

Laboratory	SEALAB, 13/99A, Keltron Road, Aroor, Kerala		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	18.10.2015
Certificate Number	T-1332	Valid Until	17.10.2017
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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	FOOD & AGRICULTURAL PRODUCTS			
1.	Fish and Fishery Products (Including Crustaceans, Cephalopods, Fin Fish Processed Foods)	Chloramphenicol	SL C/QSOP 001(Issue. 03 & Dated. 10.04.14)	0.15 µg/kg to 10 µg/kg
		Nitrofurans	SL C/QSOP-002(Issue. 02 & Dated. 12.11.11)	0.5 µg/kg to 10 µg/kg
		AOZ		0.5 µg/kg to 10 µg/kg
		AMAZ		0.5 µg/kg to 10 µg/kg
		AHD		0.5 µg/kg to 10 µg/kg
		SEM		0.5 µg/kg to 10 µg/kg
		Sulfonamides	SLC/QSOP-056 (Issue. 02 & Dated. 10.04.12)	
		Sulfadiazine		100 µg/kg to 250 µg/kg
		Sulfathiazole		100 µg/kg to 250 µg/kg
		Sulfamerazine		100 µg/kg to 250 µg/kg
		Sulfamethizole		100 µg/kg to 250 µg/kg
		Sulfadimidin/Sulfamethazin		100 µg/kg to 250 µg/kg
		Sulfamethoxyridazine		100 µg/kg to 250 µg/kg
		Sulfachloropyridazine		100 µg/kg to 250 µg/kg
	Sulfamethoxazole		100 µg/kg to 250 µg/kg	
	Sulfapyridine		100 µg/kg to 250 µg/kg	

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	Fish and Fishery Products (Including Crustaceans, Cephalopods, Fin Fish Processed Foods)	Sulfadoxin	SLC/QSOP-056 (Issue. 02 & Dated. 10.04.12)	100 µg/kg to 250 µg/kg
		Sulfadimethoxin		100 µg/kg to 250 µg/kg
		Sulfadiazine	SL C/QSOP-083 (Issue. 02 & Dated. 10.06.13)	100 µg/kg to 250 µg/kg
		Sulfamerazine		100 µg/kg to 250 µg/kg
		Sulfamethoxazole		100 µg/kg to 250 µg/kg
		Sulfadimidin/Sulfamethazin		100 µg/kg to 250 µg/kg
		Sulfamethoxy pyridazine		100 µg/kg to 250 µg/kg
		Sulfamethizole		101.07 µg/kg to 250 µg/kg
		Sulfadoxin		100 µg/kg to 250 µg/kg
		Nitrofurans Parents	SLC/QSOP-057 (Issue. 03 & Dated. 31.12.11)	
		Nitrofurazone		1 µg/kg to 25 µg/kg
		Nitrofurantoin		1 µg/kg to 25µg/kg
		Furazolidone		1 µg/kg to 25µg/kg
		Furaltadone		1 µg/kg to 25µg/kg
	Nitrofurans Parents	SLC/QSOP-082, (Issue. 02 & Dated. 30.04.14)		
	Nitrofurazone		0.5 µg/kg to 5.0µg/kg	
	Nitrofurantoin		0.5 µg/kg to 5.0µg/kg	
	Furazolidone		0.5 µg/kg to 5.0µg/kg	
	Furaltadone		0.5 µg/kg to 5.0µg/kg	

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	Fish and Fishery Products (Including Crustaceans, Cephalopods, Fin Fish Processed Foods)	Tetracyclines	SLC/QSOP-79(Issue. 04 & Dated. 10.06.13)	
		Tetracycline		100 µg/kg to 200µg/kg
		Oxy-Tetracycline		100 µg/kg to 200µg/kg
		Chlor-Tetracycline		100 µg/kg to 200µg/kg
		4-Epi Tetracycline		100 µg/kg to 200µg/kg
		4-Epi Oxytetracycline		100 µg/kg to 200µg/kg
		4-Epi Chlortetracycline		100 µg/kg to 200µg/kg
		Quinolones		
		Oxolinic Acid	SLC/QSOP-055 (Issue. 03 & Dated. 30.01.12)	100 µg/kg to 400 µg/kg
		Enrofloxacin	SL C/QSOP-076 (Issue. 01 & Dated. & 12.04.12)	30 µg/kg to 120 µg/kg
	Difloxacin	SL C/QSOP-076 (Issue. 01 & Dated. & 12.04.12)	30µg/kg to 120 µg/kg	
	Flumequine	SL C/QSOP-076 (Issue. 01 & Dated. & 12.04.12)	30µg/kg to 120 µg/kg	
	Trimethoprim	SLC/QSOP-059(Issue. 03 & Dated. 30.11.11)	50 µg/kg to 500 µg/kg	
	Indole	SL C/QSOP-054(, Issue. 03 & Dated. 30.01.12)	15 µg/kg to 200 µg/kg	
	Histamine	SLC/QSOP-064 (Issue. 03 & Dated. 30.11.11)	10 µg/g to 200 µg/g	

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	Fish and Fishery Products (Including Crustaceans, Cephalopods, Fin Fish Processed Foods)	Ethoxyquin	SLC/QSOP-080 (Issue. 01 & Dated. & 28.02.13)	2.0 µg/kg to 20 µg/kg
		Crystal Violet	SLC/QSOP-073 (Issue. 02 & Dated. 31.07.12)	0.5 µg/kg to 20 µg/kg
		Leuco Crystal Violet		0.5 µg/kg to 20 µg/kg
		Malachite Green		0.5 µg/kg to 20 µg/kg
		Leuco Malachite Green	SLC/QSOP-073 (Issue. 02 & Dated. 31.07.12)	0.5 µg/kg to 20 µg/kg
		Sudan I	SL C/QSOP-077 (Issue. 01 & Dated. & 22.02.12)	5 µg/kg to 200 µg/kg
		Sudan II		5 µg/kg to 200 µg/kg
		Sudan III		5 µg/kg to 200 µg/kg
		Sudan IV		5 µg/kg to 200 µg/kg
		Organo-Chlorine Pesticides	SL C/QSOP- 084(Issue. 01 & Dated. & Nov 2013)	
		Alpha-BHC		10 µg/kg to 500µg/kg
		Gamma-BHC/Lindane		10 µg/kg to 500 µg/kg
		Delta-BHC		10 µg/kg to 500 µg/kg
		Heptachlor		10 µg/kg to 500 µg/kg
		Endosulfan I		10 µg/kg to 500 µg/kg
	Pp' DDT		10 µg/kg to 500 µg/kg	
	Pp' DDE		10 µg/kg to 500 µg/kg	

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	Fish and Fishery Products (Including Crustaceans, Cephalopods, Fin Fish Processed Foods)	Pp' DDD	SL C/QSOP- 084(Issue. 01 & Dated. & Nov 2013)	10 µg/kg to 500 µg/kg	
		2,4,5,6Tetrachloro-M-Xylene		10 µg/kg to 500 µg/kg	
		Cis-Chlordane		10 µg/kg to 500 µg/kg	
		Aldrin		10 µg/kg to 500 µg/kg	
		Dieldrin		10 µg/kg to 500 µg/kg	
		Endrin		10 µg/kg to 500 µg/kg	
		Organophosphorus Pesticides		SL C/QSOP- 084(Issue. 01 & Dated. & Nov 2013)	
		Disulfoton			10 µg/kg to 500 µg/kg
		Malathion			10 µg/kg to 500 µg/kg
		Fenthion			10 µg/kg to 500 µg/kg
		Prothiophos			10 µg/kg to 500 µg/kg
		Ethion			10 µg/kg to 500 µg/kg
		Chlorpyrifos			10 µg/kg to 500 µg/kg
	Diazinon	10 µg/kg to 500 µg/kg			
	Polychlorinated Biphenyls	SL C/QSOP-072 (Issue. 02 & Dated. Nov 2013)			
	PCB-28		5 µg/kg to 500 µg/kg		
	PCB-52		5 µg/kg to 500 µg/kg		
	PCB-101		5 µg/kg to 500 µg/kg		

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	Fish and Fishery Products (Including Crustaceans, Cephalopods, Fin Fish Processed Foods)	PCB-138	SL C/QSOP-072 (Issue. 02 & Dated. Nov 2013)	5 µg/kg to 500 µg/kg
		PCB-153		5 µg/kg to 500 µg/kg
		PCB-180		5 µg/kg to 500 µg/kg
		Pendimethalin	SL C/QSOP- 084 (Issue. 01 & Dated. & Nov 2013)	5 µg/kg to 500 µg/kg
			SL C/QSOP- 072 (Issue. 01 & Dated. & 29.02.12)	5 µg/kg to 500 µg/kg
		Trifluralin	SL C/QSOP- 08 (Issue. 01 & Dated. & Nov 2013)	5 µg/kg to 500 µg/kg
			SL C/QSOP- 072 (Issue. 01 & Dated. & 29.02.12)	5 µg/kg to 500 µg/kg
		Cadmium	SL C/QSOP-003 (Issue. 02 & Dated. 12.04.12)	0.1 µg/g to 15 µg/g
			SLC/QSOP-085(Issue. 01 & Dated. 04.06.14)	10 µg/kg to 1000 µg/kg
		Lead	SL C/QSOP-003 (Issue. 02 & Dated. 12.04.12)	0.1 µg/g to 15 µg/g
		SL C/QSOP-003(Issue. 01 & Dated. 05.12.12)	0.02 µg/g to 0.15 µg/g	
		SLC/QSOP-085 (Issue. 01 & Dated. 04.06.14)	10 µg/kg to 1000 µg/kg	
	Chromium	SL C/QSOP-003 (Issue. 02 & Dated. 12.04.12)	0.4 µg/g to 15 µg/g	

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	Fish and Fishery Products (Including Crustaceans, Cephalopods, Fin Fish Processed Foods)	Nickel	SL C/QSOP-003 (Issue. 02 & Dated. 12.04.12)	0.10015µg/g to 15µg/g
		Copper	SL C/QSOP-003 (Issue. 02 & Dated. 12.04.12)	0.1 µg/g to 15 µg/g
		Zinc	SL C/QSOP-003(Issue. 02 & Dated. 12.04.12)	0.4 µg/g to 15 µg/g
		Iron	SL C/QSOP-003 (Issue. 02 & Dated. 12.04.12)	1µg/g to 15 µg/g
		Mercury	SL C/QSOP-003(Issue. 02 & Dated. 12.04.12)	0.05 µg/g to 1.0 µg/g
			SL C/QSOP-085 (Issue. 01 & Dated. 04.06.14)	10 µg/kg to 1000 µg/kg
		Arsenic	SL C/QSOP-003 (Issue. 02 & Dated. 12.04.12)	0.05 µg/g to 1.0 µg/g
		Moisture	AOAC (19 th Edition) 950.46: 2012, Vol. II	5 % to 80 %
		Total Ash	AOAC (19 th Edition) 923.03: 2012 , Vol. II	0.2 % to 10 %
		Residual Sulfite	AOAC (19 th Edition) 990.28: 2012, Vol. II	10 mg/kg to 300 mg/kg
	Total Salt as NaCl	AOAC (19 th Edition) 937.09: 2012, , Vol. II	0.1 % to 30 %	
	Total Phosphate (as P ₂ O ₅)	AOAC (19 th Edition) 920.153 & 958.01: 2012, , Vol. II	50 mg/kg to 7500 mg/kg	

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	Fish and Fishery Products (Including Crustaceans, Cephalopods, Fin Fish Processed Foods)	Total Volatile Base Nitrogen	SL C/QSOP-037 (Issue. 01 & Dated. & 12.06.14)	5 mg/100g to 100 mg/100g
		pH	FSSAI 2012Manual 6 -3.1	1 units to 14 units
		Trimethyl Amine	SLC/QSOP-037 (Issue. 01 & Dated. & 12.06.14)	5 mg/100g to 100 mg/100g
		Boric Acid	AOAC (19 th Edition) 959.09: 2012, Vol. II	Qualitative
		Dietary Fibre Content	AOAC (19 th Edition) 993.21: 2012, Vol. II	0.1 % to 40 %
		Cholesterol	SLC/QSOP/FP-094 (Issue. 01 & Dated. & 05.07.13)	25 mg/100g to 1000 mg/100g
		Total Fat	AOAC (19 th Edition) 920.39: 2012, ,Vol. II	0.5 % to 50 %
		Protein	AOAC (19 th Edition) 954.01: 2012, ,Vol. II	1 % to 40 %
		Vitamin A	SLC/QSOP/FP-036 ((Issue. 01 & Dated. & 05.07.13)	0.1 mg/100g to 10 mg/100g
		Vitamin C	AOAC (19 th Edition) 967.21: 2012, ,Vol. II	1 µg/g to 10 µg/g
		Total Carbohydrate	IS 1656: 2007 (RA 2009) SL C/QSOP-050)	1 % to 10 %
		Total Sugar	SL C/QSOP-049((Issue. 01 & Dated. & 05.07.13)	5 µg/g to 100 µg/g

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2.	Salt	Purity	IS 797: 1982 (RA 2012) (SL C/QSOP-053, (Issue. 01 & Dated. & 05.07.13)	1 % to 100 %
3.	Sodium Tripoly Phosphate	Purity as Phosphate	SL C/QSOP-036(Issue. 01 & Dated. & 05.07.13)	2 % to 100 %
4.	Oils & Fats Products	Iodine Value	IS 548 (Part 1): 1964 (RA 2010)	5 to 300
		Boudouins Test	IS 548 (Part 2): 1976 (RA 2010)	Qualitative
		Peroxide Value	IS 548 (Part 1): 1964 (RA 2010)	0.1 millieq/kg to 30 millieq/kg
		Saponification Value	IS 548 (Part 1): 1964 (RA 2010)	50 to 300
		Refractive Index at 40 ⁰ C	IS 548 (Part 1): 1964 (RA 2010)	1.3 to 1.7
		Flash Point	DGHS Manual 2 2005-6.1	100 ⁰ to 360 ⁰
		Polenske Value	IS 548 (Part 1): 1964 (RA 2010)	5 to 20
		Unsaponifiable Matter	IS 548 (Part 1): 1964 (RA 2010)	0.1 % to 10 %
		Acid Value	IS 548 (Part 1): 1964 (RA 2010)	0.1 to 50
		Bellier Test	IS 548 (Part 2)1976 (RA 2010)	15 ⁰ to 50 ⁰
		Hydrocynic Acid	IS 548 (Part 2): 1976 (RA 2010)	Qualitative
		Phosphorous	DGHS Manual 2: 2005-34.0	0.5 mg/l to 1000 mg/l
		Cloud Point	DGHS Manual 2: 2005-17.0	15 ⁰ C -30 ⁰ C
		Moisture and Volatile Matter	IS 548 (Part 1): 1964 (RA 2010)	0.01 % to 4.0 %

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5.	Oils & Fats Products	Free Fatty Acids as Oleic Acid	IS 548 (Part 1): 1964 (RA 2010)	0.01 % to 10 %
		Mineral Oil	IS 548 (Part 2): 1976 (RA 2010) (SLC/QSOP/FP-016)	Qualitative
		Rancidity	FSSAI 2012Manual 2 37.2.1	Qualitative
		Admixture With Other Oils	IS 548 (Part 2)1976 (RA 2010)	Qualitative
		Insoluble Impurities	IS 548 (Part 1): 1964 (RA 2010)	0.1 % to 10 %
		Reichert Meissel Value	IS 548 (Part 1): 1964 (RA 2010)	1-25
		Specific Gravity	IS 548 (Part 1): 1964 (RA 2010)	0.8-1
6.	Cereals, Pulses and by products	Acid Insoluble Ash	IS 1155: 1968 (RA 2010)	0.01 % to 10 %
		Moisture	IS 1155: 1968 (RA 2010)	0.1 % to 20 %
		Total Ash	IS 1155: 1968 (RA 2010)	0.1 % to 20 %
		Gluten	IS 1155: 1968 (RA 2010)	1 % to 12 %
		Alcoholic Acidity as H ₂ SO ₄	IS 1155: 1968 (RA 2010)	0.01-0.5 %
		Total Fat	AOAC (19 th Edition) 920.85: 2012	0.1 % to 10 %
		Total Protein	AOAC (19 th Edition) 954.01: 2012	1 % to 30 %
		Carbohydrate	IS 1656-2007 (RA 2009)	5 % to 80 %
		Crude Fibre	IS 1155: 1968 (RA 2010)	0.1 % to 20 %
		Starch	IS 4706 (Part 2): 1978 (RA 2005)	1 % to 80 %

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	Cereals, Pulses and by products	Calcium	AOAC (19 th Edition) 990.23: 2012	15mg/100g to 1000mg/100g
		Sodium	AOAC (19 th Edition) 990.23: 2012	10mg/100g to 1500mg/100g
		Potassium	AOAC (19 th Edition) 990.23: 2012	10mg/100g to 1500mg/100g
		Acidity of Extracted Fat Expressed as Oleic Acid	IS 12711: 1989 (RA 2010)	0.01 % to 10 %
		Vitamin C	AOAC (19 th Edition) 967.21: 2012 (SLC/QSOP/FP-034)	1µg/g to 10µg/g
		Energy Value	SLC/QSOP/FP-035 Issue. 01 & Dated. & 20.03.13	10 kcal to 500 kcal
		Vitamin A	SLC/QSOP/FP-036 (Issue. 01 & Dated. & 30.04.13)	0.1 mg/100g to 10 mg/100g
7.	Spices and Condiments	Moisture	IS 1797: 1985 (RA 2009)	0.3 % to 20 %
		Total Ash	IS 1797: 1985 (RA 2009)	0.1 % to 7 %
		Acid Insoluble Ash	IS 1797: 1985 (RA 2009)	0.1 % to 1.2 %
		Extraneous Matter	IS 1797: 1985 (RA 2009)	Qualitative
		Crude Fibre	IS 1797: 1985 (RA 2009)	0.1 % to 20 %
		Starch	IS 4706 (Part 2): 1978	0.1 % to 60 %

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	Spices and Condiments	Non-Volatile Ether Extract	IS 1797: 1985 (RA 2009)	0.1 % to 10 %
		Volatile Oil	IS 1797: 1985 (RA 2009)	0.1 % to 15 %
		Cold Water Soluble Extract	IS 1797: 1985 (RA 2009)	0.1 % to 20 %
		Alcohol Soluble Extract	IS 1797: 1985 (RA 2009)	0.1 % to 20 %
		Light Berries	IS 1798: 2010	0.03 % to 10 %
		Aflatoxin	SLC/QSOP/FP-048 (Issue. 01 & Dated. & 30.04.13)	15 µg/kg to 45 µg/kg
		Bulk Density	IS 1797: 1985 (RA 2009)	100 g/l to 1000 g/l
		Piperine Content	ASTA Analytical Manual (4 th Edition) Method. 12.1	0.1 % to 20 %
		Test For Lead Chromate	IS 3576: 2010	Qualitative
		Curcumin	ASTA Analytical Manual (4 th Edition) Method. 18	0.1 % to 10 %
		Sodium Chloride	IS 1797: 1985 (RA 2009)	0.1 % to 20 %
		Banned Dyes	SLC/QSOP/FP-054 (Issue. 01 & Dated. & 28.01.13)	7.0 µg /kg to 250µg/kg
		Sudan I SudanII Sudan III Sudaniv Cadmium	SLC/QSOP/FP-055(Issue. 01 & Dated. & 01.04.13)	1.2 mg/kg to 100 mg/kg
		Lead	SLC/QSOP/FP-055(Issue. 01 & Dated. & 01.04.13)	4.228 mg/kg to 100 mg/kg

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	Spices and Condiments	Chromium	SLC/QSOP/FP-055(Issue. 01 & Dated. & 01.04.13)	2.7 mg/kg to 100 mg/kg	
		Zinc	SLC/QSOP/FP-055 (Issue. 01 & Dated & 01.04.13)	3.308 mg/kg to 100 mg/kg	
		Copper	SLC/QSOP/FP-055 (Issue. 01 & Dated & 01.04.13)	2.84 mg/kg to 100 mg/kg	
	Organo Phosphorous Pesticides		SLC/QSOP/FP-057 (Issue. 01 & Dated. & 30.04.13)		
		Ethion		10 ug/kg to 20 ug/kg	
		Phorate Sulfone		10 ug/kg to 20 ug/kg	
		Phorate Sulfoxide		10 ug/kg to 20 ug/kg	
		Monochrotophos		10 ug/kg to 20 ug/kg	
		Triazophos		10 ug/kg to 20 ug/kg	
		Profenophos		10 ug/kg to 20 ug/kg	
		Phosalone		10 ug/kg to 20 ug/kg	
		Organochlorine Pesticides		SLC/QSOP/FP-056 (Issue. 01 & Dated. & 29.06.13)	
			Beta-BHC		20 ug/kg to 500ug/kg
	Gamma-BHC			20 ug/kg to 500ug/kg	
	Delta-BHC			20 ug/kg to 500ug/kg	
		Heptachlor		20 ug/kg to 500ug/kg	

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	Spices and Condiments	Aldrin	SLC/QSOP/FP-056 (Issue. 01 & Dated. & 29.06.13)	20 ug/kg to 500ug/kg
		Heptachlor Epoxide		20 ug/kg to 500ug/kg
		Endosulfan		20 ug/kg to 500ug/kg
		PP-DDE		20 ug/kg to 500ug/kg
		Dieldrin		20 ug/kg to 500ug/kg
		PP-DDD		20 ug/kg to 500ug/kg
8.	Non Alcoholic Beverages Tea and Tea Products	Moisture	IS 13853: 1994 (RA 2009)	0.3 % to 12 %
		Total Ash	IS 13854: 1994 (RA 2009)	0.1 % to 20 %
		Acid Insoluble Ash	IS 13857: 1993 (RA 2009)	0.1 % to 20 %
		Water Soluble Ash & Water Insoluble Ash	IS 13855: 1993 (RA 2009)	1 % to 80 %
		Alkalinity of Water Soluble Ash	IS 13856: 1993 (RA 2009)	0.1 % to 20 %
		Crude Fibre	IS 10226 (Part 1): 1982 (RA 2010)	0.1 % to 50 %
		Water Extract	IS 13862: 1999 (RA 2009)	0.1 % to 50 %
		Caffeine	SLC/QSOP/FP-065 (Issue. 01 & Dated. & 30/04/2013)	0.1 % to 10 %
		Iron Particles	IS 3633: 2003 (RA 2008) (SLC/QSOP/FP-066)	10 mg/kg to 300 mg/kg
	Lead	SLC/QSOP/FP-055 (Issue. 01 & Dated. & 17.10.12)	0.88 mg/kg to 100 mg/kg	

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	Non Alcoholic Beverages Tea and Tea Products	Copper	SLC/QSOP/FP-055 (Issue. 01 & Dated. & 17.10.12)	0.681mg/kg to 100 mg/kg
		Nickel	SLC/QSOP/FP-055 (Issue. 01 & Dated. & 17.10.12)	1.601 mg/kg to 100 mg/kg
		Organophosphorous Pesticides	SLC/QSOP/FP-067(Issue. 01 & Dated. & 30.03.13)	
		Cypermethrin		10 ug/kg to 25 ug/kg
		Ethion		10 ug/kg to 25 ug/kg
		Phorate Sulfone		10 ug/kg to 25 ug/kg
		Phorate Sulfoxide		10 ug/kg to 25 ug/kg
		Monochrotophos		10 ug/kg to 25 ug/kg
		Triazophos		10 ug/kg to 25 ug/kg
		Profenophos		10 ug/kg to 25 ug/kg
		Phosalone		10 ug/kg to 25 ug/kg
		Organochlorine Pesticides	SLC/QSOP/FP-056 (Issue. 01 & Dated. & 20.06.13)	
		Alpha-BHC		10 ug/kg to 500 ug/kg
		Beta-BHC		10 ug/kg to 500 ug/kg
		Gamma-BHC		10 ug/kg to 500 ug/kg
		Delta-BHC		10 ug/kg to 500 ug/kg
		Heptachlor		10 ug/kg to 500 ug/kg

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	Non Alcoholic Beverages Tea and Tea Products	Aldrin	SLC/QSOP/FP-056 (Issue. 01 & Dated. & 20.06.13)	10 ug/kg to 500 ug/kg
		Heptachlor Epoxide		10 ug/kg to 500 ug/kg
		OP-DDE		20 ug/kg to 500ug/kg
		Endosulfan		10 ug/kg to 500 ug/kg
		PP-DDE		20 ug/kg to 500ug/kg
		Dieldrin		20 ug/kg to 500ug/kg
		PP-DDD		20 ug/kg to 500ug/kg
		OP-DDT		20 ug/kg to 500 ug/kg
	Methoxychlor		20 ug/kg to 500ug/kg	
9.	Coffee, Cocoa and Byproducts	Moisture	IS3077: 1992 (RA 2009)	0.3 % to 12 %
		Total Ash	IS3077: 1992 (RA 2009)	0.1 % to 20 %
		Acid Insoluble Ash	IS3077: 1992 (RA 2009)	0.1 % to 20 %
		Water Soluble Ash	IS3077: 1992 (RA 2009)	1 % to 80 %
		Alkalinity of Water Soluble Ash	IS3077: 1992 (RA 2009)	0.1 % to 20 %
		Caffeine	SLC/QSOP/FP-065 (Issue. 01 & Dated. & 30/04/2013)	0.1 % to 10 %
		Petroleum Ether Extract	IS 3077: 1992 (RA 2009) (SLC/QSOP/FP-073)	0.1 % to 20 %
		Lead	SLC/QSOP/FP-055) Issue. 01 & Dated. & 17.10.12	1.23 mg/kg to 100 mg/kg

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	Coffee, Cocoa and Byproducts	Copper	SLC/QSOP/FP-055(Issue. 01 & Dated. & 17.10.12)	1.40 mg/kg to 100 mg/kg
		Nickel	SLC/QSOP/FP-055(Issue. 01 & Dated. & 17.10.12)	1.01 mg/kg to 100 mg/kg
		Organophosphorous Pesticides	SLC/QSOP/FP-067 (Issue. 01 & Dated. & 30.03.13)	
		Cypermethrin		10 ug/kg to 25 ug/kg
		Ethion		10 ug/kg to 25 ug/kg
		Phorate Sulfone		10 ug/kg to 25 ug/kg
		Phorate Sulfoxide		10 ug/kg to 25 ug/kg
		Monochrotophos		10 ug/kg to 25 ug/kg
		Triazophos		10 ug/kg to 25 ug/kg
		Profenophos		10 ug/kg to 25 ug/kg
		Phosalone		10 ug/kg to 25 ug/kg
10.	Nuts and Nut Products	Moisture	AOAC (19 th Edition) 925.40: 2012	0.1 % to 20 %
		Aflatoxin	SLC/QSOP/FP-074(Issue. 01 & Dated. & 30.04.13)	15 µg/kg to 45 µg/kg
		Protein	AOAC (19 th Edition) 954.01: 2012	5 % to 50 %
		Fat	AOAC (19 th Edition) 948.22: 2012	1 % to 60 %
		Crude Fiber	IS 10226 (Part 1): 2010	0.1 % to 20 %

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	Nuts and Nut Products	Salt	AOAC (19 th Edition) 950.52: 2012	0.5 % to 50 %
		Total Ash	AOAC (19 th Edition) 950.49: 2012	0.01 % to 10 %
		Peroxide Value	IS 12711: 1989 (RA 2010)	0.012 millieq/kg to 20 millieq/kg
		Acid Insoluble Ash	IS 1155: 1968 (RA 2010)	0.01 % to 5 %
		Free Fatty Acid	IS 12711: 1989 (RA 2010)	0.01 % to 20 %
		Energy Value	SLC/QSOP/FP-035 Issue. 01 & Dated. 20.03.13	10 kcal to 1000 kcal
		Carbohydrate	IS 1656: 2007 (RA 2009)	5 % to 80 %
		Organochlorine Pesticides	SLC/QSOP/FP-056 (Issue. 01 & Dated. & 29.06.13)	
		Alpha-BHC		10 ug/kg to 500 ug/kg
		Beta-BHC		10 ug/kg to 500 ug/kg
		Gamma-BHC		10 ug/kg to 500 ug/kg
		Delta-BHC		10 ug/kg to 500 ug/kg
		Endosulfan		20 ug/kg to 500ug/kg
		Heptachlor Epoxide		10 ug/kg to 500 ug/kg
		OP-DDE		20 ug/kg to 500ug/kg
		PP-DDE		20 ug/kg to 500ug/kg
	PP-DDD		20 ug/kg to 500ug/kg	
	Dieldrin		10 ug/kg to 500 ug/kg	

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11.	Bakery and Confectionery Products	Moisture	IS 12711: 1989 (RA 2010)	0.1 % to 95 %
		Ash	IS 12711: 1989 (RA 2010)	0.1 % to 20 %
		Acid Insoluble Ash	IS 12711: 1989 (RA 2010)	0.01 % to 5 %
		Protein	AOAC (19 th Edition) 954.01: 2012	0.5 % to 40 %
		Fat	IS 12711: 1989 (RA 2010)	0.1 % to 50 %
		Carbohydrate	IS 1656: 2007 (RA 2009)	5 % to 80 %
		Energy Value	SLC/QSOP/FP-035 (Issue. 01 & Dated. 20.03.13)	10 kcal to 1000 kcal
		Sodium	AOAC (19 th Edition) 990.23: 2012	10 mg/100g to 1500 mg/100g
		Potassium	AOAC (19 th Edition) 990.23: 2012	10 mg/100g to 1500 mg/100g
		Calcium	AOAC (19 th Edition) 990.23: 2012	15 mg/100g to 1000 mg/100g
		Crude Fibre	IS 12711: 1989 (RA 2010)	0.1 % to 30 %
		Peroxide Value	IS 12711: 1989 (RA 2010)	0.1 millieq/kg to 20 millieq/kg
		Acidity of Extracted Fat	IS 12711: 1989 (RA 2010)	0.01 % to 20 %
Vitamin A	SLC/QSOP/FP-036(Issue. 01 & Dated. & 29.06.13)	0.1 mg/100g to 10 mg/100g		

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	Bakery and Confectionery Products	Vitamin C	AOAC (19 th Edition) 967.21: 2012,	0.05 % to 20 %
		Saturated Fatty Acids	AOAC Official Method, (18 th Edition) 996.06: 2005	0.5 % to 100 %
		Unsaturated Fatty Acids	AOAC Official Method, (18 th Edition) 996.06: 2005	0.5 % to 100 %
		Trans Fatty Acids	SLC/QSOP/FP-093 (Issue. 01 & Dated. & 02.07.13)	up to 100 mg/kg
		Cholesterol	SLC/QSOP/FP-094 (Issue. 01 & Dated. & 05.07.13)	25 mg/100g to 1000 mg/100g
		Alcoholic Acidity	IS 12711: 1989 (RA 2010)	0.01 % to 1 %
12.	Fruits, Vegetables and Products	Drained Weight	FSSAI Manual 5, 2012-1.4	45 % to 70 %
		Total Sugar	IS 2650: 1975 (RA 2010)	2 % to 80 %
		Moisture	FSSAI Manual 5, 2012-4.1	0.05 % to 95 %
		Acid Insoluble Ash	IS 13846:2009	0.01 % to 5 %
		Starch	IS 4079: 1967 (SLC/QSOP/FP-100, (Issue. 01 & Dated. & 02.07.13)	0.1 % to 80 %
		Extraneous Matter	FSSAI Manual 3, 2012-1.2	0.1 % to 10 %
		Reducing Sugar	IS 4079: 1967	2 % to 80 %
		Fill of The Container	FSSAI Manual 5, 2012-1.3	80 % to 100 %

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	Fruits, Vegetables and Products	SO ₂	AOAC (19 th Edition) 990.28: 2012	10 mg/kg to 300 mg/kg
		Total Ash	FSSAI Manual 5, 2012-11.3	0.1 % to 30 %
		Total Soluble Solids	IS 13815: 1998	Up to 80 %
		Acidity as Citric Acid, Acetic Acid	FSSAI Manual 5, 2012-2.4	1 % to 20 %
		pH	FSSAI Manual 5, 2012-2.3	2 to 6
		Sodium Chloride Content	SLC/QSOP-062, DGHS Manual 5 2005-1.7	0.5 % to 50 %
		Oil Content	SLC/QSOP-042, DGHS Manual 5 2005-2.7	0.1 % to 60 %
		Acidity of Extracted Fat Expressed as Oleic Acid	FSSAI Manual 3, 2012-14.4	1 % to 40 %
		Total Solids	FSSAI Manual 5, 2012-14.3	1 % to 98 %
		Peroxidase Test	FSSAI Manual 5, 2012- 17.5	Qualitative (Presence/Absence)
		Vitamin C	AOAC (19 th Edition) 967.21: 2012,	0.01 % to 10 %
		Organochlorine Pesticides	SLC/QSOP/FP-109, Issue. 01 & Dated. & 24.06.13	
		Alpha-BHC		10 ug/kg to 500 ug/kg
		Beta-BHC		10 ug/kg to 500 ug/kg
	Gamma-BHC		10 ug/kg to 500 ug/kg	

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	Fruits, Vegetables and Products	Delta-BHC	SLC/QSOP/FP-109, Issue. 01 & Dated. & 24.06.13	10 ug/kg to 500 ug/kg
		Heptachlor		10 ug/kg to 500 ug/kg
		Aldrin		10 ug/kg to 500 ug/kg
		Heptachlor Epoxide		20 ug/kg to 500ug/kg
		OP-DDE		20 ug/kg to 500ug/kg
		OP-DDD		20 ug/kg to 500ug/kg
		OP-DDT		20 ug/kg to 500ug/kg
		PP-DDD		20 ug/kg to 500ug/kg
		PP-DDE		20 ug/kg to 500ug/kg
		Beta Endosulfan		10 ug/kg to 500 ug/kg
		Dieldrin		20 ug/kg to 500ug/kg
		Endosulfan		20 ug/kg to 500ug/kg
II.	WATER			
1.	Water For Food Processing Industry, Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water	Colour	APHA (22 nd Edition) 2120B: 2012, IS 3025 (Part 4): 1983 (RA 2002)	Qualitative
		Odour	IS 3025 (Part 5): 1983(RA 2002)	Qualitative
		Taste	APHA (22 nd Edition) 2160C: 2012, IS 3025 (Part 7&8): 1984 (RA 2002)	Qualitative

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	Water For Food Processing Industry, Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water	Turbidity, NTU	APHA (22 nd Edition) 2130B: 2012, IS 3025 (Part 10): 1984 (RA 2006)	0.2 NTU to 1000 NTU
		pH	APHA (22 nd Edition) 4500 H ⁺ B: 2012, IS 3025 (Part 11): 1983 (RA 2012)	4 to 14
		Conductivity	APHA (22 nd Edition) 2510-B: 2012, IS 3025 (Part 14): 2013)	1 µs/cm to 2500 µs/cm
		Total Hardness as CaCO ₃	APHA (22 nd Edition) 2340-C: 2012, IS 3025 (Part 21): 2009	1.0 mg/l to 1000 mg/l
		Total Solids	APHA (22 nd Edition) 2540-C: 2012, IS 3025 (Part 15): 1984 (RA 2009)	10 mg/l to 1000 mg/l
		Suspended Solids	APHA (22 nd Edition) 2540D: 2012, IS 3025 (Part 17) 1984, (RA 2012)	1.0 mg/l to 1000mg/l
		Total Dissolved Solids	APHA (22 nd Edition) 2540-C: 2012, IS 3025 (Part16): 1984 (RA 2006)	10 mg/l to 1000 mg/l
		Residual Free Chlorine	APHA (22 nd Edition) 4500Cl ⁻ B: 2012, IS 3025 (Part 26): 1986 (RA 2003)	0.20 mg/l to 25 mg/l
		KMnO ₄ Oxidisability	IS 3025 (Part 63): 2007	1.0 mg/l to 10mg/l
	Alkalinity	IS 3025 (Part 23): 1986, (RA 2003)	1 mg/l to 1000 mg/l	

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	Water For Food Processing Industry, Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water	Sulphide	APHA (22 nd Edition) 4500 S ² -F: 2012, IS 3025 (Part 29): 1986	5 mg/l to 10mg/l
		Free CO ₂	APHA (22 nd Edition) 4500 CO ₂ -C: 2012,	5 mg/l to 20mg/l
		Oil and Grease	IS 3025 (Part 39): 1991 (RA 2003)	0.1 mg/l to 20mg/l
		Mineral Oil	IS 3025 (Part 39): 1991 (RA 2003)	0.02 mg/l to 50mg/l
		Dissolved Oxygen	APHA (22 nd Edition) 4500 O C: 2012, IS 3025 (Part 38): 1989 (R 2003)	0.5 mg/l to 10mg/l
		BOD	APHA (22 nd Edition) 5210B: 2012, IS 3025 (Part 44): 1993(R 2009)	0.5 mg/l to 1000mg/l (For 5 Days at 20 ^o c & 3 Days at 27 ^o c)
		COD	APHA (22 nd Edition) 5220B: 2012, IS 3025 (Part 58): 2006	0.5 mg/l to 2000mg/l
		Surfactants	APHA (22 nd Edition) 5540C: 2012	0.1 mg/l to 5mg/l
		Phenolic Compounds	APHA (22 nd Edition) 5530C: 2012, IS 3025 (Part 43): 1992 (RA 2003)	1 mg/l to 10 mg/l
		Zinc	APHA (22 nd Edition) 3125: 2012	4 µg/l to 500 µg/l
	Barium	APHA (22 nd Edition) 3125: 2012	1 µg/l to 500 µg/l	
	Copper	APHA (22 nd Edition) 3125: 2012	10 µg/l to 500 µg/l	

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	Water For Food Processing Industry, Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water	Iron	APHA (22 nd Edition) 3125: 2012	20 µg/l to 500 µg/l
		Chromium	APHA (22 nd Edition) 3125: 2012	5 µg/l to 500 µg/l
		Nickel	APHA (22 nd Edition) 3125: 2012	5 µg/l to 500 µg/l
		Manganese	APHA (22 nd Edition) 3125: 2012	5 µg/l to 500 µg/l
		Cadmium	APHA (22 nd Edition) 3125: 2012	1 µg/l to 500 µg/l
		Lead	APHA (22 nd Edition) 3125: 2012	2 µg/l to 500 µg/l
		Mercury	APHA (22 nd Edition) 3125: 2012	1 µg/l to 500 µg/l
		Arsenic	APHA (22 nd Edition) 3125: 2012	5 µg/l to 500 µg/l
		Selenium	APHA (22 nd Edition) 3125: 2012	5 µg/l to 500 µg/l
		Antimony	APHA (22 nd Edition) 3125: 2012	2 µg/l to 500 µg/l
		Aluminium	APHA (22 nd Edition) 3125: 2012	10 µg/l to 500 µg/l
		Sodium	APHA (22 nd Edition) 3125: 2012	11 µg/l to 500 µg/l
		Potassium	APHA (22 nd Edition) 3125: 2012, (SL C/QSOP-066)	10 µg/l to 500 µg/l
		Molybdenum	APHA (22 nd Edition) 3125: 2012, (SL C/QSOP-066)	2 µg/l to 500 µg/l
		Calcium	APHA (22 nd Edition) 3500 Ca B: 2012, IS 3025 (Part 40): 1991 (RA 2003)	0.8 mg/l to 1000 mg/l
		APHA (22 nd Edition): 2012,	10 µg/l to 1000µg/l	

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	Water For Food Processing Industry, Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water	Borate	APHA (22 nd Edition) 3125: 2012	10 µg/l to 1000µg/l
		Silver	APHA (22 nd Edition) 3125: 2012	5 µg/l to 1000µg/l
		Lithium	APHA (22 nd Edition) 3125: 2012	2 µg/l to 1000µg/l
		Gallium	APHA (22 nd Edition) 3125: 2012	5 µg/l to 1000µg/l
		Cobalt	APHA (22 nd Edition) 3125: 2012	1 µg/l to 1000µg/l
		Strontium	APHA (22 nd Edition) 3125: 2012	5 µg/l to 1000µg/l
		Bismuth	APHA (22 nd Edition) 3125: 2012	1 µg/l to 1000µg/l
		Magnesium	APHA (22 nd Edition) 3500 Mg B: 2012, IS 3025 (Part 46): 1994 (RA 2009)	0.5 mg/l to 1000mg/l
		Ammonium	APHA (22 nd Edition) 3125: 2012	5 µg/l to 1000µg/l
		Nitrate	APHA (22 nd Edition) NH ₃ F: 2012, IS 3025 (Part34): 1988 (RA 2003)	0.05 mg/l to 1000 mg/l
			APHA (22 nd Edition) 4500 NO ₃ ⁻ B: 2012, IS 3025(Part 34): 1988 (RA 2003)	0.5 mg/l to 100mg/l
			USEPA, 1997, 300.1	1.0 mg/l to 15mg/l
	Nitrite ⁻	APHA (22 nd Edition) 4500 NO ₂ ⁻ B: 2012, IS 3025 (Part 34): 1988 (RA 2003)	0.02 mg/l to 1.0 mg/l	
			USEPA, 1997, 300.01	0.1 mg/l to 5mg/l

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	Water For Food Processing Industry, Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water	Fluoride	APHA (22 nd Edition) 4500 F ⁻ D: 2012	0.5 mg/l to 5 mg/l
			USEPA, 1997, 300.1	0.3 mg/l to 10mg/l
		Sulphate	APHA (22 nd Edition) 4500 SO ₄ ²⁻ E: 2012	4 mg/l to 200mg/l
			USEPA, 1997, 300.1	2.0 mg/l to 200mg/l
		Chloride	APHA (22 nd Edition) 4500 Cl ⁻ B: 2012 IS3025 Part 32, 1988, R-2007	1 mg/l to 1000mg/l
			USEPA, 1997, 300.1 Cincinnati, Ohio (SL C/QSOP-067)	1 mg/l to 1000mg/l
		Cyanide	APHA (22 nd Edition) 4500CN ⁻ : 2012	0.01 mg/l to 5mg/l
			SL C/QSOP-068((Issue. 01 & Dated. & 22.02.12)	5 µg/l to 100µg/l
		Phosphate	USEPA, 1997, 300.01	2.0 mg/l to 25mg/l
			APHA (22 nd Edition) 4500 PC: 2012	0.4mg/l to 10 mg/l
		Bromate	USEPA 1997, 300.01	5 µg/l to 100µg/l
		Pesticides Total	APHA (22 nd Edition) 6630C: 2012	0.5 µg/l to 20µg/l

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	Water For Food Processing Industry, Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water	Pesticides Individual	APHA (22 nd Edition) 6630C: 2012	
		Alpha-BHC		0.01 µg/l to 200µg/l
		Beta-BHC		0.04 µg/l to 200 µg/l
		Gamma-BHC		0.1 µg/l to 200 µg/l
		Delta-BHC		0.03 µg/l to 200 µg/l
		Endosulfan I		0.1 µg/l to 200 µg/l
		Endosulfan II		0.1 µg/l to 200µg/l
		Endosulfan Sulphate		0.1 µg/l to 200µg/l
		Aldrin		0.02 µg/l to 200µg/l
		Dieldrin		0.02 µg/l to 200µg/l
		O,P DDT		0.1 µg/l to 200 µg/l
		P,P' DDT		0.1 µg/l to 200 µg/l
		O,P DDE		0.1 µg/l to 200 µg/l
		P,P' DDE		0.1 µg/l to 200 µg/l
		O,P DDD		0.1 µg/l to 200µg/l
		P,P' DDD		0.1 µg/l to 200 µg/l
		Phorate		SL C/QSOP-081, Issue. 01 & Dated. & 28.02.13
	Phorate Sulphone	0.05 µg/l to 200µg/l		
	Phorate Sulphoxide	0.05 µg/l to 200µg/l		

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection	
	Water For Food Processing Industry, Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water	Chlorpyrifos	SL C/QSOP-081, Issue. 01 & Dated. & 28.02.13	0.05 µg/l to 200µg/l	
		Malathion		0.05 µg/l to 200µg/l	
		Methyl Paraoxon		0.05 µg/l to 200µg/l	
		Methyl Parathion		0.05 µg/l to 200µg/l	
		Atrazine		0.05 µg/l to 200µg/l	
		Butachlor		0.05 µg/l to 200µg/l	
		Monocrotophos		0.05 µg/l to 200µg/l	
		Ethion		0.05 µg/l to 200µg/l	
		Isoproturon		0.05 µg/l to 200µg/l	
		2,4 D		0.05 µg/l to 200µg/l	
		Malaoxon		0.05 µg/l to 200µg/l	
		Alachlor		0.05 µg/l to 200µg/l	
		Polychlorinated Biphenyl		APHA (22 nd Edition) 6630C: 2012	0.1 µg/l to 500µg/l
		PCB 28			
	PCB 52	0.1- µg/l/500µg/l			
	PCB 138	0.1 µg/l to 500µg/l			
	PCB 153	0.1 µg/l to 500µg/l			
	PCB 180	0.1 µg/l to 500µg/l			

Laboratory	SEALAB, 13/99A, Keltron Road, Aroor, Kerala		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	18.10.2015
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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection	
	Water For Food Processing Industry, Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water	Polycyclic Aromatic Hydrocarbons	APHA (22 nd Edition) 6440: 2012	0.01 µg/l to 1000µg/l	
		Benzo-A-Pyrene			
		Benzo-B-Fluranthene			0.01 µg/l to 1000µg/l
		Benzo-K-Fluranthene			0.01 µg/l to 1000µg/l
		Benzo-Ghi-Perylene			0.01 µg/l to 1000µg/l
		Indenopyrene	0.01 µg/l to 1000µg/l		
		Acrylamide	USEPA 8032 A, 1996	0.1 µg/l to 200µg/l	
		Volataile Organic Componds	USEPA 524.2, 1992, APHA (22 nd Edition) 6200: 2012		
		1,2 Dichloroethane			0.5 µg/l to 100µg/l
		Epichlorhydrin			0.1 µg/l to 200µg/l
		Benzene			0.7 µg/l to 200µg/l
		Tetrachloroethene			0.36 µg/l to 100µg/l
		Trichloroethene			0.24 µg/l to 100 µg/l
		Trihalomethanes-Total Chloroform			0.32 µg/l to 1000µg/l
		Bromodichloromethane			0.7 µg/l to 1000µg/l
		Dibromochloromethane			0.5 µg/l to 1000µg/l
		Bromoform			0.65 µg/l to 1000µg/l
		Vinyl Chloride	USEPA 524.2, 1992, APHA (22 nd Edition) 6200: 2012	0.4 µg/l to 1000µg/l	

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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**.

**Rini Narayan
Convenor**

**N. Venkateswaran
Program Manager**