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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are	Range of Testing / Limits of Detection
			performed	

## **BIOLOGICAL TESTING**

I.	FOOD & AGRICULT	URAL PRODUCTS		
1.	Herbs, Spices and	Total Plate Count	IS 5402	≥10 cfu/g
	Condiments	Yeast & Mould count	IS 5403	≥ 10 cfu/g
		Total Coliform count	IS 5401 (Part-I)	≥10 cfu/g
			IS 5401 (Part-II)	
		E.coli	IS 5887 (Part-I)	Present or absent /g
		Bacillus cereus	IS5887(VI)	≥ 10 cfu/g
		Shigella	IS 5887 (Part-VII)	Present or absent / 25 g
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent / 1.0g
		Listeria monocytogenes	IS 14988 (Part I)	Present or absent / 25 g
2.	Beverages	Total Plate Count	IS 5402	≥ 1 cfu/ml
	(Alcoholic/Non	Yeast & Mould count	IS 5403	≥ 1 cfu/ml
	Alcoholic)	Total Coliform count	IS 5401 (Part-I)	≥ 1 cfu/ml, Present or
			IS 5401 (Part-II)	absent/100 ml
		E.coli	IS 5887 (Part-I)	Present or absent / 25 ml
		Bacillus cereus	IS 5887(Part-VI)	Present or absent /g
		Shigella	IS 5887 (Part-VII)	Present or absent / 25 ml
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent / 25 ml
		Listeria monocytogenes	IS 14988 (Part- I)	Present or absent / 25 ml
3.	Jams, Juices,	Total Plate Count	IS 5402	≥ 10 cfu /g
	Sauces &	Yeast & Mould count	IS 5403	≥ 10 cfu /g
	Concentrates	Total Coliform count	IS 5401 (Part-I)	≥ 10 cfu /g, ≥ 1cfu/ml
		<u> </u> 	IS 5401(Part-II)	
		Flat sour / sulphide	FSSAI manual	Present/absent/ g,
		spoilage organism		≥ 10 cfu /g
		E.coli	IS 5887 (Part-I)	Present or absent /g
		Bacillus cereus	IS 5887(Part-VI)	≥ 10 cfu /g
		Shigella	IS 5887 (Part-VII)	Present or absent /25 g
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent /1.0g
		Listeria monocytogenes	IS 14988 (Part-I)	Present or absent / 25 g

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Convenor	Program Manager

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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-IV)	Present / absent /g or ml, ≥ 10 cfu /g
4.	Snacks and	Total Plate Count	IS 5402	≥ 10 cfu /g   ≥ 10 cfu /g
•••••	Instant Mixes	Yeast & Mould count	IS 5403	≥ 10 cfu /g
		Total Coliform count	IS 5401	≥10 cfu /g
		E.coli	IS 5887 (Part-I) IS 5401 (Part-II)	Present or absent /g
		Bacillus cereus	IS 5887(Part-VI)	≥ 10 cfu /g
		Shigella	IS 5887 (Part-VII)	Present or absent /25 g
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent / 1.0g
		Listeria monocytogenes	IS 14988 (Part-I)	Present or absent / 25 g
		Clostridium	IS 5887 (Part-IV)	Present / absent /g or ml,
		perfringenes		≥ 10 cfu /g
5.	Bakery and	Total Plate Count	IS 5402	≥10 cfu /g
	Confectionary	Yeast & Mould count	IS 5403	≥ 10 cfu /g
	Products	Total Coliform count	IS 5401 (Part-I) IS 5401 (Part-II)	≥ 10 cfu /g
		E.coli	IS 5887 (Part-I)	Present or absent /g
		Bacillus cereus	IS 5887(Part-VI)	≥ 10 cfu /g
		Shigella	IS 5887 (Part-VII)	Present or absent /25 g
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent / 1.0g
		Listeria monocytogenes	IS 14988 (Part I)	Present or absent / 25 g
6.	Nuts and Nuts	Total Plate Count	IS 5402	≥ 10 cfu /g
	Products	Yeast & Mould	IS 5403	≥ 10 cfu /g
		Total Coliform count	IS 5401 (Part-I) IS 5401 (Part-II)	≥ 10 cfu /g
		E.coli	IS 5887 (Part-I)	Present or absent /g
· <b></b>		Bacillus cereus	IS 5887(Part-VI)	≥ 10 cfu /g
<b>-</b> -		Shigella	IS 5887 (Part-VII)	Present or absent /25 g
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent / 1.0g
		Listeria monocytogenes	IS14988 (Part-I)	Present or absent / 25 g
7.	Milk and Dairy	Total Plate Count	IS 5402	≥10 cfu /g
	Products	Yeast & Mould count	IS 5403	≥10 cfu/g

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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
		Total Coliform count	IS 5401 (Part-I) IS 5401 (Part-II)	≥ 10 cfu/g, ≥ 1 cfu/ml
		E.coli	IS 5887 (Part-I)	Present or absent/g or ml
		Bacillus cereus	IS 5887(Part-VI)	≥ 10 cfu/g , ≥ 1 cfu/ml
		Shigella	IS 5887 (Part-VII)	Present or absent / 25 g or ml
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent / 1.0g
		Listeria monocytogenes	IS 14988 (Part-I)	Present or absent /g or ml
		Clostridium perfringens	IS 5887(Part-4)	Present or absent /g or ml, ≥10 cfu/g or ml
		Lactic acid bacteria (Mesophilic)	IS 16068	≥ 10 cfu /g, ≥ 1 cfu/ml
8.	Canned and	Total Plate Count	IS 5402	≥ 10 cfu /g
	Processed Foods	Yeast & Mould count	IS 5403	≥ 10 cfu/g
		Total Coliform count	IS 5401 (Part-I) IS 5401 (Part II)	≥ 10 cfu/g
		E.coli	IS 5887 (Part-I)	Present or absent/g
		Bacillus cereus	IS 5887 (Part-VI)	≥ 10 cfu/g
		Shigella	IS 5887 (Part-VII)	Present or absent /25 g
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent / 1.0g
		Clostridium perfringenes	IS 5887 (Part-IV)	Present or absent/g
		Listeria monocytogenes	IS 14988 (Part-I)	Present or absent /g/25 g
		Incubation test at 37°C for 10 days and 55° C for 7days	IS 2860	Microbial activity (Present/absent)
		Flat sour organism	FSSAI manual	Present / absent g / 100 g, ≥ 10 cfu/g
9.	Food Additives	Total plate count	IS 5402	≥ 10 cfu /g
	and Preservatives	Yeast and mould count	IS 5403	≥10 cfu /g
		Total Coliform count	IS 5401(Part-I) IS 5401 (Part-II)	≥ 10 cfu /g
		E.coli	IS 5887 (Part-I)	Present or absent/g
		Shigella	IS 5887 (Part-VII)	Present or absent/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
10.	Honey and Honey	Total plate count	IS 5402	≥10 cfu /g
	Products		IS 5403	≥ 10 cfu /g
		Total Coliform count	IS 5401(Part-I)	≥10 cfu /g
		E.coli	IS 5887 (Part-I)	Present or absent/g
		Shigella	IS 5887 (Part-VII)	Present or absent/25g
11.	Gelatin and Other	Total plate count	IS 5402	≥ 10 cfu /g
	Gums	Yeast and mould count	IS 5403	≥10 cfu /g
		Total Coliform count	IS 5401 (Part-I)	≥ 10 cfu /g
		E.coli	IS 5887 (Part-I)	Present or absent/g
		Shigella	IS 5887 (Part-VII)	Present or absent/25 g
12.	Coffee and Cocoa	Total plate count	IS 5402	≥ 10 cfu /g
	Products	Yeast and mould count	IS 5403	≥10 cfu /g
		Total Coliform count	IS 5401 (Part-I)	≥ 10 cfu /g
		E.coli	IS 5887 (Part-I)	Present or absent/g
		Shigella	IS 5887 (Part-VII)	Present or absent/25g
13.	Egg and Egg/	Total plate count	IS 5402	≥ 10 cfu /g
	Products	Yeast and mould count	IS 5403	≥10 cfu /g
		Total Coliform count	IS 5401 (Part-I)	≥ 10 cfu /g
		E.coli	IS 5887 (Part-I)	Present or absent/g
		Shigella	IS 5887 (Part-VII)	Present or absent/ 25g
14.	Meat and Meat Products	Aerobic plate count	FSSAI manual	≥ 10 cfu /g
		Staphylococcus aureus	FSSAI manual	Present or absent/1.0g, ≥
		(coagulase positive)		10 cfu /g
		Yeast and mould count	FSSAI manual	≥ 10 cfu /g
		E.coli	FSSAI manual	Present or absent/g
		Listeria monocytogenes	FSSAI manual	Present or absent /g
		Clostridium	FSSAI manual	Present or absent/g
		perfringenes /		
		botulinum		
15.	Pet Foods	Total Plate Count	IS 5402	≥ 10 cfu /g
		Yeast & Mould count	IS 5403	≥ 10 cfu /g
		Total Coliform count	IS 5401 (Part-I) IS 5401 (Part-II)	≥ 10 cfu /g

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il.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
======		E. coli	IS 5887 (Part-I)	Present or absent /g
		Bacillus cereus	IS5887(Part-VI)	≥10 cfu /g
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent / 1.0g
		Shigella	IS 5887 (Part-VII)	Present or absent /25 g
6.	Tea	Total plate count	IS 5402	≥ 10 cfu /g
		Yeast and mould count	IS 5403	≥10 cfu /g
		Total Coliform count	IS 5401 (Part-I)	≥ 10 cfu /g
		E.coli	IS 5887 (Part-I)	Present or absent/g
		Shigella	IS 5887 (Part-VII)	Present or absent/25g
7.	Poultry & Poultry	Total Plate Count	IS 5402	≥ 10 cfu /g
	Products	Yeast & Mould count	IS 5403	≥ 10 cfu /g
		Total Coliform count	IS 5401 (Part-I)	≥ 10 cfu /g
			IS 5401 (Part-IÍ)	Ĭ
		E. coli	IS 5887 (Part-I)	Present or absent /g
		Bacillus cereus	IS 5887(Part-VI)	≥10 cfu /g
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent / 1.0g
		Shigella	IS 5887 (Part-VII)	Present or absent /25 g
8.	Vegetables &	Total Plate Count	IS 5402	≥ 10 cfu /g
	Vegetables	Yeast & Mould count	IS 5403	≥ 10 cfu /g
	Products	Total Coliform count	IS 5401 (Part-I) IS 5401 (Part-II)	≥ 10 cfu /g
		E. coli	IS 5887 (Part-I)	Present or absent /g
		Bacillus cereus	IS 5887(Part-VI)	≥10 cfu /g
		Staphylococcus aureus	IS 5887 (Part-II)	Present or absent / 1.0g
		Shigella	IS 5887 (Part-VII)	Present or absent /25 g
•	WATER			
•	Packaged Drinking Water	Aerobic Microbial count at 37 °C & 22 °C	IS 5402	≥ 1 cfu/ml
		Total Coliform count	IS 5401 (Part-I)	≥ 1 cfu/ml
		E.coli	IS 15185	Present/ Absent/250ml
		Staphylococcus aureus	IS 5887 (Part-11)	Present/Absent/250ml
		<u> </u>	<u> </u>	L

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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
		Pseudomonas aeruginosa	IS 13428-(Annexure-D)	Present/Absent/250ml
		Yeast & Mould count	IS 5403	Present/Absent/250ml
		Shigella	IS 5887 (Part-VII)	Present/Absent/250ml
		Vibrio. parahaemolyticus	IS 5887(Part-V)	Present/Absent/250ml
2.	Water (Drinking Water, Packaged	Aerobic Microbial count at 37 °C & 22 °C	IS 5402	≥ 1 cfu/ml
	Drinking Water,	Total Coliform count	IS 5401 (Part-I)	≥ 1 cfu/ml
	Water for	E.coli	IS 15185	Present/ Absent/250ml
	Swimming Pool and Spas, Water from Purifiers, Ground Water/ Surface Water)	Yeast & Mould count	IS 5403	Present/Absent/250ml
3.	Water for Processed Food	Total Plate Count / standard Plate Count	FSSAI Manual	≥ 1 cfu/ml
	Industry	Lipolytic bacterial count	FSSAI Manual	≥ 1 cfu/ml
		Proteolytic bacterial count	FSSAI Manual	≥ 1 cfu/ml
		Thermophilic bacterial count	FSSAI Manual	≥ 1 cfu/ml
		Total Coliform count	FSSAI Manual	≥ 2 to 1600 CFU/ml, ≥ 1 to 16/ CFU /ml

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			performed	ı	

## **CHEMICAL TESTING**

1 1				
1.	Herbs, Spices and	Total Ash	IS1797	0.1g/100g -10.0 g/100 g
	Condiments	Acid insoluble ash	IS1797	0.01g/100g -5.0 g/100 g
	(Whole and	Water insoluble ash	IS1797	0.01g/100g - 5.0 g/100 g
	Ground)	Crude Fiber	IS1797	0.3g/100g-25.0 g/100 g
		Non Volatile Ether Extract	IS1797	0.1g/100g - 25.0 g/100 g
		Protein (N x 6.38)	IS7219	0.2g/100g-20.0 g/100 g
l T		Alcohol Soluble extract	IS1797	0.2g/100g - 50g/100 g
		Cold water Soluble extract	IS1797	0.2g/100g - 25 g/100 g
		Extraneous matter	IS1797	0.001g/100g-5g/100 g
I		Mass per litre	IS1797	1 g/100g-50g/100 g
I		Insect damaged matter	IS 2322	0.001 g/100g -5g/100 g
I		Split fruits	IS 2443	1 g/100g -5g/100 g
		Discoloured fruits	IS 2443	1 g/100g -5g/100 g
<u> </u>		Starch	IS4706(P-II)	10 g/100g -50g/100 g
		Added colour & brick	IS15642(P -I)	Qualitative
<u> </u>		powder in Chilli powder		(Positive/Negative)
		Exhausted/ deoiled	IS15642(P -I)	Qualitative
<u> </u>		cloves in sound cloves		(Positive/Negative)
		Chicory powder in	IS15642(P-II)	Qualitative
		coffee		(Positive/Negative)
		Papaya seeds in black	IS15642(P-II)	Qualitative
		pepper		(Positive/Negative)
		Common salt in iodized	IS15642(P-II)	Qualitative
ļļ		salt		(Positive/Negative)
		White powder in	FSSAI Manual	Qualitative
		common salt		(Positive/Negative)

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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
		Colored dried tendrils of	FSSAI Manual	Qualitative
		maizecob in Saffron		(Positive/Negative)
2.	Bakery &	Moisture	IS 1011	0.2 g/100g - 5.0 g/100 g
	Confectionery	Acid Insoluble Ash	IS 1011	0.02 g/100g - 5g/100 g
	Products	Acidity of the extracted fat (as oleic acid)	IS 1011	0.1 g/100g - 1.2 g/100 g
		Fat	IS 12711	0.5 g/100g -60g/100 g
		Total Protein (N x 6.25)	IS 7219	0.5 g/100g -50g/100 g
		Crude Fiber	IS 12711	0.2 g/100g - 10g/100 g
		Total Ash	IS 1011	0.2 g/100g - 15 g/100 g
		Total Sugar	IS 2650	1 g/100g -50g/100 g
		Alcoholic acidity as H <sub>2</sub> SO <sub>4</sub>	IS 12711	0.05 g/100g - 0.5 g/100 g
		Total solid content in bread	IS 12711	35 g/100g -75 g/100 g
		pH of the Bread	IS 12711	5.0-7.5
3a.	Cereal & Cereal	Foreign Matter	IS 4333(P-I)	0.01 g/100g -5g/100 g
	Products	Broken Matter	IS 4333 (P-I)	0.01 g/100g -5g/100 g
		Insect infestation	IS 4333 (P-I)	0.01 g/100g -5g/100 g
		Impurities of animal origin	IS 4333 (P-I)	0.01 g/100g -5g/100 g
		Presence of rodent hair	IS 6261	Qualitative (Positive/Negative)
		Damaged grains	IS 4333 (P-I)	0.01 g/100g -5g/100 g
		Weeviled grains	IS 4333 (P-I)	1-10 (by count)
		Other edible grains	IS 4333 (P-I)	0.01 g/100g -5g/100 g
3b.	Cereals, Pulses &	Crude fiber	IS 1155	0.2 g/100g -5g/100 g
	Cereal Products	Fat	IS 12711	0.5 g/100g -60g/100 g
		Moisture	IS 1155	0.5 g/100g -14g/100 g
		Total Ash	IS 1155	0.2 g/100g -2g/100 g
		Acid insoluble ash (on dry basis)	IS 1155	0.01 g/100g -0.15g/100 g
		Gluten (on dry basis)	IS 1155	1.5 g/100g -10g/100 g

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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
		Alcoholic acidity as H <sub>2</sub> SO <sub>4</sub> in 90g/100 g alcohol	IS 1155	0.02 g/100g -0.5g/100 g
		Protein (on dry basis, N x 5.70)	IS 7219	0.5 g/100g -25g/100 g
		Keshri Dal (Lathyrus sativus) in besan	IS 2400	Present/Absent
		Alkalinity of Ash in Papad as sodium carbonate (on dry basis)	IS 2639	0.01 g/100g - 5.0 g/100 g
		pH of water extract in Papad	IS 2639	3-12
4.	Snacks (Namkeen, Fried	Protein on dried basis (N x 6.25)	IS 7219	1 g/100g -15g/100 g
	Potato Chips and	Moisture	IS 15271	0.5 g/100g -14g/100 g
	Alu Bhujia etc.)	Acid insoluble ash (on dry basis)	IS 15271	0.01 g/100g -0.2g/100 g
		Fat	IS 15271	1 g/100g -60g/100 g
		Acidity of extracted fat (as oleic acid)	IS 15271	0.1 g/100g -1.0g/100 g
		Total Ash	IS 15271	0.2 g/100g -15g/100 g
		Peroxide value	IS 15271	0.1 g/100g -50 meq / Kg
		Total Sugar	IS 2650	1 g/100g -50g/100 g
		Crude Fiber	IS 1155	1 g/100g -25g/100 g
5.	Milk & Dairy Produc			
a.	Skimmed Milk	Crude Fiber	IS10226(P-1)	1 g/100g -25g/100 g
	Powder	Fat	FSSAI Manual	0.2 g/100g -1.5g/100 g
		Titratable acidity (as lactic acid)	FSSAI Manual	0.01 g/100g -1.5g/100 g
		Total protein (N x 6.38)	FSSAI Manual	1 g/100g -50g/100 g
		Moisture	FSSAI Manual	0.1 g/100g -10g/100 g
		Total Ash	FSSAI Manual	0.5 g/100g -10g/100 g
		Solubility Index	FSSAI Manual	1ml -2ml
b.	Liquid Milk	Fat	FSSAI Manual	0.5 g/100g - 20g/100 g

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		Titratable Acidity (as lactic acid per 100 ml of milk)	IS 1479 (Part I)	0.01 g/100g -1 g/100 g
		Starch	FSSAI Manual	Qualitative (Positive/Negative)
		Sugar	FSSAI Manual	Qualitative (Positive/Negative)
		Glucose-Dextrose	FSSAI Manual	Qualitative (Positive/Negative)
		Sodium Chloride	FSSAI Manual	Qualitative (Positive/Negative)
		Acidity and Heat Stability	FSSAI Manual	Qualitative (Positive/Negative)
		Hydrogen peroxide	FSSAI Manual	Qualitative (Positive/Negative)
		Formaldehyde	FSSAI Manual	Qualitative (Positive/Negative)
		Mastitis	FSSAI Manual	Qualitative (Positive/Negative)
		Detergent	FSSAI Manual	Qualitative (Positive/Negative)
		Protein	IS 1479 (P-II)	0.5 g/100g - 50g/100 g
		Water	FSSAI Manual	Qualitative (Positive/Negative)
		Vanaspati	FSSAI Manual	Qualitative (Positive/Negative)
		Milk solids not fat	IS 10083	2 g/100g -25g/100 g
		Total solids	IS 1479(P-II)	2 g/100g -25g/100 g
		Total Ash	IS 1479(P-II)	1 g/100g -5g/100 g
C.	Cream/Malai or	Fat	FSSAI Manual	0.5 g/100g -20g/100 g
	Cream Powder	Moisture	FSSAI Manual	0.1 g/100g -10g/100 g
   		Starch	FSSAI Manual	Qualitative (Positive/Negative)
		Protein	IS 1479 (Part-II)	0.5 g/100g - 50g/100 g

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Alok Jain **Program Manager** 

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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
d.	Curd/Dahi	Fat	FSSAI Manual	0.5 g/100g -50g/100 g
		Milk solids not fat	FSSAI Manual	0.5 g/100g -50g/100 g
		Starch	FSSAI Manual	Qualitative
				(Positive/Negative)
		Added cane sugar	FSSAI Manual	Qualitative
				(Positive/Negative)
		Vanaspati	FSSAI Manual	Qualitative
				(Positive/Negative)
		Total solids	FSSAI Manual	2 g/100g -50 g/100 g
e.	Butter, Ghee and	Refractive index	FSSAI Manual	1.333-1.4895
	Milk Fats	RM value	FSSAI Manual	1-50
		Peroxide value	FSSAI Manual	0.1meq/kg-50 meq/ kg
		Vegetable fat	FSSAI Manual	Qualitative
		(Phytosterol acetate		(Positive/Negative)
		test)		
		Sesame oil (Boudouins	FSSAI Manual	Qualitative
		test)		(Positive/Negative)
		BR Reading	FSSAI Manual	0.0-50
		Presence of animal	FSSAI Manual	Qualitative
		body fat		(Positive/Negative)
		Mashed Potatoes,	FSSAI Manual	Qualitative
		Sweet Potatoes & other		(Positive/Negative)
		starches		
		Moisture	FSSAI Manual	0.05 g/100g -5g/100 g
		Unsaponifiable matter	FSSAI Manual	0.05 g/100g -3g/100 g
		(Free fatty acids as		
		oleic acid)		
		Milk fat in butter	FSSAI Manual	0.5 g/100g -50g/100 g
		Common salt in butter	FSSAI Manual	0.5 g/100g -10g/100 g
f.	Chakka and	Total solids	FSSAI Manual	2 g/100g -60g/100 g
<u> </u>	Shrikhand	Milk fat (on dry basis)	FSSAI Manual	0.5 g/100g -50g/100 g
		Milk Protein (on dry basis) (NX6.38)	FSSAI Manual	0.5 g/100g -40g/100 g

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		Titratable acidity (as lactic acid)	FSSAI Manual	0.01 g/100g -2g/100 g
		Total ash (on dry basis)	FSSAI Manual	0.05 g/100g -10g/100 g
g.	Yogurt	Milk solids not fat	FSSAI Manual	0.5 g/100g -50g/100 g
		Milk fat	FSSAI Manual	0.5 g/100g -50g/100 g
h.	Whey Products	Fat	FSSAI Manual	0.5 g/100g -50g/100 g
		Milk protein	FSSAI Manual	0.5 g/100g -40g/100 g
		Moisture	FSSAI Manual	0.1 g/100g -10g/100 g
		Total ash	FSSAI Manual	0.05 g/100g -10g/100 g
		pH in whey powder	FSSAI Manual	3-12
i.	Edible Casein	Moisture	IS 1167	0.05 g/100g -10g/100 g
	Products	Total ash	IS 1167	0.05 g/100g -10g/100 g
		Acid insoluble ash	IS 1167	0.01 g/100g -5g/100 g
		Milk Fat	FSSAI Manual	0.05 g/100g -10g/100 g
		Milk protein (NX6.38) on dry basis	FSSAI Manual	1 g/100g -20g/100 g
		Casein in protein in casein	FSSAI Manual	1 g/100g -20g/100 g
		Free acidity at ml of NaOH per 10g	IS 1167	0.1 g/100g -5g/100 g
		pH in casein	FSSAI Manual	4-10
j.	Coagulated Milk Products	Moisture	FSSAI Manual	1 g/100g -60 g/100 g
k.	Cheese, Paneer, Chhana,	Milk protein (NX6.38)	FSSAI Manual	0.5 g/100g -40g/100 g
I.	Processed	Total ash	FSSAI Manual	0.05 g/100g -10g/100 g
	Cheese, Khoa	Fat	FSSAI Manual	1 g/100g -50g/100 g
		Starch	FSSAI Manual	Qualitative
				(Positive/Negative)
		Sugar	FSSAI Manual	Qualitative
				(Positive/Negative)
I.	Ice Cream, Kulfi	Total solids	FSSAI Manual	2 g/100g -50g/100 g
m.	Chocolate Ice	Fat	FSSAI Manual	0.5 g/100g -50g/100 g
	Cream, Softy Ice	Protein (NX6.38)	FSSAI Manual	0.5 g/100g -40g/100 g

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	Cream	Weight per Unit Volume or Over-run in Ice Cream Wt/vol (gms/I)	FSSAI Manual	50ml-1L
6.	Tea	Moisture	FSSAI Manual	0.2 g/100g - 50g/100 g
<u> </u>		Fat (on dry basis)	IS15271	0.5 g/100g -5.0g/100 g
<u> </u>		Protein (Nx6.25)	IS 7219	0.5 g/100g -10g/100 g
		Crude Fiber (on dry basis)	FSSAI Manual	1.0 g/100g -20g/100 g
		Total Ash (on dry basis)	FSSAI Manual	0.5 g/100g -15g/100 g
		Acid insoluble ash (on dry basis)	FSSAI Manual	0.02 g/100g -5g/100 g
		Water soluble ash (on dry basis)	FSSAI Manual	5 g/100g -60g/100 g
		Alkalinity of soluble ash (on dry basis)	FSSAI Manual	0.25 g/100g -10g/100 g
		Water extract (on dry basis)	FSSAI Manual	0.5 g/100g -50g/100 g
		Exhausted tea or iron fillings in tea leaves	IS 15642(P -I)	Qualitative (Positive/Negative)
7.	Coffee & Cocoa	Moisture	FSSAI Manual	1 g/100g -5g/100 g
	Products	Fat (on dry basis)	IS15271	0.5 g/100g -5.0g/100 g
		Protein (Nx6.25)	IS 7219	0.5 g/100g -10g/100 g
		Crude Fiber (on dry basis)	FSSAI Manual	1.0 g/100g -20g/100 g
		Total Ash (on dry basis)	FSSAI Manual	3 g/100g -6g/100 g
		Acid insoluble ash (on dry basis)	FSSAI Manual	0.01-0.1
		Water soluble ash (on dry basis)	FSSAI Manual	1 g/100g -70g/100 g
		Alkanity of soluble ash (on dry basis)	FSSAI Manual	1ml-5ml
		Water extract (on dry basis)	FSSAI Manual	10 g/100g -40g/100 g

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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
		Solubility in boiling	FSSAI Manual	Qualitative
		water		(Positive/Negative)
		Cereal Starch	FSSAI Manual	Qualitative
		<u> </u>		(Positive/Negative)
		Chicory in coffee	FSSAI Manual	Qualitative
				(Positive/Negative)
		Tamarind seed/date	FSSAI Manual	Qualitative
				(Positive/Negative)
8.	Edible Oils and Fats	Butyro-refractometer reading at 40°C	FSSAI Manual	0.0-50
•••••		Refractive index at 40°C	FSSAI Manual	1.333-1.4895
		Moisture	FSSAI Manual	0.05 g/100g -2 g/100 g
		RM value	FSSAI Manual	1-50
		Acid value	FSSAI Manual	0.05 g/100g -5 g/100 g
		lodine value	FSSAI Manual	5-250
		Specific gravity	FSSAI Manual	0.860-0.999
		Saponification value	FSSAI Manual	10-500
		Unsaponifiable matter	FSSAI Manual	0.1 g/100g -1.0g/100 g
		Polenske value	FSSAI Manual	13-30
		Mineral oil	FSSAI Manual	Qualitative
				(Positive/Negative)
		Castor oil	FSSAI Manual	Qualitative
				(Positive/Negative)
		Presence of sesame oil	FSSAI Manual	Qualitative
				(Positive/Negative)
		Presence of animal	FSSAI Manual	Qualitative
		body fat		(Positive/Negative)
		Presence of argemone	FSSAI Manual	Qualitative
		oil		(Positive/Negative)
		Presence of	FSSAI Manual	Qualitative
		hydrocyanic acid		(Positive/Negative)
9.	Sugar & Sugar	Moisture	FSSAI Manual	1 g/100g -20g/100 g
	Products	Sulphated Ash	IS 6287	1 g/100g -15g/100 g

Nitin Gupta Convenor

Alok Jain **Program Manager** 

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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
		Crude Fibre (on dry basis)	FSSAI Manual	1 g/100g -15g/100 g
		Fat (on dry basis)	IS 6287	0.01 g/100g -12g/100 g
		Total Sugar	IS 2650	1 g/100g -90g/100 g
		Reducing Sugar	IS 6287	0.5 g/100g -15g/100 g
		Sucrose	IS 6287	1.5 g/100g -100g/100 g
		Protein (NX6.25)	IS 7219	1 g/100g - 50g/100 g
		Acid insoluble ash	IS 6287	0.05 g/100g - 2g/100 g
		Water soluble ash (on dry basis)	FSSAI Manual	0.05 g/100g - 3g/100 g
a.	Sugar	Moisture (Loss on drying)	IS 15279	1 g/100g -20 g/100 g
		Sulphated Ash	IS 15279	1 g/100g -15 g/100 g
		Starch	IS 15279	Qualitative (Positive/Negative)
		Sucrose	IS 15279	60 g/100g -99g/100 g
b.	Pithi Sugar	Washing soda	FSSAI Manual	Qualitative (Positive/Negative)
		Chalk powder	FSSAI Manual	Qualitative (Positive/Negative)
C.	Bura	Ash insoluble in dil.HCl	FSSAI Manual	0.05 g/100g -2 g/100 g
		Total sugars (as sucrose)	FSSAI Manual	60 g/100g -99g/100 g
		Washing soda	FSSAI Manual	Qualitative (Positive/Negative)
d.	Gur/Jaggery	Insoluble matter	FSSAI Manual	1 g/100g -20g/100 g
		Total ash	FSSAI Manual	1 g/100g -15 g/100 g
	,	Ash insoluble in dil.HCl	FSSAI Manual	0.05 g/100g -2 g/100 g
		Sulphated ash	FSSAI Manual	1 g/100g -20 g/100 g
		Extraneous matter	FSSAI Manual	Qualitative (Positive/Negative)
		Washing soda	FSSAI Manual	Qualitative (Positive/Negative)

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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
		Chalk powder	FSSAI Manual	Qualitative (Positive/Negative)
10.	Honey & Honey Products	Specific gravity at 27°C	IS 4941	1-3
		Moisture	IS 4941	1 g/100g -25 g/100 g
		Ash	IS 4941	0.01 g/100g -1 g/100 g
		Total reducing sugar	IS 4941	1 g/100g -100 g/100 g
		Acidity (as formic acid)	IS 4941	0.01 g/100g -1 g/100 g
		Sucrose	IS 4941	1 g/100g -5 g/100 g
		Optical density	IS 4941	0.01 g/100g -1 g/100 g
•••••		Fiehe's Test	IS 4941	Qualitative (Positive/Negative)
11.	Poultry & Puoltry	Moisture	IS:7874 (P-I)	0.5 g/100g - 20g/100 g
	Products	Ash	IS:7874 (P-I)	0.05 g/100g - 10g/100 g
		Acid Insoluble Ash (on moisture free basis)	IS:7874 (P-I)	0.01 g/100g - 5g/100 g
		Fat	IS:7874 (P-I)	0.5 g/100g - 50g/100 g
		Crude Protein (on moisture-free basis, N x 6.25)	IS:7874 (P-I)	1 g/100g - 60g/100 g
		Crude Fibre	IS10226(P-I)	0.2 g/100g - 20g/100 g
12.	Jams, Juices,	pH of cut out syrup	IS 2860	1.0-12.0
	Sauces &	Acidity of cut out syrup	IS 2860	0.2 g/100g - 5 g/100 g
	Concentrates	Protein	IS 7219	0.5 g/100g - 50g/100 g
		Fat	IS 4684	0.5 g/100g - 50g/100 g
		Sugar	IS 2650	0.5 g/100g - 60g/100 g
		Crude Fiber	IS 10226 (I)	0.2 g/100g -10g/100 g
		Moisture	IS 4624	0.5 g/100g -10g/100 g
		Total soluble solids	IS 3884	1 g/100g -100g/100 g
		Total ash (on dry basis)	IS 4624	0.05 g/100g -10g/100 g
		Acid insoluble ash	IS 4624	0.05 g/100g -1.0g/100 g
13.	Fruit & Fruit	pH of cut out syrup	IS 2860	1.0-12.0
	Products	Acidity of cut out syrup	IS 2860	0.2 g/100g - 5 g/100 g
		Protein	IS 7219	0.5 g/100g - 50g/100 g

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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
		Fat	IS 4684	0.5 g/100g - 50g/100 g
		Sugar	IS 2650	0.5 g/100g - 60g/100 g
		Crude Fiber	IS 10226 (P-I)	0.2 g/100g -10g/100 g
		Moisture	IS 4624	10 g/100g - 90g/100 g
		Total soluble solids	IS 3884	1 g/100g -100g/100 g
		Total ash (on dry basis)	IS 4624	0.05 g/100g -10g/100 g
		Acid insoluble ash	IS 4624	0.05 g/100g -1.0g/100 g
		Drained weight in Pickles	FSSAI Manual	30 g/100g - 90g/100 g
14.	Vegetable and	pH of cut out syrup	IS 2860	1.0-12.0
	Vegetable	Acidity of cut out syrup	IS 2860	0.2 g/100g - 5 g/100 g
	Products	Protein	IS 7219	0.5 g/100g - 50g/100 g
		Fat	IS 4684	0.5 g/100g - 50g/100 g
		Sugar	IS 2650	0.5 g/100g - 60g/100 g
		Crude Fiber	IS 10226 (P-I)	0.2 g/100g -10g/100 g
		Moisture	IS 4624	0.5 g/100g - 90g/100 g
		Total soluble solids	IS 3884	1 g/100g -100g/100 g
		Total ash (on dry basis)	IS 4624	0.05 g/100g -10g/100 g
		Acid insoluble ash	IS 4624	0.05 g/100g -1.0g/100 g
15.	Beverages	Total soluble solids	FSSAI Manual	0 g/100g -50g/100 g
	(alcoholic/ Non	Total Sugar	IS:2346	1 g/100g -90 g/100 g
	Alcoholic)	Added synthetic colour	FSSAI Manual	Qualitative (Positive/Negative)
		Mineral acid in lemonade soda	FSSAI Manual	Qualitative (Positive/Negative)
16.	Food Additives & Preservatives	Presence of Benzoic acid	FSSAI Manual	Qualitative (Positive/Negative)
		Presence of Salicylic acid	FSSAI Manual	Qualitative (Positive/Negative)
		Presence of Sorbic acid	FSSAI Manual	Qualitative (Positive/Negative)
		Dulcin	FSSAI Manual	Qualitative (Positive/Negative)

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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
		Presence of mineral	FSSAI Manual	Qualitative
		acid in Vinegar		(Positive/Negative)
		Aluminium leaves in	FSSAI Manual	Qualitative
		silver leaves		(Positive/Negative)
17.	Starch & Starch	Moisture content	IS 4706 (P-II)	1.0 g/100g -15.0g/100 g
	Products	Total Ash (on dry basis)	IS 4706 (P-II)	0.01 g/100g -1.0g/100 g
		Acid insoluble ash (on dry basis)	IS 4706 (P-II)	0.01 g/100g -1.0g/100 g
		Crude Fiber (on dry basis)	IS 4706 (P-II)	0.01 g/100g -1.0g/100 g
		pH of aqueous extract	IS 4706 (P-II)	4.5-7.0
		Starch (Acid hydrolysis method) (on dry basis)	IS 4706 (P-II)	1 g/100g -100g/100 g
		Sand or talcum	FSSAI Manual	Qualitative (Positive/Negative)
18.	Meat & Meat	Fat	IS 5960 (P-III)	1 g/100g -30g/100 g
	Products	Protein	IS 7219	1 g/100g -30g/100 g
		pH	FSSAI Manual	4-9
		Moisture	IS 5960 (P-V)	1 g/100g -20g/100 g
		Total ash (on dry basis)	IS 5960 (P-II)	1 g/100g -50g/100 g
		Acid insoluble ash (on dry basis)	IS 5960 (P-II)	0.01 g/100g -2.0g/100 g
II.	WATER			
1.	(Drinking Water,	рН	IS 3025 (P-11)	3.0-12.0
	Potable Water,	Total Hardness	IS 3025 (P-21)	1mg/L-500 mg/L
	Natural Mineral	Electrical conductivity	IS 3025 (P-14)	1-1413µmhos/cm, 1413-
	Water, Packaged		, , ,	10,000 µmhos/cm,
	Drinking Water,	Total Dissolved Solids	IS 3025 (P-16)	1 mg/L -2500 mg/L
	Water for Food	Alkalinity	IS 3025 (P-23)	1 mg/L -500 mg/L
	Processing	Fluoride	IS 3025 (P-60)	0.05 mg/L -20 mg/L
	Industries,	Chloride	IS 3025 (P-32)	1 mg/L -1000 mg/L
	Treated Water,	Nitrate	IS 3025 (P-34)	1 mg/L -50 mg/L

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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
	Municipal Water,	Calcium	IS 3025 (P-40)	1 mg/L -500 mg/L
	Ground Water)	Magnesium	IS 3025 (P-46)	1 mg/L -500 mg/L
		Sulphate	IS 3025 (P-24)	2 mg/L -1000 mg/L
		Iron	IS 3025 (P-53)	0.05 mg/L -1000 mg/L
		Odour	IS 3025 (P-5)	Qualitative (Agreeable/Disagreeable)
		Residual Chlorine	IS 3025 (P-26)	0.1 mg/L -5 mg/L
		Turbidity	IS 3025 (P-10)	0.1- 40 (NTU)
		Total Suspended Solids	IS 3025(P-15)	1 mg/L -1000 mg/L
		Total Kjeldahl Nitrogen as N	IS 5194	0.5 mg/L - 5 mg/L
		Biochemical Oxygen Demand	IS 3025(P- 44)	2 mg/L – 20 mg/L
		Chemical Oxygen Demand	IS 3025(P-58)	5 mg/L – 250 mg/L
		Phosphates as P	IS 3025 (P-31)	0.1 mg/L -2.5mg/L