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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	l
			performed		

BIOLOGICAL TESTING

I.	FOOD AND AGRIC	CULTURAL PRODUCTS		
1.	Bakery & Confectionery	Bacterial Count (Total Plate Count)	IS 5402 ISO 4833	≥10 CFU/g
	Products	Coliform count	IS 5401 (Part-1) ISO 4832	≥10 CFU/g
		Yeasts & Mould count	IS 5403	≥10 CFU/g
		Escherichia coli	IS 5887 (Part-1)	Qualitative (Present or Absent/g)
		Salmonella	IS 5887 (Part-3) ISO 6579 FDA-BAM Chapter 5	Qualitative (Present or Absent/25g)
		Shigella	IS 5887 (Part-7)	Qualitative (Present or Absent/25g)
		Staphylococcus aureus	IS 5887 (Part-2)	≥100 CFU/g Present or Absent/g
		Bacillus cereus	IS 5887 (Part-6) ISO 7932	≥10 CFU/g or ≥100 CFU/g
		Clostridium perfringens	IS 5887 (Part-4)	Qualitative (Present or Absent/25g)
		Vibrio cholerae	IS 5887 (Part-5)	Qualitative (Present or Absent/25g)
		Vibrio parahaemolyticus	IS 5887 (Part-5)	Qualitative (Present or Absent/25g)
		Listeria monocytogenes	IS 14988 (Part-1) ISO 11290-1	Qualitative (Present or Absent/25g)
2.	Milk & Dairy products	Bacterial Count (Total Plate Count)	IS 5402 ISO 4833	≥1 CFU/g or ml ≥10 CFU/g or ml
	-	Coliform count	IS 5401 (Part-1) ISO 4832	≥1 CFU/g or ml ≥10 CFU/g or ml
		Yeasts & Mould count	IS 5403	≥1 CFU/g or mI ≥10 CFU/g or mI

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		Escherichia coli	IS 5887 (Part-1)	Qualitative (Present or Absent/g or ml)
		Salmonella	IS 5887 (Part-3) ISO 6579	Present or Absent/ 25g or 25ml
		Shigella	IS 5887 (Part-7)	Present or Absent/ 25g or 25ml
		Staphylococcus aureus	IS 5887 (Part-2)	≥10 CFU/g or ml ≥100 CFU/g
		Bacillus cereus	IS 5887 (Part-6) ISO 7932	≥10 CFU/g or ml ≥100 CFU/g
		Clostridium perfringens	IS 5887 (Part-4)	≥10 CFU/g or ml ≥100 CFU/g
		Listeria monocytogenes	IS 14988 (Part-1) ISO 11290-1	Qualitative (Present or Absent/25g or 25 ml/g or ml)
3.	Canned & Processed Foods	Bacterial Count (Total Plate Count)	IS 5402/ ISO 4833	≥10 CFU/g
		Coliform count	IS 5401 (Part-1) ISO 4832	≥10 CFU/g
		Yeasts & Mould count	IS 5403	≥10 CFU/g
		Escherichia coli	IS 5887 (Part-1)	Qualitative (Present or Absent/g)
		Salmonella	IS 5887 (Part-3) ISO 6579/FDA-BAM Chapter 5	Qualitative (Present or Absent/25g)
		Shigella	IS 5887 (Part-7)	Qualitative (Present or Absent/25g)
		Staphylococcus aureus	IS 5887 (Part-2)	≥100 CFU/g Present or Absent/g
		Bacillus cereus	IS 5887 (Part-6) ISO 7932	≥100 CFU/g
		Clostridium perfringens	IS 5887 (Part-4)	Qualitative (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
•••••		Vibrio cholerae	IS 5887 (Part-5)	Qualitative (Present or Absent/25g)
		Vibrio parahaemolyticus	IS 5887 (Part-5)	Qualitative (Present or Absent/25g)
		Listeria monocytogenes	IS 14988 (Part-1) ISO 11290-1	Qualitative (Present or Absent/25g)
		pH (Incubation test)	APHA 5 th Edition, Chapter 61 (Clause 61.41 & 61.46)	Change/ No changes in pH
		Aciduric Flat sour organisms	APHA 5 th Edition Chapter 25 (Clause 25.64)	Qualitative (Present or Absent/25g)
4.	Fruit & Fruit Products	Bacterial Count (Total Plate Count)	IS 5402 ISO 4833	≥1 CFU/ml or ≥10 CFU/g
		Coliform count	IS 5401 (Part-1) ISO 4832	≥1 CFU/ml or ≥10 CFU/g
		Yeasts & Mould count	IS 5403	≥1 CFU/ml or ≥10 CFU/g
		Escherichia coli	IS 5887 (Part-1)	Qualitative (Present or Absent/g or ml)
		Salmonella	IS 5887 (Part-3) ISO 6579	Qualitative (Present or Absent/25g or 25ml)
		Shigella	IS 5887 (Part-7)	Qualitative (Present or Absent/25g or 25ml)
		Staphylococcus aureus	IS 5887 (Part-2)	Qualitative (Present or Absent/g or ml)
		Vibrio cholerae	IS 5887 (Part-5)	Qualitative (Present or Absent/25g or ml)
		Listeria monocytogenes	IS 14988 (Part-1) ISO 11290-1	Qualitative (Present or Absent/25g or 25 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
		pH (Incubation test)	APHA 5 th Edition, Chapter 61 (Clause 61.41 & 61.46)	Qualitative Change/No changes in pH
		Aciduric Flat sour organisms	APHA 5 th Edition Chapter 25 (Clause 25.64)	Qualitative (Present or Absent/25g or ml)
II.	MARINE AND AQUA	A CULTURES		
1.	Fish & Sea Foods	Total Plate Count	IS 5402 ISO 4833-1	≥10 CFU/g
		Coliform count	IS 5401 (Part-1) ISO 4832	≥10 CFU/g
		Esherichia coli	ISO :16649-2	≥10 CFU/g
		Salmonella	IS 5887 (Part-3) ISO 6579-1	Qualitative (Present or Absent/25g)
		Shigella	ISO 21567	Qualitative (Present or Absent/25g)
		Staphylococcus aureus	IS 5887 (Part-8)/Sec-1 ISO 6888-1	≥100 CFU/g
		Vibrio cholerae	ISO 21872-1	Qualitative (Present or Absent/25g)
		Vibrio parahaemolyticus	ISO 21872-1	Qualitative (Present or Absent/25g)
		Listeria monocytogenes	IS 14988 (Part-1) ISO 11290-1	Qualitative (Present or Absent/25g)
III.	WATER			
1.	Packaged Drinking Water	Aerobic Microbial Count (at 22°C)	IS 5402	≥ 1CFU/mI
		Aerobic Microbial Count (at 37°C)	IS 5402	≥ 1CFU/ml
		Coliforms	IS15185 ISO 9308-1	Qualitative (Present or Absent/250ml)

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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
		Esherichia coli	IS15185 ISO 9308-1	Qualitative (Present or Absent/250ml)
		Yeast & Mould	IS 5403	Qualitative (Present or Absent/250ml)
		Pseudomonas aeruginosa	IS13428 (Annex. D)	Qualitative (Present or Absent/250ml)
		Staphylococcus aureus	IS 5887 (Part-2)	Qualitative (Present or Absent/250ml)
		Faecal Streptococci	IS15186	Qualitative (Present or Absent/250ml)
		Shigella	IS 5887 (Part-7)	Qualitative (Present or Absent/250ml)
		Salmonella	IS 15187	Qualitative (Present or Absent/250ml)
		Vibrio cholera	IS 5887 (Part-5)	Qualitative (Present or Absent/250ml)
		Vibrio parahaemolyticus	IS 5887 (Part-5)	Qualitative (Present or Absent/250ml)
		Sulphite reducing anaerobes	IS 13428 (Annex. C)	Qualitative (Present or Absent/50ml)
2.	Drinking water	Coliform count Esherichia coli	IS 1622 IS 1622	<2 to 1600 MPN/100ml <2 to 1600 MPN/100 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
3.	Water for	Coliform count	IS 1622	<2 to 1600 MPN/100ml
	Processed Food Industry	Standard Plate Count	IS 1622	≥ 1CFU/ml
	industry	Proteolytic bacterial count	IS 4251 Annex: A-1	≥ 1CFU/ml
		Lipolytic bacterial count	IS 4251 Annex: A-2	≥ 1CFU/mI

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.

Vinay Kumar Tyagi Convenor

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

CHEMICAL TESTING

I.	RESIDUES IN FOOL	PRODUCTS		
1.	Marine/Aquaculture	Food Products		
	Prawn and Prawn Products (Fresh, Frozen & canned)/	Antibiotics	SOP No. 106/89 Issue no.3.0, Issue Date:22.08.2017	0.15 μg/kg to 1.5 μg/kg
	Shrimp (Fresh,	Chloramphenicol	SOP No. 106/93 Issue	0.3 μg/kg to 4 μg/kg
	Frozen & canned)	3-Amino-2-	no.3.0, Issue	0.2 μg/kg to 4 μg/kg
	Fish and Fish	Oxazolidinone(AOZ)	Date:22.08.2017	0.2 69.19.11 69.19
	Products (Fresh, Frozen & canned)	3-Amino-5- morpholinomethyl-2- oxazolidinone (AMOZ)		0.2 μg/kg to 4 μg/kg
		1-Amino Hydantoin (AHD)		0.2 μg/kg to 4 μg/kg
		Semicarbazide (SEM)	SOP No. 106/88 Issue	10 μg/kg to 200 μg/kg
		Tetracycline	no.3.0, Issue	
		4-epitetracycline	Date:22.08.20172	10 μg/kg to 200 μg/kg
		Oxy tetracycline		
		4-epi oxytetracycline		10 μg/kg to 200 μg/kg
		Chloretetracycline		
		4-epi chlortetracycline		
		Poly chlorinated	SOP No. 106/92 Issue	2.5 µg/kg to 100 µg/kg
į		biphenyls	no.2.0, Issue Date:	
		PCBs (Trichlorobiphenyl)	17.07.2017	
		PCBs		
ļ		(Tetrachlorobiphenyl)		
		PCBs		
		(Pentachlorobiphenyl)		
		PCBs (Hayaahlarahinhanyl 1)		
		(Hexachlorobiphenyl 1)		
1		PCBs	<u> </u>	<u>. </u>

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		(Hexachlorobiphenyl 1)		
		PCBs		
		(Hexachlorobiphenyl 2)		
		PCBs		
		(Heptachlorobiphenyl)		
		Pesticides		
		DDT (The limits apply to	SOP No. 106/91	10 μg/kg-200 μg/kg
		D.D.T., D.D.D. and	Issue no.2.0,	
		D.D.E. singly or in any	Issue Date:17.07.2017	
		combination form.		
		2,4-DDE		
		4,4-DDE		
		2,4-DDD		
		4-4-DDD		
		2,4-DDT		
		4,4-DDT		
		ά-HCH		
		β-НСН		
		ү-НСН		
		Dieldrin		
		Endrin		
		Aldrin		
		Heptachlor		
		HCB		
		Cis-Chlordane		
		Trans-Chlordane		
		Trace Metals	Trace Metals	
		Arsenic	SOP No. 106/90 Issue	200 μg/kg to 1500 μg/kg
		Cadmium	no.1.0, Issue Date:	100 μg/kg to 1000 μg/kg
		Lead	17.07.2017	100 μg/kg to 1000 μg/kg
		Mercury		100 μg/kg to 1000 μg/kg
				10.0
		Tin	SOP No. 106/193 Issue	50 μg/kg to 800 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
		Zinc	no.1.0 , Issue	0.5 μg/kg to 50 μg/kg
		Copper	Date:01.07.2018	0.5 μg/kg to 50 μg/kg
		Nickel		50 µg/kg to 50000 µg/kg
		Chromium		0.5 μg/kg to 50 μg/kg
		Total Volatile Basic	Commission Decision,	5.0 mg/100 grams to 100
		Nitrogen (TVB-N)	95/149/EC, 1995 Annexure II	mg/100 grams
2.	Oils & Fats	Trace Metals		
	Edible oils, Soya	Lead	SOP No. 106/193 Issue	0.05 mg/kg to 25 mg/kg
	bean oil, sun	Copper	no.1.0 , Issue	0.5 mg/kg to 50 mg/kg
	flower oil, rice	Arsenic	Date:01.07.2018	0.05 mg/kg to 5 mg/kg
	bran oil,	Tin		0.05 mg/kg to 5 mg/kg
	palmolein oil,	Zinc		0.5 mg/kg to 50 mg/kg
	mustard oil & Ground nut oil	Cadmium		0.05 mg/kg to 50 mg/kg
		Mercury		0.05 mg/kg to 5.0 mg/kg
		Nickel		0.05 mg/kg to 50 mg/kg
		Chromium		0.5 mg/kg to 50 mg/kg
II.	ANIMAL FOOD AND	FEED		
1.	Aqua Feed	Antibiotics		
	-	Chloramphenicol	SOP 106/182, Issue No. 1.0. Issue date 24.05.2018	0.15 μg/kg to 1.2 μg/kg
		Nitrofurazone	SOP 106/183, Issue No.	100 μg/kg to 1000 μg/kg
		Nitrofurantion	1.0. Issue date 24.05.2018	100 μg/kg to 1000 μg/kg
		Furaltadone		100 μg/kg to 1000 μg/kg
		Furazolidone		100 μg/kg to 1000 μg/kg
		Tetracycline & 4-	SOP 106/10 ,	10 μg/kg to 200 μg/kg
		epitetracycline	Issue No. 3.0, 05.07.2016	
		Oxy tetracycline & 4-epi Oxytetracycline		10 μg/kg to 200 μg/kg
		Chlortetracycline & 4-epi		10 μg/kg to 200 μg/kg
		chlortetracycline		- 1.3.1.9 1.3.1.9
		Pesticides		

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	DDT (The limits apply to		
	D.D.T., D.D.D. and D.D.E. singly or in any combination form. 2,4-DDE 4,4-DDE 2,4-DDD 4-4-DDD 2,4-DDT 4,4-DDT ά-HCH β-HCH y-HCH Dieldrin Endrin Aldrin Heptachlor HCB Cis-Chlordane Trans-Chlordane	SOP 106/184, Issue No. 1.0. Issue date 24.05.2018	10μg/kg to 200 μg/kg
	Trace Metals Arsenic Cadmium Lead Copper Tin Zinc Mercury Nickel Chromium	SOP No. 106/193 Issue no.1.0, Issue Date:01.07.2018	0.05 mg/kg to 20 mg/kg 0.05 mg/kg to 50 mg/kg 0.05 mg/kg to 50 mg/kg 0.5 mg/kg to 50 mg/kg 0.05 mg/kg to 10 mg/kg 0.5 mg/kg to 50 mg/kg 0.05 mg/kg to 10 mg/kg 0.05 mg/kg to 50 mg/kg 0.05 mg/kg to 50 mg/kg 0.5 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
		Aflatoxins (B1, B2, G1,	SOP No 106/185 Issue No	
		G2)	1.0, Issue date 24.05.2018	
		Aflatoxin B1		0.25 μg/kg to 10 μg/kg
		Aflatoxin B2		0.065 μg/kg to 10 μg/kg
		Aflatoxin G1		0.12 μg/kg to 10 μg/kg
		Aflatoxin G2		0.065 μg/kg to 10 μg/kg
		Proximate Analysis		
		Moisture	IS 7874 (Part-1): 1975	0.01% to 20 %
		Protein		0.1% to 50 %
		Oil Content		0.01% to 30 %
		Crude Fibre		1.0 % to 50 %
		Total Ash content		0.1% to 20 %
		Acid Insoluble Ash		0.01% to 10 %
		Free Fatty Acid	SOP No 106/169 Issue Date: 29.01.2018	0.01% to 15 %
III.	WATER			
1.	Pond water	Temperature	АРНА 2550-В	Upto 50°C
		Dissolved Oxygen	APHA 4500-O	1 mg/L to 9 mg/L
		Color	APHA 2150 IS 3025 (Part-4)	1 to 50 Pt-Co Units
		Turbidity	APHA 2130B IS 3025 (Part-10)	0.1 NTU to 100 NTU
		Conductivity	APHA 2510-B IS 3025 (Part-14)	0.01 μS/cm to 20000 μS/cm
		рН	APHA 4500-B IS 3025 (Part-11)	3 to 12
		Total Hardness (as CaCO ₃)	APHA 2340-B & C IS 3025 (Part-21)	1 mg/L to 1000 mg/L
		Odour	APHA 2150 IS 3025 (Part-5)	Qualitative Agreeable/Disagreeable
		Cyanide	APHA 4500CN-H	0.001 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
		T	IS 3025 (Part-27)	
		Fluoride	APHA 4500F-D (SPADNS method) IS 3025 (Part-60,1.2)	0.1 mg/L to 10 mg/L
		Magnesium	IS 3025 (Part-46) (EDTA Titration with Poatton & reader Indicator)	1 mg/L to 1000 mg/L
		Calcium	IS 3025 (Part-46) (EDTA Titration)	1 mg/IL to 1000 mg/L
		Ammoniacal Nitrogen	IS: 3025 (Part-34) APHA 4500-NH3-B & C AOAC 973.48 (Distillation followed by Titrimetric Method)	0.5 mg/L to 100 mg/L
		Nitrite	IS 3025 (Part-34) (Spectrophotometric Method)/EPA 300.1	0.01 mg/L to 10 mg/L
		Nitrates	IS 3025 (Part-34) APHA 4500-NO₃. B	1 mg/L to 100 mg/L
		Total Solids	IS: 3025 (Part-15) APHA 2540-B	1 mg/L to 2000 mg/L
		Suspended Solids	APHA 2540-D	1 mg/L to 1000 mg/L
		Total Alkalinity (as CaCO₃)	IS: 3025 (Part-23) APHA 2320-B	5 mg/L to 1000 mg/L
		Salinity	APHA 2520-B (Conductivity Method)	0.1 to 40
		Hydrogen Sulphide	IS 3025 (Part-29), APHA 4500S ₂ -F	0.02 mg/L to 50 mg/L
		Chlorides	APHA 4500Cl-B, IS 3025 (Part-32)	0.5 mg/L to 1000 mg/L
		Sulphates	IS:3025(Part-24,4); APHA 4500SO ₄ -E	1 mg/L to 500 mg/L
		Bromate	EPA 300.1	1 μg/l to 40 μg/l
		Sodium	APHA 3500Na-B	1 mg/L to 200 mg/l
		Potassium	APHA 3500K-B	1 mg/L to 200 mg/l

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			(Flame Photometric)	
2.	Packaged	Color	IS 3025 (Part-4)	1 to 50 Pt-Co Units
	Drinking Water	Odour	IS 3025 (Part-5)	Qualitative Agreeable/Disagreeable
		рН	IS 3025 (Part-11)	3 to 12
		Taste	IS 3025 (Part-8)	Qualitative Agreeable/Disagreeable
		Turbidity	IS 3025 (Part-10)	0.1 NTU to 100 NTU
		Conductivity	IS 3025 (Part-14)	1 μS/cm to 2000 μS/cm
		Total Dissolved Solids	IS 3025 (Part-16)	1 mg/L to 2000 mg/L
		Chloramines (as Cl ₂)	IS 3025 (Part-26) or APHA 4500-CI G	0.05 mg/L to 10 mg/L
		Calcium (as Ca)	IS 3025 (Part-46)	1 mg/L to 1000 mg/L
		Magnesium (as Mg)	IS 3025 (Part-46)	1 mg/L to 1000 mg/L
		Total Alkalinity (as CaCO ₃)	IS: 3025 (Part-23)	5.0 mg/L to 1000 mg/L
		Total Hardness (as CaCO ₃)	IS 3025 (Part-21)	1 mg/L to 1000 mg/L
		Mineral Oil	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5 mg/L to 100 mg/L
		Chloride (as Cl)	IS 3025 (Part-32)	0.5 mg/L to 1000 mg/L
		Iron (as Fe)	IS 3025 (Part-53)	0.05 mg/L to 100 mg/L
		Ammonia (as Total Ammonia-N)	IS 3025 (Part-34)	0.1 mg/L to 10 mg/L
		Fluoride (as F)	IS 3025 (Part-60,1.2)	0.1 mg/L to 10 mg/L
		Residual Free Chlorine	IS 3025 (Part-26)	0.1 mg/L to 500 mg/L
		Nitrate (as NO₃)	IS 3025 (Part-34)	0.1 mg/L to 100 mg/L
		Phenolic compounds (as C ₆ H ₅ OH)	IS 3025 (Part-43)	0.001 mg/L to 5 mg/L
		Sulphide (as H₂S)	IS 3025 (Part-29,3)	0.02 mg/L to 50 mg/L
		Sulphate (as SO ₄)	IS 3025 (Part-24,4)	1 mg/L to 500 mg/L
	1	Nitrite (as NO ₂)	IS 3025 (Part-34,3)	0.001 mg/L to 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
		Cyanide (as CN)	IS 3025 (Part-27)	0.001 mg/L to 10 mg/L
		Anionic surface active agents (as MBAS)	Annex K of IS:13428	0.05 mg/L to 1.0 mg/L
		Bromate (as BrO ₃)	EPA 300.1	0.001 mg/l to 0.05 mg/l
3.	Drinking Water	Colour	IS 3025 (Part-4)	1 to 50 Pt-Co Units
		Odour	IS 3025 (Part-5)	Qualitative Agreeable/Disagreeable
		рН	IS 3025 (Part-11)	3 to 12
		Taste	IS 3025 (Part 7 and 8)	Qualitative
		Turbidity,	IS 3025 (Part-10)	Agreeable/Disagreeable 0.1 to 100 NTU
		Total Dissolved Solids	IS 3025 (Part-16)	1 mg/L to 2000 mg/L
		Chloramines (as Cl ₂)	IS 3025 (Part-26)or APHA 4500-CI G	0.05 mg/L to 10 mg/L
		Calcium (as Ca)	IS 3025 (Part-46)	1 mg/L to 1000 mg/L
		Magnesium (as Mg)	IS 3025 (Part-46)	1 mg/L to 1000 mg/L
		Total Alkalinity as CaCO₃	IS: 3025 (Part-23)	5.0 mg/L to 1000 mg/L
		Total Hardness (as	IS 3025 (Part-26)	1 mg/L to 1000 mg/L
	İ	CaCO ₃)	or APHA 4500-CI G	0.5 mg/l to 100 mg/l
		Mineral Oil	Clause 6 of IS 3025 (Part-39)	
		Chloride (as Cl)	IS 3025 (Part-32)	0.5 mg/L to 1000 mg/L
		Iron (as Fe) Ammonia	IS 3025 (Part-53) IS 3025 (Part-34)	0.05 mg/L to 100 mg/L 0.1 mg/L to 10 mg/L
		(as Total Ammonia-N) Fluoride (as F)	IS 3025 (Part-60,1.2)	0.1 mg/L to 10mg/L
		Free Residual Chlorine	IS 3025 (Part-26)	0.1 mg/L to 500mg/L
		Nitrate (as NO₃)	IS: 3025 (Part-34)	0.1 mg/L to 100 mg/L
		Phenolic Compounds (as C ₆ H₅OH)	IS 3025 (Part-43)	0.001 mg/L to 5 mg/L
		Sulphide (as H ₂ S)	IS 3025 (Part-29,3)	0.02 mg/L to 50 mg/L
		Sulphate (as SO ₄)	IS 3025 (Part-24,4)	1 mg/L to 500 mg/L
		Cyanide (as CN)	IS 3025 (Part-27)	0.001 mg/L to 10 mg/L
		Anionic surface active	Annex K of IS:13428	0.05 mg/L to 1.0 mg/L

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		agents (as MBAS)		
		Bromate (as BrO ₃)	EPA 300.1	0.001 mg/L to 0.05 mg/L
IV.	RESIDUES IN WAT	ER		
1.	Pond Water	Pesticide Residues	SOP 15/31A, Issue No. 6.0,	0.01 μg/L to 200 μg/L
		DDT (The limits apply to D.D.T., D.D.D. and D.D.E. singly or in any combination form.	Issue date 09.08.2016	
		2,4-DDE 4,4-DDE 2,4-DDD 4,4-DDT		
		Endosulfan Sulfate ά-HCH		
		δ-HCH		
		Aldrin Endrin		
		Heptachlor		
		HCB		
		Trans Chlordane Cis (alpha) Chlordane		
		Poly Aromatic Hydrocarbons		
		Naphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene	SOP No 106/181 Issue No 1, Issue date 2018-05-24	0.01 μg/L to 200 μg/L
		Pyrene		

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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
		Benz[a]anthracene		
		Chrysene		
		Benzo[b]fluoranthene		
		Benzo[k]fluoranthene		
		Benzo[a]pyrene		
		Indeno[1,2,3-cd]pyrene		
		Dibenz[a,h]anthracene		
		Benzo[ghi]perylene		
		Trace Metals		
		Arsenic	SOP 106/186, Issue No.	1.0 μg/L to 100 μg/L
		Chromium	1.0, Issue date 24.05.2018	10 μg/L to 2000 μg/L
		Copper		10 μg/L to 5000 μg/L
		Lead		1 μg/L to 100 μg/L
		Manganese		10 μg/L to 5000 μg/L
		Mercury		1 μg/L to 100 μg/L
		Selenium		1 μg/L to 100 μg/L
		Zinc		10 μg/L to 5000 μg/L
		Aluminium		10 μg/L to 5000 μg/L
		Iron		10 μg/L to 5000 μg/L
		Antimony		1 μg/L to 100 μg/L
		Cadmium		1 μg/L to 100 μg/L
		Nickel		10 μg/L to 2000 μg/L
2.	Packaged	Alachlor	SOP No 106/181	0.01 μg/L to 0.2 μg/L
	Drinking Water	Atrazine	Issue No 1, Issue date	0.01 μg/L to 0.2 μg/L
		Aldrin	24.05.2018	0.01 μg/L to 0.2 μg/L
		Dieldrin		0.01 μg/L to 0.2 μg/L
		Alpha HCH		0.01 μg/L to 0.2 μg/L
		Beta HCH		0.01 μg/L to 0.2 μg/L
		Butachlor		0.01 μg/L to 0.2 μg/L
		Chlorpyriphos		0.01 μg/L to 0.2 μg/L
		Delta HCH		0.01 μg/L to 0.2 μg/L
		2,4-D		0.01 μg/L to 0.2 μg/L
		o,p-DDT		0.01 μg/L to 0.2 μg/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
		p,p-DDT		0.01 μg/L to 0.2 μg/L
		o,p-DDE		0.01 μg/L to 0.2 μg/L
		p,p-DDE		0.01 μg/L to 0.2 μg/L
		o,p-DDD		0.01 μg/L to 0.2 μg/L
		p,p-DDD		0.01 μg/L to 0.2 μg/L
		Alpha-Endosulfan		0.01 μg/L to 0.2 μg/L
		Beta-Endosulfan		0.01 μg/L to 0.2 μg/L
		Endosulfan sulfate		0.01 μg/L to 0.2 μg/L
		Ethion		0.01 μg/L to 0.2 μg/L
		Gamma HCH		0.01 μg/L to 0.2 μg/L
		Isoproturon		0.01 μg/L to 0.2 μg/L
		Malaoxan		0.01 μg/L to 0.2 μg/L
		Malathion		0.01 μg/L to 0.2 μg/L
		Methyl paraoxan		0.01 μg/L to 0.2 μg/L
		Methyl parathion		0.01 μg/L to 0.2 μg/L
		Monocrotopos		0.01 μg/L to 0.2 μg/L
		Phorate		0.01 μg/L to 0.2 μg/L
		Phorate Sulfone		0.01 μg/L to 0.2 μg/L
		Phorate Sulfoxide		0.01 μg/L to 0.2 μg/L
		Poly aromatic		
		hydrocarbons		
		Acenaphthene	SOP No 106/181	0.01 μg/L to 0.2 μg/L
		Benzo(a)pyrene	Issue No 1, Issue date	0.01 μg/L to 0.2 μg/L
		Pyrene	24.05.2018	0.01 μg/L to 0.2 μg/L
		Chrysene		0.01 μg/L to 0.2 μg/L
		Benzo(k) fluoranthene		0.01 μg/L to 0.2 μg/L
		Naphthalene		0.01 μg/L to 0.2 μg/L
		Phenanthrene		0.01 μg/L to 0.2 μg/L
		Benzo(g,h,i)perylene		0.01 μg/L to 0.2 μg/L
		Indeno (1,2,3-cd) pyrene		0.01 μg/L to 0.2 μg/L
		Benzo(b)fluoranthene		0.01 μg/L to 0.2 μg/L
		Fluorene		0.01 μg/L to 0.2 μg/L
	<u> </u>	Benzo(a) anthracene		0.01 μg/L to 0.2 μg/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
		Fluoranthene		0.01 μg/L to 0.2 μg/L
		Anthracene		0.01 μg/L to 0.2 μg/L
		Dibenz(a,h) anthracene		0.01 μg/L to 0.2 μg/L
		Acenaphthylene		0.01 μg/L to 0.2 μg/L
		Polychlorinated		
		biphenyls		
		2,4,4-trichloro biphenyl	SOP No 106/181	0.01 μg/L to 0.2 μg/L
		2,2,5,5-Tetrachloro biphenyl	Issue No 1, Issue date 24.05.2018	0.01 μg/L to 0.2 μg/L
		2,2,4,5,5-Pentachloro biphenyl		0.01 μg/L to 0.2 μg/L
		2,2,3,4,4,5-Hexachloro biphenyl		0.01 μg/L to 0.2 μg/L
		2,2,4,4,5,5-Hexachloro biphenyl		0.01 μg/L to 0.2 μg/L
		2,2,3,4,4,5,5- Heptachlorobiphenyl		0.01 μg/L to 0.2 μg/L
		Trace metals		
		Aluminium	IS 3025 (Part-55): 2003	0.001 mg/L to 5 mg/L
		Lead	IS 3025 (Part-47): 1994	0.001 mg/L to 2.mg/L
		Antimony	Annex G of IS 13428 :2005	0.001 mg/L to 2.mg/L
		Cadmium	IS 3025 (Part-41): 1992	0.001 mg/L to 2.mg/L
		Mercury	IS 3025 (Part-48): 1994	0.001 mg/L to 2 mg/L
		Copper	IS 3025 (Part-42): 1992	0.05 mg/L to 5 mg/L
		Barium	IS 13428*or IS 15302 2005	0.005 mg/L to 2 mg/L
		Boron	IS 3025 (Part-57): 2005	0.1 mg/L to 2 mg/L
		Molybdenum	IS 3025 (Part-2)	0.005 mg/L to 2 mg/L
		Nickel	IS 3025 (Part-54): 2003	0.001 mg/L to 2 mg/L
		Zinc	IS 3025 (Part 49)	0.05 mg/L to 5.mg/L
		Selenium	IS 3025 (Part 56) or IS 15303	0.001 mg/L to 2 mg/L
		Silver	Annex J of IS 13428	0.001 mg/L to 5 mg/L
		Manganese	IS 3025 (Part-59)	0.05 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 Arsenic	IS 3025 (Part-37)	0.001 mg/L to 0.05 mg/L
		Total Chromium	IS 3025 (Part-52)	0.001 mg/L to 5 mg/L
		Sodium	APHA (Flame photometer) 3500-Na	1 mg/L to 200 mg/L
		Pottasum	APHA (Flame photometer) 3500-K	1 mg/L to 200 mg/L
3.	Drinking Water	Alachlor	SOP No 106/181	0.01 μg/L to 0.2 μg/L
		Atrazine	Issue No 1,	0.01 μg/L to 0.2 μg/L
		Aldrin	Issue date 24.05.2018	0.01 μg/L to 0.2 μg/L
		Dieldrin		0.01 μg/L to 0.2 μg/L
		Alpha HCH		0.01 μg/L to 0.2 μg/L
		Beta HCH		0.01 μg/L to 0.2 μg/L
		Butachlor		0.01 μg/L to 0.2 μg/L
		Chlorpyriphos		0.01 μg/L to 0.2 μg/L
		Delta HCH		0.01 μg/L to 0.2 μg/L
		2,4-D		0.01 μg/L to 0.2 μg/L
		o,p-DDT		0.01 μg/L to 0.2 μg/L
		p,p-DDT		0.01 μg/L to 0.2 μg/L
		o,p-DDE		0.01 μg/L to 0.2 μg/L
		p,p-DDE		0.01 μg/L to 0.2 μg/L
		o,p-DDD		0.01 μg/L to 0.2 μg/L
		p,p-DDD		0.01 μg/L to 0.2 μg/L
		Alpha-Endosulfan		0.01 μg/L to 0.2 μg/L
		Beta-Endosulfan		0.01 μg/L to 0.2 μg/L
		Endosulfan sulphate		0.01 μg/L to 0.2 μg/L
		Ethion		0.01 μg/L to 0.2 μg/L
		Gamma HCH		0.01 μg/L to 0.2 μg/L
		Isoproturon		0.01 μg/L to 0.2 μg/L
		Malaoxan		0.01 μg/L to 0.2 μg/L
		Methyl paraoxan		0.01 μg/L to 0.2 μg/L
		Malathion		0.01 μg/L to 0.2 μg/L
		Methyl parathion		0.01 μg/L to 0.2 μg/L
		Monocrotopos		0.01 μg/L to 0.2 μg/L
		Phorate		0.01 μg/L to 0.2 μg/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
		Phorate Sulfone		0.01 μg/L to 0.2 μg/L
				0.01 μg/L to 0.2 μg/L
		Poly aromatic hydrocarbons		
		Acenaphthene	SOP No 106/181	0.01 μg/L to 0.2 μg/L
		Benzo(a)pyrene	Issue No 1.0, Issue date	0.01 μg/L to 0.2 μg/L
		Pyrene	24.05.2018	0.01 μg/L to 0.2 μg/L
		Chrysene		0.01 μg/L to 0.2 μg/L
		Benzo(k) fluoranthene		0.01 μg/L to 0.2 μg/L
		Naphthalene		0.01 μg/L to 0.2 μg/L
		Phenanthrene		0.01 μg/L to 0.2 μg/L
		Benzo(g,h,i)perylene		0.01 μg/L to 0.2 μg/L
		Indeno (1,2,3-cd) pyrene		0.01 μg/L to 0.2 μg/L
		Benzo(b)fluoranthene		0.01 μg/L to 0.2 μg/L
		Fluorene		0.01 μg/L to 0.2 μg/L
		Benzo(a) anthracene		0.01 μg/L to 0.2 μg/L
		Fluoranthene		0.01 μg/L to 0.2 μg/L
		Anthracene		0.01 μg/L to 0.2 μg/L
		Dibenz(a,h) anthracene		0.01 μg/L to 0.2 μg/L
		Acenaphthylene		0.01 μg/L to 0.2 μg/L
		Poly aromatic		
		hydrocarbons		
		2,4,4-trichloro biphenyl	SOP No 106/181	0.01 μg/L to 0.2 μg/L
		2,2,5,5-Tetrachloro	Issue No 1.0, Issue date	0.01 μg/L to 0.2 μg/L
		biphenyl	24.05.2018	
		2,2,4,5,5-Pentachloro		0.01 μg/L to 0.2 μg/L
		biphenyl		
		2,2,3,4,4,5-Hexachloro		0.01 μg/L to 0.2 μg/L
İ		biphenyl		
		2,2,4,4,5,5-Hexachloro		0.01 μg/L to 0.2 μg/L
		biphenyl		
		2,2,34,4,5,Heptachlorobip		0.01 μg/L to 0.2 μg/L
		henyl		
		Trihalomethanes		

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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
		Chloroform	APHA 6200 23rd Edition	0.0005 mg/L to 0.02 mg/L
		Bromodichloromethane		0.0005 mg/L to 0.02 mg/L
		Dibromochloromethane		0.0005 mg/L to 0.02 mg/L
		Bromoform		0.0005 mg/L to 0.02 mg/L
		Trace metals		
		Aluminium	IS 3025 (Part-55)	0.001 mg/L to 5 mg/L
		Lead	IS 3025 (Part-47)	0.001 mg/L to 2 mg/L
		Antimony	Annex G of IS 13428	0.001 mg/L to 2 mg/L
		Cadmium	IS 3025 (Part-41)	0.001 mg/L to 2 mg/L
		Mercury	IS 3025 (Part-48)	0.001 mg/L to 2 mg/L
		Copper	IS 3025 (Part-42)	0.05 mg/L to 5 mg/L
		Barium	IS 13428 or	0.005 mg/L to 2 mg/L
			IS 15302	
		Boron	IS 3025 (Part 57)	0.1 mg/L to 2 mg/L
		Molybdenum	IS 3025 (Part 2)	0.005 mg/L to 2 mg/L
		Nickel	IS 3025 (Part 54)	0.001 mg/L to 2 mg/L
		Zinc	IS 3025 (Part 49)	0.05 mg/L to 5 mg/L
		Selenium	IS 3025 (Part 56) or	0.001 mg/L to 2 mg/L
			IS 15303	
ļ		Silver	Annex J of IS 13428	0.001 mg/L to 5.mg/L
		Manganese	IS 3025 (Part 59)	0.05 mg/L to 10 mg/L
ļ		Total Arsenic	IS 3025 (Part 37)	0.001 mg/L to 0.05 mg/L
ļ		Total Chromium	IS 3025 (Part 52)	0.001 mg/L to 5 mg/L
ļ		Sodium	APHA 3500-Na	1 mg/L to 200 mg/L
			(Flame photometer)	
		Potassium	APHA 3500-K	1 mg/L to 200 mg/L
			(Flame photometer)	

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.

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Mallika Gope **Program Manager**