KENYA STANDARD

KS 2430: 2018
ICS: 67.220.20

Ginger paste — Specification

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TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:
Jomo Kenyatta University of Agriculture And Technology
Technical University of Kenya
Kenya Industrial Research and Development Institute (KIRDI)
Consumer Information Network (CIN)
Ministry of Health — Department of Public Health
Government Chemist's Department
Unilever (K) Ltd.
Jomu Spice Firm
Tropical Heat Ltd.
Top Foods EA Ltd.
Adamji Multi Supplies
Unilever Kenya
Kenya Bureau of Standards — Secretariat

REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

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Foreword

This Kenya Standard was developed by the Spices and Condiments Technical Committee under the guidance of the Standards Projects Committee and, it is in accordance with the procedures of the Kenya Bureau of Standards.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off.
This standard has been reviewed to incorporate reviewed test methods for microbiology and heavy metal contaminant limits.

In the development of this standard reference was made to the following documents

The Food, Drugs and Chemical Substances Act, Cap. 254 of the Laws of Kenya.

Codex Stan 192 - Codex General Standard for food additives.

Codex Stan 193 - Codex General Standard for contaminants in Foods and feeds.

The Public Health Act, Cap. 242 of the Laws of Kenya.

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Acknowledgement is hereby made for the assistance derived from this source.

Ginger paste — Specification

1 Scope

This Kenya Standard specifies requirements and the methods of sampling and test for ginger paste.

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.

KS EAS 38, *Labelling of pre-packaged foods.*

KS ISO 21527-2:2008 Kenya Standard — Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds Part 2: Part 2: Colony count technique in products with water activity less than or equal to 0,95.

KS ISO 4833, *Methods for the microbiological examination of foods — Colony count technique at 30 ° C. — General guidance*

KS ISO 4832:, Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coli forms — Part 3: Colony-count technique.

KS ISO 6579, Microbiology of food and animal feeding stuffs — Part 6: Horizontal method for the detection of Salmonella spp.

KS ISO 6888-1- 3, *Methods for the microbiological examination of foods — Enumeration of coagulase-positive staphylococci*

KS ISO 16654, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Escherichia coli 0157.*
ISO 16654:2001/Amd 1:2017 - *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Escherichia coli 0157*
Annex B: Result of interlaboratory studies...

KS ISO 793, Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of Clostridium perfrigens -- Colony-count technique.

KS ISO 6633, Fruits ,Vegetables and derived products- Determination of lead content- Flameless atomic absorption Spectrometric Method.

KS ISO 6634, Fruits ,Vegetables and derived products- Determination of Arsenic Content - Silver diethlydithiocarbamate spectrophotometric Method.

EAS 35, Fortified *Edible salt — Specification*

KS EAS 39---*Code of hygienic practice for food and drink manufacturing companies*

KS ISO 948 –*Spices and condiments -- Sampling*

KS ISO 16050, *Foodstuffs — Determination of Aflatoxin B 1,and the total contents of Aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products — High performance liquid chromatographic method*

Codex Stan 193 --Codex Standard for Contaminants in food and feeds.

Codex Stan 192- Codex standard for Additives in Foods

ISO 6632- Fruits & Vegetables & derived products determination of volatile acidity.

KS ISO 948, Spices and condiments — Methods of sampling.

ISO 2173:2003
Fruit and vegetable products -- Determination of soluble solids -- Refractometric method.

3 Definitions

For the purpose of this standard, the following definition shall apply.

3.1
extraneous vegetable materials
fiber and skin common to ginger

3.2 **Defects** — Ginger paste shall be ~~reasonably~~ free from extraneous vegetable material.

4 Requirements

4.1 General requirements

4.1.1 Ginger paste shall be obtained by grinding or crushing of clean ginger rhizomes and addition of a preservative such as citric acid, with subsequent concentration under vacuum.

4.1.2 Ginger paste shall be of the consistency of crushed ginger.

4.1.3 The rhizomes used shall be mature, sound fresh, and free from insect and fungal attack.

4.1.4 Colour ginger paste shall be light to dark tan in colour.

4.1.5 Flavour ginger paste shall have characteristic flavour with no burnt flavour or other off flavour.
— Ginger paste shall be ~~reasonably~~ free from extraneous vegetable material.

4.1.7 Ginger paste , shall be ~~reasonably~~ free of insect fragments and contamination from rodents.

4.2 Specific requirements

4.2.1 Ginger paste shall comply with the physical and chemical limits given in Table 1.

Table 1 — Physical and chemical limits for ginger paste

SL No.	Characteristic	Requirement/ Limits	Annex in this standard
i)	Total soluble solids, % (mass/mass), min.	55	ISO 2173
ii)	Acidity as acetic acid ?	5	ISO 6632
iv)	Total insoluble pulp, % (mass/mass), max.	2	B

4.2.2 Food additives

No additives other than those permitted under the Food, Drugs and Chemical Substances Act, Cap. 254 of the Laws of Kenya, Public health Act,Cap. 242 and Codex Stan 192 – Codex General Standard for Food additives shall be used.

4.2.3 Ginger paste shall comply with the heavy metal contaminant limits in Table 2.

Table 2 — Heavy metal contaminant limits for ginger paste

SL No	Characteristic	Requirement	Test method
i)	Arsenic (as As), ppm, max.	(0.5)0.1	KS ISO 6634
ii)	Lead (as Pb), ppm max.	(2.5) 2	KS ISO 6633

4.2.3 Ginger paste shall comply with the microbiological limits given in Table 3.

Table 3 — Microbiological limits for ginger paste

SL No	Characteristic	Limits	Test method
i)	Coli forms, cfu/g	< 10	KS ISO 4832
ii)	Yeast and mould counts, cfu/g	< 10	KS ISO 21527
iii)	*E. Coli* counts, cfu/g	Absent	KS ISO 16654
****iv	*Clostridium perfrigens*	< 10	KS ISO 793
v)	*Salmonella*, cfu /25 g	Absent	KS ISO 6579
Vi)	*Staphylococcus aureus cfu/ g*	< 10	KS ISO 6888

*** unless canned

5 Hygiene

Ginger paste shall be manufactured under hygienic conditions complying with KS EAS 39, the Public Health Act, Cap. 242 Laws of Kenya, Food Drugs and Chemical Substances Act, Cap. 254 of the Laws of Kenya.

5.1 Aflatoxins

Ginger paste shall not have more than 10 ppb total aflatoxins and 5 ppb aflatoxin B1, when tested according to KS ISO 16050.

6 Weights and measures

6.1 Fill of the container

Fill of the container shall comply with the Weights and Measures Act, Cap. 513 of the Laws of Kenya.

7 Environmental management

Ginger paste shall be processed in an environment that conforms to EMCA 1999 No.8 on environmental management and conform to Cleaner Production Technology.

8 Packaging and marking

8.1 Packaging

Ginger paste shall be packed in food grade containers that secure product integrity and safety of the ginger paste.

8.2 Labelling

Labelling shall be done in accordance with EAS 38. Each container shall be legibly and indelibly marked with the following particulars:

i) Name of the product;
ii) Name and physical address of the manufacturer;
iii) Net weight of the contents in grams or kilograms;
iv) Date of manufacture;
v) Code number/lot number;
vi) List of ingredients in descending order;
vii) Expiry date;
viii) Storage instructions;
ix) Instructions for use;
x) Instructions for disposal of used package;
xi) Irradiation status (where applicable);
xii) GMO status

9 Sampling

Sampling shall be done according to KS ISO 948.

Annex A
(normative)

Determination of total soluble solids

B.1 Apparatus

B.1.1 Refractometer, either hand or Abbe refractometer.

B.2 Procedure

Keep one or two drops of the ginger paste concentrate sample between the two prisms of the refractometer and read the percentage of refractometric soluble solids. Although the instrument is calibrated at 20 ˚C, no temperature correction is usually necessary, if readings are taken at room temperature.

Annex B
(normative)

Determination of total insoluble pulp

C.1 Procedure

Boil 20 g of sample with 100 mL distilled water for 30-40 min. Filter through dried and weighed filter paper. Wash with hot water. Dry paper at 100˚C to constant weight. From this weight subtract the weight of the filter paper. This gives the weight of total insoluble pulp.