
Dairy whitener 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. UNBS is mandated to co-ordinate the elaboration of standards and is

- (a) a member of International Organisation for Standardisation (ISO) and
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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 has been developed as a result of a need to provide guidance to industry in production and regulation of dairy whiteners.

This Draft 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, UNBS/TC 2.

Dairy whitener — Specification

1 Scope

This Draft Uganda standard specifies requirements and methods of sampling and test for dairy whitener (sweetened partially skimmed milk powder).

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 28, Hygiene in the food and drink manufacturing industry – Code of practice

US 45, General standard for food additives

US 163, Code of hygiene practice for milk and milk products

US 217-5/EAS 217-5, Methods for microbiological examination of foods – Part 5: Enumeration of coagulase-positive *Staphylococci*

US 738, General standard for contaminants and toxins in food and feed

US EAS 38, Labelling of pre-packaged foods – Requirements

US EAS 67, Raw cow milk – Specification

US EAS 81-6, Milk powders — Determination of insolubility index

US EAS 81-5, Milk powders — Determination of titratable acidity (Routine method)

US EAS 81-2, Milk powders — Methods of analysis — Part 2: Determination of moisture content (Reference method)

US EAS 81-3, Milk powders — Methods of analysis — Part 3: Determination of fat content — Gravimetric method (Reference method)

US EAS 81-1, Milk powders — Methods of analysis — Part 1: Determination of ash and alkalinity

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 68-2-1, Milk and milk products — Methods for microbiological examination — Part 2-1: Enumeration of coliforms — Colony count technique at 30 °C

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

US EAS 162-1, Milk and milk products — Part 1: Milk, cream and evaporated milk Determination of total solids content (Reference method)

US ISO 707, Milk and milk products – Guidance on sampling

US ISO 2446, Milk – Determination of fat content

US ISO 6785, Milk and milk products — Detection of *Salmonella* spp.

US ISO 6731, Milk, cream and evaporated milk – Determination of total solids content (Reference method)

US ISO 8968-3, Milk – Determination of nitrogen content – Part 3: Block-digestion method (Semi-micro rapid routine method)

US 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)

3 Terms and definitions

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

3.1

dairy whitener (sweetened partially skimmed milk powder)

product prepared by spray drying of cow milk. The milk may be modified by partial removal of fat and substitution of milk solids not fat with carbohydrates such as sucrose, dextrose or dextrin

3.2

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

4 Requirements

4.1 Essential Ingredients

4.1.1 All ingredients used for the manufacture of dairy whiteners shall be of good quality complying with the relevant standards.

4.1.2 The milk used shall be whole milk, skimmed milk, reconstituted/recombined powdered milk or a mixture of two or more products complying with the relevant standards.

4.2 General requirements

Dairy whitener shall:

- a) be white or light cream in colour;
- b) be uniform in composition and free from lumps;
- c) practically free from scorched particles;
- d) be free of extraneous and foreign matter;
- e) be free from abnormal flavours or rancid odours;
- f) be free from added colours and flavours; and

g) have a pleasant and acceptable taste.

4.3 Specific requirements

4.3.1 Dairy whiteners shall comply with the specific requirements stipulated in table 1.

Table 1 — Specific requirements for dairy whiteners

S/No.	Parameter	Requirement	Test method
i)	Moisture content, % by mass, max.	4.0	US EAS 81-2
ii)	Titrateable acidity as lactic acid, per 100g powder, max.	1.25	US EAS 81-5
iii)	Total solids, %, min.	96	
iv)	Protein, %, min	3	US ISO 8968-3
v)	Milk fat, % by mass, min.	20.0	US ISO 2446
vi)	Total milk solids, % by weight, min.	60.0	US ISO 6731
vii)	Insolubility index, mL, max.	1.5	US EAS 81-6
viii)	Total ash (on dry basis), % by mass, max.	5.5	US EAS 81-1
ix)	Acid insoluble ash, % by mass, max.	0.1	
x)	Total added sugar (as sucrose), % by mass, max.	18.0	

5 Food additives

Food additives may be used in the preparation of dairy whiteners in accordance with US 45.

6 Contaminants

6.1 Pesticide and veterinary drug residues

Dairy whiteners shall conform to those maximum limits for pesticide and veterinary drug residues established by the Codex Alimentarius Commission.

6.2 Other contaminants

Dairy whiteners shall conform to those maximum limits for other contaminants established under US 738.

7 Hygiene

Dairy whiteners shall be produced, processed and handled under hygienic conditions and in appropriate premises in order to prevent contamination of the product in accordance with US 28 and US 163.

Dairy whiteners shall comply with the limits for micro-organisms specified in table 2.

Table 2 — Microbiological limits for dairy whiteners

S/No.	Microorganism	Limit	Method of test
i)	Total plate count, CFU/g, max.	10 ⁴	US EAS 68-1
ii)	E. Coli, MPN/g, max.	<1	US ISO 11866-1
iii)	Coliforms, MPN/g, max.	<1	US EAS 68-2-1
iv)	<i>Staphylococcus aureus</i> , CFU/g, max.	Absent	US 217-5/EAS 217-5
v)	Salmonella, 25 g, max.	Absent	US ISO 6785
vi)	Yeast and moulds, CFU/g, max	10	US EAS 68-3

8 Weights and measures

The weight of the dairy whiteners shall comply with the weights and measures requirements.

9 Packaging

Dairy whitener shall be packaged in food grade containers which will safe guard the hygienic, nutritional and organoleptic qualities of the product. The containers including packaging materials shall not impart any toxic substance or undesirable odour to the product.

10 Labelling

In addition to the requirements in US EAS 38, the following specific labelling requirements shall apply and shall be legibly and indelibly marked:

- name of the product as “dairy whitener” and/or “sweetened partially skimmed milk powder”;
- complete list of ingredients to be declared in descending order of proportion;
- name and physical address of processor/producer;
- batch or code number;
- storage conditions and instructions;
- date of manufacture;
- expiry date;
- net content in metric units; and
- country of origin.

11 Methods of analysis and sampling

Test of dairy whiteners shall be done in accordance with the Uganda Standards stated in the relevant clauses.

For the purpose of determining the compliance to this standard, sampling shall be done in accordance with ISO 707.

Bibliography

- [1] IS 12299:1998, Dairy whitener – Specification

Certification marking

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