



DRAFT TANZANIA STANDARD

Crystallized ginger — Specification

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TANZANIA BUREAU OF STANDARDS

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0. Foreword

Crystallized ginger is a product produced from ginger mixed with sugar with or without spices and permitted food additives added to obtain a desired taste. This Tanzania standard was prepared to ensure the safety and quality of crystallized ginger produced for local consumption and export market.

In developing this standard assistance was drawn from stakeholders who provided necessary information and samples.

In reporting the result of a test or analysis made in accordance with this standard, if the final value observed or calculated, is to be rounded off, it shall be done in accordance with TZS 4 (See clause 2).

1 Scope

This Tanzania Standard specifies requirements, sampling and method of test for crystallized ginger.

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

TZS 538 (EAS 38:2014), *Labelling of pre-packaged foods — General requirements*

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

TZS 799 (3rd 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 1318/ ISO 939, *Spices and condiments — Determination of moisture content — Entrainment method*

TZS 1501/ ISO 6637, *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 1503, *Fruits and Vegetables – Determination of Ash Insoluble in Hydrochloric Acid*

TZS 2426-1/ 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 purposes of this Tanzania standard, the following term and definition shall apply.

3.1 crystallized ginger

is the sugar-soaked/coated ginger with or without spices dried out to obtain a crackly glaze

4 Requirements

4.1 General requirements

4.1.1 Ingredients

4.1.1.1 Main ingredients

The main ingredients for crystallized ginger shall be fresh ginger root and sugar, complying with relevant Tanzania Standards.

4.1.1.2 Optional Ingredients

Spices, honey, lemon complying with relevant Tanzania Standard may be added.

4.1.1.2.1 Colour

The colour of the product shall be characteristic of the ingredients used.

4.1.1.2.2 Taste and odour

Crystallized ginger shall have a characteristic ginger spicy scent and shall be free from foreign taste, odours and off odours.

4.1.1.2.3 Freedom from foreign matter

Crystallized ginger shall be free from live insects, dead insects, insect fragments, rodent contamination and stones.

4.2 Specific requirements

Crystallized ginger shall comply with the requirements specified in Table 1, when tested by the specified method.

Table 1: Specific requirements for crystallized ginger

S/No	Characteristic	Limits	Method of test
1	Moisture,% m/m, max	5	TZS 1318
2	Acid insoluble ash, % (m/m), max.	0.2	TZS 1503
3	Reducing sugar (calculated as dextrose) % , m/m, min.	10	ISO 5377

5. Food additives

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

6. Hygiene

Crystallized ginger shall be prepared under Good Hygienic Practices as stipulated in TZO 109, and shall comply with the requirements specified in Table 2.

Table 2: Microbiological requirement for crystallized ginger

S/No	Characteristic	Maximum limit	Method of test
1	<i>E. coli</i> , cfu/g	Absent	TZO 730-2
2	Yeast and moulds cfu/g,	<10	TZO 2426-1
3	Salmonella spp per 25 g	Absent	TZO 122

7 Contaminants

7.1 Heavy metals

Crystallized ginger shall not contain heavy metal contaminants in excess of levels specified in Table 3.

Table 3: Limits for heavy metal in crystallized ginger

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

7.2 Pesticides Residues

Crystallized ginger shall comply with those maximum pesticide residue limits established by the Codex Committee on Pesticide Residues for this commodity.

7.3 Aflatoxin

Crystallized ginger shall not have more than 5 ppb for Aflatoxin B1 and 10 ppb for total aflatoxin when tested according to TZO 799.

8 Packing, marking and labelling

8.1 Packing

Crystallized ginger 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.

8.2 Marking and labelling

8.2.1 Crystallized ginger shall also be packed and labeled in accordance with the requirements prescribed in TZO 538.

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

- a) name of the product, "Crystallized ginger"
- b) Trade name or brand name, if any
- c) Name and address of the manufacturer and/or packer
- d) Batch or lot number
- e) Date of packing/manufacturing
- f) Net weight
- g) Country of origin
- h) Expiry date
- i) Storage conditions
- j) List of ingredients
- k) Instruction for use
- l) Allergens if present

8.2.3 The language on the label shall be Kiswahili and/or English. A second language may be used depending on the designated market.

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

9. Sampling and test

9.1 Sampling

Crystallized ginger shall be sampled in accordance with TZS 33.

9.2 Tests

Samples of crystallized ginger shall be tested for conformity with the requirements of this standard as Tables 1, 2 and 3.

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.

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