
Blended Mozzarella cheese — Specification



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This African Standard was prepared by ARSO/TC 04 Milk and milk products.

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ARSO Central Secretariat
International House 3rd Floor
P. O. Box 57363 — 00200 City Square
NAIROBI, KENYA

Tel. +254-20-2224561, +254-20-3311641, +254-20-3311608

E-mail: arso@arso-oran.org

Web: www.arso-oran.org

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ARSO Central Secretariat
International House 3rd Floor
P.O. Box 57363 — 00200 City Square
NAIROBI, KENYA

Tel: +254-20-2224561, +254-20-3311641, +254-20-3311608

E-mail: arso@arso-oran.org
Web: www.arso-oran.org

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1 Scope

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

2 Normative references

The following standards are referred to in the text in such a way that some or all of their content constitutes requirements of this Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced standard (including any amendments) shall be applied.

ARS 53, *General Principles of Food Hygiene – Code of practice*

ARS 56, *Labelling of Prepackaged Foods*

ARS 1034, *Dairy Industry-Glossary of terms*

CXS 192, *General Standard for Food Additives*

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

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

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 6888-1, *Microbiology of the food chain — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 1: Method using Baird-Parker agar medium*

ISO 11290-1, *Microbiology of the food chain — Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. — Part 1: Detection method*

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

ISO 23319, *Cheese and processed cheese products- Determination of fat content- Gravimetric method (Reference method)*

ISO 16649-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli — Part 1: Colony-count technique at 44 degrees C using membranes and 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ARS 1034 and the following shall apply.

Blended Mozzarella cheese

un-ripened cheese obtained after coagulating of partially or completely skimmed milk and replacing it with vegetable oils or fats, with a mixture of one of the dried and pasteurized milk derivatives or treating it with any heat treatments equivalent to pasteurization. It is a smooth elastic cheese with a long stranded parallel-orientated fibrous protein structure without evidence of curd granules. The cheese is rindless¹ and may be formed into various shapes.

Blended Mozzarella with a high moisture content is an un-ripened cheese obtained after coagulating of partially or completely skimmed milk and replacing it with vegetable oils or fats and it is a soft cheese with overlying layers that may form pockets containing liquid of milky appearance. It may be packed with or without the liquid. The cheese has a near white colour.

Blended Mozzarella with a low moisture content is an un-ripened cheese obtained after coagulating of partially or completely skimmed milk and replacing it with vegetable oils or fats and is a firm/semi-hard homogeneous cheese without holes and is suitable for shredding.

Blended Mozzarella is made by “pasta filata” processing, which consists of heating curd of a suitable pH value kneading and stretching until the curd is smooth and free from lumps. Still warm, the curd is cut and moulded, then firmed by cooling. Other processing techniques, which give end products with the same physical, chemical and organoleptic characteristics are allowed.

Note: The cheese has been kept in such a way that no rind is developed (a “rindless” cheese).

4 Requirements

4.1 Raw materials

Raw materials and ingredients used shall comply with relevant standards.

4.1.1 Essential raw materials

- a) Cows’ or buffaloes’ partially or completely skimmed milks, or their mixtures, or replaced by vegetable fats and oils, and products obtained from these milks.
- b) Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms.
- c) Rennet or other safe and suitable coagulating enzymes.

4.1.2 Optional raw materials

- a) Sodium chloride and potassium chloride as a salt substitute.
- b) Potable water.
- c) Vinegar.
- d) Safe and suitable processing aids.
- e) Rice, corn and potato, flours and starches: Notwithstanding the provisions in 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 Mozzarella with a low moisture content only, provided they are added only in amounts functionally necessary as governed by Good Manufacturing Practice.

4.2 General requirement

Blended Mozzarella cheese shall be:

- a) Free from dirt and foreign matter, and
- b) Uniform in appearance and stable shape.

4.3 Compositional requirements

Blended Mozzarella cheese shall meet the compositional requirements given in Table 1 when tested in accordance with the test methods specified therein. Blended Mozzarella cheese may be classified as identified in Table 1 and meet the compositional requirements, as shown.

Table 1 — Compositional requirements for blended Mozzarella cheese

Milk Constituent	Min content (m/m)	Max content (m/m)	Reference level (m/m)	Test method
Milk fat in dry matter				ISO 23319
With high moisture	20%	Not restricted	40%-50%	
With low moisture	18%	Not restricted	40%-50%	
Dry matter	Depending on the Fat on Dry matter content, according to the below table			
Milk Fat in Dry matter Content (m/m):	Corresponding Min Dry matter content (m/m):			
	With low moisture	With high moisture		
Equal to or above 18% but less than 30%:	34%	-		
Equal to or above 20% but less than 30%:	-	24%		
Equal to or above 30% but less than 40%:	39%	26%		
Equal to or above 40% but less than 45%:	42%	29%		
Equal to or above 45% but less than 50%:	45%	31%		
Equal to or above 50% but less than 60%:	47%	34%		

5 Food Additives

Food additives may be used and only within the limits specified in General Standard for Food Additives (CXS 192) – 01.6.5 Cheese analogues.

6 Contaminants

6.1 Heavy metals

The products covered by this African Standard shall comply with those maximum limits for metal contaminants specified in CXS 193.

6.2 Mycotoxins

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

6.3 Pesticides residues

Pesticide residue limits shall be in accordance with limits set by the Codex Alimentarius Commission for the product.

6.4 Veterinary drug residues

Veterinary drug residue limits shall be in accordance with limits set by the Codex Alimentarius Commission for the product.

7 Hygiene

The products covered by this African Standard shall be produced, prepared and handled in accordance with the provisions of the appropriate sections of ARS 53 and ARS 1036.

Blended Mozzarella cheese shall be free from microorganisms and products originating from microorganisms in amounts which may represent a hazard to human health.

Blended Mozzarella cheese shall comply with microbiological limits given in Table 2 when tested in accordance with the methods specified therein.

Table 2 — Microbiological limits for blended Mozzarella cheese

Food Category	Micro-organisms	Sampling plan		Limits		Test method reference	Stage of analysis
		n	c	m	M		
Unripened-Cheese	<i>Salmonella</i>	5	0	Absence in 25 g		ISO 6579-1	On the market during the shelf-life and during handling
	<i>Listeria monocytogenes</i>	5	0	Absence in 25 g		ISO 11290-1	On the market during the shelf-life
	Coagulase-positive <i>staphylococci</i> *	5	0	10 ² cfu/gm	10 ³ cfu/gm	ISO 6888-1	End of the production process
	<i>Escherichia Coli</i>	5	2	10 ² cfu/gm	10 ³ cfu/gm	ISO 16649-1	On the market during the shelf-life
n = number of units comprising the sample c = number of sample units giving values between m and M m= The level of the required MCR in the product M= Value or level of microbial limit not to be reached or greater than in any unit of the sample							

8 Packaging

Cheese shall be packaged in suitable food grade containers which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product during dispatch, transport and use of the product until the end of its shelf life.

9 Labelling

In addition to the provisions of ARS 56 and ARS 1034, the following specific provisions apply:

9.1 Name of the food

The name blended Mozzarella may be applied in accordance with ARS 56, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used. The use of the name is an option that may be chosen only if the cheese complies with this standard.

The designation of blended Mozzarella with a high moisture content shall be accompanied by a qualifying term describing the true nature of the product.

9.2 Declaration of milkfat 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.

9.3 Percentage of trans fatty acid

Trans fatty acids max 2g/100g vegetable fat rather than milk fat.

10 Methods of sampling

For checking compliance with this standard, the methods of sampling contained in ISO 707, shall be used.

Bibliography

ES 8445 Mozzarella Analogue — Specification

Draft African Standard for comments only — Not to be cited as African Standard