

# DRAFT UGANDA STANDARD

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## Edible Sugarcane — Specification

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## Contents

Page

Foreword .....	iv
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions .....</b>	<b>2</b>
<b>4 Requirements.....</b>	<b>2</b>
4.1 General requirements .....	2
4.2 presentation forms .....	2
4.3 Specific requirements .....	2
<b>5 Contaminants.....</b>	<b>3</b>
5.1 Pesticide residues .....	3
5.2 Heavy metals.....	3
5.3 Other Contaminants .....	3
<b>6 Hygiene.....</b>	<b>3</b>
6.1 Microbiology .....	3
<b>7 Packaging.....</b>	<b>3</b>
<b>8 Labelling.....</b>	<b>3</b>
<b>9 Sampling .....</b>	<b>4</b>
<b>Bibliography.....</b>	<b>5</b>

## Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established under Cap 327, of the Laws of Uganda, as amended. UNBS is mandated to co-ordinate the elaboration of standards and is

- (a) a member of International Organisation for Standardisation (ISO) and
- (b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards, and
- (c) the National Enquiry Point on TBT Agreement of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of key stakeholders including government, academia, consumer groups, private sector and other interested parties.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

The committee responsible for this document is Technical Committee UNBS/TC 2, [*Food and Agriculture*], Subcommittee SC 11, [*Sugar, edible starches and related confectionery products*].

This first edition (DUS 2029:2018), which has been technically developed.

# Edible Sugarcane — Specification

## 1 Scope

This Draft Uganda Standard specifies the requirements, method of testing and sampling of edible sugarcane for direct 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

971.21, *Mercury in food by flame atomic absorption spectroscopy (FAAS)*

986.15, *Arsenic, cadmium, lead, selenium, and zinc in human and pet foods by atomic absorption spectrometry (AAS)*

US 28 EAS 39, *Code of practices for hygiene in the food and drink manufacturing industry*

US 738, *General standard for contaminants and toxins in food and feed (5th Edition)*

US 1659, *Materials in contact with food — Requirements for packaging materials*

US CAC/GL 50, *General guidelines on sampling*

US EAS 38, *Labelling of pre-packaged foods — General requirements*

US ISO 4831, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of coliforms — Most probable number technique*

US ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 C by the pour plate technique*

US ISO 6888-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 1: Technique using Baird-Parker agar medium*

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

US ISO 21527, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 1, Colony count technique in products with water activity greater than 0.95*

### 3 Terms and definitions

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

**3.1 Sugarcane stem**  
solid, unbranched stem, roughly circular in cross-section, is clearly differentiated into joints each comprising a node and an internode

**3.2 Stalk**  
main stem of a herbaceous plant.

**3.3 Maturation index (MI),**  
ratio between the brix of the stalks tip and base

### 4 Requirements

#### 4.1 General requirements

Sugar cane stem shall be;

- a) fresh, mature, well-formed and firm.
- b) free from dirt,
- c) Free from disease, visible insect pests
- d) Free from mechanical damage and pest damage
- e) Free from off odours
- f) With characteristic natural taste and aroma

#### 4.2 presentation forms

Sugar can stem may be presented in the following forms;

- a) whole stem
- b) chopped
- c) chopped and peeled

#### 4.3 Specific requirements

4.3.1 Edible Sugar cane shall have  $\geq 60$  Total Sugars (%DM)

## 5 Contaminants

### 5.1 Pesticide residues

Edible Sugarcane shall conform to those residual limits for pesticides established by the Codex Alimentarius Commission.

### 5.2 Heavy metals

Edible Sugarcane shall not exceed the limits of metal Contaminants as in Table 1.

**Table 1— Maximum level of metallic contaminants in Edible Sugarcane**

SN	Parameter	Limit (mg/kg)	Test method
i	Lead (Pb)	0.05	AOAC 986.15
ii	Arsenic (As)	0.2	AOAC 986.15
iii	Mercury (Hg)	0.05	AOAC 971.21

### 5.3 Other Contaminants

Edible Sugarcane shall conform to those maximum levels for contaminants and toxins as in US 738.

## 6 Hygiene

Edible Sugarcane shall be harvested, packaged and transported following hygienic practices in accordance US 28, EAS 39

### 6.1 Microbiology

Edible Sugarcane shall be free from microorganisms as stated in Table 2 below;

**Table 2 — Microbiological requirements for Edible Sugarcane**

SN	Microorganism	Limit	Test method
i	Total plate count, cfu/g, Max.	10 <sup>3</sup>	US ISO 4833-1
ii	Coliform count, cfu/g, Max.	10	US ISO 4831
iii	Yeast and mould count, cfu/g, Max.	10	US ISO 21527
iv	E.coli cfu/g, Max.	Absent	US ISO 7251
v	Staphylococcus aureus cfu/g, Max.	Absent	US ISO 6888-1

## 7 Packaging

Edible Sugarcane shall be packaged in clean food grade packaging material which comply with US 1659

## 8 Labelling

In addition to the requirements of US EAS 38, the following labelling requirements shall apply and shall be legibly and indelibly marked.

- a) Common name of the product to be declared on the label as 'Edible Sugarcane ';
- b) Net contents by volume ( 'System International') units;
- c) Name and physical address of the packer;
- d) Country of origin;
- e) Sugar cane variety;
- f) Storage conditions
- g) Packing date

## **9 Sampling**

Sampling and analysis of Edible Sugarcane shall be done in accordance with US CAC/GL 50.



## Bibliography

- [1] Sugar cane production guideline, 2014, Department of Agriculture, Forestry and Fisheries, South Africa

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## Certification marking

Products that conform to Uganda standards may be marked with Uganda National Bureau of Standards (UNBS) Certification Mark shown in the figure below.

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