

ANNEX No. 1
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Physical-and-chemical and microbiological indicators for the identification of milk processing products

Table 1

Fluid milk, liquid and structured dairy composite products, fermented milk products, condensed milk products, dry (powdered milk products)

Name of milk processing product	Mass fraction range, %			Lactic acid microorganisms, probiotic microorganisms, yeasts
	Fat	protein, not below (for dairy composite products – in milk basis)	MSNF [*] , not below (for dairy composite products – in milk basis)	
1	2	3	4	5
Fluid milk	0.1 – 9.9	2.8 (for milk with the mass fraction of fat above 4 percent – 2,6)	8	–
Dairy drink (beverage)	0.1 – 6	2.6	7.4	–
Dairy cocktail, drink, jelly, pudding, mousse, paste, souffle	0.1 – 9.5	–	–	–
Fluid cream, including sterilized	10 – 34	1.8 – 2.6	5.2 – 8	–
Fluid cream, high-fat	35 – 58	1.2	3.6	–

Name of milk processing product	Mass fraction range, %			Lactic acid microorganisms, probiotic microorganisms, yeasts
	Fat	protein, not below (for dairy composite products – in milk basis)	MSNF [*] , not below (for dairy composite products – in milk basis)	
1	2	3	4	5
Fermented milk products ^{**} , except ayran, yoghurt, sour cream, curd, including products with bifidum bacteria and other probiotic microorganisms	0.1 – 9.9	2.8 (for product with the mass fraction of fat above 4 percent – 2.6	not below 7.8	Lactic acid microorganisms - not less than 1×10^7 CFU ^{***} /cm ³ (g). For products enriched with bifidum bacteria and other probiotic microorganisms, including yoghurt, bifidum bacteria and/or other probiotic microorganisms – not below 1×10^6 CFU/cm ³ (g) ^{**} . Yeasts by the end of shelf life, not less than:
Yoghurt	0.1 – 10	3.2 ^{****}	not below 9.5 ^{****}	For ayran, kefir – 1×10^4 CFU/cm ³ (g), for kumiss – 1×10^5 CFU/cm ³ (g)
Sour cream and sour-cream-based products	10 – 58	1.2	3.6	Lactic acid microorganisms for sour cream – not below 1×10^7 CFU/cm ³ (g)
Curd (except curd made with the use of ultra-filtration, separation and granular curd)	0.1 – 35	12 For curd with the mass fraction of fat above 18 % – 8	13.5 For curd with the mass fraction of fat above	Lactic acid microorganisms for curd – not below 1×10^6 CFU/cm ³ (g)

Name of milk processing product	Mass fraction range, %			Lactic acid microorganisms, probiotic microorganisms, yeasts
	Fat	protein, not below (for dairy composite products – in milk basis)	MSNF*, not below (for dairy composite products – in milk basis)	
1	2	3	4	5

18 % – 10

Curd made with the use of ultra-filtration, separation	0.1 – 25	7	10	Microflora typical for curd starters; a lack of cells of foreign microorganisms
Granular curd	Not above 25	8	–	Microflora typical for curd starters; a lack of cells of foreign microorganisms
Curd mass	Not below 0.1	6	–	Microflora typical for curd starters; a lack of cells of foreign microorganisms
Curd products*****	0.1 – 35	–	–	Microflora typical for curd starters; a lack of cells of foreign microorganisms (except heat treated)
Sterilized milk, condensed (concentrated)	0.2 – 16	6	11.5	–
Condensed milk with sugar	0.2 – 16	5	12	–
Condensed cream with sugar	19.0 – 20.0	6	18	–

Name of milk processing product	Mass fraction range, %			Lactic acid microorganisms, probiotic microorganisms, yeasts
	Fat	protein, not below (for dairy composite products – in milk basis)	MSNF [*] , not below (for dairy composite products – in milk basis)	
1	2	3	4	5
Dry (powdered) milk	0.1 – 41.9	18	53.1	–
Dry (powdered) cream	42 – 74	7 – 18	21 – 55	–
High-fat cream	75 – 80	5	15	–
Dry milk whey	not above 2	not below 10	not below 92	–

*MSNF – milk solids non-fat

** For fermented milk products for feeding infants, as well as children of pre-school and school age – in accordance with Annexes No. 2 and 11 to the Technical Regulation of the Customs Union “On Safety of Milk and Dairy Products” (TR TS 033/2013).

*** CFU – colony-forming units

**** For dairy composite products the mass fraction of protein, % – not below 2.8.

***** For dairy composite products the mass fraction of MSNF, % – not below 8.5.

***** Indicators of the identification of curd products are regulated in the regulatory or technical documents, or in the entity’s standards.

Table 2

Butter and butter paste from cow's milk

Butter name	Mass fraction, %			Titratable acidity of milk plasma of the product, °T	
	fat	moisture	salt	sweet cream butter	sour cream butter
1	2	3	4	5	6
Rendered butter	not below 99	not above 1	–	–	–
Cream butter, including:					
Sweet cream and sour cream butter	–	–	–	not above 30	40 – 65
unsalted	50 and more	14 – 46	–	–	–
salted	50 and more	13 – 45	1	–	–
with components	50 – 69	16 – 45	–	–	–
Butter paste, sweet cream and sour cream:	–	–	–	not above 33	40 – 65
unsalted	39 – 49	56 – 47	–	–	–
salted	39 – 49	55 – 46	1	–	–
with components	39 – 49	40 – 55	–	–	–
Milk fat	not below 99.8	not above 0.2	–	–	–

Table 3

Cream-and-vegetable spread, rendered cream-and-vegetable mix

Product name	Mass fraction of total fat, %	Mass fraction of milk fat in fat phase, %	Mass fraction of linoleic acid in the fat extracted from the product, %	Mass fraction of trans-isomers of oleic acid in the fat extracted from the product, calculated as methylelaidate, %	Fat melting temperature °C, not above
1	2	3	4	5	6
Cream-and-vegetable spread	39 – 95	not below 50	10 – 35	8	36
Rendered cream-and-vegetable mix	not below 99	not below 50	10 – 35	8	36

Table 4

Cheese, cheese product

Product name	Mass fraction, %			
	moisture	moisture in fat-free substance	fat in solids	salt
1	2	3	4	5
Dry cheese, cheese product	2 – 10	below 15	1 – 40 inclusive	2 – 6
Extra-hard cheese, cheese product	30 – 35	below 51	1 – 60 and more	1 – 3 inclusive
Hard cheese, cheese product	40 – 42	49 – 56 inclusive	1 – 60 and more	0,5 – 2,5 inclusive

Semi-hard cheese, cheese product	36 – 55 inclusive	54 – 69 Inclusive	1 – 60 and more	0,2 – 4 inclusive
Soft cheese, cheese product	above 55 – 80	67 and more	1 – 60 and more	0 – 5 For pickled cheese – 2 – 7 inclusive

Table 5

Processed cheese, processed cheese product

Product name	Mass fraction, %			
	fat in dry solids	moisture	Cooking salt (except sweet cheese)	sucrose (for sweet cheese)
1	2	3	4	5
Processed cheese (cheese product), chunk	Up to 65 inclusive	35 – 70 inclusive	0.2 – 4 inclusive	Up to 30 inclusive
Processed cheese (cheese product), paste-like	20 – 70 inclusive	35 – 70 inclusive	0.2 – 4 inclusive	
Processed cheese (cheese product), dry	Up to 51 inclusive	3 – 7 inclusive	2 – 5 inclusive	

Table 6

Ice-cream

Types	Mass fraction,%		Mass fraction, %, not below		Acidity** °T, not above	Overrun, %
	Milk fat	MSNF *	Sucrose or total sugar (except lactose)	Dry solids		

1	2	3	4	5	6	7
Plombir	Not below 12	7 – 10	14	36	21	30 – 130
Cream	8 – 11.5	7 – 11	14	32	22	30 – 110
Milk	Not above 7.5	7 – 11.5	14.5	28	23	30 – 90
Sour milk	Not above 7.5	7 – 11.5	17	28	90	30 – 90
With milk fat substitute	Not above 12 ^{***}	7 – 11	14	29	22	30 – 110

Notes: 1. Indicators for the identification of dairy composite products, milk-containing products are established by the national standards, technical documents, or by the entity's standards.

2. The indicator "Mass fraction of MSNF, %) is not a compulsory regulated or controlled parameter and is established at the manufacturer's discretion.

* MSNF – milk solids non-fat.

** Acidity of ice-cream with food and flavoring components is established by the national standards, technical documents, or by the entity's standards.

*** Mixes of milk and vegetable fat.

ANNEX No. 2
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Permissible levels of microorganisms in milk-based products for baby foods, adapted or partly adapted initial or follow-on milk baby formulas (including powdered ones); powdered acidified milk formulas; dairy drinks (beverages) (including powdered ones) for nutrition of infants and babies; ready-to-use milk cereals and powdered milk cereals (reconstituted to readiness with drinking water in home conditions) for nutrition of infants and babies, including products made at the dairy kitchens

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU / cm ³ (g), not above	Note
		E.coli group bacteria (coliforms) ***	Escherich ia spp. E. coli ****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococ cus spp. S.aureus			
1	2	3	4	5	6	7	8	9

I. Adapted milk baby formulas

1. Dry ready-made milk baby formulas	2x10 ³ (for formulas reconstituted at the temperature of 37–50 °C),	1	10	100	10	100	Y – 10 M – 50	
Non-acidified,	3x10 ³ (or formulas							

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

acidified reconstituted at the temperature of 70 – 85 °C). In acidified formulas: Acidophilic microorganisms – not below 1x10⁷ (where made with their use), bifidum bacteria – not below 1x10⁶ (where made with their use), Lactic acid microorganism

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

ms –
not below
1x10⁷
(with the
addition after
drying),
Lactic acid
microorganis
ms –
not below
1x10²
(without the
addition after
drying)

2. Liquid
milk baby
formulas
produced
with ultra-
pasteurization, with
aseptic
filling

Industrial
sterility
requirements
:

a) after
thermostatic
holding at
the

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

temperature of 37°C for 3 – 5 days – a lack of visible defects or deterioration indices (package buckling, appearance changes, etc.), a lack of taste or texture changes; in microscopic slides – a lack of bacterial cells
b) after thermostatic

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

holding the following changes are allowed:

titratable acidity – no more than by 2°T

QMAFAn M – not above 10 CFU/cm³ (g)

3. Liquid acidified milk baby formulas,	Lactic acid microorganisms – not below	3	10	50	10	–	Y – 10 M – 10
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Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

with aseptic filling, including those with the use of acidophilic microorganisms or bifidum bacteria

1x10⁷, acidophilic microorganisms – not below 1x10⁷ (where made with their use), bifidum bacteria – not below 1x10⁶ (where made with their use)

II. Partly adapted milk baby formulas

4. Ready-made formulas	2x10 ³ (for formulas reconstituted at the temperature of	1	10	100	10	100	Y – 10 M – 50
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Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU / cm ³ (g), not above	Note
		E.coli group bacteria (coliforms) ***	Escherich ia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococ cus spp. S.aureus			
1	2	3	4	5	6	7	8	9

37 – 50 °C),
3x10³(for
formulas
reconstituted
at the
temperature
of
70 – 85 °C)

5. Formulas
requiring heat
treatment

2,5x10⁴

1

–

50

1

200

Y –
50,
M –
100

6. Milk-based
baby
formulas

1x10²

10

10

100

10

–

–

Adapted,
sterilized,
made at the
dairy
kitchens

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

III. Sterilized milk and cream

7. Milk and cream, sterilized, ultra-sterilized, ultra-pasteurized with aseptic filling, including enriched milk

Industrial sterility requirements :

a) after thermostatic holding at the temperature of 37°C – for 3 – 5 days, a lack of visible defects or deterioration indices (package buckling, appearance

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU / cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

changes, etc.), a lack of taste or texture changes;

b) after thermostatic holding the following is allowed:

changes in titratable acidity – no more than by 2°T;

QMAFAn M – not

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

8. Sterilized milk, cream, made at the dairy kitchens, with non-aseptic filling	1x10 ²	10	10	100	10	–	–	above 10 CFU/cm ³ (g) c) microscopic slide – a lack of microbial cells
9. Liquid fermented milk products, including those with the	Lactic acid microorganisms – not below 1x10 ⁷ ,	3	10	50	10	–	Y – 10 M – 10	

IV. Fermented milk products

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

use of acidophilic microorganisms or bifidum bacteria

acidophilic microorganisms – not below 1x10⁷ (where made with their use), bifidum bacteria – not below 1x10⁶ (where made with their use)

For kefir Y– 1x10⁴

10. fermented milk products, made at the dairy kitchens, with non-aseptic filling

acidophilic microorganisms – not below 1x10⁷ (where made with their use), Bifidum

3

10

50

10

–

–

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

bacteria – not below 1x10⁶ (where made with their use)

V. Curd, curd products

11. Curd, curd products	Microflora, typical for curd starters, a lack of foreign microbial cells	0.3	1	50	1	–	Y – 10 M – 10
12. Curd, curd products Acidophilic paste, low-lactose protein paste made at the	Microflora, typical for curd starters, a lack of foreign microbial cells	0.3	–	50	1	–	–

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

dairy kitchens

13. Calcium-supplemented curd made at the dairy kitchens

100

1

–

50

1

–

–

VI. Dry (powdered) milk for baby foods

14. Dry milk for baby foods

2.5x10⁴

1

25

1

–

Y –
50
M –
100

15. Ready-made dry milk for baby foods

2x10³
(for formulas reconstituted at 37 – 50 °C),
3x10³
(for formulas reconstituted at

1

10

100

10

100

Y –
10
M –
50

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU / cm ³ (g), not above	Note
		E.coli group bacteria (coliforms) ***	Escherich ia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococ us spp. S.aureus			
1	2	3	4	5	6	7	8	9

70 – 85 °C)

16. Dry milk
for
baby foods
requiring
heat
treatment

2.5x10⁴

1

–

50

1

200

Y –
50
M –
100

VII. Pasteurized milk

17. Pasteurize
d milk,
including that
with the shelf
life above 72
h

1.5x10⁴

0.1

1

50

1

25

–

VIII. Dry (powdered) and liquid dairy drinks for children from 6 months to 3 years of age

18. Liquid
dairy drinks
for children
from 6 months

1.5x10⁴

0.1

1

50

1

–

Y –
50
M –
50

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

to 3 years of age

IX. Follow-on milk baby formulas

19. Follow-on milk baby formulas, instant (ready-made)	2x10 ³ (for formulas reconstituted at 37 – 50 °C), 3x10 ³ (for formulas reconstituted at 70 – 85 °C)	1	10	100	10	100	Y – 10 M – 50
20. Follow-on milk baby formulas, requiring heat treatment after reconstitution	2.5x10 ⁴	1	–	50	1	–	Y – 50 M – 100

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU / cm ³ (g), not above	Note
		E.coli group bacteria (coliforms) ***	Escherich ia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococ cus spp. S.aureus			
1	2	3	4	5	6	7	8	9

X. Dry (powdered) milk cereals

21. Dry (powdered) milk cereals instant (ready-made)	1x10 ⁴	1	–	50	1	2x10 ²	Y – 50 M – 100
22. Dry (powdered) milk cereals requiring boiling	5x10 ⁴	0,1	–	50	–	–	Y – 100 M – 200

XI. Ready-to-use milk cereals

23. Ready-to- use milk cereals, sterilized							Industrial sterility requirements : a) after thermostatic
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Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

holding at the temperature of 37 °C for 3 – 5 days, a lack of visible defects or deterioration indices (package buckling, change of appearance, etc.), a lack of taste or texture changes;

b) after thermostatic holding the following

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU/cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)***	Escherichia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococcus spp. S.aureus			
1	2	3	4	5	6	7	8	9

changes are allowed:

titratable acidity – no more than by 2°T;

QMAFAn M – not above 10 CFU/cm³ (g)

24. Ready-to-use milk cereals made at the dairy kitchens

1x10³

1

–

50

1

–

–

XIII. Low-lactose and lactose-free products

Product, group of products	QMAFAnM*, CFU**/cm ³ (g),	Product volume (amount), cm ³ (g) where not allowed				Bacteria B. cereus, CFU**/cm ³ (g), not above	Yeasts (Y), moulds (M), CFU / cm ³ (g), not above	Note
		E.coli group bacteria (coliforms) ***	Escherich ia spp. E. coli****	Pathogenic, including salmonella and listeria spp. L. monocytogenes* ***	Staphylococ cus spp. S.aureus			
1	2	3	4	5	6	7	8	9
25. Low-lactose products *****	2x10 ³	1	–	100	10	100	Y – 50 M – 100	
26. ^L lactose-free products *****	2x10 ³	1	10	100	10	100	Y – 50 M – 10	
XIV. Dry dairy high-protein products								
27. Dry dairy high-protein products	2,5x10 ⁴	0,3	–	50	1	–	Y – 50 M – 100	
XV. Dry milk-based products								
28. Dry milk-based products	–	0,3	–	50	1	–	Y – 50 M – 100	

*QMAFAnM – Quantity of mesophilic aerobic and facultative anaerobic microorganisms.

** CFU – colony-forming units

*** Coliforms – Escherichia coli group bacteria

**** For dry adapted milk baby formulas – for the formulas intended for nutrition of children from the first days of life to 6 months of age and from 0 to 12 months of age – where controlled for E.coli and pathogenic microorganisms, including salmonella, and where Enterobacteriaceae bacteria not related to E.coli or salmonella are found in the normative product mass, a lack of the pathogenic microorganism E.sakazakii in 300 g of the product is controlled.

For dry milk ready-made cereals – where cereals intended for nutrition of children under 6 months of age are controlled for pathogenic microorganisms, including salmonella, and where Enterobacteriaceae bacteria not related to salmonella are found in the normative product mass, a lack of the pathogenic microorganism E.sakazakii in 300 g of the product is controlled.

For dry dairy high-protein products – where salmonella and Enterobacteriaceae bacteria not related to salmonella are found in the normative mass of the product intended for children under 6 months, a lack of the pathogenic microorganism E.sakazakii in 300 g of the product is controlled.

For milk-based baby formulas – reconstituted, pasteurized, made at the dairy kitchens that are intended for children under 6 months, where controlled for E.coli and pathogenic microorganisms, including salmonella, and where Enterobacteriaceae bacteria not related to E. coli or salmonella are found in the normative product mass, a lack of the pathogenic microorganism E.sakazakii in 300 g of the product is controlled.

Where dry milk-based baby food products are made (formulas, drinks, dry milk) and where staphylococci are found in the normative product mass, a lack of staphylococcus enterotoxins is controlled (not allowed in 5 specimens with the weight of 25 g each).

***** Elaborated by the indicators of Technical Regulation “On Safety of Certain Types of Specialized Food Products, Including Therapeutic and Preventive Dietary Food” (TR TS 027/2012) adopted by Resolution of the Eurasian Economic Commission Council No.34 of June 15, 2012.

ANNEX No. 3
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Organoleptic indicators for the identification of milk processing products

Dairy products	Organoleptic indicators for the identification of milk processing products			
	appearance	texture	taste and odor	color
1	2	3	4	5
Fluid milk	Nontransparent liquid	Liquid homogenous, non-gummy	Typical of milk, with a light taste of boiling. Sweetish taste is allowed	White, for skimmed milk – with bluish shade is allowed, for sterilized milk – with light-cream shade is allowed, for enriched milk – depending on the color of the components used for enrichment
Fluid cream	Homogenous non-transparent liquid	Homogenous moderately viscous	Typical of cream, with mild boiling taste. Sweetish and salty taste is allowed	White with cream tint, uniform throughout the mass, light cream color; for sterilized cream – light cream uniform color; for varenets – from white to light cream color
Ryazhenka, varenets	Homogenous liquid with an impaired or non-impaired clot without gas generation		Pure sour milk, with strong taste of pasteurization	

Dairy products	Organoleptic indicators for the identification of milk processing products			
	appearance	texture	taste and odor	color
1	2	3	4	5

Acidophilin	Homogenous gummy liquid		Pure sour milk, with mild sharp taste	Milk white, uniform
Kefir, liquid fermented milk products	Homogenous liquid with an impaired or non-impaired clot Gas formation is allowed for the products made using yeast. When food flavor components are added – with their presence.		Pure sour milk, with mild sharp taste, or taste and smell, due to the added components. For the products made using yeast - yeast flavor is allowed	Milk white uniform or determined by the color of the added components.
Yogurt	Homogenous moderately viscous liquid. When stabilizer is added – jelly or creamy. When food flavor components are added – with their presence.		Sour milk. When sugar or sweeteners are added -moderately sweet taste. When food flavor components are added – determined by the added components.	Milk white uniform or determined by the color of the added components.
Curds, curd mass, curd products	Soft or grainy with or without tangible particles of milk protein. When food flavor components are added – with their presence.		Pure sour milk, dry milk flavor is allowed. When sugar or sweeteners are added -moderately sweet. When food flavor components are added – determined by the added components.	White or with cream tint uniform or determined by the color of the added components.
Sour cream	Homogenous mass with glossy surface		Pure sour milk. Flavor of rendered butter is allowed.	White with cream tint, uniform
Ice cream	Portions of single-layer or multilayer ice	Compact, homogenous, without tangible pellets of	Pure taste, characteristic of the ice cream type	Characteristic of the ice cream type, uniform

Dairy products	Organoleptic indicators for the identification of milk processing products			
	appearance	texture	taste and odor	color
1	2	3	4	5
	cream of various shape, fully or partially glazed (with chocolate) or not glazed (with chocolate)	fat, stabilizer and emulsifier, protein and lactose particles, ice crystals. When food flavor components are added – with their presence. In glazed ice cream the glaze (chocolate) structure is homogenous, without tangible particles of sugar, cocoa products, dry dairy products, with the presence of the nut particles, wafer crumbs and other components, if they are used.		throughout the mass of single-layer ice cream or each layer of multilayer ice cream. For glazed ice cream – color of coating characteristic of the glaze type.
Rendered butter	Granular or compact, when melted – clear, without sediment		Taste and odor of melted milk fat without foreign flavor and odor	From light yellow to yellow, uniform
Milk fat	Homogenous, compact, when melted – clear, without sediment		Pure, neutral, characteristic of milk fat	From white to yellow, homogenous throughout the mass
Dairy butter, butter paste	Compact, homogenous, plastic, cut surface is shiny, dry. Slightly shiny or slightly matt surface with single tiny droplets of water, insufficiently compact and plastic texture, slightly crumbly is allowed. When food flavor components are added – with their presence.		For sweet cream butter and sweet cream butter paste – pronounced creamy taste and flavor of pasteurization, without foreign flavor and odor. For sour cream butter and sour	From light yellow to yellow, homogenous, uniform. When food flavor components are added – determined by the color

Dairy products	Organoleptic indicators for the identification of milk processing products			
	appearance	texture	taste and odor	color
1	2	3	4	5

cream butter paste – pronounced creamy taste with sour cream flavor, without foreign flavor and odor.

For cheese butter and butter paste whey flavor is allowed. For all type of butter and butter paste slight weedy flavor is allowed and (or) insufficiently pronounced flavors of: creamy, pasteurization, overpasteurization and melted butter, sour milk. When food flavor components are added – determined by the added components.

of the added components.

Cheese, cheese product dry, including processed

Shape of package

Powdery or hard, brittle or other. When food flavor components are added – with their presence.

Cheese, with odor and flavor characteristic of a particular cheese name.

When food flavor components are added – determined by the added components.

From white to yellow.

When food flavor components are added – determined by the color of the added components.

Cheese, cheese product extra hard

Various shape

Brittle, granular or other. Without pattern or with holes of various shape and position. When food flavor components are added – with their presence.

Cheese, sweetish spicy, pronounced at various degree characteristic of a particular cheese name.

From light yellow to yellow.

When food flavor components are added – determined by the color of the added components.

Dairy products	Organoleptic indicators for the identification of milk processing products			
	appearance	texture	taste and odor	color
1	2	3	4	5

Cheese, cheese product hard

Shape of bar, cylinder or other arbitrary shape

Homogenous, compact, slightly brittle or other. Large, medium, small holes or no holes. When food flavor components are added – with their presence.

Cheese, sweetish spicy, pronounced at various degree characteristic of a particular cheese name. When food flavor components are added – determined by the added components.

From light yellow to yellow, uniform. When food flavor components are added – determined by the color of the added components.

Cheese, cheese product medium hard

Shape of bar, high or low cylinder, ellipse or other arbitrary shape

Homogenous, elastic, plastic. Large, medium, small holes of various shape and position no holes. When food flavor components are added – with their presence.

For cheese with high temperature second heating – cheese, sweetish, Spicy, pronounced at various degree for a particular cheese name, for cheese with intermediate and low temperature of second heating – cheese, slightly sour, slightly spicy, sharp, pronounced at various degree characteristic of a particular cheese name. When mold or slime is used – those determined by the type of mold or slime microflora. When food flavor components are added – determined by the added components.

From white to light yellow, uniform, marble or other. In cheese with mold – streaks of added mold, in cheese with surface mold – presence of the mold. When food flavor components are added – determined by the color of the added components.

Cheese, cheese product soft

Shape of low cylinder or other arbitrary shape

From soft plastic, compact, slightly elastic to delicate, spreading, oily. Slightly

Sour milk or cheese characteristic of a particular cheese name. When mold or slime is used – those

From white to yellow. In cheese with mold – streaks of added mold,

Dairy products	Organoleptic indicators for the identification of milk processing products			
	appearance	texture	taste and odor	color
1	2	3	4	5
		brittle, crumbly is allowed. No pattern. A small number of holes and voids of irregular shape is allowed. When food flavor components are added – with their presence.	determined by the type of mold or slime microflora. When food flavor components are added – determined by the added components.	in cheese with surface mold – presence of the mold. When food flavor components are added – determined by the color of the added components.
Cheese, cheese product processed slice	Shape of package	From compact, slightly elastic to plastic, homogenous throughout the mass, retaining shape after cutting. When food flavor components are added – with their presence.	Pure, characteristic of a particular cheese name. For smoked cheese – with smoking flavor. When food flavor components are added – determined by the added components.	From white to intense yellow, uniform. In smoked cheese – from light yellow to yellow; in sweet cheese – from white to brown. When food flavor components are added – determined by the color of the added components.
Cheese, cheese product processed paste	Shape of package	From soft plastic to delicate, spreading, cream-like, homogenous throughout the mass. When food flavor components are added – with their presence.	Pure, characteristic of a particular cheese name. When food flavor components are added – determined by the added components.	From white to intense yellow, uniform. In sweet cheese – from white to brown. When food flavor components are added – determined by the color of the added components.

Dairy products	Organoleptic indicators for the identification of milk processing products			
	appearance	texture	taste and odor	color
1	2	3	4	5
Dry milk	Homogenous powder	Fine dry powder	Pure, characteristic of fresh pasteurized milk	White with light cream tint
Dry cream	Homogenous powder	Fine dry powder	Pure, characteristic of pasteurized cream	White with light cream tint
Concentrated milk, cream	Homogenous liquid	Homogenous, moderately viscous liquid	Sweetish-salty taste characteristic of baked milk	Light cream
Condensed milk, cream with sugar	Viscous homogenous mass	Homogenous, viscous throughout the mass, without tangible crystals of milk sugar. Mealy texture and slight lactose sediment at the container bottom during storage is allowed	Pure, sweet, with pronounced taste of pasteurized milk. For condensed milk with sugar subjected to additional heat treatment – caramel flavor. Slightly weedy flavor is allowed	White with cream tint, uniform. At heat treatment and production with coffee and cocoa - brown
Whey	Transparent or semi-transparent liquid	Liquid, homogenous	Characteristic of whey, for curd whey – slightly sour taste, for cheese whey – sweetish or salty taste	From pale green to light yellow
Dry milk whey	Fine powder or powder consisting of single and agglomerated particles of dry whey	A very small number of pellets broken at slight mechanical action is allowed	Characteristic of milk whey, sweetish, salty, slightly sour taste	From white to yellow, homogenous throughout the mass
Buttermilk	Non-transparent liquid without sediment and flakes	Liquid, homogenous	Characteristic of buttermilk, for buttermilk of sweet cream butter – milk taste, for buttermilk of sour	From white to light yellow

Dairy products	Organoleptic indicators for the identification of milk processing products			
	appearance	texture	taste and odor	color
1	2	3	4	5

Casein	Homogenous powder or crystalline substance	Powder or dry compact or porous grain of any shape	cream butter – sour cream taste. Flavor of pasteurization or slightly weedy flavor is allowed Odorless, neutral taste	From white to light cream
Lactulose	Crystalline substance	Fine crystals of heterogeneous shape	Odorless, sweet taste	White
Lactulose concentrate	Homogenous viscous liquid	Homogenous, viscous	Sweetish to sour sweet taste. Flavor and odor of caramelization is allowed	From light yellow to dark yellow
Cream-vegetable spread	Matt or slightly shiny surface, with dry appearance	Plastic homogenous, compact or soft	Creamy, sweet creamy or sour creamy taste	From white to light yellow, homogenous
Cream-vegetable rendered mixture	Granular or homogenous (compact or soft)		Taste and odor of melted milk fat	From light yellow to yellow, homogenous
Dairy composite products, milk-containing products	According to the description provided by the producer, with the taste, color and (or) odor determined by the added food flavor components, use of glaze or other food products			

ANNEX No. 4
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Permissible levels of potentially dangerous substances in milk and dairy products

Product, group of products 1	Potentially dangerous substances 2	Permissible levels, mg/kg (l), not above 3
Raw milk, raw skimmed milk, raw cream and all dairy products	antibiotics:	
	levomycetine (chloramphenicol)	Not allowed (below 0.01)
		Not allowed (below 0.0003)*
	Tetracycline group	Not allowed (below 0.01)
	Streptomycin	Not allowed (below 0.2)
	Penicillin	Not allowed (below 0.004)

*The indicator of levomycetine (chloramphenicol) level shall come into effect from 01.07.2015.

ANNEX No. 5
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Permissible levels of microorganisms and somatic cells in raw milk, raw skimmed milk and raw cream

Product	QMAFAnM*, CFU**/cm ³ (g), not above ***	Product volume (amount,) cm ³ (g,) where not allowed		Count of somatic cells in 1 cm ³ (g), not above ***
		E.coli group bacteria (coliforms)****	Pathogenic microorganisms, including salmonella	
1	2	3	4	5
Raw milk	5x10 ⁵	–	25	7.5x10 ⁵
Raw skimmed milk	5x10 ⁵	–	25	–
Raw cream	5x10 ⁵	–	25	–
Raw milk for making:				
a) baby foods;	3x10 ⁵	–	25	5x10 ⁵
б) cheese and sterilized milk	5x10 ⁵	–	25	5x10 ⁵

*QMAFAnM – Quantity of mesophilic aerobic and facultative anaerobic microorganisms.

**CFU – colony-forming units

***The established levels of QMAFAnM and somatic cells count shall come into force as of 01.07.2017 (prior to 01.07.2017, the norms established by the Unified Sanitary and Epidemiological and Hygienic Requirements for Products Subject to Sanitary and Epidemiological Control (Surveillance) shall apply).

*** Coliforms – Escherichia coli group bacteria

ANNEX No. 6
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Indicators for the identification of raw cow’s milk and raw milk of other livestock species

Table 1

Indicators for the identification of raw cow’s milk

Indicator name	Parameters
1	2
Mass fraction of fat, %	not below 2.8
Mass fraction of protein, %	not below 2.8
Mass fraction of nonfat milk solids, %	not below 8.2
Texture	Homogenous liquid without precipitation or flakes. Freezing is not allowed
Taste and odor	Taste and odor are pure, without foreign flavors or smells that are not typical for fresh milk
Color	From white to light cream color
Acidity, °T	16 – 21
Density (kg/ m ³), not below*	1027 (at the temperature of 20 °C)

Indicator name	Parameters
1	2

Freezing temperature, °C (used where falsification is suspected), not above

– 0.505

*The main physical parameters of milk are calculated using the following formula:

$$\text{Nonfat milk solids (NFMS)} = 0.25 \times A + 0.225 \times F + 0.5,$$

where:

A – density, lactodensimeter;

F – mass fraction of fat in raw milk, %.

Table 2

Indicators for the identification of raw milk of other livestock species

Animal species	Content of milk constituents, % *			Density at the temperature of 20°C, not below	Acidity, °T, not above
	Fat, not below	Protein, not below	Dry solids, average		
1	2	3	4	5	6
Female goat	2.8	2.8	13.4	1027 – 1030	14 – 20
Female sheep	6.2	5.1	18.5	1034	25
Mare	1.8	2.1	10.7	1032	6.5
Female camel	3	3.8	15	1032	17.5

Animal species	Content of milk constituents, % *			Density at the temperature of 20°C, not below	Acidity, °T, not above
	Fat, not below	Protein, not below	Dry solids, average		
1	2	3	4	5	6
Buffalo cow	7.5	4.2	17.5	1029	17
Female ass	1.2	1.7	9.9	1011	6

*The values of identification indicators of milk received from individual milking operations may vary in broader ranges.

ANNEX No. 7
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Indicators for the identification of raw cream from cow’s milk

Indicator name	Parameters
1	2
Mass fraction of fat, %, not below	10
Acidity, °T	14 – 19
Texture	Uniform homogenous. Individual fat balls are allowed
Taste and odor	Strong taste and odor – creamy, pure, sweetish
Color	White, with cream tint, uniform

ANNEX No. 8
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Permissible levels of microorganisms in milk processing products when they are released into circulation

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

I. Fluid milk, fluid cream, dairy drink, milk whey, buttermilk, heat treated products on their basis

1. Fluid milk, dairy drink, in consumer package, including those enriched with vitamins, macro- and trace elements, lactulose, prebiotics:

a) pasteurized	1x10 ⁵	0,01	25	1	25	–	
b) sterilized	–	–	–	–	–	–	Industrial sterility

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

c) ultra-pasteurized (with aseptic filling)

– – – – –

requirements:

a) after thermostatic holding at the temperature of 37 °C for 3 – 5 days, a lack of visible defects or deterioration indices (package buckling, appearance changes, etc.), a lack of taste or texture changes;

b) after thermostatic holding the following changes are allowed:

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

titratable
acidity – no
more than by
2°T;

QMAFAnM –
not above 10
CFU/cm³ (g)

d) ultra-pasteurized (without aseptic filling)	100	10	100	10	25	–	
e) baked	2.5x10 ³	0.1	25	–	25	–	
2. Fluid milk, dairy drink in churns and tanks	2x10 ⁵	0.01	25	0.1	25	–	
3. Milk whey and buttermilk in consumer package, pasteurized	1x10 ⁵	0.01	25	1	25	–	

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

4. Cream and cream-based products including those in consumer packages, in particular:

a) pasteurized

1x10⁵

0.01

25

1

25

–

b) sterilized

Industrial sterility requirements:

a) after thermostatic holding at the temperature of 37 °C for 3 – 5 days, a lack of visible defects or deterioration indices (package buckling, appearance changes, etc.), a lack of taste or

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

texture changes;

b) after
thermostatic
holding the
following
changes are
allowed:

titratable
acidity – no
more than
by 2°T;

QMAFAnM –
not above 10
CFU/cm³ (g)

c) enriched	1x10 ⁵	0.01	25	1	25	–
d) whipped	1x10 ⁵	0.1	25	0.1	25	–
5. Cream and cream-based products, including those in churns and tanks	2x10 ⁵	0.01	25	0.1	25	–

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

6. Drinks,
cocktails, kissels,
jelly, sauces,
creams, puddings,
mousses, pastes,
soufflé made on
the basis of milk,
cream buttermilk,
whey – pasteurized

1x10⁵

0.1

25

1

25

–

7. Fermented milk
products and
products on their
basis with the shelf
life of no more
than 72 hours:

a) without
components

Lactic acid
microorganism
s –
not below
1x10⁷

0.01

25

1

–

–

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

b) with
components

Lactic acid
microorganism
s –
not below
1x10⁷

0.01

25

1

–

–

8. Fermented milk
products and
products on their
basis with the
shelf life above
72 hours:

a) without
components

Lactic acid
microorganism
s –
not below
1x10⁷

0.1

25

1

–

Y –
50****
M – 50

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

b) with components

Lactic acid microorganism
s –
not below
1x10⁷

0.01

25

1

–

Y –
50****
M – 50

c) enriched with bifidum bacteria and other probiotic microorganisms

bifidum bacteria and other probiotic microorganisms –
not below
1x10⁶
in the aggregate

0,1

25

1

–

Y –
50****
M – 50

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

9. Sour cream and products on its basis, including those with components

lactic acid microorganisms – not below 1x10⁷

0.001 (for heat treated after ripening sour cream products – 0.1 g/cm³)

25

1

–

For products with the shelf life above 72 hours.
–
Y – 50
M – 50

10. Heat treated cultured and dairy composite products:

a) without components

–

1

25

1

25

Y – 50
M – 50

б) with components

–

1

25

1

25

Y – 50
M – 50

II. Curd, curd mass, curd products and products on their basis

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

11. Curd without components (except curd made with the use of ultra-filtration, separation, and granular curd):

a) with the shelf life of no more than 72 hours	lactic acid microorganisms – not below 1x10 ⁶	0.001	25	0.1	–	–
b) with the shelf life above 72 hours	1x10 ⁶	0.01	25	0.1	–	Y – 100 M – 50
c) frozen	Microflora typical for curd starter, a lack of foreign microbial cells	0.01	25	0.1	–	Y – 100 M – 50

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

12. Curd made with the use of ultra-filtration, separation:

a) with the shelf life of no more than 72 hours	Microflora typical for curd starter, a lack of foreign microbial cells	0.01	25	0.1	–	–	
b) with the shelf life above 72 hours	Microflora typical for curd starter, a lack of foreign microbial cells	0.01	25	0.1	–	Y – 50 M – 50	
13. Granular curd	Microflora typical for curd starter, a lack of foreign microbial cells	0.01	25	0.1	–	Y – 100 M – 50	

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

14. Curd with components, curd mass, curd cheese bars:

a) with the shelf life of no more than 72 hours	Microflora typical for curd starter, a lack of foreign microbial cells	0.001	25	0.1	–	–
b) with the shelf life above 72 hours	Microflora typical for curd starter, a lack of foreign microbial cells	0.01	25	0.1	–	Y – 100 M – 50
c) frozen	Microflora typical for curd starter, a lack of foreign microbial cells	0.01	25	0.1	–	Y – 100 M – 50

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

15. Curd products:

Microflora typical for curd starter, a lack of foreign microbial cells

a) with the shelf life of no more than 72 hours

Microflora typical for curd starter, a lack of foreign microbial cells

0.01

25

0.1

–

–

with the shelf life above 72 hours b) со сроком годности более 72 ч.

Microflora typical for curd starter, a lack of foreign microbial cells

0.01

25

0.1

–

Y –
100
M – 50

c) frozen

–

0.01

25

0.1

–

Y –
100
M – 50

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

16. Heat treated curd products, including those with components

–

0.1

25

1

–

50 in the aggregate

17. Milk albumin, products on its basis, except those made by culturing

2x10⁵

0.1

25

0.1

–

Y –
100
M – 50

III. Milk, cream, buttermilk, dairy products, dairy composite products on their basis, sterilized concentrated and condensed, canned dairy products, canned composite dairy products

18. Sterilized condensed, concentrated milk; sterilized condensed cream; sterilized condensed dairy and dairy composite

Industrial sterility requirements:

a) after thermostatic holding at the temperature of 37 °C for 6 days, a lack of

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

products.

visible defects or deterioration indices (package buckling, appearance changes, etc.), a lack of taste or texture changes;

b) after thermostatic holding:

changes of titratable acidity are not allowed

microbial cells should not be found on a

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

microscopic
slide

c) additional
requirement to
baby foods –
where
inoculation is
made, no
fungi, yeasts or
lactic acid
microorganism
s are found.

19. Condensed
and concentrated
milk in
transportation
containers,
including churns
and tanks

2x10⁵

0.01

25

0.1

25

–

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

20. Milk, cream condensed with sugar, in consumer package:

- a) without components
- b) with components

2x10⁴

1

25

–

–

–

2x10⁴

1

25

–

–

–

21. Milk, cream condensed with sugar, in transportation containers

4x10⁴

1

25

–

–

–

22. Buttermilk, whey condensed with and without sugar

5x10⁴

1

25

–

–

–

23. Condensed dairy products with sugar

3.5x10⁴

1

25

–

–

–

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

IV. Dairy products, dairy composite products, dry, sublimated (milk, cream, fermented milk products, drinks, ice-cream mixes, whey, buttermilk, skimmed milk)

24. Dry
(powdered) cow's
milk

a) ready-to-use

5x10⁴

0.1

25

1

–

–

b) for
commercial
processing

1x10⁵

0.1

25

1

–

–

25. Dry
(powdered) dairy
drinks

1x10⁵

0.01

25

1

–

M – 50

26. Dry
(powdered) cream
and dry
(powdered) cream
with sugar

7x10⁴

0.1

25

1

–

–

27. Dry

1x10⁵

0.1

25

1

25

Y –

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

(powdered) milk
whey

50
M –
100

28. Dry
(powdered) ice-
cream mixes

5x10⁴

0.1

25

1

25
(for soft
ice-cream)

–

29. Dry
(powdered)
fermented milk
products

1x10⁵

0.1

25

1

–

Y –
50
M –
100

30. Buttermilk,
whole milk
substitute
(powdered)

5x10⁴

0.1

25

1

–

Y –
50
M –
100

V. Concentrates of milk proteins, casein, milk sugar, caseinates, milk protein hydrolysates, powdered

31. Alimentary
caseinates

5x10⁴
(sulfite-
reducing
clostridia in

0.1

25

–

–

–

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

0.01 g are not allowed)

32. Whey protein concentrate

5x10⁴

1

25

1

–

–

33. Alimentary casein concentrate

2,5x10³

1

25

1

–

–

34. Milk protein, alimentary caseins

1x10⁴
(sulfite-reducing clostridia in 0.01 g are not allowed)

1

50

1

–

Y –
10
M –
50

35. Milk sugar, refined

1x10³

1

25

1

–

Y –
50
M –
100

36. Alimentary milk sugar (alimentary

1x10⁴

1

25

1

–

Y –
50
M –

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.mono- cytogene s		
1	2	3	4	5	6	7	8

lactose)

100

37. Lactulose
concentrate

5x10³

1

50

1

–

Y –
50
M –
100

VI. Cheeses, cheese products: extra-hard, hard, semi-hard, soft, processed, whey-and-albumin, dry; cheese pastes, sauces

38. Cheeses,
cheese products:
extra-hard, hard,
semi-hard, soft,
processed, whey-
and-albumin)

a) without
components

–

0.001

25

0.001

25^{*****}

–

b) with
components

–

0.001

25

0.001

25^{*****}

–

c) smoked

–

0.001

25

0.001

25^{*****}

–

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

39. Processed
cheeses and cheese
products:

a) without components	5x10 ³	0.1	25	–	–	Y – 50 M – 50
b) with components	1x10 ⁴	0.1	25	–	–	Y – 100 M – 100
c) smoked	1x10 ⁴	0.1	25	–	–	Y – 100 M – 100
40. Cheese sauces, pastes	1x10 ⁴	0.1	25	–	–	–

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

41. Dry
(powdered)
cheeses, cheese
products

5x10⁴

1

25

–

–

–

VII. Butter, butter paste from cow's milk, milk fat

42. Butter form
cow's milk (sweet-
cream, sour-cream,
salted, unsalted):

No regulated in
sour-cream
butter

a) without
components

1x10⁵

0.01

25

0.1

25

100
in the
aggregate

b) with
components

1x10⁵

0.01

25

0.1

25

Y –
100
M –
100

c) sterilized

Industrial sterility
requirements:

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

b) after
thermostatic
holding at the
temperature of
37 °C for
3 – 5 days, a lack
of visible defects
or deterioration
indices (package
buckling,
appearance
changes, etc.), a
lack of taste or
texture changes;

b) after
thermostatic
holding the
following
changes are
allowed:

acidity of

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

fat phase –
no more
than by
0.5°K

titratable
acidity of
milk plasma
– no more
than by 2°T

QMAFAnM
– no more
than 100
CFU/g

43. Rendered butter	1x10 ³	1.0	25	–	–	M – 200	
44. Powdered butter	1x10 ⁵	0.01	25	0.1	25	100 in the aggregat e	
45. Milk fat	1x10 ³	1.0	25	–	–	M – 200	

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

46. Butter paste:

a) without components	2x10 ⁵	0.01	25	0.1	25	Y – 100 M – 100
b) with components	2x10 ⁵	0.001	25	0.1	25	Y – 100 M – 100

VIII. Cream-and-vegetable spread, rendered cream-and-vegetable mix

47. Cream-and-vegetable spread	1x10 ⁵	0.01	25	0.1	25	Y – 100 M – 100
48. Rendered cream-and-vegetable mix	1x10 ³	1	25	–	–	M – 200

IX. Ice-cream: milk, sour-milk, cream, plombir, with milk fat substitute, tarts, cakes, deserts from ice-cream, mixes, ice-cream glaze

49. Ice-cream: milk, cream, plombir, with milk	1x10 ⁵	0.01	25	1	25	–
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Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

fat substitute,
hardened,
including that with
components, tarts,
cakes, deserts from
ice-cream

50. Мороженое
молочное,
сливочное,
пломбир, с
заменителем
молочного жира,
мягкое, в том
числе
с компонентами
Ice-cream: milk,
cream, plombir,
with milk fat
substitute, soft,
including that with
components

1x10⁵

0.1

25

1

25

–

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

51. Liquid mixes
for soft ice-cream

3x10⁴

0,1

25

1

25

–

52. Sour-cream
ice-cream

Lactic acid
microorganisms – not below
1x10⁶

0.1

25

1

25

–

X. Starters (starter and probiotic microorganisms for making fermented milk products, sour cream butter and cheeses)

53. Starters for
kefir on kefir fungi

1x10⁸

3

100

10

–

Y – not
below
1x10⁴
M – 5

54. Symbiotic
(liquid) starters
for kefir product

1x10⁸

3

100

10

–

Y – not
below
1x10⁴
M – 5

55. Starters from
pure cultures:
a) liquid,
including

1x10⁸

10

100

10

–

5 in the
aggregate

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

frozen

for
concentrated
starters – not
below
1x10¹⁰

b) dry
(powdered)

1x10⁹

for
concentrated
starters – not
below
1x10¹⁰

XI. Enzymatic milk-clotting preparations

56. Enzymatic milk-clotting preparations:

a) of animal
origin

1x10⁴

1
E.coli in 25
g/cm³

25
Sulfite-reducing
clostridia in
0.01 g

–

–

–

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

b) of plant origin

5x10⁴

1

25

–

–

–

b) of microbial and fungal origin

5x10⁴
should not contain viable forms of enzyme producers

1

25

–

–

–

should not have antibiotic activity. Enzymatic preparations of fungal origin should not contain mycotoxins.

XII. Milk-based dry nutrient media for the cultivation of starter and probiotic microflora

57. Milk-based dry nutrient media for the cultivation of starter and probiotic microflora

5x10⁴

0,01

25
Sulfite-reducing clostridia in 0.01 g

–

–

–

XIII. Milk-containing products

Product	QMAFAnM*, CFU**/g (cm ³), not above	Product volume (amount,) cm ³ (g,) where not allowed				Yeasts (Y), moulds (M), CFU/cm ³ (g), Not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci, S.aureus	listeria L.monocytogenes		
1	2	3	4	5	6	7	8

58. Milk-containing products

requirements are established with consideration given to the regulatory and technical documents concerning the content and ratios of dairy and non-dairy components in a product

- Notes: 1. The hygienic norms for microbiological indicators of safety and nutritional value of food products include the following groups of microorganisms:
- sanitary indicator microorganisms that include the quantity of mesophilic aerobic and facultative anaerobic microorganisms (QMAFAnM), E.coli group bacteria (coliforms), bacteria of Enterobacteriaceae spp., enterococci;
 - opportunistic pathogens that include E. coli, Staphylococcus aureus, bacteria of Proteus spp., B. cereus and sulfite-reducing clostridia, Vibrio parahaemolyticus;
 - pathogenic microorganisms, including salmonella and Listeria monocytogenes, Yersinia spp.;
 - spoilage microorganisms, including yeasts, mould fungi, lactic acid microorganisms;
 - starter microflora microorganisms and probiotic microorganisms (lactic acid microorganisms, propionic acid microorganisms, yeasts, bifidum bacteria, acidophilic bacteria, etc.) – in products with a regulated level of biotech microflora and in

probiotic products.

2. The regulation of microbiological indicators of safety of food products is carried out for most of the groups of microorganisms based on the alternative concept – a product amount is rated where coliforms, most of opportunistic pathogens, and pathogenic microorganisms including salmonella and Listeria monocytogenes are not allowed. In other cases, a norm shows the quantity of colony-forming units in 1 cm³ (g) of a product (CFU/ cm³ (g)).

* QMAFAnM – quantity of mesophilic aerobic and facultative anaerobic microorganisms.

** CFU – colony-forming units.

*** Coliforms – E.coli group bacteria.

**** The content of yeasts at the end of shelf life not below 1×10^4 for ayran and kefir, not below 1×10^4 for kumiss; the presence of yeasts is allowed in the products made with their use in the starter.

***** The amount of product (g) where not allowed is 125 g (for soft and pickled cheeses – in 5 samples of 25 g each.)

ANNEX No. 9
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Permissible levels of oxidative deterioration and potentially dangerous substances in milk-based baby foods, adapted or partly adapted initial or follow-on milk baby formulas (including powdered ones); powdered acidified milk formulas; dairy drinks (including powdered ones) for nutrition of infants and babies; ready-to-use milk cereals and powdered milk cereals (reconstituted to readiness with drinking water in home conditions) for nutrition of infants and babies

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

All dairy products

antibiotics:

Levomycetine (chloramphenicol) not allowed (below 0.0003)

Tetracyclines not allowed (below 0.01)

Penicillin not allowed (below 0.004)

Streptomycin not allowed (below 0.2)

Mycotoxins:

afla-toxin M₁ not allowed (below 0.00002)

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

Adapted initial or follow-on milk-based formulas (dry, liquid, non-acidified and acidified); products based on partly hydrolyzed proteins; milk – pasteurized, ultra-pasteurized, sterilized, including enriched; sterilized cream; liquid fermented milk products, including those with fruit and/or vegetable components; powdered milk for baby foods; powdered and liquid dairy drinks; low-lactose and lactose-free products	radionuclides (calculated for ready-to-use product):	
	Cesium-137	40 Bq/l
	Strontium-90	25 Bq/l
	Dioxins*	not allowed (within the measurement accuracy)
	melamine**	not allowed (below 1mg/kg)
	peroxide value	4 mmol of active oxygen/kg of fat (for dry products)
	Toxic elements:	
Lead	0.02	
Arsenic	0.05	
Cadmium	0.02	
Mercury	0.005	

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

Adapted milk-based mixes	pesticides (calculated as fat):	0.02
	hexachlorocyclohexane (alfa-, beta-, gamma-isomers)	0.01
	DDT* and its metabolites	0.01
	Osmolality	320 mOsm/kg
	Acidity	60 °T (for liquid sour milk products)
Follow-on adapted milk-based mixes (formulas)	Osmolality	320 mOsm/kg
	Acidity	60 °T (for liquid sour milk products)
Follow-on partly adapted milk-based mixes (formulas)	Osmolality	330 mOsm/kg
	Acidity	60 °T (for liquid sour milk products)
Powdered milk cereals requiring cooking and instant (ready-made) powdered milk cereals	Toxic elements (in dry product):	
	lead	0.3
	arsenic	0.2

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

cadmium 0.06

mercury 0.03

Mycotoxins (in dry product):

ochratoxin A not allowed (below 0.0005)
 aflatoxin B₁ not allowed (below 0.00015)

desoxynivalenol not allowed (below 0.05) (for cereals containing wheat, corn, barley flour or grits)

zearalenone not allowed (below 0.005) (for cereals containing wheat, corn, barley flour or grits)

fumonisin B1 and B2 0.2 mg/kg (for cereals containing corn flour or grits)

T-2 toxin not allowed (below 0.05)

pesticides (calculated for fat in dry product):

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

	hexachlorocyclohexane (alfa-, beta-, gamma-isomers)	0.001
	DDT ^{***} and its metabolites	0.01
	Benzapyrene	below 0.2 µg/kg
	Infestation and contamination with bread cereals pests	not allowed
	metal impurities (in dry product)	3x10 ⁻⁴ %, size of individual particles should exceed 0.3 mm in the largest linear measurement
Sterilized ready-to-use milk cereals; ready-to-use milk cereals made at the dairy kitchens	Toxic elements (in final product):	
	lead	0.02
	arsenic	0.05
	cadmium	0.02
	mercury	0.005
	Mycotoxins:	

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

ochratoxin A not allowed (below 0.0005)

aflatoxin B1 not allowed (below 0.00015)

desoxynivalenol not allowed (below 0.05)
(for cereals containing wheat, corn, barley flour or grits)

zearalenone not allowed (below 0.005)
(for cereals containing wheat, corn, barley flour or grits)

fumonisin B1 and B2 0.2 mg/kg (for cereals containing corn flour or grits)

T-2 toxin not allowed (below 0.05)

pesticides (calculated for fat):

hexachlorocyclohexane (alfa-, beta-, gamma-isomers) 0.01

DDT* and its metabolites 0.01

Benzopyrene below 0.2 µg/kg

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

Curd and curd-based products, including those with fruit and/or vegetable components	Infestation and contamination with bread cereals pests	not allowed
	metal impurities	3x10 ⁻⁴ , %, size of individual particles should exceed 0.3 mm in the largest linear measurement
	peroxide value	4.0 mmol of active oxygen/ kg of fat (for products with fat content above 5g/100g and products enriched with vegetable oils)
	acidity	150 °T
	Toxic elements:	
	lead	0.06
	arsenic	0.15
cadmium	0.06	
mercury	0.015	

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

pesticides (calculated for fat):

hexachlorocyclohexane (alfa-, beta-, gamma-isomers)	0.55
DDT* and its metabolites	0.33

*The level of indicator is controlled when government authorities or executive power bodies have formally determined that the environmental situation has deteriorated due to emergency situations of natural or man-made origin with dioxins entry into the environment.

** The level of indicator comes into force from 01.01.2015. Control over melamine level in milk, dairy and other products is conducted in case when there is a justified assumption on its potential presence in food raw materials.

*** DDT – dichloro-diphenyl-trichloroethane, insecticide.

ANNEX No. 10
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Permissible levels of oxidative deterioration and content of potentially dangerous substances in dairy products, dairy composite products for nutrition of pre-school and school-age children

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

1. Dairy products

Antibiotics:

Levomycetine (chloramphenicol)	not allowed (below 0.0003)
Tetracycline group	not allowed (below 0.01)
Penicillin	not allowed (below 0.004)
Streptomycin	not allowed (below 0.2)

Mycotoxins:

aflatoxin M1	not allowed (below 0.00002), For cheese – not allowed (below 0.00005)
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radionuclides:

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3
	Cesium137	40 Bq/l (kg)
	Strontium-90	25 Bq/l (kg)
	dioxins*	not allowed (within the measurement accuracy)
	melamine**	not allowed (below 1 mg/kg)
2. Milk – sterilized, ultra-pasteurized, including vitaminized milk; pasteurized milk; sterilized cream; liquid sour milk products, including enriched ones; sour cream; powdered milk for baby foods; dry and liquid dairy drinks; low-lactose and lactose-free products; milk and cream condensed with sugar; concentrated milk and cream	Peroxide value	4.0 mmol of active oxygen/ kg of fat (for products with fat content above 5g/100g and products enriched with vegetable oils)
	Toxic elements:	
	lead	0.02
	arsenic	0.05
	cadmium	0.02
	mercury	0.005
	pesticides (calculated for fat):	

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3
	hexachlorocyclohexane (alfa-, beta-, gamma-isomers)	0.02
	DDT* and its metabolites	0.01
3. Curd and curd-based products, including those with fruit and/or vegetable components and/or heat treated after culturing	Peroxide value	4.0 mmol of active oxygen/ kg of fat (for products with fat content above 5g/100g and products enriched with vegetable oils)
	acidity	150 °T
	Toxic elements:	
	lead	0.06
	arsenic	0.15
	cadmium	0.06
	mercury	0.015
	pesticides (calculated for fat):	
	hexachlorocyclohexane (alfa-,	0.55

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

beta-, gamma-isomers)

0.33

DDT*** and its metabolites

4. Cream butter, butter paste of premium quality

Acidity of fat phase

2.5 °K
(for butter and paste
with components – 3,5 °K)

Toxic elements:

lead

0.1

arsenic

0.1

cadmium

0.03

mercury

0.03

pesticides (calculated for fat):

hexachlorocyclohexane (alfa-,
beta-, gamma-isomers)

0.2

DDT and its metabolites

0.2

Product, group of products	Potentially dangerous substances and oxidative deterioration indicators	Permissible levels, mg/kg (l), not above (for powdered products – calculated as for reconstituted product)
1	2	3

5. Cheese, cheese products (hard, semi-hard, soft, pickled), processed, cheese pastes

Toxic elements:

lead	0.2
arsenic	0.15
cadmium	0.1
mercury	0.03

pesticides (calculated for fat):

hexachlorocyclohexane (alfa-, beta-, gamma-isomers)	0.6
DDT and its metabolites	0.2

*The level of dioxins is controlled when government authorities or executive power bodies have formally determined that the environmental situation has deteriorated due to emergency situations of natural or man-made origin with dioxins entry into the environment.

** The level of melamine comes into force from 01.01.2015. Control over melamine level in milk, dairy and other products is conducted in case when there is a justified assumption on its potential presence in food raw materials.

*** DDT – dichloro-diphenyl-trichloroethane, insecticide.

ANNEX No. 11
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Permissible levels of microorganisms in dairy products, dairy composite products for nutrition of pre-school and school-age children

Product, group of products	QMAFAnM* CFU**/ cm ³ (g), not above	Product volume (amount), cm ³ (g) where not allowed				Yeasts (Y), moulds (M), CFU/ cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococcu s spp. S. aureus	Listeria spp. L.monocytogene s		
1	2	3	4	5	6	7	8
1. Pasteurized milk in consumer package	1x10 ⁵	0.01	25	1	25	–	
2. Ultra-pasteurized milk without aseptic filling in consumer package	100	10	100	10	25	–	
3. Pasteurized cream in consumer package	1x10 ⁵	0.01	25	1	25	–	
4. Ultra-pasteurized cream	100	10	100	10	25	–	

Product, group of products	QMAFAnM* CFU**/ cm ³ (g), not above	Product volume (amount), cm ³ (g) where not allowed				Yeasts (Y), moulds (M), CFU/ cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococcus spp. S. aureus	Listeria spp. L.monocytogenes		
1	2	3	4	5	6	7	8

without aseptic filling in consumer package

5. Baked milk

2.5x10³

1

25

–

–

–

6. Milk and cream sterilized, ultra-pasteurized with aseptic filling, including those enriched

should comply with the industrial sterility requirements for sterilized, ultra-pasteurized milk and cream in consumer package

7. Fermented milk products, including yoghurt

a) with the

–

0.01

25

1

–

–

Product, group of products	QMAFAnM* CFU**/ cm ³ (g), not above	Product volume (amount), cm ³ (g) where not allowed				Yeasts (Y), moulds (M), CFU/ cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococ- cus spp. S. aureus	Listeria spp. L.monocytogene s		
1	2	3	4	5	6	7	8

shelf life of no
more than 72
hours

b) with the
shelf life
above 72 hours

Lactic acid
micro-
organisms –
not below
1x10⁷, for
heat treated
products –
not regulated

0.1

25

1

–

Y – 50
M – 50,
Except
products
made with
the use of
starters
containing
yeasts

c) enriched
with bifidum
bacteria, with
the shelf life
above 72 hours

Lactic acid
micro-
organisms –
not below
1x10⁷,
bifidum
bacteria –
not below
1x10⁶

0.1

25

1

–

Y – 50
M – 50,
Except
products
made with
the use of
starters
containing
yeasts

Product, group of products	QMAFAnM* CFU**/ cm ³ (g), not above	Product volume (amount), cm ³ (g) where not allowed				Yeasts (Y), moulds (M), CFU/ cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococci spp. S. aureus	Listeria spp. L.monocytogenes		
1	2	3	4	5	6	7	8
8. Ryazhenka	lactic acid micro organisms – not below 1x10 ⁷	1	25	1	–	Y – 50 M – 50 (for products with the shelf life above 72 hours)	
9. Sour cream and products made on its basis	For sour cream – lactic acid micro organisms – not below 1x10 ⁷	0.001 (for sour cream products heat treated after culturing – 0,1)	25	1	–	Y – 50 M – 50 (for products with the shelf life above 72 hours)	
10. Cream butter, butter paste, curd and curd-based							In compliance with the

Product, group of products	QMAFAnM* CFU**/ cm ³ (g), not above	Product volume (amount), cm ³ (g) where not allowed				Yeasts (Y), moulds (M), CFU/ cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococcus spp. S. aureus	Listeria spp. L.monocytogenes		
1	2	3	4	5	6	7	8

products, cheese,
canned milk

levels
established
in Annex
No. 8 to
Technical
Regulation
of the
Customs
Union “On
Safety of
Milk and
Dairy
Products”
(TR TS
033/2013)

11. Products used
for making baby
foods:

a) powdered milk	2.5x10 ⁴	1	25	1	–	Y – 50 M – 100
b) concentrate of milk whey	1x10 ⁴	1	25	1	–	Y – 10 M – 50

Product, group of products	QMAFAnM* CFU**/ cm ³ (g), not above	Product volume (amount), cm ³ (g) where not allowed				Yeasts (Y), moulds (M), CFU/ cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococ- cus spp. S. aureus	Listeria spp. L.monocytogene s		
1	2	3	4	5	6	7	8

proteins
produced by
electrodialysis
(ultra-filtration
and
electrodialysis)

c) carbohydrate
-and-protein
concentrate

1x10⁴

1

50

1

–

Y – 10
M – 50

d) milk protein
concentrate

1x10⁴

1

50

1

–

Y – 10
M – 50

e) dry
carbohydrate-
and-protein
module from
cheese whey

2.5x10⁴

1

25

1

–

Y – 10
M – 50

f) dry
carbohydrate-
and-protein
modules from
curd whey

2.5x10⁴

1

25

1

–

Y – 10
M – 50

g) liquid para-

–

3

25

1

–

Y – 50

Product, group of products	QMAFAnM* CFU**/ cm ³ (g), not above	Product volume (amount), cm ³ (g) where not allowed				Yeasts (Y), moulds (M), CFU/ cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococ- cus spp. S. aureus	Listeria spp. L.monocytogene s		
1	2	3	4	5	6	7	8
casein concentrate						M – 50	
h) dry para- casein concentrate	–	1	25	1	–	Y – 50 M – 50	
i) dry casecyte	1x10 ⁴	1	25	1	–	Y – 10 M – 50	
j) dry nonfat milk component (for dry baby foods)	1.5x10 ⁴	0.3	25	1	–	Y – 10 M – 50	
k) dry milk component with malt extract (for liquid baby food products)	1.5x10 ⁴	1	25	1	–	Y – 10 M – 50	
l) dry milk component with carbohydrate-	2.5x10 ⁴	1	25	1	–	Y – 50 M – 50	

Product, group of products	QMAFAnM* CFU**/ cm ³ (g), not above	Product volume (amount), cm ³ (g) where not allowed				Yeasts (Y), moulds (M), CFU/ cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)** *	Pathogenic microorganisms , including salmonella	Staphylococcu s spp. S. aureus	Listeria spp. L.monocytogene s		
1	2	3	4	5	6	7	8

and-protein
concentrate
(for liquid baby
food products)

m) nonfat dry
milk
component
without
chemical
treatment (for
dry baby food
products)

2.5x10⁴

1

25

1

–

Y – 50
M – 50

n) refined milk
sugar

1x10³

1

25

–

–

M – 10

o) alimentary
lactose

1x10⁴

1

25

1

–

M – 100

p) lactose
concentrate

1x10³

1

50

–

–

M – 100

q) lactulose
concentrate

1x10³

1

50

1

–

Y – 50
M – 100

Product, group of products	QMAFAnM* CFU**/ cm ³ (g), not above	Product volume (amount), cm ³ (g) where not allowed				Yeasts (Y), moulds (M), CFU/ cm ³ (g), not above	Note
		E.coli group bacteria (coliforms)**	Pathogenic microorganisms , including salmonella	Staphylococ- cus spp. S. aureus	Listeria spp. L.monocytogene- s		
1	2	3	4	5	6	7	8

r) dry milk
whey

1x10⁴

1

25

1

–

Y – 10
Π – 50

* QMAFAnM – quantity of mesophilic aerobic and facultative anaerobic microorganisms.

** CFU – colony-forming units.

*** Coliforms – E.coli group bacteria.

ANNEX No. 12
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Physical-and-chemical indicators for the identification of milk-based products for baby foods, adapted or partly adapted initial or follow-on milk baby formulas (including powdered ones); powdered acidified milk formulas; dairy drinks (including powdered ones) for nutrition of infants and babies; ready-to-use milk cereals and powdered milk cereals (reconstituted to readiness with drinking water in home conditions) for nutrition of infants and babies

Criteria and indicators	Measurement units	Acceptable levels	Necessity of marking
1	2	3	4

1. Adapted milk baby formulas (dry, liquid, acidified) and products based on partly hydrolyzed proteins for nutrition of children from 0 to 6 months of age

Nutritional value indicators (per 100 ml of ready-to-use products)

Protein	g	1.2 – 1.7	+
Milk whey proteins	% of the total amount of protein not below	50*	+
Fat	g	3 – 4	+
Linoleic acid	% of the aggregate of fatty acids	14 – 20	+
	mg	400 – 800	–
The ratio of alfa tocoferol and polyunsaturated fatty acids	–	1 – 2	–

Criteria and indicators	Measurement units	Acceptable levels	Necessity of marking
1	2	3	4
Carbohydrates	г	6.5 – 8	+
Lactose	% of the total amount of carbohydrates **, not below	65	+
Taurine	mg, not above	8	+

2. Follow-on adapted milk baby formulas (dry, liquid, non-acidified and acidified) and products based on partly hydrolyzed proteins for nutrition of children over 6 months of age

Nutritional value indicators (per 100 ml of ready-to-use products)

Protein	g	1.2 – 2.1	+
Milk whey proteins	% of the total amount of protein not below	35***	–
Fat	g	2.5 – 4.0	+
Linoleic acid	% of the aggregate of fatty acids	14 – 20	+
	mg	400 – 800	+
Carbohydrates	g	7 – 9	+
Lactose	% of the total amount of carbohydrates **, not below	50	+

3. Adapted milk baby formulas (dry, liquid, non-acidified and acidified) and products based on partly hydrolyzed proteins for nutrition of children from 0 to 12 months of age

Nutritional value indicators (per 100 ml of ready-to-use products)

Criteria and indicators	Measurement units	Acceptable levels	Necessity of marking
1	2	3	4
Protein	g	1.2 – 2.1	+
Milk whey proteins	% of the total amount of protein not below	50*	–
Taurine	mg, not above	8	–
Fat	g	3 – 4	+
Linoleic acid	% of the aggregate of fatty acids	14 – 20	–
	mg	400 – 800	+
The ratio of alfa tocoferol and polyunsaturated fatty acids	–	1 – 2	–
Carbohydrates	g	6.5 – 8	+
Lactose	% of the total amount of carbohydrates**, not below	65	+

4. Follow-on partly adapted milk baby formulas (dry, liquid, non-acidified and acidified)
for nutrition of children over 6 months of age

Nutritional value indicators (per 100 ml of ready-to-use products)

Protein	g	1.5 – 2.4	+
Milk whey proteins	% of the total amount of protein	20	–

Criteria and indicators	Measurement units	Acceptable levels	Necessity of marking
1	2	3	4
	not below		
Fat	G	2.5 – 4	+
Linoleic acid	% of the aggregate of fatty acids, not below	14	+
	mg, not below	400	+
Carbohydrates	G	6 – 9	+
Lactose	% of the total amount of carbohydrates, not below	50	+

5. Supplemental feeding products and products for nutrition of infants and babies (per 100 ml or 100 g of ready-to-use product)

Fluid milk – pasteurized, sterilized, ultra-pasteurized, including enriched milk; sterilized fluid cream

Protein:

milk	g	2.8 – 3.2	+
cream	g, not below	2.6	+

Fat:

milk	g	2 – 4	+
cream	g	10	+

Criteria and indicators	Measurement units	Acceptable levels	Necessity of marking
1	2	3	4

Ash	g	0.6 – 0.8	–
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Calcium	mg, not below	100	–
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6. Sour milk products, including those with fruit and/or vegetable components

Protein	g	2 – 3.2 For prophylactic diet – not above 4	+
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Fat	g	2 – 4	+
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Carbohydrates, including sucrose ****	g, not above g, not above	12	+
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		10	+
--	--	----	---

Ash	g	0.5 – 0.8	–
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Calcium	mg, not below	60	+
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Acidity	°T, not above	110	–
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7. Curd and curd-based products, paste-like dairy products, including those with fruit and/or vegetable components

Protein	g	7 – 17	+
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Fat	g	3 – 10	+
-----	---	--------	---

Carbohydrates,	g, not above	12	+
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Criteria and indicators	Measurement units	Acceptable levels	Necessity of marking
1	2	3	4
including sucrose****	g, not above	10	+
Calcium	mg, not below	85	+
Acidity	°T, not above	150	–
8. Dry milk (per 100 ml of reconstituted product)			
Milk protein	g	2.8 – 3.2	+
Fat	g	2 – 4	+
Calcium	mg, not below	100	–
9. Dry (per 100 ml of reconstituted product) and liquid dairy, dairy composite and milk-containing drinks (for children over 6 months of age)			
Protein	g, not below	1.8	+
Fat	g	1 – 4	+
Carbohydrates, including sucrose*****	g, not above	12	–
	g, not above	6	
Calcium	mg	90 – 240	+
10. Dry milk-based cereals requiring cooking and instant (ready-made) (per 100 g of dry product)			

Criteria and indicators	Measurement units	Acceptable levels	Necessity of marking
1	2	3	4
Moisture	g, not above	8	+
Protein	g	12 – 20	+
	g not below – in cereals requiring reconstitution by whole or partly diluted cow's milk	7	
Fat	g	10 – 18	+
	g, not below – in cereals on whole milk with the mass fraction of at least 25% provided that butter or vegetable oil is added to the reconstituted cereals	5	+
	g, not below – in cereals on skimmed milk provided that they are reconstituted with whole milk or that butter or vegetable oil is added to the reconstituted cereals	0.5	+
Carbohydrates, including sucrose *****	g	60 – 70	+
	g, not above	20	+

- Notes:
1. The composition of proteins in adapted milk formula should be as close as possible to the composition of human breast milk.
 2. Sesame oil or cotton oil are not used in the composition of fat in adapted milk formula.
 3. The content of isomers should be more than 3% of the total fat content.
 4. The content of myristic and lauric acids should not be more than 20% of the total fat content.
 5. The ratio of linoleic acid and alfa-linoleic acid should be less than 5 and more than 15.

6. Where formulas are enriched with long-chain fatty acids, their content should not be above 1% of the total fat for “w-3” long-chain polyunsaturated fatty acid and 2% for “w-6” long-chain polyunsaturated fatty acid.

7. The content of eicosapentanoic acid should not be higher than the content of docosahexaenoic acid.

8. Along with lactose, maltodextrin and partly hydrolyzed gluten-free starch, sucrose and fructose are used – only in initial and follow-on adapted baby formulas based on partly hydrolyzed proteins and in follow-on partly adapted baby formulas; the amount of sucrose and/or fructose or their aggregate should not exceed 20% of the total carbohydrate content; glucose and glucose syrup – only in initial and follow-on adapted baby formulas based on partly hydrolyzed proteins in the amount not above 14 g/l; carbohydrate component may include prebiotics – galacto-oligosaccharides, fructo- oligosaccharides (not above 8 g/l in the aggregate) and lactulose.

* Except adapted casein-dominating formulas (milk baby formulas with casein content above 50% of the total amount of protein).

** Except products based on partly hydrolyzed proteins.

*** Except adapted casein-dominating formulas (milk baby formulas with casein content above 65% of the total amount of protein).

**** Sucrose replacement with fructose in the amount not above 5 g is allowed.

***** Sucrose replacement with fructose in the amount not above 3 g is allowed.

***** Sucrose replacement with fructose in the amount not above 10 g is allowed.

ANNEX No. 13
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Physical-and-chemical indicators for the identification of milk-based baby foods for nutrition of pre-school and school-aged children

Table 1

Fluid milk, fluid cream, fermented milk products milk-based drinks (dry and liquid), including enriched ones (per 100 ml of ready-to-use product)

Criteria and indicators	Measurement unit	Acceptable levels	Necessity of marking
1	2	3	4

Protein:

milk, fermented milk products, milk-based drinks	g	2 – 5	+
sour cream	g, not below	2.5	+
cream	g, not below	2.5	+

Fat:

Criteria and indicators	Measurement unit	Acceptable levels	Necessity of marking
1	2	3	4
milk, fermented milk products, milk-based drinks	g	1.5 – 4	+
cream	g	10 – 20	+
sour cream	g	10 – 20	+
Carbohydrates:			
fermented milk products, milk-based drinks	g, not above	16	+
including added sucrose*	g, not above	10	+
milk	g, not below	4.7	+
sour cream	g, not below	3.4	+
cream	g, not below	3.7	+
Calcium	mg	105 – 240	+
			(for enriched products)

Note. For fermented milk composite products it is allowed that the identification physical-and-chemical indicators are regulated in the regulatory or technical documents guiding manufacture of these products.

* Sucrose replacement with fructose in the amount not above 5 g is allowed.

Table 2

Hard, semi-hard, soft and processed cheeses for nutrition of pre-school and school-aged children (per 100 ml of ready-to-use product)

Criteria and indicators	Measurement unit	Acceptable levels	Necessity of marking
1	2	3	4
Mass fraction of moisture	%, not above	70	–
Mass fraction of fat in dry solids	%, not above	55	+
Cooking salt	g, not above	2	–

Table 3

Curd and curd-based products including those with fruit and vegetable components
(per 100 g of ready-to-use product)

Criteria and indicators	Measurement unit	Acceptable levels	Necessity of marking
1	2	3	4
Protein	g, not below	6 – 17	+
Fat	g	3.5 – 10	+
Carbohydrates,	g, not above	16	+
including added sucrose*	g, not above	10	+
Acidity	°T, not above	150	–

Criteria and indicators	Measurement unit	Acceptable levels	Necessity of marking
1	2	3	4

Note.

For fermented milk composite products it is allowed that the identification physical-and-chemical indicators are regulated in the regulatory or technical documents guiding manufacture of these products.

* Sucrose replacement with fructose in the amount not above 5 g is allowed.

ANNEX No. 14
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

**Permissible levels of micro-nutrients in liquid milk-based formulas for nutrition of
infants and babies**

Name	Measurement unit	Indicator	Necessity of marking
1	2	3	4

I. Adapted milk baby formulas (dry, liquid, non- acidified and acidified) and products based on partly hydrolyzed proteins for nutrition of
children
from birth to 6 months of age (initial baby formulas)

1. Minerals:

calcium	mg/l	330 – 700	+
phosphorus	mg/l	150 – 400	+
calcium/phosphorus	ratio	1.2 – 2	–
potassium	mg/l	400 – 850	+
sodium	mg/l	150 – 300	+
magnesium	mg/l	30 – 90	+
copper	µg/l	300 – 600	+
manganese	µg/l	10 – 300	+

Name	Measurement unit	Indicator	Necessity of marking
1	2	3	4

iron	mg/l	3 – 9	+
zinc	mg/l	3 – 10	+
chlorides	mg/l	300 – 800	+
iodine	µg/l	50 – 150	+
selenium	µg/l	10 – 40	+
ash	g/l	2.5 – 4	–

2. Vitamins:

retinol (A)	µg-equiv./l	400 – 1000	+
tocopherol (E)	mg/l	4 – 12	+
calciferol (D)	µg/l	7.5 – 12.5	+
Vitamin K	µg/l	25 – 100	+
thiamine (B1)	µg/l	400 – 2100	+
riboflavin (B2)	µg/l	500 – 2800	+
pantothenic acid	µg/l	2700 – 14000	+
pyridoxin (B6)	µg/l	300 – 1000	+

Name	Measurement unit	Indicator	Necessity of marking
1	2	3	4
niacin (PP)	µg/l	2000 – 10000	+
folic acid (Bc)	µg/l	60 – 350	+
cyanocobalamin (B12)	µg/l	1 – 3	+
ascorbic acid (C)	mg/l	55 – 150	+
inosine	mg/l	20 – 280	+
choline	mg/l	50 – 350	+
biotine	µg/l	10 – 40	+
L-carnitine	mg/l, not above	20 (if added)	+
lutein	µg/l, not above	250 (if added)	+
nucleotides (the aggregate of cytidine-, uridine, adenosine,- guanosine- and inosine-5 monophosphates)	mg/l, not above	35 (if added)	+

II. Follow-on adapted milk baby formulas (dry, liquid, non- acidified and acidified) and products based on partly hydrolyzed proteins for nutrition of children over 6 months of age

3. Minerals:

calcium	mg/l	400 – 900	+
phosphorus	mg/l	200 – 600	+

Name	Measurement unit	Indicator	Necessity of marking
1	2	3	4
calcium/phosphorus	ratio	1.2 – 2	–
potassium	mg/l	500 – 1000	+
sodium	mg/l	150 – 300	+
magnesium	mg/l	50 – 100	+
copper	µg/l	400 – 1000	+
manganese	µg/l	10 – 300	+
iron	mg/l	7 – 14	+
zinc	mg/l	4 – 10	+
chlorides	mg/l	300 – 800	+
iodine	µg/l	50 – 350	+
selenium	µg/l	10 – 40	+
ash	g/l	2.5 – 6	–
4. Vitamins:			
retinol (A)	µg-equiv./l	400 – 1000	+
tocopherol (E)	mg/l	4 – 20	+

Name	Measurement unit	Indicator	Necessity of marking
1	2	3	4
calciferol (D)	µg/l	8 – 21	+
Vitamin K	µg/l	25 – 170	+
thiamine (B1)	µg/l	400 – 2100	+
riboflavin (B2)	µg/l	600 – 2800	+
pantothenic acid	µg/l	3000 – 14000	+
pyridoxin (B6)	µg/l	400 – 1200	+
niacin (PP)	µg/l	3000 – 10000	+
folic acid (Bc)	µg/l	60 – 350	+
cyanocobalamin (B12)	µg/l	1.5 – 3	+
ascorbic acid (C)	mg/l	55 – 150	+
choline	mg/l	50 – 350	+
biotine	µg/l	10 – 40	+
inosine	mg/l	20 – 280	+
L-carnitine	mg/l, not above	20 (if added)	+

Name	Measurement unit	Indicator	Necessity of marking
1	2	3	4
lutein	µg/l, not above	250 (if added)	+
nucleotides (the aggregate of cytidine-, uridine, adenosine,- guanosine- and inosine-5 monophosphates)	mg/l	not above 35 (if added)	+

III. Adapted milk baby formulas (dry, liquid, non- acidified and acidified) and products based on partly hydrolyzed proteins for nutrition of children over 12 months of age

5. Minerals:

calcium	mg/l	400 – 900	+
phosphorus	mg/l	200 – 600	+
calcium/phosphorus	ratio	1.2 – 2	–
potassium	mg/l	400 – 800	+
sodium	mg/l	150 – 300	+
magnesium	mg/l	40 – 100	+
copper	µg/l	300 – 1000	+
manganese	µg/l	10 – 300	+
iron	mg/l	6 – 10	+
zinc	mg/l	3 – 10	+
chlorides	mg/l	300 – 800	+

Name	Measurement unit	Indicator	Necessity of marking
1	2	3	4

iodine	µg/l	50 – 350	+
selenium	µg/l	10 – 40	+
ash	g/l	2.5 – 6	+

6. Vitamins:

retinol (A)	µg-equiv./l	400 – 1000	+
tocoferol (E)	mg/l	4 – 12	+
calciferol (D)	µg/l	8 – 21	+
vitamin K	µg/l	25 – 170	+
thiamine (B1)	mg/l	0.4 – 2.1	+
riboflavin (B2)	mg/l	0.5 – 2.8	+
pantothenic acid	mg/l	2.7 – 14	+
pyridoxin (B6)	mg/l	0.3 – 1.2	+
niacin (PP)	mg/l	3 – 10	+
folic acid (Bc)	µg/l	60 – 350	+
cyanocobalamin (B12)	µg/l	1.5 – 3	+

Name	Measurement unit	Indicator	Necessity of marking
1	2	3	4
ascorbic acid (C)	mg/l	55 – 150	+
inosine	mg/l	20 – 280	+
choline	mg/l	50 – 350	+
biotine	µg/l	10 – 40	+
L-carnitine	mg/l, not above	20 (if added)	+
lutein	µg/l, not above	250 (if added)	+
nucleotides (the aggregate of cytidine-, uridine, adenosine,- guanosine- and inosine-5 monophosphates)	mg/l, not above	35 (if added)	+

IV. Follow-on partly adapted milk baby formulas (dry, liquid, non- acidified and acidified) and products based on partly hydrolyzed proteins for nutrition of children over 6 months of age

7. Minerals:

calcium	mg/l	600 – 900	+
phosphorus	mg/l	200 – 600	+
calcium/phosphorus	ratio	1.2 – 2	–
potassium	mg/l	400 – 1000	+

Name	Measurement unit	Indicator	Necessity of marking
1	2	3	4
sodium	mg/l	150 – 350	+
magnesium	mg/l	50 – 100	+
copper	µg/l	400 – 1000	+
manganese	µg/l	10 – 650	+
iron	mg/l	5 – 14	+
Zinc	mg/l	4 – 10	+
chlorides	mg/l	300 – 800	+
Iodine	µg/l	50 – 350	+
Ash	g/l	2.5 – 6	+

8. Vitamins:

retinol (A)	µg-equiv./l	400 – 1000	+
tocoferol (E)	mg/l	4 – 12	+
calciferol (D)	µg/l	7 – 21	+
thiamine (B1)	mg/l	0.4 – 2,1	+
riboflavin (B2)	mg/l	0.5 – 2,8	+

Name	Measurement unit	Indicator	Necessity of marking
1	2	3	4
pantothenic acid	mg/l	2.5 – 14	+
pyridoxin (B6)	mg/l	0.4 – 1.2	+
niacin (PP)	mg/l	3 – 10	+
folic acid (Bc)	µg/l	60 – 350	+
cyanocobalamin (B12)	µg/l	1.5 – 3	+
ascorbic acid (C)	mg/l	55 – 150	+

ANNEX No. 15
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

List of food additives and flavorings allowed for making milk-based products for baby foods for nutrition of infants and babies, adapted or partly adapted initial or follow-on milk baby formulas (including powdered ones); powdered acidified milk formulas; dairy drinks (including powdered ones) for nutrition of infants and babies; ready-to-use milk cereals and powdered milk cereals (reconstituted to readiness with drinking water in home conditions) for nutrition of infants and babies

Food additive (Index E)	Food Products	Maximum level in final products for baby foods
1	2	3
Nitrogen (E 941)	for nutrition of infants and babies	In compliance with the technical documents of the producer
Argon (E 938)		
Helium (E 939)		
Carbon dioxide (E 290)		
Alginic acid (E 400)	Dessert, pudding	500 mg/kg
Potassium alginate (E 402)		
Calcium alginate (E 404)		
Sodium alginate (E 401)		
(separately or in combination)		
L-ascorbyl palmitate (E 304)	Fat-containing products	100 mg/kg

Food additive (Index E)	Food Products	Maximum level in final products for baby foods
1	2	3

Tocopherol concentrate (E 306)

Alpha tocopherol (E 307)

Gamma tocopherol (E 308)

Delta tocopherol (E 309)
(separately or in combination)

L-ascorbic acid (E 300)

Cereal based fat-containing
products, including biscuits and
breadsticks

200 mg/kg

L-calcium ascorbate (E 302)

L-sodium ascorbate (E 301)
(separately or in combination
equivalent to
Ascorbic acid)

Potassium hydroxide (E 525)

supplementing feeding products

In compliance with the technical documents of
the producer

Calcium hydroxide (E 526)

Sodium hydroxide (E 524)
(only for regulation of active
acidity)

Guar gum (E 412)

supplementing feeding products,
anti-reflux formulas for baby foods,
hypoallergic products

10 g/kg

Food additive (Index E)	Food Products	Maximum level in final products for baby foods
1	2	3

Arabic gum (E 414)

Locust bean gum (E 410)

Xanthan gum (E 415)

Pectins (E 440)
(Separately or in combination)

Ammonium carbonates (E 503)

supplementing feeding products

In compliance with the technical documents of
the producer

Potassium carbonates (E 501)

Sodium carbonates (E 500)
(only as baking powder)

Calcium carbonates (E 170)
(only for regulation of active
acidity)

supplementing feeding products

In compliance with the technical documents of
the producer

Citric acid (E 330)

supplementing feeding products

In compliance with the technical documents of
the producer

Potassium citrates (E 332)

Calcium citrates (E 333)

Sodium citrates (E 331)
(separately or in combination,
only for regulation of active

Food additive (Index E)	Food Products	Maximum level in final products for baby foods
1	2	3

acidity)

Converted starches:

supplementing feeding products

50 g/kg

Acetylated distarch adipate
(E 1422)

Acetylated distarch
phosphate (E 1414)

Acetylated starch (E 1420)

Acetylated oxidized starch
(E 1451)

Distarch phosphate (E 1412)

Monostarch phosphate (E
1410)

Oxidized starch (E 1404)

Phosphatized distarch
phosphate (E 1413)

Starch sodium octenyl
succinate (E
1450)(separately or in
combination)

Lactic acid (E 270)

supplementing feeding products

In compliance with the technical documents of

Food additive (Index E)	Food Products	Maximum level in final products for baby foods
1	2	3

Potassium lactate (E 326)

Calcium lactate (E 387)

Sodium lactate (E 325)
(separately or in combination,
only for regulation of active
acidity)*

Hydrochloric acid (E 507)

supplementing feeding products

In compliance with the technical documents of
the producer

Acetic acid (E 260)

supplementing feeding products

In compliance with the technical documents of
the producer

Potassium acetate (E 261)

Calcium acetate (E 387)

Sodium acetate (E 262)
(separately or in combination,
only for regulation of active
acidity)

Ortho-phosphoric acid (E 339)
(added phosphate equivalent to
P₂O₅ for regulation of active
acidity only)

supplementing feeding products

1 g/kg

Malic acid (E 296)
(only for regulation of active

supplementing feeding products

In compliance with the technical documents of
the producer

the producer

Food additive (Index E)	Food Products	Maximum level in final products for baby foods
1	2	3

acidity)**

Natural flavoring

supplementing feeding products

In compliance with the technical documents of the producer

Note:

The use of food additives in products for baby foods is allowed as part of another product. The content of Arabic gum (E 414) in products like this should not exceed 150 g/kg; that of amorphous silicon dioxide (E 551) – 10 g/kg. Admission of mannitol (E 421) to baby food products as solvent carrier is allowed with vitamin B-12; the content of vitamin B-12 in such products should not exceed 1 mg/kg of mannitol. Admission of sodium ascorbate (E 301) is allowed as part of polyunsaturated fatty acid preparation coating. Admission of Arabic gum from other products should not exceed 10 mg/kg of final product, that of sodium ascorbate - 75 mg/kg of final product)

* Only L(+)-forms of lactic, tartaric, malic acids and their salts are used for producing supplementing feeding products.

** L(+)-lactic acid produced by non-pathogenic and non-toxigenic strains of microorganisms is used in the production of fermented milk products.

ANNEX No. 16
to Technical Regulation
of the Customs Union
“On Safety of Milk and Dairy
Products”
(TR TS 033/2013)

Maximum permissible deviation of dairy product nutritional value marked on the packages or labels from the actual nutritional value of such products

Final product nutritional value 1	Maximum permissible deviation , ± 2
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1. Proteins, carbohydrates, organic acids, alcohol, cellulose, fatty acids

below 10 g per 100 g of product	10 %
10 – 40 g per 100 g of product	15 %
above 40 g per 100 g of product	6 г

2. Sodium, magnesium, calcium, phosphorus, iron, zinc, vitamins C, B1, B2, B6, panthothenic acid, niacin, cholesterol 20 %

3. Vitamins A, B12, Д, E, folic acid, biotin, iodine 30 %

(not including an increased content of vitamins in the production of the final product)

Note: The actual values in terms of mass fractions of proteins, carbohydrates, organic acids, alcohol, cellulose, fatty acids, vitamins and minerals should comply with the requirements specified in the companies’ regulations and technical documents or standards used for production and identification of dairy products.

END UNOFFICIAL TRANSLATION.
