

DRAFTUGANDA STANDARD

First Edition
2016-09-07

Dairy Based Beverages — Specification

PUBLIC REVIEW DRAFT



Reference number
DUS 1563: 2016

© UNBS 2016

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

A Uganda Standard does not purport to include all necessary provisions of a contract. Users are responsible for its correct application

PUBLIC REVIEW DRAFT

© UNBS 2016

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying and microfilm, without prior written permission from UNBS.

Requests for permission to reproduce this document should be addressed to

The Executive Director
Uganda National Bureau of Standards
P.O. Box 6329
Kampala
Uganda
Tel: 256 414 505 995
Fax: 256 414 286 123
E-mail: info@unbs.go.ug
Web: www.unbs.go.ug

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 coordinate 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 Uganda Standard was developed by the **UNBS/TC 2/SC 1 – Milk and milk products** Sub Committee under the Food and Agriculture standards Technical Committee.

PUBLIC REVIEW DRAFT

Dairy Based Beverages — Specification

1 Scope

This Uganda standard specifies the requirements and the methods of sampling and test for dairy based beverages.

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.

US 163: *Code of Hygienic practise for milk and milk products*

US CODEX STAN 206: *General standard for use of dairy terms*

US CODEX STAN 243 *Standards for fermented milks*

US ISO 5538: *Milk and Milk Products sampling*

US EAS 38, *Labelling of pre-packaged foods-specification*

US 28, *Code of practice for hygiene in the food and drink manufacturing industry*

US 45, *General standard for food additives*

US EAS 12, *Drinking (potable) water — Specification*

US 217-2/EAS 217-2, *Microbiology of foods and animal feeding stuffs — Horizontal method for the enumeration of microorganisms — Part 2: Colony count technique at 30 °C*

US 217-4/EAS 217-4, *Microbiology of foods and animal feeding stuffs — Horizontal method for the detection and enumeration of coliforms — Part 4: Most probable number technique*

US ISO 6733, *Milk and milk products -- Determination of lead content -- Graphite furnace atomic absorption spectrometric method*

US ISO 6731 *Milk and milk products--Determination of total solids content*

US ISO 6561-2 *Fruits, vegetables and derived products -- Determination of cadmium content -- Part 2: Method using flame atomic absorption spectrometry*

US ISO 6634 *Fruits, vegetables and derived products -- Determination of arsenic content -- Silver diethyldithiocarbamate spectrophotometric method*

US EAS 49 *Dried whole milk powder and skimmed milk powder.*

US EAS 69 *Pasteurised Milk*

US EAS 803 *Nutritional labelling*

US EAS 804 *Claims on food*

US EAS 805 *Use of Nutritional and Health claims*

3 Terms and definitions

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

3.1 Milk
is the normal mammary secretion of milking animals obtained from one or more milkings without either addition to it or extraction from it, intended for consumption as liquid milk or for further processing.

3.2 Dairy based beverage
Includes all mixes ready-to-drink or concentrated, fermented or not fermented, sweetened or non-sweetened, flavoured or non flavoured, carbonated or non-carbonated milk-based drinks with other permitted food ingredients.

3.3 Contaminants
it is any biological or chemical agent, foreign matter, or other substances that are not intentionally added to food, which may compromise food safety or suitability.

3.4 Pasteurization
it is a heat treatment process applied to a product with the aim of avoiding public health hazards arising from pathogenic microorganisms associated with dairy based beverage. Pasteurization, as a heat treatment process, is intended to result in only minimal chemical, physical and organoleptic changes.

3.5 homogenization
process by which milk fat globules are finely divided and interspersed to form a homogeneous product so as to prevent the fat from floating on the surface and adhering to the inside of the container.

3.6 food grade material
packaging material, made of substances which are safe and suitable for their intended use and which will not impart any toxic substance or undesirable odour or flavour to the product

3.7 dietary soft drinks
drinks sweetened with low or no sugars with or without non-nutritive and/or intense sweeteners and intended for use in very low energy diets

3.8 Standardized milk
Refers to the milk whose composition has been adjusted to the desired levels.

4 Essential Quality and Compositional Requirements

4.1 Raw materials

4.1.1 Milk

Dairy based beverages shall contain 15% minimum quantity of milk. The milk may be whole milk, skimmed milk, whey milk, fermented and or unfermented milk, pasteurized, sterilized etc.

4.1.2 Water

The water used for the manufacture of dairy based beverages shall be potable water and complying with the requirements of US EAS 12

4.1.3 Sweeteners

The sweeteners shall conform to relevant standards

Dairy based beverages may contain one or more of the sweeteners such as

powder (dry) or liquid forms of sugar,

invert sugar,

dextrose,

fructose,

lactose,

mannitol,

honey,

glucose syrup,

sorbitol, and

High Fructose Corn Syrup (HFCS).

4.1.4 Fruit Juices

Diary based beverages may also contain fruit juices which shall be conforming to the relevant standards.

4.1.5 Food additives

Dairy based beverages shall contain only permitted additives in accordance with US 45.

4.2 Types of dairy based beverages

Diary based beverages shall be of the following types:

1. pasteurised

2. sterilised
3. carbonated or non-carbonated.
4. flavoured or Non flavoured
5. fermented or unfermented
6. sweetened or unsweetened
7. concentrated or ready to drink. .

Dairy based beverages, may be prepared from any of the following types of milk

- a) standardised milk
- b) homogenised Milk
- c) whole milk
- d) skimmed milk or
- e) powdered milk
- f) whey milk
- g) cultured milk

The types of milk mentioned above shall be as defined in US CODEX 206.

4.3 General Requirements

Dairy based beverages shall

possess a good body, uniform colour, a well-balanced flavour and shall be free from off-odours and off-flavors when assessed using the normal sensory tests,

be free from insect and rodent contamination and practically free from other extraneous matter,

show no turbidity (except turbidity arising from the ingredients or food additives used for flavouring or colouring), and

show no sedimentation (except sedimentation arising from the ingredients or food additives used for flavouring or colouring).

NOTE Sedimentation may occur in particulated drinks that contain particles such as pieces of fruits or vegetables.

The dairy based beverages shall be stable when stored.

4.4 Specific requirements

4.4.1 Sugar content

Dairy based beverages that shall be sweetened with sugars, shall record a Brix value of not less than five degrees at 20 °C when tested in accordance with US ISO 6731. Concentrated (liquid or solid) dairy based beverages shall be tested for Brix only after reconstitution or diluting to taste as per manufacturer's instructions.

NOTE The test for sugar content in carbonated dairy based beverages should be conducted after de-gassing.

Dietary milk based beverages may be sweetened with low sugar with or without non-nutritive and/or intense sweeteners. For those drinks, the Brix shall not apply.

4.4.2 Alcohol content

The dairy based beverages shall contain no more than 3 mg/L alcohol content when tested in accordance with US ISO 2448.

5 Contaminants

5.1 Heavy Metal Contaminants

Dairy based beverages shall not contain heavy metal contaminants in excess of the limits stipulated in Table 1

Table 1 – Limits for heavy metal contaminants in dairy based beverages

Contaminant	Maximum limit	Method of test
Arsenic (As), mg/kg	0.05	US ISO 6634
Lead (Pb), mg/kg	0.05	US ISO 6733
Mercury (Hg), mg/kg	0.001	US ISO 6637
Cadmium (Cd), mg/kg	0.003	US ISO 6561-2

5.2 Pesticides and Veterinary drug residues

The products covered by this standard shall comply with the maximum residue limits in accordance with the relevant standards.

6 Hygienic Requirements

Dairy based beverages shall be produced and handled in a hygienic manner in accordance with US 28 and US 163.

Dairy based beverages shall conform to the limits for microbiological contaminants in Table 2.

Table 2 – Microbiological limits for dairy based beverages

Microorganism	Maximum limit	Method of Test
Total aerobic count, CFU/mL	25	US 217-2 / EAS 217-2
E. coli, per 100 mL	Absent	US ISO 7251
Yeast and moulds, CFU/mL	10	US 217-8/EAS 217-8
Listeria monocytogenes, CFU/mL	Absent	US ISO 11290-2
Salmonella, , CFU/mL	Absent	US ISO 6785

7 Packaging

Dairy based beverages shall be packaged in food grade containers which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product.

8 Weights and measures

Dairy based beverages shall be packaged in accordance with the Weights and Measures legislation.

9 Labelling

9.1 General

In addition to the requirements of US EAS 38, the specific labelling requirements in 11.2 – 11.7 shall apply and shall be legibly and indelibly marked on the container.

9.2 Name of product

The name of the product to be declared on the label shall be:

milk/ dairy based soft drink or;

milk/dairy based X drink (for example, mango drink, pineapple drink) where X is the name of the fruit or vegetable juice used in the flavouring of the drink or; (amount used shall be declared on the label);

milk based X flavoured drink (for example, mango flavoured drink, pineapple flavoured drink, coffee flavoured drink) where X is the name of the flavour in the drink;

carbonated dairy based drinks shall have the word “carbonated” declared before the name of the product;

Dairy based drinks containing more than 200 mg/kg caffeine shall include the word “caffeinated” or “contains caffeine” before the name of the product;

dietary dairy based drinks shall include the word “light” or “diet” before the name of the product;

for spiced dairy beverages, the word “spiced” shall be included before the name of the product unless the common name of the spice is part of the name of the product.

9.3 List of the ingredients

Where quinine or caffeine are used as a flavouring in the production or preparation of a carbonated and non-carbonated dairy based beverage, these substances shall always be mentioned by name in the list of ingredients, immediately after the term “flavouring”.

9.4 Quantitative declaration of ingredient

Drinks containing more than 200 mg/kg caffeine shall indicate the amount of caffeine in the drink as consumed in mg/100 mL.

9.5 Instructions for use

The rate or instruction for dilution or reconstitution shall be declared on the label of concentrated dairy based beverages.

9.6 Caution

Carbonated dairy based beverages shall indicate on the label the caution, "Product is under pressure".

Caffeinated dairy based beverages shall bear a warning, "Not for consumption by children and pregnant and lactating women".

9.7 Nutrition labelling and claims

For low calorie or light dairy based beverages the calories (Xcal/100 mL) shall be declared on the label.

Nutritional labelling, nutrition and health claims may be made in accordance with US EAS803, US EAS 804, and US EAS 805.

10 Sampling of dairy based Beverages

Sampling shall be carried out in accordance with ISO 542.

11 Methods of analysis

Tests of dairy based beverages shall be done in accordance with the Uganda Standards stated in the relevant clauses

PUBLIC REVIEW DRAFT

PUBLIC REVIEW DRAFT

Bibliography

- [1] US 47:2011 Carbonated and non-carbonated soft drinks — Specification
- [2] GBT 21732 Prepared Milk Beverage.

PUBLIC REVIEW DRAFT

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.

The use of the UNBS Certification Mark is governed by the Standards Act, and the Regulations made thereunder. This mark can be used only by those licensed under the certification mark scheme operated by the Uganda National Bureau of Standards and in conjunction with the relevant Uganda Standard. The presence of this mark on a product or in relation to a product is an assurance that the goods comply with the requirements of that standard under a system of supervision, control and testing in accordance with the certification mark scheme of the Uganda National Bureau of Standards. UNBS marked products are continually checked by UNBS for conformity to that standard.

Further particulars of the terms and conditions of licensing may be obtained from the Director, Uganda National Bureau of Standards.



PUBLIC REVIEW DRAFT

PUBLIC REVIEW DRAFT

ICS nn.nnn.nn

Price based on nn pages