ETHIOPIAN STANDARD

ES 7262:2025

First edition
xx-xx-2025

Tehena- Specification

ICS: 67.230
Published by Institute of Ethiopian Standards

Foreword

This Ethiopian Standard has been prepared under the direction of Technical Committee for Food product in general (TC 91) and published by the Institute of Ethiopian Standards (IES).

The standard has been developed to address observed needs and to support the local industry in order to make progress through uprising competitiveness and maintain comparative market advantage both domestically and internationally.

Information has been gathered from various relevant resources in developing it.

Codex Stan 192, General standard for food additives

Codex Stan 193, General standard for contaminants and toxins in food and feed.

EPHI Data, Composition of Foods Commonly used in Ethiopia

Acknowledgement is made for the use of information from the above publication.

Tehena- Specification

1. Scope

This Ethiopian Standard specifies the requirements for tehena obtained from sesame seeds of the species (***Sesamum indicum*** L.) intended for direct human consumption.

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.

ES ISO 712, Cereals and cereal products — Determination of moisture content — Reference method

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

ES ISO 1871, Food and feed products – General guidelines for the determination of nitrogen by the Kjeldahl method

ES ISO 5498, Agricultural Food Products – Determination of Crude Fiber Content – General Method

ES ISO 930, Spices and condiments–Determination of acid-insoluble ash

ES ISO 5511, Oilseeds - Determination of oil content - Method using continuous-wave low resolution nuclear magnetic resonance spectrometry (Rapid method)

ES ISO 27085, Animal feeding stuffs — Determination of calcium, sodium, phosphorus, magnesium, potassium, iron, zinc, copper, manganese, cobalt, molybdenum, arsenic, lead and cadmium by ICP-AES

ES ISO 6637, Determination of mercury content - Flameless atomic absorption method

ES ISO 6561-1, Fruits, vegetables and derived products — Determination of cadmium contentPart 1: Method using graphite furnace atomic absorption spectrometry

ES ISO 6561-2, Fruits, vegetables and derived products — Determination of cadmium content — Part 2: Method using flame atomic absorption spectrometry

ES 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

ES 577, General Principles of Food Hygiene – Recommended Code of Practice

ES 929, Code of Practice – Food Hygiene Management

ES ISO 22002-1, Prerequisite programmes on food safety — Part 1: Food manufacturing

ES ISO 4833-1, Microbiology of the food chain – Horizontal method for the enumeration of microorganisms Part 1: Colony count at 30 °C by the pour plate technique

ES ISO 4833-2, Microbiology of the food chain — Horizontal method for the enumeration of microorganisms Part 2: Colony count at 30 °C by the surface plating technique

ES ISO 4832, Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coliforms - Colony-count technique

ES ISO 21527-2, Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds Part 2: Colony count technique in products with water activity less than or equal to 0,95

ES 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

ES ISO 6888-2, Microbiology of the food chain — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) Part 2: Method using rabbit plasma fibrinogen agar medium.

ES ISO 7251, Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique

ES ISO 6579-1, Microbiology of the food chain –Horizontal method for the detection, enumeration and stereotyping of Salmonella–Part1: Detection of salmonella.

ES ISO 6579-2, Microbiology of food and animal feed – Horizontal method for the detection, enumeration and stereotyping of Salmonella–Part2: Enumeration by a miniaturized most probable number technique.

ES ISO 6579-3, Microbiology of the food chain –Horizontal method for the detection, enumeration and stereotyping of Salmonella–Part3: Guidelines for stereotyping of *Salmonella spp*.

ES ISO 11290-1, Microbiology of the food chain — Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp.Part 1: Detection method

CES 73, General Standard for Prepackaged Foods – Labelling

3. Terms and Definitions

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

3.1.
tehena
is a product obtained by grinding mature, roasted, hulled or unhulled sesame seeds of the species Whole-sesame tahini is a tahini obtained by grinding unhusked sesame seeds of the botanical species "Sesame indicum L", or of husked sesame seeds and their husks, which are ripe and roasted.

4. Requirement

4.1.General Requirement

The product shall:

4.1.1. be prepared from sesame seeds that comply with its relevant standard

4.1.2. have a distinctive natural flavour and be free from rancidity.

4.1.3. have its own characteristic colour and homogenous texture, and be free from agglomeration.

4.1.4. be free from extraneous and foreign matter.

4.1.5. be free from any adultrants

4.1.6. be free from mould growth when examined with naked eyes;

4.2.Specific Requirement

The product shall comply with the physico-chemical requirements specified in Table 1 below

Table 1: Physicochemical Requirements for tehena

Characteristics	Requirements	Method of tests
Moisture content, % by mass, max.	1.5	ES ISO 712
Free fatty acid(as oleic acid)% by mass, Max	1.8	ES ISO 660
Protein % by mass, min	18	ES ISO 1871
Total Ash, % by mass, Max.	3.5	ES ISO 5498
Acid insoluble ash% by mass, Max.	0.3	ES ISO 930
Oil content, % by mass, min.	45	ES ISO 5511

5. Contaminants

The product shall comply with those maximum limits for heavy metal contaminants specified in Codex Stan. 193 and in particular listed in Table 2.

Table2. Heavy metal limits for tehena.

Contaminants	Limits(ppm max)	Test method
Arsenic(As)	0.10	ES ISO 27085
Mercury(Hg)	0.01	ES ISO 6637
Lead(Pb)	0.1	ES ISO 6637
Cadmium(Cd)	0.2	ES ISO 6561-1 or 6561-2

5.1 Pesticide residue

The product shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this or a related commodity.

5.2 Mycotoxins

The product shall comply with those maximum mycotoxin limits as established by the Codex Alimentarius Commission for food and feedstuffs, In particular total aflatoxins shall not exceed 10 µg/kg and 5µg/kg for aflatoxin B1 when tested in accordance with ES ISO 16050.

6. Hygiene

The product shall be prepared under hygienic conditions in accordance with ES 577, ES 929 and ES ISO 22002-1.

The product shall be free from pathogenic microorganisms and shall comply with the microbiological limits indicated in Table 3 below.

Table3.Microbiological limits for Tehena

S/N	Parameters	Limits, Max	Test method
1.	Total plate count, cfu/g	10^4 when made from hulled seed 10^5 when made from unhulled seed	ES ISO 4833-1, ES ISO 4833-2
2.	Total coliform cfu/g	10	ES ISO 4832
3.	Yeasts and moulds, cfu/g	10^2	ES ISO 21527-2
4.	*S.aureus,* cfu/g	Absent	ES ISO 6888
5.	*E.coli*, cfu/g	Absent	ES ISO 7251
6.	*Salmonella,*cfu per 25 g	Absent	ES ISO 6579
7.	*Listeria monocytogenes,*cfu per 25 g	Absent	ES ISO 11290

7. Packaging and labelling

7.1 Packaging

7.1.1 The product shall be packed with clean, sound, free from insect and fungal infestation and the packing material shall be of food-grade quality and shall be securely sealed.

7.1.2 Product shall also be packed with airtight bags.

7.1.3 Product shall be packed in containers, which will safeguard the hygienic, nutritional, and organoleptic qualities of the product.

7.1.4 The containers, including packaging material, shall be made of substances which are safe and suitable for their intended use. They shall not impart any toxic substance or undesirable odor or flavor to the product.

7.2 Labeling

The labeling shall comply with the requirements of CES 73, and shall be legibly and indelibly marked with the following:

a) Name of the product '**Tehena**
b) name, address and physical location of the producer/ manufacturer/ packer/importer;
c) lot/batch/code number;
d) production date and expiry date as(DD/MM/YYYY)
e) Net weight, in SI unit
f) Crop year;
g) A declaration on whether the product was genetically modified or not;
h) Storage instruction
i) Country of origin;
j) Allergen declaration
k) Any other information required by the purchaser

8. Method of sampling

Sampling shall be done in accordance with the ISO 24333.

የኢትዮጵያ ደረጃዎች ኢንስቲትዩት
INSTITUTE OF ETHIOPIAN STANDARDS

Organization and Objectives

The Institute of Ethiopian Standards (IES) is the national standards body of Ethiopia. IES is re-named by the proclamation number 1263/2021, from Ethiopian Standards Agency (ESA) to Institute of Ethiopian standards, with the mandate given by the regulation Number, 193/2010 and proclamation number, 1263/2021.

IES's objectives are:

- Develop Ethiopian standards and establish a system that enable to check whether goods and service are in compliance with the required standards,
- Facilitate the country's technology transfer through the use of standards,
- Develop national standards for local products and services so as to make them competitive in the international market.
- Conduct standards related research and provide training and technical support.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational and research institutes, governmental organizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/ or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes.

Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices). A catalogue of Ethiopian Standards is also available freely and can be accessed from our website.

 International Involvement IES, representing Ethiopia, is a member of the International Organization for Standardization (ISO), International Electro-technical Commission (IEC) and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the American Society for Testing and Materials (ASTM). It is a founding member of the African Regional Organization for standardization (ARSO).

For More Information?

Contact us at the following address.

The Head Office of IES is at Addis Ababa.

☎011-6460685, 011-6460565
011-6460880
2310AddisAbaba, Ethiopia
E-mail:info@ethiostandards.org
Website:www.ethiostandards.org

Standard Mark