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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specificatior against which tests are performed		of Testing / of Detection
I.	FOOD & AGRICU	LTURAL PRODUCTS			
1.	Dairy & Dairy Proc	lucts			
a.	Raw & Processed Milk, Curd, Paneer, Cheese, Dairy Based Confectioneries Evaporated/ Condensed Butter, Ice Cream and Other Dairy Products, Infant Milk Food	Moisture	AOAC (19 <sup>th</sup> Edition) 920.116, 927.05: 2012 Chapter 33/ DGHS Lab Manual1	, 0.5 % to	95 %
		Total ash	AOAC (19 <sup>th</sup> Edition) 945.46/930.30: 2012 Chapter 33 /IS 1165 (RA 2012 DGHS Lab Manual 1	0.2 % to 2)	10 %
		Ash insoluble in Dil HCl	DGHS Lab Manual-1	0.1 % to	5 %
		Protein	AOAC (19 <sup>th</sup> Edition) 991.20: 2012 Chapter 33 / IS 1479 (Part 2) (RA 2012)/ DGHS LabManual1	0.5 % to	80 %
		Fat	AOAC (19 <sup>th</sup> Edition) 989.05: 2012 Chapter 33 IS 11721: 2013 (RA 2010) DGHS 2005 Lab Manual 1	0.5 % to	100 %
		Solid Not Fat (SNF)	AOAC (19 <sup>th</sup> Edition) 990.21: 2012 Chapter 33 IS 1479 (Part 2) (RA 2012) DGHS Lab Manual 1	5 % to 5	0 %
		Total solids	AOAC (19 <sup>th</sup> Edition) 925.23; 990.20: 2012 Chapter 33 / DGHS Lab Manual 1 IS 1479 (Part 2) (RA 2012)	1 % to 9	9 %

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	Dairy & Dairy Products (Raw & Processed Milk, Curd, Paneer, Cheese,	Salt as NaCl	AOAC (19 <sup>th</sup> Edition) 960.29: 2012 Chapter 33 IS 3507: 1966 (RA 2012) DGHS Lab Manual 1	0.5 % to 5 %
	Dairy Based Confectioneries Evaporated/	Phosphorus as P	AOAC (19 <sup>th</sup> Edition) 991.25: 2012 Chapter 33	0.05 % to 5 %
	Condensed Butter, Ice Cream And Other Dairy Products, Infant	Titrable acidity	AOAC (19 <sup>th</sup> Edition) 947.05: 2012 Chapter 33/ IS 1165 (RA 2012) / DGHS Lab Manual 1	0.5 % to 40 %
	Milk Food)	рН	AOAC (19 <sup>th</sup> Edition) 981.12: 2012 Chapter 33 IS 3507 (RA 2012)	1 unit to 14 unit
		Milk fat	DGHS LAB MANUAL-1	1 % to 40 %
		Milk SNF	DGHS LAB MANUAL-1	5 % to 20 %
		Milk Solids	DGHS LAB MANUAL-1	5 % to 90 %
		Lead as Pb	AOAC (19 <sup>th</sup> Edition) 999.10 /999.11/973.35: 2012 Chapter 09 / DGHS Lab Manual 9	0.01 mg/kg to 50 mg/kg
		Zinc as Zn	AOAC (19 <sup>th</sup> Edition) 999.11/969.32: 2012 Chapter 09/ DGHS Lab Manual 9	0.04 mg/kg to 100 mg/k

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	Dairy & Dairy Products (Raw & Processed Milk, Curd,	Copper as Cu	AOAC (19 <sup>th</sup> Edition) 999.10 /999.11: 2012 Chapter 09 / DGHS Lab Manual 9	0.1 mg/kg to 300 mg/kg
	Paneer, Cheese, Dairy Based Confectioneries Evaporated/	Cadmium as Cd	AOAC (19 <sup>th</sup> Edition) 999.10 /999.11: 2012 Chapter 09 / DGHS Lab Manual 9	0.04 mg/kg to 50 mg/kg
	Condensed Butter, Ice Cream and Other Dairy Products, Infant	Iron as Fe	AOAC (19 <sup>th</sup> Edition) 999.10/999.11: 2012 Chapter 09/ DGHS Lab Manual 9	0.4 mg/kg to 50 mg/kg
	Milk Food)	Arsenic as As	DGHS Lab Manual 9	0.1 mg/kg to 10 mg/kg
		Tin	DGHS Lab Manual 9	0.025 mg/kg to 250 mg/kg
		Mercury as Hg	AOAC (19 <sup>th</sup> Edition) 971.21: 2012 Chapter 09/ DGHS Lab Manual 9	0.1 mg/kg to 2 mg/kg
		Carbohydrate	DGHS Lab Manual 1; ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 12	5 % to 80 %
		Energy	ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 23	(10 kcal to 500 kcal)/ 100 g
		Lactose	IS 1479 (Part 2): 1960 (RA 2012)/ DGHS Lab Manual 1	0.5 % to 55 %

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	Dairy & Dairy Products	Adulterants		
	(Raw & Processed Milk, Curd, Paneer, Cheese, Dairy Based	Cane Sugar	DGHS Lab Manual 1 / IS 1479 (Part 2): 1961 (RA 2012)	Qualitative (Present/Absent)
	Confectioneries Evaporated/ Condensed	Cellulose		Qualitative (Present/Absent)
	Butter, Ice Cream and Other Dairy Products, Infant	Starch		Qualitative (Present/Absent)
	Milk Food)	Added Urea		Qualitative (Present/Absent)
		Glucose		Qualitative (Present/Absent)
		Ammonium sulfate		Qualitative (Present/Absent)
		Saccharin		Qualitative (Present/Absent)
		Foreign Fat		Qualitative (Present/Absent)
		Sodium Chloride		Qualitative (Present/Absent)

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		performed	
Dairy & Dairy Products	Neutralisers		
(Raw & Processed Milk, Curd, Paneer, Cheese,	Hypochlorites and Chloramines	DGHS Lab Manual 1/ IS 1479 (Part 2): 1961 (RA 2012)	Qualitative (Present/Absent)
Dairy Based Confectioneries Evaporated/	Quarternary Ammonium Compounds		Qualitative (Present/Absent)
Condensed Butter, Ice Cream and Other Dairy	Detergents containing Alkylbenzene Sulfonic acids		Qualitative (Present/Absent)
Products, Infant Milk Food)	Skimmed milk powder		Qualitative (Present/Absent)
	Gelatin		Qualitative (Present/Absent)
	PRESERVATIVES		
	Formalin	DGHS Lab Manual 1/ IS 1479 (Part 2): 1961 (RA 2012)	Qualitative (Present/Absent)
	Hydrogen Peroxide	(1012012)	Qualitative (Present/Absent)
	Boric Acid & Borates		Qualitative (Present/Absent)
	Salicylic Acid		Qualitative (Present/Absent)

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## 2. Fruit And Vegetable Products

a.	Fresh and Thermally	Physical Parameters		
	Processed Fruit and Vegetable Product, Canned	Rotting	DGHS Lab Manual 5	Qualitative (Present/Absent)
	Fruit, Fruit Concentrate,	Rodent contamination		Qualitative (Present/Absent)
	Pulps, Purees, Beverages, Tomato Ketchup, Sauce, Culinary	Presence of Mould		Qualitative (Present/Absent)
	Paste, Carbonated Fruit Beverages,	рН	DGHS Lab Manual 5	1 unit to 14 unit
	Drink, Pickles, Jam, Jelly	Drained weight	DGHS Lab Manual 5	10 % to 90 %
	, <b>.</b>	Moisture	DGHS Lab Manual 5 AOAC (19 <sup>th</sup> Edition) 984.25: 2012 Chapter 16	0.5 % to 95 %
		Total Ash	AOAC (19 <sup>th</sup> Edition) 940.26: 2012 Chapter 16, DGHS Lab Manual 5	0.5 % to 15 %
		Ash insoluble in Dil.HCl	DGHS Lab Manual 5	0.1 % to 5 %
		Soluble solids	DGHS Lab Manual 5 / AOAC (19 <sup>th</sup> Edition) 920.151, 932.12: 2012 Chapter 37 / IS13815: 1993 (RA 2009)	1.0 % to 85 %
		Fruit Juice content	DGHS Lab Manual 5	1.0 % to 50 %

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	Fresh and Thermally Processed Fruit	Acidity	AOAC (19 <sup>th</sup> Edition) 942.15: 2012 Chapter 37, DGHS Lab Manual 5	0.1 % to 5 %
	and Vegetable Product, Canned Fruit, Fruit Concentrate,	Salt as NaCl	IS 3881: 1993 IS 2860: 1964 (RA 2013) DGHS Lab Manual 5	0.5 % to 50 %
	Pulps, Purees, Beverages,	Calcium	IS 2860: 1964 (RA 2013)	0.05 % to 10 %
	Tomato Ketchup, Sauce, Culinary Paste, Carbonated Fruit Beverages,	Protein	AOAC (19 <sup>th</sup> Edition) 920.152: 2012 Chapter 37/ DGHS Lab Manual 5	0.5 % to 20 %
	Drink, Pickles, Jam, Jelly	Fat	DGHS Lab Manual 5	0.1 % to 25 %
		Sulphur dioxide	AOAC (19 <sup>th</sup> Edition) 990.28: 2012 Chapter 37/ DGHS Lab Manual 5	10 mg/kg to 1000 mg/kg
		Lead as Pb	AOAC (19 <sup>th</sup> Edition) 999.10, 972.25: 2012 Chapter 09 / DGHS Lab Manual 9	0.01mg/kg to 50 mg/kg
		Zinc as Zn	AOAC (19 <sup>th</sup> Edition) 999.10; 969.32: 2012 Chapter 09 / DGHS Lab Manual 9	0.04 mg/kg to 50 mg/kg
		Copper as Cu	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.1 mg/kg to 50 mg/kg
		Cadmium as Cd	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.04 mg/kg to 50 mg/kg

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	Fresh and Thermally Processed Fruit	Iron as Fe	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.4 mg/kg to 50 mg/kg
	and Vegetable Product, Canned Fruit, Fruit Concentrate,	Tin as Sn	DGHS Lab Manual 9	0.025 mg/kg to 250 mg/kg
	Pulps, Purees, Beverages, Tomato Ketchup, Sauce, Culinary	Carbohydrate	DGHS Lab Manual 1; ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 12	5 % to 100 %
	Paste, Carbonated Fruit Beverages, Drink, Pickles, Jam, Jelly	Energy	ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 23	(10 kcal to 500 kcal)/ 100g
b.	Fruits Apples/ Oranges/ Pears/ Longan/	Arsenic as As Mercury as Hg	SMSLA/IN/SOP/87 Issue. 01/ Dated. 02.01.2016	0.25 mg/kg to 100 mg/kg 0.25 mg/kg to 100 mg/kg
	Grapes/ Kiwi/ Dragon Fruit/	Copper as Cu		0.25 mg/kg to 100 mg/kg
	Mango/ Mangosteen/ Pine	Cadmium Cd		0.25 mg/kg to 100 mg/kg
	Apple, Parsley and Other	Lead as Pb		0.25 mg/kg to 100 mg/kg
	Fruit	Zinc as Zn		0.25 mg/kg to 100 mg/kg
	Cocktails/Fruit Soup	Tin as Sn		0.25 mg/kg to 100 mg/kg
	Powder/Fruit Cerel Flakes/Frozen	Peroxidase Test	DGHS Lab Manual-5: 2005	Qualitative (Present/Absent)
	Fruits/ Dehydrated Fruits and Other	Hydrocyanic acid	AOAC (19 <sup>th</sup> Edition) 915.03: 2012	2 mg/kg to 50 mg/kg

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3.	Vegetable and Veg	etable Products		
a.	Vegetables	Arsenic as As	SMSLA/IN/SOP/87	0.25 mg/kg to 100 mg/kg
	Curry Leaves Ladies Finger	Mercury as Hg	Issue. 01/ Dated. 02.01.2016	0.25 mg/kg to 100 mg/kg
	Carrot Cabbage	Copper as Cu		0.25 mg/kg to 100 mg/kg
	Onion and Other FrozenCadmium CdVegetables, DehydratedLead as PbVegetables And OtherZinc as Zn		0.25 mg/kg to 100 mg/kg	
		Lead as Pb		0.25 mg/kg to 100 mg/kg
		Zinc as Zn		0.25 mg/kg to 100 mg/kg
	Other	Tin as Sn		0.25 mg/kg to 100 mg/kg
		Benzoic acid	SMSLA/IN/SOP/72	10 mg/kg to 2000 mg/kg
		Sorbic acid	Issue. 01/ Dated. 06.07.2016	10 mg/kg to 2000 mg/kg
		Hydrocyanic acid	AOAC (19 <sup>th</sup> Edition) 915.03: 2012	2 mg/kg to 50 mg/kg
		Inorganic bromide	SMSLA/IN/SOP/82 Issue. 01/ Dated. 15.02.2016	5 mg/kg to 500 mg/kg
		Peroxidase Test	DGHS Lab Manual-5: 2005	Qualitative (Present/Absent)

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4.	Meat and Meat Pro	oducts			
a.	Frozen Meat, Canned Meat, Canned Luncheon, Canned Cooked Ham, Canned	Moisture	AOAC (19 <sup>th</sup> Edition) 950.46: 2012 Chapter 39 / DGHS Lab Manual 6/ IS 5960 (Part 5): 2001 (RA 2007)	0.5 % to	70 %
Chopj Canne Canne	Chopped Meat, Canned Chicken, Canned Mutton and Goat Meat	Nitrogen	AOAC (19 <sup>th</sup> Edition) 928.08: 2012 Chapter 39 / IS 5960 (Part 1): 1996 (RA 2009) / DGHS Lab Manual 6	0.5 % to	85 %
		Total Fat	AOAC (19 <sup>th</sup> Edition) 960.39: 2012 Chapter 39 / IS 5960 (Part 3): 1970 (RA 2010)	0.5 % to	65 %
		Salt as NaCl	AOAC (19 <sup>th</sup> Edition) 935.47: 2012 Chapter 39 IS 5960 (Part 6/Sec I) (RA 200	0.2 % to	25 %
		Total ash	AOAC (19 <sup>th</sup> Edition) 920.153: 2012 Chapter 39,	1 % to 2	0 %
		Sodium nitrite	IS 5960 (Part 7): 1996 / DGHS Lab Manual 6	1 mg/kg	to 250 mg/kg
		Lead as Pb	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.01 mg/	/kg to 50 mg/kg

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	Frozen Meat, Canned Meat, Canned Luncheon, Canned Cooked	Zinc as Zn	AOAC (19 <sup>th</sup> Edition) 999.10;969.32: 2012 Chapter 09 / DGHS Lab Manual 9	0.04 mg/kg to 50 mg/kg
	Ham, Canned Chopped Meat, Canned Chicken,	Copper as Cu	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.1 mg/kg to 50 mg/kg
	Canned Mutton and Goat Meat	Iron as Fe	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.4 mg/kg to 50 mg/kg
5.	Fish And Fish Pro	ducts		
a.	Fish And Other Marine Products – Shrimps / Crustaceans,	Moisture	AOAC (19 <sup>th</sup> Edition) 952.08: 2012 Chapter 35/ IS 5960 (Part 5): 2001 DGHS Lab Manual 6	1.0 % to 85 %
	Frozen Fish, Canned Fish	Ash	AOAC (19 <sup>th</sup> Edition) 938.08: 2012 Chapter 35 / IS 5960 (Part 2): 2007	0.1 % to 20 %
		Total Volatile base Nitrogen	DGHS Lab Manual 6	(10 mg to 5000 mg)/100g
		Protein	IS 5960 Part 1 (RA 2009)	1 % to 50 %
		Total fat	AOAC (19 <sup>th</sup> Edition) 948.15: 2012 Chapter 35 / IS 5960 (Part 3) (RA 1990)	0.5 % to 20 %
		Salt as NaCl	AOAC (19 <sup>th</sup> Edition) 937.09: 2012 Chapter 35 / DGHS Lab Manual 6	2 % to 50 %

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	Fish And Other Marine Products – Shrimps / Crustaceans,	Sulfur-dioxide as SO2	AOAC (19 <sup>th</sup> Edition) 990.28: 2012 Chapter 47 / DGHS Lab Manual 6	10 mg/kg to 1000 mg/kg
	Frozen Fish, Canned Fish	Phosphate as PO4	DGHS Lab Manual 6	0.1 % to 10 %
		Lead as Pb	AOAC (19 <sup>th</sup> Edition) 999.10; 972.25: 2012 Chapter 09 / DGHS Lab Manual 9	0.01 mg/kg to 50 mg/kg
		Zinc as Zn	AOAC (19 <sup>th</sup> Edition) 999.10; 969.32: 2012 Chapter 09 / DGHS Lab Manual 9	0.04 mg/kg to 50 mg/kg
		Copper as Cu	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.1 mg/kg to 50 mg/kg
		Cadmium as Cd	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.04 mg/kg to 50 mg/kg
		Mercury as Hg	AOAC (19 <sup>th</sup> Edition) 977.15 /971.21: 2012 Chapter 09 / DGHS Lab Manual 9	0.1 mg/kg to 2 mg/kg
		Iron as Fe	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.4 mg/kg to 50 mg/kg

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6.	Nut and Nut Produ	cts			
a.	Edible Nuts	REFRACTIONS			
		Extraneous matter	DGHS 2005 Lab Manual 3	0.5 % to	80 %
		Rodent hair & excreta		Qualitati (Present/	
		Damaged Kernals		0.5 % to	80 %
		Damaged Raisin		0.5 % to	80 %
		Unopened shells		0.5 % to	80 %
		Empty shell		0.5 % to	80 %
		Moisture	AOAC (19 <sup>th</sup> Edition) 925.40 2012 Chapter 40	: 0.5 % to	50 %
		Ash	AOAC (19 <sup>th</sup> Edition) 950.49 2012 Chapter 40	: 0.1 % to	10.0 %
		Protein	AOAC (19 <sup>th</sup> Edition) 950.48 2012 Chapter 40	: 1 % to 5	0 %
		Fat	AOAC (19 <sup>th</sup> Edition) 948.22 2012 Chapter 40	: 1 % to 7	0 %
		Crude Fibre	AOAC (19 <sup>th</sup> Edition) 935.53 2012 Chapter 40	: 1 % to 2	0 %
		Salt	AOAC (19 <sup>th</sup> Edition) 950.52 2012 Chapter 40	: 0.5 % to	10 %

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b.	Nuts Groundnut	Lead as Pb	SMSLA/IN/SOP/87 Issue. 01/ Dated. 02.01.2016	0.25 mg/kg to 100 mg/kg
	Kernels/Cashew/ Almonds/Dates/	Copper as Cu	155de. 01/ Dated. 02.01.2010	0.25 mg/kg to 100 mg/kg
	Pistachio Nuts/Dry Fruits	Arsenic as As		0.25 mg/kg to 100 mg/kg
	And Other Nut Products	Tin as Sn		0.25 mg/kg to 100 mg/kg
	Dates Syrup/Paste And Other			0.25 mg/kg to 100 mg/kg
		Cadmium as Cd		0.25 mg/kg to 100 mg/kg
		Mercury as Hg		0.25 mg/kg to 100 mg/kg
7.	Oil Seeds	Extraneous matter	DGHS 2005 Lab Manual 3	0.5 % to 80 %
		Rodent hair & excreta		Qualitative (Present/Absent)
		Damaged Kernals		0.5 % to 80 %
		Damaged Raisin		0.5 % to 80 %
		Unopened shells		0.5 % to 80 %
		Empty shell		0.5 % to 80 %
		Moisture	IS 3579: 1966 (RA 2011)	0.5 % to 20 %
		Fat	IS 3579: 1966 (RA 2011)	1 % to 70 %
		Acid value of extracted fat	IS 3579: 1966 (RA 2011)	0.5 to 100

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8.	Groundnut Flour	Moisture	IS 4684: 1975 (RA 2010)	0.5 % to 20 %
		Ash	IS 4684: 1975 (RA 2010)	0.1 % to 10.0 %
		Acid insoluble ash	IS 4684: 1975 (RA 2010)	0.1 % to 10 %
		Protein	IS 4684: 1975 (RA 2010)	1 % to 50 %
		Fat	IS 4684: 1975 (RA 2010)	1 % to 70 %
		Acid value of extracted fat	IS 4684: 1975 (RA 2010)	0.5 to 100
		Crude Fibre	IS 4684: 1975 (RA 2010)	1 % to 40 %
		Lead as Pb	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09	0.01 mg/kg to 50 mg/kg
		Zinc as Zn	AOAC (19 <sup>th</sup> Edition) 999.10; 969.32: 2012 Chapter 09	0.04 mg/kg to 50 mg/kg
		Copper as Cu	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09	0.1 mg/kg to 50 mg/kg
		Cadmium as Cd	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09	0.04 mg/kg to 50 mg/kg
		Iron as Fe	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09	0.4 mg/kg to 100 mg/kg
		Carbohydrate	DGHS Lab Manual 1; ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 12	5 % to 80 %
		Energy	ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 23	(10 kcal to 500 kcal)/100g

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9.	Animal Feed				
a.	Pet Foods (Including Oil Cakes/ Poultry Feed/ Shrimp Feed/ Fish Feed)	Moisture	AOAC (19 <sup>th</sup> Edition) 934.01;925.04;930.15: 2012 Chapter 4 / IS 7874 (Part 1): 1975 (RA 2009)	1 % to 2	0 %
		Acid insoluble ash	IS 7874 (Part 1): 1975 (RA 2009)	0.05 % t	o 10 %
		Total ash	AOAC (19 <sup>th</sup> Edition) 942.05: 2012 Chapter 4/ IS 7874 (Part 1): 1975 (RA 2009)	0.5 % to	10 %
		Crude Protein	IS 7874 (Part 1): 1975 (RA 2009)/ AOAC (19 <sup>th</sup> Edition) 954.01: 2012 Chapter 4,	1 % to 9	0 %
		Crude Fibre	AOAC (19 <sup>th</sup> Edition) 978.10: 2012 Chapter 4 / IS 7874 (Part 1): 1975 (RA 2009)	0.5 % to	20 %
		Crude Fat	AOAC (19 <sup>th</sup> Edition) 920.39: 2012 Chapter 4 / IS 7874 (Part 1): 1975 (RA 2009)	0.5 % to	20 %
		Salt as NaCl	AOAC (19 <sup>th</sup> Edition) 943.01: 2012 Chapter 4/ IS 7874 (Part 2): 1975 (RA 2004)	0.5 % to	5 %

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	Pet Foods (Including Oil Cakes/ Poultry Feed/ Shrimp	Phosphorus	AOAC (19 <sup>th</sup> Edition) 964.06: 2012 Chapter 4 / IS 7874 (Part 2): 1975 (RA 2004)	0.05 % to 5 %
	Feed/ Fish Feed)	Calcium	IS 13433 (Part 2): 1992	0.05 % to 5 %
		Copper as Cu	DGHS Lab Manual 9	0.1 mg/kg to 50 mg/kg
		Lead as Pb	DGHS Lab Manual 9	0.01 mg/kg to 50 mg/kg
		Iron as Fe	DGHS Lab Manual 9	0.4 mg/kg to 50 mg/kg
		Carbohydrate	DGHS Lab Manual 1; ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 12	5 % to 80 %
		Energy	ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 23	(10 kcal to 500 kcal)/J
b.	Animal Food Pet Foods, Rapeseed Meal, Guar Meal And	Hyperciene Agaric Acid	SMSLA/IN/SOP/053 Issue. / Dated. 01/24.01.2015	0.05 mg/kg to 5 mg/kg 5 mg/kg to 500 mg/kg
		Saffrole		0.5 mg/kg to 10.0 mg/kg
	Miscellaneous Animal Feeds Oil Cake, Groundnut Meal, Poultry Feed Additives, Animal Nutrition Supplements and Miscellanous	Hydrocyanic Acid	AOAC (19 <sup>th</sup> Edition) 915.03: 2012	2 mg/kg to 50 mg/kg

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10.	Spices and Condim	ents		
a.	Whole and Ground or Mixed	Extraneous matter	IS 1797: 1985 (RA 2013)/ DGHS Lab Manual 10	0.1 % to 10 %
	Chilly/ Turmeric/ Curry Powder/	Insect damaged Matter		0.1 % to 10 %
	Cardamom/Curry Masala/Poppy Seeds/Caraway/	Immature And Shriveled Capsules		0.1 % to 20 %
	Cassia/ Coriander/	Broken		0.1 % to 20 %
	Cloves/ Cumin/ Ginger/	Headless Cloves		0.1 % to 50 %
	Fenugreek/ Mixed Masala Curry/	Split fruits		0.1 % to 20 %
	Powdered Dehydrated	Damaged/ Discolored Fruits		0.1 % to 20 %
	Onion	Moisture	IS 1797: 1985 (RA 2013)/ AOAC (19 <sup>th</sup> Edition) 941.11: 2012 Chapter 43 / DGHS Lab Manual 10	1.0 % to 50 %
		Total ash	IS 1797: 1985 (RA 2013)/ AOAC (19 <sup>th</sup> Edition) 941.12: 2012 Chapter 43 / DGHS Lab Manual 10	0.5 % to 20 %
		Ash Insoluble in DilHCl	AOAC (19 <sup>th</sup> Edition) 941.12: 2012 Chapter 43 Annexure B / IS 1797: 1985 (RA 2013)/ DGHS Lab Manual 10	0.1 % to 5 %
		Total Nitrogen	AOAC (19 <sup>th</sup> Edition): 2012 Chapter 43 920.173; 920.165	1 % to 30 %

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	Whole and Ground or Mixed Chilly/ Turmeric/ Curry Powder/	Crude Fibre	IS 1797: 1985 (RA 2013)/ DGHS Lab Manual 10/ AOAC (19 <sup>th</sup> Edition) 920.169: 2012 Chapter 43	1 % to 50 %
	Cardamom/Curry Masala/Poppy Seeds/Caraway/	Calcium	IS 1797: 1985 (RA 2013)/ DGHS Lab Manual 10	0.05 % to 5 %
	Cassia/ Coriander/ Cloves/ Cumin/ Ginger/	Salt as NaCl	AOAC (19 <sup>th</sup> Edition) 941.13: 2012 Chapter 43 / IS 1797: 1985 (RA 2013)/ DGHS Lab Manual 10	0.1 % to 20 %
	Fenugreek/ Mixed Masala Curry/ Powdered	Non Volatile Ether Extract	IS 1797: 1985 (RA 2013)/ DGHS Lab Manual 10	0.5 % to 80 %
	Dehydrated Onion	Volatile oil	IS 1797: 1985 (RA 2013)/ DGHS Lab Manual 10	0.5 % to 30 %
		Zinc as Zn	AOAC (19 <sup>th</sup> Edition) 999.10; 969.32: 2012 Chapter 09 / DGHS Lab Manual 9	0.04 mg/kg to 50 mg/kg
		Cadmium as Cd	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.04 mg/kg to 50 mg/kg
		Iron as Fe	AOAC (19 <sup>th</sup> Edition) 999.10: 2012 Chapter 09 / DGHS Lab Manual 9	0.4 mg/kg to 100 mg/kg
		Carbohydrate	DGHS Lab Manual 1; ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 12	5 % to 80 %
		Energy	ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 23	(10 kcal to 1000 kcal) /100g

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b.	Herbs, Spices and Condiments	Tendrils and Mother cloves	DGHS Lab Manual-10: 2005	0.05 % to 99.0 %
	Caraway/ Cardamom/	Khokar Cloves	DGHS Lab Manual-10: 2005	0.06 % to 99.0 %
	Chillies/ Capsicum/ Cinnamon/Cassia/	Living and Dead Insects	DGHS Lab Manual-10: 2005	Qualitative (Present/Absent)
	Cloves/ Coriander/ Cumin/ Ginger/	Mould	DGHS Lab Manual-10: 2005	Qualitative (Present/Absent)
Mace/Mu tmeg/Pep (White & Poppy/Tu	Mace/Mustard/Nu tmeg/Pepper	Rodent Hair & Excreta	DGHS Lab Manual-10: 2005	Qualitative (Present/Absent)
	(White & Black)/ Poppy/Turmeric/ Curry and Other	Insect Fragements	DGHS Lab Manual-10: 2005	Qualitative (Present/Absent)
		Added colouring Matter	DGHS Lab Manual-8: 2005	Qualitative (Present/Absent)
		Lead as Pb	SMSLA/IN/SOP/87	0.25 mg/kg to 100 mg/k
		Copper as Cu	Issue. 01/ Dated. 02.01.2016	0.25 mg/kg to 100 mg/k
		Arsenic as As		0.25 mg/kg to 100 mg/k
		Tin as Sn		0.25 mg/kg to 100 mg/k
		Mercury Hg		0.25 mg/kg to 100 mg/k
		Zinc as Zn		0.25 mg/kg to 100 mg/k
		Cadmium as Cd		0.25 mg/kg to 100 mg/k

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11.	Oils and Fats (Edible Oils, Fats Hydrogenated Vegetable Oils, Soya Bean Oil)	Moisture & Volatile matter	IS 548 (Part 1): 1964(RA 2011)/ AOAC (19 <sup>th</sup> Edition) 926.12: 2012 Chapter 41 / DGHS Lab Manual 2	0.01 % to 5 %

			performed	
11.	Oils and Fats (Edible Oils, Fats Hydrogenated Vegetable Oils, Soya Bean Oil)	Moisture & Volatile matter	IS 548 (Part 1): 1964(RA 2011)/ AOAC (19 <sup>th</sup> Edition) 926.12: 2012 Chapter 41 / DGHS Lab Manual 2	0.01 % to 5 %
	Refractive index at 40 °CIS 548 (Part 1): 1964AOAC (19th Edition)2012 Chapter 41 /	IS 548 (Part 1): 1964(RA 2011)/ AOAC (19 <sup>th</sup> Edition) 921.08: 2012 Chapter 41 / DGHS Lab Manual 2	1.3330 to 1.9501	
		Insoluble impurities	IS 548 (Part 1): 1964 (RA 2011)	0.1 % to 5 %
		Iodine Value	IS 548 (Part 1): 1964 (RA 2011)/ AOAC (19 <sup>th</sup> Edition) 920.159: 2012 Chapter 41 / DGHS Lab Manual 2	5 to 250
		Saponification Value	IS 548 (Part 1): 1964(RA 2011)/ AOAC (19 <sup>th</sup> Edition) 920.160: 2012 Chapter 41 / DGHS Lab Manual 2	50 to 400
		Unsaponifiable matter	IS 548 (Part 1): 1964 (RA 2011)/ AOAC (19 <sup>th</sup> Edition) 933.08: 2012 Chapter 41 / DGHS Lab Manual 2	1 % to 25 %
		Acid Value	IS 548 (Part 1): 1964 (RA 2011)/ AOAC (19 <sup>th</sup> Edition) 940.28: 2012 Chapter 41 / DGHS Lab Manual 2	0.50 to 100
		Peroxide Value	IS 548 (Part 1): 1964 (RA 2011)/ DGHS Lab Manual 2/ AOAC (19 <sup>th</sup> Edition) 965.33: 2012 Chapter 41	1 meq/kg to 100 meq/kg

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	Oils and Fats (Edible Oils, Fats	Flash Point	IS 548 (Part 1): 1964 (RA 2011)/ DGHS 2005 Lab Manual 2	50°C to 400 °C
	Hydrogenated Vegetable Oils, Soya Bean Oil)	Reichert Meisel Value	IS 548 (Part 1): 1964 (RA 2011)	2 to 35
	Soya Dean On)	Polenske value	IS 548 (Part 1): 1964 (RA 2011)	0.1 to 25
		Moisture (KF Method)	IS 548 (Part 1): 1964 (RA 2011)	0.01 % to 5.0 %
		Specific gravity	IS 548 (Part 1): 1964 (RA 2011)	0.5 to 1.5
		Test for Mineral oil	IS 548 (Part 2): 1964 (RA 2011)/ DGHS Lab Manual 2: 2005	Qualitative (Present/Absent)
		Test for Argemone oil	DGHS Lab Manual 2: 2005	(Flesent/Absent)
		Test for hydrocyanic acid		
		Test for Semisiccative Oil		
		Teat for Sesame oil		
		Cotton seed oil		
		Test for Teaseed Oil		
		Test for Olive pomace oil		
		Cholesterol	SMSLA/IN/SOP/09 By GC- MSMS based on AOAC (19 <sup>th</sup> Edition) 970.51 Chapter 41	0.01 % to 10 %

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	Oils and Fats (Edible Oils, Fats Hydrogenated Vegetable Oils, Soya Bean Oil)	Fatty acid profile (Saturated, Unsaturated, PUFA, MUFA, Trans fat)	SMSLA/IN/SOP/08 By GC- MSMS AOAC (19 <sup>th</sup> Edition): 2012/ IS 548 (Part 1): 1164	0.01 % to 100 %
12.	Oils Seeds and By- Products	Lead as pb	SMSLA/IN/SOP/87 Issue. 01/ Dated. 02.01.2016	0.25 mg/kg to 100 mg/kg
	Oil Seeds	Copper as Cu	135ue. 017 Dated. 02.01.2010	0.25 mg/kg to 100 mg/kg
	Sesame Seed, Sunflower Seed,	Arsenic as As		0.25 mg/kg to 100 mg/kg
	Cotton Seed, Mustard Seed Groundnut and	Tin as Sn		0.25 mg/kg to 100 mg/kg
	Other By Products	Zinc as Zn		0.25 mg/kg to 100 mg/kg
	Refined Oil/Palm/ Sunflower Seed	Cadmium Cd		0.25 mg/kg to 100 mg/kg
	Oil/Mustard Oil/ Coconut Oil/Olive	Mercury Hg		0.25 mg/kg to 100 mg/kg
	Oil/ Til Oil/	Trichlorfon	SMSLA/IN/SOP/42	5.00 µg/kg to 100 µg/kg
	Soyabean Oil/ Almond Oil/ Refined Vegetable	Phenthoate	Issue. 01/ Dated. 24.01.2015	5.00 µg/kg to 100 µg/kg
	Oil/ Rice Bran Oil/ Blended Vegetable Oil and Other	Phorate		5.00 μg/kg to 100 μg/kg

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			performed	

## 13. Cereals, Pulses and Flour

a.	Black Matpe,	Refractions		
	Black Matpe, Green Peas, Green Mung Bean, Toor Whole, Oats, Bakery Products, Wheat, Atta	Foreign matter	DGHS 2005 Lab Manual 3	0.5 % to 20 %
		Mineral matter		0.1 % to 10 %
		Organic matter		0.01 % to 10 %
		Other Edible grain		0.1 % to 20 %
		Rodent hair & excreta		0.1 % to 10 %
		Damaged grains		0.01 % to 20 %
		Discoloured grains		0.05 % to 20 %
		Insect damaged grains		0.1 % to 20 %
		Weevilled grains		0.1 % to 20 %
		Moisture	DGHS 2005 Manual 3/ AOAC (19 <sup>th</sup> Edition) 925.10: 2012 Chapter 32 / IS 4333 (Part 2): 2002 (RA 2012)/ IS 1155: 1968 (RA 2010)/ IS 1158: 1973 (RA 2010)/ IS 1009: 1979 (RA 2010)	1 % to 50 %

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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
	Black Matpe, Green Peas, Green Mung Bean, Toor Whole, Oats, Bakery Products,	Uric Acid	DGHS 2005 Lab Manual 3/ IS 4333 (Part 5): 1970 (RA 2010)/ AOAC (19 <sup>th</sup> Edition) 970.24: 2012 Chapter 32	5 mg/kg to 200 mg/kg
	Wheat, Atta	Total ash	AOAC (19 <sup>th</sup> Edition) 923.03: 2012 Chapter 32 / IS 1155: 1968 (RA 2010)/ IS 1158: 1973 (RA 2010)/ IS 1009: 1979 (RA 2010)	0.5 % to 20 %
		Ash insoluble in dilute HCl	IS 1155: 1968 (RA 2010)/ IS 1158: 1973 (RA 2010)/ IS 1009: 1979 (RA 2010)	0.1 % to 10 %
		Acidity of extracted fat	DGHS 2005 Lab Manual 3	0.1 % to 50 %
		Protein	AOAC (19 <sup>th</sup> Edition) 920.87, 979.09: 2012 Chapter 32 / IS 7219: 1973	1 % to 60 %
		Total fat	AOAC (19 <sup>th</sup> Edition) 922.06, 920.85: 2012 Chapter 32	1 % to 20 %
		Crude Fibre	AOAC (19 <sup>th</sup> Edition) 920.86: 2012 Chapter 32	1 % to 50 %
		Gluten	DGHS Lab Manual 3/ IS 1155: 1968 (RA 2010)/ IS 1158: 1973 (RA 2010)/ IS 1009: 1979 (RA 2010)	0.5 % to 50 %

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	Black Matpe, Green Peas,	Sulphated ash	DGHS 2005 Lab Manual 3	0.01 % to 5 %
	Green Mung Bean, Toor	Sulphur dioxide	DGHS 2005 Lab Manual 6	10 mg/kg to 1000 mg/kg
	Whole, Oats, Bakery Products, Wheat, Atta	Argemone seeds	DGHS 2005 Lab Manual	Qualitative (Present/Absent)
	Wiikat, Atta	Carbohydrate	DGHS Lab Manual 1; ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 12	5 % to 80 %
		Energy	ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 23	(10 kcal to 500 kcal)/100g
14.	Cereals, Pulses and	l Cereal Products		
a.	Cereals	Lead as Pb	SMSLA/IN/SOP/87	0.25 mg/kg to 300 mg/kg
	Atta/ Maida/	Copper as Cu	Issue. 01/ Dated. 02.01.2016	0.25 mg/kg to 300 mg/kg
	Semolina/ Besan/ Pearl Barley/	Arsenic as As		0.25 mg/kg to 300 mg/kg
	Food Grains/ Rolled Oats and	Tin as Sn		0.25 mg/kg to 300 mg/kg
	Other Cereal Products	Zinc as Zn		0.25 mg/kg to 300 mg/kg
	Corn Flour/Corn Flakes, Custard	Cadmium as Cd		0.25 mg/kg to 300 mg/kg
	Powder/ Macoroni	Mercury as Hg		0.25 mg/kg to 300 mg/kg
	Products/ Malt	Alcoholic acidity	IS 1155: 1968 (RA 2010)	0.06 % to 20.0 %
	Andmalt Based Foods/ Solvent Extracted Flours and Other	Hydrocyanic acid	AOAC (19 <sup>th</sup> Edition) 915.03: 2012	2 mg/kg to 50 mg/kg

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15.	15. Salt (Edible Common Salt, Iodized Salt, Refined Iodized	Moisture	AOAC (19 <sup>th</sup> Edition) 925.55: 2012 Annexure B Chapter 11 / IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010)	0.1 % to 10 %	
F	Salt, Vacuum Evaporated Iodized Salt)	Water insoluble matter	AOAC (19 <sup>th</sup> Edition) 925.55: 2012 Annexure C Chapter 11 / IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010)	(0.05 g to 5 g)/100g	
		Chloride as NaCl	IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010)	70 % to 99 %	
			Acid insoluble matter	AOAC (19 <sup>th</sup> Edition) 925.55: 2012 Annexure D Chapter 11 / IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010)	(0.05 g to 5 g)/100g
		Matter soluble in water (other than NaCl)	IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010)	0.1 % to 5 %	
		Calcium	IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010) / AOAC (19 <sup>th</sup> Edition) 925.55: 2012 Annexure G Chapter 11	0.05 % to 2 %	
		Magnesium	IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010) / AOAC (19 <sup>th</sup> Edition) 925.55: 2012 Annexure G Chapter 11	0.05 % to 1 %	
		Sulphates	IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010) / AOAC (19 <sup>th</sup> Edition) 925.55: 2012 Annexure F Chapter 11	0.01 % to 1 %	

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	Salt (Edible Common Salt, Iodized Salt, Refined Iodized	Lead	IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010) / AOAC (19 <sup>th</sup> Edition) 925.55: 2012 Annexure G Chapter 11	0.1 mg/kg to 100 mg/kg
	Salt, Vacuum Evaporated Iodized Salt)	Iodine content	IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010)/ AOAC (19 <sup>th</sup> Edition) 925.56: 2012 Chapter 11	2 mg/kg to 100 mg/kg
		Alkalinity as Na <sub>2</sub> CO <sub>3</sub>	IS 253: 1985 (RA 2014)/ IS 7224: 2006 (RA 2010)	0.05 % to 1 %
16.	Sweetening Agents			
a.	Hone y	Total Reducing Sugar	IS 4941: 1994 (RA 2008) Annexure C	5.0 g/100g to 90 g/100g
		Optical density at 660nm	IS 4941: 1994 (RA 2008) Annexure H	0.15 to 0.350
		Sucrose	IS 4941: 1994 (RA 2008) Annexure C	0.5 g/100g to 85 g/100g
		Moisture	IS 4941: 1994 (RA 2008) Annexure B	2.0 g/100g to 50g/100g
		Ash	IS 4941: 1994 (RA 2008) Annexure D	0.10 g/100g to 5g/100g
		Specific gravity at 27 deg C	IS 4941: 1994 (RA 2008) Annexure A	1.0 to 1.50
		Acidity (as formic acid)	IS 4941: 1994 (RA 2008) Annexure E	0.11 g/100g to 0.5 g/100g

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	Hone y	Fiehes test	IS 4941: 1994 (RA 2008) Annexure F	Qualitative (Negative/Positive)
b.	Plantation White Sugar and Refined Sugar -	Loss on drying / Moisture	IS 15279: 2003 (RA 2012)/ GS2/1/3-15: (2005)	0.01 % to 5.0 %
Icing S Sugar,	Icing Sugar, Palm Sugar, Brown Sugar, Jaggery	Polarisation	IS 15279: 2003 (RA 2012) / GS1/2/3-1: (2009) / GS2/3-1: (1994)	50 % to 100 %
		Sulphated ash	IS 15279: 2003 (RA 2012) / GS1-10: (1998)	0.01 % to 2.0 %
		Colour (ICUMSA units)	IS 15279: 2003 (RA 2012)/ GS2/3-10: (2007)	10 to 5000
		Extraneous Matter	DGHS Lab Manual 4	Qualitative (Present/Absent)
		рН	GS1/2/3/4/7/8/9-23: (2009)	01 to 14
		Conductivity Ash	GS1/3/4/7/8-13: (1998)	0.01 % to 0.5 %
		Iron filings	DGHS Manual 4	Qualitative (Present/Absent)
17.	Tea & Tea Powders, Coffee & Coffee	Moisture	AOAC (19 <sup>th</sup> Edition) 925.19 Chapter 30	2.5 % to 40 %
	Powder	Crude Fibre	DGHS 2005 Manual 4	0.50 % to 40 %
		Total ash	AOAC (19 <sup>th</sup> Edition) 920.100 Chapter 30 DGHS 2005 Manual 4	1.0 % to 20 %

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	Tea & Tea Powders, Coffee & Coffee	Acid insoluble ash	AOAC (19 <sup>th</sup> Edition) 920.100 Chapter 30 / DGHS 2005 Manual 4	0.02 % to 5.0 %
	Powder	Water extract	DGHS 2005 Manual 4 / AOAC (19 <sup>th</sup> Edition) 920.104 Chapter 30	4.0 % to 80 %
		Water Soluble ash	AOAC (19 <sup>th</sup> Edition) 920.100 Chapter 30	2.50 % to 60 %
		Alkalinity of water soluble ash as KOH	AOAC (19 <sup>th</sup> Edition) 920.100 Chapter 30	0.30 % to 5.0 %
		Petroleum Ether Extract	AOAC (19 <sup>th</sup> Edition) 925.18 Chapter 30	3.0 % to 20 %
		Protein	AOAC (19 <sup>th</sup> Edition) 920.103 Chapter 30	0.1 % to 50 %
		Caffeine	SMSLA/IN/SOP/69 Issue. 1 Dated. 01/05.07.2015	2.5 mg/kg to 100 mg/kg
		Energy-Kcal/100g [By calculation]	ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 23	10 kcal/100g to 800 kcal/100g
		Carbohydrates [By difference]	DGHS Lab Manual 1; ISSN 0254-4725 FAO Food and Nutrition Paper 77 Page. 12	10.0 % to 90 %
		Solubility in hot water	DGHS 2005 Manual 4	Qualitative (Pass/ Fail)
		Solubility in coldwater	DGHS 2005 Manual 4	Qualitative (Pass/ Fail)

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b.	Tea	Extraneous Matter	DGHS Lab Manual-4: 2005	Qualitative (Present/Absent)
		Added Colouring Matter	DGHS Lab Manual-8: 2005	Qualitative (Present/Absent)
		Iron Fillings	DGHS Lab Manual-4: 2005	5.0 mg/kg to 500 mg/kg
		Hydrocyanic acid	AOAC 19th Edn. 2012-915.03	2.0 mg/kg to 50 mg/kg
		Lead as Pb	SMSLA/IN/SOP/87	0.25 mg/kg to 100 mg/kg
		Copper as Cu	Issue. 01/ Dated. 02.01.2016	0.25 mg/kg to 200 mg/kg
		Arsenic as As		0.25 mg/kg to 100 mg/kg
		Mercury as Hg		0.25 mg/kg to 100 mg/kg
		Tin as Sn		0.25 mg/kg to 300 mg/kg
		Zinc as Zn		0.25 mg/kg to 100 mg/kg
		Cadmium as Cd		0.25 mg/kg to 100 mg/kg
18.	Bakery and	Lead as Pb	SMSLA/IN/SOP/87	0.25 mg/kg to 100 mg/kg
	Confectionary Products	Copper as Cu	Issue. 01/ Dated. 02.01.2016	0.25 mg/kg to 100 mg/kg
	Bread Biscuits	Arsenic as As		0.25 mg/kg to 100 mg/kg
	Wafer Roll Cakes	Tin as Sn		0.25 mg/kg to 100 mg/kg
	Toffee Chocolate	Zinc as Zn		0.25 mg/kg to 100 mg/kg
	Lozenges and	Cadmium as Cd		0.25 mg/kg to 100 mg/kg
	Other	Mercury as Hg		0.25 mg/kg to 100 mg/kg

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	Bakery and Confectionary Products	Hydrocyanic acid	AOAC (19 <sup>th</sup> Edition) 915.03: 2012	2 mg/kg to 50 mg/kg
	Bread	Moisture	IS 6287: 1985 (RA 1999)	0.25 % to 85.0 %
	Biscuits Wafer Roll	Ash	DGHS Lab Manual-4: 2005	0.1 % to 25.0 %
	Cakes Toffee	Total Fat	IS 6287: 1985 (RA 1999)	0.3 % to 85.0 %
	Chocolate Lozenges and	Protein	IS 6287: 1985 (RA 1999)	0.30 % to 50.0 %
	Other	Ash Insoluble in Dil. HCl	IS 6287: 1985 (RA 1999)	0.06 % to 20.0 %
		Sulphated Ash	IS 6287: 1985 (RA 1999)	0.06 % to 20.0 %
19.	<b>Edible Colours</b>	Moisture	IS 6287: 1985 (RA 1999)	0.25 % to 85.0 %
	And Flavours Onion Flavour,	Ash	DGHS Lab Manual-4: 2005	0.1 % to 25.0 %
	Tomato Flavour, Pineapple Flavour	Total Fat	IS 6287: 1985 (RA 1999)	0.3 % to 85.0 %
	(Kiwi Flavour, Semi Finished	Protein	IS 6287: 1985 (RA 1999)	0.30 % to 50.0 %
	Flavour	Ash Insoluble in Dil. HCl	IS 6287: 1985 (RA 1999)	0.06 % to 20.0 %
	Compound, Synthetic Flavours, Savoury Flavour, Cheese	Sulphated Ash	IS 6287: 1985 (RA 1999)	0.06 % to 20.0 %
		Lead as Pb	SMSLA/IN/SOP/87	0.25 mg/kg to 100 mg/k
	Flavour, Flavour Powder, Caramel	Copper as Cu	Issue. 01/ Dated. 02.01.2016	0.25 mg/kg to 100 mg/k
	Flavour, Vegetable	Arsenic as As		0.25 mg/kg to 100 mg/k
	Flavouring Powder, Food	Tin as Sn		0.25 mg/kg to 100 mg/k
	Flavour and Other	Zinc as Zn		0.25 mg/kg to 100 mg/k

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		Cadmium as Cd	SMSLA/IN/SOP/87	0.25 mg/	'kg to 100 mg/kg
		Mercury as Hg	Issue. 01/ Dated. 02.01.2016	0.25 mg/	'kg to 100 mg/kg
		Hydrocyanic acid	AOAC (19 <sup>th</sup> Edition) 915.03: 2012	2 mg/kg	to 50 mg/kg
II.	<b>RESIDUES IN FO</b>	OD PRODUCTS			
1.	Fruits and	o,p DDT	' DDTSMSLA/IN/SOP/05 Issue. 01Dated. 02.11.2012	0.01 mg/	'kg to 5.0 mg/kg
	Vegetables	p,p' DDT		0.01 mg/	'kg to 2.0 mg/kg
		o,p DDE	SMSLA/IN/SOP/06 Issue. 01 Dated. 02.11.2012	0.01 mg/	'kg to 5.0 mg/kg
		p,p' DDE	Based on AOAC (19 <sup>th</sup> Edition) 970.52,	0.01 mg/	'kg to 5.0 mg/kg
		o,p DDD	985.22: 2012;		'kg to 5.0 mg/kg
		p,p' DDD	J.Chromatography A 1173: 20	0.01 mg/	'kg to 5.0 mg/kg
		Gamma HCH (Lindane)		0.01 mg/	'kg to 1.0 mg/kg
		Alpha HCH		0.01 mg/	'kg to 1.0 mg/kg
		Beta HCH		0.01 mg/	'kg to 1.0 mg/kg
		Delta HCH		0.01 mg/	'kg to 1.0 mg/kg
		Alpha Endosulfan		0.01 mg/	'kg to 5.0 mg/kg
		Beta Endosulfan		0.01 mg/	'kg to 5.0 mg/kg
		Endosulfan Sulphate		0.01 mg/	'kg to 5.0 mg/kg
		Ethion		0.01 mg/	'kg to 1.0 mg/kg
		Butachlor		0.01 mg/	'kg to 1.0 mg/kg

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	Fruits and	Alachor	In-house Validate Method	0.01 mg/kg to 1.0 mg/kg
	Vegetables	Methyl Parathion	SMSLA/IN/SOP/05 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 1.0 mg/kg
		Aldrin	SMSLA/IN/SOP/06 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 1.0 mg/kg
		Dieldrin	Based on AOAC (19 <sup>th</sup> Edition) 970.52, 985.22: 2012; J.Chromatography A 1173: 2007	0.01 mg/kg to 1.0 mg/kg
		Chlordane-cis		0.01 mg/kg to 1.0 mg/kg
		Chlordane-trans		0.01 mg/kg to 1.0 mg/kg
		Cyfluthrin (sum of isomers)		0.01 mg/kg to 3.0 mg/kg
		Cypermethrin (sum of isomers)		0.01 mg/kg to 5.0 mg/kg
		Deltamethrin		0.01 mg/kg to 2.0 mg/kg
		Diazinon		0.01 mg/kg to 1.0 mg/kg
		Endrin		0.01 mg/kg to 1.0 mg/kg
		Heptachlor		0.01 mg/kg to 1.0 mg/kg
		Heptachlor epoxide		0.01 mg/kg to 1.0 mg/kg
		Hexachlorobenzene		0.01 mg/kg to 1.0 mg/kg
		Azinphos ethyl		0.01 mg/kg to 1.0 mg/kg
		Primphosmethyl		0.01 mg/kg to 5.0 mg/kg
		Fenitrothion		0.01 mg/kg to 1.0 mg/kg
		Captan		0.01 mg/kg to 2.0 mg/kg
		Chlorobenzilate		0.01 mg/kg to 1.0 mg/kg

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	Fruits and	Dicofol	In-house Validate Method	0.01 mg/kg to 2.0 mg/kg
	Vegetables	Difenoconazole	SMSLA/IN/SOP/05 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 5.0 mg/kg
		Formothion	SMSLA/IN/SOP/06 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 1.0 mg/kg
		Phosalone	Based on AOAC (19 <sup>th</sup> Edition) 970.52,	0.01 mg/kg to 1.0 mg/kg
		Acephate	AOAC (19 <sup>47</sup> Edition) 970.52, 985.22: 2012; J.Chromatography A 1173: 2007	0.01 mg/kg to 1.0 mg/kg
		2,4-D		0.01 mg/kg to 5.0 mg/kg
		Abamectin		0.01 mg/kg to 1.0 mg/kg
		Acetamiprid		0.01 mg/kg to 20.0 mg/kg
		Atrazine		0.01 mg/kg to 5.0 mg/kg
		Azadirachtin		0.025 mg/kg to 100 mg/kg
		Benalaxyl		0.01 mg/kg to 30.0 mg/kg
		Bendiocarb		0.01 mg/kg to 1.0 mg/kg
		Fenobucarb		0.01 mg/kg to 1.0 mg/kg
		Benomyl		0.01 mg/kg to 30.0 mg/kg
		Bifenazate		0.01 mg/kg to 1.0 mg/kg
		Bitertanol		0.01 mg/kg to 5.0 mg/kg
		Carbaryl		0.01 mg/kg to 1.0 mg/kg

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	Fruits and Vegetables	Carbendazim	In-house Validate Method SMSLA/IN/SOP/05 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 30.0 mg/kg
		Carbofuran	SMSLA/IN/SOP/06	0.01 mg/kg to 1.0 mg/kg
		Cartap	Issue. 01 Dated. 02.11.2012 Based on	0.01 mg/kg to 1.0 mg/kg
		Chlorfenvinphos	AOAC (19 <sup>th</sup> Edition) 970.52, 985.22: 2012;	0.01 mg/kg to 2.0 mg/kg
		Chlorpyrifos-Ethyl	J.Chromatography A 1173: 2007	0.01 mg/kg to 50.0 mg/kg
		Chlorpyrifos-Methyl		0.01 mg/kg to 20.0 mg/kg
		Clothianidin		0.1 mg/kg to 60.0 mg/kg
		Cymoxanil		0.01 mg/kg to 20.0 mg/kg
		Oxy Demetron methyl (Demeton -O)		0.01 mg/kg to 1.0 mg/kg
		Diafenthiuron		0.01 mg/kg to 1.0 mg/kg
		Dichlorvos		0.01 mg/kg to 1.0 mg/kg
		Dimethoate		0.01 mg/kg to 2.0 mg/kg
		Dimethomorph		0.01 mg/kg to 100 mg/kg
		Dinocap		0.025 mg/kg to 5.0 mg/kg
		Dithianon		0.075 mg/kg to 100 mg/kg
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	Fruits and Vegetables	Diuron	In-house Validate Method SMSLA/IN/SOP/05 Issue. 01	0.01 mg/kg to 5.0 mg/kg
	vegetables	Dodine	Dated. 02.11.2012 SMSLA/IN/SOP/06	0.01 mg/kg to 20.0 mg/kg
		Edifenphos	Issue. 01 Dated. 02.11.2012 Based on	0.01 mg/kg to 1.0 mg/kg
		Ethephon	AOAC (19 <sup>th</sup> Edition) 970.52, 985.22: 2012; J.Chromatography A 1173: 2007	0.02 mg/kg to 70.0 mg/kg
		Etofenprox		0.01 mg/kg to 100 mg/kg
		Fenarimol		0.01 mg/kg to 30.0 mg/kg
		Fenazaquin		0.01 mg/kg to 20.0 mg/kg
		Fernobucarb		0.01 mg/kg to 1.0 mg/kg
		Fenpyroximate		0.01 mg/kg to 30.0 mg/kg
		Fenthion		0.01 mg/kg to 1.0 mg/kg
		Flubendiamide		0.01 mg/kg to 100 mg/kg
		Flufenacet		0.01 mg/kg to 5.0 mg/kg
		Flufenoxuron		0.02 mg/kg to 100 mg/kg
		Flusilazole		0.01 mg/kg to 5.0 mg/kg
		Forchlorfenuron		0.025 mg/kg to 5.0 mg/kg

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	Fruits and	Fosetyl - Al	In-house Validate Method	0.01 mg/kg to 100 mg/kg
	Vegetables	Glufosinate	SMSLA/IN/SOP/05 Issue. 01 Dated. 02.11.2012	0.02 mg/kg to 10 mg/kg
		Glyphosate	SMSLA/IN/SOP/06 Issue. 01 Dated. 02.11.2012	0.02 mg/kg to 50 mg/kg
		Hexaconazole	Based on AOAC (19 <sup>th</sup> Edition) 970.52,	0.01 mg/kg to 1.0 mg/kg
		Iprovalicarb	985.22: 2012;	0.01 mg/kg to 100 mg/kg
		Isoprothialone	J.Chromatography A 1173: 2007	0.01 mg/kg to 1.0 mg/kg
		Isoproturon		0.01 mg/kg to 5.0 mg/kg
		Kresoxim- Methyl		0.01 mg/kg to 100 mg/kg
		Linuron		0.01 mg/kg to 5.0 mg/kg
		Lufenuron		0.01 mg/kg to 100 mg/kg
		Malathion		0.01 mg/kg to 2.0 mg/kg
		Malaoxon		0.01 mg/kg to 2.0 mg/kg
		Mandipropamid		0.075 mg/kg to 100 mg/kg
		Mepiquat		0.01 mg/kg to 30.0 mg/kg
		Metalaxyl		0.01 mg/kg to 100 mg/kg
		Metalaxyl – M		0.01 mg/kg to 100 mg/kg
		Methamidophos		0.01 mg/kg to 1.0 mg/kg
		Methomyl		0.01 mg/kg to 2.0 mg/kg

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	Fruits and Vegetables	Metribuzin	In-house Validate Method SMSLA/IN/SOP/05 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 10.0 mg/kg	
		Monocrotophos	SMSLA/IN/SOP/06 0.01 mg/kg t Issue. 01 Dated. 02.11.2012	SMSLA/IN/SOP/06 0.01 mg/kg	0.01 mg/kg to 1.0 mg/kg
		Myclobutanil		0.01 mg/kg to 100 mg/kg	
		Novaluron	AOAC (19 <sup>th</sup> Edition) 970.52, 985.22: 2012;	0.01 mg/kg to 1.0 mg/kg	
		Ocharatoxin A	J.Chromatography A 1173: 2007	0.01 mg/kg to 1.0 mg/kg	
		Omethoate		0.01 mg/kg to 2.0 mg/kg	
		Oxyfluorfen		0.01 mg/kg to 10 mg/kg	
		Paclobutrazol		0.01 mg/kg to 5.0 mg/kg	
		Paraxon methyl		0.01 mg/kg to 1.0 mg/kg	
		Paraquat		0.01 mg/kg to 2.0 mg/kg	
		Parathion		0.01 mg/kg to 5.0 mg/kg	
		Penconazole		0.01 mg/kg to 20.0	
		Pencycuron		mg/kg 0.01 mg/kg to 5.0 mg/kg	
		Pendimethalin		0.01 mg/kg to 5.0 mg/kg	
		Phenthoate		0.01 mg/kg to 1.0 mg/kg	
		Phorate		0.01 mg/kg to 1.0 mg/kg	
		Phoratesulfone		0.01 mg/kg to 1.0 mg/kg	
		Phoratesulfoxide		0.01 mg/kg to 1.0 mg/kg	
		Phosphamidon		0.01 mg/kg to 1.0 mg/kg	

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	Fruits and	Propanil	In-house Validate Method	0.01 mg/kg to 10 mg/kg
	Vegetables	Propiconazole	SMSLA/IN/SOP/05 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 30.0
		Quinalphos	Issue. 01 Dated. 02.11.2012 0.01 mg/kg to 5	mg/kg 0.01 mg/kg to 5.0 mg/kg
		Simazine		0.01 mg/kg to 20 mg/kg
		Spinosad - A	985.22: 2012; J.Chromatography A 1173: 2007	0.01 mg/kg to 50 mg/kg
		Spinosad - D	J.emoniatography IX 1173. 2007	0.01 mg/kg to 50 mg/kg
		Spiromesifen		0.01 mg/kg to 2.0 mg/kg
		Tebuconazole		0.01 mg/kg to 100 mg/kg
		Temephos		0.01 mg/kg to 1.0 mg/kg
		Thiamethoxam		0.01 mg/kg to 50 mg/kg
		Thiobencarb		0.02 mg/kg to 10 mg/kg
		Thiodicarb		0.01 mg/kg to 2.0 mg/kg
		Triadimefon		0.01 mg/kg to 100 mg/kg
		Thionazin		0.01 mg/kg to 1.0 mg/kg
		Thiophanate - Methyl		0.01 mg/kg to 10 mg/kg
		Thiometon		0.01 mg/kg to 1.0 mg/kg
		Triadimenol		0.01 mg/kg to 100 mg/kg
		Triazophos		0.01 mg/kg to 1.0 mg/kg
		Trichlorfon		0.01 mg/kg to 1.0 mg/kg

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	Fruits and	Tricyclazole	In-house Validate Method	0.01 mg/kg to 5.0 mg/kg
	Vegetables	Tridemorph	SMSLA/IN/SOP/05 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 1.0 mg/kg
		Uracil	SMSLA/IN/SOP/06 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 100 mg/kg
		1-Naphthyl acetic acid	Based on AOAC (19 <sup>th</sup> Edition) 970.52,	0.01 mg/kg to 5.0 mg/kg
		Dithiocarbamates	AGAC (19 Edition) 970.32, 985.22: 2012; J.Chromatography A 1173: 2007	0.01 mg/kg to 10.0 mg/kg
		Pyrethrins		0.01 mg/kg to 50 mg/kg
		Metolachlor		0.01 mg/kg to 10.0 mg/kg
		Propetamphos		0.01 mg/kg to 1.0 mg/kg
		Chlorothalonil		0.01 mg/kg to 3.0 mg/kg
		Transfluthrin		0.01 mg/kg to 1.0 mg/kg
		Trifluralin		0.01 mg/kg to 1.0 mg/kg
		Benfluralin		0.01 mg/kg to 1.0 mg/kg
		Hexathiazox		0.01 mg/kg to 10.0 mg/kg
		Buprofezin		0.01 mg/kg to 10.0 mg/kg
		Trifloxystrobin		0.01 mg/kg to 5.0 mg/kg
		Propargite		0.01 mg/kg to 7.0 mg/kg
		Carbosulfan		0.01 mg/kg to 1.0 mg/kg

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	Fruits and	Fenpropathrin	In-house Validate Method SMSLA/IN/SOP/05 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 1.0 mg/kg
	Vegetables	Methoxychlor		0.01 mg/kg to 5.0 mg/kg
		Lambda cyhalothrin	SMSLA/IN/SOP/06 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 2.0 mg/kg
		Coumaphos	Based on AOAC (19 <sup>th</sup> Edition) 970.52, 985.22: 2012; J.Chromatography A 1173: 2007	0.01 mg/kg to 1.0 mg/kg
		Esfenvalerate		0.01 mg/kg to 10.0 mg/kg
		Fenvalerate		0.01 mg/kg to 2.0 mg/kg
		Pyraclostrobin		0.02 mg/kg to 100 mg/kg
		Fluvalinate_tau		0.01 mg/kg to 10.0 mg/kg
		Indoxacarb		0.01 mg/kg to 100 mg/kg
		Captafol		0.01 mg/kg to 2.0 mg/kg
		Fipronil		0.00025 mg/kg to 0.03 mg/kg
		Pyriproxyfen		0.025 mg/kg to 0.3 mg/kg
		Iprodione		0.02 mg/kg to 100 mg/kg

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2.	Fruits and Fruit Products	Benzoic acid	SMSLA/IN/SOP/72 Issue. 01/ Dated. 06.07.2016	10 mg/kg to 2000 mg/kg
	Fruits Apples/Oranges/	Sorbic acid		10 mg/kg to 2000 mg/kg
	Pears/Longan/ Grapes/Kiwi/ Dragon Fruit/Mango/	Inorganic bromide	SMSLA/IN/SOP/82 Issue. 01/ Dated. 15.02.2016	5 mg/kg to 500 mg/kg
	Mangosteen/Pine Apple, Parsley And Other			

**Fruit Products** 

**Cocktails/Fruit** 

Powder/Fruit

Flakes/Frozen Fruits/

and Other

**Dehydrated Fruits** 

Fruit

Soup

Cerel

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3.	Vegetable and	Benzoic acid	SMSLA/IN/SOP/72	10 mg/kg to 2000 mg/kg
	Vegetable Products	Sorbic acid	Issue. 01/ Dated. 06.07.2016	10 mg/kg to 2000 mg/kg
Curry Leave Ladies Fing Carrot Cabbage Onion And Vegetable Products Frozen Vegetables, Dehydrated Vegetables A	Cabbage Onion And Other Vegetable Products Frozen Vegetables,	Inorganic bromide	SMSLA/IN/SOP/82 Issue. 01/ Dated. 15.02.2016	5 mg/kg to 500 mg/kg
4.	Milk & Milk Products	o,p DDT	In-house Validate Method SMSLA/IN/SOP/15 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 5.0 mg/kg
		o,p DDE		0.01 mg/kg to 5.0 mg/kg
		o,p DDD	Based on AOAC (19 <sup>th</sup> Edition): 2012	0.01 mg/kg to 5.0 mg/kg
		p,p DDT		0.01 mg/kg to 2.0 mg/kg
		p,p DDE		0.01 mg/kg to 5.0 mg/kg
		p,p DDD		0.01 mg/kg to 5.0 mg/kg
		Alpha HCH		0.01 mg/kg to 1.0 mg/kg
		Beta HCH		0.01 mg/kg to 1.0 mg/kg
		Gama - HCH (Lindane)		0.01 mg/kg to 1.0 mg/kg
		Delta –HCH		0.01 mg/kg to 1.0 mg/kg

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	Milk & Milk Products	Alpha Endosulfan	In-house Validate Method	0.01 mg/kg to 5.0 mg/kg
		Beta Endosulfan	SMSLA/IN/SOP/15 Issue. 01 Dated. 02.11.2012.	0.01 mg/kg to 5.0 mg/kg
		EndosulfanSulphate	Based on AOAC (19 <sup>th</sup> Edition): 2012	0.01 mg/kg to 5.0 mg/kg
		Ethion		0.01 mg/kg to 1.0 mg/kg
		Methyl Parathion		0.01 mg/kg to 1.0 mg/kg
		Aldrin		0.01 mg/kg to 1.0 mg/kg
		Dieldrin		0.01 mg/kg to 1.0 mg/kg
		Diazinon		0.01 mg/kg to 1.0 mg/kg
		Endrin		0.01 mg/kg to 1.0 mg/kg
		Heptachlor		0.01 mg/kg to 1.0 mg/kg
		Heptachlor epoxide		0.01 mg/kg to 1.0 mg/kg
		Phosalone		0.01 mg/kg to 1.0 mg/kg
		Dichlorvos		0.01 mg/kg to 1.0 mg/kg
	Fenthion Malathion Paraxon methyl		0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 2.0 mg/kg	
		Paraxon methyl		0.01 mg/kg to 1.0 mg/kg
		Methoxychlor		0.01 mg/kg to 5.0 mg/kg

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5.	Fish & Fishery	o,p DDT	In-house Validate Method	0.01 mg/kg to 5.0 mg/kg
	Products / Poultry & Poultry	o,p DDE	SMSLA/IN/SOP/16 Issue. 01 Dated. 02.11.2012	0.01 mg/kg to 5.0 mg/kg
	Products	o,p DDD	Based on AOAC (19 <sup>th</sup> Edition): 2012	0.01 mg/kg to 5.0 mg/kg
		p,p DDT		0.01 mg/kg to 2.0 mg/kg
		p,p DDE		0.01 mg/kg to 5.0 mg/kg
		p,p DDD Alpha HCH		0.01 mg/kg to 5.0 mg/kg
				0.01 mg/kg to 1.0 mg/kg
		Beta HCH		0.01 mg/kg to 1.0 mg/kg
		Gama - HCH (Lindane )		0.01 mg/kg to 1.0 mg/kg
		Delta –HCH		0.01 mg/kg to 1.0 mg/kg
	Alpha Endosulfan Beta Endosulfan EndosulfanSulphate Ethion	Alpha Endosulfan		0.01 mg/kg to 5.0 mg/kg
			0.01 mg/kg to 5.0 mg/kg	
			0.01 mg/kg to 5.0 mg/kg	
			0.025 mg/kg to 1.0 mg/kg	
		Diazinon		0.01 mg/kg to 1.0 mg/kg
		Phosalone		0.01 mg/kg to 1.0 mg/kg
		Atrazine		0.01 mg/kg to 5.0 mg/kg
		Carbaryl		0.01 mg/kg to 1.0 mg/kg

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	Fish & Fishery		0.01 mg/kg to 2.0 mg/kg	
	Products / Poultry & Poultry Products Chlorpyrifos-Ethyl Chlorpyrifos-Methyl	Chlorpyrifos-Ethyl	SMSLA/IN/SOP/16 Issue. 01 Dated. 02.11.2012 Based on	0.01 mg/kg to 50.0 mg/kg
		AOAC (19 <sup>th</sup> Edition): 2012	0.01 mg/kg to 20.0 mg/kg	
		Dichlorvos		0.01 mg/kg to 1.0 mg/kg
		Dimethoate		0.01 mg/kg to 2.0 mg/kg
		Fenarimol		0.01 mg/kg to 30.0 mg/kg
		Fenthion		0.01 mg/kg to 1.0 mg/kg
		Myclobutanil		0.01 mg/kg to 100 mg/k
		Omethoate		0.01 mg/kg to 2.0 mg/kg
		Pendimethalin		0.01 mg/kg to 5.0 mg/kg
		Phorate		0.025 mg/kg to 1.0 mg/kg
		Phosphamidon		0.01 mg/kg to 1.0 mg/kg
		Quinalphos		0.01 mg/kg to 5.0 mg/kg
		Simazine		0.01 mg/kg to 20 mg/kg
		Triazophos		0.01 mg/kg to 1.0 mg/kg

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	Fish & Fishery	Antifungal agents (Dyes)			
	Products / Poultry & Poultry Products	Malachite Green	SMSLA/IN/SOP/19 Issue. 1 Dated. 18.07.2012	0.5 ug/k	g to 3.5 ug/kg
	Troutes	Crystal Violet	based on Quantitative and confirmatory analysis of	0.5 ug/k	g to 3.5 ug/kg
		Leuco Crystal Violet	malachite green and	-	g to 3.5 ug/kg
		Leuco Malachite Green	Leucomalachite Green residues in fish and shrimp-LIB No:436 Volume 21,No:11,Nov 2005.		g to 3.5 ug/kg
		Histamine	SMSLA/IN/SOP/55 Issue. 1 Dated. 22.01.2015 based on Journal of Chromatography A 1032,(2004)79-85	5 mg/kg	to 100 mg/kg
6.	Spices &	Pesticides:	In-house Validate Method		
	Condiments	o,p DDE	SMSLA/IN/SOP/18 Issue. 01 Dated. 02.11.2012.	0.01 mg	/kg to 5.0 mg/kg
		o,p DDD	Based on AOAC (19 <sup>th</sup> Edition): 2012	0.01 mg	/kg to 5.0 mg/kg
		p,p DDT		0.01 mg	/kg to 2.0 mg/kg
		p,p DDE		0.01 mg	/kg to 5.0 mg/kg
		p,p DDD		0.01 mg	/kg to 5.0 mg/kg
		Alpha HCH		0.01 mg	/kg to 1.0 mg/kg
		Beta HCH		0.01 mg	/kg to 1.0 mg/kg
		Gama - HCH (Lindane)		0.01 mg	/kg to 1.0 mg/kg
		Delta –HCH		0.01 mg	/kg to 1.0 mg/kg

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	Spices & Condiments	Alpha Endosulfan	In-house Validate Method	0.01 mg/kg to 5.0 mg/kg
		Beta Endosulfan	SMSLA/IN/SOP/18 Issue. 01 Dated. 02.11.2012.	0.01 mg/kg to 5.0 mg/kg
		EndosulfanSulphate	Based on AOAC (19 <sup>th</sup> Edition): 2012	0.01 mg/kg to 5.0 mg/kg
		Ethion		0.01 mg/kg to 1.0 mg/kg
		Diazinon		0.01 mg/kg to 1.0 mg/kg
		Phosalone		0.01 mg/kg to 1.0 mg/kg
		Acephate		0.01 mg/kg to 1.0 mg/kg
		Atrazine		0.01 mg/kg to 5.0 mg/kg
		Carbaryl		0.01 mg/kg to 1.0 mg/kg
		Chlorfenvinphos		0.01 mg/kg to 2.0 mg/kg
		Chlorpyrifos-Ethyl		0.01 mg/kg to 50.0 mg/kg
		Chlorpyrifos-Methyl		0.01 mg/kg to 20.0 mg/kg
		Dichlorvos		0.01 mg/kg to 1.0 mg/kg
		Dimethoate		0.01 mg/kg to 2.0 mg/kg
		Fenarimol		0.01 mg/kg to 30.0 mg/kg
		Fenthion		0.01 mg/kg to 1.0 mg/kg
		Myclobutanil		0.01 mg/kg to 100 mg/kg

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	Spices &	Omethoate	In-house Validate Method	0.01 mg/kg to 2.0 mg/kg
	Condiments	Pendimethalin	SMSLA/IN/SOP/18 Issue. 01 Dated. 02.11.2012.	0.01 mg/kg to 5.0 mg/kg
		Phorate	Based on AOAC (19 <sup>th</sup> Edition): 2012	0.01 mg/kg to 1.0 mg/kg
		Phosphamidon	×	0.01 mg/kg to 1.0 mg/kg
		Quinalphos		0.01 mg/kg to 5.0 mg/kg
		Simazine		0.01 mg/kg to 20 mg/kg
		Triazophos		0.01 mg/kg to 1.0 mg/kg
		Sudan Dyes		
		SUDAN I 1-phenylazonaphth-2-ol	SMSLA/IN/SOP/54 Issue. 1 Dated. 01/02.06.2015	100 μg/kg to 10000 μg/kg
		SUDAN II 1-(2,4-dimethylphenyl) azonapthalen-2-ol	based on journal of chem.soc.pak. Vol. 28,No. 3: 2006 AOAC (11 <sup>th</sup> Edition): (1970) pp 575	100 μg/kg to 10000 μg/kg
		SUDAN III 1-(4-(phenyldiazenyl) phenyl) azonaphthalen-2-ol		100 μg/kg to 10000 μg/kg
		SUDAN IV 1-(2-methyl-4-(2-methyl phenyldiazenyl) phenyl) azonapthalen-2-ol		100 μg/kg to 10000 μg/k

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7.	Cereals & Pulses	Pesticide Residues		
	Black (Matpe/Green	Aldrin	SMSLA/IN/SOP/33 Issue. 1 Dated. 22.01.2015 Based on	0.01 mg/kg to 1.0 mg/kg
	Peas/Chick Peas/Toor/Green Moong/Red	Dieldrin	AOAC (19 <sup>th</sup> Edition): 2012	0.01 mg/kg to 1.0 mg/kg
	Lentils)CarbarylChlordaneDiazinonDichlorvosFenitrothionHeptachlorMalathionPhosphamidonPyrethrinsChlorpyrifos		0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 1.0 mg/kg	
			0.01 mg/kg to 1.0 mg/kg	
		Ethion		0.01 mg/kg to 1.0 mg/kg

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	Cereals & Pulses Black	Monocrotophos	SMSLA/IN/SOP/33 Issue. 1 Dated. 22.01.2015 Based on	0.01 mg/kg to 1.0 mg/kg
	(Matpe/Green Peas/Chick	Paraquat Dichloride	AOAC (19 <sup>th</sup> Edition): 2012	0.01 mg/kg to 1.0 mg/kg
	Peas/Toor/Green Trichlorfon Moong/Red		0.01 mg/kg to 1.0 mg/kg	
	Lentils)	Thiometon		0.01 mg/kg to 1.0 mg/kg
	Car	Carbendazim		0.01 mg/kg to 1.0 mg/kg
		Benomyl		0.01 mg/kg to 1.0 mg/kg
		Carbofuran		0.01 mg/kg to 1.0 mg/kg
		Deltamethrin		0.01 mg/kg to 1.0 mg/kg
		Fenthion		0.01 mg/kg to 1.0 mg/kg
		Dithiocarbomates		0.01 mg/kg to 1.0 mg/kg
		Phenthoate		0.01 mg/kg to 1.0 mg/kg
		Phorate		0.01 mg/kg to 1.0 mg/kg
		Pirimiphos-Methyl		0.01 mg/kg to 1.0 mg/kg
		Oxydemeton methyl		0.01 mg/kg to 1.0 mg/kg
		2,4-D		0.01 mg/kg to 1.0 mg/kg

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8.	Cereals, Pulses and Cereal	Aflatoxins B1	SMSLA/IN/SOP/52 Issue. 01/ Dated. 04.09.2014	2.5 ug/kg to 50 ug/kg
	Products Cereals	Aflatoxins B2		2.5 ug/kg to 50 ug/kg
Se Be Ba	Atta/Maida/ Semolina/	Aflatoxins G1		2.5 ug/kg to 50 ug/kg
	Besan/Pearl Barley/Food	Aflatoxins G2		2.5 ug/kg to 50 ug/kg
	Grains/Rolled Oats and Other Cereal Products	Ochratoxin A	SMSLA/IN/SOP/75 Issue. 01/ Dated. 05.08.2016	1.0 ug/kg to 50 ug/kg
	Corn Flour/Corn Flakes, Custard Powder/	Deoxyvalenol	SMSLA/IN/SOP/76 Issue. 01/ Dated. 02.11.2015	0.1 ug/kg to 2 mg/kg
	Macoroni Products/Malt Andmalt Based	Alpha-BHC	SMSLA/IN/SOP/42 Issue. 01/ Dated. 24.01.2015	5 ug/kg to 150 ug/kg
	Foods/Solvent Extracted Flours and Other	Beta-BHC		5 ug/kg to 150 ug/kg
		Gamma-BHC		5 ug/kg to 150 ug/kg
		Delta-BHC		5 ug/kg to 150 ug/kg
		Inorganic Bromide	SMSLA/IN/SOP/82 Issue. 01/ Dated. 15.02.2016	5 mg/kg to 500 mg/kg
9.	Fish & Fishery	Antibiotic Residues		
	Products	Chloramphenical	In-house Validate Method SMSLA/IN/SOP/10	0.15 μg/kg to 1.05 μg/kg
		Nitrofurans	Issue. 01 Dated. 03.06.2013 By LC-MS-MS based on US-FDA 4290	

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5. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Fish & Fishery Products	Nitrofurazone	In-house Validate Method SMSLA/IN/SOP/11 Issue. 01	0.5 µg/kg to 5.0 µg/kg
		Furazolidone	Dated. 03.06.2013 By LC-MS- MS based on	0.5 $\mu\text{g/kg}$ to 5.0 $\mu\text{g/kg}$
		Nitrofurantoin	Journal of Food and Drug	$0.5~\mu\text{g/kg}$ to $5.0~\mu\text{g/kg}$
		Furaltadone	Analysis Vol.18 No:02 -2010 Pages 98 -106	0.5 $\mu$ g/kg to 5.0 $\mu$ g/kg
		Nitrofuran Metabolites		
		AMOZ	In-house Validate Method	0.5 $\mu$ g/kg to 5.0 $\mu$ g/kg
		AOZ	SMSLA/IN/SOP/12 Issue. 01 Dated. 03.06.2013By LC-MS-MS	0.5 $\mu g/kg$ to 5.0 $\mu g/kg$
		SEM	based Journal of chromatography A-939	$0.5~\mu\text{g/kg}$ to $5.0~\mu\text{g/kg}$
		AHD (2001) – Page 49-58		0.5 µg/kg to 5.0 µg/kg
		Tetracyclines		
		Tetracycline	In-house Validate Method	10 $\mu$ g/kg to 175 $\mu$ g/kg
		Oxytetracycline	SMSLA/IN/SOP/13 Issue. 01 Dated. 03.06.2013 By LC-MS-	10 µg/kg to 175 µg/kg
		Chlortetracycline	MS Journal of chromatography A-928	10 µg/kg to 175 µg/kg
		4-epitetracycline	(2001), A-1216(2009),	10 µg/kg to 175 µg/kg
		4-epioxytetracycline	A-987 (2003)	10 µg/kg to 175 µg/kg
		4-epichlortetracycline		10 µg/kg to 175 µg/kg
		Doxycycline		10 µg/kg to 175 µg/kg

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	Fish & Fishery Products	Sulfonamides		
	1 I ouucus	Sulfadoxine	SMSLA/IN/SOP/14 Issue. 01/ Dated. 03.06.2013	25 $\mu g/kg$ to 175 $\mu g/kg$
		Sulfanilamide	Based on the Elsiever (TALANTA) 55 (2001)	25 µg/kg to 175 µg/kg
		Trimethoprim	(P.No: 1127-1139) In-house Validate Method by LC	25 µg/kg to 175 µg/kg
a.	Prawn and Prawn Products/	Sulfamethazine	MS-MS	10 μg/kg to 175 μg/kg
	Shrimps and	Sulfamerazine		10 µg/kg to 175 µg/kg
	Others	Sulfapyridine		10 µg/kg to 175 µg/kg
		Sulphadiazine		10 $\mu$ g/kg to 175 $\mu$ g/kg
		Sulfamethoxazole		10 µg/kg to 175 µg/kg
		Sulfathiazole		10 $\mu$ g/kg to 175 $\mu$ g/kg
		Sulfachloropyridazine		10 $\mu$ g/kg to 175 $\mu$ g/kg
		Sulfamethizole		10 $\mu$ g/kg to 175 $\mu$ g/kg
		Sulfamethoxypyridazine		10 µg/kg to 175 µg/kg
		Sulfadimethoxine		10 μg/kg to 175 μg/kg
		Fluoroquinolones		
		Ciprofloxacin	SMSLA/IN/SOP/57	25 $\mu g/kg$ to 250 $\mu g/kg$
		Danofloxacin	Issue. 01/ Dated. 24.01.2015 Based on Agilent application note	25 $\mu g/kg$ to 250 $\mu g/kg$
		Difloxacin		75 μg/kg to 750 μg/kg
		Enrofloxacin		25 µg/kg to 250 µg/kg

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	Prawn and Prawn	Norfloxacin	SMSLA/IN/SOP/57	7.5 μg/kg to 75 μg/kg
	Products/ Shrimps and	Sarafloxacin	Issue. 01/ Dated. 24.01.2015 Based on Agilent application note	7.5 µg/kg to 75 µg/kg
	Others	Quinolones		
		Oxolinic Acid	SMSLA/IN/SOP/57	25 µg/kg to 250 µg/kg
		Flumequine	Issue. 01/ Dated. 24.01.2015 Based on Agilent application note	50 $\mu g/kg$ to 500 $\mu g/kg$
		Nalidixic Acid		7.5 μg/kg to 75 μg/kg
		NON DIOXIN LIKE-PCB		
		PCB 28-2,4,4' – trichlorobiphenyl	SMSLA/IN/SOP/73 Issue. / Date: 01/02.11.2015	12.5 μg/kg to 120 μg/kg
		PCB 52-2,2',5,5' – tetrachlorobiphenyl	Based on Biotage Application Note AN768	12.5 μg/kg to 120 μg/kg
		PCB 101-2,2',4,5,5' pentachlorobiphenyl	AITIO	12.5 μg/kg to 120 μg/kg
		PCB 138 -2',3,4,4',5' hexachlorobiphenyl		12.5 μg/kg to 120 μg/kg
		PCB 153 2,2',4,4',5,5' hexachlorobiphenyl)		12.5 μg/kg to 120 μg/kg
		PCB 180 2,2',3,4,4',5,5' heptachlorobiphenyl		12.5 μg/kg to 120 μg/kg

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10.	Nut & Nut	Aflatoxin		
	Products	Aflatoxin B1	In-house Validate Method	2.5 $\mu$ g/kg to 50 $\mu$ g/kg
		Aflatoxin B2	SMSLA/IN/SOP/51 Issue. 01 Dated. 27.05.2015 By HPLC	2.5 $\mu$ g/kg to 50 $\mu$ g/kg
		Aflatoxin G1	based on AOAC (19 <sup>th</sup> Edition) 980.21,	2.5 $\mu$ g/kg to 50 $\mu$ g/kg
		Aflatoxin G2	986.16: 2012	2.5 $\mu$ g/kg to 50 $\mu$ g/kg
11.	Dairy & Dairy Products	Aflatoxin M1	In-house Validate Method SMSLA/IN/SOP/21 Issue. 01 Dated. 03.06.2013 By HPLC based on AOAC (19 <sup>th</sup> Edition): 2012	2.5 µg/kg to 50 µg/kg
	Water soluble vitamins			
		Pyridoxal- 5- Phosphate	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Thiamine	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Pyridoxine	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		D - Penthothenic Acid	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Nicotinic Acid	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Niacin	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Ascorbic Acid	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g

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	Dairy & Dairy Products	Pyridoxal	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Folic Acid	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Riboflavin	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Nicotinamide	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Cyanocobalamine	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Biotin	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Pyridoxamine	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Lipoic Acid	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		4-Aminobenzoic Acid	SMSLA/IN/SOP/43 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Fat soluble vitamins		
		Vitamin A Palmitate	SMSLA/IN/SOP/44 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g
		Vitamin D2	SMSLA/IN/SOP/44 Issue. 1 Dated. 22.01.2015	(0.1 mg to 50 mg)/100 g

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	Dairy & Dairy Products	Vitamin D3	SMSLA/IN/SOP/44 Issue. 1 Dated. 22.01.2015	(0.1 mg	to 50 mg)/100 g
		Vitamin E	SMSLA/IN/SOP/44 Issue. 1 Dated. 22.01.2015	(0.1 mg	to 50 mg)/100 g
		Vitamin E Acetate	SMSLA/IN/SOP/44 Issue. 1 Dated. 22.01.2015	(0.1 mg	to 50 mg)/100 g
		Vitamin K1	SMSLA/IN/SOP/44 Issue. 1 Dated. 22.01.2015	(0.1 mg	to 50 mg)/100 g
		Vitamin K2	SMSLA/IN/SOP/44 Issue. 1 Dated. 22.01.2015	(0.1 mg	to 50 mg)/100 g
		Vitamin A	SMSLA/IN/SOP/44 Issue. 1 Dated. 22.01.2015	(0.1 mg	to 50 mg)/100 g
		Gamma Tocopherol	SMSLA/IN/SOP/44 Issue. 1 Dated. 22.01.2015	(0.1 mg	to 50 mg)/100 g
12.	Milk & Milk Products	Melamine	SMSLA/IN/SOP/45	5 µg/kg	to 200 μg/kg
13.	Tea	tert-Butylhydroquinone	SMSLA/IN/SOP/74 Issue. 01/ Dated. 05.08.2016		g to 300 mg/kg
		Butylated hydroxyanisole	15540, 01, 15400, 05,00,2010		g to 300 mg/kg
		3,5-Di-tert-4- butylhydroxytoluene		10 mg/k	g to 300 mg/kg

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	Tea	Catechins in tea		
		Gallic acid	SMSLA/IN/SOP/86 Issue. 01/ Dated. 02.01.2016	0.1 mg/kg to 100 mg/kg
		Catechin hydrate		0.1 mg/kg to 100 mg/kg
		Catechin gallate		0.1 mg/kg to 100 mg/kg
		Epicatechin gallate		0.1 mg/kg to 100 mg/kg
		Epicatechin		0.1 mg/kg to 100 mg/kg
		Gallocatechin		0.1 mg/kg to 100 mg/kg
		Epigallocatechin		0.1 mg/kg to 100 mg/kg
		Aflatoxins B1	SMSLA/IN/SOP/052	1.0 μg/kg to 50 μg/kg
		Aflatoxins B2	Issue. 01/ Dated. 04.09.2014	1.0 μg/kg to 50 μg/kg
		Aflatoxins G1		1.0 μg/kg to 50 μg/kg
		Aflatoxins G2		1.0 μg/kg to 50 μg/kg
		Hyperciene	SMSLA/IN/SOP/053	0.05 mg/kg to 5 mg/kg
		Agaric Acid	Issue. 01/ Dated. 24.01.2015	5 mg/kg to 200 mg/kg
		Saffrole		0.5 mg/kg to 10 mg/kg
		Dicofol	SMSLA/IN/SOP/42	5 μg/kg to 10000 μg/kg
		Ethion	Issue. 01/ Dated. 24.01.2015	5 $\mu$ g/kg to 10000 $\mu$ g/kg

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	Теа	Quinalphos	SMSLA/IN/SOP/42	5 μg/kg to 10000 μg/kg
		Glyphosate	Issue. 01/ Dated. 24.01.2015	5 $\mu g/kg$ to 10000 $\mu g/kg$
		Fenzaquin		5 $\mu g/kg$ to 10000 $\mu g/kg$
		Glufosinate Ammonium		5 $\mu g/kg$ to 10000 $\mu g/kg$
		Propargite		5 $\mu g/kg$ to 10000 $\mu g/kg$
14.	Herbs, Spices and Condiments	Inorganic Bromide	SMSLA/IN/SOP/82 Issue. 01/ Dated. 15.02.2016	0.5 mg/kg to 500.0 mg/kg
	Herbs, Spices and Condiments Caraway/ Cardamom/ Chillies/ Capsicum/	Aflatoxins B1	SMSLA/IN/SOP/52 Issue. 01/ Dated. 04.09.2014	2.5 ug/kg to 50 ug/kg
		Aflatoxins B2		2.5 ug/kg to 50 ug/kg
		Aflatoxins G1		2.5 ug/kg to 50 ug/kg
	Cinnamon/Cassia/ Cloves/Coriander/ Cumin/Ginger/ Mace/Mustard/ Nutmeg/ Pepper (White & Black)/ Poppy/Turmeric/ Curry and Other	Aflatoxins G2		2.5 ug/kg to 50 ug/kg
15.	Bakery and	Benzoic acid	SMSLA/IN/SOP/72	10 mg/kg to 2000 mg/kg
	Confectionary Products	Sorbic acid	Issue. 01/ Dated. 06.07.2016	10 mg/kg to 2000 mg/kg
	Bread	Aflatoxins B1	SMSLA/IN/SOP/52	2.5 ug/kg to 50 ug/kg
	Biscuits Wafer Roll	Aflatoxins B2	Issue. 01/ Dated. 04.09.2014	2.5 ug/kg to 50 ug/kg
	Cakes	Aflatoxins G1		2.5 ug/kg to 50 ug/kg
	Toffee Chocolate Lozenges And Other	Aflatoxins G2		2.5 ug/kg to 50 ug/kg

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16.	Edible Colours and Flavours	Benzoic acid	SMSLA/IN/SOP/72 Issue. 01/ Dated. 06.07.2016	10 mg/kg to 2000 mg/kg
	Onion Flavour, Tomato Flavour,	Sorbic acid		10 mg/kg to 2000 mg/kg
	Pineapple Flavour (Kiwi Flavour,	Aflatoxins B1	SMSLA/IN/SOP/52 Issue. 01/ Dated. 04.09.2014	2.5 ug/kg to 50 ug/kg
	Semi Finished Flavour Compound,	Aflatoxins B2		2.5 ug/kg to 50 ug/kg
	Synthetic Flavours, Savoury Flavour, Cheese	Aflatoxins G1		2.5 ug/kg to 50 ug/kg
	Flavour, Cheese Flavour, Flavour Powder, Caramel Flavour, Vegetable Flavouring Powder,Food Flavour And Other	Aflatoxins G2		2.5 ug/kg to 50 ug/kg
III.	WATER			
1.	Packaged Drinking Water / Packaged Natural Mineral Water	Colour	IS 3025 (Part 4): 1983 (RA 2012) / APHA (22 <sup>nd</sup> Edition) 2120 B: 2012	1 Hazen to 50 Hazen
		Odour	IS 3025 (Part 5): 1983 (RA 2012) / APHA (22 <sup>nd</sup> Edition) 2150: 2012	Qualitative (Agreeable / Disagreeable)
		Taste	IS 3025 (Part 8): 1984 (RA 2012)/ APHA (22 <sup>nd</sup> Edition) 2160 C: 2012	Qualitative (Agreeable / Disagreeable)

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	Packaged Drinking Water / Packaged Natural Mineral Water	Turbidity	IS 3025 (Part 10): 1984 (RA 2012) / APHA (22 <sup>nd</sup> Edition) 2130 B: 2012	0.1 NTU	J to 50 NTU
		pH @ 25°C	IS 3025 (Part 11): 1984 (RA 2012)/ APHA (22 <sup>nd</sup> Edition) 4500 H <sup>+</sup> -B 2012	1 to 14 :	
		Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006)/ APHA (22 <sup>nd</sup> Edition) 2540C: 2012	1 mg/l to	o 5000 mg/l
		Aluminium as Al	IS 3025(Part 55): 2009 / IS 15302 /	0.007 m	g/l to 20 mg/l

	IS 15302 / APHA (22 <sup>nd</sup> Edition) 3120: 2012	
	IS 3025:Part 65:2014 SMSLA/EN/SOP-019	0.001 to 10 mg/L
Anionic Detergents as MBAS	IS 13428: 2009 Annexure K / APHA (22 <sup>nd</sup> Edition) 5540 C: 2012	0.05 mg/l to 5.0 mg/l
Barium as Ba	IS 13428: 2009 Annexure F / IS 15302 / APHA (22 <sup>nd</sup> Edition) 3111 D: 2012	0.1 mg/l to 10.0 mg/l
	IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l

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	PackagedBorates as BDrinking Water /Packaged NaturalMineral Water		IS 3025 (Part 57): 2009 / APHA (22 <sup>nd</sup> Edition) 3120: 2012/ IS 13428: 2009 Annexure H	0.1 mg/l to 10.0 mg/l
			IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l
		Calcium as Ca	IS 3025 (Part 40): 1991 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3500 Ca B: 2012	0.5 mg/l to 5000 mg/l
		Chloride as Cl	IS 3025 (Part 32): 1988 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500 Cl: 2012	1.0 mg/l to 2000 mg/l
		Copper as Cu	IS 3025 (Part 42): 1992 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.005 mg/l to 10.0 mg/
			IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l
		Fluoride as F	IS 3025 (Part 60): 2008 / APHA (22 <sup>nd</sup> Edition) 4500 F-: 2012	0.1 mg/l to 5.0 mg/l
		Free residual chlorine	IS 3025 (Part 26): 1986 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500-Cl E: 2012	0.1 mg/l to 10.0 mg/l

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	Packaged Drinking Water / Packaged Natural	Iron as Fe	IS 3025 (Part 53): 2009 / IS 15302 / APHA (22 <sup>nd</sup> Edition) 3120: 2012	0.05 mg/l to 20 mg/l
	Mineral Water	Magnesium as Mg	IS 3025 (Part 46): 1994 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3500 Mg B: 2012	0.5 mg/l to 5000 mg/l
		Manganese as Mn	IS 3025 (Part 59): 2012 / APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.01 mg/l to 10.0 mg/l
			IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l
		Mineral Oil	IS 3025 (Part 39): 1991 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 5520: 2012	0.01 mg/l to 1.0 mg/l Qualitative (Absent/Present)
		Nitrate as NO3	IS 3025(Part 34): 1988 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500-NO <sub>3</sub> : 2012	1 mg/l to 100 mg/l
		Phenolic compound (as C6H5OH)	IS 3025 (Part 43): 1992 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 5530 A: 2012	0.001 mg/l to 1.00 mg/l Qualitative (Absent/Present)
		Selenium (as Se)	IS 3025 (Part 56): 2009 / IS 15303 / APHA (22 <sup>nd</sup> Edition) 3113 B,3114 C: 2012	0.003 mg/l to 1.0 mg/l
			IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l

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	Packaged Drinking Water / Packaged Natural	Silver as Ag	IS 13428: 2009 Annexure J / APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.007 mg/l to 20.0 mg/l
	Mineral Water		IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l
		Sulphate as SO4	IS 3025 (Part 24): 1986 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500 SO <sub>4</sub> – E: 2012	1.0 mg/l to 5000 mg/l
		Sulphide as H2S	IS 3025 (Part 29): 1986 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500 S - F: 2012	0.02 mg/l to 10 mg/l
		Total Alkalinity as HCO3	IS 3025 (Part 23): 1986 (RA 2003) / APHA (22 <sup>nd</sup> Edition) 2320 B: 2012	1.0 mg/l to 5000 mg/l
		Zinc as Zn	IS 3025 (Part 49): 1994 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3111B: 2012	0.002 mg/l to 10 mg/l
			IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l
		Cadmium as Cd	IS 3025 (Part 41): 1992 (RA1998) / APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.004 mg/l to 20 mg/l
			IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l

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	Packaged Drinking Water / Packaged Natural Mineral Water	Cyanide as CN	IS 3025 (Part 27): 1986 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500-Cl E: 2012 (by ISE)	C C	'l to 2.0 mg/l
		Lead as Pb	IS 3025 (Part 47): 1994 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	·	g/l to 10 mg/l
			IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mạ	g/l to 10 mg/l
		Mercury as Hg	IS 3025 (Part 48): 1994 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3111 B: 2012		ng/l to 1 mg/l
			EPA 200.8	0.0005 n	ng/l to 10 mg/l
		Nickel as Ni	IS 13428 / IS 3025 (Part 54): 2003 Annexure L / APHA (22 <sup>nd</sup> Edition) 3111 B: 2012		g/l to 10 mg/l
			IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 m	g/l to 10 mg/l
		Total Arsenic as As	IS 3025 (Part 37): 1988 (RA 1999)/ APHA (22 <sup>nd</sup> Edition) 3114 B,3113B: 2012	0.004 m	g/l to 2.0 mg/l

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	Packaged Drinking Water / Packaged Natural	Arsenic as As	IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l
	Mineral Water	Total Chromium as Cr	IS 13428 / IS 3025 (Part 52): 2009 Annexure J / APHA (22 <sup>nd</sup> Edition) 3120: 2012	0.006 mg/l to 10.0 mg/l
		Chromium as Cr	IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l
		Sodium as Na	IS 3025 (Part 45): 1993 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3500-Na B: 2012	1.0 mg/l to 1000 mg/l
		Antimony as Sb	IS 13428: 2009 Annexure G / IS 15303: 2003/ APHA (22 <sup>nd</sup> Edition) 3114 C: 2012	0.004 mg/l to 1.0 mg/l
			IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l
		Bromates as BrO <sub>3</sub>	ISO 15061: 2001	0.005 mg/l to 5 mg/l
		Nitrite as NO <sub>2</sub>	IS 3025(Part 34): 1988 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500- NO <sub>2</sub> : 2012	0.01 mg/l to 10 mg/l

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2.	Drinking Water Processed Food Industry/ Crowned Water/	Colour	IS 3025 (Part 4): 1983(RA 2012) APHA (22 <sup>nd</sup> Edition) 2120 B: 2012	1 Hazens to 50 Hazens
Wa	Ground Water/ Water from Purifiers/Others	Odour	IS 3025 (Part 5): 1983 (RA 2012) / APHA (22 <sup>nd</sup> Edition) 2150: 2012	Qualitative (Agreable / Disagreable
		Taste	IS 3025 (Part 8): 1984 (RA 2012)/ APHA (22 <sup>nd</sup> Edition) 2160 C: 2012	Qualitative (Agreable / Disagreable
		Turbidity	IS 3025 (Part 10): 1984 (RA 2006) / APHA (22 <sup>nd</sup> Edition) 2130 B: 2012	0.1 NTU to 50 NTU
		pH @ 25°C	IS 3025 (Part 11): 1984 (RA 2012)/ APHA (22 <sup>nd</sup> Edition) 4500 H <sup>+</sup> - B: 2012	1 to 14
		Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006)/ APHA (22 <sup>nd</sup> Edition) 2540C: 2012	1 mg/l to 5000 mg/l
		Chloramine	APHA (22 <sup>nd</sup> Edition) 4500-Cl G: 2012	1.0 mg/l to 10 mg/l
		Molybdenenum	IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.001 mg/l to 10 mg/l

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	Drinking Water Processed Food	Cadmium	IS 3025 (Part 65): 2014 / SMSLA/EN/SOP-019	0.0004 mg/l to 10 mg/l
	Industry/ Ground Water/ Water from Purifiers/Others	Bromoform	SMSLA/IN/SOP/29 Issue. & Dated. 01/02.11.2012	5 µg/l to 500 µg/l
		Trichloromethane	SMSLA/IN/SOP/29 Issue. & Dated. 01/02.11.2012	5 µg/l to 500 µg/l
		Dibromochloromethane	SMSLA/IN/SOP/29 Issue. & Dated. 01/02.11.2012	5 µg/l to 500 µg/l
		Bromodichloromethane	SMSLA/IN/SOP/29 Issue. & Dated. 01/02.11.2012	5 µg/l to 500 µg/l
		Aluminium as Al	IS 3025(Part 55) 3111 D, 3113 B: 2012 / APHA (22 <sup>nd</sup> Edition): 2012	0.007 mg/l to 25 mg/l
		Ammonia as NH4	IS 3025(Part 34): 1988 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500- NH <sub>3</sub> : 2012	0.01 mg/l to 20.0 mg/l
		Anionic Detergents as MBAS	IS 13428: 2009 Annexure K / APHA (22 <sup>nd</sup> Edition) 5540 C: 2012	0.05 mg/l to 5.0 mg/l
		Barium as Ba	IS 13428: 2009 Annexure F / APHA (22 <sup>nd</sup> Edition) 3111D: 2012	0.1 mg/l to 25.0 mg/l
		Boron as B	IS 3025 (Part 57): 2009 / APHA (22 <sup>nd</sup> Edition) 3120: 2012/ IS 13428: 2009 Annexure H	0.1 mg/l to 10.0 mg/l

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	Drinking Water Processed Food Industry/ Ground Water/ Water from	Calcium as Ca	IS 3025 (Part 40): 1991 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3500 Ca B: 2012	0.5 mg/l to 10000 mg/l
	Water from Purifiers/Others	Chloride as Cl	IS 3025 (Part 32): 1988 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500 Cl: 2012	1.0 mg/l to 1000 mg/l
		Copper as Cu	IS 3025 (Part 42): 1992 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3111B: 2012	0.005 mg/l to 25 mg/l
		Fluride as F	IS 3025 (Part 60): 2008 / APHA (22 <sup>nd</sup> Edition) 4500 F-: 2012	0.1 mg/l to 5.0 mg/l
		Free residual chlorine	IS 3025 (Part 26 ): 1986 (RA 2009) / APHA (22 <sup>nd</sup> Edition) 4500-Cl E: 2012	0.1 mg/l to 10.0 mg/l
		Iron as Fe	IS 3025:(Part 53): 2009 / APHA (22 <sup>nd</sup> Edition) 3111B: 2012	0.05 mg/l to 50 mg/l
		Magnesium as Mg	IS 3025 (Part 46): 1994 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3500 Mg B: 2012	0.5 mg/l to 500 mg/l

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	Drinking Water Processed Food Industry/	Manganese as Mn	IS 3025 (Part 59): 2012 / APHA (22 <sup>nd</sup> Edition) 3111B: 2012	0.01 mg/l to 20.0 mg/l
	Ground Water/ Water from Purifiers/Others	Mineral Oil	IS 3025 (Part 39): 1991 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 5520 O&G,B: 2012	0.01 mg/l to 5.0 mg/l
		Nitrate as NO <sub>3</sub>	IS 3025 (Part 34): 1988 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500-NO <sub>3</sub> - B: 2012	1 mg/l to 100 mg/l
		Phenolic compound (as C <sub>6</sub> H <sub>5</sub> OH)	IS 3025 (Part 43): 1992 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 5530 A: 2012	0.001 mg/l to 1.0 mg/l
		Selenium (as Se)	IS 3025 (Part 53): 2009 / APHA (22 <sup>nd</sup> Edition) 3114 C,3113 B: 2012	0.005 mg/l to 1.0 mg/l
		Silver as Ag	IS 13428: 2005 Annexure J / APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.007 mg/l to 20.0 mg/l
		Sulphate as SO <sub>4</sub>	IS 3025 (Part 24): 1986 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500 SO <sub>4</sub> - E: 2012	1.0 mg/l to 5000 mg/l
		Silica as SiO <sub>2</sub>	APHA (22 <sup>nd</sup> Edition) 4500 SiO <sub>2</sub> D: 2012/ IS 3025 (Part 35) (RA 2003)	0.01 mg/l to 10 mg/l
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Drinking Water Processed Food Industry/ Ground Water/ Water from	Sulfide as H <sub>2</sub> S	IS 3025 (Part 29): 1986 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500 S - 2012	-	/l to 10.0 mg/l
Purifiers/Others	Total Alkalinity as CaCO <sub>3</sub>	IS 3025 (Part 23): 1986 (RA 2003) / APHA (22 <sup>nd</sup> Edition) 2320 B: 2012	1.0 mg/l	to 1000 mg/l
	Total Hardness as CaCO <sub>3</sub>	IS 3025 (Part 21): 1983 (RA 2012) / APHA (22 <sup>nd</sup> Edition) 2340 C: 2012	1.0 mg/l	to 10000 mg/l
	Zinc as Zn	IS 3025 (Part 49): 1994 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.002 m	g/l to 50 mg/l
	Cadmium as Cd	IS 3025 (Part 41): 1992 (RA 1998) / APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.004 m	g/l to 10 mg/l
	Cyanide as CN	IS 3025 (Part 27): 1986 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500 – CN- E: 2012 (by ISE)	0.01 mg	/l to 2.0 mg/l
	Lead as Pb	IS 3025 (Part 47): 1994 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3111B: 2012	0.005 m	g/l to 25 mg/l

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	Drinking Water Processed Food Industry/ Ground Water/ Water from	Mercury as Hg	IS 3025 (Part 48): 1994 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 3112 B: 2012	0.0005 mg/l to 1 mg/l
	Purifiers/Others	Nickel as Ni	IS 3025 (Part 54): 2003 / APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.004 mg/l to 25 mg/l
		Total Arsenic as As	IS 3025 (Part 37): 1988 (RA 1999)/ APHA (22 <sup>nd</sup> Edition) 3114 B, 3113 B: 2012	0.004 mg/l to 1.0 mg/l
		Total Chromium as Cr	IS 3025 (Part 52): 2009 / APHA (22 <sup>nd</sup> Edition) 3111 B: 2012/ IS 13428: 2004 Annexure J	0.006 mg/l to 10 mg/l
		Sodium as Na	IS 3025 (Part 45): 1993 (RA 1999)/ APHA (22 <sup>nd</sup> Edition) 3500-Na B: 2012	1.0 mg/l to 1000 mg/l
		Antimony as Sb	IS 13428 Annexure G / APHA (22 <sup>nd</sup> Edition) 3120: 2012	0.004 mg/l to 5.0 mg/l
		Nitrite as NO <sub>2</sub>	IS 3025(Part 34): 1988 (RA 2009)/ APHA (22 <sup>nd</sup> Edition) 4500-NO <sub>2</sub> B: 2012	0.01 mg/l to 10 mg/l
		Apperance	APHA (22 <sup>nd</sup> Edition) 2110: 2012	Qualitative (Visual Examination)

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	Drinking Water Processed Food Industry/	Phenolphthalein Alkalinity CaCO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 2320 B: 2012	1.0 mg/l to 1000 mg/l
	Ground Water/ Water from Purifiers/Others	Hexavalent Chromium as Cr <sup>6+</sup>	IS 3025 (Part 52): 2003 / APHA (22 <sup>nd</sup> Edition) 3500 – Cr,B: 2012	0.03 mg/l to 10 mg/l
3.	Water Construction Purpose	Organic solids	IS 3025 (Part 18): 1986 (RA 2012)	1 mg/l to 1000 mg/l
	i ui pose	Inorganic solids	IS 3025 (Part 18): 1984 (RA 2012)	1 mg/l to 10000 mg/l
		Sulphates as SO <sub>4</sub>	IS 3025 (Part 24): 1986 (RA 2009)	1 mg/l to 5000 mg/l
		Chlorides as Cl	IS 3025 (Part 32): 1988 (RA 2009)	1 mg/l to 5000 mg/l
		Suspended Matter	IS 3025 (Part 17): 1984 (RA 2002)	1 mg/l to 5000 mg/l
		pH Value @ 25°C	IS 3025 (Part 11): 1984 (RA 2012)	1 to 14
		To neutralize 100ml of sample water using phenolphthalein as an indicator using 0.02N NaOH	IS 3025 (Part 22) (RA 2003)	0.1 ml to 50 ml
		To neutralize 100ml of sample water using Mixed indicator using 0.02 N H <sub>2</sub> SO <sub>4</sub>	IS 3025 (Part 23) (RA 2003)	0.1 ml to 50 ml

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4.	Reagent Grade Water	Specific Conductance at 25 °C	APHA (22 <sup>nd</sup> Edition) 2510: 2012/ IS 3025 (Part 14) (RA 2002)	1 μs/cm	to 500 µs/cm
		pH value @ 25 °C	APHA (22 <sup>nd</sup> Edition) 4500 H <sup>+</sup> - B: 2012/ IS 3025 (Part 11) (RA 2012)	- 1 to 14	
		Total solids at 105 °C	APHA (22 <sup>nd</sup> Edition) 2540 B: 2012 / IS 3025 (Part 15) (RA 2009)	1 mg/l to	o 100 mg/l
		Silica as SiO <sub>2</sub>	APHA (22 <sup>nd</sup> Edition) 4500 SiC D: 2012/ IS 3025 (Part 35) (RA 2003)	<b>0</b> <sub>2</sub> 0.01 mg	/l to 10 mg/l
		Colour retention of KMnO <sub>4</sub> at 27 °C	IS 1070: 2003 Annexure A	Qualitat	ive
5.	Swimming Pools/ Surface Water	Total alkalinity as CaCO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 2320 B: 2012	1.0 mg/l	to 10000 mg/l
		Phenolphthalein Alkalinity CaCO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 2320 B: 2012	1.0 mg/l	to 1000 mg/l
		Aluminium as Al	APHA (22 <sup>nd</sup> Edition) 3111 D,3113 B- Al: 2012	0.007 m	g/l to 50 mg/l
		Total Residual chlorine	APHA (22 <sup>nd</sup> Edition) 4500- Cl B: 2012	0.1 mg/l	to 10.0 mg/l
		Oxygen consumed in 4 hrs	IS 3025 (Part 63): 1964 (RA 2008) Clause. 51	0.2 mg/l	to 6 mg/l

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	Swimming Pools/ Surface Water	Total Dissolved solids	APHA (22 <sup>nd</sup> Edition) 2540C: 2012	1 mg/l to 10000 mg/l
		Chloride as Cl	APHA (22 <sup>nd</sup> Edition) 4500 Cl- B: 2012	1.0 mg/l to 10000 mg/l
		Iron as Fe	APHA (22 <sup>nd</sup> Edition) 3500- Fe B: 2012 (by UV)/ APHA (22 <sup>nd</sup> Edition) 3111B- Fe B: 2012	0.05 mg/l to 50 mg/l
		Lead as Pb	APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.005 mg/l to 50 mg/l
		Colour	APHA (22 <sup>nd</sup> Edition) 2120 B: 2012	1 Hazen to 100 Hazen
		Odour	APHA (22 <sup>nd</sup> Edition) 2150 B: 2012	Qualitative (Agreable/Disagreable)
		Taste	APHA (22 <sup>nd</sup> Edition) 2160 B: 2012	Qualitative (Agreable/Disagreable)
		Turbidity, NTU	APHA (22 <sup>nd</sup> Edition) 2130 B: 2012	0.1 to 200
		рН @ 25°С	APHA (22 <sup>nd</sup> Edition) 4500 H <sup>+</sup> - B: 2012	1 to 14
		Conductivity @ 25°C	APHA (22 <sup>nd</sup> Edition) 2510 B: 2012	1 μs/cm to 10000 μs/cm
		Dissolved Oxygen	APHA (22 <sup>nd</sup> Edition) 4500- O B: 2012	0.2 mg/l to 8 mg/l

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Swimming Pools/ Surface Water	BOD at 27°C for 3 days	IS 3025 (Part 44): 1993 (RA 2003)	2.0 mg/l to 5000 mg/l
	COD	APHA (22 <sup>nd</sup> Edition) 5220 B: 2012	4 mg/l to 5000 mg/l
	Oil and Grease	APHA (22 <sup>nd</sup> Edition) 5520 B: 2012 (Partition Gravimetric method)	1 mg/l to 1000 mg/l
	Total Hardness as CaCO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 2340 C: 2012	1.0 mg/l to 10000 mg/l
	Sulphate as SO <sub>4</sub>	APHA (22 <sup>nd</sup> Edition) 4500 SO <sub>4</sub> – B: 2012	- 1 mg/l to 5000 mg/l
	Nitrates as NO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 4500-NO <sub>3</sub> - B: 2012	1 mg/l to 50 mg/l
	Free Ammonia as NH <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 4500- NH <sub>3</sub> B,C: 2012	0.1 mg/l to 20 mg/l
	Fluoride as F	APHA (22 <sup>nd</sup> Edition) 4500 F- B,D: 2012	0.1 mg/l to 10 mg/l
	Calcium as Ca	APHA (22 <sup>nd</sup> Edition) 3500 Ca B: 2012	0.5 mg/l to 5000 mg/l
	Magnesium as Mg	APHA (22 <sup>nd</sup> Edition) 3500 Mg B: 2012	0.5 mg/l to 5000 mg/l
	Copper as Cu	APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.05 mg/l to 50.0 mg/l

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	Swimming Pools/ Surface Water	Zinc as Zn	APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.02 mg	/l to 50.0 mg/l
		Manganese as Mn	APHA (22 <sup>nd</sup> Edition) 3111B Mn 2012	0.1 mg/l	to 50.0 mg/l
		Boron as B	APHA (22 <sup>nd</sup> Edition) 4500 B: 2012/ IS 13428 (RA 2009) Annexure H	0.1 mg/l	to 10.0 mg/l
		Barium Ba	APHA (22 <sup>nd</sup> Edition) 3111 D: 2012	0.1 mg/l	to 25 mg/l
		Silver Ag	APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.05 mg	/l to 25 mg/l
		Arsenic as As	APHA (22 <sup>nd</sup> Edition) 3114 B,3113 B: 2012	0.002 m	g/l to 1.0 mg/l
		Mercury as Hg	APHA (22 <sup>nd</sup> Edition) 3112 B: 2012	0.0005 r	ng/l to 1.0 mg/l
		Cadmium as Cd	APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.004 m	g/l to 10.0 mg/l
		Hexavalent Chromium as Cr <sup>6+</sup>	APHA (22 <sup>nd</sup> Edition) 3500 Cr B: 2012	0.03 mg	/l to 0.2 mg/l
		Selenium as Se	APHA (22 <sup>nd</sup> Edition) 3114 C, 3113 B: 2012	0.003 m	g/l to 1.0 mg/l
		Cyanide as CN	APHA (22 <sup>nd</sup> Edition) 4500- CN- C,E: 2012 (by ISE)	0.01 mg	/l to 2.0 mg/l

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	Swimming Pools/ Surface Water	Phenolic compounds as C6H5OH	APHA (22 <sup>nd</sup> Edition) 5530 C 2012	2: 0.001 m	g/l to 1 mg/l
		Anionic detergents (as MBAS)	APHA (22 <sup>nd</sup> Edition) 5540 B 2012	s,C: 0.05 mg	/l to 5.0 mg/l
		Percent Sodium (%)	IS 2296: 1982	5 % to 1	00 %
		Sodium Absorption Ratio	IS 11624: 1986 (RA 2001)	2 me/l to	o 1000 me/l
		Silica as SiO <sub>2</sub>	APHA (22 <sup>nd</sup> Edition) 4500 S C,D: 2012	iO <sub>2</sub> 0.01 mg	/l to 50 mg/l
		Sulphite as SO <sub>3</sub> - Iodometric method	APHA (22 <sup>nd</sup> Edition) 4500B SO <sub>3</sub> : 2012	- 2.0 mg/l	to 50 mg/l
		Phosphate as PO <sub>4</sub>	APHA (22 <sup>nd</sup> Edition) 4500-1 B,D: 2012	P 0.05 mg	/l to 100 mg/l
6.	Packaged	Pesticides			
	Drinking Water Natural Mineral	Alachlor	SMSLA/IN/SOP/02 Issue. 1	0.01 µg/	/l to 1.2 μg/l
	Water Processed Food Industry	Atrazine	Dated. 18.07.2012 By GCMSMS Based on USEPA 508 Rev. 3.0 (1989)/525.5 Rev. 2.0 (1995) /8321B Rev. 2 February 2007 /515.1 Rev. 4.0 (1989/532 Rev. 1.0 June 2000/ 8141A Rev. 1 September 1994 & 1657A Rev. A September		'l to 1.2 μg/l
	Drinking Water	Aldrin		0.01 μg/	'l to 1.2 μg/l
		Dieldrin		0.01 μg	'l to 1.2 μg/l
		Alpha-HCH			'l to 1.2 μg/l
		Beta-HCH	2000	0.01 µg⁄	'l to 1.2 μg/l

Butachlor

0.01  $\mu$ g/l to 1.2  $\mu$ g/l

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	Packaged Drinking Water	Chlorpyriphos	SMSLA/IN/SOP/02 Issue. 1 Dated. 18.07.2012 By	0.01 µg/l to 1.2 µg/l
	Natural Mineral Water Processed Food Industry	Delta-HCH	GCMSMS Based on USEPA 0.01 µg/l to 1.2	0.01 $\mu g/l$ to 1.2 $\mu g/l$
		o,p'DDT	508 Rev. 3.0 (1989)/525.5 Rev. 2.0 (1995) /8321B Rev. 2	0.01 $\mu g/l$ to 1.2 $\mu g/l$
	Drinking Water	p,pDDT	February 2007 /515.1 Rev. 4.0 (1989/532 Rev. 1.0 June 2000/	0.01 $\mu g/l$ to 1.2 $\mu g/l$
		o,p'DDE	8141A Rev. 1 September 1994 & 1657A Rev. A September	$0.01~\mu\text{g/l}$ to $1.2~\mu\text{g/l}$
	p,p'DDE	p,p'DDE	2000	0.01 $\mu g/l$ to 1.2 $\mu g/l$
		o,p'-DDD		0.01 µg/l to 1.2 µg/l
		p,p'-DDD		0.01 $\mu g/l$ to 1.2 $\mu g/l$
		alpha-Endosulfan		0.01 $\mu g/l$ to 1.2 $\mu g/l$
		beta Endosulfan		0.01 $\mu g/l$ to 1.2 $\mu g/l$
		Endosulfan sulfate		0.01 $\mu g/l$ to 1.2 $\mu g/l$
		Ethion		0.01 $\mu g/l$ to 1.2 $\mu g/l$
		Gamma-HCH (Lindane)		0.01 µg/l to 1.2 µg/l
		Methyl Parathion		0.01 µg/l to 1.2 µg/l
		Methyl Paraoxon		0.01 µg/l to 1.2 µg/l
		Phorate		0.01 µg/l to 1.2 µg/l
		Phoratesulphoxide		0.01 µg/l to 1.2 µg/l
		Phoratesulphone		0.01 μg/l to 1.2 μg/l

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	Packaged Drinking Water	Isoproturon	SMSLA/IN/SOP/01 Issue. 1 Dated. 18.07.2012 By LCMSMS	0.01 µg/l to 1.2 µg/l
	Natural Mineral Water Processed	Malathion	Based on EPA method 525.2 Rev. 2.0 : 1995 /3510 Rev. 3	0.01 µg/l to 1.2 µg/l
	Food Industry Drinking Water	Malaoxon	December 1996/532 Rev. 1.0 June 2000/8141A Rev. 1	0.01 $\mu g/l$ to 1.2 $\mu g/l$
	8	Monocrotophos	September 1994 /1657A Rev. A September 2000 &8321A Rev. 1	$0.01~\mu\text{g/l}$ to $1.2~\mu\text{g/l}$
		2,4-D	December 1996	$0.01~\mu\text{g/l}$ to $1.2~\mu\text{g/l}$
		Polychlorinated biphenyls (PCBs)	SMSLA/IN/SOP/03 Issue. 1 Dated. 18.07.2012 by GCMSMS based on EPA method 608 Rev 2.2 EPA EMSL-Ci May 1991,EPA 3510 Rev. 3 December 1996 & Annexure M IS 13428: 2005	0.01 μg/l to 1.0 μg/l
		Polynuclear aromatic hydrocarbons (PAHs)	SMSLA/IN/SOP/04 Issue. 1 Dated. 18.07.2012 by GCMSMS based on APHA 6440/USEPA 525.2 Rev. 2.0: 1995 & IS 5182 (Part 12): 2004.	0.01 μg/l to 1.0 μg/l
IV.	ENVIRONMENT			
1.	STP Water / Effluent Water/ Waste Water/	Colour	APHA (22 <sup>nd</sup> Edition) 2120 B: 2012	1 Hazens to 500 Hazer
	Treated Water	Temperature °C	APHA (22 <sup>nd</sup> Edition) 2550B: 2012	25 °C to 100 °C
		pH value @ 25°C	APHA (22 <sup>nd</sup> Edition) 4500 H <sup>+</sup> - B: 2012	1 to 14

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	STP Water / Effluent Water/	Total suspended solids(TSS)	APHA (22 <sup>nd</sup> Edition) 2540 D: 2012	1 mg/l to 1000 mg/l
	Waste Water/ Treated Water	Total Dissolved solids	APHA (22 <sup>nd</sup> Edition) 2540 C: 2012	1 mg/l to 50000 mg/l
		Conductivity $\mu$ S/cm @ 25 °C	APHA (22 <sup>nd</sup> Edition) 2510 B: 2012	1 µs/cm to 50000 µs/cm
		Oil and Grease	APHA (22 <sup>nd</sup> Edition) 5520: 2012 (Partition Gravimetric method)	4 mg/l to 5000 mg/l
		Total Residual chlorine	APHA (22 <sup>nd</sup> Edition) 4500 Cl- B: 2012	0.1 mg/l to 10 mg/l
		Free Ammonia as NH <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 4500 NH <sub>3</sub> B,C: 2012	0.5 mg/l to 50 mg/l
		Ammonical Nitrogen as NH <sub>3</sub> -N	APHA (22 <sup>nd</sup> Edition) 4500 NH <sub>3</sub> B,C: 2012	1.0 mg/l to 100 mg/l
		Total Kjeldahl Nitrogen as N	APHA (22 <sup>nd</sup> Edition) 4500 Norg - B: 2012	1.0 mg/l to 250 mg/l
		BOD at 27°C for 3 days	IS 3025 (Part 44): 1993 (RA 2003)	2.0 mg/l to 10000 mg/l
		BOD at 20°C for5days	APHA (22 <sup>nd</sup> Edition) 5210 B: 2012	2.0 mg/l to 5000 mg/l
		COD (Open reflux method)	APHA (22 <sup>nd</sup> Edition) 5220 B: 2012	4 mg/l to 7000 mg/l
		Arsenic as As	As APHA (22 <sup>nd</sup> Edition) 3114B, 3113 B: 2012	0.01 mg/l to 1.0 mg/l

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	STP Water / Effluent Water/	Mercury as Hg	APHA (22 <sup>nd</sup> Edition) 3112 B: 2005	0.0005 mg/l to 1.0 mg/l
	Waste Water/ Treated Water	Lead as Pb	APHA (22 <sup>nd</sup> Edition) 3111 B: 2005	0.005 mg/l to 50 mg/l
		Cadmium as Cd	APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.02 mg/l to 25 mg/l
		Hexavalent Chromium as Cr <sup>6+</sup>	APHA (22 <sup>nd</sup> Edition) 3500 Cr B: 2012	0.01 mg/l to 0.2 mg/l
		Total Chromium as Cr	APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.25 mg/l to 25 mg/l
		Copper as Cu	APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.05 mg/l to 50 mg/l
		Zinc as Zn	APHA (22 <sup>nd</sup> Edition) 3111 B: 2012	0.02 mg/l to 50 mg/l
		Nickel as Ni	APHA (22 <sup>nd</sup> Edition) 3111 B: 2005	0.1 mg/l to 50 mg/l
		Boron as B	APHA (22 <sup>nd</sup> Edition) 3500 B: 2012/ IS 13428 (RA 2009) Annexure H	0.1 mg/l to 10.0 mg/l
		Percent sodium	IS 2296: 1982	5 % to 100 %
		Residual Sodium Carbonate	IS 11624: 1986 (RA 2009)	1.5 me/l to 25 me/l

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	STP Water / Effluent Water/ Waste Water/ Treated Water	Cyanide as CN	APHA (22 <sup>nd</sup> Edition) 4500-CN- C,E: 2012 (by ISE)	0.1 mg/l to 10 mg/l
		Chloride as Cl	APHA (22 <sup>nd</sup> Edition) 4500 Cl <sup>-</sup> B: 2012	1 mg/l to 10000 mg/l
		Fluoride as F	APHA (22 <sup>nd</sup> Edition) 4500 F- B,D: 2012	0.1 mg/l to 10 mg/l
		Total Phosphorous as P	APHA (22 <sup>nd</sup> Edition) 4500- P B,D: 2012	0.05 mg/l to 25 mg/l
		Dissolved Phosphorous as P	APHA (22 <sup>nd</sup> Edition) 4500- P B,D: 2012	0.05 mg/l to 25 mg/l
		Sulphates as SO4	APHA (22 <sup>nd</sup> Edition) 4500 SO <sub>4</sub> - B: 2012	5 mg/l to 5000 mg/l
		Sulphide as S - Iodometric Method	APHA (22 <sup>nd</sup> Edition) 4500 S <sup>-</sup> F: 2012	1.0 mg/l to 100 mg/l
		Phenolic compounds as C6H5OH	APHA (22 <sup>nd</sup> Edition) 5530 C: 2012	0.001 mg/l to 1.0 mg/l
		Mixed Liquid suspended solids(MLSS)	APHA (22 <sup>nd</sup> Edition) 2540 D: 2012	5 mg/l to 10000 mg/l
		Mixed Liquid volatile solids(MLVS)	APHA (22 <sup>nd</sup> Edition) 2540 E: 2012	5 mg/l to 10000 mg/l
		Mixed Liquid Fixed Solids(MLFS), mg/l	APHA (22 <sup>nd</sup> Edition) 2540 E: 2012	5 mg/l to 10000 mg/l

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	STP Water / Effluent Water/ Wasta Water/	Sludge Volume Index(SVI)	APHA (22 <sup>nd</sup> Edition) 2710 D: 2012	5 ml/g to 1000 ml/g $$
	Waste Water/ Treated Water	Settleable Solids	APHA (22 <sup>nd</sup> Edition) 2540 F: 2012	0.1 ml/l to 100 ml/l
		Iron as Fe	APHA (22 <sup>nd</sup> Edition) 3500 Fe B: 2012	0.02 mg/l to 100 mg/l
		Nitrite as NO <sub>2</sub>	APHA (22 <sup>nd</sup> Edition) 4500- NO <sub>2</sub> B: 2012	0.01 mg/l to 50 mg/l
		Nitrate as NO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 4500- NO <sub>3</sub> - B: 2012	1 mg/l to 100 mg/l
		Total Alkalinity as CaCO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 2320 B: 2012	1.0 mg/l to 1000 mg/l
		Magnesium as Mg	APHA (22 <sup>nd</sup> Edition) 3500 Mg B: 2012	0.5 mg/l to 5000 mg/l
		Sodium as Na	APHA (22 <sup>nd</sup> Edition) 3111- Na B: 2012	1 mg/l to 1000 mg/l
		Total Hardness as CaCO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 2340 C: 2012	1.0 mg/l to 10000 mg/l
		Calcium as Ca	APHA (22 <sup>nd</sup> Edition) 3500 Ca B: 2012	0.5 mg/l to 10000 mg/
		Potassium as K	APHA (22 <sup>nd</sup> Edition) 3111B- K B: 2012	1 mg/l to 1000 mg/l
		Fixed Solids	APHA (22 <sup>nd</sup> Edition) 2540E: 2012	5 mg/l to 1000 mg/l

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	STP Water / Effluent Water/	Volatile Solids	APHA (22 <sup>nd</sup> Edition) 2540 E: 2012	5 mg/l to 1000 mg/l
	Waste Water/ Treated Water	Acidity as CaCO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 2310B: 2012	1.0 mg/l to 1000 mg/l
		Calcium Hardness as CaCO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 3500 Ca B: 2012	1.0 mg/l to 10000 mg/l
		Magnesium Hardness as CaCO <sub>3</sub>	APHA (22 <sup>nd</sup> Edition) 3500 Mg B: 2012	1.0 mg/l to 5000 mg/l
		Salinity	APHA (22 <sup>nd</sup> Edition) 2520: 2012	1 ppt to 40 ppt
2.	Industrial Water	Selenium (as Se)	IS 3025 (Part 65): 2014/ SMSLA/EN/SOP-019	0.01 mg/l to 100 mg/l
		Manganese (as Mn)		0.01 mg/l to 100 mg/l
		Vanadium (as V)		0.01 mg/l to 100 mg/l
3.	Soil	Calcium as Ca	EPA method 3050 B Rev. 2 - December 1996/ SMALA/EN/SOP/100 Issue. 01 Dated. 05.02.2015	5 mg/kg to 5000 mg/kg
		Magnesium as Mg	EPA method 3050 B Rev. 2 - December 1996/ SMSLA/EN/SOP/101 Issue. 01 Dated. 05.02.2015	5 mg/kg to 5000 mg/kg
		Sodium as Na	EPA method 3050 B Rev. 2 - December 1996/by flame photometry	10 mg/kg to 5000 mg/kg

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	Soil Potassium as K		EPA method 3050 B Rev. 2 - December 1996/IS 10158: 1982//by flame photometry	10 mg/kg to 5000 mg/kg
		Calcium Carbonate as CaCO3	SMSLA/EN/SOP/72 Issue. 01 Dated. 05.02.2015	5 mg/kg to 5000 mg/kg
		Lead as Pb	EPA 200.8 Rev. 5.4: 1994	40 mg/kg to 5000 mg/kg
		Cadmium as Cd	EPA 200.8 Rev. 5.4: 1994	25 mg/kg to 5000 mg/kg
		Mercury as Hg	EPA 200.8 Rev. 5.4: 1994	0.1 mg/kg to 1000 mg/kg
		Copper as Cu	EPA 200.8 Rev. 5.4: 1994	3 mg/kg to 1000 mg/kg
		Zinc as Zn	EPA method 3050 B Rev. 2: December 1996	5 mg/kg to 1000 mg/kg
		Selenium as Se	EPA 200.8 Rev. 5.4: 1994	0.5 mg/kg to 1000 mg/kg
		Arsenic as As	EPA 200.8 Rev. 5.4: 1994	0.2 mg/kg to 1000 mg/kg
		Iron as Fe	EPA 200.8 Rev. 5.4: 1994	20 mg/kg to 1000 mg/kg
		Manganese as Mn	EPA 200.8 Rev. 5.4: 1994	10 mg/kg to 1000 mg/kg
		Chromium as Cr	EPA 200.8 Rev. 5.4: 1994	25 mg/kg to 1000 mg/kg
		Nickel as Ni	EPA 200.8 Rev. 5.4: 1994	10 mg/kg to 1000 mg/kg
		Tin as Sn	EPA 200.8 Rev. 5.4: 1994	500 mg/kg to 1000 mg/kg

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	Soil	Antimony as Sb	EPA 200.8 Rev. 5.4: 1994	100 mg/kg to 1000 mg/kg
		Aluminium as Al	EPA 200.8 Rev. 5.4: 1994	100 mg/kg to 1000 mg/kg
		Silver as Ag	EPA 200.8 Rev. 5.4: 1994	5 mg/kg to 1000 mg/kg
		Barium as Ba	EPA 200.8 Rev. 5.4: 1994	100 mg/kg to 1000 mg/kg
		Boron as B	EPA 200.8 Rev. 5.4: 1994/ SMSLA/EN/SOP/094 Issue. 01 Dated. 05.02.2015	10 mg/kg to 1000 mg/kg
		Conductivity @ 25 °C	IS 14767: 2000	0.1 μs/cm to 50000 μs/cm
		pH @ 25 °C	IS 10158: 1982 (RA 2007) / IS 2720 (Part 26): 1987 (RA 2007)	1 to 14
		Moisture (%)	IS 2720 (Part 2): 1973 (RA 2012)	0.2 % to 99 %
		Bulk Density	SMSLA/EN/SOP/74 Issue. 01 Dated. 05.02.2015	1 0 kg/m <sup>3</sup> to 5000 kg/m <sup>3</sup>
		C:N Ratio	SMSLA/EN/SOP/75 Issue. 01 Dated. 05.02.2015	NA
		Density g/cc	SMSLA/EN/SOP/77 Issue. 01 Dated. 05.02.2015	0.5 g/cc to 5 g/cc

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	Soil	Total Kjeldal Nitrogen as N	IS 10158: 1982 (RA 2007)	5 mg/kg to 1000 mg/kg
		Carbonate as CO <sub>3</sub>	SMSLA/EN/SOP/098 Issue. 01 Dated. 05.02.2015	5 mg/kg to 1000 mg/kg
		Bicarbonate asHCO <sub>3</sub>	SMSLA/EN/SOP/098 Issue. 01 Dated. 05.02.2015	5 mg/kg to 1000 mg/kg
		Chloride as Cl	SMSLA/EN/SOP/097 Issue. 01 Dated. 05.02.2015	5 mg/kg to 1000 mg/kg
		Sulphate as So4	SMSLA/EN/SOP/127 Issue. 01 Dated. 05.02.2015 /By Gravemetric Method	5 mg/kg to 10000 mg/kg
		Colour	SMSLA/EN/SOP/78 Issue. 01 Dated. 05.02.2015	Qualitative
		Ash Content (%)	SMSLA/EN/SOP/79 Issue. 01 Dated. 05.02.2015	0.2 % to 90 %
		Cation Exchange Capacity	EPA 9081 Revised September 1986	(10 meq to 5000 meq) /100g
		Exchangeable sodium as Na	SMSLA/EN/SOP/81 Issue. 01 Dated. 05.02.2015	10 mg/kg to 5000 mg/kg
		Exchangeable Potassium as K	SMSLA/EN/SOP/81 Issue. 01 Dated. 05.02.2015	10 mg/kg to 5000 mg/kg
		Exchangeable Calcium as Ca	SMSLA/EN/SOP/81 Issue. 01 Dated. 05.02.2015	5 mg/kg to 5000 mg/kg

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	Soil	Exchangeable Magnessium as Mg	SMSLA/EN/SOP/81 Issue. 01 Dated. 05.02.2015	5 mg/kg to 5000 mg/kg
		Available Nitrogen as N	SMSLA/EN/SOP/82 Issue. 01 Dated. 05.02.2015	5 mg/kg to 5000 mg/kg
		Available Phosphorous as P	SMSLA/EN/SOP/83 Issue. 01 Dated. 05.02.2015	5 mg/kg to 5000 mg/kg
		Sodium Absorption ratio	SMSLA/EN/SOP/85 Issue. 01 Dated. 05.02.2015	5 meq/kg to 1000 meq/kg
		Total Water Soluble Solids	IS 2720 (Part 21): 1973	0.1 μs/cm to 50000 μs/cm
		Gross Calorific Value,cal/g	ASTM D 240-02 (Reapproved 2007)/ IS 10158: 1982 (RA 2007)	100 cal/g to 1000 cal/g
		Phosphorous as P	IS 10158: 1982 (RA 2007)	5 mg/kg to 10000 mg/kg
		Total Nitrogen as N	IS 10158: 1982 (RA 2007)	5 mg/kg to 10000 mg/kg
		Total Organic Carbon	SMSLA/EN/SOP/86 Issue. 01 Dated. 05.02.2015	0.1 % to 20 %
		Molybdenum as Mo	EPA 200.8 Rev. 5.4: 1994	100 mg/kg to 5000 mg/kg
		Total Organic matter	IS 2720 (Part 22): 2002	0.1 % to 20 %
		Ammonia as NH <sub>3</sub>	SMSLA/EN/SOP/126 Issue. 01 Dated. 05.02.2015	5 mg/kg to 10000 mg/kg

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	Soil	Ammonical Nitrogen as NH <sub>3</sub> -N	SMSLA/EN/SOP/129 Issue. 01 Dated. 05.02.2015	5 mg/kg to 10000 mg/kg
		Hexavalent Chromium as Cr <sup>6+</sup>	EPA 3060A Rev. 1 , December 1996 / EPA 7196 Rev. 1 July 1992	5 mg/kg to 10000 mg/kg
		Nitrates as NO <sub>3</sub>	SMSLA/EN/SOP/124 Issue. 01 Dated. 05.02.2015	5 mg/kg to 10000 mg/kg
		Nitrites as NO <sub>2</sub>	SMSLA/EN/SOP/125 Issue. 01 Dated. 05.02.2015	2 mg/kg to 10000 mg/kg
		Silica as SiO <sub>2</sub>	SMSLA/EN/SOP/87 Issue. 01 Dated. 05.02.2015	0.02 % to 99 %
		Loss on Ignition	SMSLA/EN/SOP/88 Issue. 01 Dated. 05.02.2015	0.2 % to 90 %
		Inert or Over Size Matter	SMSLA/EN/SOP/89 Issue. 01 Dated. 05.02.2015	NA
		Volatile Organic Compounds		
		1,1-Dichloroethylene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Dichloromethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Trans-1,2-Dichloroethene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg

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	Soil	1,1-Dichloroethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Cis-1,2-Dichloroethene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		2,2-Dichloropropane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Bromochloromethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Chloroform	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,1,1-Trichloroethene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,1-Dichloro-1-propene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Carbontetrachloride	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Benzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,2 -Dichloroethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Trichloroethylene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,2-Dichloropropane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg

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	Soil	Dibromomethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Bromodichloromethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Cis-1,3-Dichloropropene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Toluene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		trans-1,3-Dichloropropene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,1,2-Trichloroethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Tetrachloroethene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,3-Dichloropropane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Dibromochloromethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,2-Dibromoethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Chlorobenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		m-Xylene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg

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	Soil	1,1,1,2-Tetrachloroethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Ethylbenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		p-Xylene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		o-Xylene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Styrene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Bromoform	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Isopropylbenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,1,2,2-Tetrachloroethane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Bromobenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,2,3-Trichloropropane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Propylbenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		2-Chlorotoluene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg

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	Soil	1,3,5-Trimethylbenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		4-Chlorotoluene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Tert-Butylbenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,2,4-Trimethylbenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		Sec-Butylbenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,3-Dichlorobenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		p-Isopropyltoluene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,4- Dichlorobenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		n-Butylbenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,2-Dichlorobenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,2-Dibromo-3-chloropropane	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg
		1,2,4-Trichlorobenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/kg to 7.0 mg/kg

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	Soil	Hexachloro-1,3-butadiene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/k	tg to 7.0 mg/kg
		Napthalene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/k	to 7.0 mg/kg
		1,2,3-Trichlorobenzene	EPA Method 8260 Revised Dated. 12. 03.1999	0.1 mg/k	to 7.0 mg/kg
		Hydrocarbons			
		Octane	SMSLA/EN/SOP/136 Issue. 1 Dated. 01/05.02.2015 based o		to 15 mg/kg
		Nonane	NWTPCH-HCID		to 15 mg/kg
		Decane		5 mg/kg	to 15 mg/kg
		Undecane		5 mg/kg	to 15 mg/kg
		Dodecane		5 mg/kg	to 15 mg/kg
		Tridecane		5 mg/kg	to 15 mg/kg
		Tetradecane		5 mg/kg	to 15 mg/kg
		Pentadecane		5 mg/kg	to 15 mg/kg
		Hexadecane		5 mg/kg	to 15 mg/kg
		Heptadecane		5 mg/kg	to 15 mg/kg
		Octadecane		5 mg/kg	to 15 mg/kg

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Soil	Pristane	SMSLA/EN/SOP/136 Issue. 1 Dated. 01/05.02.2015 based on	5 mg/kg to 15 mg/kg
	Nanodecane	NWTPCH-HCID	5 mg/kg to 15 mg/kg
	Phytane		5 mg/kg to 15 mg/kg
	Eicosane		5 mg/kg to 15 mg/kg
	Heneicosane		5 mg/kg to 15 mg/kg
	Docosane		5 mg/kg to 15 mg/kg
	Tricosane		5 mg/kg to 15 mg/kg
	Tetracosane		5 mg/kg to 15 mg/kg
	Pentacosane		5 mg/kg to 15 mg/kg
	Hexacosane		5 mg/kg to 15 mg/kg
	Heptacosane		5 mg/kg to 15 mg/kg
	Octacosane		5 mg/kg to 15 mg/kg
	Nanocosane		5 mg/kg to 15 mg/kg
	Triacontane	ne	5 mg/kg to 15 mg/kg
	N-Hentriacontane		5 mg/kg to 15 mg/kg
	Dotriacontane		5 mg/kg to 15 mg/kg

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	Soil	Tritriacontane	SMSLA/EN/SOP/136 Issue. 1 Dated. 01/05.02.2015 based on	5 mg/kg to 15 mg/kg
		Tetratriacontane	NWTPCH-HCID	5 mg/kg to 15 mg/kg
		Pentatriacontane		5 mg/kg to 15 mg/kg
		Hexatriacontane		5 mg/kg to 15 mg/kg
		Heptatriacontane		5 mg/kg to 15 mg/kg
		Octatriacontane		5 mg/kg to 15 mg/kg
		Nanotriacontane		5 mg/kg to 15 mg/kg
		Tetracontane		5 mg/kg to 15 mg/kg
		Polynuclear Aromatic Hydrocarbons (PAH)		
		Naphthalene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Acenaphthylene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Acenaphthene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Fluorene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg

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	Soil	Anthracene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Phenanthrene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Fluoranthene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Pyrene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Benz(A)Anthracene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Chrysene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Benz(B)Fluoranthene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Benz(K)Fluoranthene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg
		Benzo(A)Pyrene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHOD 8100 Revised September 1986	0.1 mg/kg to 10 mg/kg

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Soil Ir	ndeno(1,2,3-CC)Pyrene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHO 8100 Revised September 1986	OD	g to 10 mg/kg
D	Dibenz(A,H)Anthracene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHO 8100 Revised September 1986	OD	g to 10 mg/kg
В	senzo(G,H,I)Perylene	EPA METHOD 3510C Rev. 3 December 1996 /EPA METHO 8100 Revised September 1986	OD	g to 10 mg/kg
Р	olychlorinated Biphenyls (PCB)			
2.	,6 dichlorobi phenyl	EPA 3545A Rev. 1 February 2007/EPA 8082 Revised December 1996	50 ug/kg	to 225 ug/kg
2	2,4,4Tri chlorobi phenyl	EPA 3545A Rev. 1 February 2007/EPA 8082 Revised December 1996	50 ug/kg	to 225 ug/kg
2	2,2,5,5Tetra chlorobi phenyl	EPA 3545A Rev. 1 February 2007/EPA 8082 Revised December 1996	50 ug/kg	to 225 ug/kg
2.	,2,3,4,5,5Hexachlorobi phenyl	EPA 3545A Rev. 1 February 2007/EPA 8082 Revised December 1996	50 ug/kg	to 225 ug/kg
2.	,2,4,4,5,5Hexachlorobi phenyl	EPA 3545A Rev. 1 February 2007/EPA 8082 Revised December 1996	50 ug/kg	to 225 ug/kg

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	Soil	2,2,3,4,4,5,5Heptachlorobi phenyl	EPA 3545A Rev. 1 February 2007/EPA 8082 Revised December 1996	50 ug/kg to 225 ug/kg
		Organochlorine Pesticides :		
		Alpha-HCH	SMSLA/IN/SOP/32 Issue. 1	0.1 mg/kg to 2.0 mg/kg
		Beta- HCH	Dated. 01/20.04.2015 Based on EPA Method 8081A	0.1 mg/kg to 2.0 mg/kg
		Gamma- HCH	Rev. 1 December 1996 & 3550C Rev. 3 February 2007	0.1 mg/kg to 2.0 mg/kg
		Delta- HCH		0.1 mg/kg to 2.0 mg/kg
		Heptachlor		0.1 mg/kg to 2.0 mg/kg
		Aldrin		0.1 mg/kg to 2.0 mg/kg
		Heptachlor Epoxide		0.1 mg/kg to 2.0 mg/kg
		Endosulfan-I		0.1 mg/kg to 2.0 mg/kg
		4,4-DDE		0.1 mg/kg to 2.0 mg/kg
		Dieldrin		0.1 mg/kg to 2.0 mg/kg
		Endrin Ketone		0.1 mg/kg to 2.0 mg/kg
		Endosulfan-II		0.1 mg/kg to 2.0 mg/kg
		4,4-DDD		0.1 mg/kg to 2.0 mg/kg
		Endrin Aldehyde		0.1 mg/kg to 2.0 mg/kg
		Endosulfan Sulfate		0.1 mg/kg to 2.0 mg/kg

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	Soil	4,4-DDT	SMSLA/IN/SOP/32 Issue. 1 Dated. 01/20.04.2015	0.1 mg/kg to 2.0 mg/kg
		Methoxychlor	Based on EPA Method 8081A Rev. 1 December 1996 & 3550C Rev. 3 February 2007	0.1 mg/kg to 2.0 mg/kg
4.	Used Oil / Waste Oil	Arsenic as As	EPA method 3031 Revised December 1996	1.0 mg/kg to 100 mg/kg
		Cadmium as Cd	EPA method 3031 Revised December 1996	1.0 mg/kg to 100 mg/kg
		Chromium as Cr	EPA method 3031 Revised December 1996	1.0 mg/kg to 100 mg/kg
		Nickel as Ni	EPA method 3031 Revised December 1996	1.0 mg/kg to 100 mg/kg
		Lead as Pb	EPA method 3031 Revised December 1996	1.0 mg/kg to 100 mg/kg
		Diluents	ASTM D 322-97 (Reapproved 2007)	0.05 % to 10 %
		Total Halogens as Cl	EPA method 5050 Revised September 1994	10 mg/kg to 5000 mg/kg
		Neutralization number	ASTM-D 974-08	(1 mg to 25 mg) KOH/ g
		Poly aromatic Hydrocarbons	ASTM D 5412-93(Reapproved 2007) by GCMS	2 mg/kg to 50 mg/kg
		Polychlorinated Biphenyl	ASTMD 6160- 98(Reapproved 2008)	2 mg/kg to 50 mg/kg

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	Used Oil / Waste Oil	Saponification Value	ASTM-D 94-07	(1 mg to 180 mg) KOH/g
		Density @ 15°C	ASTM D 1298-99 (Reapproved 2005)	0.800 g/cc to 3.000 g/cc
		Kinematic viscosity in CST	ASTM D 445: 2006	1 cst to 50 cst
		Water content	ASTM D 95-05	0.05 % to 10 %
		Flash point	ASTM D 93-08	40 °C to 250 °C
		Fire point	ASTM D 93-08	40 °C to 360 °C
		Sediment	ASTM D 1796-04 (Reapproved 2009)	0.05 % to 10 %
		Ash content	ASTM D 482-07	0.2 % to 90 %
		GCV	ASTM D 240-02 (Reapproved 2007)	50 kcal/kg to 10000 kcal/kg
		Sulphur	ASTM D 129-00 (Reapproved 2005)	0.1 % to 10 %
V.	ATMOSPHERIC I	POLLUTION		
1.	Stack Emission Monitoring	Oxygen as O <sub>2</sub>	IS 13270: 1992 (RA 2003)/By Flue gas Analyser	0.1 % to 21 %
		Temperature	By Digital thermocouple/ IS 11255 (Part 3): 2003	35°C to 1200 °C

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	Stack Emission Monitoring	Carbon Dioxide as CO <sub>2</sub>	IS 13270: 1992 (RA 2003)/ By Flue gas Analyser	0.1 % to	25 %
		Carbon Monoxide as CO	IS 13270: 1992 (RA 2003)/ By Flue gas Analyser	1.14 mg/ mg/m <sup>3</sup>	$/m^{3}$ to 5000
		Particulate Matter	IS 11255 (Part 1): 1985 / EPA 5i/EPA 17 Revised July 01 1991	-	to 500 mg/m <sup>3</sup>
		Sulphur Dioxide as SO <sub>2</sub>	IS 11255(Part 2): 1985 / EPA 6 (Title 40) Protection of Environment : Revised as of July 1, 1991)/ IS 13270: 1992/ Flue Gas Analyzer	1 mg/m <sup>3</sup>	to 2000 mg/m <sup>3</sup>
		Nitrogen Oxides as NO <sub>x</sub>	IS 11255 (Part 7): 1985 /IS 13270: 1992/ EPA 7 (Title 40 – Protection of Environment : Revised as of July 1, 1991)/Flue Gas Analyzer	mg/m <sup>3</sup>	n <sup>3</sup> to 1000
		Total Fluoride as F	EPA method 13 B (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.1 mg/r	$m^3$ to 10 mg/m <sup>3</sup>
		Sulphuric Acid Mist	EPA method 8 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	1 mg/m <sup>3</sup>	to 5000 mg/m <sup>3</sup>
		Moisture Content	EPA Method 1-3 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.1 % to	20 %

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Stack Emission Monitoring	Ammonia as NH3	IS 11255 (Part 6): 1999 (RA 2009)	0.02 mg/r 100 mg/n	
	Dioxins and Furans	EPA Method. 23A (sampling) Rev. 1 December 1996	For Samp	ling
	Lead as Pb	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.25 mg/r	n <sup>3</sup> to 10mg/m <sup>3</sup>
	Cadmium as Cd	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.025 mg	/m <sup>3</sup> to 5 mg/m <sup>3</sup>
	Mercury as Hg	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.025 mg 20 mg/m <sup>3</sup>	
	Copper as Cu	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.25 mg/r	n <sup>3</sup> to 30 mg/m <sup>3</sup>
	Arsenic as As	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.25 mg/r	m <sup>3</sup> to 50 mg/m <sup>3</sup>
	Manganese as Mn	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.25 mg/r mg/m <sup>3</sup>	n <sup>3</sup> to 100
	Chromium as Cr	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.25 mg/r	m <sup>3</sup> to 10 mg/m <sup>3</sup>

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	Stack Emission Monitoring	Nickel as Ni	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	$0.25 \text{ mg/m}^3$ to $10 \text{ mg/m}^3$
		Antimony as Sb	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.25 mg/m <sup>3</sup> to 10 mg/m <sup>3</sup>
		Cobalt as Co	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.25 mg/m <sup>3</sup> to 100 mg/m <sup>3</sup>
		Tellurium as Te	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.25 mg/m <sup>3</sup> to 100 mg/m <sup>3</sup>
		Vanadaium as V	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.125 mg/m <sup>3</sup> to 100 mg/m <sup>3</sup>
		Thallium as Tl	EPA Method. 29 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.001 mg/m <sup>3</sup> to 100 mg/m <sup>3</sup>
		Gaseous Discharge (Nm <sup>3</sup> /Hr)	IS 11255 (Part 3): 1985/ EPA 1- 3 (Title 40- Protection of Environment : Revised as of July 1, 1991)	NA
		HCl	EPA Method 26A Revised September 28, 1994	0.1 mg/m <sup>3</sup> to 10 mg/m <sup>3</sup>
		HF	EPA Method 26A Revised September 28, 1994	0.1 mg/m <sup>3</sup> to 10 mg/m <sup>3</sup>

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	Stack Emission Monitoring	Velocity	EPA method 1-3 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	1 m/s to :	50 m/s
		Non methane hydrocarbons	USEPA Method 25 (Title 40 – Protection of Environment : Revised as of July 1, 1991)	0.1 mg/n mg/m <sup>3</sup>	n <sup>3</sup> to 2000
		Volatile organic Compounds (VOCs) (As per EPA 504/524 VOC Mix A)	SMSLA/IN/SOP/07 Issue. 01 Dated. 02.11.2012 USPEA Method 18 Revised may 21, 1993	mg/m <sup>3</sup>	<sup>3</sup> to 2000
2.	Ambient Air Quality	Particulate Matter(PM10)	IS 5182 (Part 23): 2006 (RA 2012)/ By gravimetric method	$5 \ \mu g/m^3 t$	o 500 µg/m <sup>3</sup>
		Sulphur Dioxide as SO <sub>2</sub>	IS 5182 (Part 2): 2001 (RA 2012)	$3 \ \mu g/m^3 t$	o 250 µg/m <sup>3</sup>
		Nitrogen dioxide as NO <sub>2</sub>	IS 5182 (Part 6): 1975 (RA 2012)	$5 \ \mu g/m^3 t$	o 250 µg/m <sup>3</sup>
		Carbon Monoxide as CO	IS 5182 (Part 10): 1999 (RA 2009) (Indicator Tube Method)	1.14 mg/ mg/m <sup>3</sup>	m <sup>3</sup> to 343
		Lead as Pb	IS 5182 (Part 22): 2004/AAS- method after Sampling on EPM 2000 or Equivalent filter paper.		/m <sup>3</sup> to 1000
		Ammonia as NH3	BY Indophenol method	$5 \ \mu g/m^3 t$	o 500 µg/m <sup>3</sup>

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	Ambient Air Quality	Total Fluorides as F	IS 5182 (Part 13): 1991	0.1 mg/m <sup>3</sup> to 10 mg/m <sup>3</sup>
	Quality.	Mercury as Hg	IS 5182 (Part 22): 2004/AAS- method after Sampling on EPM 2000 or Equivalent filter paper.	0.1 ng/m <sup>3</sup> to 100 ng/m <sup>3</sup>
		Nickel as Ni	IS 5182 (Part 22): 2004/AAS- method after Sampling on EPM 2000 or Equivalent filter paper.	7 ng/m <sup>3</sup> to 1000 ng/m <sup>3</sup>
		Arsenic as As	IS 5182 (Part 22): 2004/AAS- method after Sampling on EPM 2000 or Equivalent filter paper.	1.0 ng/m <sup>3</sup> to 1000 ng/m <sup>3</sup>
		Ozone as O <sub>3</sub>	Chemical Method/ IS 5182 (Part 9) (RA 2009)	3 $\mu g/m^3$ to 200 $\mu g/m^3$
		Hydrocarbon	IS 5182 (Part 17): 1979 (RA 2009)	2.5 $\mu$ g/m <sup>3</sup> to 1000 $\mu$ g/m <sup>3</sup>
		Particulate Matter(PM2.5)	SMSLA/EN/SOP/062 Issue. 1 Dated. 05.02.2015	5 $\mu g/m^3$ to 500 $\mu g/m^3$
		Noise Level	IS 9989: 1981/Sound Level Meter/	30 dB to 130 dB
		Benzo (a) Pyrene (Particulate Phase)	IS 5182 (Part 4) For Sampling USEPA8270 Rev. 7 march 2011 for Analysis	0.16 ng/m <sup>3</sup> to 100 ng/m <sup>3</sup>
		Poly Aromatic Hydrocarbons (PAH)	IS 5182 (Part 12): 2004/ EPA TO 13A Rev. 2 January 1999	0.16 ng/m <sup>3</sup> to 100 ng/m <sup>3</sup>

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	Ambient Air Quality	Hydrocarbon	IS 5182 (Part 117): 1979 (RA 2009)	2.5 µg/m	$\mu^{3}$ to 1000 µg/m <sup>3</sup>
		Volatile organic compounds	SMSLA/IN/SOP/07 Issue. 01 Dated. 02.11.2012 EPA Compendium Method TO16 Rev. 2 January 1999 TO17 Rev. 2 January 1999	$1 \ \mu g/m^3$	to 1000 μg/m <sup>3</sup>
3.	Indoor Air Quality	Respirable particulate matter	NIOSH – 0600 Issue. 3 Dated. 15 January 1998	$5 \ \mu g/m^3$	to 500 $\mu$ g/m <sup>3</sup>
	Monitoring/ Work Zone/ Figutue Emission/	Sulphur Dioxide as SO <sub>2</sub>	IS 5182 (Part 2): 2001 (RA 2012)	$3 \ \mu g/m^3$	to 250 $\mu$ g/m <sup>3</sup>
	Industrial Hygienic	Oxides of nitrogen as NO <sub>2</sub>	IS 5182 (Part 6): 1975 (RA 2012)	$5 \ \mu g/m^3$	to 250 $\mu$ g/m <sup>3</sup>
		Ammonia as NH <sub>3</sub>	NIOSH – 6015 Issue. 2 Dated. 15 August 1994	$5 \ \mu g/m^3$	to 500 $\mu$ g/m <sup>3</sup>
		VOC's	NIOSH - 2549 Issue. 1 Dated. 15 may 1996 / by PID Anlyser		to 1000 ppm <sup>3</sup> to 1000 μg/m <sup>3</sup>
		Carbon Monoxide as CO	NIOSH – 6604 Issue. 1 Dated. 15 may 1996 / by IAQ analyser	1.14 mg/ mg/m <sup>3</sup>	<sup>/m<sup>3</sup></sup> to 300
		Lead as Pb	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	0.05 mg/	$m^3$ to 1 mg/m <sup>3</sup>
		Cadmium as Cd	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	$0.001 \text{ mg} \text{mg/m}^3$	g/m <sup>3</sup> to 100

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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
	Indoor Air Quality Monitoring/ Work	Copper as Cu	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	0.05 mg/m <sup>3</sup> to 1 mg/m <sup>3</sup>
	Zone/ Figutue Emission/ Industrial	Zinc as Zn	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	$0.05 \text{ mg/m}^3$ to $1 \text{ mg/m}^3$
	Hygienic	Selenium as Se	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	$0.05 \text{ mg/m}^3$ to $1 \text{ mg/m}^3$
		Arsenic as As	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	$0.005 \text{ mg/m}^3$ to 50 mg/m <sup>3</sup>
		Iron as Fe	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	$0.05 \text{ mg/m}^3$ to $1 \text{ mg/m}^3$
		Manganese as Mn	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	0.05 mg/m <sup>3</sup> to 1 mg/m <sup>3</sup>
		Chromium as Cr	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	0.01 $\mu g/m^3$ to 500 $\mu g/m^3$
		Nickel as Ni	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	0.05 mg/m <sup>3</sup> to 1 mg/m <sup>3</sup>
		Tin as Sn	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	0.3 mg/m <sup>3</sup> to 1 mg/m <sup>3</sup>
		Antimony as Sb	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	0.05 mg/m <sup>3</sup> to 1 mg/m <sup>3</sup>
		Aluminium as Al	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	0.05 mg/m <sup>3</sup> to 1 mg/m <sup>3</sup>

Laboratory	SMS Labs Services Private Limited, Puduchathram Post, Thirumazhisai Via Tamil Nadu	•
Accreditation Standard	ISO/IEC 17025: 2005	
Discipline	Chemical Testing	Issue Date 07.09.2015
Certificate Number	T-2637	Valid Until 06.09.2017
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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
	Indoor Air Quality	Cobalt as Co	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	0.05 mg/m <sup>3</sup> to 1 mg/m <sup>3</sup>
	Monitoring/ Work Zone/ Figutue Emission/	Beryllium as Be	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	$0.005 \text{ mg/m}^3$ to $1 \text{ mg/m}^3$
	Industrial Hygienic	Silver as Ag	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	$0.003 \text{ mg/m}^3$ to 100 mg/m <sup>3</sup>
		Barium as Ba	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	$0.05 \text{ mg/m}^3$ to $1 \text{ mg/m}^3$
		Vanadium as V	NIOSH – 7300 Issue. 3 Dated. 15 march 2003	0.14 mg/m <sup>3</sup> to 1mg/m <sup>3</sup>
		Carbon Dioxide as CO <sub>2</sub>	SMSLA/EN/SOP/141 Issue. 1 Dated. 05.02.2015	1.8 mg/m <sup>3</sup> to 5000 mg/m <sup>3</sup>
		Heat Stress	SMSLA/EN/SOP/142 Issue. 1 Dated. 05.02.2015	5 °C to 60 °C
		% Relative Humidity	SMSLA/EN/SOP/143 Issue. 1 Dated. 05.02.2015	20 % to 95 %
		Noise Level	IS 9989: 1981/Sound Level Meter	30 dB to 130 dB
		Illumination	SMSLA/EN/SOP/144 Issue. 1 Dated. 05.02.2015	1 LUX to 400000 LUX
		Ozone	Chemical Method/ IS 5182 (Part 9) (RA 2009)	20 $\mu g/m^3$ to 200 $\mu g/m^3$

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