**Cheese— Specification**

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#### Foreword

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The main task of technical committees is to prepare ARSO Standards. Draft ARSO Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an ARSO Standard requires approval by at least 75 % of the member bodies casting a vote.

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

Acknowledged the CODEX STAN 283, General Standard for Cheese is our main reference for this ARSO standard.

This African Standard was prepared by the ARSO Technical Committee on Milk and milk products (ARSO/TC 04)

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## AFRICAN STANDARD

**Cheese— Specification**

1 Scope

 This Draft African Standard specifies the requirements, sampling and test methods for cheese intended for direct human consumption or further processing.

This general standard applies in addition to any further specifications for individual varieties of cheese, or groups of varieties of cheese which is a subject of specific African Standard designated by a specific name.

2 Normative references

The following referenced documents are indispensable for the application of this document.

CXS 283- *General Standard for Cheese*

CODEX STAN 192-*General Standard for Food Additives*

CXS 193-*General Standard for Contaminants and Toxins in Food and Feed*

CXC 1-*General Principles of Food Hygiene*

CXC 57-*Code of Hygienic Practice for Milk and Milk Products*

CXG 21-Establishment and Application of Microbiological Criteria Related to Foods

ARS 56, *Pre-packaged foods — Labelling*

ARS xxx , Terms and definitions

3 Terms and definitions

For the purpose of this standard the following definitions apply.

3.1 Cheese is the ripened or unripned soft, semi-hard, hard, or extra-hard product, which may be coated, and in which the whey protein/casein ratio does not exceed that of milk, obtained by:

(a) coagulating wholly or partly the protein of milk, skimmed milk, partly skimmed milk, cream, whey cream or buttermilk, or any combination of these materials, through the action of rennet or other suitable coagulating agents, and by partially draining the whey resulting from the coagulation, while respecting the principle that cheese-making results in a concentration of milk protein (in particular, the casein portion), and that consequently, the protein content of the cheese will be distinctly higher than the protein level of the blend of the above milk materials from which the cheese was made; and/or

(b) processing techniques involving coagulation of the protein of milk and/or products obtained from milk which give an end-product with similar physical, chemical and organoleptic characteristics as the product defined under (a).

For more information, just refer to Annex A (informative)

4 Requirements

4.1 Raw materials

**4.1.1 Essential Raw materials**

Milk and/or products obtained from milk.

**4.1.2 Optional Raw material**

– Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless micro-organisms

– Rennet or other safe and suitable coagulating enzymes

– Sodium chloride or potassium chloride

– Potable water

– Gelatine and starches: Notwithstanding the provisions in the African cheese specification (ARS 1073), these substances can be used in the same function as stabilizers, provided they are added only in amounts functionally necessary as governed by Good Manufacturing Practice taking into account any use of the stabilisers/thickeners up on Codex food additives reference.

– Vinegar

– Rice, corn and potato flours and starches: Notwithstanding the provisions in the African cheese specification (ARS 1073), these substances can be used in the same function as anti-caking agents for treatment of the surface of cut, sliced, and shredded products only, provided they are added only in amounts functionally necessary as governed by Good Manufacturing Practice taking into account any use of the anti-caking agents up on Codex food additives reference.

4.2 General requirement

Cheese shall be free from dirt and foreign matter and without off- flavours and textural defects.

4.3 Compositional Requirements

**Table (1) designation according to firmness and ripening characteristics**

|  |
| --- |
| **DESIGNATION ACCORDING TO FIRMNESS AND RIPENING CHARACTERISTICS** |
| **According to firmness: Term 1** | **According to principal ripening: Term 2** |
| **MFFB%**  | **Designation** |
| < 51  | Extra hard  | Ripened  |
| 49–56  | Hard  | Mould ripened  |
| 54–69  | Firm/Semi-hard  | Unripened/Fresh  |
| > 67  | Soft  | In Brine  |

MFFB equals percentage moisture on a fat-free basis, i.e.,

|  |
| --- |
| Weight of moisture in the cheese |
| Total weight of cheese – Weight of fat in the cheese  |

 X 100

**Example:**

The designation of a cheese with moisture on a fat-free basis of 57% which is ripened in a manner similar in which Danablu is ripened would be:

“Mould ripened firm cheese or firm mould ripened cheese.”

**Table (2): Milk Fat content**

|  |  |
| --- | --- |
| **Fat Content** | **FDM %** |
| **High fat** | above or equal to 60% |
| **Full fat** | above or equal to 45% and less than 60% |
| **Medium fat** | above or equal to 25% and less than 45%) |
| **Partially skimmed** | above or equal to 10% and less than 25%) |
| **Skim** | FDM is less than 10%) |

**Note:** FDM % means fat in the dry matter”

5 Food Additives

Food additives may be used and only within the limits specified in General Standard for Food Additives CODEX STAN 192– Category 01.6.1 (unripened cheese) & 01.6.2 (ripened cheese) and table 3

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 the General Standard for Contaminants and Toxins in Food and Feed (CXS 193-1995).

**6.2 Mycotoxins**

When tested in accordance with ISO 14501, the level of aflatoxin M1 shall not (exceed 0.50 μg/kg.)

7 Hygiene

It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the General Principles of Food Hygiene (CXC 1-1969), the Code of Hygienic Practice for Milk and Milk Products (CXC 57-2004) 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 the Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods (CXG 21-1997).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Food Category** | **Micro-organisms** | **Sampling plan** | **Limits** | **Test method reference** | **Limit Reference** |
| **n** | **c** | **m** | **M** |
| Un ripened, ripened soft, semi hard, hard and very hard cheese produced cheese from heat treated milk or whey | Salmonella | 5 | 0 | Absence in 25 g | ISO 6579-1 | EU regulation |
| Listeria monocytogenes | 5 | 0 | Absence in 25 g | ISO 11290-1 |  |
| Coagulase-positive staphylococci | 5 | 0 | 102 cfu/gm | 103cfu/gm | ISO 6888-1 |  |
| Staphylococcal entero-toxins for cheese made from Raw milk  | 5 | 2 | 104cfu/g | 105cfu/gm | European screening method for the detection of Staphylococci |  |
| Escherichia Coli | 5 | 2 | 102 cfu/gm | 103cfu/gm | ISO 16649-1 |  |

8 Labelling

In addition to the provisions of the ARSO standard ARS-56 and the General Standard for the Use of Dairy Terms (CXS 206-1999), the following specific provisions apply:

8.1 Name of the food

The name of the food shall be cheese. However, the word “cheese” may be omitted in the designation of an individual cheese variety reserved by a Codex standard for individual cheeses, and, in the absence thereof, a variety name specified in the national legislation of the country in which the product is sold, provided that the omission does not create an erroneous impression regarding the character of the food.

8.1.1 In case the product is not designated with a variety name but with the designation “cheese” alone, the designation may be accompanied by the appropriate descriptive terms according to table 1

8.2 Declaration of milk fat content

The milk fat content shall be declared in a manner found acceptable in the country of sale to the final consumer, either (i) as a percentage by mass, (ii) as a percentage of fat in dry matter, or (iii) in grams per serving as quantified in the label provided that the number of servings is stated.

Additionally, terms may be used as per table (2).

8.3 Date marking

Notwithstanding the provisions of Section 5.7.1 of the General Standard for the Labelling of Pre-packaged Foods (ARS 56), the date of minimum durability need not be declared in the labelling of firm, hard and extra hard cheese which are not mould/soft-ripened and not intended to be purchased as such by the final consumer: in such cases the date of manufacture shall be declared.

8.4 Additional Mandatory Requirements.

List of ingredients

1. Name and address of manufacturer or distributor or packer.
2. net weight in metric unit.
3. Country of origin.
4. ‘Best before date’ (dd/mm/yy).
5. storage Conditions and instructions.
6. lot identification, batch or code number.

The language on the label shall be English. Additional language may be used depending on the designated market.

Allergen information

8.5 Labelling of non-retail containers

Information required in Section 7 of this Standard and Sections 4.1 to 4.8 of the Standard for the Labelling of Pre-packaged Foods (ARS 56) 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, and in the absence of such a container on the cheese itself. However, lot identification, and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

 9 Packaging

A container or outer container in which the Cheese is packed shall:

(a) be made from a material that :

 (i) is suitable for this purpose;

(ii) will protect the contents thereof from contamination; and

(iii) will not impart any undesirable flavour or taste to the contents thereof;

(b) be so strong that it will not be damaged or deformed during normal storage, handling and transport practices;

(c) in the case of a container that is re-used, be thoroughly cleaned and sterilized before the Cheese

 is packed therein;

(d) be intact; and

(e) be closed properly in a manner permitted by the nature thereof.

10 Methods of Sampling and Analysis

For checking the compliance with this standard, the methods of analysis and sampling contained in the Recommended Methods of Analysis and Sampling (CXS 234-1999) relevant to the provisions in this standard, shall be used.

Annex A
(informative)
Glossary of Terms

**Ripened cheese** is cheese, which is not ready for consumption shortly after manufacture, but which must be held for such time, at such temperature, and under such other conditions as will result in the necessary biochemical and physical changes characterizing the cheese in question.

**Mould ripened** cheese is a ripened cheese in which the ripening has been accomplished primarily by the development of characteristic mould growth throughout the interior and/or on the surface of the cheese.

**Unripned cheese** including fresh cheese is cheese which is ready for consumption shortly after manufacture.

**Cheese Rind** During ripening of the molded cheese curd in natural creation or in environments in which the air humidity and, possibly, air composition are controlled, the outside of the cheese will develop into a semi-closed layer with a lower moisture content. This part of the cheese is called rind. The rind is constituted of cheese mass which, at the start of the ripening, is of the same composition as the internal part of the cheese. In many cases, the brining of cheese initiates the formation of rind. Due to the influence of the salt gradient in the brine, of oxygen, of drying out and of other reactions, the rind successively becomes of a somewhat different composition than the interior of the cheese and often presents a more bitter taste.

During or after ripening the cheese rind can be treated or can be naturally colonized with desired cultures of microorganisms, for instance Penicillium candidum or Brevibacterium linens. The resulting layer, in some cases referred to as smear, forms a part of the rind.

**Rindless cheese** is ripened by the use of a ripening film. The outer part of that cheese does not develop a rind with a lower moisture content although influence of light of course can cause some difference compared to the inner part.

**Cheese Surface** The term “cheese surface” is used for the outside layer of cheese or parts of cheese, even in the sliced, shredded or grated form. The term includes the outside of the whole cheese, disregarding whether a rind has been formed or not.

**Cheese Coatings** Cheese can be coated prior to the ripening, during the ripening process or when the ripening has been finished. When a coating is used during ripening the purpose of the coating is to regulate the moisture content of the cheese and to protect the cheese against micro-organisms.

**Coating of a cheese** after the ripening has been finished is done to protect the cheese against microorganisms and other contamination, to protect the cheese from physical damage during transport and distribution and/or to give the cheese a specific appearance (e.g. coloured).

**Coating** can be distinguished very easily from rind, as coatings are made of non-cheese material, and very often it is possible to remove the coating again by brushing, rubbing or peeling it off.

Cheese can be coated with:

– A film, very often polyvinylacetate, but also other artificial material or material composed of natural ingredients, which helps to regulate the humidity during ripening and protects the cheese against microorganisms (for example, ripening films)1

– A layer, mostly wax, paraffin or a plastic, which normally is impermeable to moisture, to protect the cheese after ripening against microorganisms and against physical damage during retail handling and, in some cases to contribute to the presentation of the cheese.

Bibliography

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