



## **DRAFT TANZANIA STANDARD**

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### **Chili oil — Specification**

**TANZANIA BUREAU OF STANDARDS**

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Draft for comments only

## 0. Foreword

Chili oil a condiment made from vegetable oil that has been infused with very hot peppers and spices. This Tanzania standard was prepared to ensure safety and quality of chili oil 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 chili oil 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 118-1/ISO 4833-1, *Microbiology of the food chain - Horizontal method for the enumeration of microorganisms - Part 1: Colony count at 30 °C by the pour plate technique*

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- 2 (1st Ed) ISO 16649 (Part 2), *Microbiology of the food chain — Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli — Part 1: Colony-count technique at 44 degrees C using membranes and 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

TZS 1320: 2017/ ISO 6571:2008, *Spice, condiments and herbs - Determination of volatile oil content (hydrodistillation method)*

TZS 1324:2010 (1st Ed) ISO 3960, *Animal and vegetable fats and oils — Determination of peroxide value — Iodometric (visual) endpoint determination*

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 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 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*

ISO 3513, *Chilies — Determination of Scoville index*

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 chili oil**

condiment made from vegetable oil that has been infused with chili peppers and spices

#### **3.2 fresh chilies**

fresh, mature and clean chilies of Capsicum and/or preserved chilies

### **4 Requirements**

#### **4.1 General requirements**

##### **4.1.1 Ingredients**

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

Chili oil shall be a product prepared from fresh chilies, a mixture of chili paste or chili solids derived from clean, sound and wholesome ripened chilies and cooking oil complying with standards for named vegetable oil.

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

Chili oil may contain extracts of garlic, ginger, onion and other spices and sugar.

###### **4.1.1.2.1 Colour**

Chili oil shall have the characteristic colour of ingredients used.

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

Chili oil shall be free from objectionable flavour, off-flavour or objectionable odours of any kind.

###### **4.1.1.2.3 Appearance**

Chili oil shall be clear without any precipitate/suspended particles.

#### **4.2 Specific requirements**

Chili oil shall comply with the requirements specified in Table 1, when tested by the specified method.

**Table 1: Specific requirements for chili oil**

S/No	Characteristic	Limits	Method of test
1	Acidity as acetic acid, % m/m, min.	0.8	TZS 1488
2	pH, max.	4	TZS 1491
3	Scoville index, Scoville Heat Unit	600 – 13 000	ISO 3513
4	Volatile oil, %, max.	2	TZS 1320
5	Peroxide value, milliequivalents of peroxide oxygen/kg, max.	10	TZS 1324

## 5. Food additives

The use of food additives in chili oil shall be in accordance with Codex Stan 192.

## 6. Hygiene

Chili oil shall be prepared under Good Hygienic Practices as stipulated in TZS 109, *Codes of hygiene for food processing units- General* and shall comply with the requirements specified in Table 2.

**Table 2: Microbiological requirement for chili oil**

S/No	characteristic	Maximum limit	Test method
1	Total Plate Count, cfu/g	10	TZS 118-1
2	<i>E. coli</i> , cfu/g	Absent	TZS 730-2
3	Yeast and moulds cfu/g, max.	Absent	TZS 2426
4	<i>Salmonella</i> spp, per 25 g	Absent	TZS 122

## 7 Contaminants

### 7.1 Heavy metals

Chili oil shall not contain any metallic contaminants in excess of levels specified in Table 3.

**Table 3: Limits for heavy metal in chili oil**

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

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

## 8 Packing, marking and labelling

### 8.1 Packing

Chili oil 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** Chili oil 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, 'chili oil'
- 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 presents

**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**

Chili oil shall be sampled in accordance with TZS 33.

### **9.2 Tests**

Samples of chili oil shall be tested for conformity with the requirements of this standard as in 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.

## **Bibliography**

RS 169:2018 - Chili oil — Specification