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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
		BIOLOGIC	AL TESTING	
I.	WATER			
1.	Drinking Water	Coliform Bacteria MPN Per 100 ml	IS 1622	1 to 161MPN/100 ml
		Faecal Coliform	IS 1622	Qualitative Present or Absent/100 ml
		Escherichia Coli	IS 1622	Qualitative Present or Absent/100ml
2.	Packaged	Coliform organism	IS 5401 (Part-1)	Present or Absent/250 ml
	Drinking Water	Yeast &Mould	IS 5403	Present or Absent /250ml
		Aerobic Microbial Count	IS 5402	
		37 °C for 24 hrs		≥1cfu/ ml
		22 °C for 72 hrs		≥1cfu/ ml
		Pseudomonas Aeruginosa	IS 13428	Present or Absent /250ml
		Vibrio cholera & Vibrio Peraheamolyticus	IS 5887 (Part -5)	Present or Absent /250ml
		Staphylococcus aureus	IS 5887 (Part -2)	Present or Absent /250ml
3.	Swimming Pool	MPN coliform count	IS1622	1 to 161MPN/100 ml
	Water	Standard Plate count	IS 3328	≥1 cfu/ ml
II.	FOOD AND AGRICU	LTURE PRODUCT		
1.	Beverages	Total Plate count	IS 5402	>1 cfu/ ml
		Coliform count	IS 5401(Part-1)	≥1 cfu/ ml
	•	Yeast & mould count	IS 5403	>1 cfu/ ml
2.	Spices & Condiments			
a.	Whole,	Total Plate Count	IS 5402	≥10 cfu/g
	Ground, Mixed	Yeast & Mould Count	IS 5403	≥10 cfu/g

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		Coliform Count	IS 5401(Part-1)	≥10 cfu/g
			IS 5401(Part-2)	<0.3 to>110 MPN/g
		E.coli	IS 5887(Part-1)	Present or Absent/g
		Salmonella	IS 5887 (Part-3)	Present or Absent/25g
		Shigella	IS 5887(Part-7)	Present or Absent/25g
		Staphylococcus aureus	IS 5887(Part-2)	Present or Absent/g
3.	Vegetables & Vegetables Products			
a.	Thermally Pocessed	Total Plate Count	IS 5402	≥10 cfu/g ≥1cfu/ml
	Products (Tomato	Yeast & Mould Count	IS 5403	≥10 cfu/g ≥1cfu/ml
	Juices, Soup, Puree, Paste, Ketchup,Sauce),	Coliform Count	IS 5401(Part-1) IS 5401(Part-2)	≥10 cfu/g ≥1cfu/ml
	Mixed Veg	E.coli	IS 5887(Part-1)	<0.3 to>110 MPN/g Present or Absent/g
	Wilked Veg	Salmonella	IS 5887(Part-3)	Present or Absent/25g
		Shigella	IS 5887(Part-7)	Present or Absent/25g
		Staphylococcus aureus	IS 5887(Part-2)	Present or Absent/g
4.	Bakery &	Total Plate Count	IS 5402	≥10 cfu/g
	Confectionary	Yeast & Mould Count	IS 5403	≥10 cfu/g
	Products	Coliform Count	IS 5401(Part-1)	≥10 cfu/g
		Comonii Codri	IS 5401(Part-2)	<0.3 to>110 MPN/g
		E.coli	IS 5887(Part-1)	Present or Absent/g
		Salmonella	IS 5887(Part-3)	Present or Absent/25g
		Shigella	IS 5887(Part-7)	Present or Absent/25g
		Staphylococcus aureus	IS 5887(Part-2)	Present or Absent/g
5.	Cereal And Cereal	Total Plate Count	IS 5402	≥10 cfu/g
	Products	Yeast & Mould Count	IS 5403	≥10 cfu/g
		Coliform Count	IS 5401(Part-1) IS 5401(Part-2)	≥10 cfu/g <0.3 to>110 MPN/g

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	E.coli	IS 5887(Part-1)	Present or Absent/g
	Salmonella	IS 5887(Part-3)	Present or Absent/25g
	Shigella	IS 5887(Part-7)	Present or Absent/25g
	Staphylococcus aureus	IS 5887(Part-2)	Present or Absent/g
Milk & Dairy Products			
(Flavoured Milk, Milk Powder,	Total Plate Count	IS 5402	≥10 cfu/g ≥1cfu/ml
Yoghurt, Probiotic	Yeast & Mould Count	IS 5403	≥10 cfu/g ≥1cfu/ml
Dessert	Coliform Count	IS 5401 (Part-1) IS 5401(Part-2)	≥10 cfu/g ≥1cfu/ml <0.3 to>110 MPN/g
	E.coli	IS 5887(Part-1)	Present or Absent/g
	Salmonella		Present or Absent/25g
	Shigella		Present or Absent/25g
	Staphylococcus aureus	IS 5887(Part-2)	Present or Absent/g
Infant Food			
Infant Milk	Total Plate Count	IS 5402	≥10 cfu/g
Substitute & Milk	Yeast & Mould Count	IS 5403	≥10 cfu/g
Cereal Based	Coliform Count	IS 5401(Part-1)	≥10 cfu/g
	<u> </u>	IS 5401(Part-2)	<0.3 to>110 MPN/g
		IS 5887(Part-1)	Present or Absent/g
			Present or Absent/25g
			Present or Absent/25g
Based	Staphylococcus aureus	IS 5887(Part-2)	Present or Absent/g
Food			
Nuts And Nuts Product			
Dry Fruits and Nuts	Total Plate Count	IS 5402	≥10 cfu/g
	Yeast & Mould Count	IS 5403	≥10 cfu/g
	Milk & Dairy Products (Flavoured Milk, Milk Powder, Yoghurt, Probiotic Curd, Frozen Dessert Infant Food Infant Milk Substitute & Milk Cereal Based Weaning Food, Protein Rich Food Supplement For Infant & Children Processed Cereal Based Complementary Food Nuts And Nuts Product	E.coli Salmonella Shigella Staphylococcus aureus	Defect

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		Coliform Count	IS 5401(Part-1) IS 5401(Part-2)	≥10 cfu/g <0.3 to >110 MPN/g
		E.coli		Present or Absent/g
		Salmonella	IS 5887(Part-3)	Present or Absent/25g
		Shigella	IS 5887(Part-7)	Present or Absent/25g
		Staphylococcus aureus	IS 5887 (Part-2)	Present or Absent/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				
	CHEMICAL TESTING							
I.	WATER							
1.	Drinking Water /	Electrical Conductivity	IS 3025 (Part 14)	1 to 5000 µmhos/cm				
	Packaged Water/	pH	IS 3025 (Part 11)	2 to 12				
	Mineral /Ground	Chloride as Cl	IS 3025 (Part 32)	5 mg/l to 1000 mg/l				
	Water/ Swimming	Calcium as Ca	IS 3025 (Part 40)	5 mg/l to 1000 mg/l				
	Pool Water/	Magnesium as Mg	APHA, 3500-Mg(B)	5 mg/l to 1000 mg/l				
	Domestic And	Total Hardness as CaCO₃	IS 3025 (Part 21)	5 mg/l to 1000 mg/l				
	Potable Water	Turbidity	IS 3025 (Part 10)	5 NTU to 100 NTU				
		Sulphate as SO ₄	APHA, 4500 SO ₄ -2	5 mg/l to 1000 mg/l				
		Total Dissolved Solids	IS 3025 (Part 16)	10 mg/l to 2000 mg/l				
		Iron as Fe	APHA, 3500 Fe-B	0.01 mg/l to 100 mg/l				
		Free Residual Chlorine	APHA, 4500 Cl ⁻ (B)	1 mg/l to 50 mg/l				
		Fluoride as F	APHA,4500 F-(D)	0.1 mg/l to 50 mg/l				
		Reactive Silica as SiO ₂	IS 3025 (Part 35)	1.0 mg/l to 100 mg/l				
		Boron as B	APHA, 4500B-C	1.0 mg/l to 50 mg/l				
		Nitrate as NO₃	IS 3025 (Part 34)	1.0 mg/l to 100 mg/l				
		Dissolved Phosphate as PO ₄	IS 3025 (Part 31)	0.5 mg/l to 10 mg/l				
		Potassium as K	APHA, 3500 K(B)	1 mg/l to 100 mg/l				
		Sodium as Na	APHA, 3500 K(B)	1 mg/l to 100 mg/l				
		Alkalinity	APHA, 2320 (B)	5 mg/l to 100 mg/l				
		Ammonical Nitrogen	IS 3025 (Part 34)	1 mg/l to 100 mg/l				
		as NH₃						
		Total Suspended Solid	IS 3025 (Part 17)	5 mg/l to 100 mg/l				
		Phenol	APHA, 5530(C)	0.1 mg/l to 10 mg/l				
		Zinc (Zn)	APHA, 3111(B)	0.05 mg/ I to 100 mg/l				
		Lead (Pb)	APHA, 3111(B)	0.01 mg/l to 10 mg/l				
		Nickel (Ni)	APHA, 3111(B)	0.01 mg/l to 10 mg/l				
		Manganese (Mn)	APHA, 3111(B)	0.05 mg/l to 10 mg/l				
		Aluminium (Al)	APHA, 3111(B)	0.03 mg/l to 10 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
		Total Chromium (Cr)	APHA, 3111(B)	0.05 mg/l to 10 mg/l
		Hexavalent Cr ⁺⁶	APHA, 3500 Cr (B)	0.05 mg/l to 10 mg/l
		Silver (Ag)	APHA, 3111(B)	0.1 mg/ l to 10 mg/l
		Cobalt (Co)	APHA, 3111(B)	0.1 mg/l to 10 mg/l
		Copper (Cu)	APHA, 3111(B)	0.5 mg/l to 10 mg/l
		Acidity	IS : 3025 (Part-22)	5 mg/l to 500 mg/l
		Cadmium (Cd)	APHA, 3111 (B)	0.1 mg/l to 1 mg/l
II.	POLLUTION AND EN	NVIRONMENT		
1.	Waste Water	Electrical Conductivity	IS 3025 (Part 14)	1 to 5000 µmhos/cm
		рН	IS 3025 (Part 11)	2 to 12
		Chloride as Cl	IS 3025 (Part 32)	5 mg/l to 1000 mg/l
		Chemical Oxygen Demand		5 mg/l to 50000 mg/l
		Sulphate as SO ₄	APHA ,4500 SO₄ ⁻² E	5 mg/l to 1000 mg/l
		Total Dissolved Solids	IS 3025 (Part 16)	10 mg/l to 5000 mg/l
		Total Suspended Solids	IS 3025 (Part 17)	1 mg/l to 5000 mg/l
		Total Iron as Fe	APHA ,3500 Fe-B	0.1 mg/l to 100 mg/l
		Biochemical Oxygen Demand at 27°C for 3 days	IS 3025 (Part 44)	2 mg/l to 30000 mg/l
		Oil & Grease	IS 3025 (Part 39)	1 mg/l to 100 mg/l
		Free Residual Chlorine	IS 3025 (Part 26)	1 mg/l to 50 mg/l
		Boron as B	IS 3025 (Part 57)	10 mg/l to 50 mg/l
		Nitrate as NO₃	IS 3025 (Part 34)	1 mg/l to 100 mg/l
		Temperature	IS 3025 (Part 9)	25°C to 60°C
		Calcium as Ca	IS 3025 (Part 40)	2 mg/l to 1000 mg/l
		Potassium as K	APHA, 3500 K(B)	1 mg/l to 100 mg/l
		Sodium as Na	APHA, 3500 K(B)	1 mg/l to 100 mg/l
		Fluoride as F	APHA,4500 F-(D)	0.1 mg/l to 50 mg/l
		TKN	IS 3025 (Part 34)	1 mg/l to 100 mg/l
		Ammonical Nitrogen as NH ₃	IS 3025 (Part 34)	1 mg/l to 100 mg/l
		Magnesium as Mg	APHA 3500-Mg(B)	5 mg/l to 1000 mg/l
		Free Ammonia	IS 3025 (Part 34)	1.0 mg/l to 100 mg/l

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		Zinc (Zn)	APHA, 3111(B)	1.0 mg/l to 100 mg/l
		Lead (Pb)	APHA, 3111(B)	0.50 mg/l to 10 mg/l
		Nickel (Ni)	APHA, 3111(B)	0.50 mg/l to 10 mg/l
		Phosphorous	APHA, 3500	5 mg/l to 100 mg/l
		Aluminium (Al)	APHA, 3111(B)	0.5 mg/l to 10 mg/l
		Silver (Ag)	APHA, 3111(B)	0.2 mg/l to 10 mg/l
		Cobalt (Co)	APHA, 3111(B)	0.2 mg/l to 10 mg/l
		Copper (Cu)	APHA, 3111(B)	0.2 mg/l to 10 mg/l
		Cadmium (Cd)	APHA, 3111(B)	0.003 mg/l to 1 mg/l
		Surfactant	APHA, 5540 (C)	0.2 mg/l to 10 mg/l
		Phenolic Compound	APHA, 5530 (C)	0.01 mg/l to 10 mg/l
		Color	APHA, 2120 (B)	5 Hazen to 500 Hazen
		Total Chromium (Cr)	APHA, 3111(B)	0.5 mg/l to 10 mg/l
		Hexavalent Cr ⁺⁶	APHA, 3500 Cr (B)	0.02 mg/l to 10 mg/l
2.	Soil	Specific Electrical	IS 14767	0.1 mS/s to 200mS/s
		Conductivity	[Instrument Method]	
		pН	IS 2720 (Part-26)	2-12
			Electromagnetic Method	
		Available Sodium	USEPA 3050 B	05 mg/kg to
			(AAS Flame) Rev./SOP No. EL/SOP/SOIL/06	5000 mg/kg
		Available Nitrogen	IS 14684 [Devaeda's alloy Method]	5 mg/kg to 280 mg/kg
		Total Kjeldahl Nitrogen	IS 14684, [Devaeda's alloy Method]	5 mg/kg to 280 mg/kg
<u> </u>		Organic Matter	IS 2720 (Part-22)	0.5% to 30 %
		Bulk Density	IS 2720 (Part-28), &	
			Part-29,	0.5 mg/cm ³ to 5 mg/cm ³
			& SOP No. EL/SOP/SOIL/05	
			[By Cold Method]	
		Potassium		05 mg/kg to
			Rev./SOP No.	5000 mg/kg
		<u> </u>	EL/SOP/SOIL/06	
ļ		Chloride	USEPA 9253	5 mg/kg to 25000 mg/kg

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III.	RESIDUES IN WATER			
1.	Pesticides	Aldrin Alpha HCH Beta HCH Delta HCH Gamma HCH Butachlor Lindane Ethion	APHA, 6630 (C)	1.0 µg/L to 50µg/L 1.0 µg/L to 50µg/L 1.0 µg/L to 50µg/L 1.0 µg/L to 50µg/L 2 µg/L to 100µg/L 0.1 µg/L to 5 µg/L 0.5 µg/L to 50µg/L
IV.	RESIDUES IN FOOD	Phorate Atrazine Malathion Chlorpyriphos	APHA, 6630 (C) APHA, 6630 (C) APHA, 6630 (C) APHA, 6630 (C) APHA, 6630 (C)	1 μg/L to 100μg/L 2 μg/L to 100μg/L 2 μg/L to 100 μg/L 0.1 μg/L to 1mg/L 10 μg/L to1000 μg/L
1.	Trace Metal Analysis	•		
(a)	Herbs, spices & condiments, Canned & Processed food	Lead	AOAC 999.11 20th Edition,	2 to 100mg/kg
(b)	Beverages (Alcoholic/Non- alcoholic), Herbs, spices & condiments,Tea, Infant foods	Copper	AOAC 999.11 20th Edition,	0.3 to 100mg/kg
(c)	Beverages (Alcoholic / Non- alcoholic), Herbs, spices & condiments, Vegetables & vegetable Products	Arsenic	AOAC 986.15 20th Edition,	40 to 2000 μg/kg

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(d)	Jam, juices, sauces & concentrates	Tin	AOAC 985.16 20th Edition,	20 to 100mg/kg
(e)	Meat & meat Products, Cereals, Pulses & cereal Products	Cadmium	AOAC 999.11 20th Edition,	0.2 to 100mg/kg
(f)	Meat & meat Products, Salt	Mercury	AOAC 971.21 20th Edition,	100 to 2000 µg/kg
(g)	Meat & meat Products	Chromium	AOAC 999.11 20th Edition,	0.1 to 100 mg/kg
(h)	Fortified lodized Salt, Common Salt, Tea	Iron	AOAC 999.11 20th Edition,	0.5 to 100 mg/kg
(i)	Nut & Nut Products, Meat & Meat Products, Cereals, Pulses & Cereal Products, Tea	Manganese	AOAC 999.11 20th Edition,	0.5 to 100 mg/kg
(j)	Herbs, Spices & Condiments, Canned & Processed Food	Zinc	AOAC 999.11 20th Edition,	0.1 to 100 mg/kg
(k)	Herbs, spices & condiments	Nickel	AOAC 999.11 20th Edition,	0.4 to 100 mg/kg
٧.	ATMOSPHERE POLI	LUTION		
1.	Ambient Air Monitoring	Particulate Matter (PM ₁₀) Sulphur dioxide (SO ₂) Nitrogen dioxide (NO ₂) Particulate Matter (PM _{2.5})	IS 5182 (Part 23) IS 5182 (Part 2) IS 5182 (Part 6) LAB SOP No-SP-63	10 μg/m ³ to 1000 μg/m ³ 6 μg/m ³ to 1000 μg/m ³ 5 μg/m ³ to 1000 μg/m ³ 10 μg/m ³ to 1000 μg/m ³
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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
		Ammonia	APHA-AIR 3 rd Ed. Method No-401	5 μg/m³ to 500 μg/m³
		Lead	IS 5182 (Part- 22)	0.05 μg/m ³ to 5 μg/m ³
2.	Stack Emission	Particulate Matters	IS 11255 (Part- 1)	5 to 5000 mg/Nm ³
	Air Monitoring	Sulphur Dioxide (SO ₂)	IS 11255 (Part- 2)	4 to 5000 mg/Nm ³
		Carbon Mono-oxide (CO)	IS13270 Orsat Gas Apparatus	1 to 20 % by Vol.
		Carbon Dioxide (CO ₂)	IS 13270 Orsat Gas Apparatus	1 to 20% by Vol.
		Oxygen (O ₂)	IS 13270 Orsat Gas Apparatus	1 to 20% by Vol.
		NOx	IS 5182 (Part-7)	5.0 to 500 mg/Nm ³
VI.	FOOD & AGRICULT	URAL PRODUCTS		
1.	Milk and Milk Products			
(a)	Infant Milk Substitutes, Milk Powder, Paneer,	Moisture	Clause 10.2 of Annex. A FSSAI 1st Ed; IS 16072	0.50 to 20.00 % by mass
	SMP, WMP	Total ash	Clause 10.7 of Annex. A FSSAI 1st Ed; Annexure B of IS 14433 (Part-1)	0.05 to 10.00 % by mass
		Acid insoluble ash	Clause 10.8 of Annex. A FSSAI 1st Ed; Annexure C of IS 14433 (Part-1)	0.01 to 10.00 % by mass
		Fat	Clause 10.3 of Annex. A FSSAI 1st Ed; IS 11721	1.0 to 50.0 % By mass
		Protein	Clause 10.6 of Annex. A FSSAI 1st Ed; IS 7219	1.0 to 50.0 % by mass

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		Titrable acidity	Clause 10.4 of Annex. A FSSAI 1st Ed; Annexure B of IS 1165	0.1 to 2.0 % by mass
		Vitamin C	IS 5838	1.00 to 500.00 mg/100g
		Carbohydrates	AOAC 986.25 (20th Ed),	40 to 100 % by mass
		Energy (calorific value	IS 14433 (Part-1)	50 to 500 Kcal/100g
		Detection of added	Clause 4.2 of Annex. E	Present/Absent
		synthetic coloring matter	FSSAI 1st Ed.	(Qualitative)
		Sugar	IS 4079	1.0 to 30.0 % by mass
(b)	Milk & Milk	Test for Adulterants &	FSSAI Lab Manual	Present/Absent
	Products	Preservatives	(Milk & Milk Products),	(Qualitative)
		Cane sugar	FSSAI 1st Ed., Method	Present/Absent
			1.2.1.1	(Qualitative)
		Starch	FSSAI 1st Ed.,	Present/Absent
			Method 1.2.2.1	(Qualitative)
		Cellulose	FSSAI 1st Ed., Method 1.2.3	Present/Absent
				(Qualitative)
		Added urea	FSSAI 1st Ed., Method	Present/Absent
			1.2.4.1	(Qualitative)
		Ammonium compounds	FSSAI 1st Ed., Method 1.2.5	Present/Absent
				(Qualitative)
		Added glucose	FSSAI 1st Ed., Method	Present/Absent
		<u> </u>	1.2.7.1	(Qualitative)
		Sodium chloride	FSSAI 1st Ed., Method 1.2.8	Present/Absent
		<u> </u>		(Qualitative)
		Salicylic acid	FSSAI 1st Ed., Method	Present/Absent
			12.20	(Qualitative)
		Neutralizers	FSSAI 1st Ed., Method	Present/Absent
		<u> </u>	1.2.11	(Qualitative)
		Hypochlorite's &	FSSAI 1st Ed.,	Present/Absent
		chloramines	Method 1.2.12	(Qualitative)
		Formalin	FSSAI 1st Ed., Method 1.2.17	Present/Absent (Qualitative)
		<u> </u>		

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		Hydrogen Peroxide	FSSAI 1st Ed., Method 1.2.18	Present/Absent (Qualitative)
		Boric acid & borates	FSSAI 1st Ed., Method 1.2.19	Present/Absent (Qualitative)
(c)	Cheese	Moisture	Clause 6.2 of Annex. A FSSAI 1st Ed,	1.0 to 50.0 % by mass
		Fat	Clause 6.3 of Annex. A FSSAI 1st Ed.,	1.0 to 50.0 % by mass
2.	Oils & Fats	Moisture & volatile matter	Clause 3 of Annex. B FSSAI 1st Ed., Clause 5.1 of IS 548 (Part-1)	0.02 to 0.50 % by mass
		RM value	Clause 13 of Annex. B FSSAI 1st Ed., Clause 18 of IS 548 (Part-1)	20 to 35
		Refractive index	Clause 5 of Annex. B FSSAI 1st Ed., Clause 10 of IS 548 (Part-1)	1.30 to 1.71
		Saponification value	Clause 9 of Annex. B FSSAI 1st Ed., Clause 15 of IS 548 (Part-1)	130 to 300
		lodine Value	Clause 12 of Annex. B FSSAI 1st Ed., Clause 14 of IS 548 (Part-1)	7 to 200
		Acid value	Clause 11 of Annex. B FSSAI 1st Ed., Clause 7 of IS 548 (Part-1)	0.5 to 10.0
		Free fatty acids	FSSAI 1st Ed., Clause 7 of IS 548 (Part-1)	
		Melting Point	Clause 8 of Annex. B FSSAI 1st Ed., Clause 9.1 of IS 548 (Part-1)	25 to 90 °C
		Peroxide value		1 to 1000 meq./1000gm
		Hydrocyanic acid	Clause 32 of Annex. B FSSAI 1st Ed.,	Present/Absent (Qualitative)

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		Baudouin Test	Clause 15 of Annex. B	Present/Absent
			FSSAI 1st Ed.,	(Qualitative)
		Unsaponifiable matter	Clause 10 of Annex. B FSSAI 1st Ed.,	0.002 to 10.000 % by mass
		Mineral oil by TLC	IS 548 (Part-1) Clause 28 of Annex. B FSSAI 1st Ed.,	Present/Absent (Qualitative)
		Cotton seed oil (Halphen test)	Clause 16 of Annex. B FSSAI 1st Ed,	Present/Absent (Qualitative)
		Argemone oil	Clause 30 of Annex. B FSSAI 1st Ed.,	Present/Absent (Qualitative)
		Detection of added	Clause 39 of Annex. B	Present/Absent
		synthetic colouring matter	FSSAI 1st Ed.,	(Qualitative)
		Polybromide test	Clause 20 of Annex. B FSSAI 1st Ed.,	Present/Absent (Qualitative)
•••••		Castor oil by TLC	4	Present/Absent
		Specific gravity		0.860 to 2.000
3.	Ready to Eat Fruits	Acidity	IS 13844	0.01 to 25.00 % by mass
	& Vegetable	Moisture	IS 4624, Appendix A	0.5 to 50.0 % by mass
	Products	Ash	IS 4624, Appendix E	0.02 to 20.00 % by mass
	(Processed)	Acid insoluble ash	IS 4624, Appendix F	0.02 to 5.00 % by mass
		Protein	IS 7219	1 to 50 % by mass
		Fat	IS 4684, Appendix F	0.01 to 60.00 % by mass
		Carbohydrates	AOAC 986.25 (20th Ed),	20 to 100 % by mass
		Energy (Calorific value)	IS 14433 (Part-1)	80 to 250 Kcal/100g
		Vitamin C	IS 5838	1 to 500 mg/100g
		Sodium chloride	IS 2860, Clause 11	1 to 20 % by mass
		Sugar	IS 2650, Appendix E	2.0 to 80.0 % by mass
		Detection of added synthetic coloring matter	Clause 4.2 of Annex. E FSSAI 1st Ed.,	Present/Absent (Qualitative)

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		Artificial sweetener as	Clause 3.1 FSSAI Lab	Present/Absent
		saccharin	Manual (Food Additives),	(Qualitative)
		Crude fibre	IS 10226 (Part-1)	0.2 to 20.0 % by mass
4.	Food Grains, Pulses, Cereal & Cereal Products	Moisture	Clause 2.0 of Annex. D FSSAI 1st Ed., IS 1155, Appendix A	1.0 to 50.0 % by mass
	(Atta, Maida, Suji, Besan)	Total ash	Clause 8.2 of Annex. D FSSAI 1st Ed., IS 1155, Appendix B	0.05 to 10.00 % by mass
		Gluten	Clause 8.4 of Annex. D FSSAI 1st Ed., IS 1155, Appendix D	2.0 to 20.0 % by mass
		Acid insoluble ash	Clause 8.3 of Annex. D FSSAI 1st Ed.,	0.02 to 2.00 % by mass
		Alcoholic acidity	Clause 8.5 of Annex. D FSSAI 1st Ed., IS 1155, Appendix F	0.02 to 2.00 % by mass
		Crude fibre	Clause 8.8 of Annex. D FSSAI 1st Ed., IS 1155, Appendix E	0.2 to 20.0 % by mass
		Protein	Clause 8.7 of Annex. D FSSAI 1st Ed; IS 7219	0.5 to 70.0 % by mass
		Fat	IS 4684, Appendix F	0.5 to 10.0 % by mass
		Carbohydrates	AOAC 986.25 (20th Ed),	30 to 90 % by mass
		Energy (Calorific value)	IS 14433 (Part-1)	100 to 500 Kcal/100g
		Detection of added	Clause 4.2 of Annex. E	Present/Absent
		synthetic colouring matter	FSSAI 1st Ed.,	(Qualitative)
		Argemone seeds	Clause 1.0 of Annex. B FSSAI 1st Ed.,	Present/Absent (Qualitative)
		Insect	Clause 1.0 FSSAI 1st Ed.,	Present/Absent (Qualitative)
•••••		Microscopic examination	Clause 13 FSSAI Lab Manual (Cereal & Cereal Products)	Present/Absent (Qualitative)

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		Rodent hair & Extracts	Clause 1.5 FSSAI Lab	Present/Absent
			Manual	(Qualitative)
			(Cereal & Cereal Products),	
		Presence of mould	Clause 1.0 FSSAI Lab	Present/Absent
			Manual	(Qualitative)
		ļ	(Cereal & Cereal Products)	
5.	Protein-Rich Food	Moisture	IS 4684, Appendix B	1.0 to 20.0 % by mass
	Supplements &	Total ash	IS 4684, Appendix D	0.5 to 20.0 % by mass
	Ready-to-Eat	Acid insoluble ash	IS 4684, Appendix E	0.02 to 5.00 % by mass
	Protein Rich	Sugar	IS 2650, Appendix E	2.0 to 50.0 % by mass
	Extruded Fortified	Fat	IS 4684, Appendix F	0.5 to 50.0 % by mass
	Foods Meant for	Protein	IS 7219	0.5 to 25.0 % by mass
	Preschool Children	Crude fibre	IS 4684, Appendix H	0.2 to 5.0 % by mass
	& Women	Carbohydrates	AOAC 986.25 (20th Ed),	55 to 90 % by mass
		Energy (Calorific value)	IS 14433 (Part-1)	300 to 525 Kcal/100g
		Vitamin C	IS 5838	1.0 to 500.0 mg/100g
6.	Bakery Products	Moisture	IS 1011, Annexure B	0.5 to 50.0 % by mass
		Total ash	IS 1011, Annexure C	0.5 to 10.0 % by mass
		Acid insoluble ash	IS 1011, Annexure C	0.05 to 2.00 % by mass
		Fat	IS 12711,Clause 10	0.5 to 20 % by mass
		Protein	IS 7219	1.0 to 40 .0% by mass
		Sugar	IS 2650, Annexure E	1.0 to 50.0 % by mass
		Acidity of extracted fat	IS 1011, Annexure D	0.1 to 0.5.0 % by mass
		Carbohydrates	AOAC 986.25 (20th Ed),	50 to 100 g/100g
		Energy (Calorific value)	IS 14433 (Part-1)	300 to 500 Kcal/100g
		Crude fibre	IS 12711, Clause 13	1.0 to 10.0 % by mass
		рН	IS 12711, Clause 12	2.0 to 13.0
		Total solids	IS 12711, Clause 8	10 to 98 % by mass
		Alcoholic acidity	IS 12711, Clause 14	0.02 to 2.00 % by mass
7.		Moisture	IS 15271, Annexure B	0.5 to 10.0 % by mass
••••••	Snacks (Namkeens)	Fat	IS 15271, Annexure D	0.5 to 60.0 % by mass
		Ash	IS 15271, Annexure C	0.5 to 10.0 % by mass
		Acid insoluble ash	IS 15271, Annexure C	0.05 to 2.00 % by mass

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		Protein	IS 7219	1.0 to 20.0 % by mass
		Acid value of extracted fat	IS 15271, Annexure E	0.1 to 2.0 % by mass
		Carbohydrate	AOAC 986.25 (20th Ed)	30 to 100 % by mass
		Energy (Calorific value)	IS 14433 (Part-1)	400 to 600 Kcal/100g
		Peroxide Value of extracted fat	IS 15271, Annexure F	0.5 to 10.0 meq/kg
8.	Animal Feed & Pet	Moisture	IS 7874 (Part-1), Clause 4	0.5 to 25.0 % by mass
	Food	Ash	IS 7874 (Part-1), Clause 9	0.5 to 10.0 % by mass
		Crude fat	IS 7874 (Part-1), Clause 7	0.5 to 25.0 % by mass
		Crude fibre	IS 7874 (Part-1), Clause 8	0.5 to 5.0 % by mass
		Protein	IS 7219	0.5 to 60.0 % by mass
		Carbohydrates	AOAC 986.25 (20th Ed),	30 to 70 % by mass
		Energy (Calorific value)	IS 14433 (Part-1)	350 to 500 Kcal/100g
9.	Honey	Moisture	Clause 6.2 of FSSAI Lab Manual 4 IS: 4941, Annex-B-2	13to 25 % by mass
		Optical Density at 660nm	Annex–H of IS:4941	0.010 to 0.799
		Total Reducing sugar	Clause 6.4 of FSSAI Lab Manual 4 IS:4941, Annex-C-1	50 to 85 % by mass
		Sucrose	Clause 6.4 of FSSAI Lab Manual 4 IS:4941, Annex-C-2	0.40 to 10.00 % by mass
		Ash	Clause 6.7 of FSSAI Lab Manual 4 IS:4941, Annex–D	0.002 to 5.000 % by mass
		Acidity(as Formic acid)	Clause 6.8 of FSSAI Lab Manual 4 IS:4941, Annex-E	0.01 to 0.50 % by mass
		1	Clause 6.6 of FSSAI Lab Manual 4 IS:4941, Annex-F-1	Present/Absent (Qualitative)
		Hydroxy methyl furfural (HMF)	IS:4941, Annex-F-2	0.50 to 150.00 mg/kg

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		Specific Gravity	Clause 6.3 of FSSAI Lab Manual 4 IS:4941, Annex–A	0.90 to 1.50
10.	Spices and Condiments	Moisture/Loss on Drying	Clause 3.0 of Annex. G FSSAI1st Ed, IS 1797, Clause 9	1.0 to 30.0 % by mass
		Total ash	Clause 4.0 of Annex. G FSSAI 1st Ed., Clause 6 IS 1797,	1.0 to 30.0 % by mass
		Acid insoluble ash	Clause 5.0 of Annex. G FSSAI 1st Ed., Clause 8 IS1797,	0.05 to 20.00 % by mass
		Water insoluble ash	IS 1797, Clause 7	0.5 to 5.0 % by mass
		Cold water soluble extract	Clause 6.0 of Annex. G FSSAI 1st Ed., IS 1797, Clause 11	0.04 to 50.00 % by mass
		Alcohol soluble extract	Clause 7.0 of Annex. G FSSAI 1st Ed., IS 1797, Clause 10	0.04 to 50.00 % by mass
		Volatile oil	Clause 10.0 of Annex. G FSSAI 1st Ed, IS 1797, Clause 15	0.1 to 20.0 ml/100gm
		Non Volatile ether extract	Clause 9.0 of Annex. G FSSAI 1st Ed., IS 1797, Clause 14	0.50 to 40.00 % by mass
		Crude fibre	Clause 11.0 of Annex. G FSSAI 1st Ed, IS 1797, Clause 13	0.20 to 35.00 % by mass
		Starch	Clause 9 IS 4706 (Part2)	1 to 90 % by mass
		Acidity	IS 13242, Annexure A	0.5 to 30.0 %
[Curcumin content in Turmeric Powder/Whole	IS 10925, Appendix B	1 to 6 %

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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
		Chromate test in Turmeric Powder/Whole	IS 3576, Annexure A	Present/Absent (Qualitative)
		Protein	IS 7219	0.2 to 30.0 % by mass
		Detection of Added	Clause 4.2 of Annex. E	Present/Absent
		synthetic colouring matter	FSSAI 1st Ed.,	(Qualitative)
		Salt	IS:1797, Clause 16	0.2 to 25.0 %
11.	Sugar	Extraneous matter	FSSAI 1st Ed.,	Present/Absent
	(Cane Sugar, Raw		IS 5975	(Qualitative)
	Sugar)	Dirt, Filth & Iron fillings	FSSAI 1st Ed;	Present/Absent
		_	IS 5975	(Qualitative)
		Detection of Added	Clause 4.2 FSSAI Lab	Present/Absent
		synthetic coloring matter	Manual (Food Additives),	(Qualitative)
		Moisture	Clause 7.2 of FSSAI Lab	0.05 to 20.00 % by mass
			IS 15279, Manual 4	_
		Total Sugar	Clause 7.4 of FSSAI Lab	1.0 to 99.9 % by mass
		(Expressed as Sucrose)	IS 15279, Manual 4	
		Sulphated Ash	IS 15279; IS 5975	0.1t o 10.0 % by mass
••••••		Ash Content	Clause 7.3 of FSSAI Lab Manual 4 IS 4941	0.01to 5.00 % by mass
12.	Meat and Meat	Moisture	IS 5960 (Part-5)	0.5 to 80.0 % by mass
	Products	Ash	IS 5960 (Part-2)	0.05 to 10.00 % by mass
	(Raw & Processed)	Nitrogen Content	Clause 2.2 of FSSAI Lab Manual (Meat & Meat Products) IS 5960 (Part-1)	1.0 to 10.0 % by mass
		Total Fat	Clause 2.1 of FSSAI Lab Manual (Meat & Meat Products) IS 5960 (Part -3)	0.5 to 20.0 % by mass
		Carbohydrate	AOAC 986.25 (20th Ed)	20 to 60 % by mass
		Energy (calorific value)	IS 14433 (Part-1)	150 to 300 Kcal/100g

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13.	Confectionary	Moisture	Clause A2 of FSSAI Lab Manual 4 IS 6287	0.1 to 10.0 % by mass
		Ash Sulphated	Clause A3 of FSSAI Lab Manual 4 IS 6287	0.05 to 15.00 % by mass
		Acid insoluble ash	Clause A3 of FSSAI Lab Manual 4 IS 6287	0.01 to 10.00 % by mass
•••••		Reducing Sugar	Clause A9 of FSSAI Lab Manual 4 IS 6287	1.0 to 30.0 % by mass
••••••		Sucrose content	Clause A10 of FSSAI Lab Manual 4 IS 6287	1.0 to 80.0 % by mass
		Fat	Clause A8 of FSSAI Lab Manual 4 IS 6287	1.0 to 10.0 % by mass
		Protein	Clause A7 of FSSAI Lab Manual 4 IS 6287	1.0 to 30.0 % by mass
		Detection of added synthetic colouring matter	Clause 4.2 of Annex. E FSSAI 1st Ed.,	Present/Absent (Qualitative)
14.	Chocolate (Milk Chocolate, Milk Covering	Total fat	Clause C3 of FSSAI Lab Manual 4 IS 1163	2.0 to 50.0 % by mass
	Chocolate, Plain Chocolate, Plain Covering	Milk fat	Clause C7 Of FSSAI Lab Manual 4 IS 1163	1.0 to 15.0 %
	Chocolate, White Chocolate, Blend Chocolate)	Milk Solids	Clause C4 Of FSSAI Lab Manual 4 IS 1163	1.0 to 20.0 %
•••••		Acid Insoluble Ash	Clause C6 Of FSSAI Lab Manual 4; IS 1163	0.01to 1.00 % by mass

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15.	Edible Salt	Moisture	IS 7224, Annex A; IS 253	0.1 to 10.0 % by mass
		Water Soluble Matter other than NaCl	IS 7224, Annex E; IS 253	0.5 to 5.0 % by mass
		Water Insoluble Matter	IS 7224; Annex C; IS 253	0.05 to 5.00 % by mass
		Iodine Content	IS 7224, Annex H;	10 to 100 mg/kg
		Sodium Chloride Content (Salt)	IS 7224; Annex D; IS 253	95 to 100 % by mass
		Alkalinity	IS 7224, Annex J;	0.05 to 1.00 % by mass
16.	Tea & Coffee	Dry matter content	IS 3633	85 to 98 % by mass
		Moisture	IS 2791	0.05 to 20.00 % by mass
		Total ash	IS 13854	1.0to 20.0 % by mass
		Acid insoluble ash	IS 13857	0.1to 10.0 % by mass
		Water soluble ash	IS 13855	1.0to 60.0 % by mass
		Water extract	IS 13862	0.5to 50.0 % by mass
		Alkalinity of soluble ash	IS 13856	1to 5 % by mass
		Crude fibre	As Per FSSAI 1 st Ed; IS 10226 (Part-1)	≤50 % by mass
17.	Ready to Serve Carbonated & Non Carbonated	Brix	Clause 15.1 of Annex C. FSSAI 1 st Ed; IS 13815	0°to 95°
	Beverages (Alcoholic & Non-	Total Acidity	IS 13844; IS 3752	0.01to 5.00 % by mass
	Alcoholic)	рН	Clause 15.2 of Annex C FSSAI 1st Ed; AOAC 945.10(20th Ed),	1to 14
		Alcoholic Content	IS 3752	2.0 to 99.0
· · · · · · · · · · · · · · · · · · ·		Residue on Evaporation	IS 3752	0.05 to 10.00 g/100ml
		Artificial sweetener as	Clause 3.1 of Annex. E	Present/Absent
		saccharin	FSSAI 1 st Ed;	(Qualitative)
18.	Nuts & Nuts	Moisture	IS 4684	0.02 to 50.00 % by mass
	Products	Total Ash	IS 4684	0.02 to 20.00 % by mass

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		Acid Insoluble Ash	IS 4684	0.2 to 10.0 % by mass
		Fat	IS 4684	0.5 to 70.0 % by mass
		Protein	IS 4684	0.1 to 80.0 % by mass
		Carbohydrate	AOAC 986.25	0.5 to 95.0 % by mass
		Energy (as Calorific Value)	IS 14433 (Part-1)	4.0 to 900.0 Kcal/100g
19.	Tobacco & Tobacco	Moisture	IS 5643	0.1 to 50.0 % by mass
	Products	Total Ash	IS 5643	0.002 to 20.000 % by
		Acid Insoluble Ash	IS 5643	mass 0.001 to 5.000 % by mass
		Total Nitrogen	IS 5643	0.001 to10.000%by mass
		Nicotine Content	IS 5643	0.2 to 20.0 %
20.	Migration			
(a)	Plastic Bottles for	a) Amount of Extractive	IS 9845	Max. 60 mg/L
	Packaged Natural	b) Amount of Extractive	IS 9845	Max. 10 mg/dm ²
	Mineral Water and Packaged Drinking Water	Color Migration	IS 9845	Present/Absent (Qualitative)
(b)	Polyethylene	a) Amount of Extractive	IS 15609	Max. 60 mg/L
	flexible Pouches for	b) Amount of Extractive	IS 15609	Max. 10 mg/dm ²
	the Packing of Natural Mineral Water	Color Migration	IS 15609	Present/Absent (Qualitative)
(c)	Polyethylene for	a) Amount of Extractive	IS 10146	Max. 60 mg/L
	used in contact	b) Amount of Extractive	IS 10146	Max. 10 mg/dm ²
	with food stuff (Overall Migration)	Color Migration	IS 10146	Present/Absent (Qualitative)
(d)	Plastic cap for	a) Amount of Extractive	IS 9845	1 to 100 mg/l
` '	Packaged Natural	b) Amount of Extractive	IS 10146	1 to 100 mg/dm ²
	Mineral Water, Packaged Drinking Water and Food Bottles.	Color Migration	IS 10146	Present/Absent (Qualitative)

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		CHEMIC	CAL TESTING	
AT SITE				
٧.	ATMOSPHERE POL	LUTION		
1.	Noise Testing	Ambient Noise Testing (Leg)	IS 1989	30 to 110 dB (A)
		Source Noise Testing	IS 9000 (Part -21) IS 9876	30 to 130 dB (A)
2.	Work Zone/ Indoor Air Quality	Suspended Particulate Matter (SPM)	IS 5182,(Part-4)	2 mg/m ³ to 50 mg/m ³