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## DRAFT EAST AFRICAN STANDARD

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Groundnut kernels for oil extraction — Specification

EAST AFRICAN COMMUNITY

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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 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.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. 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 Principles and procedures for development of East African Standards.

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.

EAS 889 was prepared by Technical Committee EASC/ TC/015, Edible Oil Seeds, Fats and Oils.

This Second edition cancels and replaces the First edition, which has been technically revised.

## Groundnut kernels for oil extraction — Specification

### 1 Scope

This Draft East African Standard specifies the requirements, sampling and test methods for groundnut kernels of the plant *Arachis hypogea* intended for oil extraction.

### 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. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EAS 38, Labelling of pre-packaged foods — Specification

EAS 39, Code of practice for hygiene for food and drink manufacturing industries

ISO 542, Oilseeds — Sampling

ISO 659, Oilseeds -- Determination of oil content (Reference method)

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

ISO 665, Oilseeds — Determination of moisture and volatile matter content

ISO 729, Oilseeds — Determination of acidity of oils

CXS 193, Codex general standard for contaminants and toxins in foods

ISO 6579-1, Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of *Salmonella* — Part 1: Detection of *Salmonella* spp.

ISO 6888-1, Microbiology of the food chain — Horizontal method for the enumeration of coagulase-positive *Staphylococci* (*Staphylococcus aureus* and other species) — Part 1: Method using Baird-Parker agar medium

ISO 16050, Foodstuffs — Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products — High-performance liquid chromatographic method

ISO 16654, Microbiology of food and animal feeding stuffs — Horizontal method for the detection of *Escherichia coli*

ISO 21527-1, Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration yeasts and moulds — Part 1: Colony-count technique in products with water activity greater than 0,95

### 3 Terms and definitions

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

**3.1  
groundnut/peanut**  
either in the pod or in the form of kernels which are obtained from varieties of the species *Arachis hypogaea* L.

**3.2  
groundnut kernels**  
raw groundnuts with their shells removed, and which have not been subjected to roasting and/or any form of treatment

**3.3  
damaged/defective**  
kernel which is damaged mechanically, or by mould or weevils, or those showing internal discoloration of kernels materially affecting the quality

**3.4  
Broken kernel**  
more than one fourth of the groundnut kernel is broken off

**3.5  
other defects**  
groundnut kernel that have skin discolouration, flesh discolouration and/or sprouted kernels

**3.6  
foreign matter**  
organic and inorganic materials other than shelled groundnut kernels

Notes:

1. Inorganic includes stones, glass, pieces of soil and other mineral matter
2. organic matter is any animal or plant matter (seed coats, straws, weeds) other than shelled groundnut kernel, damaged shelled groundnut kernel, other kernels, inorganic extraneous matter and harmful/toxic matter

## 4 Requirements

### 4.1 General

Groundnuts shall be free from:

- a) dead or living insects, insect fragments and mites; and
- b) foreign matter or any contaminants;
- c) foreign odours and undesirable flavour and/or taste;
- d) decayed and mould-damaged kernels; and
- e) small shrivelled and immature kernels or hard kernels

### 4.2 Specific quality requirements

Groundnuts for extraction shall comply with requirements given in Table 1

**Table 1 — Specific requirements for groundnuts for oil extraction**

S/N	Characteristic	Requirement	Test method
i)	Moisture content, % m/m max.	8.0	ISO 665
ii)	Free Fatty Acids (FFA), %, m/m, max.	2	ISO 729

### 4.3 Grading requirements

Groundnuts kernels for oil extraction for oil may be classified as Grade 1, Grade 2 or Grade 3 according to Table 2

**Table 2 — Grade requirements for groundnut kernels for oil extraction**

S/N	Characteristic	Requirement			Test method
		Grade 1	Grade 2	Grade 3	
i)	Oil content of the kernel (on moisture freebasis), % by mass, min.	48.0	45.0	N/A <sup>a</sup>	ISO 659
iii)	Broken, defective and damaged kernels, % by mass, max.	3.0	5.0	7.0	ISO 605
iv)	Other defects, % by mass, max.	0.5	1.5	3	
v)	Foreign matter, % by mass, max.	0.1	0.2	0.3	
NOTE: The maximum total tolerance limits for Grade 1 is 0.1 %, 5.0 % for Grade 2 and 7.0 % for Grade 3 by number or weight for groundnuts corresponding to the size immediately above and/or below that indicated on the package.					
<sup>a</sup> Not applicable					

## 5 Contaminants

### 5.1 Aflatoxin

Aflatoxin limits for groundnuts kernels for oil extraction for oil shall comply with the limits specified in Table 3.

**Table 3 — Aflatoxin limits for Raw roasted and fried groundnuts**

S. no	Characteristic	Limit	Method of test
i)	Total aflatoxin content, ppb, max.	15	ISO 16050
ii)	Aflatoxin B <sub>1</sub> , ppb	5	

### 5.2 Pesticide residues

Groundnuts kernels for oil extraction for oil shall conform to those maximum residue limits established by the Codex Alimentarius Commission for this product.

NOTE Where the use of certain pesticides is prohibited by some Partner States, then it should be notified to all Partner States accordingly.

### 5.3 Other contaminants

Groundnuts kernels for oil extraction for oil shall comply with those maximum limits for other contaminants established in CXS 193.



## 6 Hygiene

**6.1** Groundnuts kernels for oil extraction for oil shall be produced, prepared and handled in accordance with EAS 39.

**6.2** Groundnuts kernels for oil extraction for oil shall be free of pathogenic organisms and shall comply with the microbiological requirements specified in Table 4.

**Table 4 — Microbiological limits for groundnuts for oil extraction**

S. No.	Characteristic	Limits	Method of test
i	E.coli, MPN/gh	absent	ISO 16654
ii	<i>Salmonella spp</i> per 25 g	absent	ISO 6579-1
iii	<i>Staphylococcus aureus</i> , cfu/g	absent	ISO 6888-1

## 7 Packaging

Groundnuts kernels for oil extraction for oil shall be packaged in food grade containers and sealed in manner to ensure the safety and quality requirements specified in this standard are maintained throughout the shelf life of the product

## 8 Labelling

**8.1** In addition to the requirements of EAS 38, the following shall apply:

- the product name: shall be 'groundnut kernels for oil extraction'; and
- where applicable, grading shall be declared in compliance to clause 4.3.

## 9 Sampling

Sampling shall be done in accordance with ISO 542.

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