

<b>Laboratory</b>	<b>Sigma Test &amp; Research Centre, BA-15, Mangolpuri Industrial Area, Phase-II, New Delhi</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Chemical Testing</b>	<b>Issue Date</b>	<b>31.03.2015</b>
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<b>S. No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
<b>I. METALS AND ALLOYS</b>				
<b>1. Mild steel</b>	Carbon		IS 228 (Part 1): 1987 (RA 2008)	0.05 % to 2.50 %
	Sulphur			0.01 % to 0.2 %
	Phosphorus		IS 228 (Part 9): 1989 (RA 2004)	0.001 % to 0.2 %
	Silicon		IS 228 (Part 3): 1987 (RA 2008)	0.05 % to 5.0 %
	Manganese			0.1 % to 10.0 %
	Carbon Equivalent		IS 228 (Part 8): 1989 (RA 2004)	0.1 to 0.7
			IS 228 (Part 2): 1987 By Calculation	
<b>2. Stainless Steel</b>	Carbon		IS 228 (Part 1): 1987 (RA 2008)	0.01 % to 2.0 %
	Sulphur			0.01 % to 0.2 %
	Phosphorus		IS 228 (Part 9): 1989 (RA 2004)	0.001 % to 0.2 %
	Silicon		IS 228 (Part 3): 1987 (RA 2008)	0.05 % to 5.0 %
	Manganese			0.1 % to 10.0 %
	Nickel		IS 228 (Part 8): 1989 (RA 2004)	0.1 % to 25.0 %
	Chromium		IS 228 (Part 2): 1987	0.1 % to 30.0 %

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		Molybdenum	IS 228 (Part 5): 1987 IS 228 (Part 6): 1987 IS 228 (Part 7): 1990	1.0 % to 4.0 %
<b>3.</b>	<b>Mild steel &amp; Stainless Steel</b>	Copper	IS 228 (Part 15): 1992/AAS IS 228 (Part 19): 1998 STRC/STP/BC11	0.05 % to 5 %/ 0.001 % to 0.5 %
		Nitrogen	Issue No/Date.1/22.09.2014	0.01 % to 0.5 %
		Titanium		0.1 % to 0.5 %
		Vanadium		0.05 % to 0.25 %
		Tin		0.1 % to 0.5 %
		Arsenic		0.1 % to 0.5 %
		Boron		0.5 % to 2.5 %
		Nickel		0.1 % to 0.5 %
		Chromium		0.1 % to 0.5 %
		Molybdenum		0.1 % to 0.5 %
<b>4.</b>	<b>GI Sheet/</b>	Anodic Coating	IS 5523: 1993 Clause. 2.3	1 micron to

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	<b>Pipe/Aluminium Product</b>		(Stripping)	2000 micron
		Mass of Zinc Coating	IS 6745: 1972 Clause. 3.1.1 (B) (Single spot test)	5 g/m <sup>2</sup> to 1000 g/m <sup>2</sup>
<b>II. BUILDING MATERIALS</b>				
<b>1.</b>	<b>Fly ash</b>	Loss on Ignition	IS 1727: 1967 (RA 2004)	0.1 % to 20.0 %
		Silica	IS 1727: 1967 (RA 2004)	10.0 % to 70.0 %
	<b>Fly ash</b>	Combined Ferric oxide and Alumina	IS 1727: 1967 (RA 2004)	1 % to 50.0 %
		Calcium Oxide	IS 1727: 1967 (RA 2004)	0.5 % to 20.0 %
		Magnesia	IS 1727: 1967 (RA 2004)	0.1 % to 10.0 %
		Sulphuric Anhydride	IS 1727: 1967 (RA 2004)	0.01 % to 10.0 %
		Available Alkalis (as Na <sub>2</sub> O)	IS 3812 (Part 1 & 2): 2013	0.01 % to 10.0 %
		Chloride	IS 4032: 1985	0.01 % to 0.5 %
<b>2.</b>	<b>Cement (OPC/PPC/PSC/WPC)</b>	Insoluble Residue	IS 4032: 1985 (RA 2005) Clause 4.10	0.1 % to 40 %
		Iron as Fe <sub>2</sub> O <sub>3</sub>	IS 4032: 1985 (RA 2005) Clause 4.5.2	0.1 % to 8.0 %

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		Alumina as Al <sub>2</sub> O <sub>3</sub>	IS 4032: 1985 (RA 2005) Clause 4.6.1	1.0 % to 10 %
		Sulphuric anhydride (as SO <sub>3</sub> )	IS 4032: 1985 (RA 2005) Clause 4.9	0.5 % to 5.0 %
		Calcium Oxide (CaO)	IS 4032: 85 (RA 2005) Clause 4.7.2	35 % to 70 %
		Magnesia (as MgO)	IS 4032: 1985 (RA 2005) Clause 4.8.2	0.5 % to 10 %
	<b>Cement (OPC/PPC/ PSC/WPC)</b>	Magnesia (as MgO) (for PPC)	IS 4032: 1985 Clause 7.2.1	0.1 % to 10.0 %
		Sulphur as Sulphide (S) (for PSC)	IS 4032: 1985 Clause 4.9	0.01 % to 5.0 %
		Combined Oxide (as R <sub>2</sub> O <sub>3</sub> )	IS 4032: 85(RA 2005)	1.0 % to 20.0 %
		Loss on ignition (LOI)	IS 4032: 85 (RA 2005)	0.5 % to 20 %
		Free Lime	IS 4032: 85 (RA 2005)	0.01 % to 5 %
		Alkali Content as Sodium Oxide (Na <sub>2</sub> O)	IS 4032: 85 (RA 2005)	0.01 % to 2 %
		Chloride content	IS 4032: 85 (RA 2005)	0.01 % to 2 %
		Silica	IS 4032: 1985 (RA 2005)	10 % to 40 %

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<b>3.</b>	<b>Soil</b>	Total soluble solids	IS 2720 (Part 21): 1977 (RA 2006)	(10 Micro mho to 5000 Micro mho)/cm
		Acidity	IS 3025 (Part 22): 1986	0.01 % to 20 %
		Alkalinity	IS 3025 (Part 23): 1986	0.01 % to 20 %
		Carbonates	IS 2720 (Part 23): 1976 (RA 2006)	0.01 % to 20 %
		Silica	IS 2720 (Part 25): 1982	40 % to 90.0 %
		Nitrogen	IS 10158: 1982 (RA 2003)	0.1 % to 5.0 %
		Phosphorus	IS 3025 (Part 31): 1988	0.1 % to 5.0 %
	<b>Soil</b>	Potassium Sodium	IS 3025 (Part 45): 1993 IS 3025 (Part 45): 1993	0.01 % to 10.0 % 0.01 % to 10 %
		pH	IS 2720 (Part 26): 1987 (RA 2002)	2 to 12
		Water soluble sulphates	IS 2720 (Part 27): 1977 (RA 2001)	0.01 % to 5 %
		Water soluble chlorides	IS 3025 (Part 32): 1988	0.01 % to 5 %
		Organic Matter	IS 2720 (Part 22): 1977 (RA 2001)	0.02 % to 10 %
<b>4.</b>	<b>Admixtures</b>	pH	IS 9103: 1999 (RA 2008)	4 to 10

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		Relative Density	IS 9103: 1999 (RA 2008)	0.7 to 1.5
		Dry Material Content	IS 9103: 1999 (RA 2008)	15 % to 50 %
		Ash Content	IS 9103: 19 99 (RA 2008)	1 % to 25.0 %
		Chloride Ion content	IS 6925: 1973 (RA 2008)	0.01 % to 1 %
<b>5.</b>	<b>Gypsum Building plaster</b>	Sulphur Trioxide (as SO <sub>3</sub> )	IS 1288: 1982 (RA 2006)	15 % to 50 %
		Calcium Oxide (as CaO)	IS 1288: 1982 (RA 2006) (Clause 10.1 KMnO <sub>4</sub> )	10 % to 35 %
		Soluble Magnesium Salt (as MgO)	IS 2547 (Part 1): 1976 (RA 2002) Appendix A IS 1288: 1982 (RA 1999)	0.01 % to 0.5 %
	<b>Gypsum Building plaster</b>	Soluble Sodium Salt (as Na <sub>2</sub> O)	IS 2547 (Part 1):1976 Appendix A IS 4032: 1985 (RA 2005)	0.01 % to 2 %
		Loss on Ignition	IS 2547: 1976 (Part 1) Appendix B	1 % to 20.0 %
		Free Lime	IS 2547 (Part 1): 1976 Appendix C	0.1 % to 5.0%

### III. FOOD AND AGRICULTURAL PRODUCTS

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<b>1.</b>	<b>Animal Feeds and Feeding Stuffs</b>	Moisture	IS 7874 (Part 1): 1975 (RA 2004)	(0.5 to 30) g/100g
		Total ash	IS 7874 (Part 1): 1975 (RA 2004)	(0.1 to 20) g/100g
		Acid insoluble ash	IS 7874 (Part 1): 1975 (RA 2004)	(0.1 to 15) g/100g
		Crude Protein	IS 7874 (Part 1): 1975 (RA 2004)	(0.5 to 90) g/100g
		Crude Fat	IS 7874 (Part 1): 1975 (RA 2004)	(0.1 to 15) g/100g
		Crude Fibre	IS 7874 (Part 1): 1975 (RA 2004)	(1 to 25) g/100g
		Phosphorus	AOAC (19 <sup>th</sup> Edition)965.17	(0.05 to 5) g/100g
		Salt as NaCl	AOAC (19 <sup>th</sup> Edition)960.29	(0.1 to 10) g/100g
		Sodium	AOAC (19 <sup>th</sup> Edition)966.16	(1.0 to 5000) mg/100g
		Potassium	AOAC (19 <sup>th</sup> Edition)965.30	(1.0 to 5000) mg/100g
<b>2.</b>	<b>Oil &amp; Fats Ghee, Butter,</b>	Moisture and volatile Matter	AOCS Ca 2c-25 (6 <sup>th</sup> Edition): 2009	(0.01 to 1) g/100g

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	<b>Margarine and Vanaspati</b>	Acid value	AOCS Cd 3d-63 (6 <sup>th</sup> Edition): 2009	0.1 to 10
		Unsaponifiable matter	AOCS Ca 6a-40 (6 <sup>th</sup> Edition): 2009	(0.01 to 10) g/100g
		Saponification value	AOCS Cd 3-25 (6 <sup>th</sup> Edition): 2009	150 to 300
		Specific gravity	AOCS Cc 10b-25 (6 <sup>th</sup> Edition): 2009	0.85 to 0.95
		Iodine value	AOCS Cd 1-25 (6 <sup>th</sup> Edition): 2009	7 to 200
		Refractive Index	AOCS Cc 7-25 (6 <sup>th</sup> Edition): 2009	1.4300 to 1.4700
		Flash point	AOAC Cc 9c-95 (6 <sup>th</sup> Edition): 2009	1 <sup>o</sup> C to 390 <sup>o</sup> C
		Peroxide value	AOCS Cd 8b-90 (6 <sup>th</sup> Edition): 2009	(1 to 100) meq/kg
		Melting point	AOCS Cc 1-25 (6 <sup>th</sup> Edition): 2009	15 <sup>o</sup> C to 80 <sup>o</sup> C
		Richert Missel Value	AOCS Cd 5-40 (6 <sup>th</sup> Edition): 2009	1 to 80

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		Polenske value	AOCS Cd 5-40 (6 <sup>th</sup> Edition): 2009	0.1 to 10
		Cholesterol	STRC/STP/F009 (Issue No./ Date:- 01/19.11.2013)	(0 to 1000) mg/100g
	<b>Oil &amp; Fats Ghee, Butter, Margarine and Vanaspati</b>	<b>Adulterations</b> Sesame oil Cotton seed oil Rice Bran oil Linseed oil Mustard oil Adulterations Sesame oil Cotton seed oil Rice Bran oil Linseed oil Mustard oil	IS 548: 1964 (RA 2010)	Qualitative (Present/Absent)
<b>3.</b>	<b>Oil seeds, Deoiled Seed &amp; Oil Cakes)</b>	Moisture	IS 3579: 1966 (RA 2000)	(0.01 to 25.0) g/100g
		Oil Content	IS 3579: 1966 (RA 2000)	(0.1 to 85.0) g/100g
		Damaged & Weevilled	IS 3579: 1966 (RA 2000)	(0.02 to 15.0)

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		Seeds		g/100g
		Slightly Damaged Seeds	IS 3579: 1966 (RA 2000)	(0.02 to 15.0) g/100g
		Shrivelled & Immature Seeds	IS 3579: 1966 (RA 2000)	(0.02 to 15.0) g/100g
		Impurities	IS 3579: 1966 (RA 2000)	(0.01 to 15.0) g/100g
		Acid value of extracted fat	IS 3579: 1966 (RA 2000)	0.1 to 10.0
<b>4.</b>	<b>Food Grains (Cereal &amp; Pulses)</b>	Moisture	IS 4333 (Part 2): 2002 (RA 2012)	(0.1 to 20.0) g/100g
		Refraction	IS 4333 (Part 1): 1996 (RA 2012)	(0.1 to 100) g/100g
		Uric acid	IS 4333 (Part 5): 1970 (RA 2005)	1 mg/kg to 100 mg/kg
		Mass of 1000 grains	IS 4333 (Part 4): 2002 (RA 2012)	200 g to 2000 g
	<b>Food Grains (Cereal &amp; Pulses)</b>	Sodium	AOAC (19 <sup>th</sup> Edition)966.16	(1.0 to 5000) mg/100g
		Potassium	AOAC (19 <sup>th</sup> Edition)965.30	(1.0 to 5000) mg/100g
<b>5.</b>	<b>Wheat Atta</b>	Moisture	IS 1155: 1968 (RA 2005)	(0.1 to 20) g/100g

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		Total ash	IS 1155: 1968 (RA 2005)	(0.05 to 10) g/100g
		Acid insoluble ash	IS 1155: 1968 (RA 2005)	(0.01 to 5) g/100g
		Gluten (on dry basis)	IS 1155: 1968 (RA 2005)	(1.0 to 30) g/100g
		Granularity	IS 1155: 1968 (RA 2005)	Qualitative
		Crude fibre	IS 1155: 1968 (RA 2005)	(0.2 to 5) g/100g
		Alcoholic acidity	IS 1155: 1968 (RA 2005)	(0.01 to 1.0) g/100g
		Sedimentation Index (Zeleny test)	IS 13864: 1993 (RA 2010)	5.0 ml to 74 ml
<b>6.</b>	<b>Maida</b>	Moisture	IS 1009: 1979 (RA 2005)	(0.1 to 20) g/100g
		Total ash	IS 1009: 1979 (RA 2005)	(0.05 to 10) g/100g
		Acid insoluble ash	IS 1009: 1979 (RA 2005)	(0.01 to 5) g/100g
		Gluten	IS 1009: 1979 (RA 2005)	(1.0 to 35) g/100g
		Granularity	IS 1009: 1979 (RA 2005)	Qualitative
		Alcoholic acidity	IS 1009: 1979 (RA 2005)	(0.01 to 2.0) g/100g
<b>7.</b>	<b>Suji/Rava</b>	Moisture	IS 1010: 1968 (RA 2005)	(0.1 to 20) g/100g
		Total ash	IS 1010: 1968 (RA 2005)	(0.05 to 10)

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		Acid insoluble ash	IS 1010: 1968 (RA 2005)	g/100g (0.01 to 5) g/100g
		Alcoholic acidity	IS 1010: 1968 (RA 2005)	(0.01 to 2.0) g/100g
		Gluten	IS 1010: 1968 (RA 2005)	(0.5 to 15) g/100g
<b>8.</b>	<b>Tea (Green Tea, Tea Leaves &amp; Ready Tea bags)</b>	Moisture	IS 13859: 1993 (RA 1998)	(0.1 to 20) g/100g
		Total ash	IS 13854: 1994 (RA 2004)	(1.0 to 20) g/100g
		Acid insoluble ash	IS 13857: 1993 (RA 2004)	(0.1 to 10) g/100g
		Water extract	IS 13862: 1999 (RA 2004)	(0.5 to 50) g/100g
		Water insoluble ash	IS 13855: 1993 (RA 2004)	(1.0 to 30) g/100g
		Water soluble ash	IS 13855: 1993 (RA 2004)	(1.0 to 10) g/100g
		Alkalinity of water - soluble ash (as K <sub>2</sub> O)	IS 13856: 1993 (RA 2004)	(0.5 to 10.0) g/100g
		Crude fibre	IS 10226 (Part 1): 1982 (RA 2005)	(0.5 to 50) g/100g
<b>9.</b>	<b>Edible Starches Arrowroot &amp; Soup Powder</b>	Moisture	IS 4706: 1978 (RA 2010)	(1 to 80) g/100g
		Total Ash	IS 4706: 1978 (RA 2010)	(0.1 to 50.0) g/100g
		Acid Insoluble ash	IS 4706: 1978 (RA 2010)	(0.01 to 50.0) g/100g

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	<b>Edible Starches Arrowroot &amp; Soup Powder</b>	Sulphated ash	IS 4706: 1978 (RA 2010)	(0.1 to 50.0) g/100g
		Crude Protein	IS 4706: 1978 (RA 2010)	(0.3 to 70.0) g/100g
		Starch	IS 4706: 1978 (RA 2010)	(0.1 to 90.0) g/100g
		Crude Fibre	IS 4706: 1978 (RA 2010)	(0.1 to 50.0) g/100g
		Sulphur dioxide	AOAC (19 <sup>th</sup> Edition) 990.28	(10 to 500) mg/kg
		Free acidity	IS 4706: 1978 (RA 2010)	(0.1 to 20.0) g/100g
		Alcoholic acidity	IS 4706: 1978 (RA 2010)	(0.01 to 1.0) g/100g
		pH	IS 4706: 1978 (RA 2010)	1.0 to 14.0
		Hydrocyanic acid	IS 4706: 1978 (RA 2010)	Qualitative (Absent/Present)
		Viscosity	IS 4706 (Part 1): 1978 (RA 2010)	200 cps to 100000 cps
<b>10</b>	<b>Nuts, Pistachio, Almonds, Dates, Ground nut, (Raisins, Cashew Nuts, Apricot &amp; Wall Nuts)</b>	Moisture	IS 4684: 1975 (RA 2005)	(0.5 to 50.0) g/100g
		Total Ash	IS 4684: 1975 (RA 2005)	(0.5 to 10.0) g/100g
		Acid Insoluble Ash	IS 4684: 1975 (RA 2005)	(0.05 to 10.0) g/100g
		Fat	IS 4684: 1975 (RA 2005)	(0.5 to 80.0) g/100g
		Crude fibre	IS 4684: 1975 (RA 2005)	(0.5 to 50.0) g/100g

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		Protein	IS 4684: 1975 (RA 2005)	(0.5 to 50.0) g/100g
		Acid value of extracted fat	IS 4684: 1975 (RA 2005)	(0.1 to 10.0) g/100g
<b>11</b>	<b>Fruits and Vegetables (Canned vegetables, Dried / Dehydrated vegetables, Frozen vegetables)</b>	Moisture	AOAC (19 <sup>th</sup> Edition)934.06	(0.1 to 95) g/100g
		Total Solid	AOAC (19 <sup>th</sup> Edition)920.151	(0.5 to 20) g/100g
		Ash	AOAC (19 <sup>th</sup> Edition)940.26	(0.1 to 10) g/100g
		Starch	IS 4706 (Part 2): 1978 (RA 2005)	(1 to 99) g/100g
		Total soluble solids	AOAC (19 <sup>th</sup> Edition)932.12/ (19 <sup>th</sup> Edition) 983.17	1 ° to 85 ° Brix
		Protein	AOAC (19 <sup>th</sup> Edition)920.152	(0.1 to 50) g/100g
		Reducing sugar	IS 2860: 1964 (RA 2008)	(1.0 to 70) g/100g
		Acidity (as citric acid)	AOAC (19 <sup>th</sup> Edition)942.15	(0.1 to 10) g/100g
		Sulphur dioxide	AOAC (19 <sup>th</sup> Edition)990.28	10 mg/kg to 1000 mg/kg
		Vitamin C	AOAC (19 <sup>th</sup> Edition)967.21	(1 to 500) mg/100g
<b>12</b>	<b>Raw Milk</b>	Total Solids	IS 1479 (Part 2): 1961 (RA 2009)	(5 to 20) g/100g

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		Ash	IS 1479 (Part 2): 1961 (RA 2009)	(0.01 to 2) g/100g
		Protein	IS 7219 : 1973 (RA 2005)	(0.5 to 5) g/100g
		Fat	IS 1479 (Part 2): 1961 (RA 2009)	(0.1 to 10) g/100g
		Solid Non Fat	IS 1479 (Part 1): 1960 (RA 2003)	(7 to 12.5) g/100g
		Titration Acidity	IS 1479 (Part 1): 1966 (RA 2003)	(0.05 g to 2.0 g)/100g
	<b>Raw Milk</b>	Lactose	IS 1479 (Part 2): 1961 (RA 2009)	(1 to 15) g/100g
		<b>Adulteration</b> Cane Sugar Starch Urea Neutralizer Hydrogen Peroxide Formalin	DGHS Manual 2005	Qualitative (Absent/Present)
<b>13</b>	<b>Dried Milk</b>	Moisture	AOAC (19 <sup>th</sup> Edition)927.05	(0.1 to 10) g/100g
		Total Solid	IS 1165: 2002 (RA 2009)	(20 to 100) g/100g
		Ash	IS 1165: 2002 (RA 2009)	(0.05 to 10) g/100g
		Fat	IS 11721: 2005 (RA 2010)	(0.1 to 25) g/100g

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		Protein	IS 7219: 1973 (RA 2005)	(10 to 50) g/100g
		Titration Acidity	IS 1165: 2002 (RA 2009)	(0.1 to 5) g/100g
		Insolubility Index	IS 12759: 1989 (RA 2009)	0.1 ml to 1 ml
		Vitamin A	STRC/STP/F012 (Issue No./ Date:- 01/30.12.2013)	(50 to 1000) µg/100g
		Vitamin E	STRC/STP/F013 (Issue No./ Date:- 01/14.10.2013)	(0.5 to 50) mg/100g
<b>14</b>	<b>Sweetened Condensed Milk</b>	Total Solids	IS 1166: 1986 (RA 2009)	(15 to 85) g/100g
		Total Milk Solid	IS 1166: 1986 (RA 2009)	(20 to 40) g/100g
		Fat	IS 1166: 1986 (RA 2009)	(0.1 to 15) g/100g
		Milk Solid Not Fat	IS 1166: 1986 (RA 2009)	(15 to 30) g/100g
		Titration Acidity	IS 1166:1986 (RA 2009)	(0.1 to 5) g/100g
		Sucrose	IS 1166: 1986 (RA 2009)	(10 to 60) g/100g
		Accelerated Storage test	IS 1166: 1986 (RA 2009)	Qualitative (Pass/Fail)

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<b>15</b>	<b>Paneer /Cheese (includes Natural &amp; Processed Cheese)</b>	Moisture	IS 10484: 1983 (RA 2010)	(1 to 80) g/100g
		Ash	IS 2785: 1979 (RA 2010)	(1 to 10) g/100g
		Fat	IS 2785: 1979 (RA 2010)	(1 to 70) g/100g
		Protein	IS 7219: 1973 (RA 2005)	(1 to 50) g/100g
		Titration acidity	IS 10484: 1983 (RA 2010)	(0.1 g to 5 g)/100g
		Salt	AOAC (19 <sup>th</sup> Edition) 960.29	(0.1 g to 10 g)/100g
<b>16</b>	<b>Ice cream</b>	Moisture	IS 2802: 1964 (RA 2009)	(10 to 80) g/100g
		Total solids	IS 2802: 1964 (RA 2009)	(25 to 65) g/100g
		Sucrose	IS 2802: 1964 (RA 2009)	(5 to 60) g/100g
		Milk Fat	IS 2802: 1964 (RA 2009)	(0.5 to 25) g/100g
<b>17</b>	<b>Liquid glucose</b>	Titration Acidity	IS 2802: 1964 (RA 2009)	(0.1 to 5) g/100g
		Dextrose Equivalent	IS 873: 1974 (RA 2010)	(20 to 60) g/100g
		Total solids	IS 873: 1974 (RA 2010)	(1.0 to 100) g/100g
		pH	IS 873: 1974 (RA 2010)	1.0 to 14
		Ash	IS 873: 1974 (RA 2010)	(0.02 to 5.0) g/100g
<b>18</b>	<b>Meat</b>	Sulphur Dioxide	AOAC (19 <sup>th</sup> Edition) 990.28	(10 to 500) mg /kg
		Moisture	AOAC (19 <sup>th</sup> Edition) 950.46	(1 to 85) g/100g

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.		Ash	AOAC (19 <sup>th</sup> Edition) 920.153	(0.5 to 5.0) g/100g
		Total Fat	AOAC (19 <sup>th</sup> Edition) 922.06	(1 to 20) g/100g
		Protein	IS 7219: 1973 (RA 2005)	(1 to 80) g/100g
		Total Phosphorus	AOAC (19 <sup>th</sup> Edition) 965.17	(0.01 to 3.0) g/100g
<b>19</b>	<b>Spices and Condiments (Whole &amp; Powdered)</b>	Moisture	IS 1797: 1985 (RA 2003)	(1 to 30) g/100g
.		Total ash	IS 1797: 1985 (RA 2003)	(1 to 30) g/100g
		Acid insoluble ash	IS 1797: 1985 (RA 2003)	(0.1 to 20) g/100g
		Non volatile ether extract	IS 1797: 1985 (RA 2003)	(0.5 to 40) g/100g
		Volatile oil	IS 1797: 1985 (RA 2003)	(0.1 to 20) g/100g
		Cold water soluble extract	IS 1797:1985 (RA 2003)	(0.05 to 90) g/100g
		Salt (as NaCl)	AOAC 960.29, 19th Edn	(0.05 to 90) g/100g
<b>20</b>	<b>Turmeric powder</b>	Crude Fibre	IS 1797:1985 (RA 2003)	(0.1 to 30) g/100g
.		Curcumin content	IS 10925: 1984 (RA 2007)	(1 to 95) g/100g
		Starch	IS 4706 (Part 2): 1978 (RA 2005)	(40 to 60) g/100g
		Presence of chromates	IS 3576:1994 (RA 2003)	Qualitative

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				(Present/Absent)
<b>21</b>	<b>Bakery products Baking Powder, Buns, Cake &amp; Pastry, Popcorns, Chips &amp; Wafers, Rusks, Pizza base &amp; Nans</b>	Moisture	IS 1485: 1993 (RA 2005)	(0.1 to 10) g/100g
		Ash	IS 1485: 1993 (RA 2005)	(0.1 to 20) g/100g
		Acid insoluble ash	IS 1485: 1993 (RA 2005)	(0.01 to 5) g/100g
		Fat	AOAC (19 <sup>th</sup> Edition)920.85	(1 to 60) g/100g
		Protein	IS 7219: 1973 (RA 2005)	(1 to 40) g/100g
		Carbohydrate	AOAC (19 <sup>th</sup> Edition)986.25	(10 to 90) g/100g
		Energy	STRC/STP/F073 (Issue No./ Date:- 01/22.09.2014)	(50 to 1000) kcal/100g
		Crude Fibre	IS 10226 (Part 1): 1982	(0.5 to 10) g/100g
		Total Sugar	AOAC (19 <sup>th</sup> Edition) 923.09	(0.5 to 20) g/100g
		Salt	AOAC (19 <sup>th</sup> Edition) 960.29	(0.1 to 1.0) g/100g
		Phosphorus	AOAC (19 <sup>th</sup> Edition) 965.17	(50 to 500) mg/100g
		Dietary Fibre	AOAC (19 <sup>th</sup> Edition) 985.29	(1 to 20) g/100g
		Cholesterol	STRC/STP/F014 (Issue No./ Date:- 01/22.09.2014)	(1 to 1000) mg/100g
<b>22</b>	<b>Biscuit</b>	Moisture	IS 1011: 2002 (RA 2009)	(0.1 to 10.0)

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.		Acid Insoluble Ash	IS 1011: 2002 (RA 2009)	g/100g (0.01 to 2.0)
		Fat	IS 1011: 2002 (RA 2009)	g/100g (0.1 to 50.0)
		Protein	AOAC (19 <sup>th</sup> Edition) 920.87	g/100g (0.2 to 25.0)
		Acidity of Extracted Fat	IS 1011: 2002 (RA 2009)	g/100g (0.1 to 2.0)
		Texture	IS 1011: 2002 (RA 2009)	Qualitative (Uniform/ Deform)
		Total Sugar	IS 4079: 1967 (RA 2000)	(0.5 to 50.0) g/100g
		Sodium	AOAC (19 <sup>th</sup> Edition) 966.16	(1.0 to 5000) mg/100g
		Potassium	AOAC (19 <sup>th</sup> Edition) 965.30	(1.0 to 5000) mg/100g
<b>23</b>	<b>Confectionery (Chewing gum, Bubble gum, Hard-boiled Confectionery, Gum Base, Toffees)</b>	Moisture	IS 6287: 1985 (RA 2005)	(0.1 to 25) g/100g
.		Acid Insoluble ash	IS 6287: 1985 (RA 2005)	(0.01 to 0.5) g/100g
		Sulphated ash	IS 6287: 1985 (RA 2005)	(0.01 to 5.0) g/100g
		Reducing sugar	IS 6287: 1985 (RA 2005)	(1 to 30) g/100g
		Sucrose	IS 6287: 1985 (RA 2005)	(1 to 80) g/100g
		Fat	IS 6287: 1985 (RA 2005)	(0.5 to 10) g/100g
		Protein	IS 6287: 1985 (RA 2005)	(0.5 to 20) g/100g

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	<b>Confectionery (Chewing gum, Bubble gum, Hard-boiled Confectionary, Gum Base, Toffees)</b>	Gum Content	IS 6747: 1981 (RA 2005)	(5 to 30) g/100g
		Food Grade Color	DGHS Manual 2005	Qualitative (Absent/Present)
		Titanium Dioxide	AOAC 973.36, 19th Edn	(10 to 10000) mg/kg
<b>24 Gaur Gum</b>	.	Moisture	IS 3988: 1981 (RA 2001)	(0.1 to 15.0) g/100g
		Ash	IS 3988: 1981 (RA 2001)	(0.1 to 5.0) g/100g
		Protein	IS 3988: 1981 (RA 2001)	(0.2 to 5.0) g/100g
		Residue insoluble in acid	IS 3988: 1981 (RA 2001)	(0.1 to 5.0) g/100g
		Gum Content	IS 3988: 1981 (RA 2001)	(70 to 95) g/100g
		pH	IS 3988: 1981 (RA 2001)	3.5 to 7.0
		Starch	IS 3988: 1981 (RA 2001)	Qualitative (Absent/Present)
<b>25 Honey</b>	.	Viscosity	IS 3988: 1981 (RA 2001)	60 cps to 10000 cps
		Moisture	IS 4941: 1994 (RA 2002) Annexure B	(0.05 to 50) g/100g
		Ash	IS 4941: 1994 (RA 2002) Annexure D	(0.005 to 5) g/100g

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		Total Reducing Sugar	IS 4941: 1994 (RA 2002) Annexure C	(50 to 85) g/100g
	<b>Honey</b>	Optical density at 660 nm	IS 4941: 1994 (RA 2002) Annexure H	0.100 to 0.800
		Sucrose	IS 4941: 1994 (RA 2002) Annexure C	(0.5 to 85) g/100g
		Specific gravity at 27 deg C	IS 4941: 1994 (RA 2002) Annexure A	0.85 to 1.50
		Acidity (as formic acid)	IS 4941: 1994 (RA 2002) Annexure E	(0.01 to 0.5) g/100g
		Fiehe's test	IS 4941: 1994 (RA 2002) Annexure F	Qualitative (Negative/Positive)
		Fructose-Glucose (RAtio	IS 4941: 1994 (RA 2002) Annexure C	0.5 to 2.0
		HMF	IS 4941: 1994 (RA 2002) Annexure F	(0.1 to 80) mg/kg
<b>26</b>	<b>Pickle</b>	Acidity (as acetic acid)	IS 3501: 1966 (RA 2005)	(0.1 to 10) g/100g
		Salt as NaCl	AOAC (19 <sup>th</sup> Edition) 960.29	(0.1 to 15) g/100g
		Benzoic acid	IS 3501: 1966 (RA 2005)	(10 to 350) mg/kg
<b>27</b>	<b>Ketchup</b>	Acidity (as acetic acid)	AOAC (19 <sup>th</sup> Edition) 942.15	(0.1 to 10) g/100g

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.		Total soluble solid	AOAC (19 <sup>th</sup> Edition) 932.12/ (19 <sup>th</sup> Edition) 983.17	(1 to 99) g/100g
		pH	Food Chemicals Codex	1.0 to 14.0
<b>28</b>	<b>Edible Salt</b>	Viscosity Moisture	Food Chemicals Codex IS 253: 1985 (RA 2004)	50 cps to 5000cps (0.01 to 10) g/100g
.		Water insoluble matter	IS 253: 1985 (RA 2004)	(0.02 to 5) g/100g
		Chloride as NaCl	IS 253: 1985 (RA 2004)	(90 to 99.9) g/100g
		Matter soluble in water (other than NaCl)	IS 253: 1985 (RA 2004)	(0.1 to 2.0) g/100g
		Calcium	IS 253: 1985 (RA 2004)	(1 to 1000) mg/kg
		Magnesium	IS 253: 1985 (RA 2004)	(1 to 1000) mg/kg
		Sulphates	IS 253: 1985 (RA 2004)	(0.1 to 1) g/100g
		Alkalinity as Na <sub>2</sub> CO <sub>3</sub>	IS 253: 1985 (RA 2004)	(0.01 to 1) g/100g
		Lead	IS 253:1985 (RA 2004)	Comparison at 0.05 mg/kg
		Iron	IS 253: 1985 (RA 2004)	Comparison at 1 mg/kg
		Arsenic	IS 253: 1985 (RA 2004)	Comparison at 0.02 mg/kg

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		Iodine	IS 253: 1985 (RA 2004)	(0.02 to 100) mg/kg
		Ferrocyanide	IS 253: 1985 (RA 2004)	Comparison at 0.5 mg/kg
<b>29</b>	<b>Coffee, Cocoa Chocolates &amp; Chicory</b>	Moisture	IS 2791: 1992 (RA 2009)	(0.05 to 10.0) g/100g
		Ash	IS 2791: 1992 (RA 2009)	(0.05 to 8.0) g/100g
		Caffeine	IS 2791: 1992 (RA 2009)	(0.5 to 6.0) g/100g
		Solubility	IS 2791: 1992 (RA 2009)	Qualitative (Soluble/Insoluble)
<b>30</b>	<b>Infant Foods</b>	Moisture	AOAC (19 <sup>th</sup> Edition) 927.05	(0.1 to 25.0) g/100g
		Total ash	IS 14433: 2007	(0.1 to 25.0) g/100g
		Acid insoluble ash	IS 14433: 2007	(0.01 to 0.5) g/100g
		Protein	IS 7219: 1993 (RA 2005)	(1.0 to 50) g/100g
		Fat	IS 11721: 2005	(1.0 to 70) g/100g
		Insolubility Index	IS 12759: 1989 (RA 1999)	0.1ml to 2.0 ml

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<b>31</b>	<b>Namkeen</b>	Moisture	IS 15271: 2003	(1 to 10) g/100g
		Ash	IS 15271: 2003	(1 to 40) g/100g
		Acid Insoluble Ash	IS 15271: 2003	(0.1 to 5) g/100g
		Fat	IS 15271: 2003	(1 to 60) g/100g
		Protein	IS 7219 : 1973 (RA 2005)	(0.5 to 40) g/100g
		Peroxide Value	IS 15271: 2003	(0.1 to 10) meq/kg
		Acidity of extracted Fat	IS 15271: 2003	(0.1 to 5.0) g/100g
<b>32</b>	<b>Tobacco Pan Masala, Catechu &amp; Supari</b>	Loss on heating	IS 5643: 1999 (RA 2004)	(0.5 to 50) g/100g
		Total Ash	IS 5643: 1999 (RA 2004)	(0.5 to 20) g/100g
		Acid insoluble Ash	IS 5643: 1999 (RA 2004)	(0.1 to 5) g/100g
		Total Alkaloids (Nicotine)	IS 5643: 1999 (RA 2004)	(0.1 to 10) g/100g
		Total Nitrogen	IS 5643: 1999 (RA 2004)	(0.5 to 20) g/100g
		Total Chlorides	IS 5643: 1999 (RA 2004)	(0.1 to 5) g/100g
<b>33</b>	<b>Non Alcoholic beverages Fruits beverages, Ready to serve beverages,</b>	Acidity (as citric acid)	AOAC (19 <sup>th</sup> Edition) 942.15	(0.1 to 10) g/100g
		Total Soluble Solid	AOAC (19 <sup>th</sup> Edition) 932.12	1.0 ° to 99 °Brix
		Total Sugar	AOAC (19 <sup>th</sup> Edition) 923.09	1.0 to 80 g/100g

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	<b>Fresh &amp; Canned Juices &amp; Fruits &amp; Vegetables Juice</b>	Sulphur Dioxide	AOAC (19 <sup>th</sup> Edition) 990.28	(10 to 500) mg/kg
		Vitamin C	AOAC (19 <sup>th</sup> Edition) 967.21	(1 to 500) mg/100g
<b>34</b>	<b>Nutraceuticals</b>	Moisture	AOAC (19 <sup>th</sup> Edition) 925.10	(0.1 to 5) g/100g
		Total Ash	AOAC (19 <sup>th</sup> Edition) 923.03	(0.1 to 2) g/100g
		Fat	AOAC (19 <sup>th</sup> Edition) 922.06	(0.01 to 5) g/100g
		Protein	AOAC (19 <sup>th</sup> Edition) 920.87	(0.5 to 99.5) g/100g
		Total sugar	AOAC (19 <sup>th</sup> Edition) 975.14	(0.5 to 5) g/100g
		Vitamin A	STRC/STP/F010 (Issue No./ Date:- 01/07.01.2014 )	(50 to 1000) µg/100g
		<b>Nutraceuticals</b>	Vitamin E	STRC/STP/F011 (Issue No./ Date:- 01/16.12.2013)
<b>35</b>	<b>Alcoholic beverages (Rum, Whisky, Brandy, Gin)</b>	Residue on evaporation	IS 3752: 2005 (RA 2008)	(0.1 to 1.0) g/100g
		Volatile acidity	IS 3752: 2005 (RA 2008)	(1 to 50) g/100 L
		Esters	IS 3752: 2005 (RA 2008)	(1 to 20) g/100 L
		Higher alcohols as amyl alcohol	IS 3752: 2005 (RA 2008)	(1 to 100) g/100 L

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		Total Acidity	IS 3752: 2005 (RA 2008)	(1 to 160) g/100 L
		Aldehydes as acetaldehyde	IS 3752: 2005 (RA 2008)	(5 to 45) g/100 L
		Furfural	IS 3752: 2005 (RA 2008)	(0.1 to 12) g/100 L
		Ethyl Alcohol	IS 3752: 2005 (RA 2008)	(5 to 99.5) g/100g
<b>36</b>	<b>Fruits &amp; Vegetable Products</b>	Sodium (Na)	STRC/STP/F008/01 Issue No/Date 1/22.09.14	1.0 mg/kg to 50,000 mg/kg
		Potassium (K)	STRC/STP/F008/01 Issue No/Date 1/22.09.14	1.0 mg/kg to 50,000 mg/kg
		Iron (Fe)	STRC/STP/F055 Issue No/Date 1/26.12.14	0.5 mg/kg to 1000 mg/kg
		Calcium (Ca)	STRC/STP/F055 Issue No/Date 1/26.12.14	1.0 mg/kg to 10,000 mg/kg
		Magnesium (Mg)	STRC/STP/F055 Issue No/Date 1/26.12.14	1.0 mg/kg to 10,000 mg/kg
	<b>Fruits &amp; Vegetable Products</b>	Manganese (Mn)	STRC/STP/F055 Issue No/Date 1/26.12.14	0.1 mg/kg to 1000 mg/kg
		Lead (Pb)	STRC/STP/F055 Issue No/Date 1/26.12.14	0.5 mg/kg to 500 mg/kg
		Copper (Cu)	STRC/STP/F055 Issue No/Date 1/26.12.14	0.1 mg/kg to 1000 mg/kg
		Nickel (Ni)	STRC/STP/F055	1.0 mg/kg to

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			Issue No/Date 1/26.12.14	1000 mg/kg
		Arsenic (As)	STRC/STP/F055 Issue No/Date 1/26.12.14	0.005 mg/kg to 100 mg/kg
		Tin (Sn)	STRC/STP/F055 Issue No/Date 1/26.12.14	15.0 mg/kg to 1000 mg/kg
		Zinc (Zn)	STRC/STP/F055 Issue No/Date 1/26.12.14	0.1 mg/kg to 100 mg/kg
		Cadmium (Cd)	STRC/STP/F055 Issue No/Date 1/26.12.14	0.1 mg/kg to 100 mg/kg
		Chromium (Cr)	STRC/STP/F055 Issue No/Date 1/26.12.14	1.0 mg/kg to 1000 mg/kg
		Mercury (Hg)	STRC/STP/F055 Issue No/Date 1/26.12.14	0.01 mg/kg to 50 mg/kg
<b>37</b>	<b>Pulses, Grains &amp; Cereals</b>	Sodium (Na)	STRC/STP/F008/01 Issue No/Date 1/22.09.14	1.0 mg/kg to 50,000 mg/kg
		Potassium (K)	STRC/STP/F008/01 Issue No/Date 1/22.09.14	1.0 mg/kg to 50,000 mg/kg
		Iron (Fe)	STRC/STP/F054 Issue No/Date 1/26.12.14	0.5 mg/kg to 1000 mg/kg

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		Calcium (Ca)	STRC/STP/F054 Issue No/Date 1/26.12.14	1.0 mg/kg to 10,000 mg/kg
		Magnesium (Mg)	STRC/STP/F054 Issue No/Date 1/26.12.14	1.0 mg/kg to 10,000 mg/kg
		Manganese (Mn)	STRC/STP/F054 Issue No/Date 1/26.12.14	0.1 mg/kg to 1000 mg/kg
		Lead (Pb)	STRC/STP/F054 Issue No/Date 1/26.12.14	0.5 mg/kg to 500 mg/kg
		Copper (Cu)	STRC/STP/F054 Issue No/Date 1/26.12.14	0.1 mg/kg to 1000 mg/kg
		Nickel (Ni)	STRC/STP/F054 Issue No/Date 1/26.12.14	1.0 mg/kg to 1000 mg/kg
		Arsenic (As)	STRC/STP/F054 Issue No/Date 1/26.12.14	0.005 mg/kg to 100 mg/kg
		Tin (Sn)	STRC/STP/F054 Issue No/Date 1/26.12.14	15.0 mg/kg to 1000 mg/kg
	<b>Pulses, Grains &amp; Cereals</b>	Zinc (Zn)	STRC/STP/F054 Issue No/Date 1/26.12.14	0.1 mg/kg to 100 mg/kg
		Cadmium (Cd)	STRC/STP/F054 Issue No/Date 1/26.12.14	0.1 mg/kg to 100 mg/kg

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		Chromium (Cr)	STRC/STP/F054 Issue No/Date 1/26.12.14	1.0 mg/kg to 1000 mg/kg
		Mercury (Hg)	STRC/STP/F054 Issue No/Date 1/26.12.14	0.01 mg/kg to 50 mg/kg
<b>38</b>	<b>Fruits and vegetables (fresh &amp; dehydrated)</b>	Atrazine	STRC/STP/F/039 (Issue No./ Date:- 1/22.09.2014)	0.005 mg to 5 mg/kg
		Phorate sulfoxide		
		Phorate sulfone		
		Phorate		
		Permethrin II		
		Permethrin I		
		Methyl Parathion		
		Parathion		
		Myclobutanil		
		Malathion		
		Hexaconazol		
		Heptachlor-exo epoxide		
		Heptachlor		
		Fenitrothion		
		Ethion		
		Endosulfan sulphate		
		EndosulfanI-alpha		
		Aldirin		
		Dieldrin		
		DDT-pp		
		DDT-op		
		DDE-pp		
		DDE-op	STRC/STP/F/039 (Issue No./ Date:- 1/22.09.2014)	0.005 mg to 5 mg/kg
	<b>Fruits and vegetables (fresh &amp; dehydrated)</b>	DDD-op		

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	<b>dehydrated)</b>	DDD-pp BHC Alpha BHC Beta BHC Gamma BHC Delta Cypermethrin II Cypermethrin III Cypermethrin IV Chlordane CIS Chlordane Trans Chlorpyrifos		
<b>39</b>	<b>Food Grains (whole and grained)</b>	Atrazine Phorate sulfoxide Phorate Phorate Sulfone Permethrin II Permethrin I Methyl Parathion Parathion Myclobutanil Malathion Hexaconazol Heptachlor-exo epoxide Heptachlor Fenitrothion Ethion Endosulfan sulphate Endosulfanl-alpha Aldirin Dieldrin	STRC/STP/F/051 (Issue No./ Date:- 1/22.09.2014)	0.005 mg to 5 mg/kg

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	<b>Food Grains (whole and grained)</b>	DDT-pp DDT-op  DDE-pp DDE-op DDD-op DDD-pp BHC Alpha BHC Beta BHC Gamma BHC Delta Cypermethrin II Cypermethrin III Cypermethrin IV Chlordane CIS Chlordane Trans Chlorpyrifos	STRC/STP/F/051 (Issue No./ Date:- 1/22.09.2014)	0.005 mg to 5 mg/kg
<b>40</b>	<b>Nuts</b>	Atrazine  Alachor Chlorobenzlate Butachlor Chlorfenvinphos Myclobutanil Malathion Heptachlor-exo epoxide Heptachlor Ethion Endosulfan sulphate EndosulfanI-alpha EndosulfanII-Beta	STRC/STP/F/038 (Issue No./ Date:- 1/22.09.2014)	0.005 mg to 5 mg/kg

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	<b>Nuts</b>	Aldrin Dieldrin DDT-pp DDT-op DDE-pp DDE-op  DDD-op DDD-pp BHC Alpha BHC Beta BHC Gamma BHC Delta Chlorpyrifos	STRC/STP/F/038 (Issue No./ Date:- 1/22.09.2014)	0.005 mg to 5 mg/kg
<b>IV. WATER</b>				
<b>1.</b>	<b>Packaged Drinking water/ Packaged Natural Mineral water/ Borewell Water/ Surface Water</b>	<b>Pesticide Residue</b>		
		Alpha HCH	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		Beta HCH	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		Gamma HCH (Lindane)	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		Delta HCH	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		2,4 D	USEPA 515.1: 1995	0.01 µg/l to 500 µg/l

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	<b>Packaged Drinking water/ Packaged Natural Mineral water/ Borewell Water/ Surface Water</b>	2,4-DDD	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		2,4-DDE	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		2,4-DDT	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		4,4-DDD	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		4,4-DDE	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		4,4-DDT	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		Endosulfan Alpha,	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		Endosulfan Beta	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		Endosulfan Sulphate	USEPA 508: 1995 AOAC 990.06: 2012	0.01 µg/l to 500 µg/l
		Monocrotophos	USEPA 8141A: 1994	0.01 µg/l to 500 µg/l
		Ethion	USEPA 1657A: 2000	0.01 µg/l to 500 µg/l
		Chlorpyriphos	USEPA 525.2: 1995 8141A: 1994	0.01 µg/l to 500 µg/l

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		Alachlor	USEPA 525.2: 1995 , 507: 1995	0.01 µg/l to 500 µg/l
		Phorate	USEPA 8141A: 1994	0.01 µg/l to 500 µg/l
		Phorate Sulphoxide	USEPA 8141A: 1994	0.01 µg/l to 500 µg/l
		Phorate sulphone	USEPA 8141A: 1994	0.01 µg/l to 500 µg/l
	<b>Packaged Drinking water/ Packaged Natural Mineral water/ Borewell Water/ Surface Water</b>	Butachlor	USEPA 525.2: 1995, 8141A: 1994	0.01 µg/l to 500 µg/l
		Isoproturon	USEPA 532: 2000	0.01 µg/l to 500 µg/l
		Atrazine	USEPA 525.2: 1995, 8141A: 1994	0.01 µg/l to 500 µg/l
		Malathion	USEPA 8141A: 1994	0.01 µg/l to 500 µg/l
		Methyl parathion	USEPA 8141A: 1994 ISO 10695: 2000	0.01 µg/l to 500 µg/l
		Methyl Paraoxon	USEPA 8141A: 1994 ISO 10695: 2000	0.01 µg/l to 500 µg/l
		Malaoxon	USEPA 8141A: 1994	0.01 µg/l to 500 µg/l
		Aldrin	USEPA508: 1995 AOAC990.06: 2012	0.01 µg/l to 500 µg/l

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			USEPA 525.2: 1995	
		Dieldrin	USEPA508: 1995 AOAC990.06: 2012 USEPA 525.2: 1995	0.01 µg/l to 500 µg/l
		Polynuclear Aromatic Hydrocarbons (PAH):	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		Flurene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		Anthracene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
	<b>Packaged Drinking water/ Packaged Natural Mineral water/ Borewell Water/ Surface Water</b>	Fluoranthene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		Benz(a)anthracene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		Chrysen	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		Benzo[b]fluoran thene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		[Benzo [a] Pyrene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		Pyrene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l

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<b>S. No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
		Dimethylben(a)anthracene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		Benzo[k]fluoranthene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		Perylene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		Indeno[1,2,3-cd]pyrene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		Dibenz[a,h]anthracene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
	<b>Packaged Drinking water/ Packaged Natural Mineral water/ Borewell Water/ Surface Water</b>	Benzo[ghi]perylene	APHA 6440: 2012 IS 10500: 2012	0.1 µg/l to 500 µg/l
		<b>Polychlorinated Biphenyl (PCB)s :</b>		
		1,1'-Biphenyl, 2,2,4,4'-tetrachloro - PCB	IS 13428: 2005 Annexure M	0.01 mg/l to 0.5 mg/l
		1,1'-Biphenyl, 2',4,4'-trichloro- PCB		
		1,1'-Biphenyl, 2,2',4,5,5'-pentachloro-PCB		
		1,1'-Biphenyl, 2,2',3,4,4',5-hexachloro- PCB		

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		1,1'-Biphenyl, 2,2',4,4', 5,5'-hexachloro-PCM		
		1,1'-Biphenyl, 2,2',3,4, 4',5,5'-heptachloro- PCB		
		1,1'-Biphenyl, 2,2',3,3',4, 4',5,5'-octachloro-PCB		
		<b>Trihalomethanes:</b>		
		Bromoform	APHA 6232: 2012	0.01 mg/l to 10 mg/l
		Dibromo chloromethane		
		Bromo dichloromethane		
		Chloroform		
<b>2.</b>	<b>Packaged Drinking water/Packaged Natural Mineral water/ Borewell Water/ Surface Water/ Swimming Pool Water</b>	Colour	IS 3025 (Part 4): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2120 B: 2012	1 to 100 Hazen Unit
		Odour	IS 3025 (Part 5): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2150 B: 2012	Qualitative
		Taste	IS 3025 (Part 7 & 8): 1984/ APHA (22 <sup>nd</sup> Edition) 2160 C: 2012	Qualitative

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		Turbidity	IS 3025 (Part 10): 1984(RA 2002) APHA (22 <sup>nd</sup> Edition) 2130 B: 2012	0.1 NTU to 1000 NTU
		Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006) APHA (22 <sup>nd</sup> Edition) 2540 B: 2012	5 mg/l to 10000 mg/l
		pH	IS 3025 (Part 11): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 4500H <sup>+</sup> B: 2012	1 to 14
		Barium	IS 15302: 2003 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.002 mg/l to 50 mg/l
		Copper	IS 3025 (Part 42): 1992 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.02 mg/l to 50 mg/l
		Manganese	IS 3025 (Part 59): 200 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.05 mg/l to 50 mg/l
		Nitrate	IS 3025 (Part 34): 1988 (RA 2003)	0.5 mg/l to 100 mg/l

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		Nitrite	IS 3025 (Part 34): 1988 (RA 2003)	0.01 mg/l to 100 mg/l
	<b>Packaged Drinking water/Packaged Natural Mineral water/ Borewell Water/ Surface Water/ Swimming Pool Water</b>	Fluoride	IS 3025 (Part 60): 2008 APHA (22 <sup>nd</sup> Edition) 4500F D: 2012	0.1 mg/l to 100 mg/l
		Zinc	IS 3025 (Part 49): 1994 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.02 mg/l to 50 mg/l
		Silver	IS 13428: 2005 Annexure J APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.005 mg/l to 50 mg/l
		Chloride	IS 3025 (Part 32): 1988 (RA 2003) APHA (22 <sup>nd</sup> Edition) 4500Cl-A: 2012	0.5 mg/l to 10000 mg/l
		Selenium	IS 15303: 2003 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.005 mg/l to 50 mg/l
		Sulphate	IS 3025 (Part 24) 1986 (RA 1992) APHA (22 <sup>nd</sup> Edition) 4500 SO <sub>4</sub> <sup>2-</sup> E: 2012	5 mg/l to 1000 mg/l
		Alkalinity (as HCO <sub>3</sub> )	IS 3025 (Part 23): 1986 (RA 2003) APHA (22 <sup>nd</sup> Edition) 2320B: 2012	1 mg/l to 10000 mg/l

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		Calcium	IS 3025 (Part 40): 1991 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500 Ca B: 2012	0.5 mg/l to 1000 mg/l
		Magnesium	IS 3025 (Part 46): 1994 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500 Mg B: 2012	0.5 mg/l to 1000 mg/l
	<b>Packaged Drinking water/Packaged Natural Mineral water/ Borewell Water/ Surface Water/ Swimming Pool Water</b>	Sodium	IS 3025 (Part 45) 1993 (RA 2003/ APHA (22 <sup>nd</sup> Edition) 3500 Na B: 2012	1 mg/l to 100 mg/l
		Phenolic Compounds	IS 3025 (Part 43): 1992 (RA 2003) APHA (22 <sup>nd</sup> Edition) 5530 C: 2012	0.01 mg/l to 100 mg/l
		Mineral Oil	IS 3025 (Part 39): 1991 (RA 2003) APHA (22 <sup>nd</sup> Edition) 5520 C: 2012	0.01 mg/l to 50 mg/l
		Anionic Surface Active Agents (MBAS)	IS 13428: 2005 Annexure K APHA (22 <sup>nd</sup> Edition) 5540 C: 2012	0.05 mg/l to 100 mg/l
		Sulphide (H <sub>2</sub> S)	IS 3025 (Part 29): 1986 (RA 2003) APHA (22 <sup>nd</sup> Edition)	0.05 mg/l to 20 mg/l

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			4500S <sup>2</sup> -D: 2012	
		Antimony	IS 15303: 2003 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.002 mg/l to 50 mg/l
		Borates (B)	IS 13428: 2005 Annexure H APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.02 mg/l to 100 mg/l
		Iron	IS 3025 (Part 53): 2003 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.01 mg/l to 50 mg/l
		Aluminum	IS 15302: 2003 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.01 mg/l to 50 mg/l
		Residual Free Chlorine	IS 3025 (Part 26): 1986 (RA 2003) APHA (22 <sup>nd</sup> Edition) 4500: 2012 Clause B	0.1 mg/l to 100 mg/l
	<b>Packaged Drinking water/Packaged Natural Mineral water/ Borewell Water/ Surface Water/ Swimming Pool Water</b>	Mercury	IS 3025 (Part 48): 1994 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.0002 mg/l to 50 mg/l
		Cadmium	IS 3025 (Part 41): 1992 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50 mg/l

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		Arsenic	IS 3025 (Part 37): 1988 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.005 mg/l to 50 mg/l
		Cyanide	IS 3025 (Part 27): 1986 (RA 2009) APHA (22 <sup>nd</sup> Edition) 4500 CN <sup>-</sup> ·C: 2012	0.01 mg/l to 100 mg/l
		Lead	IS 3025 (Part 47): 1994 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.005 mg/l to 50 mg/l
		Chromium	IS 13428: 2005 Annexure J APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.01 mg/l to 50 mg/l
		Nickel	IS 13428: 2005 Annexure L APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.01 mg/l to 50 mg/l
		Molybdenum	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Chloramines (as Cl <sub>2</sub> )	IS 3025 (Part 26): 1986 (RA 2003)	0.1 mg/l to 100 mg/l
		Ammonia (as total ammonia-N)	IS 3025 (Part 34): 1988 (RA 2003) APHA (22 <sup>nd</sup> Edition) 4500 NH <sub>3</sub> C: 2012	0.1 mg/l to 100 mg/l

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	<b>Packaged Drinking water/Packaged Natural Mineral water/ Borewell Water/ Surface Water/ Swimming Pool Water</b>	Heavy metals (as Pb)	IS 7017: 1973	0.1 mg/l to 10.0 mg/l
		Total hardness	IS 3025 (Part 21): 2009 APHA (22 <sup>nd</sup> Edition) 2340 C: 2012	0.1 mg/l to 100 mg/l
		Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (Part 23): 1986 (RA 2003) APHA (22 <sup>nd</sup> Edition) 2320B: 2012	1 mg/l to 10000 mg/l
		Dissolved Oxygen	IS 3025 (Part 38): 1989 (RA 1999) APHA (22 <sup>nd</sup> Edition) 4500-O C: 2012	0.1 mg/l to 50.0 mg/l
		Chemical Oxygen Demand (COD)	IS 3025 (Part 58): 2006 APHA (22 <sup>nd</sup> Edition) 5220B: 2012	5 mg/l to 10000 mg/l
		Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44): 1993 (RA 1991) APHA (22 <sup>nd</sup> Edition) 5210B: 2012	1 mg/l to 10000 mg/l
		Silica (as SiO <sub>2</sub> )	IS 3025 (Part 35): 1988 (RA 1999) APHA (22 <sup>nd</sup> Edition) 4500 SiO <sub>2</sub> C: 2012	0.1 mg/l to 1000 mg/l
		Phosphorous	IS 3025 (Part 31): 1988 (RA 1999) APHA (22 <sup>nd</sup> Edition) 4500 P D: 2012	0.1 mg/l to 1000 mg/l

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		Oil & Grease	IS 3025 (Part 39): 1984 (RA 2002) APHA (22 <sup>nd</sup> Edition) 5520E: 2012	5 mg/l to 100.0 mg/l
		Potassium	IS 3025 (Part 45): 1993 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500 K B: 2012	1.0 mg/l to 100.0 mg/l
		Total acidity	IS 3025 (Part 22): 1986 (RA 1998) APHA (22 <sup>nd</sup> Edition) 2320B: 2012	1.0 mg/l to 1000.0 mg/l
		Total Suspended Solids (TSS)	IS 3025 (Part 17): 1984 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2540D: 2012	5 mg/l to 10,000mg/l
<b>3.</b>	<b>Water for Processed Food Industry</b>	Colour	IS 3025 (Part 4): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2120B: 2012	1 Hazen to 100 Hazen
		Turbidity	IS 3025 (Part 10): 1984 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2130B: 2012	0.1 NTU to 1000 NTU
		Odour	IS 3025 (Part 5): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2150B:	Qualitative

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			2012	
	Total solids		IS 3025(Part 16): 1984 (RA 2006) APHA (22 <sup>nd</sup> Edition) 2540B: 2012	1 mg/l to 10000 mg/l
	Total hardness		IS 3025 (Part 21): 2009/ APHA (22 <sup>nd</sup> Edition) 2340C: 2012	0.5 mg/l to 1000 mg/l
	Sulphate		IS 3025 (Part 24): 1986 (RA1992) APHA (22 <sup>nd</sup> Edition) 4500 SO <sub>4</sub> <sup>2-</sup> E: 2012	1.0 mg/l to 1000.0 mg/l
	Fluoride		IS 3025 (Part 60): 2008 APHA (22 <sup>nd</sup> Edition) 4500 FD	0.1 mg/l to 100 mg/l
	Chloride		IS 3025 (Part 32): 1988 (RA 2003) APHA (22 <sup>nd</sup> Edition) 4500Cl <sup>-</sup> A: 2012	0.5 mg/l to 10000 mg/l
	Cyanide		IS 3025 (Part 27): 1986 (RA 2009) APHA (22 <sup>nd</sup> Edition) 4500 CN <sup>-</sup> C: 2012	0.02 mg/l to 100 mg/l
	Selenium		IS 15303: 2003 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l

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	<b>Water for Processed Food Industry</b>	Iron	IS 3025 (Part 53): 2003 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.1 mg/l to 100.0 mg/l
		Magnesium	IS 3025 (Part 40): 1991 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500 Mg B: 2012	0.5 mg/l to 1000 mg/l
		Manganese	IS 3025 (Part 59): 2006 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Copper	IS 3025 (Part 42): 1992 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Lead	IS 3025 (Part 47): 1994 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Chromium	IS 13428: 2005 Annexure J APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.05 mg/l to 50.0 mg/l
		Zinc	IS 3025 (Part 49): 1994 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.02 mg/l to 50.0 mg/l
		Arsenic	IS 3025 (Part 2 )2004/ APHA	0.001 mg/l to

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			(22 <sup>nd</sup> Edition) 3125 B: 2012	50.0 mg/l
		Nitrate	IS 3025 (Part 34): 1988 (RA 2003)	1 mg/l to 100 mg/l
		Phenolic substances	IS 3025 (Part 43): 1992/ APHA (22 <sup>nd</sup> Edition) 5530C: 2012	0.001 mg/l to 100 mg/l
<b>4.</b>	<b>Water for fermentation industry</b>	Colour	IS 3025 (Part 4): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2120B: 2012	1 Hazen to 100 Hazen
		Turbidity	IS 3025 (Part 10): 1984 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2130 B: 2012	0.1 NTU to 1000 NTU
		Odour	IS 3025 (Part 5): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2150B: 2012	Qualitative
		Total solids	IS 3025 (Part 16): 1984 (RA 2006) APHA (22 <sup>nd</sup> Edition) 2540B: 2012	1 mg/l to 10000 mg/l
		Total hardness	IS 3025 (Part 21): 2009	0.5 mg/l to 1000

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			APHA (22 <sup>nd</sup> Edition) 2340C: 2012	mg/l
		Sulphate	IS 3025 (Part 24): 1986 (RA 1992) APHA (22 <sup>nd</sup> Edition) 4500 SO <sub>4</sub> <sup>2-</sup> E: 2012	1.0 mg/l to 1000.0 mg/l
		Fluoride	IS 3025 (Part 60): 2008/ APHA (22 <sup>nd</sup> Edition)4500F.D	0.1 mg/l to 100.0 mg/l
		Chloride	IS 3025 (Part 32): 1988 (RA 2003) APHA (22 <sup>nd</sup> Edition) 4500 Cl <sup>-</sup> A: 2012	0.5 mg/l to 10000 mg/l
		Cyanide	IS 3025 (Part 27): 1986 (RA 2009) APHA (22 <sup>nd</sup> Edition) 4500 CN <sup>-</sup> C: 2012	0.02 mg/l to 100 mg/l
		Selenium	IS 15303: 2003 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
	<b>Water for fermentation industry</b>	Iron	IS 3025 (Part 53): 2003 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.1 mg/l to 100.0 mg/l
		Magnesium	IS 3025 (Part 46): 1994 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500 Mg-B: 2012	0.5 mg/l to 1000 mg/l

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		Manganese	IS 3025 (Part 59): 2006 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Copper	IS 3025 (Part 42): 1992 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Lead	IS 3025 (Part 47): 1994 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Chromium	IS 3025 (Part 52): 2003 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.05 mg/l to 50.0 mg/l
		Zinc	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.02 mg/l to 50.0 mg/l
		Arsenic	IS 3025 (Part 37): 1988 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Nitrate	IS 3025 (Part 34): 1988 (RA 2003)	1 mg/l to 100 mg/l
		Phenolic substances	IS 3025 (Part 43): 1992 APHA (22 <sup>nd</sup> Edition) 5530C: 2012	0.001 mg/l to 100 mg/l

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		Cadmium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50 mg/l
		Mercury	IS 3025 (Part 2): 2004 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.0002 mg/l to 50 mg/l
	<b>Water for fermentation industry</b>	Alkalinity(as CaCO <sub>3</sub> )	IS 3025 (Part 23): 1986 (RA 2006) APHA (22 <sup>nd</sup> Edition) 2320B: 2012	1 mg/l to 10000 mg/l
		Calcium	IS 3025 (Part 40): 1991 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500-Ca B: 2012	0.5 mg/l to 1000 mg/l
<b>5.</b>	<b>Construction Water</b>	pH value	IS 3025 (Part 11): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 4500 H+B: 2012	1.0 to 14.0
		Amount of 0.02N NaOH required to neutralize 100ml sample using phenolphthalein indicator(Limits of Acidity)	IS 3025 (Part 22): 1986 (RA 1998)	0.1 ml to 10 ml
		Amount of 0.02N H <sub>2</sub> SO <sub>4</sub> required to neutralize 100ml sample using	IS 3025 (Part 23): 1986 (RA 2006)	0.1 ml to 50 ml

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		mixed indicator (Limits of Alkalinity)		
		Inorganic Solids	IS 3025 (Part 18): 1984 (RA 2002)	01 to 10000 mg/l
		Organic Solids	IS 3025 (Part 18): 1984 (RA 2002)	01 mg/l to 500 mg/l
		Sulphates as SO <sub>3</sub>	IS 3025 (Part 24): 1986 (RA 1992) APHA (22 <sup>nd</sup> Edition) 4500 SO <sub>4</sub> <sup>2-</sup> C: 2012	01 mg/l to 3000 mg/l
		Chloride as Cl	IS 3025 (Part 32) 1988 (RA 2003) APHA (22 <sup>nd</sup> Edition) 4500 Cl-A: 2012	05 mg/l to 3000 mg/l
	<b>Construction Water</b>	Suspended Matter	IS 3025 (Part 17): 1984 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2540D: 2012,	05 mg/l to 3000 mg/l
<b>6.</b>	<b>Waste Water</b>	Total dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006) APHA (22 <sup>nd</sup> Edition) 2540B: 2012	5 mg/l to 25,000 mg/l
		Total Suspended Solids (TSS)	IS 3025 (Part 17): 1984 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2540D: 2012	5 mg/l to 25,000 mg/l
		Total Kjeldahl Nitrogen	IS 3025 (Part 34): 1988 (RA 1999)	0.1 mg/l to 500 mg/l

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			By Kjeldahl method	
		Dissolved Oxygen	IS 3025 (Part 38): 1989 (RA 1999) APHA (22 <sup>nd</sup> Edition) 4500 O <sub>2</sub> C: 2012	0.1 mg/l to 20.0 mg/l
		Chemical Oxygen Demand (COD)	IS 3025 (Part 58): 2006 APHA (22 <sup>nd</sup> Edition) 5220B: 2012	5 mg/l to 50000 mg/l
		Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44): 1993 (RA 1991) APHA (22 <sup>nd</sup> Edition) 5210B: 2012	1 mg/l to 50000 mg/l
		Silica (as SiO <sub>2</sub> )	IS 3025 (Part 35): 1988 (RA 1999) APHA (22 <sup>nd</sup> Edition) 4500 SiO <sub>2</sub> C: 2012	0.1 mg/l to 1000 mg/l
		Phosphorous	IS 3025 (Part 31): 1988 (RA 1999) APHA (22 <sup>nd</sup> Edition) 4500P D: 2012	0.1 mg/l to 1000 mg/l
		Oil & Grease	IS 3025 (Part 39): 1984 (RA 2002) APHA (22 <sup>nd</sup> Edition) 5520 E: 2012	5.0 mg/l to 100.0 mg/l
	<b>Waste Water</b>	pH value	IS 3025 (Part 11): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 4500	1 to 14

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			H+B: 2012	
<b>7.</b>	<b>Dialysis water</b>	Calcium	IS 3025 (Part 40): 1991 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500-Ca B: 2012	0.1 mg/l to 50.0 mg/l
		Magnesium	IS 3025 (Part 46): 1994 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500 Mg-B: 2012	0.1 mg/l to 50.0 mg/l
		Potassium	IS 3025 (Part 45): 1993 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500 K-B: 2012	1.0 mg/l to 100.0 mg/l
		Sodium	IS 3025 (Part 45): 1993 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500 Na-B: 2012	1.0 mg/l to 100.0 mg/l
		Antimony	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Arsenic	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Zinc	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.02 mg/l to 50.0 mg/l
		Barium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l

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	<b>Dialysis water</b>	Beryllium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Cadmium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Chromium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Lead	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Mercury	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.0002 mg/l to 50.0 mg/l
		Selenium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Silver	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Aluminium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.01 mg/l to 50.0 mg/l
		Chloramines	IS 3025 (Part 26): 1986	0.04 mg/l to 50.0 mg/l
		Total chlorine	IS 3025 (Part 26): 1986 IS 3025 (Part 45): 1993 (RA 2003) APHA (22 <sup>nd</sup> Edition) 4500:	0.1 mg/l to 50.0 mg/l

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			2012 Clause B	
		Copper	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Fluoride	APHA (22 <sup>nd</sup> Edition) 4500F.D	0.1 mg/l to 100.0 mg/l
	<b>Dialysis water</b>	Nitrate	IS 3025 (Part 34): 1988 (RA 2003)	1 mg/l to 100.0 mg/l
		Thallium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 0.002 mg/l
		Sulphate	IS 3025 (Part 24): 1986 (RA 1992) APHA (22 <sup>nd</sup> Edition) 4500 SO <sub>4</sub> <sup>2-</sup> E: 2012	5 mg/l to 1000 mg/l
<b>8.</b>	<b>Water for textile industry</b>	Colour	IS 3025 (Part 4): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2120B: 2012	1 Hazen to 100 Hazen
		Turbidity	IS 3025 (Part 10): 1984 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2130 B: 2012	0.1 NTU to 1000 NTU
		Total hardness	IS 3025 (Part 21): 2009 APHA (22 <sup>nd</sup> Edition) 2340 C: 2012	0.5 mg/l to 1000 mg/l
		Sulphate	IS 3025 (Part 24): 1986 (RA	1.0 mg/l to

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			1992) APHA (22 <sup>nd</sup> Edition) 4500 SO <sub>4</sub> <sup>2-</sup> E: 2012	1000.0 mg/l
		Chloride	IS 3025 (Part 32): 1988 (RA 2003) APHA (22 <sup>nd</sup> Edition) 4500 Cl- A: 2012	0.5 mg/l to 10000 mg/l
		Iron	IS 3025 (Part 53): 2003, IS 3025 (Part 2): 2004/ APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.1 mg/l to 100.0 mg/l
		Manganese	IS 3025 (Part 59): 2006, IS 3025 (Part 2): 2004/ APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
	<b>Water for textile industry</b>	pH	IS 3025 (Part 11): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 4500H+ B: 2012	1 to 14
		Aluminium	IS 15302: 2003 IS 3025 (Part 2): 2004 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Total alkalinity (as CaCO <sub>3</sub> )	IS 3025 (Part 23): 1986 (RA 2003) APHA (22 <sup>nd</sup> Edition) 2320B: 2012	1 mg/l to 10000 mg/l

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		Iron and manganese added together	IS 3025 (Part 53): 2003 & IS 3025 (Part 59): 2006/ APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.1 mg/l to 150.0 mg/l
		Corrosivity	IS 201: 1992 (RA 2008) Ann.A	1 to 14
		odour	IS 3025 (Part 5): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2150B: 2012	Qualitative
<b>9.</b>	<b>Water for Ice manufacture</b>	Colour	IS 3025 (Part 4): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2120 B: 2012	1 Hazen to 100 Hazen
		Turbidity	IS 3025 (Part 10): 1984 (RA 2002) APHA (22 <sup>nd</sup> Edition) 2130 B: 2012	0.1 NTU to 1000 NTU
		Odour	IS 3025 (Part 5): 1983 (RA 2002)/ APHA (22 <sup>nd</sup> Edition) 2150 B: 2012	Qualitative
		Total dissolved solids	IS 3025 (Part 16): 1984 (RA 2006)	5 mg/l to 10000 mg/l
		Total hardness	IS 3025 (Part 21): 2009	0.5 mg/l to 1000 mg/l
	<b>Water for Ice manufacture</b>	Sulphate	IS 3025 (Part 24): 1986 (RA 1992)	5.0 mg/l to 1000.0 mg/l

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		Fluoride	IS 3025 (Part 60): 2008 APHA (22 <sup>nd</sup> Edition) 4500F D	0.1 to 100.0
		Chloride	IS 3025 (Part 32): 1988 (RA 2003) APHA (22 <sup>nd</sup> Edition) 4500Cl-A: 2012	5 mg/l to 10000 mg/l
		Cyanide	IS 3025 (Part 27): 1986 (RA 2009) APHA (22 <sup>nd</sup> Edition) 4500 CN-C: 2012	0.02 mg/l to 100 mg/l
		Selenium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Iron	IS 3025 (Part 2): 2004 APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.1 mg/l to 100.0 mg/l
		Magnesium	IS 3025 (Part 46): 1994 (RA 2003) APHA (22 <sup>nd</sup> Edition) 3500 Mg B: 2012	0.5 mg/l to 1000 mg/l
		Manganese	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Copper	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Lead	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l

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	<b>Water for Ice manufacture</b>	Chromium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.05 mg/l to 50.0 mg/l
		Zinc	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Arsenic	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50.0 mg/l
		Phenolic substances	IS 3025 (Part 43): 1992 APHA (22 <sup>nd</sup> Edition) 5530C: 2012	0.001 mg/l to 100 mg/l
		Cadmium	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.001 mg/l to 50 mg/l
		Mercury	APHA (22 <sup>nd</sup> Edition) 3125 B: 2012	0.0002 mg/l to 50 mg/l
<b>10</b>	<b>Reagent grade water</b>	Specific conductivity	IS 3025 (Part 14): 1984 APHA (22 <sup>nd</sup> Edition) 2510B: 2012	0.1 µS/cm to 0.2 10000 µS/cm
		pH at 25°C	IS 3025 (Part 11): 1983 (RA 2002) APHA (22 <sup>nd</sup> Edition) 4500H <sup>+</sup> B: 2012	1 to 14
		Total solids or non volatile residue at 105°C	IS 3025 (Part 16): 1984 (RA 2006) APHA (22 <sup>nd</sup> Edition) 2540B: 2012	1 mg/l to 10000 mg/l
		Silica(as SiO <sub>2</sub> )	IS 3025 (Part 35): 1988 (RA	0.1 mg/l to 1000

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<b>Laboratory</b>	<b>Sigma Test &amp; Research Centre, BA-15, Mangolpuri Industrial Area, Phase-II, New Delhi</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Chemical Testing</b>	<b>Issue Date</b>	<b>31.03.2015</b>
<b>Certificate Number</b>	<b>T-1911</b>	<b>Valid Until</b>	<b>30.03.2017</b>
<b>Last Amended on</b>	<b>-</b>	<b>Page</b>	<b>61 of 61</b>

<b>S. No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
			1999) APHA (22 <sup>nd</sup> Edition) 4500 SiO <sub>2</sub> C: 2012	mg/l
		Colour retention of KMnO <sub>4</sub>	IS 1070: 1992 (RA 2008) Ann.A	Qualitative

**-X-X-X-X-X-X-X-X-X-X-X-X-X-X-**

**\*NOTE:** The Laboratory has demonstrated competence for the stated scope for **WATER**. This however **does not fully cover** the specification requirements of **BIS for the Packaged Drinking Water as per IS14543 and the Packaged Natural Mineral Water IS13428.**

**Ruchi Guntuku**  
Convenor

**N. Venkateswaran**  
Program Manager