



DRAFT TANZANIA STANDARD

Fruit flavoured concentrates – Specification

TANZANIA BUREAU OF STANDARDS

0 Foreword

Fruit flavoured concentrates are among beverages sweetened with artificial sweeteners which provide a sweet sensation to the taste buds, without raising blood sugar levels, they are calorie free products consumed for diet purposes.

These products are currently produced in Tanzania and some are imported for direct human consumption for people on diet as a ready to drink beverage after reconstitution with potable water.

The need to develop this Tanzania Standard was necessitated by the need to ensure the safety and quality of flavored fruit concentrates being produced and marketed in Tanzania.

In reporting the result of a test or analysis made in accordance with the Tanzania 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, methods of sampling and test for fruit flavoured concentrates intended for direct 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

Codex Stan 192, *General standard for food additives*

TZS 4, *Rounding off numerical values*

TZS 109: *General code of hygiene for food processing units*

TZS 114, *Soft drink manufacturing units – Code of hygiene*

TZS 118/ISO 4833, *Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of microorganisms – Colony-count technique at 30°C*

TZS 119/ISO 4831, *Microbiology of food and animal feeding stuffs – Horizontal method for detection and enumeration of coliforms – Most probable number technique*

TZS 131, *Microbiology General guidance for enumeration of yeast and moulds – Colony Count technique at 25°C*

TZS 163, *Processed fruits and vegetable products – Sampling*

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

TZS 538, *General standard on packaging, marking and labeling*

TZS 789, *Drinking (potable) water – Specification*

TZS 1491/ ISO 1842, *Fruits and Vegetables – Determination of pH*

TZS 1492, *Fruits and Vegetables – Determination of tin content*

TZS 1495, *Fruits and Vegetables – Determination of copper content*

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

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

3. Terms and definitions

For the purpose of this Tanzania Standard the following definitions shall apply: -

3.1 fruit flavoured concentrates

are concentrated beverage sweetened with non-nutritive sweeteners which provide a sweet sensation to the taste buds, without raising blood sugar levels, they are calorie free products consumed for diet purposes.

3.2 potable water

water conforming to the requirements of TZS 789 (see clause 2)

3.3 Calorie free

having relatively fewer calories (not more than 5 calories per serving)

3.4 artificial sweeteners

are substances used instead of sugars (i.e., sucrose, corn syrup, honey, agave nectar) to sweeten foods, beverages and other products

4. Requirements

4.1 General Requirements

4.1.1 fruit flavoured concentrates shall:

- (a) have uniform colour and particle size
- (b) free from foreign matter

4.1.2 Taste and aroma (flavour)

The product shall have taste and aroma characteristic of the flavour to which it is claimed or implied on the label.

4.1.3 Wholesomeness

The flavoured fruit concentrates shall have a good body and uniform colour.

4.2 Specific requirements

4.2.1 pH

The pH of flavoured fruit concentrates shall be in a range of 2.5 to 4.5 and shall be verified as per TZS 1491.

5. Food additives

Use of food additives shall be in accordance to Codex Stan 192

6. Contaminants

The product on testing shall not contain metal contaminants exceeding levels given in table 1:

Table 1 – Limits for metal contaminants

S/No	Contaminant	Maximum Limit, (mg/kg)	Method of Test
1	Lead (Pb)	0.2	TZS 268
2	Arsenic (As)	0.2	TZS 1502
3	Copper (Cu)	3	TZS 1495
4	Tin (Sn)	200	TZS 1492
5	Cadmium (Cd)	0.003	TZS 1581-1

7. Hygiene

7.1 The product shall be prepared under hygienic conditions according to TZS 114 and TZS 109

7.2 Microbiological limit – The product on testing shall not contain microbiological count more than the levels given in Table 2.

Table 2 – Microbiological limits

S/N	Microorganism	Maximum Limit	Method of Test (see clause 2)
1	Total plate count, cfu/g	1×10^3	TZS 118
2	Coliforms, cfu/g	Absent	TZS 119
3	Yeast and moulds, cfu/g	10	TZS131

8. Sampling and test

8.1 Sampling

The product shall be sampled in accordance with TZS 163

8.2 Test

The product shall be tested for compliance with the requirements of this standard as described in this standard.

9. Packing, marking and labelling

9.1 Packing

Fruit flavoured concentrates shall be packed in suitable food grade containers which are moisture proof and hermetically sealed.

9.1.1 The containers shall be filled under hygienic conditions

9.1.2 If the product is packed in sachets, the sachets shall also be labeled.

9.2 Marking and labeling

In addition to the provisions covered under TZS 538 (see clause 2) fruit flavoured concentrate shall be legibly and indelibly marked on the label with the following information.

- (a) The “common name” of the product shall reflect the low calorie drink and its flavor e.g Low calorie Tamarind drinks
- (b) Name, postal and physical address of the manufacturer and /or packer
- (c) List of ingredients in descending order, including specific names of additives
- d) Net content
- e) Batch identification number in code or in clear
- f) Date of manufacture and expiry or best before date
- g) Country of origin
- h) Storage condition
- i) Trade or brand name
- j) Instructions for use.
- k) A statement that shall prominently feature on the label that the drink contains an artificial sweetener.
- l) Warning statement

“This product has no nutritive value, it is prohibited for children under 18 years of age, pregnant and breast feeding women, sick people and elderly people” and the statement shall also be written in Kiswahili as follows, “Bidhaa hii haina virutubishi, hairuhusiwi kutumiwa na watoto wenye umri chini ya miaka 18, wanawake wajawazito na wanaonyonyesha, wagonjwa na wazee”.

NOTE – If the drink in solid form to which aspartame has been added is displayed for retail sale other than in a package, there must be displayed in connection with the drink in standard 50% of the label size, a statement that the drink contains an artificial sweetener together with the statement “ Phenylketonuria: contains Phenylalanine.

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

9.4 The use of pictorials or any other misrepresentation of the product on the label is prohibited.

9.5 Each container may also be marked with the TBS standards mark of quality.

NOTE – The use of the TBS certification mark is governed by the provision of the Standards Act, 2009. Details of conditions under which a license for the use of TBS certification mark may be granted to the manufacturer may be obtained from TBS.