AFDC 7(885) CD3

DRAFT TANZANIA STANDARD

Ginger paste – Specification

TANZANIA BUREAU OF STANDARDS

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0. Foreword

Ginger paste is obtained from ginger rhizomes *(Zingiber officinale* L.) and is one of the commonly used products in food to add flavor.

This Tanzania standard was prepared due to increasing utilization of ginger paste in culinary to ensure the safety and quality of ginger paste produced for local and export market.

In the preparation of this standard assistance was sought from KS 2430:2018 Ginger paste – Specification

In reporting the results of a test or analysis made in accordance with this Tanzania Standard, if the final value observed or calculated is to be rounded off, it shall be done in accordance with TZS 4 *Rounding off numerical values* (see clause 2).

1 Scope

This Tanzania Standard specifies requirements, sampling and method of test for ginger paste prepared from ginger (*Zingiber officinale)* intended for human consumption.

2 Normative references

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

TZS 4, *Rounding off numerical values*

TZS 33, *Spices and condiments- Sampling*

TZS 109, *Food processing units – Code of hygiene*

TZS 122-1(ISO 6579-1), *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella- Part 1: Detection of Salmonella spp.*

TZS 125, *Microbiology of food and animal feeding stuffs – Horizontal method for enumeration of coagulase – Positive staphylococci (Staphylococcus aureus and other species)*

TZS 268, *General atomic absorption spectrophotometric method for determination of lead in food stuffs*

TZS 538 (EAS 38), *Labelling of pre-packaged foods — General requirements*

TZS 729 (1st Ed) (ISO 4832), *Microbiology of food and animal feeding stuffs –Horizontal method for the enumeration of coliforms – Colony count technique*

TZS 730- 2 (1st Ed) ISO 16649 (Part 2), *Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of -b-glucuronidase-positive Escherichia coli – Part 2 – Colony-count technique at 44 ^{0}C using 5-bromo-4-chloro-3-indolyl-b-D-glucuronide*

TZS 799, (2nd Ed)/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*

TZS 1496 (ISO 2173), *Fruits, vegetables and derived products – Sampling and methods of test – Part 10: Determination of soluble solids*

TZS 1499 (ISO 6632-1), *Fruits, vegetables and derived products – Sampling and methods of test – Part 13: Determination of volatile acidity*

TZS 1501 (ISO 6637-1), *Fruits, vegetables and derived products – Sampling and methods of test – Part 16: Determination of mercury content – Flameless atomic absorption method*

TZS 1502, *Fruits and Vegetables – Determination of Arsenic content*

TZS 1529, *Fruits and Vegetables – Determination of Sodium Chloride in brine*

TZS 1581-Part 1, *Determination of cadmium content – Method graphite furnace atomic absorption spectrometry*

TZS 2426 (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*

Codex Stan 192, *General Standard for Food Additives*

3 Terms and definitions

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

3.1 ginger paste

a product obtained by grinding clean raw ginger rhizomes

3.2 extraneous matters:

foreign matters such as soil, skins, stems, leaves, dirt or any material other than ginger paste.

4 Requirements

4.1 General requirements

4.1.1 Description

Ginger paste shall be obtained by grinding clean raw ginger rhizomes with addition of preservative and subsequently concentrated. The rhizomes used shall be mature, sound fresh, and free from insect and fungal attack.

4.1.2 Colour

Ginger paste shall be light to dark tan in colour.

4.1.3 Flavour

Ginger paste shall have characteristic flavour of ginger with no burnt or other off flavor.

4.1.4 Freedom from moulds, insects, etc

Ginger paste shall be free from live insects, dead insects, insect fragments, moulds and rodent contamination.

4.2 Specific requirements

Ginger paste shall comply with the requirements specified in Table 1, when tested by the specified method.

Table 1 – Chemical requirement

Characteristic	limits	Test method
Total soluble solids, % (mass/mass),	6-25	TZS 1496
Acidity as acetic acid %, max (g/100 ml)	5	TZS 1499
Total insoluble pulp, % (mass/mass), max	2	Annex A

5. Food additives

The use of food additives in ginger paste shall be in accordance with Codex Stan 192.

6. Hygiene

Ginger paste shall be prepared under Good Hygienic Practices as stipulated in TZS 109, shall comply to the requirements specified in Table 2

Table 2: Microbiological requirement for ginger paste

Characteristic	Maximum limit	Test method(See clause 2)
Escherichia coli, cfu/g,	Absent	TZS 730 -2
Yeasts and moulds at 25 ^{0}C, cfu/g,	10^2	TZS 131
Staphylococcus aureus, cfu.g	10^2	TZS 125
Salmonella *spp,* per 25 g	Absent	TZS 122

7 Contaminants

7.1 Heavy metals

Ginger paste shall not contain any metal contaminants in excess of levels specified in Table 3.

Table 3– Limit for heavy metals contaminants for ginger paste

S/No	Characteristic	Maximum limit (mg/kg)	Method of test
1	Arsenic	0.2	TZS 1502
2	Lead	0.3	TZS 268
3	Mercury	0.1	TZS 1501

7.2 Pesticides Residues

Ginger paste shall comply with those maximum pesticide residue limits established by the Codex Committee on Pesticide Residues for this commodity

7.3 Aflatoxin

Ginger paste shall not have more than 5 ppb for Aflatoxin B1 and 10 ppb for total aflatoxin when tested according to TZS 799.

8 Packing, marking and labelling

8.1 Packing

Ginger paste shall be packed in clean, sound and dry food grade containers made of a material which does not affect the safety and quality of the product but protects it from light and entrance of moisture.

8.2 Marking and labelling

8.2.1 Ginger paste shall also be packed and labeled in accordance to the requirements prescribed in TZS 538 (see clause 2)

8.2.2 The following particulars shall legibly and indelibly be marked or labeled on each container:

a) name of the product, 'Ginger Paste'

b) Trade name or brand name, if any

c) Name and address of the manufacturer and/or packer.

d) Batch or code number

e) Date of packing/manufacturing

f) Net weight

g) Country of origin

h) Expiry date

i) Storage condition

j) List of ingredients

k) Instructions for use;

8.3 The containers may also be marked with TBS certification mark.

9 Sampling and test

9.1 Sampling

Ginger paste shall be sampled in accordance with TZS 33.

9.2 Test methods

Samples of ginger paste shall be tested for conformity with the requirements of this standard by following the methods of physical, organoleptic, microbiological and chemical analysis.

NOTE: The TBS Mark of Quality may be used by manufacturers only under license from TBS. Particulars of conditions which the licenses are granted may be obtained from TBS offices.

Annex A

(Normative)

Determination of total insoluble pulp

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.