Laboratory Bureau Veritas India Private Limited, Food Laboratory, Plot No. B3/B4,

TTC Industrial Area, Digha MIDC, Digha, Thane, Navi Mumbai,

Maharashtra

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SI.	Product / Material of Test	Specific Test Performed	•	Range of Testing / Limits of Detection
			performed	

## **BIOLOGICAL TESTING**

I.	FOOD AND AGRIC	CULTURAL PRODUCTS		
1.	Tea (Tea, Instant	Aerobic Microbial Count/ Total Plate Count/	IS 5402: 2012 (RA 2018) ISO 4833: 2003	≥ 10 cfu/g
	Tea, Green Tea)	Total Viable Count/ Total Bacterial Count	ISO 4833-1: 2013	≥ 10 cfu/g
		Yeast and Mould Count	IS 5403: 1999 (RA 2018)	≥ 10 cfu/g
! ! !			ISO 21527-2: 2008	≥ 10 cfu/g
		Enumeration of	IS 5401 (Part 1): 2012	≥ 10 cfu/g
		Coliforms	(RA 2018) ISO 4832: 2006	
			IS 5401 (Part 2): 2012 (RA 2018) ISO 4831: 2006	< 0.3 MPN/g to 110 MPN/g
		Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018)	≥ 10 cfu/g
				< 0.3 MPN/g to 110 MPN/g
		E. coli	IS 5887 (Part 1): 1976 (RA 2018)	< 0.3 MPN/g to 110 MPN/g
				Qualitative (Presence or Absence per g)
			ISO 7251: 2005	Qualitative (Presence or Absence per g or 25g)
				0.3 MPN to ≥110 MPN 0.18 MPN to 160 MPN
		Staphylococcus aureus	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence per 25g)

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		Faecal streptococci	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence per 25g) < 0.3 MPN/g to
		Salmonella spp.	IS 5887 (Part 3): 1999 (RA 2018)	110 MPN/g Qualitative (Presence or Absence per 25g to 375g)
			ISO 6579-1: 2017	Qualitative (Presence or Absence per 25g to 375g)
		Clostridium perfringens	IS 5887 (Part 4): 1999 (RA 2018)	Qualitative (Presence or Absence per 25g)
		Vibrio Cholerae and Vibrio parahaemolyticus	IS 5887 (Part 5): 1976 (RA 2018)	Qualitative (Presence or Absence per 25g)
		Shigella	IS 5887 (Part 7): 1999 (RA 2018)	Qualitative (Presence or Absence per 25g)
			ISO 21567: 2004	Qualitative (Presence or Absence per 25g)
		Listeria monocytogenes	IS 14988 (Part 1): 2001 (RA 2018)	Qualitative (Presence or Absence per 25g)
		Enumeration of Faecal Coliforms	Bacteriological Analytical Manual– USFD- 2017, Chapter 4	< 3 MPN/g to 1100 MPN/g
		Pseudomonas aeruginosa	IP-2014, Cl. 2.2.9	Qualitative (Presence or Absence /g)

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2.	Sugar and Sugar Products	Aerobic Microbial Count/ Total Plate Count/	IS 5402: 2012 (RA 2018) ISO 4833: 2003	≥ 10 cfu/g
	(Sugar, Jaggery, Sweets and Sugar	Total Viable Count/ Total Bacterial Count	ISO 4833-1: 2013	≥ 10 cfu/g
	boiled Confectionary	Yeast and Mould Count	IS 5403: 1999 (RA 2018) ISO 21527-2: 2008	≥ 10 cfu/g ≥ 10 cfu/g
	Lozenges, Chewing Gum and Bubble	Enumeration of Coliforms	IS 5401 (Part 1): 2012 (RA 2018) ISO 4832: 2006	≥ 10 cfu/g
	Gum, Ice Lollies or Edible Ice Jelly		IS 5401(Part 2): 2012 (RA 2018) ISO 4831:2006	< 0.3 MPN/g to 110 MPN/g
	Candy Drops)	Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018)	≥ 10 cfu/g < 0.3 MPN/g to 110 MPN/g
		E. coli	IS 5887 (Part 1): 1976 (RA 2018)	< 0.3 MPN/g to 110 MPN/g Qualitative
				(Presence or Absence /g)
			ISO 7251: 2005	Qualitative (Presence or Absence /25g)
				0.3 MPN to ≥110 MPN 0.18 MPN to 160 MPN
		S. aureus	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
		Faecal Streptococci	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
				< 0.3 MPN/g to 110 MPN/g

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		Salmonella spp.	ISO 6579-1: 2017	Qualitative (Presence or Absence per 25g to 375g)
			IS 5887(Part 3): 1999 (RA 2018)	Qualitative (Presence or Absence per 25g to 375g)
		Clostridium perfringens	IS 5887 (Part 4): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
		Vibrio Cholerae and Vibrio parahaemolyticus	IS 5887 (Part 5): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
		Shigella	IS 5887 (Part 7): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
			ISO 21567: 2004	Qualitative (Presence or Absence /25g)
		Listeria monocytogenes	IS 14988 (Part 1): 2001 (RA 2018)	Qualitative (Presence or Absence /25g)
		Enumeration of Faecal Coliforms	Bacteriological Analytical Manual– USFD- 2017, Chapter 4	< 3 MPN/g to 1100 MPN/g
		Pseudomonas aeruginosa	IP-2014, Cl. 2.2.9	Qualitative (Presence or Absence /g)
3.	Herbs, Spices and Condiments	Aerobic Microbial Count/ Total Plate Count/	IS 5402: 2012 (RA 2018) ISO 4833: 2003	≥ 10 cfu/g
	(Edible spice whole, ground, or	Total Viable Count/ Total Bacterial Count	ISO 4833-1: 2013	≥ 10 cfu/g
	mixed turmeric, chilies, cinnamon,	Yeast and Mould Count	IS 5403: 1999 (RA 2018) ISO 21527-2: 2008	≥ 10 cfu/g ≥ 10 cfu/g
	cumin seeds,	Enumeration of	IS 5401 (Part 1): 2012	≥ 10 cfu/g

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	cardamom, tamarind, spice	Coliforms	(RA 2018) ISO 4832: 2006	
	blends, herbs)		IS 5401 (Part 2): 2012 (RA 2018) ISO 4831: 2006	< 0.3 MPN/g to 110 MPN/g
		Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018)	≥ 10 cfu/g < 0.3 MPN/g to 110 MPN/g
		E. coli	IS 5887 (Part 1): 1976 (RA 2018)	< 0.3 MPN/g to 110 MPN/g
				Qualitative (Presence or Absence /g)
			ISO 7251: 2005	Qualitative (Presence or Absence /25g)
				0.3 MPN to ≥110 MPN 0.18 MPN to 160 MPN
		Staphylococcus aureus	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
			IS 5887 (Part 8/Section-1): 2002 (RA 2018) ISO 6888-1: 1999	≥ 10 cfu/g
			ISO 6888-1: 1999 Ammd-1 2003	≥ 10 cfu/g
		Faecal Streptococci	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
				< 0.3 MPN/g to 110 MPN/g
		Salmonella spp.	IS 5887(Part 3): 1999 (RA 2018)	Qualitative (Presence or Absence per 25g to 375g)

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			ISO 6579-1: 2017	Qualitative (Presence or Absence per 25g to 375g)
		Clostridium perfringens	IS 5887 (Part 4): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
		Vibrio Cholerae and Vibrio parahaemolyticus	IS 5887 (Part 5): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
		Bacillus cereus	IS 5887 (Part 6): 2012 (RA 2018) ISO 7932: 2006	≥ 10 cfu/g
		Shigella spp.	IS 5887 (Part 7): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
			ISO 21567: 2004	Qualitative (Presence or Absence /25g)
		Listeria monocytogenes	IS 14988 (Part 1): 2001 (RA 2018)	Qualitative (Presence or Absence /25g)
		Enumeration of Faecal Coliforms	Bacteriological Analytical Manual– USFD- 2017, Chapter 4	< 3 MPN/g to 1100 MPN/g
		Pseudomonas aeruginosa	IP-2014, Cl. 2.2.9	Qualitative (Presence or Absence /g)
4.	Oil seeds and its by products	Aerobic Microbial Count/ Total Plate Count/	IS 5402: 2012 (RA 2018) ISO 4833: 2003	≥ 10 cfu/g
	(Edible or non-edible fat, all	Total Viable Count/ Total Bacterial Count	ISO 4833-1: 2013	≥ 10 cfu/g
	oil seeds, groundnut,	Yeast and Mould count	IS 5403: 1999 (RA 2018) ISO 21527-2: 2008	≥ 10 cfu/g ≥ 10 cfu/g
	sesame,	Enumeration of	IS 5401 (Part 1): 2012	≥ 10 cfu/g

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	coconut, ghee, butter, tallow,	Coliforms	(RA 2018) ISO 4832: 2006	
	cooking fat, spreading fat, any other oil (Crude /		IS 5401 (Part 2): 2012 (RA 2018) ISO 4831: 2006	< 0.3 MPN/g or mL to 110 MPN/g or mL
	Refined / Blend) / fat)	Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018)	≥ 10 cfu/g < 0.3 MPN/g to 110 MPN/g
		E. coli	IS 5887 (Part 1): 1976 (RA 2018)	< 0.3 MPN/g to 110 MPN/g
				Qualitative (Presence or Absence /g)
			ISO 7251: 2005	Qualitative (Presence or Absence /25g)
				0.3 MPN to ≥110 MPN 0.18 MPN to 160 MPN
		S. aureus	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
			IS 5887 (Part 8/Section-1): 2002 (RA 2018) ISO 6888-1: 1999	≥ 10 cfu/g
			ISO 6888-1: 1999 Ammd-1 2003	≥ 10 cfu/g
		Faecal Streptococci	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
				< 0.3 MPN/g to 110 MPN/g
		Salmonella spp.	IS 5887 (Part 3): 1999 (RA 2018)	Qualitative (Presence or Absence per 25g to 375g)

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			ISO 6579-1: 2017	Qualitative (Presence or Absence per 25g to 375g)
		Clostridium perfringens	IS 5887 (Part 4): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
		Vibrio cholerae and V. parahaemolyticus	IS 5887 (Part 5): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
		Bacillus cereus	IS 5887 (Part 6): 2012 (RA 2018) ISO 7932: 2006	≥ 10 cfu/g
		Shigella	IS 5887 (Part 7): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
			ISO 21567: 2004	Qualitative (Presence or Absence /25g)
		Listeria monocytogenes	IS 14988 (Part 1): 2001 (RA 2018)	Qualitative (Presence or Absence /25g)
		Enumeration of Faecal Coliforms	Bacteriological Analytical Manual– USFD- 2017, Chapter 4	< 3 MPN/g to 1100 MPN/g
		Pseudomonas aeruginosa	IP-2014, Cl. 2.2.9	Qualitative (Presence or Absence /g)
5.	Poultry and Poultry Products	Aerobic Microbial Count/ Total Plate Count/	IS 5402: 2012 (RA 2018) ISO 4833: 2003	≥ 10 cfu/g
	(Egg and Egg Products	Total Viable Count/ Total Bacterial Count	ISO 4833-1: 2013	≥ 10 cfu/g
	Raw egg, egg powder, whole	Yeast and Mould count	IS 5403: 1999 (RA 2018) ISO 21527-1: 2008	≥ 10 cfu/g ≥ 10 cfu/g
	egg	Enumeration of	IS 5401 (Part 1): 2012	≥ 10 cfu/g

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	powder, Albumin & yolk, chicken)	Coliforms	(RA 2018) ISO 4832: 2006	
			IS 5401 (Part 2): 2012 (RA 2018) ISO 4831: 2006	< 0.3 MPN/g to 110 MPN/g
		Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018)	≥ 10 cfu/g < 0.3 MPN/g to 110 MPN/g
		E. coli	IS 5887 (Part 1): 1976 (RA 2018)	< 0.3 MPN/g to 110 MPN/g
				Qualitative (Presence or Absence /g)
			ISO 7251: 2005	Qualitative (Presence or Absence /25g)
				0.3 MPN to ≥110 MPN 0.18 MPN to 160 MPN
		Staphylococcus aureus	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
			IS 5887 (Part 8/Section-1): 2002 (RA 2018) ISO 6888-1: 1999	≥ 10 cfu/g
			ISO 6888-1: 1999 Ammd-1 2003	≥ 10 cfu/g
		Faecal streptococci	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
				< 0.3 MPN/g to 110 MPN/g
		Salmonella spp.	IS5887 (Part 3): 1999 (RA 2018)	Qualitative (Presence or Absence per 25g to 375g)

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			ISO 6579-1: 2017	Qualitative (Presence or Absence per 25g to 375g)
		Vibrio cholerae and Vibrio parahaemolyticus	IS 5887 (Part 5): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
		Bacillus cereus	IS 5887 (Part 6): 2012 (RA 2018) ISO 7932: 2004	≥ 10 cfu/g
		Clostridium perfringens	IS 5887 (Part 4): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
		Shigella	IS 5887 (Part 7): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
			ISO 21567: 2004	Qualitative (Presence or Absence /25g)
		Listeria monocytogenes	IS 14988 (Part 1): 2001 (RA 2018)	Qualitative (Presence or Absence /25g)
		Enumeration of Faecal Coliforms	Bacteriological Analytical Manual– USFD- 2017, Chapter 4	< 3 MPN/g to 1100 MPN/g
6.	Meat and meat products	Aerobic Microbial Count/ Total Plate Count/	IS 5402: 2012 (RA 2018) ISO 4833: 2003	≥ 10 cfu/g
		Total Viable Count/ Total Bacterial Count	ISO 4833-1: 2013	≥ 10 cfu/g
		Yeast and Mould count	IS 5403: 1999 (RA 2018)	≥ 10 cfu/g
		Enumeration of Coliforms	ISO 21527-1: 2008 IS 5401 (Part 1): 2012 (RA 2018) ISO 4832: 2006	≥ 10 cfu/g ≥ 10 cfu/g

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			IS 5401 (Part 2): 2012 (RA 2018) ISO 4831: 2006	< 0.3 MPN/g to 110 MPN/g
		Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018)	≥ 10 cfu/g
				< 0.3 MPN/g to 110 MPN/g
		E. coli	IS 5887 (Part 1): 1976 (RA 2018)	< 0.3 MPN/g to 110 MPN/g
				Qualitative (Presence or Absence/g)
			ISO 7251: 2005	Qualitative (Presence or Absence /25g)
				0.3 MPN to ≥110 MPN 0.18 MPN to 160 MPN
		Staphylococcus aureus	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
			IS 5887 (Part 8/Section-1): 2002 (RA 2018) ISO 6888-1: 1999	≥ 10 cfu/g
			ISO 6888-1: 1999 Ammd-1 2003	≥ 10 cfu/g
		Faecal streptococci	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
				< 0.3 MPN/g to 110 MPN/g
		Salmonella spp.	IS 5887 (Part 3): 1999 (RA 2018)	Qualitative (Presence or Absence per 25g to 375g)
			ISO 6579-1: 2017	Qualitative (Presence or Absence

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				per 25g to 375g)
		Vibrio cholerae and	IS 5887 (Part 5): 1976	Qualitative
		Vibrio parahaemolyticus	(RA 2018)	(Presence or Absence
				/25g)
		Bacillus cereus	IS 5887 (Part 6): 2012 (RA 2018) ISO 7932: 2004	≥ 10 cfu/g
		Clostridium perfringens	IS 5887 (Part 4): 1999	Qualitative
			(RA 2018)	(Presence or Absence /25g)
		Shigella	IS 5887 (Part 7): 1999	Qualitative
			(RA 2018)	(Presence or Absence
				/25g)
			ISO 21567: 2004	Qualitative
				(Presence or Absence /25g)
		Listeria monocytogenes	IS 14988 (Part 1): 2001	Qualitative
			(RA 2018)	(Presence or Absence
			<u> </u>	/25g)
		Enumeration of Faecal	Bacteriological Analytical	< 3 MPN/g to
		Coliforms	Manual- USFD- 2017, Chapter 4	1100 MPN/g
7.	Milk and Dairy	Aerobic Microbial Count/	IS 5402: 2012 (RA 2018)	≥1 cfu/mL
	Products	Total Plate Count/	ISO 4833: 2003	≥ 10 cfu/g
	(Milk, Paneer,	Total Viable Count/	ISO 4833-1: 2013	≥1 cfu/mL
	Cheese, Butter,	Total Bacterial Count		≥ 10 cfu/g
	Ghee, Chocolate	Yeast and Mould count	IS 5403: 1999 (RA 2018)	≥1 cfu/mL
	and chocolate			≥ 10 cfu/g
	products/		ISO 21527-1: 2008	≥1 cfu/mL
	Whey Products, Milk Powder /		100 04507 0: 0000	≥ 10 cfu/g
	Milk-Cereal Based		ISO 21527-2: 2008	≥1 cfu/mL
	Foods /	Enumeration of	IS 5401 (Port 1): 2012	≥ 10 cfu/g ≥1 cfu/mL
	Processed	Coliforms	IS 5401 (Part 1): 2012 (RA 2018)	≥1 Clu/mL ≥ 10 cfu/g
		COMOTHS	(NA 2010)	= 10 Clu/g

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[	Cereal Based		ISO 4832: 2006	
	Complementary		IS 5401 (Part 2): 2012	≥1 cfu/mL
	Foods & Related		(RA 2018)	≥ 10 cfu/g
	products)		ISO 4831: 2006	
		Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018)	≥ 10 cfu/g
				≥1 cfu/ mL
		E. coli	IS 5887 (Part 1): 1976	≥ 10 cfu/g
			(RA 2018)	≥1 cfu/ mL
			ISO 7251: 2005	Qualitative
				(Presence or Absence
				per 25g or 25 mL)
				0.3 MPN to ≥110 MPN
ļ			<u> </u>	0.18 MPN to 160 MPN
		S. aureus	IS 5887 (Part 2): 1976	Qualitative
			(RA 2018)	(Presence or Absence
ļ				/25g)
			IS 5887 (Part 8/Section-1):	≥ 10 cfu/g
			2002 (RA 2018)	≥1 cfu/ mL
ļ 			ISO 6888-1: 1999	
			ISO 6888-1: 1999	(< 0.3 MPN to 110
ļ			Ammd-1 2003	MPN)/g or mL
		Faecal Streptococci	IS 5887 (Part 2): 1976	(< 0.3 MPN to 110
			(RA 2018)	MPN)/g or mL
				Qualitative
				(Presence or Absence
ļ		0.1	10.5007 (5.10) 4000	per g or mL)
		Salmonella spp.	IS 5887 (Part 3): 1999	Qualitative
			(RA 2018)	(Presence or Absence
ļ			ISO 6579-1: 2017	per 25g or 25 mL) 0.3 MPN to ≥110 MPN
ļ		Clostridium perfringens	IS 5887 (Part 4): 1999	0.18 MPN to 160 MPN
			(RA 2018)	
		Vibrio cholerae and	IS 5887 (Part 5): 1976	Qualitative
		Vibrio parahaemolyticus	(RA 2018)	(Presence or Absence

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[				per 25g or 25mL)
		Bacillus cereus	IS 5887 (Part 6): 2012	≥1 cfu/ mL or
			(RA 2018)	≥ 10 cfu/g
			ISO 7932: 2006	
		Shigella spp.	IS 5887 (Part 7): 1999	Qualitative
			(RA 2018)	(Presence or Absence
			, ,	per 25g or 25mL)
			ISO 21567: 2004	≥1 cfu/ mL or
<u> </u>				≥ 10 cfu/g
		Listeria monocytogenes	IS 14988 (Part 1): 2001	≥1 cfu/ mL or
<u> </u>			(RA 2018)	≥ 10 cfu/g
			IS 14988 (Part 2): 2002	Qualitative
			(RA 2018)	(Presence or Absence
ļ				per 25g or 25mL)
		Enumeration of Faecal	Bacteriological Analytical	(< 0.3 MPN to 110
		Coliforms	Manual- USFD- 2017, Chapter 4	MPN)/g or mL
		Pseudomonas	IP-2014, Cl. 2.2.9	Qualitative
		aeruginosa		(Presence or
ļ				Absence/g)
8.	Bakery and confectionery	Aerobic Microbial Count/ Total Plate Count/	IS 5402: 2012 (RA 2018) ISO 4833: 2003	≥ 10 cfu/g
	products (Biscuits, Bread,	Total Viable Count/ Total Bacterial Count	ISO 4833-1: 2013	≥ 10 cfu/g
	Cakes, Cookies,	Yeast and Mould count	IS 5403: 1999 (RA 2018)	≥ 10 cfu/g
	Cookies Mix, Cake		ISO 21527-1: 2008	≥ 10 cfu/g
	Mix, Chocolates,		ISO 21527-2: 2008	≥ 10 cfu/g
	Nankatai, Bread	Enumeration of	IS 5401 (Part 1): 2012	≥ 10 cfu/g
	Sticks, Toast,	Coliforms	(RA 2018)	
<u> </u>	Sugar boiled		ISO 4832: 2006	
	confectionary,		IS 5401 (Part 2): 2012	< 0.3 MPN/g to
	Lozenges,		(RA 2018)	110 MPN/g
<u> </u>	Chewing		ISO 4831: 2006	<u> </u>
	gum, bubble gum,	Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018)	≥ 10 cfu/g

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	Chocolate, Ice Lollies and Edible			< 0.3 MPN/g to 110 MPN/g
	Ices)	E. coli	IS 5887 (Part 1): 1976 (RA 2018)	< 0.3 MPN/g to 110 MPN/g
				Qualitative (Presence or Absence/g)
			ISO 7251: 2005	Qualitative (Presence or Absence /25g)
				MPN 0.3 to ≥110 MPN 0.18 to 160
		Staphylococcus aureus	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
			IS 5887 (Part 8/Section-1): 2002 (RA 2018) ISO 6888-1: 1999	≥ 10 cfu/g
			ISO 6888-1: 1999 Ammd-1 2003	≥ 10 cfu/g
		Faecal Streptococci	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
				(< 0.3 MPN to 110 MPN)/g or mL
		Salmonella spp.	IS 5887 (Part 3): 1999 (RA 2018)	Qualitative (Presence or Absence /25 g to 375g)
			ISO 6579-1: 2017	Qualitative (Presence or Absence per 25g to 375g)

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Clostridium perfringens	IS 5887 (Part 4): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
		Vibrio cholerae and Vibrio parahaemolyticus	IS 5887 (Part 5): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
		Bacillus cereus	IS 5887 (Part 6): 2012 (RA 2018) ISO 7932: 2006	≥ 10 cfu/g
		Shigella spp.	IS 5887 (Part 7): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
			ISO 21567: 2004	Qualitative (Presence or Absence /25g)
		Listeria monocytogenes	IS 14988 (Part 1): 2001 (RA 2018)	Qualitative (Presence or Absence /25g)
		Enumeration of Faecal Coliforms	Bacteriological Analytical Manual– USFD- 2017, Chapter 4	< 3 MPN/g to 1100 MPN/g
		Pseudomonas aeruginosa	IP-2014, Cl. 2.2.9	Qualitative (Presence or Absence /g)
9.	Canned, processed foods	Aerobic Microbial Count/ Total Plate Count/	IS 5402: 2012 (RA 2018) ISO 4833: 2003	≥ 10 cfu/g
	(Ready to eat/ cook, canned or	Total Viable Count/ Total Bacterial Count	ISO 4833-1: 2013	≥ 10 cfu/g
	processed	Yeast and Mould count	IS 5403: 1999 (RA 2018)	≥ 10 cfu/g
<b> </b>	products)		ISO 21527-1: 2008 ISO 21527-2: 2008	≥ 10 cfu/g ≥ 10 cfu/g
		Enumeration of Coliforms	IS 5401 (Part 1): 2012 (RA 2018)	≥ 10 cfu/g ≥ 10 cfu/g

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[			ISO 4832: 2006	
}			IS 5401 (Part 2): 2012 (RA 2018) ISO 4831: 2006	< 0.3 MPN/g to 110 MPN/g
		Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018)	≥ 10 cfu/g
				< 0.3 MPN/g to 110 MPN/g
		E. coli	IS 5887 (Part 1): 1976 (RA 2018)	< 0.3 MPN/g to 110 MPN/g
				Qualitative (Presence or Absence /g)
			ISO 7251: 2005	Qualitative (Presence or Absence /25g)
				0.3 MPN to ≥110 MPN 0.18 MPN to 160 MPN
		Staphylococcus aureus	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
			IS 5887 (Part 8/Section-1: 2002) (RA 2018) ISO 6888-1: 1999	≥ 10 cfu/g
			ISO 6888-1: 1999 Ammd-1 2003	≥ 10 cfu/g
		Salmonella	IS 5887 (Part 3): 1999 (RA 2018)	Qualitative (Presence or Absence /25 g to 375g)
			ISO 6579-1: 2017	Qualitative (Presence or Absence per 25g to 375g)
		Clostridium perfringens	IS 5887 (Part 4): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Vibrio cholerae and Vibrio parahaemolyticus	IS 5887 (Part 5): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
		Bacillus cereus	IS 5887 (Part 6): 2012 (RA 2018) ISO 7936: 2006	≥ 10 cfu/g
		Shigella spp.	IS 5887 (Part 7): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
			ISO 21567: 2004	Qualitative (Presence or Absence /25g)
		Listeria monocytogenes	IS 14988 (Part 1): 2001 (RA 2018)	Qualitative (Presence or Absence /25g)
		Faecal streptococi	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
				< 0.3 MPN/g to 110 MPN/g
		Incubation at 37°C for 10 days	IS 2860: 1964 (RA 2018)	Qualitative [Negative or Positive (Change/no change in Physical /chemical characteristic; microbial activity present/absent)]
		Incubation at 55°C for 7 days	IS 2860: 1964 (RA 2018)	Qualitative [Negative or Positive (Change/no change in Physical /chemical characteristic; microbial activity present/absent)]

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		Sulphite Reducing Clostridia	ISO 15213: 2003	≥ 10 cfu/g
		Enumeration of Faecal Coliforms	Bacteriological Analytical Manual– USFD- 2017, Chapter 4	< 3 MPN/g to 1100 MPN/g
10.	Cereal and its products	Aerobic Microbial Count/ Total Plate Count/	IS 5402: 2012 (RA 2018) ISO 4833: 2003	≥ 10 cfu/g
	(Flour, Food grains, Pulses &	Total Viable Count/ Total Bacterial Count	ISO 4833-1: 2013	≥ 10 cfu/g
	Macaroni Products	Yeast and Mould count	IS 5403: 1999 (RA 2018) ISO 21527-2: 2008	≥ 10 cfu/g ≥ 10 cfu/g
	(Pasta, Vermicelli & Noodles)	Enumeration of Coliforms	IS 5401 (Part 1): 2012 (RA 2018) ISO 4832: 2006	≥ 10 cfu/g
	Malted & Malt based foods Starchy,		IS 5401 (Part 2): 2012 (RA 2018) ISO 4831: 2006	< 0.3 MPN/g to 110 MPN/g
	Other related products)	Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018)	≥ 10 cfu/g
				< 0.3 MPN/g to 110 MPN/g
		E. coli	IS 5887 (Part 1): 1976 (RA 2018)	< 0.3 MPN/g to 110 MPN/g
				Qualitative (Presence or Absence /g)
			ISO 7251: 2005	Qualitative (Presence or Absence /25g)
				0.3 MPN to ≥110 MPN 0.18 MPN to 160 MPN
		S. aureus	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)

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			IS 5887 (Part 8/Section-1): 2002 (RA 2018) ISO 6888-1: 1999	≥ 10 cfu/g
			ISO 6888-1: 1999 Ammd-1 2003	≥ 10 cfu/g
		Faecal Streptococci	IS 5887 (Part 2): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
				< 0.3 MPN/g to 110 MPN/g
		Salmonella spp.	IS 5887 (Part 3): 1999 (RA 2018)	Qualitative (Presence or Absence per 25g to 375g)
			ISO 6579-1: 2017	Qualitative (Presence or Absence per 25g to 375g)
		Clostridium perfringens	IS 5887 (Part 4): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
		Vibrio cholerae and V. parahaemolyticus	IS 5887 (Part 5): 1976 (RA 2018)	Qualitative (Presence or Absence /25g)
		Bacillus cereus	IS 5887 (Part 6): 2012 (RA 2018) ISO 7932: 2006	≥ 10 cfu/g
		Shigella	IS 5887 (Part 7): 1999 (RA 2018)	Qualitative (Presence or Absence /25g)
			ISO 21567: 2004	Qualitative (Presence or Absence /25g)
		Listeria monocytogenes	IS 14988 (Part 1): 2001 (RA 2018)	Qualitative (Presence or Absence /25g)

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Enumeration of Faecal Coliforms	Bacteriological Analytical Manual– USFD- 2017, Chapter 4	< 3 MPN/g to 1100 MPN/g
II.	WATER			
1.	Drinking water	Coliforms	IS 1622: 1981 (RA 2014)	< 2 MPN/ 100mL to 1600 MPN/ 100mL < 1 MPN/ 100mL to 161 MPN/ 100mL
		Faecal coliform	IS 1622: 1981 (RA 2014)	< 2 MPN/ 100mL to 1600 MPN/ 100mL
		E. coli	IS 1622: 1981 (RA 2014)	< 2 MPN/ 100mL to 1600 MPN/ 100mL
		Standard plate count	IS 1622: 1981 (RA 2014)	≥1 cfu/mL
2.	Water for swimming pool	Standard Plate Count	IS 3328: 1993 Ammd-1 July 2010 (RA 2013)	≥1 cfu/mL
	and Spa	Coliforms	IS 1622: 1981 (RA 2014)	< 2 MPN/ 100mL to 1600 MPN/ 100mL
III.	ENVIRONMENT AN	D POLLUTION		
1.	Microbiological monitoring of air	Total Plate Count	Compendium of Methods for microbiological examinations of food (5 <sup>th</sup> Edition, 2015) Chapter 3 & ISO 7218: 2007 Ammendement-01: 2013	≥1 cfu/ 90 mm plate/ Duration of Exposure
		Total Yeast & Mould Count	Compendium of Methods for microbiological examinations of food (5 <sup>th</sup> Edition, 2015) Chapter 3 & ISO 7218: 2007 Ammendement-01: 2013	≥1 cfu / 90 mm plate/ Duration of Exposure

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2.	Microbiological monitoring of surface (swab method)	Total plate Count	IS 5402: 2012 (RA 2018) ISO 4833: 2003 extended method for swabbing (based on ISO 18593: 2004.) ISO 18593: 2004 (for Swab collection)	≥1 cfu/mL
		Yeast and Mould Count	IS 5402: 2012 (RA 2018) ISO 4833: 2003 extended method for swabbing (based on ISO 18593: 2004) ISO 18593: 2004 (for Swab collection)	≥1 cfu/mL
		Coliform count	IS 5401 (Part 1): 2012 (RA 2018) ISO 4832: 2006 extended method for swabbing (based on ISO 18593: 2004) ISO 18593: 2004 (for Swab collection)	≥1 cfu/mL
		Enterobacteriaceae	IS/ISO 7402: 1993 (RA 2018) extended method for swabbing (based on ISO 18593: 2004) ISO 18593: 2004 (for Swab collection)	≥1 cfu/mL
		E. coli	IS 5887 (Part 1): 1976 (RA 2018) extended method for swabbing (based on ISO 18593:2004) ISO 18593:2004 (for Swab collection)	Qualitative (Present/ Absent per Swab)
		Salmonella	IS 5887 (Part 3): 1999 (RA 2018) Extended method for swabbing (based on ISO 18593: 2004)	Qualitative (Present/ Absent per Swab)

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[			ISO 18593: 2004	
			(for Swab collection)	
		L. monocytogenes	IS 14988 (Part 1): 2001	Qualitative
			(RA 2018)	(Present/ Absent per
			extended method for swabbing	Swab)
			(based on ISO 18593: 2004)	
			ISO 18593: 2004	
<u> </u>			(for Swab collection)	
		S. aureus	IS 5887 (Part 2): 1976	Qualitative
			(RA 2018)	(Present/ Absent per
			extended method for swabbing	Swab)
			(based on ISO 18593: 2004.)	
			ISO 18593: 2004	
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(for Swab collection)	
		Vibrio cholerae	IS 5887 (Part 5): 1976	Qualitative
			(RA 2018)	(Present/ Absent per
			Extended method for swabbing	Swab)
			(based on ISO 18593:2004.)	
			ISO 18593: 2004	
l			(for Swab collection)	

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SI.	Product / Material of Test	Specific Test Performed	•	Range of Testing / Limits of Detection
			performed	

## **CHEMICAL TESTING**

I.	FOOD AND AGRIC	ULTURAL PRODUCTS		
1.	Cereals, Pulses	Particle size	IS 4706-1:1978 (RA 2015)	0.1 % to 100 %
	and Cereal		IS 1010: 1968 (RA 2015)	0.1 % to 100 %
	Products		IS 1158: 1973 (RA 2010)	0.1 % to 100 %
	(Flour, Food	Granularity	IS 1155: 1968 (RA 2015)	0.1 % to 100 %
	grains, Pulses &		IS 1009: 1979 (RA 2015)	0.1 % to 100 %
	Starchy Foods)	Moisture	IS 4333-2: 2017	0.20 % to 25 %
			IS 1155: 1968 (RA 2015)	0.20 % to 25 %
			IS 1158: 1973 (RA 2010)	0.20 % to 25 %
<u> </u>			IS 1009: 1979 (RA 2015)	0.20 % to 25 %
<u> </u>			IS 1010: 1968 (RA 2015)	0.20 % to 25 %
<u> </u>		Total ash	IS 1155: 1968 (RA 2015)	0.5 % to 20 %
 			IS 1009: 1979 (RA 2015)	0.5 % to 20 %
ļ 			IS 1010: 1968 (RA 2015)	0.5 % to 20 %
ļ 		Crude fiber	IS 1155: 1968 (RA 2015)	0.50 % to 25 %
ļ			IS 10226-1: 1982 (RA 2015)	0.50 % to 25 %
ļ			IS 1158: 1973 (RA 2010)	0.50 % to 25 %
ļ		Protein	IS 7219: 1973 (RA 2015)	0.50 % to 20 %
		Alcoholic Acidity	IS 1155: 1968 (RA 2015)	0.01 % to 10 %
<u> </u>			IS 1009: 1979 (RA 2015)	0.01 % to 10 %
			IS 1158: 1973 (RA 2010)	0.01 % to 10 %
			IS 1010: 1968 (RA 2015)	0.01 % to 10 %
		Gluten	IS 1009: 1979 (RA 2015)	5 % to 20 %
			IS 1155: 1968 (RA 2015)	5 % to 20 %
			IS 1010: 1968 (RA 2015)	5 % to 20 %
		Acid insoluble ash	IS 1155: 1968 (RA 2015)	0.01 % to 5 %
			IS 1158: 1973 (RA 2010)	0.01 % to 5 %
			IS 1009: 1979 (RA 2015)	0.01 % to 5 %
			IS 1010: 1968 (RA 2015)	0.01 % to 5 %

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2.	Food grains (Wheat, Maize,	Refractions (Physical examination)		
	Rice, Barley, gram, chick pea, Millets)	Foreign matter Other food grains Damaged grains Discolored grains	IS 4333-1: 1996 (RA 2017) IS 4333-1: 1996 (RA 2017) IS 4333-1: 1996 (RA 2017) IS 4333-1: 1996 (RA 2017)	0 to 20 % 0 to 20 % 0 to 20 % 0 to 20 %
		Insect damaged grains Slightly damaged grains	IS 4333-1: 1996 (RA 2017)	0 to 20 % 0 to 20 % 0 to 20 % 0 to 20 %
		Broken grains Shriveled or immature Kernels with husk Red grain	IS 4333-1: 1996 (RA 2017)	0 to 20 % 0 to 20 % 0 to 20 %
		Chalky grain Mass of 1000 grains	IS 4333-1: 1996 (RA 2017) IS 4333-4: 2017 ISO 520: 1977 (RA 2012)	0 to 20 % 5 g to 500 g
3.	Milk and Dairy products (Milk, Paneer, Cheese, Butter, Chocolate and chocolate	Total solids  pH	IS 1479-2: 1961 (RA 2017) IS 12333: 2018 IS 1166: 1986 (RA 2017) IS 2802: 1964 (RA 2016) FSSAI manual of methods of analysis of food – Milk and	1 % to 100 % 1 % to 100 % 1 % to 100 % 1 % to 100 % 1 to 14
	products/ Whey Products, Milk Powder / Milk-Cereal Based Foods / Processed	Total Fat	milk products- 2016 IS 4238: 1967 (RA 2014) IS 1479-2: 1961 (RA 2017) IS 11721: 2013 (RA 2017) IS 10484: 1983 (RA 2014)	1 to 14 1 % to 15 % 1 % to 15 % 1 % to 15 %
	Cereal Based Complementary Foods)	Titrable acidity	IS 1479-2: 1961 (RA 2017) IS 4238: 1967 (RA 2014) IS 10484: 1983 (RA 2014) IS 3507: 1966 (RA 2017)	0.1 % to 10 % 0.1 % to 10 % 0.1 % to 10 % 0.1 % to 10 %
			IS 11766: 1986 (RA 2017) IS 1166: 1986 (RA 2017)	0.1 % to 10 % 0.1 % to 10 %

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[		Crude protein	IS 7219: 1973 (RA 2015)	1 % to 40 %
			IS 1479-2: 1961 (RA 2017)	1 % to 40 %
		Sucrose	IS 1166: 1986 (RA 2017)	1 % to 70 %
			IS 2802: 1964 (RA 2016)	1 % to 70 %
			IS 4079: 1967 (RA 2016)	1 % to 70 %
		Non- protein Nitrogen	IS 1479-2: 1961 (RA 2017)	1 % to 40 %
		Adulterants	IS 1479-1: 1960 (RA 2016)	Qualitative
		Preservatives/	IS 1479-1: 1960 (RA 2016)	Qualitative
		Neutralizers		]
		Chloride	IS 1479-2: 1961 (RA 2017)	0.1 % to 5 %
		Reducing sugar	IS 4079: 1967 (RA 2016)	1 % to 80 %
		Salt as added NaCl	IS 2785: 1979 (RA 2016)	0.1 % to 25 %
			IS 3507: 1966 (RA 2017)	0.1 % to 25 %
		Moisture	IS 11623: 2008 (RA 2017)	0.1 % to 15 %
			IS 16072: 2012 (RA 2017)	0.1 % to 15 %
		Total ash	IS 1165: 2002 (RA 2017)	0.1 % to 20 %
			IS 14433: 2007 (RA 2017)	0.1 % to 20 %
		Acid insoluble ash	IS 14433: 2007 (RA 2017)	0.01 % to 0.5 %
4.	Sugar and sugar	Sulphated ash	IS 6287: 1985 (RA 2015)	0.1 % to 2.0 %
	products		FSSAI manual of method of	0.1 % to 2.0 %
	(Sugar, Jaggery,		analysis of food – Beverages,	
	Sweets and Sugar		Sugar & Sugar products &	
	boiled		confectionary – 2015	
	Confectionary	Moisture	IS 15279: 2003 (RA 2013)	0.1 % to 15 %
	Lozenges,		IS 6287: 1985 (RA 2015)	0.1 % to 15 %
	Chewing Gum and		IS 1163: 1992 (RA 2014)	0.1 % to 15 %
	Bubble Gum, Ice Lollies or Edible		FSSAI manual of method of	0.1 % to 15 %
	Ice Jelly Candy		analysis of food – Beverages,	
			Sugar & Sugar products &	
ļ	Drops)		confectionary – 2015	
ļ	!	Total ash	IS 1163: 1992 (RA 2014)	0.1 % to 20 %
			FSSAI manual of method of	0.1 % to 20 %
1		<u> </u>	analysis of food – Beverages,	

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			Sugar & Sugar products &	
			confectionary – 2015	
		Acid Insoluble ash	IS 6287: 1985 (RA 2015)	0.01 % to 2 %
			IS 1163: 1992 (RA 2014)	0.01 % to 2 %
			FSSAI manual of method of	0.01 % to 2 %
			analysis of food – Beverages,	
			Sugar & Sugar products &	
			confectionary – 2015	
		Sugar /Sucrose	IS 6287: 1985 (RA 2015)	1 % to 100 %
			IS 15279: 2003 (RA 2013)	1 % to 100 %
			IS 1163: 1992 (RA 2014)	1 % to 100 %
			FSSAI manual of method of	1 % to 100 %
			analysis of food – Beverages,	
			Sugar & Sugar products &	
			confectionary – 2015	
		Fat	IS 1163: 1992 (RA 2014)	0.5 % to 60 %
			FSSAI manual of method of	0.5 % to 60 %
			analysis of food – Beverages,	
			Sugar & Sugar products &	
			confectionary – 2015	
			IS 6287: 1985 (RA 2015)	0.5 % to 60 %
		Chocolate Component	FSSAI manual of method of	1 % to 60 %
		of Filled Chocolate	analysis of food – Beverages,	
			Sugar & Sugar products &	
			confectionary – 2015	<u> </u>
		Edible wholesome substances	IS 1163: 1992 (RA 2014)	1 % to 60 %
			FSSAI manual of method of	1 % to 60 %
			analysis of food – Beverages,	
			Sugar & Sugar products &	
			confectionary – 2015	
5.	Fruit and fruit	Total solids	FSSAI Manual of methods for	1 % to 90 %
	products		Analysis of foods - Fruit and	
	(Thermally		vegetable products	

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	processed fruits, cocktails, juices, fruit nectars, fruit	рН	FSSAI Manual of methods for Analysis of foods - Fruit and vegetable products	1 to 14
	drink, ready to serve fruit beverages,	Acidity	FSSAI Manual of methods for Analysis of foods - Fruit and vegetable products	1 % to 60 %
	purees, pulps, squashes, crushes, syrups,	Reducing sugar	FSSAI Manual of methods for Analysis of foods - Fruit and vegetable products	1 % to 80 %
	sherbets, jam, jelly, marmalade)	Sucrose	FSSAI Manual of methods for Analysis of foods - Fruit and vegetable products	1 % to 80 %
		Brix	IS 13815: 2010 (RA 2015)	1 % to 90 %
			FSSAI Manual of methods for	1 % to 90 %
			Analysis of foods - Fruit and	
		<u> </u>	vegetable products	
 		Acid insoluble ash	IS 13846: 2009 (RA 2013)	1 % to 10 %
			FSSAI Manual of methods for	1 % to 10 %
			Analysis of foods - Fruit and	
			vegetable products	
6.	Vegetable and vegetable products	Salt as NaCl	FSSAI Manual of methods for Analysis of foods - Fruit and vegetable products	1 % to 50 %
	(Salads, Pickles, curry, paste, Sauces, masalas)	Total solids	FSSAI Manual of methods for Analysis of foods - Fruit and vegetable products	1 % to 90 %
	,	рН	FSSAI Manual of methods for Analysis of foods - Fruit and vegetable products	1 to 14
		Acidity	FSSAI Manual of methods for Analysis of foods - Fruit and vegetable products	1 % to 60 %
		Acid insoluble ash	IS 13846: 2009 (RA 2013) FSSAI Manual of methods for	1 % to 10 %

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			Analysis of foods - Fruit and	
			vegetable products	
7.	Herbs, Spices and	Water insoluble Ash	IS 1797: 1985 (RA 2017)	0.1 % to 20 %
	Condiments	Total ash	IS 1797: 1985 (RA 2017)	0.1 % to 20 %
	(Edible spice	Alcohol Soluble extract	IS 1797: 1985 (RA 2017)	0.1 % to 20 %
	whole, ground,	Cold water-soluble	IS 1797: 1985 (RA 2017)	1 % to 30 %
	mixed- turmeric,	extract		
	chilies, cinnamon,	Crude fiber	IS 1797: 1985 (RA 2017)	1.0 % to 30 %
	cumin seeds,		IS 10226-I: 1982 (RA 2015)	
	cardamom,	Salt as NaCl	IS 1797-1985 (RA 2017)	0.2 % to 20 %
	tamarind, spice	Nonvolatile ether extract	IS 1797: 1985 (RA 2017)	0.1 % to 30 %
	blends, herbs)	Acid Insoluble Ash	IS 1797: 1985 (RA 2017)	0.01 % to 20 %
		Moisture	IS 1797: 1985 (RA 2017)	1.0 % to 30 %
		Volatile Oil	IS 1797: 1985 (RA 2017)	0.5 % to 20 %
		Starch	IS 4706-2: 1978 (RA 2015)	2 % to 80 %
		Extraneous matter	IS 1797: 1985 (RA 2017)	0.1 % to 15 %
		Acidity as citric acid	IS 13242: 1991(RA 2012)	0.1 % to 40 %
		Curcumin content	IS 3576: 2010 (RA 2015)	0.1 % to 20 %
		Presence of chromate	IS 3576: 2010 (RA 2015)	Qualitative
8.	Edible oils and	Acid Value	IS 548-1: 1964 (RA 2015)	0.10 to 10
	Fats	FFA	IS 548 -I: 1964 (RA 2015)	0.10 % to 10 %
	(Edible or	lodine Value	IS 548-1: 1964 (RA 2015)	10 to 150
	non-edible fat, Oil seeds- groundnut,	Peroxide Value	IS 548-1: 1964 (RA 2015)	1 meq of O <sub>2</sub> /kg to 20 meq of O <sub>2</sub> /kg
	sesame, coconut,	Unsaponifiable matter	IS 548-1: 1964 (RA 2015)	0.05 % to 10 %
	butter, tallow,	Refractive index	IS 548-1: 1964 (RA 2015)	1.333 to 1.700
	cooking fat,	Moisture	IS 548-1: 1964 (RA 2015)	0.01 % to 5 %
	spreading fat, any	Saponification value	IS 548-1: 1964 (RA 2015)	1 to 200
	Crude/ Refined/	Color in 1-inch cell as	IS 548-1: 1976 (RA 2015)	0.1 to 5
	Blend/ fat)	Y+ 5R, Lovibond unit		
		Detection of Linseed oil (Hexabromide test)	IS 548-2: 1976 (RA 2015)	Qualitative
		Detection of	IS 548-2: 1976 (RA 2015)	Qualitative

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Hydrocyanic acid		
		Detection of Cotton	IS 548-2: 1976 (RA 2015)	Qualitative
		seed oil (Halphen test)		
		Specific gravity	IS 548-1: 1964 (RA 2015)	0.5 to 2.0
9.	Ghee	Acid value	IS 3508: 1966 (RA 2017)	0.1 to 10
		FFA	IS 3508: 1966 (RA 2017)	0.1 % to 10 %
		lodine value	IS 3508: 1966 (RA 2017)	10 to 150
		Moisture	IS 3508: 1966 (RA 2017)	0.01 % to 5 %
		Refractive index	IS 3508: 1966 (RA 2017)	1.333 to 1.700
		Peroxide value	IS 3508: 1966 (RA 2017)	1 meq/kg to 20 meq/kg
		Unsaponifiable matter	IS 3508: 1966 (RA 2017)	0.05 to 10
		Insoluble impurities	IS 3508: 1966 (RA 2017)	0.01 % to 25 %
10.	Bakery and	Moisture	IS 1011: 2002 (RA 2013)	1 % to 40 %
	confectionary		IS 6287: 1985 (RA 2015)	1 % to 40 %
	products		IS 12711: 1989 (RA 2015)	1 % to 40 %
	(Biscuits, Bread,	Total solids	IS 1483: 1988 (RA 2015)	1 % to 90 %
	Cakes, Cookies, Cookies Mix, Cake		IS 12711: 1989 (RA 2015)	1 % to 90 %
	Mix, Chocolates,	Fat	IS 6287: 1985 (RA 2015)	0.5 % to 25 %
	Nankatai, Bread		IS 12711: 1989 (RA 2015)	0.5 % to 25 %
	Sticks, Toast,	Total Ash	IS 4706-2: 1978 (RA 2015)	0.1 % to 20 %
	Sugar boiled		IS 12711: 1989 (RA 2015)	0.1 % to 20 %
	confectionary,	Acid insoluble ash	IS 1011: 2002 (RA 2013)	0.05 % to 10 %
	Lozenges,		IS 6287: 1985 (RA 2015)	0.05 % to 10 %
	Chewing		IS 1483: 1988 (RA 2015)	0.05 % to 10 %
	gum, bubble gum,		IS 12711: 1989 (RA 2015)	0.05 % to 10 %
	Chocolate, Ice Lollies and Edible	Sulphated ash	IS 6287: 1985 (RA 2015)	0.05 % to 20 %
	Ices,)	Acidity of extracted fat	IS 1011: 2002 (RA 2013)	0.01 % to 5 %
	,		IS 12711: 1989 (RA 2015)	0.01 % to 5 %
		Crude fiber	IS 1483: 1988 (RA 2015)	0.5 % to 25 %
			IS 10226-1: 1982 (RA 2015)	0.5 % to 25 %

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IS 12711: 1989 (RA 2015)	0.5 % to 25 %
		pH of aqueous extract	IS 1483: 1988 (RA 2015)	2 to 14
			IS 12711: 1989 (RA 2015)	2 to 14
		Alcoholic Acidity	IS 12711: 1989 (RA 2015)	0.01 % to 5 %
		Peroxide value	IS 12711: 1989 (RA 2015)	1 meq of O <sub>2</sub> /kg to 40 meq of O <sub>2</sub> /kg
11.	Ready to eat/ cook	Moisture	IS 12569: 1989 (RA 2015)	0.5 % to 40 %
	products		IS 2234: 1989 (RA 2015)	0.5 % to 40 %
	(Canned and		IS 4684: 1975	0.5 % to 40 %
	processed food		IS 15271: 2013	0.5 % to 40 %
	products)		IS 13264: 1991 (RA 2017)	0.5 % to 40 %
		Total Ash	IS 4684: 1975 (RA 2015)	0.5 % to 20 %
			IS 2234: 1989 (RA 2015)	0.5 % to 20 %
		Fat	IS 4684: 1975 (RA 2015)	1.0 % to 60 %
			IS 13354: 1992 (RA 2013)	1.0 % to 60 %
			IS 12220: 1987 (RA 2015)	1.0 % to 60 %
			IS 12569: 1989 (RA 2015)	1.0 % to 60 %
			IS 15271: 2015	1.0 % to 60 %
			IS 1479 -2: 1961 (RA 2017)	1.0 % to 60 %
		Protein	IS 7219: 1973 (RA 2015)	0.5 % to 30 %
			IS 2234: 1989 (RA 2015)	0.5 % to 30 %
		Crude fiber	IS 1656: 1969 (RA 2017)	0.5 % to 25 %
			IS 2234: 1989 (RA 2015)	0.5 % to 25 %
			IS 10226-1: 1982 (RA 2010)	0.5 % to 25 %
<b> </b>		Acid Insoluble Ash	IS 1011: 2002 (RA 2013)	0.05 % to 10 %
			IS 12569: 1989 (RA 2015)	0.05 % to 10 %
			IS 2234: 1989 (RA 2015)	0.05 % to 10 %
			IS 12569: 1989 (RA 2015)	0.05 % to 10 %
			IS 13264: 1991 (RA 2012)	0.05 % to 10 %
			IS 15271: 2003 (RA 2015)	0.05 % to 10 %
		Acidity of extracted fat	IS 12569: 1989 (RA 2015)	0.01 % to 10 %

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			IS 15271: 2003 (RA 2013)	0.01 % to 10 %
		Carbohydrate	IS 1656: 2007 (RA 2017)	1.0 % to 99 %
			IS 2234: 1989 (RA 2015)	1.0 % to 99 %
		Energy	BV/MUM/FC/SOP/014 dated 14/07/2018	10 kcal/100g to 500 kcal/100g
		Dirt and extraneous matter	IS 2234: 1989 (RA 2015)	Qualitative
		Salt	IS 1158: 1973 (RA 2015)	0.1 % to 5.0 %
			IS 12575: 2010 (RA 2015)	0.1 % to 5.0 %
			IS 13264: 1991	0.1 % to 5.0 %
		Peroxide value	IS 15271: 2003 (RA 2013)	1 meq of O <sub>2</sub> / kg to 50 meq of O <sub>2</sub> / kg
		Dried fruits content	IS 13264: 1991 (RA 2017)	1 % to 25 %
II.	WATER	<u> </u>		
1.	Drinking Water	Total dissolved solids (Filterable residue)	IS 3025-16: 1984 (RA 2006)	0.1 mg/L to 1000 mg/L
		рH	IS 3025-11: 1983 (RA 2017)	1 to 14
		Total Alkalinity as CaCO₃	IS 3025-23: 1986 (RA 2014)	10 mg/L to 500 mg/L
		Chloride	IS 3025-32: 1988 (RA 2014)	1 mg/L to 500 mg/L
		Total hardness as CaCO <sub>3</sub>	IS 3025-21: 2009 (RA 2014)	0 to 500 mg/L
		Free residual chlorine	IS 3025-26: 1986 (RA 2014)	0 to 50 mg/L

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