, *Animal and vegetable fats and oils — Determination of moisture and volatile matter content*

ISO 663, *Animal and vegetable fats and oils — Determination of insoluble impurities content*

ISO 3596, *Animal and vegetable fats and oils — Determination of unsaponifiable matter — Method using diethyl ether extraction*

ISO 3657, *Animal and vegetable fats and oils — Determination of saponification value*

ISO 3960, *Animal and vegetable fats and oils — Determination of peroxide value — Iodometric (visual) endpoint determination*

ISO 3961, *Animal and vegetable fats and oils — Determination of iodine value*

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ISO 5555, *Animal and vegetable fats and oils — Sampling*

ISO 6320, *Animal and vegetable fats and oils — Determination of refractive index*

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3. Terms and definitions

3.1
edible groundnut/ Peanut oils
edible oil derived from the seeds of *Arachis hypogaea* L. and has the following synonymous names: peanut oil, arachis oil.

3.2
virgin groundnut/peanut oil
edible groundnut/ peanut oil obtained without altering its nature that may be obtained by use of mechanical procedures such as expelling or pressing, with or without the application of heat and without the use of solvents

3.3
cold-pressed groundnut/ peanut oil
Virgin groundnut/ peanut oil obtained by mechanical procedures without the application of heat

3.4
refined (non-virgin) groundnut/ peanut oil
edible groundnut/ peanut oil obtained by mechanical procedures and/or solvent extraction and subjected to refining processes

3.5
foreign matter
any undesirable material visible with naked eye in a packaged edible groundnut/ peanut oil

3.6
food grade packaging material
packaging material, made of substances which are safe and suitable for the intended use, and which will not impart any toxic substance or undesirable odor or flavor to the product

4. Requirements

4.1. General requirements

Edible groundnut/ peanut oil shall

a) be obtained from groundnuts/ peanuts which are mature, clean and practically free from insect infestation;

b) be free from foreign matter;

c) be free from rancid or undesirable odour and/or taste;

d) be free from admixture with other oils; and

e) have colour characteristic of groundnut/ peanut oil.

4.2. Specific Requirements

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Edible groundnut/ peanut oil shall comply with the specific requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 – Specific requirements for edible groundnut oil

S/N	Parameter	Requirement	Test method
i.	Moisture and volatile matter at 105 °C, % m/m, max.	0.2	ISO 662
ii.	Insoluble impurities, % m/m, max.	0.05	ISO 663
iii.	Soap content, % m/m, max.	0.005	ISO 10539
iv.	Acid value, mg/KOH/g max. • Virgin • Non-virgin (refined)	 4.0 0.6	ISO 660
v.	Peroxide value, mEq oxygen/kg max. • Virgin • Non-virgin (refined)	 15 10	ISO 3960
vi.	Iron (Fe), mg/kg, max. • Virgin • Non-virgin (refined)	 5.0 1.5	ISO 21033
vii.	Copper (Cu), mg/kg, max. • Virgin • Non-virgin (refined)	 0.4 0.1	
viii.	Iodine value, g I_2 per 100 g	77 – 107	ISO 3961
ix.	Saponification value, mg KOH/g oil	187 – 196	ISO 3657
x.	Unsaponifiable matter, g/kg, max.	10	ISO 3596
xi.	Refractive index, at 40 ºC	1.460 – 1.465	ISO 6320
xii.	Relative density at 20 ºC	0.909 – 0.920	ISO 6883
xiii.	Colour units in a 25.4 mm Lovibond cell, max.	Red: 4 Yellow: 35	ISO 15305
xiv	[Fatty acid profile]	[Annex A]	[ISO 5508]

5. Fortification

Edible groundnut oil may be fortified. When fortified, the product shall comply with EAS 769.

6. Food additives

6.1 Food additives when used in edible refined (non-virgin) groundnut/ peanut oil shall comply with CXS 192.

6.2 Edible virgin or cold pressed groundnut/ peanut oil shall not contain food additives.

7. Flavouring agents

7.2 Flavourings when used in groundnut/ peanut oil shall comply with CXG 66-2008.

8. Contaminants

8.1 Pesticide residues

Edible groundnut/ peanut oil shall comply with the maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

8.2 Heavy metals

Edible groundnut/ peanut oil shall comply with the maximum limits for heavy metals given in Table 2 when tested in accordance with the test methods specified therein.

Table 2 — Limits for heavy metals in groundnut **oil**

S/N	Contaminant	Limit mg/kg, max.	Test method
i.	Lead (Pb)	0.08	ISO 12193
ii.	Arsenic (As)	0.1	ISO 13547-2

8.3 Aflatoxins

Aflatoxin levels in edible groundnut/ peanut oil shall not exceed the limits given in Table 3 when tested in accordance with the test method specified therein.

Table 3 — Aflatoxin limits for edible groundnut **oil**

S/N	Parameter	Limit µg/kg, max.	Test method
i.	Total aflatoxin	10	ISO 16050
ii.	Aflatoxin B1	5	

8.4 Other Contaminants and Toxins

The edible groundnut/ peanut oil shall comply with the maximum levels specified in CXS 193-**1995**.

9. Hygiene

Edible groundnut oil shall be produced, processed, handled and stored in accordance with EAS 39.

10. Packaging

Edible groundnut oil shall be packaged in food grade packaging material and sealed in a manner that safeguards the hygienic, nutritional and organoleptic properties of the product.

11. Labelling

11.1 In addition to the labelling requirements specified in EAS 38, the following information shall be legibly and indelibly labelled:

a) name of the product as [“groundnut oil” or “peanut oil” or “arachis oil”;], [“edible groundnut oil” or “edible peanut oil” or “edible arachis oil”;]

b) type of the oil as:

i) virgin;

ii) cold-pressed; or

iii) non-virgin or refined.

11.2 Groundnut/ peanut Oil shall comply with the requirements for labelling non-retail containers as provided in EAS 1246.

12. Nutrition and health claims

Edible groundnut oil may have claims on nutrition and health. Such claims when made shall comply with EAS 803, EAS 804 and EAS 805.

13. Sampling

Sampling and sample preparation for testing shall be done in accordance with ISO 5555 and ISO 661, respectively.

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Annex A
(informative)

GLC Fatty acid composition

When required the fatty acid profile should be determined by Gas Liquid Chromatography. Ranges of fatty acids are given in Table A.1 for information

Table A.1 — Fatty acid composition for edible groudnut oil

Carbon configuration	Composition %
C6:0	ND
C8:0	ND
C10:0	ND
C12:0	ND–0.1
C14:0	ND–0.1
C16:0	5.0–14.0
C16:1	ND–0.2
C17:0	ND–0.1
C17:1	ND–0.1
C18:0	1.0–4.5
C18:1	35.0–80
C18:2	4.0–43.0
C18:3	ND–0.5
C20:0	0.7–2.0
C20:1	0.7–3.2
C20:2	ND
C22:0	1.5–4.5
C22:1	ND–0.6
C22:2	ND
C24:0	0.5–2.5
C24:1	ND–0.3
ND – non detectable, defined as ≤0.05%	

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3. IS 11476:1985, Glossary of terms related to fats and oils. Indian Standards Institution.

4. IS 11068:1984, Criteria for Edibility of fats and oils. Indian Standards Institution.

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