



DRAFT TANZANIA STANDARD

Seamoss gel — Specification

TANZANIA BUREAU OF STANDARDS

Seamoss gel — Specification

0 Foreword

Seamoss gel is a product made from blending the edible algae with water, creating a thick gel; where sometime fruits and spices may be added. It is used as a natural dietary supplement and as food and drink thickener.

This Tanzania Standard was prepared in order to ensure the safety and quality of seamoss gel produced and/or traded in Tanzania.

In the preparation of this Tanzania Standard, considerable assistance was derived from stakeholders producing the product.

For the purpose of deciding whether a particular requirement of this Tanzania Standard is complied with, the final value observed or calculated expressing the result(s) of a test or analysis shall be rounded off in accordance with TZS 4 (see Clause 2).

1 Scope

This Tanzania Standard specifies the requirements, sampling and test methods for seamoss gel produced from edible seamoss species intended for human consumption.

2 Normative references

For undated references, the latest edition of the referenced document (including any amendments) applies.

CXS 192, *General standard for food additives*

CXS 193, *General standard for contaminants and toxins in food and feed*

CXG 50, *General guidelines on sampling*

TZS 4, *Rounding off numerical values*

TZS 109, *Food processing units — Code of hygiene — General*

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

TZS 122, *Microbiology of food and feeding stuffs — Horizontal method for the detection of Salmonella spp.*

TZS 125 (all parts), *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species)*

TZS 538, *Packaging and labelling of foods*

TZS 2750, *Dried seaweed — Specification*

TZS 3950, *Powdered seaweed -Specification*

TZS 1491, *Fruit and Vegetable products - Determination of pH*

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TZS 121, *Microbiological examination for clostridium botulinum and clostridium botulinum toxins - Test method*

TZS 730-2, *Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of -b-glucuronidase-positive Escheria coli - Part 2 - Colony-count technique at 44 0C using 5-bromo-4-chloro-3-indolyl-b-D-glucuronide*

3 Terms and definitions

For the purposes of this standard the following terms and definitions shall apply.

3.1

seamoss

cluster of macroscopic and multicellular benthic marine algae of the division rhodophyta (red)

3.2

seamoss gel

thick, jelly-like substance made by blending seamoss with water in which fruit or spices may be added

3.3

carrageenan content

concentration of the natural gelling agent that gives the product its texture and beneficial properties

3.4

foreign matter

organic and inorganic materials such as sand, soil and glass, other than extraneous matter in the raw material used

3.5

extraneous matter

organic matter of seamoss origin other than seamoss and other raw material used

3.6

food grade containers

containers that shall safeguard the hygienic, safety, nutritional, technological, and organoleptic qualities of the product

4 Requirements

4.1 General requirements

4.1.1 Raw material

- a) Seamoss used in the preparation of seamoss gel shall comply with TZS 2750 and TZS 3950;
- b) Spices if used shall comply with respective product standard; and
- c) Fruits if used shall comply with respective product standard.

4.1.2 Finished product

The final product shall:

- a) have colour characteristics of the seamoss and/or other raw material used;
- b) have taste and odour typical of the seamoss and/or other raw material used;
- c) Thickness of the seamoss gel; and
- d) be free from extraneous and foreign matters.

4.2 Specific requirements

4.2.1 Seamoss gel shall comply with the specific requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for seamoss gel

S/No.	Parameter	Requirement	Test method
i.	pH	3.0 – 7.0	TZS 1491
ii.	Viscosity, cP , max	70	Viscometer
iii.	Salt as KCl, % max	2	Annex A
iv.	Carrageenan content, % min	25	HPLC

5 Food additives

Food additives may be used in the preparation of seamoss gel in accordance with CXS 192.

6 Contaminants

6.1 Heavy metals

Seamoss gel shall comply with those maximum limits for heavy metals and other contaminants specified in CXS 193.

6.2 Pesticide and veterinary drug residues

Seamoss gel shall comply with those maximum pesticide and veterinary drug residue limits established by the Codex Alimentarius Commission for similar commodities.

7 Hygiene

7.1 Seamoss gel shall be produced and handled in a hygienic manner in accordance with TZS 109.

7.2 Seamoss gel shall comply with the microbiological limits given in Table 2 when tested in accordance with the test methods specified therein.

Table 2 — Microbiological limits for seamoss gel

S/No.	Microorganism	Limit	Test method
i.	<i>Escherichia coli</i> , CFU/g	Absent	TZS 730-2
ii.	Total plate count CFU/g, max.	10 ⁵	TZS 118
iii.	<i>C. botulinum</i>	Absent	TZS 121
iv.	<i>Staphylococcus aureus</i> , CFU/g	Absent	TZS 125
v.	<i>Salmonella</i> spp, per 25g	Absent	TZS 122

8 Sampling and testing

8.1 Sampling

Sampling shall be done in accordance with CXG 50.

8.2 Testing

Tests shall be done in accordance with the test methods specified in Table 1 and Table 2.

9 Packaging, labelling and marking

9.1 Packaging

Seamoss gel shall be well packaged in a food grade container.

9.2 Labelling

9.2.1 In addition to the requirements given in TZS 538, seamoss gel shall be legibly and indelibly labelled with the following information:

- a) name of the product as “seamoss gel”
- b) common name and species name;
- c) declaration “Bleached” or “Unbleached” seamoss used;
- d) fruit or spice if used;
- e) net weight;
- f) name and physical address of the manufacturer/packer/distributor;
- g) date of manufacture;
- h) expiry date;
- i) batch number;
- j) instructions for use;
- k) country of origin; and
- l) storage conditions.

m) Declaration of allergens if used

9.2.2 Each container may also be marked with the TBS Standards Mark of Quality.

NOTE — The TBS Standards Mark of Quality may be used by the manufacturers only under licence from TBS. Particulars of conditions under which the licences are granted may be obtained from TBS.

Annex A (normative)

Determination of salt (as KCl)

B.1 Procedure

Weigh approximately 3-5 grams of the seamoss gel sample into a crucible. Heat the sample in the crucible in the furnace at 550°C – 600 °C for about 3 hours. Cool the crucible and add 100mls of distilled water. Transfer the solution from the crucible into Erlenmeyer flask. Add 5 drops of K_2CrO_4 into the solution and titrate with standard 0.1N $AgNO_3$ to end point (yellow to brick red colour)

B.2 Calculation

$$\text{Salt as KCL \%} = \frac{V \text{ AgNO}_3 \times N_{\text{AgNO}_3} \times 0.0584 \times 100}{\text{Sample weight}} \times 1.276$$

