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IDT

DRAFT MALAWI STANDARD

Whey powders – Specification

NOTE: This is a draft proposal and it shall neither be used nor regarded as a Malawi standard

Whey powders – Specification

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FOREWORD

This draft Malawi standard has been prepared to provide requirements for whey powders.

The draft standard is identical to the following international standard:

Codex Stan 289:1995, *Standard for whey powders*.

Acknowledgement is made for the use of the information.

TECHNICAL COMMITTEE

This Malawi Standard was prepared by the *Technical Committee MBS/TC 23, Milk and milk products* and the following companies, organizations and institutions were represented:

- Blantyre Agricultural Development Division (Ministry of Agriculture)
- Department of Animal Health and Livestock Development (Ministry of Agriculture);
- Consumers Association of Malawi;
- Dairibord Malawi Limited;
- Lilongwe Dairy (2001) Limited;
- Lilongwe University of Agriculture and Natural Resources (Bunda Campus);
- Malawi Bureau of Standards;
- The Polytechnic (University of Malawi);
- Shire Highlands Milk Producers Association;
- Suncrest Creameries.

NOTICE

This Malawi standard shall be reviewed every five years or whenever necessary in order to keep abreast of progress. Comments are welcome and shall be considered when the standard is being reviewed.

DRAFT MALAWI STANDARD

Whey powders – Specification

1 SCOPE

This draft standard applies to whey powder and acid whey powder, intended for direct consumption or further processing, in conformity with the description in section 3 of this draft standard.

2 NORMATIVE REFERENCES

The following standards contain provisions, which through reference in this text, constitute provisions of this Malawi standard. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this standard are encouraged to take steps to ensure the use of the most recent edition of the standard indicated below. Information on current valid national and international standards can be obtained from the Malawi Bureau of Standards.

MS 19: *Labelling of pre-packed foods – General standard*;

MS 21: *Food and food processing units – Code of hygienic conditions*;

MS 75: *Milk and milk products – Methods of sampling and analysis*;

MS 202: *Fortified white sugar – Specification*;

MS 237: *Food Additives – General standard*;

MS 302: *Contaminants and toxins in foods – General standard*;

MS 744: *Use of dairy terms – General standard*;

MS 1113: *Code of hygienic practice for milk and milk products*;

CAC/GL 21: *Principles for the establishment and application of microbiological criteria for foods*;

3 DESCRIPTION

3.1 Whey powders are milk products obtained by drying whey or acid whey.

3.2 Whey is the fluid milk product obtained during the manufacture of cheese, casein or similar products by separation from the curd after coagulation of milk and/or of products obtained from milk. Coagulation is obtained through the action of, principally, rennet type enzymes.

3.3 Acid whey is the fluid milk product obtained during the manufacture of cheese, casein or similar products by separation from the curd after coagulation of milk and/or of products obtained from milk. Coagulation is obtained, principally, by acidification.

4 ESSENTIAL COMPOSITION AND QUALITY FACTORS**4.1 Raw materials**

Whey or acid whey.

4.2 Permitted ingredients

Seed lactose (conforming to MS 202) in the manufacture of pre-crystallized whey powder.

4.3 Composition

Table 1 – Compositional requirements for whey powders

S/N	Criteria	Minimum content	Reference content	Maximum content
1	Lactose ^(a)	n.s.	61.0 % m/m	n.s.
2	Milk protein ^(b)	10.0 % m/m	n.s.	n.s.
3	Milk fat	n.s.	2.0 % m/m	n.s.
4	Water ^(c)	n.s.	n.s.	5.0 % m/m
5	Ash	n.s.	n.s.	9.5 % m/m
6	pH (in 10% solution) ^(d)	> 5.1	n.s.	n.s.

Note: n.s. means “Not specified.”

Table 2 – Compositional requirements for acid whey powder

S/N	Criteria	Minimum content	Reference content	Maximum content
1	Lactose ^(a)	n.s.	61.0 % m/m	n.s.
2	Milk protein ^(b)	7.0 % m/m	n.s.	n.s.
3	Milk fat	n.s.	2.0 % m/m	n.s.
4	Water ^(c)	n.s.	n.s.	4.5 % m/m
5	Ash	n.s.	n.s.	15.0 % m/m
6	pH (in 10% solution) ^(e)	n.s.	n.s.	5.1

Note 1: (a) Although the products may contain both anhydrous lactose and lactose monohydrate, the lactose content is expressed as anhydrous lactose. 100 parts of lactose monohydrate contain 95 parts of anhydrous lactose.

Note 2: (b) Protein content is 6.38 multiplied by the total Kjeldahl nitrogen determined.

Note 3: (c) The water content does not include water of crystallization of the lactose.

Note 4: (d) Or titratable acidity (calculated as lactic acid) <0.35 %.

Note 5: (e) Or titratable acidity (calculated as lactic acid) ≥ 0.35 %.

In accordance with the provision of **5.3.3** of MS 744, whey powders may be modified in composition to meet the desired end-product composition, for instance, neutralization or demineralization. However, compositional modifications beyond the minima or maxima specified above for milk protein and water are not considered to be in compliance with the Section **5.3.3**.

5. FOOD ADDITIVES

Food additives listed in Tables 1 and 2 of MS 237 in Food Category 01.8.2 (Dried whey and whey products, excluding whey cheese) may be used in foods subject to this standard.

6. CONTAMINANTS

6.1 The products covered by this standard shall comply with the maximum levels for contaminants that are specified for the product in MS 302.

6.2 The milk used in the manufacture of the products covered by this standard shall comply with the maximum levels for contaminants and toxins specified for milk by MS 302 and with the maximum residue limits for veterinary drug residues and pesticides established for milk by the Codex Alimentarius Commission.

7 HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of MS 21, MS 1113 and other relevant Codex texts such as Codes of hygienic practice and Codes of practice. The products should comply with any microbiological criteria established in accordance with CAC/GL 21.

8 LABELLING

In addition to the provisions of MS 19 and MS 744, the following specific provisions apply:

8.1 Name of the food

The name of the food shall be “Whey powder” or “Acid whey powder” according to the descriptions in section 3 and the compositions in section 4.3.

The designation of products in which the fat and/or lactose contents are below or above the reference content levels specified in section 4.3 of this standard shall be accompanied by an appropriate qualification describing the modification made or the lactose and/or fat content, respectively, either as part of the name or in a prominent position in the same field of vision.

The term “sweet” may accompany the name of whey powder, provided that the whey powder meets the following compositional criteria:

minimum lactose: 65%

minimum protein: 11%

maximum ash: 8.5%

pH (10% solution)*: >6

* or titratable acidity of maximum 0.16% (calculated as lactic acid).

8.2 Labelling of non-retail containers

Information required in section 8 of this standard and sections 4.1 to 4.8 of MS 19 and, if necessary, storage instructions, 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. However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such mark is clearly identifiable with the accompanying documents.

9 METHODS OF SAMPLING AND ANALYSIS

Sampling and analysis of milkfat products shall be done in accordance with MS 75.

APPENDIX – ADDITIONAL INFORMATION

The additional information below does not affect the provisions in the preceding sections which are those that are essential to the product identity, the use of the name of the food and the safety of the food.

1. OTHER QUALITY FACTORS

1.1 Physical appearance

White to pale cream; free from lumps which do not break up under slight pressure.

1.2 Flavour and odour

Not more than slight foreign flavours and odours. The product must be free from offensive flavours and odours.

2. PROCESSING AIDS

Acids used for precipitation purposes:

INS no.	Name
260	Acetic acid, glacial
270	Lactic acid, L-, D- and DL-
330	Citric acid
338	Orthophosphoric acid
507	Hydrochloric acid
513	Sulphuric acid

For renneting enhancement purposes:
509 Calcium chloride

3. ADDITIONAL QUALITY FACTORS

	Rennet casein	Acid casein	Caseinates
Maximum sediment (scorched particles)	15 mg/25g	22.5 mg/25g	22.5 mg/25g (spray dried) 81.5 mg/25g (roller dried)

Heavy metals

The following limits apply:

Metal	Maximum limit
Copper	5 mg/kg
Iron	20 mg/kg (50 mg/kg in roller dried caseinates)

4. ADDITIONAL METHODS OF ANALYSIS

See CODEX STAN 234.

THE MALAWI BUREAU OF STANDARDS

The Malawi Bureau of Standards is the standardizing body in Malawi under the aegis of the Ministry of Industry and Trade. Set up in 1972 by the Malawi Bureau of Standards Act (Cap: 51:02), the Bureau is a parastatal body whose activities aim at formulating and promoting the general adoption of standards relating to structures, commodities, materials, practices, operations and from time to time revise, alter and amend the same to incorporate advanced technology.

CERTIFICATION MARK SCHEME

To bring the advantages of standardization within the reach of the common consumer, the Bureau operates a Certification Mark Scheme. Under this scheme, manufacturers who produce goods that conform to national standards are granted permits to use the Bureau's "Mark of Quality" depicted below on their products. This Mark gives confidence to the consumer of the commodity's reliability.

