

# DRAFT UGANDA STANDARD

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## Chewing gum — Specification

PUBLIC REVIEW DRAFT



Reference number  
DUS DEAS 352: 2018

**Compliance with this standard does not, of itself confer immunity from legal obligations**

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The Executive Director  
Uganda National Bureau of Standards  
P.O. Box 6329  
Kampala  
Uganda  
Tel: +256 417 333 250/1/2  
Fax: +256 414 286 123  
E-mail: [info@unbs.go.ug](mailto:info@unbs.go.ug)  
Web: [www.unbs.go.ug](http://www.unbs.go.ug)

## National 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 representatives of consumers, traders, academicians, manufacturers, government and other stakeholders.

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.

This Draft Uganda Standard, DUS DEAS 352: 2018, *Chewing gum — Specification*, is identical with and has been reproduced from an International Standard, DEAS 352: 2018, *Chewing gum — Specification*, and is being proposed for adoption as a Uganda Standard.

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*.

Wherever the words, "East African Standard " appear, they should be replaced by "Uganda Standard."



**DEAS 352: 2018**

ICS 67.180.10

## **DRAFT EAST AFRICAN STANDARD**

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**Chewing gum — Specification**

**EAST AFRICAN COMMUNITY**

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## Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

In order to achieve this objective, the Community established an East African Standards Committee mandated to develop and issue East African Standards.

The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

EAS 352 was prepared by Technical Committee EAS/TC 019, *Sugar and Sugar confectionery*.

This second edition cancels and replaces the first edition (EAS 352:2000), of which has been technically revised.

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# Chewing gum— Specification

## 1 Scope

This Draft East African Standard specifies the requirements, sampling and test methods for chewing gum.

## 2 Normative 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 document (including any amendments) applies.

*EAS 12, Potable water—Specification*

*EAS 39, Hygiene for food and drink manufacturing industry — Code of practice*

*EAS 38, Labelling of pre-packaged foods — Specification*

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

*ICUMSA GS 4/7/8/5-2, Determination of sucrose by gas chromatography in molasses and factory products - official; and cane juice — Tentative*

*ICUMSA GS 4/3- 7, Determination of total reducing sugars in molasses and refined syrups after hydrolysis by the lane and Eynon constant volume procedure — Official (Reference method)*

*ISO 5379, Starches and derived product, — Determination of sulphur dioxide content — Acidimetric method and nephelometric method*

*ISO 5809, Starches and derived products — Determination of sulphated ash*

*ISO 6579, Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Salmonella spp*

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

*ISO 21527-2, Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 2 — Colony count technique in products with water activity less than or equal to 0.95*

*ISO 5377:1981 Starch hydrolysis products -- Determination of reducing power and dextrose equivalent --*

*ISO 5809:1982, Starches and derived products -- Determination of sulphated ash*

*ISO 8968-1:2014 (IDF 20-1:2014) ,Milk and milk products -- Determination of nitrogen content -- Part 1: Kjeldahl principle and crude protein calculation*

*ISO 4832 Horizontal method for the detection and enumeration of Coliforms*

*ISO 6579-1 Microbiology of the food chain -- Horizontal method for the detection, enumeration and serotyping Of Salmonella -- Part 1: Detection of Salmonella spp.*

*ISO 21527-2 horizontal method for the enumeration of viable osmophilic yeasts and xerophilic moulds in products intended for human*

### **3 Terms and definitions**

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

#### **3.1**

##### **chewing gum**

confectionary product made from natural or synthetic gum base and ingredients and/or additives

#### **3.2**

##### **bubble gum**

chewing gum that can form a bubble when filled with air

#### **3.4**

##### **sugar-free gum**

Chewing gum in which sugar has not been added

#### **3.5 foreign matters**

Any matter which is not part of the product formulation

### **4 Requirements**

#### **4.1 General requirements**

##### **4.1.1** The chewing gum product shall:

- a) be safe and suitable for human consumption.
- b) be of a acceptable taste , flavour and chewy
- c) be free from foreign matter;

## 4.2 Ingredients

### 4.2.1 General

All ingredients shall comply with relevant East African Standards. Where no East African Standards exist, Codex Standards shall apply.

When water is used, it shall comply to EAS 12

### 4.2.2 Essential ingredients

Food grade gum base shall be an essential ingredient for the manufacture of chewing gum.

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### 4.2.3 Optional ingredients

Any other food grade ingredient used shall comply with clause 4.1.1 of this standard

## 4.3 Specific requirements

Chewing gum shall comply with the specific quality requirements specified in Table 1.

**Table 1 — Requirements for chewing gum and bubble gum**

S/N	Characteristic	Requirement		Method of test
		Chewing gum	Bubble gum	
i)	Moisture, % by mass, max.	4	4	AOAC 977.10
ii)	Sulphated ash, (if sugar based), % by mass, max.	9.5	15	ISO 5809
iii)	Acid insoluble ash, % by mass, max.	2.0 5.5	3.5 5.5	AOAC 975.12
iv)	Reducing sugars, (if sugar based), % by mass, min. % by mass, min.	4.5 5.5	5.5	ISO 5377- 1981
v)	Sucrose, (if sugar based), % by mass, max.	70 80	70 60	ICUMSA GS 4/7/8/5-2
vi)	Gum base, % by mass, min.	12.5 12	14.0 12	Annex A

## 5 Food additives

The Food additives used in product shall comply with Codex standard 192

## 6 Contaminants

### 6.1 Pesticide residues

Chewing gum shall comply with maximum pesticide residues limits established by the Codex Alimentarius Commission for this commodity.

### 6.2 Heavy metal

Chewing gum shall not contain heavy metals in amounts which may represent a hazard to human health and shall comply with the limits in Table 2.

**Table 2 — Limits for metal contaminants**

S/N	Metal	Maximum Limits mg/kg (ppm)	Test methods
1	Lead	0.5	AOAC 986-15
2	Arsenic	1.0	

## 7 Hygiene

The Chewing gum shall be prepared and handled in a hygienic manner in accordance with EAS 39 and shall comply with the microbiological limits stipulated in Table 3 when tested in accordance with the methods specified therein.

**Table 3 — Microbiological limits for chewing gum**

Characteristic	Requirement	Test Methods
Coliforms CFU/g	<10	ISO 4832
Salmonella spp per 25 g	Not detected	ISO 6579-1
Staphylococcus aureus /g	Not detected	ISO 6888 - 3
Yeast and moulds, CFU/g	<10	....ISO 21527-2

## 8 Packaging

The Chewing gum shall be packaged in food grade material that ensure the integrity and the safety of the product

## 9 Labelling

The packages shall be labelled in accordance with the requirements of EAS 38.

Exemptions specified in clause 4.7.1. c) of EAS 38 for expiry date do not apply and expire date shall be given.

## 10. Weight and measures

The weight and fill of chewing gum shall comply with the weights and measures regulations of Partner States or equivalent legislation.

## 11 Sampling

'Sampling shall be carried out in accordance with Codex Stan 50

## **Annex A**

### **(normative)**

## **Determination of gum base content**

### **A.1 Preparation of the sample**

Take four tablets of chewing gum or bubble gum and clean with a fine hair brush to remove the talc and sugar dust. Cut the sample into small pieces.

### **A.2 Method**

Weigh accurately the entire sample and quantitatively transfer the sample into an extraction cartridge. Take 200 ml of chloroform in a tared 250-mL capacity round-bottom flask. Extract the sample for eight hours in a soxhlet extraction assembly. Subsequently distil off the chloroform in a drying chamber at  $105\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ . Weigh the flask. Continue the process till a constant mass is obtained

### **A.3 Calculation**

The gum based content shall be expressed as follows:

$$\text{Gum base content, \% by mass} = \frac{M_1 - M_2}{M}$$

where

$M_1$  mass, in grams, of the flask with extracted gum sample,

$M_2$  mass, in grams, of the empty flask, and

$M$  mass, in grams, of the sample taken for test.

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