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DRAFT TANZANIA STANDARD

Roselle alcoholic drink – Specification

TANZANIA BUREAU OF STANDARDS

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0 Foreword

Most alcoholic beverages have traditionally been known to be products of direct fermentation process; either from saccharified grains or fruits extract. Research and development that has been taking place for the production of non traditional alcoholic beverages has enabled the production of other alcoholic beverages that are based on fermentation of ingredients arising from plant parts such as flowers, calyces, leaves and saps. This category of beverage is increasingly becoming important in Tanzania.

Alcoholic beverages are normally judged in terms of their flavour and the stimulating effect they produce. Bearing this in mind, the alcoholic beverage industry has thus continuously been in search of new technique and products that would fulfill the aforementioned requirements.

In light of the need to safeguard the consumer and in order to ensure the safety and quality of the product, this Tanzania Standard was thus developed.

In the preparation of this Tanzania Standard assistance was derived from the local processors of the product.

In reporting the result of a test or analysis made in accordance with this 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 and methods of sampling and tests for roselle alcoholic drink, produced by fermentation of a sugar added extract of dried roselle calyces mash, by yeasts.

2 REFERENCES

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced documents (including any amendments) applies;
:

TZS 4 *Rounding off numerical values*

TZS 59 *Water: Distilled quality – Specification*

TZS 76 *Test method for determination of arsenic*

TZS 101 *Refined sugar – Specification*

TZS 109 *Code of hygiene for food processing units – General*

TZS115 *Food – Permitted food additives – Schedule*

TZS 117 *Food – Handling of samples for microbiological analysis – Code of practice*

TZS 119 *General guidance for the enumeration of Coliforms – Most Probable Number Technique*

TZS 163 *Processed fruits and vegetable products – Methods of sampling and tests*

TZS 268 *General atomic absorption spectrophotometer method for determination of lead in foodstuffs*

TZS 538 *Packaging, marking and labeling of foods*

TZS 574(Part 1), *Potable water – Specification*

TZS 471 *Methods of sampling and test for alcoholic beverages*

TZS 665 *Ready to drink unfermented fruit flavour based alcoholic beverage – Specification*

TZS 1190: 2009, *Dried roselle – Specification*

TZS 831 Brown sugar – Specification

TZS 131 Microbiology of food and animal feeding stuff\: General guidance for enumeration of yeasts and moulds\- Colony Count technique at 25^0C

TZS 118 Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of microorganisms – Colony\-count technique at 30^0C

3 TERMS AND DEFINITION

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

3.1 Dried roselle calyces

Means dried calyces of herbaceous shrub of *Hibiscus sabdariffa*

3.2 ethanol

ethyl alcohol C_2H_5OH

3.3 Ready to drink

Means a drink that can be served for consumption without being diluted.

3.4 Industrial sugar

Means refined sugar conforming to TZS 101 (see clause 2)

4. REQUIREMENTS

4.1 General Requirements

4.1.1 Description

4.1.1.1 *Roselle alcoholic drink*

Shall be the carbonated or non carbonated alcoholic beverage intended to be consumed directly without prior dilution, obtained by fermentation of an extract of roselle calyces mash; prepared by filtering or decanting of a mixture of roselle calyces that have been treated with hot potable water conforming to TZS 574 Part 1, (see clause 2); with or without the addition of essences, herbs, spices, plant extracts or other permitted food additives (see 4.2.4) and there after mixed with sugar. The alcoholic content of which shall range between 9 – 12 per cent volume by volume.

4.1.2 Raw material

The following raw materials shall be used for the production of roselle alcoholic drink.

4.1.2.1 *Potable water*

Conforming to TZS 574 (see clause 2)

4.1.2.2 *Roselle* calyces *extract*

Derived from sound safe whole roselle calyces conforming to the requirements prescribed in TZS 1190 (see clause 2) with the use of hot potable water

4.1.2.3 *sugar*

Refined sugar conforming to TZS 101 or Brown sugar conforming to TZS 831 (see clause 2)

4.1.2.4 *Food additives*

The following class of permitted food additives and as specified in TZS 115 (see clause 2) may be used.

a) Flavours
b) Stabilizers
c) Preservatives
d) Acidity regulators
e) Essential oils and/or fruit extracts

4.1.2.4.1 Only permitted natural flavours and their identical synthetic equivalent; and other synthetic flavours approved by the Codex Alimentarius Commission shall be used. They shall not contain substances in amounts that may be injurious to health.

4.1.2.4.2 Roselle alcoholic drink shall not contain added colours in order to give or amplify the natural colour of roselle.

4.1.2.4.3 The drink shall be free from foreign odour, taste, suspension and shall be clear. Also shall possess the characteristic taste and colour.

4.2 SPECIFIC REQUIREMENT

4.2.1 When tested the physical and chemical requirements of roselle alcoholic drink shall be as specified in table 1.

Table 1: Physical and Chemical requirements for roselle alcoholic drink

S/No.	Characteristic	Requirement	Method of Test (see clause 2)
1.	Ethyl alcohol, percent, v/v	9 - 12	TZS 471
2.	Total acidity as citric acid, (g/l)	4 - 8	TZS 467
3.	Volatile acidity as acetic acid, g/l, max	1.3	
4.	Total sulphur dioxide, mg/l, **max**	250	
5.	Free sulphur dioxide, mg/l, **max**	40	
6.	Copper, mg/l, **max**	2	
7.	Lead, mg/l, Max	0.1	

5 CONTAMINANTS

Roselle alcoholic drink shall be free from chemicals, metal and pesticide contaminants in amounts which may present a hazard to human health.

6 HYGIENE

6.1 Roselle alcoholic drink shall be manufactured in premises and an environment that is hygienically maintained and shall be handled in accordance to the requirements provided in TZS 109 (See clause 2)

6.2 *Microbiological requirement*

The product shall conform to the microbiological limits specified in table 2, when tested in accordance with the methods prescribed see clause 2)

Table 2: Microbiological requirements for roselle alcoholic drink

S/No.	Organism	Maximum limit	Method of Test
1.	Total colony count, cfu/ ml	1×10^1	TZS 118
2.	Coliforms (MPN/ml)	Nil	TZS 119
3.	Yeasts and moulds, cfu/ ml	1×10^1	TZS 131

7 SAMPLING AND TEST

7.1 The method of sampling and tests shall be in accordance with Table 1 and 2

7.2 Quality of reagents

7.2.1 Unless specified otherwise analytical grade chemicals and distilled water conforming to TZS 59 (see clause 2) shall be used in all tests.

8 PACKAGING, MARKING AND LABELLING

8.1 Packing

8.1.1 Rosella alcoholic drink shall be filled in any safe, suitable containers, conforming to the requirements of TZS 538 (see clause 2). The containers, shall be properly sealed with gas tight caps; which shall not affect the quality of the product and shall also protect the product from undue oxidation or contamination.

8.1.2 Crown and other closures in case of bottled drinks shall be lined internally with harmless material.

8.1.3 The volume filled shall comply with the weights and packaging regulations,

8.2 Marking and labelling

Containers of roselle alcoholic drink intended for sale or distribution for human consumption shall be legibly and indelibly marked or labelled with the following information.

a) Name of the product (Roselle alcoholic drink)
b) Brand or Trade name of the product
c) Name and physical address of the manufacturer or packer
d) Alcohol content, in percent volume by volume
e) A declaration of common name or by international numbering system of any additive used
f) List of ingredients in descending order of proportion
g) The net content by volume in milliliters or litres
h) Country of origin
i) Date of manufacture and expiry date
j) Storage condition
k) Batch number in code or in clear

8.3 Certification mark

Each container may also be marked with TBS certification mark of quality.

NOTE - The TBS Mark of Quality may be used by the packers only under licence from TBS. Particulars of conditions under which the licenses are granted, may be obtained from TBS