DUS DEAS 915

DRAFT UGANDA STANDARD

First Edition
2018-mm-dd

Ghee — Specification

Reference number
DUS DEAS 915: 2018

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

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National foreword

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(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 915:2018*, Ghee — Specification,* is identical with and has been reproduced from an East African Standard, EAS 915:2018*, Ghee — Specification,* and is being proposed for adoption as a Uganda Standard.

This standard was developed by Food and agriculture Standards Technical Committee (UNBS/TC 2).

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

DEAS 915: 2018

ICS 67.100.10

DRAFT EAST AFRICAN STANDARD

Ghee — 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.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. 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 Principles and procedures for development of East African Standards.

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.

The committee responsible for this document is Technical Committee EASC/TC 017, *Milk and milk products*.

Attention is drawn to the possibility that some of the elements of this document may be subject of patent rights. EAC shall not be held responsible for identifying any or all such patent rights.

Ghee — Specification

1 Scope

This Draft East African Standard specifies the requirements, sampling and test for ghee intended for human consumption.

2 Normative references

The following documents are 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.

AOAC 999.10, *Official method for lead, cadmium, zinc, copper, and iron in foods Atomic absorption Spectrophotometry after microwave Digestion*

CAC/RCP 1, *General principles for food hygiene*

CAC/RCP 57, *Code of hygienic practice for milk and milk products*

EAS 22, *Butter — Specification*

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

EAS 67, *Raw cow milk — Specification*

EAS 803, *Nutrition labelling — Requirements*

ISO 663, *Animal and vegetable fats and oils — Determination of insoluble impurities content*

ISO 707, *Milk and milk products — Guidance on sampling*

ISO 1740, *Milkfat products and butter — Determination of fat acidity (reference method)*

ISO 3727-1, *Butter — Determination of moisture, non-fat solids and fat contents — Part 1: Determination of moisture content (Reference method)*

ISO 3727-3, *Butter — Determination of moisture, non-fat solids and fat contents — Part 2: Determination of non-fat solids content (Reference method)*

ISO 3960, *Animal and vegetable fats and oils — Determination of peroxide value — Iodometric (visual) endpoint determination*

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

ISO 6320, *Animal and vegetable fats and oils — Determination of refractive index*

ISO 6321, *Animal and vegetable fats and oils — Determination of melting point in open capillary tubes (slip point)*

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 6611, *Milk and milk products — Enumeration of colony-forming units of yeasts and/or moulds — Colony-count technique at 25 degrees C*

ISO 6888-3, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 3: Detection and MPN technique for low numbers*

ISO 8294, *Animal and vegetable oils — Determination of copper, iron, nickel content graphite furnace atomic absorption method*

ISO 11866-1, *Milk and milk products — Enumeration of presumptive Escherichia coli — Part 1: Most probable number technique using 4-methylumbelliferyl-beta-D-glucuronide (MUG)*

ISO 14501, *Milk and milk powder — Determination of aflatoxin M1 content — Clean-up by immunoaffinity chromatography and determination by high-performance liquid chromatography*

3 Terms and definitions

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

3.1
ghee
product exclusively obtained from cow milk, cream or butter, by means of heat processes which result in almost total removal of water and non fat solids, with an especially developed flavour and physical structure

3.2
milk
normal, clean and fresh secretions extracted from the udder of a healthy milking cow, excluding that obtained during the first seven days after calving

3.3
cream
fluid milk product comparatively rich in fat, in the form of an emulsion of fat-in skimmed milk, obtained by physical separation from milk.

3.4
butter
fatty product derived exclusively from milk and/or products obtained from milk, principally in the form of an emulsion of the type water-in-oil

3.5
milk
normal, clean and fresh secretions extracted from the udder of a healthy milking cow, excluding that obtained during the first seven days after calving

4 Requirements

4.1 Raw materials

The following raw material may be used and comply with relevant standards where they exist:

a) raw milk complying with EAS 67;

b) butter complying with EAS 22; or

c) cream.

4.2 General requirements

Ghee shall have transparent amber color (golden yellow) in liquid form or cream white in solid form.

4.3 Specific requirements

Ghee shall comply with the specific requirements stipulated in Table 1 when tested in accordance with test methods specified therein:

Table 1 — Specific requirements for ghee

S/N	Characteristic	Requirement	Test method
i.	Melting point range, °C	28 - 44	ISO 6321
ii.	Free fatty acid, as oleic acid, (%), m/m, max.	0.4	ISO 1740
iii.	Milk fat content,%, (m/m), min.	99.6	ISO 3727-3
iv.	Moisture content, %, (m/m), max.	0.4	ISO 3727-1
v.	Peroxide value (mEq O2/kg fat), max.	0.6	ISO 3960
vi.	Refractive index, at 40 °C	1.4530 - 1.4590	ISO 6320
vii.	Insoluble impurities, %, max.	0.05	ISO 663

5 Microbiological limits

Ghee shall comply with microbiological limits in Table 2 when tested in accordance with test methods specified therein.

Table 2 — Microbiological limits for ghee

S/N	Micro-organism	Maximum limits per g	Test method
i.	Total plate count, CFU/g	10^3	ISO 4833-1
ii.	*E. Coli*, CFU/g	Absent	ISO 11866-1
iii.	*Salmonella* spp, 25 g	Absent	ISO 6579-1
iv.	Yeasts and Moulds, CFU/ g	10	ISO 6611
v.	*Staphylococcus aureus*, per g	Absent	ISO 6888-3

6 Contaminants

6.1 Heavy metals

Ghee shall comply with the maximum limits for heavy metals given in Table 3 when tested in accordance with the test methods specified therein.

Table 3 — Maximum limits for heavy metals in ghee

S/N	Heavy metal	Maximum limits mg/kg	Test method
i.	Lead, Pb	0.02	AOAC 999.10
ii.	Copper, Cu	0.05	ISO 8294
iii.	Iron, Fe	0.2	

6.2 Mycotoxin

When tested in accordance with ISO 14501, the level of Aflatoxin M1shall not exceed 0.50 µg/kg.

6.3 Pesticide and veterinary drug residues

The products covered by this standard shall comply with the maximum residue limits for veterinary drug and pesticide residues established in Codex Standard Guide for Maximum Pesticide Limits in Foods.

7 Hygiene

Ghee shall be processed in accordance with the hygienic requirements stipulated in CAC/RCP 1 and CAC/RCP 57.

8 Packaging

Ghee shall be packaged in food grade containers which safeguard the quality of the product.

9 Labelling

The containers shall be labelled in compliance with the requirements of EAS 38 and EAS 803. In addition, the following particulars shall be legibly and indelibly labelled on the container:

a) name of the product as “Ghee”;

b) net content in SI units;

c) name and physical address of manufacturer;

d) batch or code number;

e) nutritional information;

f) the date of manufacture and expiry date;

g) instruction for storage and use; and

h) country of origin.

10 Sampling

Sampling for the purpose of testing shall be done in accordance with ISO 707.

