
Sweet potato Puree – Specification

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Foreword

This Ethiopian Standard has been prepared under the direction of the Technical committee for fruit and vegetable (TC-13) and published by Ethiopian Standard Agency (ESA).

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

In the preparation of this standard reference has been made to the following:

DKS 2860, *Sweet potato puree – Specification.*

KS EAS 771, *Fresh sweet potatoes- Specification.*

CODEX Stan 192, *General standard for food additives.*

CODEX STAN 193, *General standard for contaminants and toxins in food and feed.*

Acknowledgment has been made for the use of information from the above publications.

Sweet potato Puree – Specifications

1. Scope

This Ethiopian standard specifies the quality and safety requirements, methods of sampling and test for sweet potato puree obtained from sweet potato (*Ipomea batatas*) 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.

CES 58, Drinking water (other than any packaged water) - Specification.

CES 73, General standard for prepackaged foods-Labeling.

ES 577, Recommended code of practice-General principle of food hygiene.

EAS 771, Fresh sweet potato - specification.

ES ISO 762, Fruit and vegetable products - Determination of mineral impurities content.

ES 929, Code of practice-food hygiene management.

ES ISO 6579-3, Microbiology of the food chain - Horizontal method for the detection, Enumeration and serotyping of Salmonella - Part 3 Guidelines for serotyping of Salmonella spp.

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 21527-1, Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of yeasts and moulds - Part 1: Colony count technique in products with water activity greater than 0.95.

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 0.9.

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

3. Terms and definitions

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

3.1

Sweet potato puree

product prepared by mashing of steamed, boiled, baked, sweet potatoes obtained from sound, sweet potatoes (*Ipomea batatas*).

3.2

sound

firm, not soft and free from diseases, insect and pest damage, excessive bruising and physical injuries affecting keeping quality of the root.

3.3

food grade packaging material

packaging material, made of substances which are safe and suitable for their intended use and which will not impart any toxic substance or undesirable odour or flavour to the product

3.4

foreign matter

all organic and inorganic material other than sweet potato puree

4. Ingredients

One or any combination of two or more of the following ingredients may be used in the puree:

- a) Sweet potatoes complying to EAS 771;
- b) spices and aromatic herbs conforming to the relevant Ethiopian Standards;
- c) water complying with CES 58;
- d) Food additives conforming to CODEX STAN 192.

5. Requirements

5.1 General Requirements

5.1.1 The sweet potato puree shall:

- a. be practically free from insect or their fragments, or fungal growth.
- b. have the characteristic taste and flavour of sweet potato;
- c. be free from burnt or any other objectionable flavours;
- d. be of good keeping quality and shall show no sign of fermentation;
- e. possess good body and consistency, and uniform colour;
- f. be practically free from any extraneous plant material and foreign matter

5.1.2 Where sweet potato puree is packed in metal cans, the mineral impurity content shall not exceed 0.1% of the natural total soluble solids content when tested in accordance with ES ISO 762.

5.2 Specific requirements

Sweet potato puree shall comply with the compositional requirements indicated in Table 1

Table 1-Compositional requirements for sweet potato puree

Characteristic	Requirement	Test method
Natural sweet potato puree soluble solids content, % by mass, Min.	25	AOAC 920.151
Sodium chloride, (% by mass) ^a , Max.	2	AOAC 971.27

a- where sodium chloride is used

6. Contaminants

6.1 Pesticide residues

The products shall conform to the maximum residue limits established by the Codex Committee on Pesticide Residues for roots and root crops.

6.2 Other contaminants

Sweet potato puree shall conform to the maximum levels of the Codex General Standard contaminants and toxins in food and feed (CODEX STAN 193).

7. Hygiene

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

7.2 The products shall be free from pathogenic organisms and shall comply with the microbiological limits indicated in Table 2.

Table 2 - Microbiological limits for sweet potato puree

Microorganism	Limit	Test Methods
Yeast and Moulds, cfu/g, Max.	10 ³	ES ISO 21527-1 ES ISO 21527-2
<i>Escherichia coli</i> , cfu/g.	Absent	ES ISO 7251
<i>Salmonella</i> sp., cfu/25 g.	Absent	ES ISO 6579-3

8. Packaging and Labeling

8.1 Packaging

8.1.1 Sweet potato puree shall be packaged in food grade materials that will safeguard the hygienic, nutritional and organoleptic qualities of the product.

8.1.2 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 suitable flavor to the product.

NOTE 1: Packaging materials may be required to meet different regulations in Ethiopia.

8.2 Labeling

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

- a) name of product shall be “sweet potato puree “
- b) name and physical address of manufacturer/importer;
- c) country of origin;
- d) date of manufacture and expiry date;
- e) list of ingredients in descending order;
- f) net content declared in SI units (metric system);
- g) batch number;
- h) instructions for use; and
- i) storage instructions.

9. Methods of sampling

Sampling shall be done in accordance with Annex A.

Annex A

Sampling (Normative)

A.1 Definitions

A.1.1

lot

Collection of primary containers or units of the same size, type, and style manufactured or packed under similar conditions and handled as a single unit of trade.

A.1.2

lot size

number of primary containers or units in the lot.

A.1.3

sample size

total number of sample units drawn for examination from a lot.

A.1.4

sample unit

container, a portion of the contents of a container, or a composite mixture of product from small containers that is sufficient for the examination or testing as a single unit. For full container, the sample units shall be the entire contents of the container.

A.2 Sampling plans

Lot size (primary containers) Size of container, n 1	
Net weight equal to or less than 1 kg (2.2 lb)	
4 800 or less	13
4 801 to 24 000	21
24 001 to 48 000	29
48 001 to 84 000	48
84 001 to 144 000	84
144 001 to 240 000	126
Over 240 000	200
Net weight greater than 1 kg (2.2 lb) but not more than 4.5 kg (10 lb)	
2 400 or less	13
2 401 to 15 000	21
15 001 to 24 000	29
24 001 to 42 000	48
42 001 to 72, 000	84
72 001 to 120 000	126
Over 120 000	200
Net weight greater than 4.5 kg (10 lb)	
600 or less	13
601 to 2 000	21
2 001 to 7 200	29
7 201 to 15 000	48
15 001 to 24 000	84
24 001 to 42 000	126
Over 42 000	200
n^1 = number of primary containers in sample.	

Bibliography

AOAC 920.151, Solids (total) in fruits and fruit products.

AOAC 971.27, Determination of chloride, expressed as sodium chloride.

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Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010. ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1998.

ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services 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.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational institutions, research institutes, government 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.

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