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DRAFT ZANZIBAR NATIONAL STANDARD

Dried glucose syrup — Specification

ZANZIBAR BUREAU OF STANDARDS

Foreword

This Draft Zanzibar National Standard has been prepared by Food Standard Technical committee (TCFA1). In accordance with the Zanzibar Bureau of Standards general procedures, this draft is here by presented to the public in order to receive any technical comment concerns.

Technical Committee Representatives

This draft Zanzibar National Standard was prepared by Food Technical Standard committee which consists of representatives from the following organizations:

Chief Government Chemist Laboratory Agency (CGCLA)
Ministry of Agriculture, Irrigation, Natural Resources and Livestock (MAINRL)
Ministry of Health Zanzibar (MoH)
Said Salim Bakhresa & Company LTD
The State University of Zanzibar (SUZA)
Umoja wa Wazalishaji Wadogo Wadogo Zanzibar (UWAZI)
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Dried glucose syrup — Specification

1 Scope

This draft Zanzibar National Standard specifies requirements, sampling and test methods for dried glucose syrup intended for human consumption.

2 Normative references

The following referenced documents 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.

CAC/GL 50, *General guidelines on sampling*

CXS 192, *General Standard for Food Additives*

EAS 39, *General principles of food hygiene — Code of practice*

EAS 803, *Nutrition labelling — Requirements*

EAS 805, *Use of nutritional and health claims — Requirements*

ICUMSA GS3/4/7/8-11, *The Determination of Sulphated Ash in Brown Sugar, Juice, Syrup and Molasses*

ICUMSA Method GS 2/3-35, *The Determination of Sulphite in Refined Sugar Products excepting Brown Sugars by an Enzymatic Method*

ICUMSA Method GS 2/9-6, *The Determination of Reducing Sugars in White Sugar and Plantation White Sugar by the Modified Ofner Titrimetric Method*

ISO 12846, *Water quality — Determination of cobalt, nickel, copper, zinc, cadmium and lead — Flame atomic absorption spectrometric methods*

ISO 1742, *Glucose syrups — Determination of dry matter — Vacuum oven method*

ISO 21527 -2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds*

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

ISO 7251, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique*

ISO 8288, *Water quality — Determination of cobalt, nickel, copper, zinc, cadmium and lead — Flame atomic absorption spectrometric methods*

ISO/TS 19620, *Determination of arsenic(III) and arsenic(V) species — Method using high performance liquid chromatography (HPLC) with detection by inductively coupled plasma mass spectrometry (ICP-MS) or hydride generation atomic fluorescence spectrometry (HG-AFS)*

ZNS 61, *Packaging and labelling of food*

3 Terms and definitions

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

3.1

dried glucose syrup

glucose syrup from which the water has been partially removed to give a total solids content of not less than 93.0% m/m.

3.2

ICUMSA unit

international unit developed by International Commission for Universal Methods of Sugar Analysis (ICUMSA) for expressing the purity of sugar and is directly related to the colour of sugar.

3.3

food grade packaging material

material which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product

4 Requirements

4.1 General requirements

4.1.1 Dried glucose syrup shall

- a) be in form of coarse or fine white to creamish white powder;
- b) have not undergone any kind of deterioration or spoilage; and
- c) be clean and free from foreign matter.

4.2 Specific requirements

Dried glucose syrup 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 Dried glucose syrup

| | Characteristic | Limit | Test method |
|------|--|-------|-------------------------|
| i. | Total solid content, %, (v/v), min | 93.0 | ISO 1742 |
| ii. | Reducing sugar content (dextrose equivalent, DE on dry basis) percent by mass, <i>min.</i> | 2 | ICUMSA Method GS 2/9-6 |
| iii. | Sulphated ash (on dry basis) percent by mass, <i>Max.</i> | 1.0 | ICUMSA GS3/4/7/8-11 |
| iv. | Sulphur dioxide,mg/kg <i>max.</i> | 40 | ICUMSA Method GS 2/3-35 |
| v. | Sulphur dioxide,mg/kg (in those syrups used for manufacture of sugar confections only) <i>max.</i> | 150 | ICUMSA Method GS 2/3-35 |

5 Food additives

Food additives when used shall comply with CODEX STAN 192

6 Contaminants

6.1 Heavy metals

Dried glucose syrup shall comply with those maximum heavy metal limits given in Table 2 when tested in accordance with test methods specified therein..

Table 2 – Limits for heavy metal contaminants for Dried glucose syrup

| Contaminant | Maximum limit mg/kg | Test method |
|--------------|------------------------|--------------|
| Arsenic (As) | 1 | ISO/TS 19620 |
| Lead (Pb) | 2 | ISO 8288 |
| Copper (Cu) | 5 | ISO 12846 |

7 Hygiene

7.1 Dried glucose syrup shall be produced and handled under hygienic conditions in accordance with EAS 39 and shall comply with microbiological limits given in Table 3 when tested in accordance with the methods specified therein.

Table 3 – Microbiological limits for Dried glucose syrup

| S/No | Microorganism | Maximum limit | Test method |
|------|--|---------------|--------------|
| ii. | <i>Escherichia coli</i> , cfu/g, max. | Absent | ISO 7251 |
| iii. | <i>Salmonella spp</i> , per 25 g, max. | Absent | ISO 6579 -1 |
| vi. | Yeasts and moulds, cfu per g, max. | 50 | ISO 21527 -2 |

8 Packaging

Dried glucose syrup shall be produced and packaged in food grade containers in accordance to which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product.

10 Labelling

10.1 The containers shall be labelled in compliance with the requirements of ZNS 61. In addition, the following particulars shall be legibly and indelibly labelled on the container:

- a) name of the product as “Dried glucose syrup or Dried glucose”;

PCD 750: 2025

- b) brand name if any;
- c) name, address and physical location of the manufacturer and/or the packer, distributor, importer, exporter or vendor;
- d) net weight in metric units;
- e) country of origin;
- f) batch number;
- g) date of manufacture and expiry of the product;
- h) storage instructions; and
- i) batch number.

10.2 Nutritional and health claims shall be made in accordance to EAS 803 and EAS 805.

11 Sampling

Sampling of Dried glucose syrup shall be done in accordance with CAC/GL 50.