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WTO Notified – Microbiological Standards for Milk and Milk Products

Report Categories:

Sanitary/Phytosanitary/Food Safety

FAIRS Subject Report

Exporter Guide

Dairy and Products

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Report Highlights:

On September 9, 2015, the Government of India (GOI) notified draft Food Safety and Standards (Food Products Standards and Food Additives) Amendment Regulations, 2015 to the World Trade Organization (WTO). The deadline for comments is November 8, 2015.

General Information:

DISCLAIMER: The information contained in this report was retrieved from the Government of India (GOI) and WTO websites: <http://www.fssai.gov.in/> and www.wto.org. The Office of Agricultural Affairs and/or the U.S. Government make no claim of accuracy or authenticity.

On September 9, 2015, the Government of India notified draft Food Safety and Standards (Food Products Standards and Food Additives) Amendment Regulations, 2015 to the World Trade Organization (WTO). The draft revises microbiological standards for milk and dairy products in [Appendix B](#) of the [Food Safety and Standards \(Food Products Standards and Food Additives\) Regulations, 2011](#). The deadline for comments is November 8, 2015. The notification notes that the draft amendment will go into effect at a minimum of 180 days after the final notification of the amendment is published in the official gazette, but can only go into effect on either January 1 or July 1.

For more details on the draft regulation, please refer to [Draft Food Safety and Standards \(Food Products Standards and Food Additives\) Amendment Regulation, 2015](#) or the [WTO](#) website.

Comments should be sent to:

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Final details on the draft regulation:

Publication date on the FSSAI website: September 3, 2015
Date of Implementation: To be determined
WTO Notification Number: G/SPS/N/IND/116
WTO Notification Date: September 9, 2015
Final Date for Comments: November 8, 2015
Products Affected: Milk and milk products

MINISTRY OF HEALTH AND FAMILY WELFARE

(Food Safety and Standards Authority of India)

NOTIFICATION

New Delhi, the 30th July, 2015

F. No.1-110(2)/SP (Biological Hazards)/FSSAI/2010.—The following draft of certain regulations further to amend the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011, which the Food Safety and Standards Authority of India, proposes to make, with previous approval of the Central Government, in exercise of the powers conferred by clause (e) of sub-section (2) of section 92 read with section 16 of the Food Safety and Standards Act, 2006 (34 of 2006), is hereby published as required by the said sub-section (1) of the said Act, for information of all persons likely to be affected thereby, and notice is hereby given that the said draft shall be taken into consideration after the expiry of the period of sixty days from the date on which the copies of the Official Gazette in which this notification is published, are made available to the public;

The Objections or suggestions, if any, duly supported by scientific evidence may be addressed to the Chief Executive Officer, Food Safety and Standards Authority of India, Food and Drug Administration Bhawan, Kotla Road, New Delhi-110002;

The objections and suggestions, which may be received from any person with respect to the said draft regulations before the expiry of the period so specified, will be considered by the Food Authority.

Draft regulations

1. **Short title and commencement.**— (1) These regulations may be called the Food Safety and Standards (Food Products Standards and Food Additives) Amendment Regulations, 2015.
- (2) They shall come into force with effect from the ensuing 1st January or 1st July of the year, as the case may be, subject to minimum of 180 days from the date of final notification of these regulations in the official Gazette.
2. In the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011, in APPENDIX B relating to "Microbiological Requirements", for TABLE 2 and the entries relating thereto, the following TABLE and the entries shall be substituted, namely:—

TABLE-2- Microbiological Requirements for Milk and Milk Products:

Table-2A Microbiological Requirements for Milk and Milk Products -Hygiene Indicator Organisms

Sr. No.	Product Description	Aerobic Plate Count				Coliform Count				Staph. aureus (Coagulase positive)				Yeast and mold count				Faecal streptococci			
		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)		Sampling plan		Limit (cfu)	
		n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M	n	c	m	M
1	Pasteurized Milk/Flavored Milk	5(3)	3	30x10 ³ /ml	50x10 ³ /ml	5(3)	0	Absent/0.1ml	5	0											
2	Pasteurized Cream	5(3)	3	50x10 ³ /g	75x10 ³ /g	5(3)	0	10/g													
3	Sterilized/UHT/Flavored Milk / Evaporated Milk																				
4	Sterilized/ UHT Cream																				
5	Sweetened Condensed Milk	5(3)	3	5x10 ³ /g	1x10 ³ /g	5(3)	0	Absent/0.1g	5(3)	0	10/g										
6	Pasteurized Butter ¹	5(3)	3	25x10 ³ /g	50x10 ³ /g	5(3)	2	Absent/0.1g	5(3)	2	10/g	50g	5(3)	3	20g						
7	Milk powder, SMP, PSMP, Dairy Whitener; Cream powder, Ice Cream Mix powder; Lactose; Whey based powder; Butter Milk powder; Casein powder ²	5(3)	2	30x10 ³ /g	50x10 ³ /g	5(3)	2	Absent/0.1g	5(3)	2	10/g	1x10 ³ /g	5(3)	0	50.1g						
8	Infant Milk Food, Infant Formulae, Infant Milk Substitute	5(3)	2	5x10 ³ /g	5x10 ³ /g	11 (10)	0	Absent/0.1g	5(3)	0	Absent/0.1g										
	Food Follow Up Formula			5x10 ³ /g	5x10 ³ /g																
	Cereal Based Complimentary			1x10 ³ /g	10x10 ³ /g																
9	Ice Cream, Frozen Dessert, Milk Lolly, Ice Candy etc.	5(3)	3	1x10 ³ /g	2x10 ³ /g	5(3)	3	10/g	1x10 ³ /g	5(3)	2	10g	1x10 ³ /g								
10	Processed Cheese/ Cheese Spread (Ready To Eat Products)	5(3)	2	25x10 ³ /g	50x10 ³ /g	5(3)	0	10/g		5(3)	0	10g									
11	All Other Cheeses Categories including Fresh Cheeses / Cheddar / Cottage /Soft /Semi Soft ⁴ etc (Not Ready To Eat Products)					5(3)	3	1x10 ³ /g	5x10 ³ /g	5(3)	3	10g	1x10 ³ /g	5(3)	3	50g					
12	Fermented milk products : Yoghurt, Dahi, Chakka, Shrikhand ⁵ etc					5(3)	2	10/g	1x10 ³ /g	5(3)	2	10g	1x10 ³ /g	5(3)	3	50g					
13	Panner/ Chhena/ dhama based sweets	5(3)	3	15x10 ³ /g	35x10 ³ /g	5(3)	3	10/g	1x10 ³ /g	5(3)	3	10g	1x10 ³ /g	5(3)	3	50g					
14	Kheer/ Kheer based sweets	5(3)	3	25x10 ³ /g	75x10 ³ /g	5(3)	2	50g	1x10 ³ /g	5(3)	3	10g	1x10 ³ /g	5(3)	3	10g					
	Method of Analysis	IS 5402				IS 5401, Part 1				IS 5887, Part 8/Sec 1				IS 5403				IS 5887 (Part-2): 1976			

¹ Pasteurized milk shall be stored at manufacturing unit and at retail points in such a way that temperature of milk shall not exceed 8°C as recommended in IS 13688: 1999

² The microbial specifications for ripened butter are the same as for pasteurized butter excluding the requirements of total plate count.

³ The yeast and mold count of 5.0.1g as specified in dried product categories shall be applicable only to cream powder

⁴ The yeast and mold counts in all other cheese category will be applicable except mold ripened cheeses.

⁵ The standard requirements of lactic counts of one million c.f.u/g min as specified by BIS (IS 12998: 1989) in such products or such products containing probiotic organisms shall be applicable

() Figures in parenthesis indicate no. of samples required for testing at retail points.

Table-2B: Microbiological Requirements For Milk and Milk Products-Safety Indicator Organisms

	<i>E. coli</i>				<i>Salmonella</i> / <i>Shigella</i>				<i>L. monocytogenes</i>				<i>B. cereus</i>				Sulphite Reducing Clostridia (SRC)				<i>Enterobacter sakazakii</i>			
	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)	Sampling plan	Limit (cfu)
1	Pasteurized Milk/Flavored Milk	5(3) 0	Absent/0.1ml	5(3) 0	Absent/25 ml	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
2	Pasteurized Cream	5(3) 0	Absent/0.1g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
3	Sterilized/UHT/Flavored Milk / Evaporated Milk	5(3) 0	Absent/0.1ml	5(3) 0	Absent/25 ml	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
4	Sterilized/UHT Cream	5(3) 0	Absent/0.1g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
5	Sweetened Condensed Milk	5(3) 0	Absent/0.1g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
6	Pasteurized Butter	5(3) 0	Absent/0.1g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
7	Milk powder, SMP, PSMP, Dairy Whitener, Cream powder, Ice Cream Mix powder, Lactose, Whey based powder, Butter Milk powder, Casein powder	5(3) 0	Absent/0.1g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
8	Infant Milk Food, Infant Formulae, Infant Milk Substitute	10 (5)	Absent/0.1g	15 (5)	Absent/25g	10 (5)	Absent/25g	10 (5)	Absent/25g	10 (5)	Absent/25g	10 (5)	Absent/25g	10 (5)	Absent/25g	10 (5)	Absent/25g	10 (5)	Absent/25g	10 (5)	Absent/25g	10 (5)	Absent/25g	10 (5)
9	Follow Up Formula Cereal Based Complimentary Food Ice Cream, Frozen Dessert, Milk Lolly, Ice Candy etc	5(3) 0	Absent/g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
10	Processed Cheese/ Cheese Spread ¹ (Ready To Eat Products)	5(3) 0	Absent/g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
11	All Other Cheeses Categories including Fresh Cheeses / Cheddar / Cottage / Soft / Semi Soft etc (Not Ready To Eat Products)	5(3) 0	Absent/0.1g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
12	Fermented milk products : Yoghurt, Dahi, Chakka, Shrikhand etc	5(3) 0	Absent/g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
13	Panner/ Chhana/ chhana based sweets	5(3) 0	Absent/0.1g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0
14	Khoa/ Khoa based sweets Method of analysis	5(3) 0	Absent/0.1g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0	Absent/25g	5(3) 0

ISO / TS 22964:2006

ISO 15213:2003

IS 5887, Part 1

IS 14982-Part 1

IS 5887, Part 3 & 7

IS 5887, Part 1

[†] Processed cheese packed in canned shall comply accelerated storage test when incubated at 30°C for 14 days as per IS: 2785:1964 and should give no bulging.

() figures in parenthesis indicate no of samples required at retail points.

Sampling Guidelines: The sampling for different microbiological parameters specified in Table-2A and B shall be ensured aseptically at manufacturing units as well as at retail points as per the sampling plan given in Table-2C by a trained person with specialised knowledge in the field of microbiology, following guidelines given in IS 11546:1999/ISO 707:1985 (Reaffirmed 2010). The samples shall be stored and transported under appropriate temperature conditions and insulations within 24 hrs of sampling to accredited laboratories for analysis as per the approved sampling plan and test methods.³ A large sample size may be drawn (if desired) according to the tests required and the type of product. Preservatives shall not be added to samples intended for microbiological examination. The desired number of samples as per sampling plan given in Table-2A & B shall be taken from full production batches and will be submitted to accredited laboratory in original unopened packaging, sealed at the time of sampling maintained in their original physical state. The final decision shall be drawn based on results with no provision for retesting for microbiological parameters.

Sampling plan⁶: The following terms, as used by the International Commission on Microbiological Specifications of Foods (ICMSF) are defined and used in this standard:

n = the number of sample units which must be examined from the batch or lot of food to satisfy the requirements of a particular sampling plan.

mt= Represents an acceptable level and values above it are marginally acceptable in terms of the sampling plan.

c = the maximum allowable number of defective sample units in 3-class sampling plan applicable at manufacturing units only.

M = A microbiological criterion which indicates unsatisfactory or potentially hazardous quality. Values above M are unacceptable in terms of the sampling plan and detection of one or more samples exceeding this level would be cause for rejection of the lot and will attract prosecution by the concerned food safety authorities.

Table 2C Sampling plan for compliance of microbiological parameters at manufacturing units and at retail points

Sampling area	Sampling Plan									
	2-Class					3-Class				
	n	c	m	B	c	m	M			
Manufacturing unit	n=5-30	c=0	Values of m specified for all testing parameters for different products as specified Table-2A &B will be applicable	5-30	c=2,3	Values of m specified for all testing parameters for different products as specified Table- 2A&B will be applicable	Values of M specified for all testing parameters for different products as specified Table- 2A & B will be applicable			
Retail point	n=3-10	c=0	Values of m specified for all testing parameters for different products as specified Table-2 A&B will be applicable	3-10	c=0	Not applicable	Values of M specified for all testing parameters for different products as specified in Table- 2A &B will be applicable			

Microbiological criteria and their interpretation: Following three categories of microbiological quality have been assigned in standard based on hygiene and safety indicator organisms. These are satisfactory, unsatisfactory and potentially hazardous.

1. Satisfactory: if the test values of m or M or both applicable within the sampling plan are conforming the specified limits, the microbiological quality of product is considered satisfactory and no action is required.

2. Unsatisfactory: if the test values of m or M or both applicable within the sampling plan are not conforming the specified limits of hygiene indicators, i.e. aerobic count, coliform count, coagulase positive *S. aureus*, faecal streptococci and yeast and mold count etc which indicates poor hygiene or poor handling practices, the microbiological quality of product will be considered unsatisfactory. Under these conditions the premises producing such unsatisfactory product(s) shall be investigated for nonconformity or non-compliance and legal action on detected products will be notified by the food safety authority. The subsequent release of such product shall be subject to HACCP / GMP audit clearance of the premises / finished products by the food safety authority.

3. Potentially hazardous: if the test values of m / or M or both applicable within the sampling plan are not conforming are specified limits of safety indicators i.e., *L. coli*, *Salmonella* / *Shigella*, *B. cereus*, Sulphite Reducing Clostridia (SRC), *Enterobacteriaceae*, *L. monocytogenes* and sterility tests etc. which indicates serious food safety concern, the microbiological quality of product will be considered as potentially hazardous. Under these conditions the premises producing such unsatisfactory product(s) shall be stopped and legal actions on potentially hazardous products will be notified by the food safety authority. The recall action on withdrawal of any such food still available for sale or distribution shall be initiated and release of subsequent batches of such hazardous products will be under hold by the food manufacturers. Failure by an owner to either cease manufacture of product or withdraw/ recall product from sale when requested to do so shall result in seizure of that product where the officer has reason to believe that it is contaminated with pathogenic bacteria. A detail risk assessment will be carried out to determine by the food safety authority to investigate the source or cause of the problem so that remedial action can commence and the approval for restock of such products under non-conformity will be allowed only after compliance of manufacturing unit for food safety standards requirements or guidelines set by Authority.

Reference test methods

Sr. no.	Test reference	References
1	Microbiology - general guidance for the enumeration of micro-organisms- colony count technique at 30°C (first revision)	IS 5402:2002/ISO 4833:1991 reaffirmed 2007
2	Microbiology - general guidance for the enumeration of coliforms: Part 1 colony count technique (first revision)	IS 5401 (Part 1): 2002/ISO 4832:1991 reaffirmed 2007
3	Methods for detection of bacteria responsible for food poisoning: Part 8 Horizontal method for enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) Section 1 Technique using Baird-Parker Agar Medium	IS 5887 (Part 8/Sec 1): 2002/ISO 6888-1:1999 reaffirmed 2007
4	Isolation, identification and enumeration of <i>Staphylococcus aureus</i> and faecal streptococci (first revision)	IS 5887 (Part 2): 1976
5	Milk and milk products — detection of <i>Enterobacter sakazakii</i> (First Edition)	ISO/TS 22964: 2006
6	Method for yeast and mould count of food stuffs and animal feeds (first revision)	IS 5403:1999 reaffirmed 2005/ISO 7934:1987 reaffirmed 2009
7	Methods for detection of bacteria responsible for food poisoning: Isolation, identification and enumeration of <i>Escherichia coli</i> (first revision)	IS 5887 (Part 1): 1976 reaffirmed 2009 Part 1
8	Methods for detection of bacteria responsible for food poisoning: Part 3: general guidance on methods for detection of <i>Salmonella</i> (second revision) Methods for detection	IS 5887 (Part 3): 1999/ISO 6579:1993 reaffirmed 2004
9	Methods for detection of bacteria responsible for food poisoning: Part 7: general guidance on methods for isolation and identification of <i>Shigella</i>	IS 5887 (Part 7): 1999/ISO 6579:1993 reaffirmed 2009
10	Microbiology of food and animal feeding stuffs - horizontal method for detection and enumeration of <i>Listeria monocytogenes</i> : Part 1 Detection method	IS 14988 (Part 1): 2001/ISO 11290-1:1996 reaffirmed 2007
11	Methods for detection of bacteria responsible for food poisoning: Part 6 identification, enumeration and confirmation of <i>B. cereus</i>	IS 5887 (Part 6): 1999/ISO 7932:1993 reaffirmed 2007
12	Microbiology of food and animal feeding stuffs- Horizontal method for the enumeration of sulfite reducing bacteria growing under anaerobic conditions	ISO 15213: 2003-05-01
13	Methods of test for dairy industry part III bacteriological analysis of milk (first revision)	IS 1479 (Part III-1977- reaffirmed 1992
14	Indian Standard Specification for sterilized milk	IS: 4238-1967 reaffirmed 2010
15	Specification for sterilized cream	BIS (IS : 4884:1968) reaffirmed 1999
16	Packaged pasteurized milk - specification (first revision)	IS 13688: 1999
17	Method for determination of phosphatase activity in milk and milk products	IS 8479 (Parts 1): 1977 reaffirmed 1997
18	Specification for condensed milk, partly skimmed and skimmed condensed milk (second revision)	IS: 1166-1986 reaffirmed 1997
19	Hard cheese, processed cheese and processed cheese spread	IS: 2785:1964
20	Methods of sampling for milk and milk products	IS 11546:1999/ISO 707:1997 reaffirmed 2010
21	Dairy products- Yoghurt specification	IS: 12898:1989 reaffirmed 1994*

For IS Standards recent version shall apply.

YUDHVIR SINGH MALIK, Chief Executive Officer
[ADVT.-III/4/Exty./187-O/15(151)]

Note.—The principal regulations were published in the Gazette of India, Extraordinary vide notification number F. No. 2-15015/30/2010, dated the 1st August, 2011 subsequently amended vide notification numbers:

- (1) F. No. 4/15015/30/2011, dated the 7th June, 2013;
- (2) F. No. P.15014/1/2011-PFA/FSSAI, dated the 27th June, 2013;
- (3) F. No. 5/15015/30/2012, dated the 12th July, 2013, and
- (4) F. No. P.15025/262/13-PA/FSSAI dated the 5th, December, 2014.