



## **DRAFT TANZANIA STANDARD**

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### **Spice paste — Specification**

**TANZANIA BUREAU OF STANDARDS**

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Draft for comments only

## 0. Foreword

Spice paste is a product produced by blending wet and dry spices, oil, water, coconut milk, sugar, salt and permitted food additives added to obtain a uniform paste. This Tanzania standard was prepared to ensure the safety and quality of spice paste produced and/or marketed in Tanzania.

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 spice paste 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 38:2014), *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 °C 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 1488:2016/ ISO 750:1998, *Fruits, vegetables and derived products – Sampling and methods of test – Part 2: Determination of titratable acidity*

TZS 1491, *Fruits and Vegetables – Determination of pH*

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

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

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 terms and definitions shall apply.

#### **3.1 spice paste**

is a blend of dry and wet spices intended to enhance flavour, taste and aroma in food

#### **3.2 wet spices**

a mixture of fresh spices such as onions, coconut, tomatoes garlic, coconut grates, coconut milk

#### **3.3 dry spices**

a mixture of powdered spices such as cardamom, black pepper, curry powder, coriander, garlic, cinnamon, ginger and lemon

### **4 Requirements**

#### **4.1 General requirements**

##### **4.1.1 Ingredients**

##### **4.1.1.1 Main ingredients**

The main ingredients for spice paste shall be tomatoes, onions, coconut grates, coconut milk and garlic as well as powdered cardamom, black pepper, curry powder, coriander, garlic, cinnamon and ginger complying with relevant Tanzania Standards.

##### **4.1.1.2 Optional Ingredients**

Salt, sugar, oil, lemon and tomato paste complying with relevant Tanzania Standard may be added.

##### **4.1.1.2.1 Colour**

The spice paste shall have the characteristic colour of the ingredients used. The product shall be practically free from scorched and toasted particles.

##### **4.1.1.2.2 Taste and odour**

Spice paste shall have a characteristic taste and pungent odour of mixed spices used and shall be free from off odours, foreign taste and odours.

##### **4.1.1.2.3 Freedom from foreign matter**

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

#### 4.2 Specific requirements

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

**Table 1: Specific requirements for spice paste**

S/No	Characteristic	Limits	Method of test
1	Total soluble solids (Brix), % (m/m)	18-30	TZS 1496
2	Acidity expressed as Acetic acid,%m/m,max	3.5	TZS 1488
3	pH	2.5 – 3.5	TZS 1491
4	Acid insoluble ash, % (m/m), max	0.2	TZS 1503
5	Salt,%(m/m), max	2.5	TZS 1529

#### 5. Food additives

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

#### 6. Hygiene

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

**Table 2: Microbiological requirement for spice paste**

S/No	Characteristic	Maximum limit	Method of test
1	<i>E. coli</i> , cfu/g	Absent	TZS 730-2
2	Yeast and moulds cfu/g,.	10 <sup>2</sup>	TZS 2426-1
3	<i>Staphylococcus aureus</i> , cfu/g	10 <sup>2</sup>	TZS 125
4	Salmonella spp per 25 g	Absent	TZS 122-1

#### 7 Contaminants

##### 7.1 Heavy metals

Spice paste shall not contain any metallic contaminants in excess of levels specified in Table 3.

**Table 3: Limits for heavy metal in spice 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

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

##### 7.3 Aflatoxin

Spice 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

Spice 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.

## **8.2 Marking and labelling**

**8.2.1** Spice paste shall also be packed and labeled in accordance with the requirements prescribed in TZS 538.

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

- a) name of the product, 'Spice paste'
- 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**

Spice paste shall be sampled in accordance with TZS 33.

### **9.2 Tests**

Samples of spice paste 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.