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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I. FO	OD & AGRICULTUE	RAL PRODUCTS		
1.	Animal Feeds/Poultry feed/ Pet Foods	Aerobic Microbial Count or Total Bacterial Count	IS 5402: 2012 /ISO 4833:2003 USFDA (BAM) 8th edition Chapter-3, January-2001	\geq 1 cfu/ ml \geq 10 cfu/ g
		Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006	\geq 1 cfu/ ml \geq 10 cfu/ g \geq 0.30 MPN/ g or ml
			USFDA (BAM) 8th edition Chapter-4, Sep-2002	\geq 1 cfu/ ml \geq 10 cfu/ g \geq 3.0 MPN/ g or ml
		Yeasts& Molds	IS 5403: 1999 USFDA (BAM) 8th edition Chapter-18, January-2001	\geq 1 cfu/ ml \geq 10 cfu/ g
		Molds	IS 5403:1999	\geq 1 cfu/ml \geq 10 cfu/ g
		Escherichia coli	IS 5887(Part-1): 1976	≥0.30 MPN/ g or ml ≥10 cfu/ g ≥1 cfu/ml Absent/Present/ 1/ 10 / 25 g or ml
			USFDA (BAM) 8th edition Chapter-4, Sep-2002	\geq 3.0 MPN/ g or ml \geq 10 cfu/ g \geq 1 cfu/ ml

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		Staphylococcus aureus	IS 5887(Part-2): 1976 Reaffirmed 2009	≥10 cfu/ g, ≥1 cfu/ ml Absent/Present /0.1/1/10 / 25 ;
			IS 5887 (Part-8, Sec.1&2): 2002	or ml
			USFDA (BAM) 8th edition Chapter-12, Jan-2001	≥10 cfu/ g ≥1 cfu/ ml
		Salmonella	IS 5887(Part-3): 1999	Absent/Present/25 g or ml or
			USFDA (BAM) 8th edition Chapter-5, Aug-2012	Absent/Present/ 375 g or ml
		Shigella	IS 5887 (Part-7): 1999	Absent/Present/ 25 g or ml
			USFDA (BAM) 8th edition Chapter-6,Jan 2001	Absent/Present/ 50 g or ml
		Enterobacteriaceae	IS7402: 1993	\geq 1 cfu/ ml \geq 10 cfu/ g \geq 0.30 MPN/ g or ml
		Bacillus cereus	IS 5887(Part-6): 2012	≥10 cfu/ g ≥1 cfu/ ml
			USFDA (BAM) 8th edition Chapter-14, Jan-2001	_1 Olw III
		Faecal Streptococci (Enterococci)	IS: 5887(Part-2): 1976	≥10 cfu/ g, ≥1 cfu/ ml, ≥0.30 MPN/ g or ml Absent/Present /1 g or ml

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		Clostridium perfringens	IS 5887 (part -4): 1999	Absent/Present/ 1g or ml or Absent/Present/ 25 g or ml
		Vibrio cholerae	IS 5887(Part-5): 1976	Absent/Present/25 g or ml
		Listeria spp	IS 14988(Part-1): 2001	Absent/Present/25 g or ml
		Listeria monocytogenes	IS 14988(Part-1& 2): 2001	Absent/Present/25 g or ml
2.	Alcoholic Drinks	Aerobic Microbial Count / Total Bacterial Count	IS 5402:2012 ISO 4833 : 2003	≥1 cfu/ml
		Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006 IS 3752:2005	\geq 1 cfu/ml \geq 0.30 MPN/ ml
		Yeasts& Molds	IS 5403:1999	≥1 cfu/ml
		Escherichia coli	IS 5887(Part-1): 1976	Absent/Present/ ml
3.	Soft Drinks / Fruit Juices / Health Drinks	Aerobic microbial count/ Total Bacterial Count	IS 5402:2012/ISO 4833 :2003 USFDA (BAM) 8th edition Chapter-3, January-2001	\geq 1 cfu/ml \geq 10 cfu/ g
		Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/ g or ml Absent/ Present/ 100 ml

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			USFDA (BAM) 8th edition Chapter-4, Sep-2002	≥1 cfu/ml ≥10 cfu/ g ≥3 MPN/ g or ml
		Yeasts& Molds	IS 5403:1999 USFDA (BAM) 8th edition Chapter-18, January-2001	≥1 cfu/ml ≥ 10 cfu/ g Absent/ Present/ 100ml
		Molds	IS 5403:1999	$\geq 1 \text{ cfu/ml}$ $\geq 10 \text{ cfu/ g}$
		Escherichia coli	IS 5887(Part-1): 1976 Reaff. 2005	≥0.3 MPN/g or ml ≥10 cfu/g ≥1 cfu/ml Absent/Present/ 100ml Absent/Present/ 25 g
			USFDA (BAM) 8th edition Chapter-4, Sep-2002	\geq 3 MPN/g or ml \geq 10 cfu/g \geq 1 cfu/ml
		Staphylococcus aureus	IS 5887(Part-2): 1976; IS 5887 (Part-8, Sec.1&2): 2002	≥10 cfu/g, ≥10 cfu/ ml Absent/Present/ 0.1/ 1/ 10/25 g or ml
			USFDA (BAM) 8th edition Chapter-12, Jan-2001	≥10 cfu/g ≥1 cfu/ml

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Salmonella	IS 5887(Part-3): 1999	Absent/Present /25 g or ml
			USFDA (BAM) 8th edition Chapter-5,Aug-2012	or Absent/Present / 375 g or ml
		Shigella	IS 5887 (Part-7): 1999	Absent/Present/25 g or ml
			USFDA (BAM) 8th edition Chapter-6, Feb-2013	Absent/Present/50 g or ml
		Enterobacteriaceae	IS7402: 1993	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml
		Bacillus cereus	IS 5887(Part-6): 2012 USFDA (BAM) 8th edition Chapter-14, Jan-2012	≥10 cfu/g ≥1cfu/ml
		Faecal Streptococci (Enterococci)	IS: 5887(Part-2) : 1976	≥10 cfu/g, ≥1 cfu/ ml ≥0.3 MPN/ g or ml Absent/Present/1 g or ml
		Clostridium perfringens	IS 5887 (Part -4): 1999	Absent/Present/ g or ml Absent/Present/25 g or ml
		Vibrio cholerae	IS 5887(Part-5): 1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/ 25 g or ml

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Vibrio parahaemolyticus	IS 5887(Part-5):1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/25 g or ml
4.	Cereals, Pulses Cereal Products/ Bakery & Bakery products/	Aerobic microbial count/ Total Bacterial Count	IS 5402:2012 ISO 4833 :2003 USFDA (BAM) 8th edition Chapter-3, January-2001	≥1 cfu/ml ≥ 10 cfu/ g
	Oil Seeds & By- Products/Nuts & Nut Products	Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006	Absent/Present/25 g or ml ≥1 cfu/ml
			USFDA (BAM) 8th edition Chapter-4, Sep-2002	≥10 cfu/ g
		Yeasts & Molds	IS 5403: 1999 USFDA (BAM) 8th edition Chapter-18, January-2001	
		Molds	IS 5403: 1999	_
		Escherichia coli	IS 5887(Part-1): 1976	≥10 cfu/g ≥1cfu/ ml Absent/Present/1/10/ 25 g
			USFDA (BAM) 8th edition Chapter-4, Feb-2013	≥0.3 MPN/g or ml ≥10 cfu/g

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		Staphylococcus aureus	IS 5887(Part-2): 1976 IS 5887 (Part-8, Sec.1&2): 2002	≥10 cfu/g, ≥1 cfu/ ml Absent/Present /0.1/1/ 10/ 25 g or ml
			USFDA (BAM) 8th edition Chapter-12, Jan-2001	≥10 cfu/g ≥1 cfu/ml
		Salmonella	IS 5887(Part-3): 1999 USFDA (BAM) 8th edition Chapter-5, Aug-2012	Absent/Present/25 g or ml or Absent/Present / 375 g or ml
		Shigella	IS 5887 (Part-7): 1999	Absent/Present /25 g or ml
			USFDA (BAM) 8th edition Chapter-6, Feb-2013	or Absent/Present /50 g or ml
		Enterobacteriaceae	IS7402:1993	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml
		Bacillus cereus	IS 5887(Part-6): 2012 USFDA (BAM) 8th edition Chapter-14, Jan-2012	≥10 cfu/g ≥1 cfu/ml
		Faecal Streptococci (Enterococci)	IS: 5887(Part-2): 1976	≥10 cfu/g ≥1 cfu/ml Absent/Present/1 g or ml ≥0.3 MPN/ g or ml
		Clostridium perfringens	IS 5887 (Part -4): 1999	Absent/Present/ g or ml Absent/Present/ 25 g or ml

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		Vibrio cholerae	IS 5887(Part-5): 1976	Absent/Present/ 25 g or ml
		Vibrio parahaemolyticus	IS 5887(Part-5):1976	Absent/Present/ 25 g or ml
		Listeria spp	IS 14988(Part-1): 2001	Absent/Present/ 25 g or ml
		Listeria monocytogenes	IS 14988(Part-1& 2): 2001	Absent/Present/ 25 g or ml
		Thermophilic Anaerobic spore count (55 0 C)	APHA 4 th Edition 2005, Chapter 26	Absent/Present / g or ml
		Mesophilic Aerobic Spore formers	APHA 4 th Edition 2005, Chapter 22	\geq 10 spores / g \geq 1 spore / ml
		Mesophilic Anaerobic Spore formers	APHA 4 th Edition 2005, Chapter 23	≥3.0 MPN /g or ml, ≥10 spores/g ≥1 spore/ml
5.	Tea , Coffee & Cocoa Products,	Aerobic microbial count/ Total Bacterial Count	IS 5402:2012 ISO 4833:2003 USFDA (BAM) 8th edition Chapter-3, January-2001	$\geq 1 \text{ cfu/ml}$ $\geq 10 \text{ cfu/g}$

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		Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml
			USFDA (BAM) 8th edition Chapter-4, Sep-2002	\geq 1 cfu/ml \geq 10 cfu/ g \geq 3.0 MPN/g or ml
		Yeasts& Molds	IS 5403:1999 USFDA (BAM) 8th edition Chapter-18, January-2001	\geq 1 cfu/ml \geq 10 cfu/ g
		Molds	IS 5403:1999	≥1 cfu/ml ≥ 10 cfu/ g Absent/Present/ 0.1 g or ml
		Escherichia coli	IS 5887(Part-1): 1976	≥0.3 MPN/g or ml ≥10 cfu/g ≥1 cfu/ml Absent/Present/ 1/ 10/ 25 or ml
			USFDA (BAM) 8th edition Chapter-4, Feb-2013	≥3 MPN/g or ml ≥10 cfu/g ≥1 cfu/ml

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		Staphylococcus aureus	IS 5887(Part-2): 1976	≥10 cfu/g,
		suphytococcus uneus	15 5007(1 art-2). 1770	$\geq 10 \text{ cfu/g},$ $\geq 1 \text{ cfu/ml},$
			IS 5887(Part-8, Sec.1&2) : 2002	Absent/Present/ 0.1/ 1/10/25 g or ml
			USFDA (BAM) 8th edition	≥10 cfu/g
			Chapter-12, Jan-2001	≥1 cfu/ml
		Salmonella	IS 5887(Part-3): 1999	Absent/Present/ 25 g or ml or
			USFDA (BAM) 8th edition Chapter-5, Aug-2012	Absent/Present/ 375 g or mi
		Shigella	IS 5887 (Part-7): 1999	Absent/Present /25 g or ml or
			USFDA (BAM) 8th edition Chapter-6, Feb-2013	Absent/Present /50 g or ml
		Enterobacteriaceae	IS7402:1993	≥1 cfu/ml
				\geq 10 cfu/ g \geq 0.30 MPN/g or ml
		Bacillus cereus	IS 5887(Part-6):2012 USFDA (BAM) 8th edition Chapter-14, Jan-2012	≥10 cfu/g ≥1 cfu/ ml
		Faecal Streptococci (Enterococci)	IS: 5887(Part-2): 1976	≥10 cfu/g, ≥1 cfu/ml Absent/Present/1 g or ml ≥0.3MPN/ g or ml

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		Clostridium perfringens	IS 5887 (part -4): 1999	Absent/Present/ g or ml or Absent/Present/25 g or ml
		Vibrio cholerae	IS 5887(Part-5): 1976	Absent/Present/25 g or ml
		Vibrio parahaemolyticus	IS 5887(Part-5):1976	Absent/Present/25 g or ml
		Listeria spp	IS 14988(Part-1): 2001	Absent/Present/25 g or ml
		Listeria monocytogenes	IS 14988(Part-1& 2): 2001	Absent/Present/25 g or ml
		Thermophilic Anaerobic spore count (55 °C)	APHA 4 th Edition 2005, Chapter 26	Absent/Present / g or ml
		Mesophilic Aerobic Spore formers	APHA 4 th Edition 2005, Chapter 22	\geq 10 spores / g \geq 1 spore / ml
		Mesophilic Anaerobic Spore formers	APHA 4 th Edition 2005, Chapter 23	≥3.0 MPN /g or ml, ≥10 spores/g ≥1 spore / ml
•	Ready to eat foods/Snacks and Instant Mixes/ Un- processed foods/ Semi- processed	Aerobic Microbial Count or Total Bacterial Count	IS 5402:2012 ISO 4833:2003 USFDA (BAM) 8th edition Chapter-3, January-2001	\geq 1 cfu/ml \geq 10 cfu/ g
	foods/Canned foods/Cooked foods/ Thermally processed foods	Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006 USFDA (BAM) 8th edition Chapter-4, Sep-2002	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml \geq 1 cfu/ml \geq 10 cfu/ g \geq 3.0 MPN/g or ml

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		Yeasts & Molds	IS 5403:1999 USFDA (BAM) 8th edition Chapter-18, January-2001	≥1 cfu/ml ≥ 10 cfu/ g
		Molds	IS 5403:1999	$\geq 1 \text{ cfu/ml}$ $\geq 10 \text{ cfu/g}$
		Escherichia coli	IS 5887(Part-1): 1976	≥0.3 MPN/g ≥10 cfu/g or ml ≥1 cfu/ml Absent/Present/ 1/ 10 / 25 g or ml
			USFDA (BAM) 8th edition Chapter-4, Feb-2013	≥3 MPN/g or ml ≥10 cfu/g ≥1 cfu/ ml
		Staphylococcus aureus	IS 5887(Part-2): 1976	≥10 cfu/g, ≥1 cfu/ ml,
			IS 5887 (Part-8, Sec.1&2): 2002	Absent/Present/ 0.1/1/10/25 g or ml
			USFDA (BAM) 8th edition Chapter-12, Jan-2001	≥10 cfu/g ≥1 cfu/ ml
		Salmonella	IS 5887(Part-3): 1999 USFDA (BAM) 8th edition Chapter-5, Aug-2012	Absent/Present/ 25 g or ml or Absent/Present/ 375 g or ml

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		Shigella	IS 5887 (Part-7): 1999	Absent/Present /25 g or ml
			USFDA (BAM) 8th edition Chapter-6, Feb-2013	Absent/Present /50 g or ml
		Enterobacteriaceae	IS7402: 1993	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml
		Bacillus cereus	IS 5887(Part-6): 2012 USFDA (BAM) 8th edition Chapter-14, Jan-2012	≥10 cfu/g ≥1 cfu/ ml
		Faecal Streptococci (Enterococci)	IS: 5887(Part-2): 1976	≥10 cfu/g, ≥1 cfu/ ml ≥0.3 MPN/ g or ml Absent/Present/1 g or ml
		Clostridium perfringens	IS 5887 (part -4): 1999	Absent/Present/ g or ml or Absent/Present/25 g or ml
		Vibrio cholerae	IS 5887(Part-5): 1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/25 g or ml
		Vibrio parahaemolyticus	IS 5887(Part-5):1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/ 25 g or ml

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		Listeria spp	IS 14988(Part-1): 2001	Absent/Present/25 g or ml
		Listeria monocytogenes	IS 14988(Part-1): 2001	Absent/Present/ 25 g or ml
		Thermophilic Anaerobic spore count (55 0 C)	APHA 4 th Edition 2005, Chapter 26	Absent/Present / g or ml
		Mesophilic Aerobic Spore formers	APHA 4 th Edition 2005, Chapter 22	\geq 10 spores / g \geq 1 spore / ml
		Mesophilic Anaerobic Spore formers	APHA 4 th Edition 2005, Chapter 23	≥3.0 MPN /g/ml, ≥10 spore/g ≥1 spore/ ml
]]]	Fish & Sea Foods/ Meat & Meat Products/ Poultry & Poultry Products /	Aerobic microbial count/ Total Bacterial Count	IS 5402:2012 ISO 4833 :2003 USFDA (BAM) 8th edition Chapter-3, January-2001	\geq 1 cfu/ml \geq 10 cfu/ g
	Egg& Egg Products	Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006	\geq 1 cfu/ml \geq 10 cfu/g \geq 0.30 MPN/g or ml
			USFDA (BAM) 8th edition Chapter-4, Sep-2002	\geq 1 cfu/ml \geq 10 cfu/ g \geq 3 MPN/g or ml
		Yeasts& Molds	IS 5403 1999 USFDA (BAM) 8th edition Chapter-18, January-2001	\geq 1 cfu/ml \geq 10 cfu/ g

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		Escherichia coli	IS 5887(Part-1): 1976	≥0.3 MPN/g or ml ≥10 cfu/g ≥1 cfu/ ml Absent/Present/ 1/10/25 g or ml
			USFDA (BAM) 8th edition Chapter-4, Feb-2013	≥3 MPN/g or ml ≥10 cfu/g ≥1 cfu/ ml
		Staphylococcus aureus	IS 5887(Part-2): 1976 IS 5887 (Part-8, Sec.1&2): 2002	≥10 cfu/g ≥1 cfu/ ml Absent/Present /0.1/1/10/25 g or ml
			USFDA (BAM) 8th edition Chapter-12, Jan-2001	≥10 cfu/g ≥1 cfu/ ml
		Salmonella	IS 5887(Part-3): 1999	Absent/Present/25 g or ml
			USFDA (BAM) 8th edition Chapter-5, Aug-2012	Absent/Present/375 g or ml
		Shigella	IS 5887 (Part-7): 1999	Absent/Present /25 g or ml
			USFDA (BAM) 8th edition Chapter-6, Feb-2013	Absent/Present / 50 g or ml
		Enterobacteriaceae	IS7402:1993	\geq 1 cfu/ml \geq 10 cfu/g \geq 0.30 MPN/g or ml

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		Bacillus cereus	IS 5887(Part-6): 2012 USFDA (BAM) 8th edition Chapter-14, Jan-2012	≥10 cfu/g ≥1 cfu/ ml
		Faecal Streptococci (Enterococci)	IS: 5887(Part-2): 1976	≥10 cfu/g, ≥1 cfu/ ml ≥ 0.30 MPN/ g or ml Absent/Present/ 1 g or ml
		Clostridium perfringens	IS 5887 (part -4): 1999	Absent/Present/ g or ml or Absent/Present/25 g or ml
		Vibrio cholerae	IS 5887(Part-5): 1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/25 g or ml
		Vibrio parahaemolyticus	IS 5887(Part-5):1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/25 g or ml
		Listeria spp	IS 14988(Part-1): 2001	Absent/Present/25 g or ml
		Listeria monocytogenes	IS 14988(Part-1& 2): 2001	Absent/Present/25 g or ml

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8.	Fruit & Fruit Products/ Vegetables & Vegetable Products	Aerobic microbial count/ Total Bacterial Count	IS 5402:2012 ISO 4833 :2003 USFDA (BAM) 8th edition Chapter-3, January-2001	≥1 cfu/ml ≥ 10 cfu/g
		Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml
			USFDA (BAM) 8th edition Chapter-4, Sep-2002	≥1 cfu/ml ≥10 cfu/ g ≥3 MPN/g or ml
		Yeasts& Molds	IS 5403:1999 USFDA (BAM) 8th edition Chapter-18, January-2001	≥1 cfu/ml ≥ 10 cfu/g
		Molds	IS 5403:1999	$\geq 1 \text{ cfu/ml}$ $\geq 10 \text{ cfu/g}$
		Escherichia coli	IS 5887(Part-1): 1976	≥0.3 MPN/g or ml ≥10 cfu/g ≥1 cfu/ ml Absent/Present/1/ 10/ 25 g or ml
			USFDA (BAM) 8th edition Chapter-4, Feb 2013	\geq 3 MPN/g or ml \geq 10 cfu/g \geq 1 cfu/ ml

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Staphylococcus aureus	IS 5887(Part-2): 1976 IS 5887 (Part-8, Sec.1&2): 2002	≥10 cfu/g, ≥1 cfu/ ml Absent/Present/
			USFDA (BAM) 8th edition Chapter-12, Jan-2001	0.1/1/10/25 g or ml ≥10 cfu/g ≥1 cfu/ ml
		Salmonella	IS 5887(Part-3): 1999	Absent/Present / 25 g or ml or
			USFDA (BAM) 8th edition Chapter-5, Aug-2012	Absent/Present/ 375 g or m
		Shigella	IS 5887 (Part-7): 1999	Absent/Present/25 g or ml
			USFDA (BAM) 8th edition Chapter-6, Feb-2013	Absent/Present/ 50 g or ml
		Enterobacteriaceae	IS7402:1993	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml
		Bacillus cereus	IS 5887(Part-6): 2012 USFDA (BAM) 8th edition Chapter-14, Jan-2012	≥10 cfu/g ≥1 cfu/ ml
		Faecal Streptococci (Enterococci)	IS: 5887(Part-2):1976	≥10 cfu/g, ≥1 cfu/ ml Absent/Present/1 g or ml ≥0.3 MPN/ g or ml

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		Clostridium perfringens	IS 5887 (part -4): 1999	Absent/Present/ g or ml or Absent/Present/25 g or ml
		Vibrio cholerae	IS 5887(Part-5): 1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/ 25 g or ml
		Vibrio parahaemolyticus	IS 5887(Part-5):1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/25 g or ml
		Listeria spp	IS 14988(Part-1): 2001	Absent/Present/25 g or ml
		Listeria monocytogenes	IS 14988(Part-1& 2): 2001	Absent/Present/25 g or ml
		Thermophilic Anaerobic spore count (55 °C)	APHA 4 th Edition 2005, Chapter 26	Absent/Present / g or ml
		Mesophilic Aerobic Spore formers	APHA 4 th Edition 2005, Chapter 22	\geq 10 spores / g \geq 1 spore/ ml
		Mesophilic Anaerobic Spore formers	APHA 4 th Edition 2005, Chapter 23	≥ 3.0 MPN /g or ml, ≥10 spores/g ≥1 spore/ ml
	Herbs, Spices & Condiments	Aerobic microbial count/ Total Bacterial Count	IS 5402: 2012 ISO 4833 : 2003 USFDA (BAM) 8th edition Chapter-3, January-2001	≥1 cfu/ml ≥ 10 cfu/ g

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		Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006	≥ 1 cfu/ml ≥ 10 cfu/g ≥ 0.30 MPN/g or ml
			USFDA (BAM) 8th edition Chapter-4, Sep-2002	\geq 1 cfu/ml \geq 10 cfu/ g \geq 3 MPN/g or ml
		Yeasts & Molds	IS 5403:1999 USFDA (BAM) 8th edition Chapter-18, January-2001	$\geq 1 \text{ cfu/ml}$ $\geq 10 \text{ cfu/g}$
		Molds	IS 5403:1999	$\geq 1 \text{ cfu/ml}$ $\geq 10 \text{ cfu/g}$
		Escherichia coli	IS 5887(Part-1): 1976	≥0.3 MPN/g or ml ≥10 cfu/g ≥1 cfu/ ml Absent/Present/ 1 / 10 /25 g or ml
			USFDA (BAM) 8th edition Chapter-4, Feb-2013	\geq 3 MPN/g or ml \geq 10 cfu/g \geq 1 cfu/ ml
		Staphylococcus aureus	IS 5887(Part-2): 1976 IS 5887 (Part-8, Sec.1&2): 2002	≥10 cfu/g, ≥1 cfu/ ml Absent/Present /0.1/1/ 10/25 g or ml
			USFDA (BAM) 8th edition	≥10 cfu/g

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Salmonella	IS 5887(Part-3): 1999 USFDA (BAM) 8th edition Chapter-5, Aug-2012	Absent/Present/ 25/ g or ml or Absent/Present/ 375 g or ml
		Shigella	IS 5887 (Part-7): 1999 USFDA (BAM) 8th edition Chapter-6, Feb-2013	Absent/Present/ 25 g or ml or Absent/Present/ 50 g or ml
		Enterobacteriaceae	IS7402:1993	\geq 1 cfu/ml \geq 10 cfu/g \geq 0.30 MPN/g or ml
		Bacillus cereus	IS 5887(Part-6): 2012 USFDA (BAM) 8th edition Chapter-14, Jan-2012	≥10 cfu/g ≥1 cfu/ ml
		Faecal Streptococci (Enterococci)	IS: 5887(Part-2): 1976	≥10 cfu/g, ≥1 cfu/ ml Absent/Present/ 1 g or ml ≥ 0.30 MPN/g or ml
		Clostridium perfringens	IS 5887 (part -4): 1999	Absent/Present/ 1 g or ml or Absent/Present/ 25 g or ml
		Vibrio cholerae	IS 5887(Part-5): 1976	Absent/Present/ 25 g or ml
		Vibrio parahaemolyticus	IS 5887(Part-5):1976	Absent/Present/ 25 g or ml
		Listeria spp	IS 14988(Part-1): 2001	Absent/Present/ 25 g or ml
		Listeria monocytogenes	IS 14988(Part-1& 2): 2001	Absent/Present/ 25 g or ml

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Thermophilic Anaerobic spore count (55 °C)	APHA 4 th Edition 2005, Chapter 26	Absent/Present / g or ml
		Mesophilic Aerobic Spore formers	APHA 4 th Edition 2005, Chapter 22	\geq 10 spores / g \geq 1 spore / ml
		Mesophilic Anaerobic Spore formers	APHA 4 th Edition 2005, Chapter 23	≥ 3.0 MPN /g or ml, ≥10 spores/g ≥1 spore/ ml
10.	Infant Foods	Aerobic Microbial Count or Total Bacterial Count	IS 5402:2012 ISO 4833 :2003 USFDA (BAM) 8th edition Chapter-3, January-2001	≥1 cfu/ml ≥ 10 cfu/g
		Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml
			USFDA (BAM) 8th edition Chapter-4, Sep-2002	\geq 1 cfu/ml \geq 10 cfu/ g \geq 3 MPN/g or ml
		Yeasts& Molds	IS 5403:1999 USFDA (BAM) 8th edition Chapter-18, January-2001	\geq 1 cfu/ml \geq 10 cfu/ g
		Molds	IS 5403:1999	$\geq 1 \text{ cfu/ml}$ $\geq 10 \text{ cfu/ g}$

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		Escherichia coli	IS 5887(Part-1): 1976	≥0.3 MPN/g or ml, ≥10 cfu/g ≥1 cfu/ml Absent/Present/ 1/10/ 25 g or ml
			USFDA (BAM) 8th edition Chapter-4, Feb-2013	\geq 3 MPN/g or ml \geq 10 cfu/g \geq 1 cfu/ml
		Staphylococcus aureus	IS 5887(Part-2): 1976 IS 5887(Part-8, Sec.1&2): 2002	≥10 cfu/g, ≥1 cfu/ml Absent/Present /0.1/1/10/25 g or ml
			USFDA (BAM) 8th edition Chapter-12, Jan-2001	≥10 cfu/g ≥1 cfu/ml
		Salmonella	IS 5887(Part-3): 1999	Absent/Present/ 25 g or ml
			USFDA (BAM) 8th edition Chapter-5, Aug-2012	or Absent/Present 375 g or ml
		Shigella	IS 5887 (Part-7): 1999 USFDA (BAM) 8th edition Chapter-6, Feb-2013	Absent/Present /25 g or ml or Absent/Present/ 50 g or ml
		Enterobacteriaceae	IS7402:1993 Reaff. 2001	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml

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		Bacillus cereus	IS 5887(Part-6): 2012 USFDA (BAM) 8th edition Chapter-14, Jan-2012	≥10 cfu/g ≥1 cfu/ml
		Faecal Streptococci (Enterococci)	IS: 5887(Part-2): 1976	≥10 cfu/g ≥1cfu/ml ≥0.3 MPN/ g or ml Absent/Present /1 g or ml
		Clostridium perfringens	IS 5887 (part -4): 1999	Absent/Present/ 1/25 g or ml
		Vibrio cholerae	IS 5887(Part-5): 1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/ 25 g or ml
		Vibrio parahaemolyticus	IS 5887(Part-5):1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/ 25 g or ml
		Listeria spp	IS 14988(Part-1): 2001	Absent/Present/ 25 g or ml
		Listeria monocytogenes	IS 14988(Part-1& 2): 2001	Absent/Present/ 25 g or ml
		Thermophilic Anaerobic spore count (55 0 C)	APHA 4 th Edition 2005, Chapter 26	Absent/Present / g or ml
		Mesophilic Aerobic Spore formers	APHA 4 th Edition 2005, Chapter 22	\geq 10 spores / g or \geq 1 spore / ml

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		Mesophilic Anaerobic Spore formers	APHA 4 th Edition 2005, Chapter 23	≥3.0 MPN /g or ml, ≥10 spores/g ≥1 spore/ml
11.	Milk & Dairy Products	Aerobic Microbial Count / Total Bacterial Count	IS 5402:2012 ISO 4833 : 2003 USFDA(BAM) 8 th edition Chapter 3, Jan-2001	≥1 cfu/ml ≥1 cfu/ g
		Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml Absent/Present/ 0.1 g
			USFDA(BAM)) 8 th edition Chapter 4, Sep-2002	\geq 1 cfu/ml \geq 10 cfu/ g \geq 3 MPN/g or ml
		Yeasts & Molds	IS 5403:1999 USFDA (BAM) 8th edition Chapter-18, January-2001	≥1 cfu/ml ≥ 10 cfu/ g Absent/Present/ 0.1 g Absent/Present/ 1 g or ml
		Escherichia coli	IS 5887(Part-1): 1976	≥0.3 MPN/g or ml ≥10 cfu/g ≥1 cfu/ml Absent/Present/ 0.1/ 1/10/2 g or ml
			USFDA (BAM) 8th edition Chapter-4, Feb-2013	\geq 3 MPN/g or ml \geq 10 cfu/g \geq 1 cfu/ml

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		Staphylococcus aureus	IS 5887(Part-2): 1976 IS 5887(Part-8, Sec.1&2): 2002	≥10 cfu/g ≥1 cfu/ml Absent/Present /0.1/ 1 /10 g or ml
			USFDA (BAM) 8th edition Chapter-12, Jan-2001	≥10 cfu/g ≥1 cfu/ml
		Salmonella	IS 5887(Part-3): 1999 USFDA (BAM) 8th edition Chapter-5, Aug-2012	Absent/Present /25 g or ml or Absent/Present/ 375 g or m
		Shigella	IS 5887 (Part-7): 1999 USFDA (BAM) 8th edition Chapter-6, Feb-2013	Absent/Present/ 25 g or ml or Absent/Present/ 50 g or ml
		Enterobacteriaceae	IS7402:1993	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml
		Bacillus cereus	IS 5887(Part-6): 2012 USFDA (BAM) 8th edition Chapter-14, Jan-2012	$\geq 10 \text{ cfu/g}$ $\geq 1 \text{ cfu/ml}$
		Faecal Streptococci (Enterococci)	IS: 5887(Part-2): 1976	≥10 cfu/g ≥1 cfu/ml Absent/Present /1g or ml ≥0.3 MPN/ g or ml
		Clostridium perfringens	IS 5887 (Part -4): 1999	Absent/Present/ g or ml or Absent/Present/ 25 g or ml

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		Vibrio cholerae	IS 5887(Part-5): 1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/ 25 g or ml
		Vibrio parahaemolyticus	IS 5887(Part-5):1976 USFDA (BAM) 8th edition Chapter 9, May 2004	Absent/Present/ 25 g or ml
		Listeria spp	IS 14988(Part-1): 2001	Absent/Present/ 25 g or ml
		Listeria monocytogenes	IS 14988(Part-1& 2): 2001	Absent/Present/ 1 g or ml or Absent/Present/ 25 g or ml
		Thermophilic Anaerobic spore count (55 °C)	APHA 4 th Edition 2005, Chapter 26	Absent/Present / g or ml
		Mesophilic Aerobic Spore formers	APHA 4 th Edition 2005, Chapter 22	\geq 10 spores / g or \geq 1 spore/ ml
		Mesophilic Anaerobic Spore formers	APHA 4 th Edition 2005, Chapter 23	\geq 3.0 MPN /g or ml \geq 10 spores/g \geq 1 spore/ ml
12.	Sugar & Sugar Products/ Confectionary products/Honey and Honey Products	Aerobic Microbial Count / Total Bacterial Count	IS 5402: 2012 ISO 4833 : 2003 USFDA (BAM) 8th edition Chapter-3, January-2001	≥1 cfu/ml ≥ 10 cfu/ g

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		Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991 IS 5401(Part-2):2012 ISO 4831:2006	\geq 1 cfu/ml \geq 10 cfu/g \geq 0.30 MPN/g or ml
			USFDA (BAM) 8th edition Chapter-4, Sep-2002	\geq 1 cfu/ml \geq 10 cfu/ g \geq 3 MPN/g or ml
		Yeasts & Molds	IS 5403:1999 USFDA (BAM) 8th edition Chapter-18, January-2001	≥1 cfu/ml ≥ 10 cfu/ g Absent/Present/ 0.1 g
		Escherichia coli	IS 5887(Part-1): 1976	≥0.3 MPN/g or ml ≥10 cfu/g ≥1 cfu/ml Absent/Present/ 1/10/25 g o ml
			USFDA (BAM) 8th edition Chapter-4, Feb 2013	\geq 0.3 MPN/g or ml \geq 10 cfu/g \geq 1 cfu/ml
		Vibrio cholerae	IS 5887(Pt-5): 1976	Absent/ Present / 25g or ml
		Vibrio parahaemolyticus	IS 5887(Part-5):1976	Absent/Present/ 25 g or ml
		Listeria spp	IS 14988(Part-1): 2001	Absent/Present/ 25 g or ml
		Listeria monocytogenes	IS 14988(Part-1& 2): 2001	Absent/Present/ 25 g or ml

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		Clostridium perfringens	IS 5887 (part -4): 1999	Absent/Present/ g or ml or Absent/Present/ 25 g or ml
		Bacillus cereus	IS 5887(Part-6): 2012 USFDA-BAM, Chapter 14 : 2012	≥10 cfu/g ≥1 cfu/ml
		Staphylococcus aureus	IS 5887(Part-2): 1976; IS 5887: (Part-8, Sec.1&2): 2002 USFDA (BAM) 8th edition Chapter-12, Jan-2001	≥10 cfu/g, ≥1 cfu/ml Absent/Present /0.1 /1/10 / 25 g or ml
		Salmonella	IS 5887(Part-3): 1999 USFDA (BAM) 8th edition Chapter-5, Aug-2012	Absent/Present/ 25 g or ml or Absent/Present /375 g or ml
		Enterobacteriaceae	IS7402:1993	\geq 1 cfu/ml \geq 10 cfu/ g \geq 0.30 MPN/g or ml
		Thermophilic Anaerobic spore count (55 ⁰ C)	APHA 4 th Edition 2005, Chapter 26	Absent/Present / g or ml
		Mesophilic Aerobic Spore formers	APHA 4 th Edition 2005, Chapter 22	$\geq 10 \text{ spores /g}$ $\geq 1 \text{ spore /ml}$
		Mesophilic Anaerobic Spore formers	APHA 4 th Edition 2005, Chapter 23	≥3.0 MPN /g/ml, ≥10 spores/g ≥ 1 spore / ml

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13.	Salt	Staphylococcus aureus	USFDA (BAM) 8th edition Chapter-12, Jan-2001 IS 5887(part 2):1976	≥10 cfu/ g Absent/Present/ g
		Sulphite Reducing Clostridium	IS 13428: 2005, Annexure D	Absent/Present /1 / 50g
II.	WATER			
1.	Water for Processed Food Industry (IS: 4251)	Aerobic Bacterial count/Standard Plate Count	IS 1622: 1981	≥1cfu/ml
	(15) 120 2)	Coliform Bacteria	IS 1622:1981	≥2 MPN /100ml Absent / Present/100/ 250 ml cfu/ 100 ml
		Proteolytic organisms	IS 4251 :1967 Appendix A	≥1 cfu/ml
		Lipolytic Organisms	IS 4251 :1967 Appendix A	≥1 cfu/ml
		Thermophilic bacterial count	IS 4251 :1967 Appendix B	≥1 cfu/ml
2.	Drinking water, Open well, Bore	Coliforms	IS 1622:1981 IS 15185: 2002	≥2 MPN/100 ml
	Well (IS 10500 :2012)	Escherichia coli	IS 1622:1981 (2003-05) Reaffirmed 2009	≥2 MPN/100 ml,

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3.	Packaged Drinking Water (IS: 14543)	Aerobic Bacterial Count/Standard Plate Count at 22°C and 37°C	IS 5402:2012 ISO 4833:2003	≥1cfu/ml
	and Natural Mineral Water (IS: 13428)	Coliforms	IS 15185: 2002 ISO 4832 :1991 IS 5401(Part-1): 2002	Absent/Present/250ml
		Escherichia coli	IS 15185: 2002 IS 5887(Part-1): 1976	Absent/Present/250ml
		Yeasts & Molds	IS 5403:1999 IS 15188: 2002	Absent/Present / 250 ml
		Staphylococcus aureus	IS 5887(Part-2):1976 IS 15188: 2002	Absent/Present/250ml
		Salmonella	IS 5887(Part-3): 1999 IS 15187:2002	Absent/Present/250ml
		Shigella	IS 5887 (Part-7) :1999 IS 15188: 2002	Absent/Present/250ml
		Vibrio cholerae, Vibrio parahaemolyticus	IS 5887 (Part-5) :1976 IS 15188: 2002	Absent/Present/250ml
		Pseudomonas aeruginosa	IS 13428: 2005, Annexure D	Absent/Present/250ml
		Sulphite reducing anaerobes	IS 13428:2005, Annexure C	Absent/Present/50ml
		Faecal Streptococci	IS 5887 (Part2): 1976 IS 15186 : 2002	Absent/Present/250ml

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4.	Water (Bore well, open well,	Pseudomonas aeruginosa	IS 13428: 2005, Annexure D ISO 16266 : 2006	Absent / Present/ 100 ml
	treated water)	Sulphite reducing anaerobes	IS 13428: 2005, Annexure C	Absent / Present/ 50/100 ml
		Faecal streptococci	IS 15186 : 2002	Absent / Present/100 ml
		Salmonella	IS 15187:2002	Absent/Present /100 ml
		Aerobic Bacterial count/Standard Plate Count/Total Viable Count at 22°C and 37°C	IS 1622: 1981 IS 5402:2012	≥1cfu/ml
		Yeasts & Moulds	IS 5403:1999 IS 15188: 2002	Absent/Present /100 ml, cfu/100 ml
		Thermo tolerant Coliforms/ Faecal Coliforms	IS 1622:1981	≥ MPN/100 ml, Absent/Present/ 100 ml
		Enterococci	IS 1622:1981; IS 5887(P-2):1976; IS 15186:2002	≥2 MPN/100 ml Absent/ Present/ 100ml
		Staphylococcus aureus	IS 5887(P-2): 1976; IS 5887 (Part-8, Sec. 1&2): 2002	Absent/Present/100 ml
		Vibrio parahaemolyticus	IS 5887 (Part-5):1976	Absent / Present/ 100 ml

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		Clostridium perfringens (including spores)	IS 13428: 2005, Annexure C Annex-III of EN98/83/EC	Absent/Present/ 100 ml
		Vibrio cholerae,	IS 5887 (Part-5) :1976 IS 15188: 2002	Absent/Present/ 100 ml
5.	Water intended for Human Consumption (98/83/EC)	Total viable colony count @37°C for 24 hrs	ISO 4833 - 2003 IS 5402-2012	≥ 1 cfu/ml
	(50,00,20)	Total viable colony count @ 22°C for 72 hrs	ISO 4833 - 2003 IS 5402-2012	≥ 1 cfu/ml
		Coliforms	15185-2002 ISO:9308(Part 1):2000	Absent/Present/ 100/250 ml
		E.coli	15185-2002 ISO:9308(Part 1):2000	Absent/Present/ 100/250 ml
		Enterococci	ISO 7899-2 : 2000 IS 15186:2002	Absent/Present/ 100/ 250 ml
		Pseudomonas aeruginosa	IS 13428:2005, Annexure D	Absent/Present/ 100/ 250 ml
		Clostridium perfringens (including spores)	Annex-III of EN98/83/EC	Absent/Present/ 100/ 250 ml
6.	Microbiological test for Ultraviolet disinfection system (IS: 14724)	By Sarcina lutea (Micrococcus luteus)	IS 14724:1999 Annexure A	≥ 99.9% reduction

Laboratory	Testing Services-CommGrade, National Collateral Management Services Limited, Plot No. A-1/2/A, 4th - 6th Floor, IDA Uppal, Uppal, Hyderabad		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Biological Testing	Issue Date	26.08.2013
Certificate Number	T-1657	Valid Until	25.08.2015

25.11.2013

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
III.	MICROBIOLOGIC	CAL MONITORING OF ENVIR	RONMENTAL SAMPLES	
1.	Swabs	Total Plate Count	IS 5402: 2012 IS 4833 :2003	≥1 cfu /cm ²
		Total Coliforms	IS 5401(Part-1): 2002 ISO 4832:1991	≥1 cfu /cm ²
		Yeasts & Moulds	IS 5403: 1999	$\geq 1 \text{ cfu /cm}^2$
		E.coli	IS 5887(Part-1): 1976	≥1 cfu / cm ² Absent/Present / cm ²
		Staphylococcus aureus	IS 5887(Part-2): 1976	\geq 1 cfu / cm ² Absent/Present / cm ²
		Salmonella	IS 5887(Part-3): 1999	Absent/Present /1/50 cm ²
	Plate Exposure	Total Plate Count	Compendium of methods for the	≥1cfu / plate
	method	Total Coliforms	microbiological examination of foods (APHA) 4 th Edition, 2001,	≥1cfu / plate
		Yeasts & Moulds	Chapter 3	≥1cfu / plate
		E.coli		Absent/Present / plate
		Staphylococcus aureus		Absent/Present / plate

^{*}NOTE: The Laboratory has demonstrated competence for the stated scope for WATER. This however <u>does not fully cover</u> the specification requirements of **BIS for the Packaged Drinking Water as per IS:14543 and the Packaged Natural Mineral Water IS:13428.**