



**DEAS 893: 2023**

ICS 67.080.20

## **DRAFT EAST AFRICAN STANDARD**

---

### **Chilli sauce — Specification**

## **EAST AFRICAN COMMUNITY**

---



### Copyright notice

This EAC document is copyright-protected by EAC. While the reproduction of this document by participants in the EAC standards development process is permitted without prior permission from EAC, neither this document nor any extract from it may be reproduced, stored or transmitted in any form for any other purpose without prior written permission from EAC.

Requests for permission to reproduce this document for the purpose of selling it should be addressed as shown below or to EAC's member body in the country of the requester:

© East African Community 2023 — All rights reserved  
East African Community  
P.O. Box 1096,  
Arusha  
Tanzania  
Tel: + 255 27 2162100  
Fax: + 255 27 2162190  
E-mail: [eac@eachq.org](mailto:eac@eachq.org)  
Web: [www.eac-quality.net](http://www.eac-quality.net)

Reproduction for sales purposes may be subject to royalty payments or a licensing agreement. Violators may be prosecuted.

# Contents

Page

Foreword .....	iv
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 Requirements .....	2
4.2 General requirements .....	2
4.1.1 Ingredients .....	2
4.1.2 Quality requirements .....	3
4.2 Specific requirements .....	3
5 Food additives .....	3
6 Contaminants .....	3
6.1 Pesticide residues .....	4
6.2 Heavy metal contaminants .....	4
7 Hygiene .....	4
8 Packaging .....	4
9 Labelling .....	4
Annex A (normative) Determination of specific gravity .....	6
A.1 Principle .....	6
A.2 Apparatus .....	6
A.3 Procedure .....	6
A.4 Calculation .....	6
Bibliography .....	7

## Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the Principles and procedures for development of East African Standards.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EAS/TC 025, *Processed fruits, vegetables and tubers*.

This **second/third/...** edition cancels and replaces the **first/second/...** edition (US **nnn-n:yyyy**), which has been technically revised.

Attention is drawn to the possibility that some of the elements of this document may be subject of patent rights. EAC shall not be held responsible for identifying any or all such patent rights.

## Chilli sauce — Specification

### 1 Scope

This Draft East African Standard specifies requirements, sampling and test methods for chilli sauce for human consumption.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

CODEX STAN 192, *General standard for food additives*

EAS 38, *Labelling of pre-packaged foods — Specification*

EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

ISO 750, *Fruits and vegetables — Determination of titratable acidity*

ISO 1842, *Fruit and vegetable products — Determination of pH*

ISO 2173, *Fruit and vegetable products — Determination of soluble solids — Refractometric method*

ISO 4833 (All parts), *Microbiology of the food chain — Horizontal methods for the enumeration of microorganisms*

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

ISO 6633, *Fruits, vegetables and derived products — Determination of lead content — Flameless atomic absorption spectrometric method*

ISO 16649-2, *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 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

ISO 21527-1, *Microbiology of food and animal feedingstuffs — Horizontal methods for the enumeration of yeasts and moulds*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

**3.1**

**chilli sauce**

condiment prepared from sound chillies, vinegar, salt and other optional permitted ingredients

**3.2**

**chillies**

whole, mature pungent fruits of botanical species *Capsicum frutescens* (Linnaeus). The fruits varies from red to other colours”

**3.3**

**foreign matter**

any organic or inorganic substances which affects the appearance, texture and typical smell/taste of the chilli sauce

**3.4**

**sound**

not overripe, not soft and free from diseases or insect damage, or bruising or physical injuries affecting keeping quality of the fruit

**3.5**

**mild chilli sauce**

chilli sauce with low pungency with a Scoville scale measure of 100 – 10 000'Scoville Heat Units (SHU)

**3.6**

**hot chilli sauce**

chilli sauce high pungency with a Scoville scale measure of above 10 000'Scoville Heat Units (SHU)

NOTE Scoville scale is a measurement of pungency of chilli peppers using Scoville organoleptic test

## **4 Requirements**

### **4.2 General requirements**

#### **4.1.1 Ingredients**

##### **4.1.1.1 Basic Ingredients**

Chilli sauce shall consist of the following ingredients which shall comply with the relevant applicable standards;

- a) fresh chili (*Capsicum* spp.) or processed chili such as chili powder ground from dried chili, roasted
- b) chili, ground chili, chili preserved in vinegar or in brine;
- c) vinegar or other permitted acid;
- d) salt;

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

The following optional ingredients may also be used in the product and they shall comply to the relevant standards:

- a) mango, papaya, tamarind and/or other fruits;
- b) tomato, garlic, onion, carrot, sweet potato, yellow pumpkin and/or other vegetables;

- c) spices and herbs;
- d) sugars;
- e) chili extract;
- f) starch; and
- g) other edible ingredients as appropriate to the product.

#### 4.1.2 Quality requirements

Chilli sauce shall:

- a) be free from insect or fragments;
- b) be free from foreign matter;
- c) be practically free from defects;
- d) possess good body and consistency;
- e) be of uniform colour;
- f) be of good keeping quality and shall show no sign of fermentation;
- g) be free from burnt or any other objectionable flavours; and
- h) have the characteristic taste and flavour of chilli sauce

#### 4.2 Specific requirements

Chill sauce shall conform to the specific requirements in Table 1 when tested in accordance with the methods prescribed therein.

**Table 1 — Specific requirements for chilli sauce**

S/N	Characteristic	Requirement	Test method
i)	Total soluble solids percent by mass (Brix), percent by mass at 20 °C,	7 – 18	ISO 2173
ii)	Acidity expressed as anhydrous acetic acid, percent by mass, min.	0.8	ISO 750
iii)	Specific gravity at 20 °C	1.027 73 – 1.074 13	Annex A
iv)	pH	Not higher than 4.5	ISO 1842

### 5 Food additives

Food additives used shall comply with CODEX STAN 192.

### 6 Contaminants



## 6.1 Pesticide residues

Chilli sauce shall conform to those maximum residue limits established by the Codex Committee on Pesticide Residues for this commodity.

## 6.2 Heavy metal contaminants

When tested in accordance with ISO 6633, the lead content in chilli sauce shall not exceed 0.1 mg/kg.

## 7 Hygiene

7.1 Chilli sauce shall be prepared under hygienic conditions in accordance with EAS 39.

7.2 Chilli sauce shall be free from pathogenic organisms and shall comply with the microbiological limits given in Table 2, when tested in accordance with the methods prescribed therein.

**Table 2 — Microbiological limits for chilli sauce**

S/N	Type of micro-organism	Limits (number of count)	Test method
i)	Total viable counts cfu/g, max.	10	ISO 4833 (All parts)
ii)	Yeasts and moulds cfu/g	Shall be absent	ISO 21527-1
iii)	<i>Escherichia coli</i> cfu/g	Shall be absent	ISO 16649-2
iv)	<i>Salmonella</i> sp., per g	Shall be absent	ISO 6579-1

## 8 Packaging

Chilli sauce shall be packed in suitable food grade containers. The containers shall be free from other products that may lead to contamination and alter the quality, composition, flavour, odour and taste of the products. Containers shall be airtight and shall be provided with tamper-proof seals and closures. Containers shall preclude contamination with or proliferation of microorganisms in the products during storage and transport.

## 9 Labelling

In addition to the requirements of EAS 38, the following specific labelling requirements shall apply and shall be legibly and indelibly labelled on each container:

- name of product including the type shall be "Mild chilli sauce" or "Hot chilli sauce";
- name and physical address of manufacturer;
- country of origin;
- date of manufacture and expiry date;
- list of ingredients in descending order;
- net content declared in SI units (metric system);
- storage instructions;

- h) instructions for use; and
- i) batch number in code or in clear.

## Annex A (normative)

### Determination of specific gravity

#### A.1 Principle

The method involves use of specific gravity bottle which enables a liquid's density to be measured accurately by reference to an appropriate working fluid which is water. The specific gravity bottle is weighed empty, full of water, and full of a liquid whose specific gravity is desired. The ratio of the mass of a unit volume of a substance to the mass of a unit volume of water is then calculated as the specific gravity.

#### A.2 Apparatus

Specific gravity bottle/ pycnometer

#### A.3 Procedure

Clean and thoroughly dry the specific gravity bottle and weigh it. Fill it up to the mark with freshly boiled and cooled water, which has been maintained at a temperature of  $20\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$  and weigh. Remove the water, dry the bottle again and fill it with the material maintained at the same temperature. Weight the bottle again.

#### A.4 Calculation

Specify the temperature of testing

Calculate as follows:

$$\text{Specific gravity at } 20\text{ }^{\circ}\text{C}/20\text{ }^{\circ}\text{C} = \frac{C - A}{B - A}$$

where

C is the mass, in grams, of the specific gravity bottle with the material,

A is the mass, in grams, of the empty specific gravity bottle, and

B is the mass, in grams, of the specific gravity bottle with water.

## Bibliography

CODEX STAN 306R-2011, *Regional standard for chilli sauce*



