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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
		BIOLOGICA	AL TESTING	
I.	FOOD & AGRICULT	URAL PRODUCTS		
1.	Snacks & Instant Mixes(Cooked Food, Canteen	Total plates count/Total bacterial count/ Aerobic microbial count	IS 5402	≥10 cfu/g
	food, Pizza, Pasta	Coliform Count	IS 5401 (Part-1)	≥10 cfu/g
	Noodles & mixes)	E.coli	IS 5887 (Part-1)	≥10 cfu/g Qualitative (Present / Absent/ gm)
		Salmonella	IS 5887 (Part-3)	Qualitative (Present / Absent/ 25 gm
		Yeast & mould enumeration	IS 5403	≥10 cfu/g
		Shigella	IS 5887 (Part-7)	Qualitative (Present / Absent/ 25 gm)
		Staphylococcus aureus enumeration & detection	IS 5887 (Part-2) / IS 5887 (Part-8 sec- I &II)	≥10 cfu/g Qualitative (Present / Absent/ gm)
		Feacal Streptococci	IS 5887 (Part-2)	Qualitative (Present / Absent/gm)
		Clostridium perfringens enumeration	AOAC 20 th Edn , 976.30	≥10 cfu/g
		Listeria monocytogenes Detection	IS 14988	Qualitative (Present / Absent/ 25 gm)
		Bacillus cereus enumeration	IS 5887 (Part-6)	≥10 cfu/g
		Vibrio paraheamolyticus	IS 5887(Part-5)	Qualitative (Present / Absent/ 25 gm)
		Vibrio cholerae	IS 5887(Part-5)	Qualitative (Present / Absent/ 25 gm)

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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
2.	Tea	Total plates count/Total bacterial count/ Aerobic microbial count	IS 5402	≥10 cfu/g
		Coliform Count	IS 5401 (Part-1)	≥10 cfu/g
		E.coli	IS 5887 (Part-1)	≥10 cfu/g Qualitative (Present / Absent/ gm)
		Salmonella	IS 5887 (Part-3)	Qualitative (Present / Absent/ 25 gm)
		Yeast & Mould	IS 5403	≥10 cfu/g
3.	Milk & Dairy Products (Curd,Paneer,	Total plates count/Total bacterial count/ Aerobic microbial count	IS 5402	≥10 cfu/g or ml ≥1 cfu/ml
	Cheese, powdered & condensed milk,	Coliform Count	IS 5401 (Part-1)	≥10 cfu/g or mI ≥1 cfu/mI
	liquid milk)	E.coli	IS 5887 (Part-1)	≥10 cfu/g Qualitative (Present / Absent/ gm)
		Staphylococcus aureus detection/enumeration	IS 5887 (Part-2) / IS 5887 (Part-8 sec- I &II)	≥10 cfu/g or ml ≥1 cfu/ml Qualitative (Present / Absent/ gm or ml)
		Vibrio cholerae	IS 5887(Part-5)	Qualitative (Present / Absent/ 25 gm or ml)
		Feacal Streptococci detection	IS 5887 (Part-2)	Qualitative (Present / Absent/ gm or ml)
		Salmonella Detection	IS 5887 (Part-3)	Qualitative (Present / Absent/ 25 gm or ml)

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Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Shigella Detection	IS 5887 (Part-7)	Qualitative (Present / Absent/ 25 gm or ml)
	Listeria monocytogens Detection	IS 14988	Qualitative (Present / Absent/ 25 gm or ml)
	Bacillus cereus	IS 5887 (Part-6)	≥10 cfu/g or ml
	Yeast & mould	IS 5403	≥10 cfu/g or ml ≥1 cfu/ml
	Clostridium perfringenes	AOAC 20 th Edn, 976.30	≥10 cfu/g or ml ≥1 cfu/ml
Fruits & Fruit products	Coliform Count	IS 5401 (Part-1)	≥10 cfu/g or ml ≥1 cfu/ml
(Raw Fruits, thermally processed Fruit)	E.coli enumeration & detection	IS 5887 (Part-1)	≥10 cfu/g or mI ≥1 cfu/mI Qualitative (Present / Absent/ gm)
	Salmonella	IS 5887 (Part- 3)	Qualitative (Present / Absent/ 25 gm or ml)
	Yeast & mould enumeration	IS 5403	≥10 cfu/g or ml
	Staphylococcus aureus enumeration & detection	IS 5887 (Part-2) / IS 5887 (p- 8 sec- I &II)	≥10 cfu/g or ml ≥1 cfu/ml
			Qualitative (Present / Absent / gm or ml)
	Vibrio paraheamolyticus	IS 5887(Part-5)	Qualitative (Present / Absent/ 25 gm or ml)
	Clostridium perfringenes enumeration	AOAC 20 th Edn, 976.30	≥10 cfu/g or ml ≥1 cfu/ml
	Fruits & Fruit products (Raw Fruits, thermally	Shigella Detection Listeria monocytogens Detection Bacillus cereus Yeast & mould Clostridium perfringenes Fruits & Fruit products (Raw Fruits, thermally processed Fruit) Salmonella Yeast & mould enumeration Staphylococcus aureus enumeration & detection Vibrio paraheamolyticus Clostridium perfringenes	of Test against which tests are performed Shigella Detection IS 5887 (Part-7) Listeria monocytogens Detection IS 14988 Bacillus cereus IS 5887 (Part-6) Yeast & mould IS 5403 Clostridium perfringenes AOAC 20th Edn, 976.30 Fruits & Fruit products (Raw Fruits, thermally processed Fruit) E.coli enumeration & detection IS 5887 (Part-1) Salmonella IS 5887 (Part-3) Yeast & mould enumeration Staphylococcus aureus enumeration & detection IS 5887 (Part-2) / IS 5887 (Part-2) / IS 5887 (Part-2) / IS 5887 (Part-5) Vibrio paraheamolyticus IS 5887 (Part-5) Clostridium perfringenes AOAC 20th Edn, 976.30

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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	IS 5887(Part-5)	Qualitative (Present / Absent/25 gm or ml)
		Total plates count/Total bacterial count/ Aerobic microbial count	IS 5402	≥10 cfu/g or ml ≥1 cfu/ml
		Shigella	IS 5887 (Part-7)	Qualitative (Present / Absent/ 25 gm or ml)
		Flat Sour Organism	APHA Ch- 26 5 Th ed	≥10 cfu/g or mI ≥1 cfu/mI
		Incubation Test at 55 degree Celcius & 37 degree celcius	FSSAI lab manual 14	Qualitative
		Bacillus cereus	IS 5887 (Part-6)	≥10 cfu/g or ml
5.	Veg & Vegetable Products (Raw Veg, Pickles, Processed Veg)	Staphylococcus aureus enumeration & detection	IS 5887 (Part-2) / IS 5887(Part 8 sec- I &II)	≥10 cfu/g or ml ≥1 cfu/ml Qualitative (Present / Absent / gm or ml)
		Total plates count/bacterial count/ Aerobic microbial count	IS 5402	≥10 cfu/g or ml ≥1 cfu/ml
		Salmonella	IS 5887 (Part-3)	Qualitative (Present / Absent/ 25 gm or ml)
		E.coli	IS 5887 (Part-1)	≥10 cfu/g or ml ≥1 cfu/ml Qualitative (Present / Absent / gm or ml)
		Flat Sour Organism	APHA Ch- 26 5 Th edtion	≥10 cfu/g or ml ≥1 cfu/ml

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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
		Incubation Test at 55 degree celcius & 37 degree celcius		Qualitative
		Shigella	IS 5887 (Part-7)	Qualitative (Present / Absent/ 25 gm or ml)
		Clostridium perfringenes	AOAC 20 th Edn, 976.30	≥10 cfu/g or ml ≥1 cfu/ml
		Vibrio paraheamolyticus	IS 5887(Part-5)	Qualitative (Present / Absent/ 25 gm or ml)
		Vibrio cholerae	IS 5887(Part-5)	Qualitative (Present / Absent/ 25 gm or ml)
		Coliform Count	IS 5401 (Part-1)	≥10 cfu/g or ml ≥1 cfu/ml
		Yeast & mould	IS 5403	≥10 cfu/g or ml ≥1 cfu/ml
<u> </u>		Bacillus cereus	IS 5887 (Part-6)	≥10 cfu/g
6.	Betel leaves	Salmonella	SOP No: 106/113, Issue No:1, D.O.E, 2017-07-01	Qualitative (Present or Absent)
II.	WATER			
1.	Drinking Water	Total Coliform	IS 1622	2-1600 (MPN) /100 ml & Qualitative (Present or Absent/ 100ml)
		E.coli	IS 1622	Qualitative (Present or Absent/ 100ml)
		Total Bacterial Count/ Standard Plate Count/ Heterotropic Plate Count	IS 1622 / IS 5402	≥1 cfu/ml

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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
2.	Packaged Drinking Water & packaged natural mineral water	Total Bacterial Count/Aerobic Microbial Count at 22 Degree C/ 72 hrs & 37 Degree C/ 24 hr	IS 5402	≥1 cfu/ml
		Coliform/250 ml	IS 5401 (Part-1) & IS 15185	Qualitative (Present or Absent/ 250 ml)
		E.coli/250 ml	IS 15185	Qualitative (Present or Absent/ 250 ml)
		Feacal Streptococci/250 ml	IS 5887(Part-II) & IS 15186	Qualitative (Present or Absent/ 250 ml)
		S.aureus/250 ml	IS 5887(p-II)	Qualitative (Present or Absent/ 250 ml)
		Ç	IS 13428 ANNX-D	Qualitative (Present or Absent/ 250 ml)
		Salmonella/250ml	IS 5887 (Part-3) & IS 15187	Qualitative (Present or Absent/ 250 ml)
		Shigella/250 ml	IS 5887 (Part-7)	Qualitative Present or Absent/ 250 ml
		Sulphite reducing anaerobs (Clostridia)/50ml	IS 13428 ANNX-C	Qualitative (Present or Absent/50 ml)
		Yeast/250 ml	IS 5403	Qualitative (Present or Absent/ 250 ml)
		Vibrio cholerae/250 ml	IS 5887(Part-5)	Qualitative (Present or Absent/ 250 ml)

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SI.	Product / Material of Test	Specific Test Performed		Range of Testing / Limits of Detection
		Vibrio paraheamolyticus/ 250 ml	IS 5887(Part-5)	Qualitative (Present or Absent/ 250 ml)
		Mould/ 250ml	IS 5403	Qualitative (Present or Absent/ 250 ml)

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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.	FOOD AND AGRICU	JLTURAL PRODUCTS					
1.	Cereals, Pulses & Cereal Products	Physical examination for Moulds Living and dead insect fragments Rodent contamination (Hair & Excreta) Khesari Dal Foreign Matter Mineral matter Organic matter Damaged Grains Insect Damaged grains/beans Wevilled grains Other edible grains Argemone seeds Presence of mould Test for mineral oil Fragments Kernels with husk. Red Grains (Rice) Chalky Grains (Rice)	Section 1.2 of FSSAI Manual of Methods of Analysis of Cereal and Cereal Products, 2016. IS 4333(part-1)	Qualitative Qualitative 1% to 10 % 1% to 10 % 1% to 10 % 1% to 10 % 0.1% to 10 % 0.1% to 10 % 0.1% to 10 % 0.1% to 10 % Qualitative Qualitative Qualitative 0.1% to 10 %			
		Proximate Analysis Moisture	Section 8.1 of FSSAI Manual of Methods of Analysis of Cereal and Cereal Products	1.0% to 40.0 %			

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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 Ash (on Dry Basis)	Section 8.2 of FSSAI Manual of Methods of Analysis of Cereal and Cereal Products	0.05% to 15%
		Acid Insoluble Ash in dilute HCl (on Dry Basis)	Section 8.3 of FSSAI Manual of Methods of Analysis of Cereal and Cereal Products	0.05 % to 5 %
		Gluten (Dry Basis)	Section 8.4 of FSSAI Manual of Methods of Analysis of Cereal and Cereal Products	1 % to 25 %
		Alcoholic acidity (as H ₂ SO ₄) with 90 % alcohol.	Section 8.5 of FSSAI Manual of Methods of Analysis of Cereal and Cereal Products	0.05 % to 5 %
		Crude Protein	IS 7219	0.1 % to 40 %
		Crude Fat	AOAC 20 th Ed., 2003.06, (Hexane Extraction)	0.1 % to 25 %
			Codex Guideline for Nutritional Labelling (Calculation Method)	10% to 90 %
		Energy in Kcal	Codex Guideline for Nutritional Labelling (Calculation Method)	340 kcal/100 g to 600 kcal/100 g
		Total Sugars	AOAC 20 th Ed., 920.184	0.1 % to 100 %
		Crude Fiber (on Dry Basis)	AOAC 20 th Ed. 962.09 IS 10226 (Part 1),	1 % to 17 %
		Dietary Fiber (on dry basis)	AOAC 20 th Ed., 985.29	1.0 % to 45%

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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
		Antioxidants		
		ВНА	AOAC 983.15,	10 mg/Kg to 1000
		TBHQ	AOAC 20th Ed.	mg/Kg
		Preservatives		
		Benzoic acid & its sodium	SOP No.06/44,Issue 2.0,	10 mg/Kg to 3000 mg/kg
		& Potassium salt or both (calculated as Benzoic acid)	Issue Date: 2015/03/31	
		Sorbic acid and its cal., Sod.,Pot.salt(Calculated as sorbic acid)		
		Colors		
		Test for Natural colors	Section 4.1 of FSSAI Manual of Methods of Analysis of Food additives	Qualitative
		Test for Synthetic colors	Section 4.2 of FSSAI Manual of Methods of Analysis of Food additives	Qualitative
		Fatty acid Profiling		
		Saturated Fat	AOAC 20th Ed., 969.33	0.10 % to 100 %
		Mono Unsaturated Fatty Acids (MUFA)	,	0.01 % to 100 %
		Poly Unsaturated Fatty acids (PUFA)		0.01 % to 100 %
		Cholesterol	AOAC 20th Ed.,994.10	0.01 mg/g to 10 mg/g
		Taste Enhancers		
		Monosodium Glutamate (MSG)	Section 7.5 of FSSAI Manual of Methods of Analysis-Additives, HPLC Method	1.0 mg/Kg to 10 mg/Kg

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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
[Metals and Minerals		
		Iron	AOAC 20th Ed., 2015.01	2 mg/kg to 100 mg/kg
		Zinc	microwave Digestion	5.0 mg/kg to 50 mg/kg
		Lead	followed by Sec. 3 of	0.2 mg/kg to 50 mg/kg
		Copper	FSSAI Lab Manual for	4 mg/kg to 100 mg/kg
		Arsenic	Metals; by AAS /	0.05 mg/kg to 50 mg/kg
		Tin	SOP: 06/02, Issue No: 8.0,	1.0 mg/kg to 200 mg/kg
		Cadmium	Issue date: 2016/06/07	0.05 mg/kg to 25 mg/kg
		Mercury		0.1 mg/kg to 50 mg/kg
		Mycotoxins		
		Aflatoxin B1	AOAC 20 th Ed., ;2008.02	1.5 µg/kg to 50 µg/kg
		Aflatoxin B2		0.5µg/kg to 50 µg/kg
		Aflatoxin G1		1.5µg/kg to 50 µg/kg
		Aflatoxin G2		0.5µg/kg to 50 µg/kg
		Ochratoxin A		5 μg/kg to 100 μg/kg
		Pesticide Residues	 	
		Aldrin	AOAC 20 th Ed.; 2007.1	10 μg/kg to 200 μg/kg
		Alachlor	EN 15662 (QuEChERS)	10 μg/kg to 200 μg/kg
		Atrazine	SOP No. 106/26, Issue	10 μg/kg to 200 μg/kg
		Benfuracarb	No:1.0, Issue date:	10 μg/kg to 200 μg/kg
		Chlorfenvinphos	2016/07/05	10 μg/kg to 200 μg/kg
		Chlorpyrifos		10 μg/kg to 200 μg/kg
		Cypermethrin I,II,III,IV		10 μg/kg to 200 μg/kg
		Deltamethrin I,II		10 μg/kg to 200 μg/kg
		Diuron		10 μg/kg to 200 μg/kg
<u> </u>		Dieldrin		10 μg/kg to 200 μg/kg
<u> </u>		Edifenfos		10 μg/kg to 200 μg/kg
		Endosulfan Alpha		10 μg/kg to 200 μg/kg
		Endosulfan Beta		
		Endosulfan sulphate		
		Malathion		10 μg/kg to 200 μg/kg
.		Malaoxon		

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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
[Metasulfuron-methyl	AOAC 20th Ed.; 2007.1	10 μg/kg to 200 μg/kg
Ì		Methyl Chloro-phenoxy-	EN 15662 (QuEChERS)	10 μg/kg to 200 μg/kg
		acetic acid (MCPA)	SOP No. 106/26, Issue	
		Pendimethalin	No:1.0, Issue date:	10 μg/kg to 200 μg/kg
		Pretilachlor	2016/07/05	10 μg/kg to 200 μg/kg
		Trifluralin		10 μg/kg to 200 μg/kg
		ά-HCH		10 μg/kg to 200 μg/kg
		Beta-HCH		10 μg/kg to 200 μg/kg
		δ-HCH		10 μg/kg to 200 μg/kg
		Gamma-HCH		10 μg/kg to 200 μg/kg
		Anilophos		10 μg/kg to 200 μg/kg
		Bitertanol		10 μg/kg to 200 μg/kg
		Buprofezin		10 μg/kg to 200 μg/kg
		Butachlor		10 μg/kg to 200 μg/kg
		Carbaryl		10 μg/kg to 200 μg/kg
		Carbendazim		10 μg/kg to 200 μg/kg
		Carbofuran		10 μg/kg to 200 μg/kg
		Carpropamid		10 μg/kg to 200 μg/kg
		Chlorimuron-ethyl		10 μg/kg to 200 μg/kg
		Clodinafop-propanyl		10 μg/kg to 200 μg/kg
		Clomazone		10 μg/kg to 200 μg/kg
		Cyhalofop-butyl		10 μg/kg to 200 μg/kg
		Diclofop-methyl		10 μg/kg to 200 μg/kg
		Ethion		10 μg/kg to 200 μg/kg
		Ethoxysulfruron		10 μg/kg to 200 μg/kg
		Fenobucarb		10 μg/kg to 200 μg/kg
		Fenthion		10 μg/kg to 200 μg/kg
		Fenthion sulfone		10 μg/kg to 200 μg/kg
		Fenthion sulphoxide		10 μg/kg to 200 μg/kg
		Flufenacet		10 μg/kg to 200 μg/kg
		Imidacloprid		10 μg/kg to 200 μg/kg
		Isoprothiolane		10 μg/kg to 200 μg/kg
		Isoproturon		10 μg/kg to 200 μg/kg
<u> </u>		Metalaxyl		10 μg/kg to 200 μg/kg

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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
		Monocrotophos Oxyflurfen Phenthoate Phorate Phorate sulfone Phorate sulphoxide Phosphamidon Propiconazole Pyrethrins I Pyethrins II Quinalphos Simazine Tebuconazole Thiamethoxam Thiachloprid Thiometon Thiometon sulphoxide Triadimefon Triallate Triazophos	AOAC 20 th Ed.; 2007.1 EN 15662:2008 (QuEChERS) SOP No. 106/26, Issue No:1.0, Issue date: 2016/07/05	10 µg/kg to 200 µg/kg
		Trichlorfon Tricyclazole Tridemorph	AOAC 20 th Ed., 2007.1 EN 15662 (QuEChERS) SOP No. 106/26, Issue No:1.0, Issue date: 2016/07/05	10 μg/kg to 200 μg/kg 10 μg/kg to 200 μg/kg 10 μg/kg to 200 μg/kg
		2,4-D Cartap hydrochloride Dithiocarbamates Paraquat Dichloride Inorganic Bromide	SOP No. 106/26, Issue No: 1.0, Issue date: 2016/07/05. EPA 300.1	10 µg/kg to 200 µg/kg 10 µg/kg to 200 µg/kg 10 µg/kg to 200 µg/kg 10 µg/kg to 200 µg/kg 1 mg/Kg to 100 mg/Kg

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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
2.	Milk & Dairy Products.	Milk Fat	Section 6.3 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	1% to10 %
		Milk Solids not fat	Section 14.2 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	1 % to 95%
		Milk protein in Milk solid not fat	Section 3.4 of FSSAI Manual of Methods of Analysis of Milk and Milk Products,	1 % to 95%
		Milk fat on dry matter	Section 6.3 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	1 % to 50 %
		Moisture	IS 16072	1 % to 95%
		Total Solids	Section 1.3.3 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	1 % to 100 %
		Total Fat	Section 6.3 of FSSAI Manual of Methods of Analysis of Milk and Milk Products,	0.1 % to 30 %
		Total Protein (N x 6.38)	IS 7219	0.1 % to 95%
		Titratable acidity (0.1 ml NaOH/10gm solid not fat)	Section 9.5 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	0.1 % to 20%
		Common salt	Section 12.4 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	0.5 % to 10%

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Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	B.R. value of Ghee at 40 degree	Section 13.3 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	20 to 60
	Reichert Meissel value	Section 13.5 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	1 to 50
	FFA as oleic acid	Section 13.4 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	0.1 %to 10%
	Peroxide Value	Section 13.9 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	0.1 meq/Kg to 50 meq/Kg
	Boudouins Test	Section 13.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	Qualitative
	Total Ash on dry basis	Section 14.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	0.01% to 10%
	Acid Insoluble ash in dil. HCl	IS 14433	0.01 % to 5%
	Sugar as sucrose, on dry basis	AOAC 920.184	0.4 %% to 80 %
	pH of 10.0% aqueous solution	Section 16.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	1 to 13
	i	B.R. value of Ghee at 40 degree Reichert Meissel value FFA as oleic acid Peroxide Value Boudouins Test Total Ash on dry basis Acid Insoluble ash in dil. HCI Sugar as sucrose, on dry basis pH of 10.0% aqueous	B.R. value of Ghee at 40 degree B.R. value of Ghee at 40 Section 13.3 of FSSAI Manual of Methods of Analysis of Milk and Milk Products Reichert Meissel value Reichert Meissel value Section 13.5 of FSSAI Manual of Methods of Analysis of Milk and Milk Products FFA as oleic acid Section 13.4 of FSSAI Manual of Methods of Analysis of Milk and Milk Products Peroxide Value Section 13.9 of FSSAI Manual of Methods of Analysis of Milk and Milk Products Boudouins Test Section 13.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products Total Ash on dry basis Total Ash on dry basis Total Ash on dry basis Acid Insoluble ash in dil. HCI Sugar as sucrose, on dry basis PH of 10.0% aqueous solution Section 16.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products Section 16.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products Section 16.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products Section 16.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products Section 16.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products Section 16.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products Section 16.6 of FSSAI Manual of Methods of Analysis of Milk and Milk Products

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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
		Casein	Section 17.4 of FSSAI Manual of Methods of Analysis of Milk and Milk Products	0.1% to 99%
		Adulterants in Milk		
		Test for added Urea	Section 1.0 of FSSAI	Qualitative
		Test for added starch	Manual of Methods of	Qualitative
		Test for Cane sugar	Analysis of Milk and Milk	Qualitative
		Test for Cellulose	Products	Qualitative
		Test for detergents		Qualitative
		Test for Neutralizers		Qualitative
		Test for rancidity		Qualitative
		Test for Ammonium		Qualitative
		compounds		
		Test for Sulphates		Qualitative
		Test for added Glucose		Qualitative
		Test for Sodium Chloride		Qualitative
		Test for Foreign Fat		Qualitative
		Test for Nitrates		Qualitative
		Detection of Hypochlorites and Chloramines		Qualitative
		Test for Quaternary Ammonium Compounds		Qualitative
		Test for Presence of Anionic Detergent		Qualitative
		Test for Presence of Skimmed milk Powder in Natural milk		Qualitative
		Test for Detection of Gelatine		Qualitative
		Test for Presence of Formalin		Qualitative
		Test for Presence of Hydrogen Peroxide		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
		Test for Presence of Boric	Section 1.0 of FSSAI	Qualitative
		acid and Borates	Manual of Methods of	O lite time
		Test for Presence of Salicylic acid	Analysis of Milk and Milk Products	Qualitative
		Antioxidants		
		ВНА	AOAC 983.15, AOAC 20th	10 mg/kg to 1000 mg/Kg
		TBHQ	Ed.	10 mg/kg to 1000 mg/Kg
		Preservatives		
		Benzoic acid & its sodium & Potassium salt or both (calculated as Benzoic acid)	SOP No.06/44,Issue 2.0, Issue date: 2015/03/31.	10 mg/kg to 3000 mg/kg
		Sorbic acid and its Calcium Sodium, Pottasium.salt(Calculated as sorbic acid)		10 mg/kg to 3000 mg/kg
		Colors		
		Test for Natural colors	Section 4.1 of FSSAI Manual of Methods of Analysis of Food additives,	Qualitative
		Test for Synthetic colors	Section 4.2 of FSSAI Manual of Methods of Analysis of Food additives,	Qualitative
		Fatty acid profiling		
		Saturated Fat	AOAC 20th Ed., 969.33	0.1 % to 100 %
		Mono Unsaturated Fatty Acids (MUFA)	, , , , , , , , , , , , , , , , , , , ,	0.1 % to 100 %
		Poly Unsaturated Fatty acids (PUFA)		0.1 % to 100 %
		Trans fat		0.1 % to 100 %
		Cholesterol	AOAC 20th Ed.,994.10	0.01 % to 10 mg/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
		Metals and Minerals		
		Iron		2 mg/kg to 100 mg/kg
		Zinc		5 mg/kg to 50 mg/kg
		Lead	AOAC 20 th Ed.,2015.01	0.2 mg/kg to 50 mg/kg
		Copper	microwave Digestion	5 mg/kg to 100 mg/kg
		Arsenic	followed by Sec. 3 of FSSAI Lab Manual for	0.05 mg/kg to 50 mg/kg
		Tin	Metals; by AAS/	2.0 mg/kg to 200 mg/kg
		Zinc	SOP: 06/02, Issue No: 8.0,	5 mg/kg to 200 mg/kg
		Cadmium	SOP: 06/02, Issue No: 8.0, Issue date: 2016/06/07.	0.1 mg/kg to 25 mg/kg
		Mercury Melamine		0.2 mg/kg to 50 mg/kg
		Meiamine	USFDA CLG-MEL 1.01,	$10 \mu g/Kg$ to $2000 \mu g/Kg$
		Mycotoxins		
		Aflatoxin M1 (Milk based)	AOAC 20 th Ed., 2000.08	0.4 μg/Kg to 10 μg/Kg
		Pesticide Residues	AOAC 20 th Ed., 2007.1	10 μg/Kg to 200 μg/Kg
		Aldrin	EN 15662 (QuEChERS)	10 μg/Kg to 200 μg/Kg
		Dieldrin	SOP No. 106/29,	10 μg/Kg to 200 μg/Kg
		Chlordane	Issue No: 1.0, Dated 2016/08/08.	10 μg/Kg to 200 μg/Kg
		o,p – DDT	2010/08/08.	10 μg/Kg to 200 μg/Kg
		p,p – DDT		10 μg/Kg to 200 μg/Kg
		o,p – DDD	AOAC 20th Ed., 2007.1	10 μg/Kg to 200 μg/Kg
		p,p – DDD	EN 15662 (QuEChERS)	10 μg/Kg to 200 μg/Kg
		o,p – DDE	SOP No. 106/29,	10 μg/Kg to 200 μg/Kg
		p,p – DDE	Issue No: 1.0,2016/08/08	10 μg/Kg to 200 μg/Kg
		Fenitrothion		10 μg/Kg to 200 μg/Kg
		Heptachlor		10 μg/Kg to 200 μg/Kg
		Heptachlor epoxide		10 μg/Kg to 200 μg/Kg
		Alpha-HCH		10 μg/Kg to 200 μg/Kg
		Beta-HCH		10 μg/Kg to 200 μg/Kg
		Y-HCH		10 μg/Kg to 200 μg/Kg
		δ-ΗCΗ		10 μg/Kg to 200 μg/Kg

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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
		Chlorfenvinphos Chlorpyrifos Ethion Monocrotophos Trichlorfon Carbendazim Edifenfos Cypermethrin I Cypermethrin III Cypermethrin III Cypermethrin IV Fenthion Fenthion sulfone Fenthion sulphoxide Fenvalerate Esfenvalerate Phenthoate Phorate Phorate sulphoxide Pirimiphos-methyl	AOAC 20 th Ed., 2007.1 EN 15662 (QuEChERS) SOP No. 106/29, Issue No: 1.0,2016/08/08	10 μg/Kg to 200 μg/Kg
3	Теа	2,4-D Moisture (on dry basis)	SOP No. 106/29, Issue No: 1.0,2016/08/08. IS 13853	10 μg/Kg to 200 μg/Kg 1% to 50 %
		m/m Total Ash (m/m) Water Soluble Ash of-total ash Alkalinity of water soluble ash expressed as KOH (m/m) Acid-insoluble ash (m/m)	IS 13854 IS 13855 IS 13856 IS 13857	1 % to 10 % 1 % to 95 % 0.1% to 4 % 0.1% to 2.0 %

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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
		Water extract (m/m)	IS 13862	32% to 70 %`
		Crude Fibre (m/m)	IS10226, and AOAC 962.09, AOAC 20th Ed.	1.0% to 20 %
		Total catechins (m/m)	SOP No: 106/116 Issue No :1.0 Issue date : 2017/07/04	0.10 % to 25 %
		Caffeine	SOP 06/01, Issue No :8.0 Issue date : 2017/04/10	0.1 % to 25 %
		Total Polyphenols	ISO 14502-1	0.10 % to 25 %
		Total Fat	AOAC 920.97; 20 th Ed.,	0.1 % to 10%
		Total protein	IS 7219	0.1% to 10%
		Carbohydrates (of 2 % solution)	Codex Guideline for Nutritional Labelling (Calculation Method)	10% to 90 %
		Total Sugar (as Sucrose %)	AOAC 906.03 ; 20th Ed.,	0.1% to 10 %
		Energy (of 2 % solution)	Codex Guideline for Nutritional Labelling (Calculation Method)	340 kcal/100 g to 600 kcal/100 g
		Vitamin C	IS 5838	0.1mg/100g to 40mg/100g
		Fatty Acid Profile		
		Saturated fat	AOAC 20 th Ed.	0.1 % to 100 %
		MUFA	AOAC 969.33;	0.001 % to 100 %
		PUFA		0.004 % to 100 %
		Cholesterol	AOAC 20 th Ed. 994.10	0.01 mg/g to 10 mg/g
		Iron Filings	IS 3633	10 mg/kg to1000 mg/kg
		Trace Metals		
		Iron	AOAC 20 th Ed., 2015.01	2 mg/kg to 100 mg/kg
		Lead	microwave Digestion	0.2 mg/kg to 50 mg/kg
		Copper Arsenic	followed by Sec. 3 of FSSAI Lab Manual for	5 mg/kg to 100 mg/kg 0.2 mg/kg to 50 mg/kg

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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
[Tin	Metals; by AAS /	1 mg/kg to 200 mg/kg
		Zinc	SOP : 06/02, Issue 8.0,	5 mg/kg to 200 mg/kg
		Cadmium	Issue date:2016/06/07;	0.05 mg/kg to 25 mg/kg
		Mercury		0.1 mg/kg to 50 mg/kg
		Pesticides		
		Dicofol	AOAC 20th Ed., 2007.1, EN	10 μg/kg to 200 μg/kg
		Propargite	15662 (QuEChERS)	10 μg/kg to 200 μg/kg
		Fenazaquin		10 μg/kg to 200 μg/kg
		Ethion		10 μg/kg to 200 μg/kg
		Quinalphos		10 μg/kg to 200 μg/kg
		Fenpyroximate		10 μg/kg to 200 μg/kg
		Hexaconazole		10 μg/kg to 200 μg/kg
		Propiconazole		10 μg/kg to 200 μg/kg
		Glufosinate-ammonium	SOP No :106/117, Issue	10 μg/kg to 200 μg/kg
		Glyphosate	No:01, Issued on 2017/07/04	10 μg/kg to 200 μg/kg
4.	Fruits & Fruit	Physical Parameters		
	Products	Rotting	FSSAI Manual of Methods	Qualitative
			of Analysis of Fruit and	
			Vegetable products	
		Rodent Contamination	Section 17.1 of FSSAI	Qualitative
			Manual of Methods of	
			Analysis of Fruit and	
			Vegetable products	
		Added wax coating	FSSAI Manual of Methods	Qualitative
			of Analysis of Fruit and	
		Mould	Vegetable products Section 17.1 of FSSAI	Ovelitetive
		Mould	Manual of Methods of	Qualitative
			Analysis of Fruit and	
			Vegetable products	
		Moisture (m/m)	IS 3579	1% to 90%
		Moistare (III/III)	Section .4.1; 6 of FSSAI	1 /0 10 90 /0
			Manual of Methods of	
			Analysis of Fruit and	

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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
			Vegetable products	
		рН	Section 2.3 ;6 of FSSAI Manual of Methods of Analysis of Fruit and	1 to 13
		Total ash (m/m)	Vegetable products Section 11.3 & 14.4; 6 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products	0.05 % to 25 %
		Percentage of reducing Sugar to total sugar	AOAC 920.184, AOAC 20 th Edition.	0.1 % to 95 %
		Acid Insoluble Ash	Section 5.3 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products	0.01 % to 10%
		Total Sugar (as Sucrose)	AOAC 920.184, AOAC 20th Edition.	0.4 % to 90%
		Ascorbic acid	IS 5838	0.5 mg/100g to 1000 mg/100g
		Acidity as acetic acid or Citric Acid or Malic acid or Oleic acid	Section 2.4 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products IS 13844	0.1 % to 10%
		Total soluble solids(Brix)	IS 13815	1 % to 50
		Anti-Oxidants		
		BHA TBHQ	AOAC 983.15, AOAC 20 th Edition.	10 mg/kg to 1000mg/kg 10 mg/kg to 1000 mg/kg
		Preservatives		
		Benzoic acid & its sodium & Potassium salt or both (calculated as Benzoic acid)	SOP No.06/44, Issue 2.0, Effective from: 2015/04/15.	5.0 mg/kg to 3000mg/kg

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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
		Sorbic acid and its calcium., Sodium.,Pot.salt(Calculat ed as sorbic acid)		5.0mg/kg to 3000mg/kg
		Sulphur dioxide Colors	AOAC 990.28, 20th Edition	10.0mg/kg to 1000mg/kg
		a)Test for Natural colors	Section 4.1 of FSSAI Manual of Methods of Analysis of Food additives	Qualitative (Qualitative)
		b)Synthetic		
		Ponceau 4R Carmoisine Tartarzine Sunset yellow FCF	FSSAI Manuals, Manual-8, No.4.2.7. 3 (HPLC Method) ASOP No.06/43, Issue 2.0, Issue date: 2015/04/20.	5 mg/kg to 1000 mg/Kg 5 mg/kg to 1000 mg/Kg 5 mg/kg to 1000 mg/Kg 5 mg/kg to 1000 mg/Kg
		Artificial Sweeteners		3 mg/kg to 1000 mg/kg
		Aspertame	Section 3.5.3 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products, SOP No.06/44, Issue No:2.0, Issue date: 2015/04/15.	100 mg/kg to 1000 mg/Kg
		Acesulphame K		100mg/kg to 1000mg/kg
		Metals		
		Iron Arsenic	AOAC 20 th Ed., 2015.01 microwave Digestion	10 mg/kg to 100 mg/kg 0.1 mg/kg to 10 mg/kg
		Cadmium Lead	followed by Sec. 3 of FSSAI Lab Manual for	0.05 mg/kg to 50 mg/kg 0.1 mg/kg to 50 mg/kg
		Copper Tin Zinc	Metals; by AAS / SOP : 06/02, Issue No:8.0, Issue date: 2016/06/07.	1.0 mg/kg to 50 mg/kg 1.0 mg/kg to 50 mg/kg 5 mg/kg to 50 mg/kg
		Copper oxy chloride as copper Mercury		1 mg/kg to 200 mg/Kg 0.2 - 50 mg/kg

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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
[Container filled	IS 3884	NA
		Insects	Visual examination	Present / Absent
		Naturally Occurring Toxic	Substances	
		Safrole	AOAC 969.13; 20 th Ed., SOP No.06/37, Issue No:2.0, Issue date:2015/07/31	1 mg/kg to 20 mg/kg
		Mycotoxins		
		Patulin	AOAC 995.10 (HPLC-UV); 20 th Ed.	5 mg/kg to 50 mg/kg
		Pesticide Residues		
		Aldrin	AOAC 20 th Ed., 2007.1	10 μg/kg to 200 μg/kg
		Dieldrin	EN 15662 (QuEChERS)	10 μg/kg to 200 μg/kg
		o,p – DDT	SOP No. 106/25,	10 μg/kg to 200 μg/kg
		p,p – DDT	Issue No:1.0,	10 μg/kg to 200 μg/kg
		o,p – DDD	date:2016/07/01	10 μg/kg to 200 μg/kg
		p,p – DDD		10 μg/kg to 200 μg/kg
		o,p – DDE		10 μg/kg to 200 μg/kg
		p,p – DDE		10 μg/kg to 200 μg/kg
		Dichlorvos		10 μg/kg to 200 μg/kg
		Dicofol		10 μg/kg to 200 μg/kg
		Endosulfan A		10 μg/kg to 200 μg/kg
		Endosulfan B		10 μg/kg to 200 μg/kg
		Endosulfan Sulphate Fenitrothion		10 µg/kg to 200 µg/kg
		 		10 µg/kg to 200 µg/kg 10 µg/kg to 200 µg/kg
		Alpha- Hexachlorocyclohexane		10 μg/kg to 200 μg/kg
		Beta-		10 μg/kg to 200 μg/kg
		Hexachlorocyclohexane		
		Gamma- Hexachlorocyclohexane		10 μg/kg to 200 μg/kg
		Delta- Hexachlorocyclohexane		10 μg/kg to 200 μg/kg
		Parathion		10 μg/kg to 200 μg/kg

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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
[Parathion methyl		10 μg/kg to 200 μg/kg
		Phosphamidon		10 μg/kg to 200 μg/kg
		Pyrethins I		10 μg/kg to 200 μg/kg
		Pyrethins II		10 μg/kg to 200 μg/kg
		Chlorfenvinphos		10 μg/kg to 200 μg/kg
		Aldicarb		10 μg/kg to 200 μg/kg
		Cypermethrin I,II,III,IV		10 μg/kg to 200 μg/kg
		Fenvalerate		10 μg/kg to 200 μg/kg
		Hexaconazole		10 μg/kg to 200 μg/kg
		Captafol		10 μg/kg to 200 μg/kg
		Captan		10 μg/kg to 200 μg/kg
		Chlorpyrifos		10 μg/kg to 200 μg/kg
		Diuron		10 μg/kg to 200 μg/kg
		Dodine		10 μg/kg to 200 μg/kg
		Malathion		10 μg/kg to 200 μg/kg
		Malaoxon		10 μg/kg to 200 μg/kg
		Carbendazim		10 μg/kg to 200 μg/kg
		Chlorobenzilate		10 μg/kg to 200 μg/kg
		Cymoxanil		10 μg/kg to 200 μg/kg
		Dithianon		10 μg/kg to 200 μg/kg
		Difenoconazole	AOAC 20 th Ed., 2007.1	10 μg/kg to 200 μg/kg
		Dimethomorph	EN 15662 (QuEChERS)	10 μg/kg to 200 μg/kg
		Ethion	SOP No. 106/25,	10 μg/kg to 200 μg/kg
		Fenarimol	Issue No:1.0,	10 μg/kg to 200 μg/kg
		Fenthion	date:2016/07/01	10 μg/kg to 200 μg/kg
		Fenthion sulfone		10 μg/kg to 200 μg/kg
		Fenthion sulphoxide		10 μg/kg to 200 μg/kg
		Formothion / Dimethoate		10 μg/kg to 200 μg/kg
		Hexaconazole		10 μg/kg to 200 μg/kg
		Monocrotophos		10 μg/kg to 200 μg/kg
		Myclobutanil		10 μg/kg to 200 μg/kg
		Novaluron	-	10 μg/kg to 200 μg/kg
		Paraquat Dichloride	-	10 μg/kg to 200 μg/kg
<u>L</u>	<u> </u>	Penconazole	<u> </u>	10 μg/kg to 200 μg/kg

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Phorate sulfone	SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	5.	vegetable	Phorate sulfone Phorate sulphoxide Phosalone Thiometon Thiometon sulphoxide Thiophenate methyl Triadimefon Trichlorfon Tridemorph 2,4-D Chlormequat chloride Dithiocarbamates Alfa Napthyl acetic acid (A.N.A.) Ethephon Fosetyl-Al Moisture (m/m) PH	SOP No. 106/25, IssueNo:1.0, date:2016/07/01 IS 3579 Section .4.1; 6 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products Section 2.3; 6 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products Section 11.3 & 14.4; 6 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products Section 5.3 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products Section 5.3 of FSSAI Manual of Methods of Analysis of Fruit and	10 µg/kg to 200 µg/kg

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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
		Sugar as sucrose	Section 2.6 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products	0.4 % to 90%
		Ascorbic acid	Section 2.8 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products IS 5838	0.5 mg/100g to1000 mg/100g
		Acidity as acetic acid or Citric Acid or Lauric Acid or Malic acid	IS 13844	0.1% to 10%
		Total soluble solids(Brix)	IS 13815	1 to 20
		Container filled	IS 3884	NA
		Anti Oxidants		
		BHA	AOAC 983.15, 20th Edition	10 mg/kg to 1000 mg/kg
		TBHQ	,	10 mg/kg to 1000 mg/kg
		Preservatives		
		Benzoic acid & its sodium & Potassium salt or both (calculated as Benzoic acid)	Section 2.4.1 of FSSAI Manual of Methods of Analysis of Food additives	10 mg/kg to 3000 mg/Kg
		Sorbic acid and its cal., Sod.,Pot.salt(Calculated as sorbic acid)		10 mg/kg to 3000 mg/kg
		Sulphur dioxide	Section 2.5.3 of FSSAI Manual of Methods of Analysis of Food additives	10 mg/kg to 1000 mg/kg
		Artificial Sweeteners		
		Aspertame	SOP No.06/44,	100 mg/kg to 1000 mg/kg
		Acesulphame K	Issue 2.0, Effective from: 2015/04/15.	100 mg/kg to 1000 mg/kg

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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
		Metals	·	
		Metals Arsenic Cadmium Lead Copper Tin Zinc Mercury Pesticide Residues Aldrin Dieldrin O,p - DDT D,p - DDT O,p - DDD D,p - DDE Dichlorvos Dicofol Endosulfan A Endosulfan B Endosulfan Sulphate Fenitrothion Alpha Hexachlorocyclohexane Beta Hexachlorocyclohexane Gamma Hexachlorocyclohexane Delta Hexachlorocyclohexane	AOAC 20 th Ed., 2015.01 microwave Digestion followed by Sec. 3 of FSSAI Lab Manual for Metals; by AAS / SOP: 06/02, Issue 8.0, Issue date: 2016/06/07. AOAC 20th Ed, 2007.1 EN 15662 (QuEChERS) SOP No. 106/25, IssueNo:1.0, date:2016/07/01	0.1 mg/kg to 10 mg/kg 0.05 mg/kg to 50 mg/kg 1.0 mg/kg to 50 mg/kg 1.0 mg/kg to 50 mg/kg 1.0 mg/kg to 50 mg/kg 5 mg/kg to 50 mg/kg 0.1 mg/kg to 50 mg/kg 0.1 mg/kg to 50 mg/kg 10 μg/kg to 200 μg/kg
		Parathion Parathion methyl		10 µg/kg to 200 µg/kg 10 µg/kg to 200 µg/kg
		Phosphamidon		10 μg/kg to 200 μg/kg

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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
		Pyrethins I		10 μg/kg to 200 μg/kg
		Pyrethins II		10 μg/kg to 200 μg/kg
		Copper oxychloride		1 mg/k g to 200 mg/kg
		Chlorfenvinphos		10 μg/kg to 200 μg/kg
		Aldicarb		10 μg/kg to 200 μg/kg
		Cypermethrin I,II,III,IV		10 μg/kg to 200 μg/kg
		Fenvalerate		10 μg/kg to 200 μg/kg
		Hexaconazole		10 μg/kg to 200 μg/kg
		Captafol		10 μg/kg to 200 μg/kg
		Captan		10 μg/kg to 200 μg/kg
		Chlorpyrifos		10 μg/kg to 200 μg/kg
		Diuron		10 μg/kg to 200 μg/kg
		Dodine		10 μg/kg to 200 μg/kg
		Malathion		10 μg/kg to 200 μg/kg
		Malaoxon		10 μg/kg to 200 μg/kg
		Carbendazim		10 μg/kg to 200 μg/kg
		Carbofuran		10 μg/kg to 200 μg/kg
		Chlormequat chloride		10 μg/kg to 200 μg/kg
		Chlorobenzilate		10 μg/kg to 200 μg/kg
		Cymoxanil		10 μg/kg to 200 μg/kg
		Dithianon		10 μg/kg to 200 μg/kg
		Difenoconazole	AOAC 20th Ed.,2007.1	10 μg/kg to 200 μg/kg
		Dimethomorph – I	EN 15662 (QuEChERS)	10 μg/kg to 200 μg/kg
		Dimethomorph – II	SOP No. 106/25,	10 μg/kg to 200 μg/kg
		Ethion	Issue No:1.0,	10 μg/kg to 200 μg/kg
		Fenarimol	date:2016/07/01	10 μg/kg to 200 μg/kg
		Fenthion		10 μg/kg to 200 μg/kg
		Fenthion sulfone		10 μg/kg to 200 μg/kg
		Fenthion sulphoxide		10 μg/kg to 200 μg/kg
		Formothion / Dimethoate		10 μg/kg to 200 μg/kg
		Hexaconazole		10 μg/kg to 200 μg/kg
		Monocrotophos		10 μg/kg to 200 μg/kg
		Myclobutanil		10 μg/kg to 200 μg/kg
		Novaluron		10 μg/kg to 200 μg/kg

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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
6.	Jams, Juices, Sauces & Concentrates	Penconazole Phorate Phorate sulfone Phorate sulphoxide Phosalone Thiometon Thiometon sulphoxide Thiophenate methyl Triadimefon Trichlorfon Tridemorph 2,4-D Paraquat chloride Dithiocarbamates Alfa Napthyl acetic acid (A.N.A.) Fosetyl-Al Ethephon Total soluble solids Total sugars (as Sucrose) Moisture (m/m)	SOP No. 106/25, Issue No:1.0, date:2016/07/01 IS 13815 AOAC 920.184, AOAC 20 th Edition IS 3579 Section .4.1; 6 of FSSAI	10 µg/kg to 200 µg/kg
		pH Total ash	Manual of Methods of Analysis of Fruit and Vegetable products Section 2.3;6 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products Section 11.3 & 14.4; 6 of FSSAI Manual of Methods	1 to13 0.05 % to 25 %
		Total ash		0.05 % 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
		Percentage of reducing Sugar to total sugar	Section 2.6; 6 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products	0.4 to 95 %
		Acid Insoluble Ash	Section 5.3 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products	0.01 to 10%
		Ascorbic acid	IS 5838	0.5 mg/100g to1000 mg/100g
		Acidity as acetic acid or Citric Acid or Lauric Acid	Section 2.4 of FSSAI Manual of Methods of Analysis of Fruit and Vegetable products IS 13844	0.1 to 10%
		Anti Oxidants		
		BHA TBHQ	AOAC 983.15, AOAC 20th Edition	10 mg/kg to 1000 mg/kg 10 mg/kg to 1000 mg/kg
		Preservatives	·	,
		Benzoic acid & its sodium & Potassium salt or both (calculated as Benzoic acid)	SOP No.06/44,Issue 2.0, Effective from: 2015/04/15.	10 mg/kg to 3000 mg/kg
		Sorbic acid and its Calcium. Sodium, Potassium. Salt(Calculated as sorbic acid)		10 mg/kg to 3000 mg/kg
		Sulphur dioxide	Section 2.5.3 of FSSAI Manual of Methods of Analysis of Food additives	10 mg/kg to 1000 mg/kg

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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
		Colors		
		a) Test for Natural colors	Section 4.1 of FSSAI Manual of Methods of Analysis of Food additives	Qualitative
		b)Synthetic		
		Ponceau 4R Carmoisine	SOP No.06/43, Issue 2.0, Effective from 2015/04/22.	10 mg/kg to 1000 mg/kg 10 mg/kg to 1000 mg/kg
		Tartarzine		10 mg/kg to 1000 mg/kg
		Sunset yellow FCF		10 mg/kg to 1000 mg/kg
		Artificial Sweeteners		
		Aspertame	SOP No.06/44,Issue 2.0,	100mg/kg to 1000 mg/kg
		Acesulphame K	Effective from: 2015/04/15.	100 mg/kg to 1000 mg/kg
		Metals	AOAC 20th Ed., 2015.01	
		Arsenic	microwave Digestion	0.1 mg/kg to 10 mg/kg
		Cadmium	followed by Sec. 3 of FSSAI Lab Manual for	0.04 mg/kg to 50 mg/kg
		Lead	Metals; by AAS / SOP :	0.2 mg/kg to 50 mg/kg
		Copper Tin	06/02, Issue No:8.0, Issue	1.0 mg/kg to 50 mg/kg 1.0 mg/kg to 50 mg/kg
		Zinc	date:2016/06/07;	5 mg/kg to 50 mg/kg
		Mercury	,	0.2 mg/kg to 50 mg/kg
		Pesticide Residues	l	, o.2 mg/kg to oo mg/kg
		Aldrin	AOAC 20th Ed., 2007.1	10 μg/kg to 200 μg/kg
		Dieldrin	QuEChERS; EN 15662	10 μg/kg to 200 μg/kg
		o,p – DDT	SOP No.106/25,	10 μg/kg to 200 μg/kg
		p,p – DDT	Issue No:1.0,2016/07/01.	10 μg/kg to 200 μg/kg
		o,p – DDD		10 μg/kg to 200 μg/kg
		p,p – DDD		10 μg/kg to 200 μg/kg
		o,p – DDE		10 μg/kg to 200 μg/kg
		p,p – DDE		10 μg/kg to 200 μg/kg
		Dichlorvos		10 μg/kg to 200 μg/kg
		Dicofol		10 μg/kg to 200 μg/kg
<u> </u>	<u> </u>	Endosulfan A	<u> </u>	10 μg/kg to 200 μg/kg

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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
		Endosulfan B		10 μg/kg to 200 μg/kg
		Endosulfan Sulphate		10 μg/kg to 200 μg/kg
		Fenitrothion		10 μg/kg to 200 μg/kg
		Alpha-		10 μg/kg to 200 μg/kg
		Hexachlorocyclohexane		
		Beta-		10 μg/kg to 200 μg/kg
		Hexachlorocyclohexane		
		Gamma-		10 μg/kg to 200 μg/kg
		Hexachlorocyclohexane		
		Delta-		10 μg/kg to 200 μg/kg
		Hexachlorocyclohexane		
		Parathion		10 μg/kg to 200 μg/kg
		Parathion methyl		10 μg/kg to 200 μg/kg
		Phosphamidon		10 μg/kg to 200 μg/kg
		Pyrethins I		10 μg/kg to 200 μg/kg
		Pyrethins II		10 μg/kg to 200 μg/kg
		Chlorfenvinphos		10 μg/kg to 200 μg/kg
		Aldicarb		10 μg/kg to 200 μg/kg
		Cypermethrin I		10 μg/kg to 200 μg/kg
		Cypermethrin II		10 μg/kg to 200 μg/kg
		Cypermethrin III		10 μg/kg to 200 μg/kg
		Cypermethrin IV		10 μg/kg to 200 μg/kg
		Fenvalerate		10 μg/kg to 200 μg/kg
		Hexaconazole		10 μg/kg to 200 μg/kg
		Captafol		10 μg/kg to 200 μg/kg
		Captan		10 μg/kg to 200 μg/kg
		Chlorpyrifos		10 μg/kg to 200 μg/kg
		Diuron	AOAC 20 th Ed., 2007.1	10 μg/kg to 200 μg/kg
		Dodine	QuEChERS; EN 15662	10 μg/kg to 200 μg/kg
		Malathion	SOP No.106/25,	10 μg/kg to 200 μg/kg
		Malaoxon	Issue No:1.0,2016/07/01.	10 μg/kg to 200 μg/kg
		Carbendazim		10 μg/kg to 200 μg/kg
		Chlorobenzilate		10 μg/kg to 200 μg/kg
		Cymoxanil		10 μg/kg to 200 μg/kg

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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
[Dithianon		10 μg/kg to 200 μg/kg
		Difenoconazole		10 μg/kg to 200 μg/kg
		Dimethomorph – I		10 μg/kg to 200 μg/kg
		Dimethomorph – II		10 μg/kg to 200 μg/kg
		Ethion		10 μg/kg to 200 μg/kg
		Fenarimol		10 μg/kg to 200 μg/kg
		Fenthion		10 μg/kg to 200 μg/kg
		Fenthion sulfone		10 μg/kg to 200 μg/kg
		Fenthion sulphoxide		10 μg/kg to 200 μg/kg
		Formothion / Dimethoate		10 μg/kg to 200 μg/kg
		Hexaconazole		10 μg/kg to 200 μg/kg
		Monocrotophos		10 μg/kg to 200 μg/kg
		Myclobutanil		10 μg/kg to 200 μg/kg
		Novaluron		10 μg/kg to 200 μg/kg
		Penconazole		10 μg/kg to 200 μg/kg
		Phorate		10 μg/kg to 200 μg/kg
		Phorate sulfone		10 μg/kg to 200 μg/kg
		Phorate sulphoxide		10 μg/kg to 200 μg/kg
		Phosalone		10 μg/kg to 200 μg/kg
		Thiometon		10 μg/kg to 200 μg/kg
		Thiometon sulphoxide		10 μg/kg to 200 μg/kg
		Thiophenate methyl		10 μg/kg to 200 μg/kg
		Triadimefon		10 μg/kg to 200 μg/kg
		Trichlorfon		10 μg/kg to 200 μg/kg
		Tridemorph		10 μg/kg to 200 μg/kg
		2,4-D	SOP No.106/25,	10 μg/kg to 200 μg/kg
		Paraquat chloride	Issue No:1.0,2016/07/01	10 μg/kg to 200 μg/kg
		Dithiocarbamates		10 μg/kg to 200 μg/kg
		Alfa Napthyl acetic acid		10 μg/kg to 200 μg/kg
		(A.N.A.)		40
		Fosetyl-Al		10 μg/kg to 200 μg/kg
		Ethephon		10 μg/kg to 200 μg/kg

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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
7.	Proprietary/ Ready to eat Foods	Energy (Calories)	Codex Guideline for Nutritional Labelling (Calculation Method)	340 kcal/100 g to600 kcal/100 g
		Total ash	IS 1155	1.0 % to 25 %
		Acid Insoluble ash	IS 1155	0.05 % to 10%
		Moisture	IS 1155	1.0 % to 40%
		Calories from Fat	Codex Guideline for Nutritional Labelling (Calculation Method)	340 kcal/100 g to 600 kcal/100 g
		Total Fat	AOAC 2003.06, (Hexane Extraction); 20 th Edition	0.1 % to 25 %
		Saturated Fat	AOAC 20th Ed., 969.33	0.1 % to 100 %
		Monounsaturated Fat		0.1 % to 100 %
		Polyunsaturated Fat		0.1 % to 100 %
		Trans Fat		0.01 % to 100 %
		Cholesterol	AOAC 20 th Ed., 994.10	0.01 % to 10 mg/g
		Common salt	IS 2860	0.5 % to 10%
		Total Carbohydrates	Codex Guideline for	10% to 90 %
			Nutritional Labelling (Calculation Method)	
		Dietary Fiber (on dry basis)	AOAC 985.29, 20th Edition	0.1 % to 45%
		Sugar	AOAC 906.02; 20th Edition	1 mg/Kg to 100 mg/kg
		Protein	IS 7219	3 % to 25%
		Vitamin A (Retinol)	SOP 06/27, Issue No: 05 ;	
			Issue Date : 2016.03.01	1 mg/kg to 100 mg/kg
		Vitamin C (Ascorbic acid)	AOAC 2012.21; 20th Edition	0.1 mg/100g- 40 mg/100g
		Iron	AOAC 20 th Ed., 2016;	2 mg/Kg to 100 mg/kg
			2015.01 microwave	
			Digestion followed by Sec. 3	
			of FSSAI Lab Manual for	
			Metals; by AAS/SOP:106/55,	
			Issue No:1.0,	
			Dated:2016/11/03	

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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
		Sodium	AOAC 20th Ed., 2016; 2015.01 microwave Digestion followed by Sec. 3 of FSSAI Lab Manual for Metals; by Flame photometer	2.0 mg/kg to 50 mg/kg
II.	WATER			
1.	Water for Processed Food	Colour	APHA 22nd Edition, 2120B IS 3025 (Part 4)	1.0 Hazen Unit to 50 Hazen Unit
	Industry	Odour	APHA 22nd Edition, 2150B IS 3025 (Part 5)	Unobjectionable / Agreeable
		Turbidity	APHA 22nd Edition ,2130B IS 3025 (Part 10)	1.0 NTU to 40.0 NTU
		рН	APHA 22nd Edition,4500-H+ IS 3025 (Part 11)	1.0 to 12.0
		Iron as Fe	APHA 22nd Edition, 3500Fe – B	0.05 mg/l to 1.0 mg/l
		Chloride as Cl	APHA 22nd Edition, 4500Cl IS 3025 (Part 32)	5.0 mg/l 1000.0 mg/l
		Total Solids	IS 3025 (Part-15) APHA 22nd Edition , 2540 B	10 mg/l 5000 mg/l
		Magnesium as Mg	APHA 22nd Edition , 3500Mg IS 3025 (Part 46)	10 mg/l 100.0 mg/l
		Total Hardness as CaCO ₃	APHA21 ST Edition,2340 C IS 3025 (Part 21)	5.0 mg/l 1000.0 mg/l
		Copper as Cu	APHA 22nd Edition, 3111B IS 3025 (Part 42)	0.05 mg/l 1.0 mg/l
		Manganese as Mn	APHA 22nd Edition, 3111B	0.05 mg/l 1.0 mg/l
		Sulphate as SO ₄	IS 3025 (Part 24) (Turbidity method)	1.0 mg/l 500.0 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
		Nitrate as N	APHA 22nd Edition, 4500- NO3 E (Spectrophotometric method)	0.1 mg/l to 100.0 mg/l
		Fluoride as F	APHA 22nd Edition 2012, 4500F (SPADNS method) IS 3025 (Part 60) (SPADNS method)	0.1 mg/l to 1.5 mg/l
		Phenolic Compounds as C ₆ H₅OH	APHA 22nd Edition, 5530C IS 3025 (Part 43)	0.001 mg/l to 1.0 mg/l
		Selenium as Se	APHA 22nd Edition , 3114B IS 15303	0.005 mg/l to 0.05 mg/l
		Arsenic as As	APHA 22nd Edition , 3114B IS 3025 (Part 37)	0.005 mg/l to 0.25 mg/l
		Lead as Pb	APHA 22nd Edition, 3113B IS 3025 (Part 47)	0.005 mg/l to 0.10 mg/l
		Zinc as Zn	APHA 22nd Edition, 3111B IS 3025 (Part 49)	0.05 mg/l to 1.0 mg/l
		Total Chromium as Cr	APHA 22nd Edition, 3111B Cr	0.001 mg/l to 0.1 mg/l
		Cyanide as CN	APHA 22nd Edition, 4500 CN IS 3025 (Part 27)	0.01 mg/l to 10.0 mg/l
2.	Drinking Water	Colour	APHA 22nd Edition , 2120B IS 3025 (Part 4)	1.0 Hazen Unit to 50 Hazen Unit
		Odour	APHA 22nd Edition , 2150B IS 3025 (Part 5)	Unobjectionable/ Agreeable (Qualitative)
		Taste	IS 3025 (Part 8)	Unobjectionable/ Agreeable (Qualitative)
		Turbidity	APHA 22nd Edition, 2130B IS 3025 (Part 10)	1.0 NTU to 40.0 NTU

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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
		рН	APHA 22nd Edition,4500-H+ IS 3025 (Part 11)	1.0 to 12.0
		Specific Conductivity	APHA 22nd Edition, 2510B IS 3025 (Part 14)	1.0µS/cm to1000µS/cm
		Iron as Fe	APHA 22nd Edition, 3500Fe – B	0.05 mg/l to 1.0 mg/l
		Chloride as Cl	APHA 22nd Edition, 4500Cl	5.0 mg/l to 2000.0 mg/l
		Total Dissolved Solids	APHA 22nd Edition, 2540B IS 3025(Part 16)	10.0 mg/l to 5000 mg/l
		Calcium as Ca	APHA 22nd Edition, 3500Ca IS 3025 (Part 40)	10 mg/l to 500.0 mg/l
		Magnesium as Mg	APHA 22nd Edition, 3500Mg IS 3025 (Part 46)	0.24 mg/l to 120.0 mg/l
		Total Hardness as CaCO ₃	APHA21 ST Edition,2340 C IS 3025 (Part 21)	5.0 mg/l to 1000.0 mg/l
		Copper as Cu	APHA 22nd Edition, 3111B IS 3025 (Part 42)	0.05 mg/l to 1.0 mg/l
		Boron as B	APHA 22nd Edition,4500B,C	0.50 mg/l to 10.0 mg/l
		Manganese as Mn	APHA 22nd Edition, 3111B	0.05 mg/l to 1.0 mg/l
		Sulphate as SO ₄	IS 3025 (Part 24) (Turbidity method)	1.0 mg/l to 500.0 mg/l
		Nitrate as NO₃	APHA 22nd Edition, 4500- NO3 E (Spectrophotometric method)	0.4 mg/l to 100 mg/l
		Fluoride as F	APHA 22nd Edition , 4500F (SPADNS method) IS 3025 (Part 60) (SPADNS method)	0.1 1.5 mg/l
		Phenolic Compounds as C ₆ H ₅ OH	APHA 22nd Edition, 5530C IS 3025 (Part 43)	0.001 mg/l to 1.0 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
		Mercury as Hg	APHA 22nd Edition, 3112B IS 3025 (Part 48)	0.001 mg/l to 0.02 mg/l
		Cadmium as Cd	APHA 22nd Edition , 3111B IS 3025 (Part 41)	0.001 mg/l to 0.02 mg/l
		Selenium as Se	APHA 22nd Edition, 3114B IS 15303	0.005 mg/l to 0.05 mg/l
		Arsenic as As	APHA 22nd Edition, 3114B IS 3025 (Part 37)	0.005 mg/l to 0.05 mg/l
		Lead as Pb	APHA 22nd Edition, 3113B IS 3025 (Part 47)	0.005 mg/l to 0.05 mg/l
		Zinc as Zn	APHA 22nd Edition, 3111B IS 3025 (Part 49)	0.05 mg/l to 10 mg/l
		Nickel as Ni	13428 (Annex L)	0.004 mg/l to 0.1 mg/l
		Antimony as Sb	IS 15303	0.001 mg/l to 0.02 mg/l
		Total Chromium as Cr	APHA 22nd Edition,3111B Cr	0.001 mg/l to 0.1 mg/l
		Alkalinity as CaCO₃	APHA 22nd Edition, 2320B IS 3025 (Part 23)	5.0 mg/l to 1000.0 mg/l
ĺ		Aluminium as Al	APHA 22nd Edition, 3112B	0.01 mg/l to 0.1 mg/l
		Cyanide as CN	APHA 22nd Edition,4500 CN IS 3025 (Part 27)	0.01 mg/l to 10.0 mg/l
		Silver as Ag	APHA 22nd Edition, 3111B IS 13428(Annex J)	0.001 – 0.10 mg/L
		Barium in as Ba	APHA 22nd Edition, 3500	0.5 mg/l to 5.0 mg/l
		Sodium as Na	IS 3025 (Part 45)	1.0 mg/l to 500.0 mg/l
		Potassium as K	IS 3025 (Part 45)	1.0 mg/l to 100.0 mg/l
		Sulphide as H₂S	APHA 22nd Edition, 4500S2- D IS 3025 (Part 29)	0.01 mg/l to 0.7 mg/l
		Anionic Surface Active Agents as (MBAS)	APHA 22nd Edition, 5540C	0.02 mg/l to 2.0 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
[Mineral Oil	IS 3025 (Part 39)	0.1 mg/l to 10.0 mg/l
		Ammonia (as total ammonia- N)	APHA 22nd Edition, 4500NH ₃ - F IS 3025 (Part 34)	0.1 mg/l to 1.0 mg/l
		Residual Free Chlorine	IS 3025 (Part 26)	0.1 mg/l to 50 mg/l
		Chloramines (as Cl ₂)	IS 3025 (part 26)	1 mg/l to 50mg/l
		Molybdenum as Mo	APHA 22nd Edition, 3111B	0.005 mg/l to 0.100 mg/l
		Polychlorinated Biphenyls	l	·
		Monochloro biphenyl	Ànnexure- M ,IS 13428	0.01 μg/l to 0.1 μg/l
		Di chloro biphenyl		(each)
		Tri chloro biphenyl	US EPA 8082,	
		Tetra chloro biphenyl		
		Penta chloro biphenyl		
		Hexa chloro biphenyl		
		Hepta chloro biphenyl		
		Octa chloro biphenyl		J
		Polynuclear aromatic hyd Napthalene,	APHA 22 nd Edition, 6440	0.1 ug/l to 1.0 ug/l
		Anthracene	US EPA 8270C, Annex N,	0.1 μg/l to 1.0 μg/l (each)
		Phenanthrene	IS 13428/ SOP No. 106/27,	(eacii)
		Chrysene	Issue No:1.0, dated	
		benzo (a) anthracene	2016/07/11	
		fluoranthene		
		benzo (a) pyrene		
		benzo (K) fluoranthene		
		indeno (1, 2, 3-cd) pyrene		
		benzo (ghi) perylene		
		Acenaphthylene		
		Acenaphthene		
		Fluorene		
		Pyrene		
		benzo (b) fluoranthene		
<u> </u>		dibenzo(a,h) anthracene	<u> </u>	<u> </u>

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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
[Pesticide Residues		
		Pesticide Residues α – HCH β - HCH γ- HCH (Lindane) 2,4-DDD 2,4-DDE 2,4-DDT 4,4-DDD 4,4-DDE 4,4-DDT Endosulphan-α Endosulphan-β Endosulphan-sulphate Monocrotophos Ethion Chlorpyrifos Phorate Phorate sulphoxide Phorate sulphone 2,4-D Butachlor Isoproturon Alachlor Atrazine Methyl paraoxon Malathion Malaoxon Aldrin Dieldrin	AOAC 990.06, USEPA 508 Annex N, IS 13428/ SOP No. 106/27, Issue No:1.0, dated 2016/07/11 USEPA 8141A,1657A,525.281, 515.1,525.2,532,507 AOAC 990.06, USEPA 508 Annex N, IS 13428/ SOP No. 106/27, Issue No:1.0, dated2016/07/11 USEPA 8141A,1657A,525.281,814 1A, 515.1,525.2,532,507 AOAC 990.06	0.01 μg/l to 0.1 μg/l (each) 0.01 μg/l to 0.1 μg/l (each)

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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
3.	Packaged	Colour	APHA 22nd Edition, 2120B	1.0 Hazen Unit to 50
	Drinking water/		IS 3025 (Part 4)	Hazen Unit
	Packaged	Odour	APHA 22nd Edition, 2150B	Unobjectionable /
	Natural Mineral		IS 3025 (Part 5)	Agreeable
	water	Taste	IS 3025 (Part 8)	Unobjectionable / Agreeable
		Turbidity	APHA 22nd Edition, 2130B IS 3025 (Part 10)	1.0 NTU to 40.0 NTU
		рН	APHA 22nd Edition, 4500- H+	1.0 to 12.0
			IS 3025 (Part 11)	
		Specific Conductivity	APHA 22nd Edition, 2510B	1.0 μS/cm to1000μS/cm
			IS 3025 (Part 14)	
		Iron as Fe	APHA 22nd Edition,	0.05 mg/l to 1.0 mg/l
			3500Fe – B	
		Chloride as Cl	APHA 22nd Edition, 4500Cl	5.0 mg/l to 500.0 mg/l
		ļ	IS 3025 (Part 32)	
		Total Dissolved Solids	APHA 22nd Edition, 2540B	10.0 mg/l to 5000 mg/l
		Calcium as Ca	IS 3025(Part 16) APHA 22nd Edition,	10 mg/l to 200.0 mg/l
		Calcium as Ca	3500Ca	10 mg/1 to 200.0 mg/1
			IS 3025 (Part 40)	
ļ		Magnesium as Mg	APHA 22nd Edition,	10 mg/l to 100.0 mg/l
			3500Mg	i i i i i giri i i i i i i i i i i i i i
			IS 3025 (Part 46)	
		Total Hardness as CaCO₃	APHA21 ST Edition,2340 C IS 3025 (Part 21)	5.0 mg/l to 500.0 mg/l
		Copper as Cu	APHA 22nd Edition, 3111B IS 3025 (Part 42)	0.05 mg/l to 1.0 mg/l
	i I I	Borate as B	IS 13428– 2005,Annex H	0.1 mg/l to 10 mg/l
		Manganese as Mn	APHA 22nd Edition, 3111B	0.05 mg/l to 1.0 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
		Sulphate as SO ₄	IS 3025 (Part 24) (Turbidity method)	1.0 mg/l to 400 mg/l
		Nitrate as NO₃	APHA 22nd Edition, 4500- NO3 E (Spectrophotometric method)	0.4 mg/l to 100 mg/l
		Nitrite as NO₂	APHA 22nd Edition, 4500- NO2 B (Spectrophotometric method) IS 3025 (Part 34) (Spectrophotometric method)	0.01 mg/l to 0.1 mg/l
		Fluoride as F	APHA 22nd Edition, 4500F (SPADNS method) IS 3025 (Part 60) (SPADNS method)	0.1 mg/l to 1.5 mg/l
		Phenolic Compounds as C ₆ H ₅ OH	APHA 22nd Edition, 5530C/ IS 3025 (Part 43)	0.001 mg/l to 1.0 mg/l
		Mercury as Hg	APHA 22nd Edition, 3112B IS 3025 (Part 48)	0.001 mg/l to 0.02 mg/l
		Cadmium as Cd	APHA 22nd Edition, 3111B IS 3025 (Part 41)	0.001 mg/l to 0.02 mg/l
		Selenium as Se	APHA 22nd Edition, 3114B IS 15303	0.005 mg/l to 0.05 mg/l
		Arsenic as As	APHA 22nd Edition, 3114B IS 3025 (Part 37)	0.005 mg/l to 0.05 mg/l
		Lead as Pb	APHA 22nd Edition, 3113B IS 3025 (Part 47)	0.005 mg/l to 0.05 mg/l
		Zinc as Zn	APHA 22nd Edition, 3111B IS 3025 (Part 49)	0.05 mg/l to 10 mg/l
		Nickel as Ni	IS 13428 (Annex L)	0.004 mg/l to 0.1 mg/l
		Antimony as Sb	IS 15303 & 13428(Annex G)	0.001 mg/l to 0.02 mg/l
		Total Chromium as Cr	APHA 22nd Edition, 3111B Cr	0.001 mg/l to 0.1 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
		Alkalinity as HCO₃	APHA 22nd Edition, 2320B IS 3025 (Part 23)	5.0 mg/l to 1000.0 mg/l
		Aluminium as Al	APHA 22nd Edition, 3112B	0.004 mg/l to 0.10 mg/l
		Cyanide as CN	APHA 22nd Edition, 4500 CN/ IS 3025 (Part 27)	0.01 mg/l to 10.0 mg/l
		Silver as Ag	APHA 22nd Edition, 3111B IS 13428(Annex J)	0.001 mg/l to 0.10 mg/l
		Barium in as Ba	APHA 22nd Edition, 3500	0.5 mg/l to 5.0 mg/l
		Sodium as Na	IS 3025 (Part 45)	1.0 mg/l to 500 mg/l
		Potassium as K	IS 3025 (Part 45)	1.0 mg/l to 100 mg/l
		Sulphide as H₂S	APHA 22nd Edition, 4500S2- D IS 3025 (Part 29)	0.01 mg/l to 0.7 mg/l
		Anionic Surface Active Agents as (MBAS)	APHA 22nd Edition, 5540C	0.02 mg/l to 2.0 mg/l
		Mineral Oil	IS 3025 (Part 39)	0.01 mg/l to 10.0 mg/l
		Ammonia (as total ammonia- N)	APHA 22nd Edition, 4500NH ₃ - F IS 3025 (Part 34)	0.1 mg/l to 1.0 mg/l
		Residual Free Chlorine	IS 3025 (Part 26)	0.1 mg/l to 50 mg/l
		Bromate (as BrO ₃)	ISO 15061; EPA 300.1, (Ion Chromatography)	0.002 mg/l to 0.02 mg/l
		Polychlorinated Biphenyls	s (PCBs)	
		Monochloro bi phenyl	Annexure- M ,IS 13428	0.01 μg/l to 0.1 μg/l
		Di chloro bi phenyl	US EPA 8082,	(each)
		Tri chloro bi phenyl		
		Tetra chloro bi phenyl		
		Penta chloro bi phenyl		
		Hexa chloro bi phenyl		
		Hepta chloro bi phenyl		
		Octa chloro bi phenyl		

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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
		Polynuclear aromatic hyd	rocarbons (PAH)	
		Napthalene,	APHA 22 nd Edition, 6440	0.01 μg/l to 1.0 μg/l
		Anthracene		(each)
		Phenanthrene	US EPA 8270C, /	
		Chrysene	SOP No. 106/27,Issue No:	
		benzo (a) anthracene	1.0,	
		fluoranthene	Issue date:2016/07/11	
		benzo (a) pyrene		
		Benzo (k) fluoranthene		
		indeno (1, 2, 3-cd) pyrene		
		benzo (ghi) perylene		
		Acenaphthylene		
		Acenaphthene		
		Fluorene		
		Pyrene		
		benzo (b) fluoranthene		
		dibenzo(a,h) anthracene		
		Pesticide Residues	I	l
		α – HCH	Annex N, IS 13428 /	0.01 μg/l to 0.1 μg/l
		β - HCH	SOP No. 106/27,	(each)
		δ- HCH	Issue No:1.0,	
		y- HCH (Lindane)	dated2016/07/11	
		2,4-DDD		
		2,4-DDE	USEPA	
		2,4-DDT	8141A,1657A,525.281,	
		4,4-DDD	515.1,525.2,532,507 AOAC 990.06	
			AOAC 990.00	

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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
		4,4-DDE 4,4-DDT Endosulphan -α Endosulphan-β Endosulphan-sulphate Monocrotophos Ethion Chlorpyrifos Phorate Phorate sulphoxide Phorate sulphone 2,4-D Butachlor Isoproturon Alachlor Atrazine Methyl parathion Methyl paraoxon Malathion Malaoxon Aldrin Dieldrin	Annex N, IS 13428/ SOP No. 106/27, Issue No:1.0, dated2016/07/11 USEPA 8141A,1657A,525.281,814 1A, 515.1,525.2,532,507 AOAC 990.06	0.01 μg/l to 0.1 μg/l (each)

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