

# UGANDA STANDARD

Second Edition  
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## Milk fat products — Specification

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## 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 1, Milk and milk products.

This second edition cancels and replaces the first edition (US 817: 2008), which has been technically revised.



# Milk fat products — Specification

## 1 Scope

### Milk fat products — Specification

This Uganda Standard specifies requirements and methods of sampling and test for anhydrous milk fat, anhydrous butteroil and butteroil, which are intended for further processing.

## 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.

US EAS 38, *General standard for the labelling of pre-packaged foods*

US 45, *General standard for food additives*

US 163, *Code of hygienic practice for milk and milk products*

US 738, *General standard for contaminants and toxins in foods*

US EAS 68-1, *Milk and milk products — Methods for microbiological examination — Part 1: Total plate count*

US EAS 68-3, *Milk and milk products — Methods of microbiological examination — Part 3: Enumeration of colony forming units of yeasts and/or moulds - Colony-count technique at 25 °C*

US EAS 80-6, *Butter — Methods of chemical analysis — Part 6: Determination of fat acidity (Reference method)*

US EAS 80- 8, *Butter — Methods of chemical analysis — Part 8: Determination of copper content*

US EAS 80- 9, *Butter — Methods of chemical analysis — Part 9: Determination of iron content*

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

FDUS ISO 3976, *Milk fat — Determination of peroxide value*

FDUS ISO 3595, *Milk fat — Detection of vegetable fat by the phytosteryl acetate test*

FDUS ISO 5536, *Milk fat products — Determination of water content — Karl Fischer method*

FDUS ISO 8262-3, *Milk products and milk-based foods — Determination of fat content by the Weibull-Berntrop gravimetric method (Reference method) — Part 3: Special cases*

### 3 Terms and definitions

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

#### 3.1

##### **milk fat**

complex of triglycerides derived exclusively from milk and/or products obtained from milk

#### 3.2

##### **anhydrous milk fat , anhydrous butteroil and butteroil**

fatty products derived exclusively from milk and/or products obtained from milk, by means of processes which result in almost total removal of water and non-fat solids

### 4 Essential composition and quality factors)

#### 4.1 Raw materials

Anhydrous milk fat, anhydrous and butteroil, shall be produced from milk and/or products obtained from milk.

Anhydrous milk fat, anhydrous and butteroil shall be free from vegetable fat when tested in accordance with US ISO 3595.

Anhydrous milk fat, anhydrous and butteroil shall be free from animal fat other than milk fat.

#### 4.2 Composition

Anhydrous milk fat, anhydrous and butteroil shall conform to the compositional requirements in Table 1.

#### 4.1 Raw materials

Anhydrous milk fat, anhydrous and butteroil shall be produced from milk and/or products obtained from milk.

Anhydrous milk fat, anhydrous and butteroil shall be free from vegetable fat when tested in accordance with US ISO 3595.

Anhydrous milk fat, anhydrous and butteroil shall be free from animal fat other than milk fat.

The taste and odour shall be acceptable for market requirements after heating a sample to 40 °C – 45 °C

The texture of the product shall be smooth and fine or coarse granules to liquid, depending on temperature.

#### 4.3 Composition

Anhydrous milk fat, anhydrous and butteroil shall conform to the compositional requirements in Table 1.

**Table 1 – Compositional requirement for anhydrous milk fat, anhydrous butteroil, and butteroil**

Component	Requirement		Method of test
	Anhydrous milk fat/ Anhydrous butteroil	Butteroil	
Minimum milk fat, (% m/m)	99.8	99.6	US ISO 8262-3
Maximum water, (% m/m)	0.1	0.3	US ISO 5536
Maximum peroxide value (milli-equivalents of oxygen/kg fat)	0.3	0.6	US ISO 3976

## 5 Food additives

Food additives may be used in anhydrous milk fat, anhydrous and Butteroil in accordance with US 45.

Inert gas may be used to flush airtight containers before, during and after filling with product..

## 6 Contaminants

### 6.1 Contaminants and toxins

The anhydrous milk fat, anhydrous and Butteroil shall conform to the maximum limits of contaminants and toxins in US 738.

In addition the products shall conform to the maximum tolerable limits for metal contaminants listed in Table 2.

**Table 2— Maximum tolerable limits for metal contaminants in anhydrous milk fat, anhydrous Butteroil and butter oil**

Metal contaminant	Maximum limit, mg/kg	Method of test
Copper	0.05	US EAS 80-8
Iron	0.2	US EAS 80-9

### 6.2 Pesticide and veterinary drug residues

The anhydrous milk fat, anhydrous and butteroil shall conform to the maximum residue limits for pesticides and veterinary drugs established by the Codex Alimentarius Commission.

## 7 Hygiene

Anhydrous milk fat, anhydrous and Butteroil shall be prepared and handled in accordance with US 163. The products shall conform to the microbiological limits indicated in Table 3.

**Table 3 – Microbiological limits in anhydrous milk fat, anhydrous butteroil and butteroil**

Microorganism	Limit	Method of test
Total plate count (cfu/g), maximum	10	US EAS 68-1
<i>Escherichia coli</i> , (per gram), maximum	Not detected	US ISO 7251
Yeasts and moulds (cfu/g), maximum	10	US EAS 68-3

## 8 Packaging

Anhydrous milk fat, anhydrous and Butteroil shall be packaged in clean food grade packaging material to protect the product from contamination. The packaging materials and process shall not contaminate the product or otherwise affect its technological, nutritional or sensory quality.

## **9 Labelling**

In addition to the provisions of US EAS 38, anhydrous milk fat, anhydrous and Butteroil shall conform to the following labeling requirements:

a) the name of the food shall be one of the following in accordance with Clause 3.

i) anhydrous milk fat;

ii) anhydrous butteroil;

iii) butteroil; and

iv) ghee;

b) for non-retail containers, the information required shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer or packer shall appear on the container.

## **9 Methods of sampling**

Sampling of Anhydrous milk fat, anhydrous and Butteroil shall be conducted in accordance with US ISO 707.

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## Bibliography

[1] US 817 *Milk fat — Specification* — First Edition

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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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