

[Attachment 5]

1. Korean standards for individual microorganisms in dairy products

Commodity	Microorganisms	Specifications	Comment
Milks	bacterial count	n=5, c=2, m=10,000, M=50,000	for sterilized products, n=5, c=0, m=0
	Coliforms	n=5, c=2, m=10, M=100	Sterilized products are excluded
	<i>Salmonella</i> spp.	n=5, c=0, m=0/25g	
	<i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g	
	<i>Staphylococcus aureus</i>	n=5, c=0, m=0/25g	
Processed Milks	bacterial count	n=5, c=2, m=10,000, M=50,000	for sterilized products, n=5, c=0, m=0
	Coliforms	n=5, c=2, m=0, M=10	Sterilized products are excluded
	<i>Salmonella</i> spp.	n=5, c=0, m=0/25g	
	<i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g	
	<i>Staphylococcus aureus</i>	n=5, c=0, m=0/25g	
Concentrated Milks	bacterial count	n=5, c=2, m=10,000, M=50,000	for sterilized products, n=5, c=0, m=0 (only applicable to Concentrated milk, Concentrated skim milk)
	Coliforms	n=5, c=2, m=0, M=10	Sterilized products are excluded (only applicable to Concentrated milk, Concentrated skim milk)
	<i>Salmonella</i> spp.	n=5, c=0, m=0/25g	
	<i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g	
	<i>Staphylococcus aureus</i>	n=5, c=0, m=0/25g	
Milk Creams	bacterial count	n=5, c=2, m=10,000, M=50,000	for sterilized products, n=5, c=0, m=0 (only applicable to Processed milk Cream)
	Coliforms	n=5, c=2, m=0, M=10	sterilized products are excluded (only applicable to Processed milk Cream)
	<i>Salmonella</i> spp.	n=5, c=0, m=0/25g	
	<i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g	
	<i>Staphylococcus aureus</i>	n=5, c=0, m=0/25g	
Fermented Milks	Coliforms	n=5, c=2, m=0, M=10	
	<i>Salmonella</i> spp.	n=5, c=0, m=0/25g	
	<i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g	
	<i>Staphylococcus aureus</i>	n=5, c=0, m=0/25g	

Butters	Coliforms	n=5, c=2, m=0, M=10	
	<i>Salmonella</i> spp.	n=5, c=0, m=0/25g	
	<i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g	
	<i>Staphylococcus aureus</i>	n=5, c=0, m=0/25g	
Ice Creams	bacterial count	n=5, c=2, m=10,000, M=100,000	
	Coliforms	n=5, c=2, m=10, M=100	
	<i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g	

2. General standards for foodborne pathogens in Korea

Processed foods that have been pasteurized or sterilized

Foodborne Pathogens	Specifications	Comment
<i>Salmonella</i> spp.	n=5, c=0, m=0/25g	
<i>Vibrio parahaemolyticus</i>	n=5, c=0, m=0/25g	
<i>Listeria monocytogenes</i>	n=5, c=0, m=0/25g	
Enterohemorrhagic <i>Escherichia coli</i>	n=5, c=0, m=0/25g	
<i>Campylobacter jejuni/coli</i>	n=5, c=0, m=0/25g	
<i>Yersinia enterocolitica</i>	n=5, c=0, m=0/25g	
<i>Bacillus cereus</i>	Not more than 1,000 per gram	sterilized products shall be negative
<i>Clostridium perfringens</i>	n=5, c=0, m=0/25g	
<i>Staphylococcus aureus</i>	n=5, c=0, m=0/25g	

3. Veterinary drugs

Substances that should not be detected in dairy products

No.	Substances
1	Nitrofurans{Furazolidone, Furaladone, Nitrofurazone, Nitrofurantoin, Nitrovin, etc} preparation and metabolites ◎ Definition: 3-amino-2-oxazolidinone(AOZ), 3-amino-5-morpholinomethyl-2-oxazolidinone(AMOZ), semicarbazide(SEM) ³ , 1-aminohydantoin(AHD), Nitrovin
2	Chloramphenicol ◎ Definition: Chloramphenicol

3	Malachite green and its metabolites <input type="radio"/> Definition: Malachite green and leucomalachite green are defined as malachite green
4	Diethylstilbestrol, DES <input type="radio"/> Definition: Diethylstilbestrol
5	Dimetridazole <input type="radio"/> Definition: Dimetridazole
6	Clenbuterol <input type="radio"/> Definition: Clenbuterol
7	Vancomycin <input type="radio"/> Definition: Vancomycin
8	Chlorpromazine <input type="radio"/> Definition: Chlorpromazine
9	Thiouracil <input type="radio"/> Definition: 2-thiouracil, 6-methyl-2-thiouracil, 6-propyl-2-thiouracil, and 6-phenyl-2-thiouracil are defined as thiouracil
10	Colchicine <input type="radio"/> Definition: Colchicine
11	Pyrimethamine <input type="radio"/> Definition: Pyrimethamine
12	Medroxyprogesterone acetate (MPA) <input type="radio"/> Definition: Medroxyprogesterone acetate
13	Carbadox <input type="radio"/> Definition: Quinoxaline-2-carboxylic acid (QCA)
14	Dapsone <input type="radio"/> Definition: Dapsone and monoacetyl dapsonis are defined as dapsone.
15	Olaquinox <input type="radio"/> Definition: 3-methyl quinoxaline-2-carboxylic acid (MQCA)
16	Ronidazole <input type="radio"/> Definition: Ronidazole and 2-hydroxymethyl-1-methyl-5-nitroimidazole(HMMNI) are as defined as ronidazole.
17	Metronidazole <input type="radio"/> Definition: Metronidazole and -(2-hydroxyethyl)-2-hydroxymethyl-5-nitroimidazole (Metronidazole-OH) are as defined as metronidazole
18	Ipronidazole <input type="radio"/> Definition : Ipronidazole and 1-methyl-2-(2'-hydroxyisopropyl) -5-nitroimidazole (Ipronidazole-OH) are as defined as ipronidazole

*Note 1. Semicarbazide (SEM), which is the metabolite of nitrofurazone, is only applied to the edible parts of non heat-treated livestock products.

- Medroxyprogesterone acetate(MPA) should be specifically controlled not to be detected in the dairy products made from sheep' s milk.

□ Maximum Residue Limits(MRLs) for Veterinary drugs in milk

Substance	MRLs (mg/kg)	
	EU	KOREA
Baquiloprim	0.03	-
Betamethasone	0.0003	-
Carazolol	0.0001	-
Carbergoline	0.0001	-
Cefacetrile	0.125	0.05
Cefalonium	0.02	0.01
Cefoperazone	0.05	0.03
Cephapirin	0.06	0.03
Chlormadinone	0.0025	-
Clorsulon	0.016	-
Cloasantel	0.045	-
Cyhalothrin	0.05	-
Diclofenac	0.0001	-
Enrofloxacin	0.1	0.05
Ciprofloxacin		
Flugestone acetate	0.001	-
Flumequine	0.05	-
Flunixin	0.04	0.02
Hydrocortisone aceponate	0.01	-
Kanamycin	0.15	0.1
Methylprednisolone	0.002	-
Morantel	0.05	-
Neomycin	1.5	0.5
Netobimin	0.1	-
Nitroxinil	0.02	-
Novobiocin	0.05	0.01
Oxacillin	0.03	-
Oxyclozanide	0.01	-
Penethamate	0.004	-
Pirlimycin	0.1	-
Thiamphenicol	0.05	-
Tilmicosin	0.05	-
Triclobendazole	0.01	-

4. residues(pesticides, fungicides etc.)

Maximum Residue Limits(MRLs) for residue in livestock products

Substance	MRLs (ppm)	
	EU	KOREA
2,4,5-T	0.01*(F)	-
Chlorfenvinphos	0.01*(F)	-
Diphenylamine	0.05*	-
Endrin	0.0008(F)	-
Ethion	0.01*	-
Mecarbam	0.01*	-
Lindane	0.01*(F)	-
Methacrifos	0.01*	-
Methiocarb	0.05*	-
Phorate	0.01*	-
Phosalone	0.01*	-
Phosmet	0.05*	-
Propoxur	0.05*	-
Pyriproxyfen	0.05*(F)	-
Quintozene	0.01*(F)	-
Terbufos	0.01*	-
DDT	0.04(F)	0.02(F)
Diflubenzuron	0.05*(F)	0.05
Methidathion	0.02*	0.001
Endosulfan	0.05*(F)	0.1
Carbaryl	0.05*(F)	0.1
Clofentezine	0.05*	0.01
Chlorpyrifos	0.01*(F)	0.02
Chlorpyrifos-methyl	0.01*(F)	0.01
Triadimefon	0.01*(F)	0.05
Fenpyroximate	0.01*(F)	0.005(F)
Fenitrothion	0.01*	0.002
Fenbutatin oxide	0.05*(F)	0.05
Fenthion	0.01*(F)	0.01

Substance	MRLs (ppm)	
	EU	KOREA
Flusilazole	0.02*(F)	0.01
Propiconazole	0.01*(F)	0.01
Pirimiphos-methyl	0.01*(F)	0.05
Disulfoton	0.01*(F)	0.01
Bifenthrin	0.2(F)	0.05
Profenofos	0.01*(F)	0.01
Triazophos	0.01*(F)	0.01
Penconazole	0.01*(F)	0.01
Methoxyfenozide	0.05(F)	0.05
Dimethipin	-	0.01
Bendiocarb	-	0.05
Paraquat	-	0.01
Fenvalerate	-	0.1(F)
Dimethoate	-	0.05
Fenpropathrin	-	0.1(F)

Annotation (F) : Milk products with a fat content of 2% or more are expressed on a fat basis. The MRL would be 25 times the MRL for milk. The MRL for milk products with a fat content lower than 2% are considered to be half the value for milk and are expressed on a whole product basis.

5. Contaminants

Group	Contaminant	Commodity	EU	KOREA	Unit
Heavy metal	Lead(Pb)	Raw milk and milk products	0.02	0.02	mg/kg
Mycotoxin	Aflatoxin M1	Raw milk and milk products	0.05	0.5	ug/kg
		Powdered infant formulae and follow-on formulae	0.025	0.025	
Melamine	Melamine	Powdered infant formulae and follow-on formulae	1	No detection	mg/kg
		milk or milk products	-	2.5	
Radio-activity	¹³¹ I	milk or milk products	300	100	Bq/kg, L
	¹³⁴ Cs+ ¹³⁷ Cs	milk or milk products	200	100	