

Laboratory **Food Hygiene and Health Laboratory, A-512/513, Megacenter, Commercial Complex, Magarpatta, Solapur Road, Hadapsar, Pune, Maharashtra**

Accreditation Standard **ISO/IEC 17025: 2005**

Discipline **Chemical Testing** **Issue Date** **06.07.2015**

Certificate Number **T-1201** **Valid Until** **05.07.2017**

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	WATER			
1.	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Processed Food Industry, Swimming Pool Water	Colour	IS 3025 (Part 4): 1983 (RA 2006) APHA (22 nd Edition) 2120-B: 2012	1 Hazen/TCU to 10 Hazen/TCU
		Odour	IS 3025 (Part 5): 1983 (RA 2006)	Qualitative (Agreeable/Not Agreeable)
		Taste	IS 3025 (Part 7): 1984 (RA 2006) IS 3025 (Part 8): 1984 (RA 2006)	Qualitative (Agreeable/Not Agreeable) Qualitative (Agreeable/Not Agreeable)
		pH	IS 3025 (Part 11): 1983 (RA 2006)	3.0 to 13.9
		Turbidity	IS 3025 (Part 10): 1984 (RA 2002)	0.1 NTU to 40 NTU
		Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006)	10 mg/l to 2000 mg/l
		Aluminum	APHA (22 nd Edition) 3500-AI B: 2012 IS 3025 (Part 55): 2003 (RA 2009)	0.005 mg/l to 0.20 mg/l 0.02 mg/l to 0.3 mg/l
		Ammonia	IS 3025 (Part 34): 1988 (RA 2009) APHA (22 nd Edition) 4500-NH ₃ F:2012	0.01 mg/l to 5 mg/l
		Anionic Surface Active Agent	IS 13428: 2005 Annexure K	0.05 mg/l to 1 mg/l
		Barium	IS 13428: 2005 Annexure F IS 15302: 2003	0.5 mg/l to 20mg/l 0.005 mg/l to 0.10 mg/l

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	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Processed Food Industry, Swimming Pool Water	Boron	APHA (22 nd Edition) 4500-B C: 2012 IS 3025 (Part 57): 2005 APHA (22 nd Edition) 4500-B B: 2012	0.1 mg/l to 2.0 mg/l
		Calcium	APHA (22 nd Edition) 3500 Ca-B: 2012 IS 3025 (Part 40): 1991 (RA 2009) (EDTA titrimetric Method)	2 mg/l to 200 mg/l
		Chloramines	IS 3025 (Part 26): 1986 (RA 2009)	0.1 mg/l to 1.0 mg/l
		Chlorides	IS 3025 (Part 32): 1988 (RA 2009) APHA (22 nd Edition) 4500-Cl B: 2012	2 mg/l to 500 mg/l
		Copper	APHA (22 nd Edition): 2012 IS 3025 (Part 42): 1992 (RA 2009)	0.005 to 1.0 mg/l
		Fluorides	APHA (22 nd Edition) 4500-F D: 2012 IS 3025 (Part 60): 2008	0.1 mg/l to 5 mg/l 0.05 mg/l to 1.0 mg/l
		Residual & Free Chlorine	IS 3025 (Part 26): 1986 (RA 2009)	0.1 mg/l to 2.5 mg/l

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	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Processed Food Industry, Swimming Pool Water	Iron	APHA (22 nd Edition) 3500-Fe B: 2012 IS 3025 (Part 53): 2003 (RA 2009)	0.03 mg/l to 1.0 mg/l
			APHA (22 nd Edition) 3111-B: 2012	0.1 mg/l to 2.0 mg/l
		Magnesium	APHA (22 nd Edition) 3500-Mg B: 2012 IS 3025 (Part 46): 1994 (RA 2009) APHA (22 nd Edition) 3111-B: 2012	1.0 mg/l to 200 mg/l
		Manganese	APHA (22 nd Edition) 3113-B: 2012 IS 3025 (Part 59): 2006	0.005 mg/l to 0.02 mg/l
		Mineral Oil	IS 3025 (Part 39): 1991 (RA 2009)	0.05 mg/l to 2.5 mg/l
		Nitrate	APHA (22 nd Edition) 4500-NO ₃ B :2012 IS 3025 (Part 34): 1988 (RA 2009) Devarda's Alloy Reduction IS 3025 (Part 34): 1988 (RA 2009) Chromotropic acid	0.1 mg/l to 15 mg/l 2 mg/l to 50 mg/l 0.1 mg/l to 5.0 mg/l
		Nitrite	IS 3025 (Part 34): 1988 (RA 2009)	0.001 mg/l to 0.2 mg/l
		Phenolic Compound	IS 3025 (Part 43): 1992 (RA 2009)	0.001 mg/l to 0.25 mg/l
		Selenium	APHA (22 nd Edition) 3114-C: 2012. IS 3025 (Part 56): 2003 (RA 2009)	0.005 mg/l to 0.050 mg/l

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	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Processed Food Industry, Swimming Pool Water	Silver	APHA (22 nd Edition) 3113- B :2012 IS 13428: 2005 Annexure J	0.005 mg/l to 0.050 mg/l
		Sulphate	APHA (22 nd Edition) 4500-SO ₄ ²⁻ E : 2012 IS 3025 (Part 24): 1986 (RA 2009)	1 mg/l to 40 mg/l
		Sulphide	IS 3025 (Part 29): 1986 (RA 2009) APHA (22 nd Edition) 4500-S ²⁻ D : 2012	0.03 mg/l to 20 mg/l 0.1 mg/l to 20 mg/l
		Alkalinity	APHA (22 nd Edition) 2320-B: 2012 IS 3025 (Part 23): 1986 (RA 2009)	2 mg/l to 500mg/l
		Total Hardness	IS 3025 (Part 21): 1983 (RA 2006) (EDTA Method)	2 mg/l to 1000 mg/l
		Zinc	APHA (22 nd Edition) 3111-B: 2012 AAS IS 3025 (Part 49): 1994 (RA 2009)	0.05 mg/l to 1.0 mg/l
		Cadmium	APHA (22 nd Edition) 3113-B: 2012 IS 3025 (Part 41): 1992 (RA 2009)	0.0005 mg/l to 0.020 mg/l
		Cyanide	IS 3025 (Part 27): 1986 (RA 2009)	0.005 mg/l to 1.0 mg/l

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	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Processed Food Industry, Swimming Pool Water	Lead	APHA (22 nd Edition) 3113-B : 2012 IS 3025 (Part 47): 1994 (RA 2009)	0.005 mg/l to 0.1 mg/l
		Mercury	APHA (22 nd Edition) 3112-B: 2012 IS 3025 (Part 48): 1994 (RA 2009)	0.001 mg/l to 0.050 mg/l
		Molybdenum	APHA (22 nd Edition) 3113-B: 2012	0.005 mg/l to 0.05 mg/l
		Nickel	APHA (22 nd Edition) 3113-B :2012 IS 13428: 2005 Annexure L	0.005 mg/l to 0.05 mg/l
		Arsenic	IS 3025 (Part 37): 1988 (RA 2009) APHA (22 nd Edition) 3114-C: 2012	0.01 mg/l to 0.50 mg/l 0.005 mg/l to 0.10 mg/l
		Total Chromium	APHA (22 nd Edition) 3113-B : 2012 IS 13428: 2005 Annexure J	0.005 mg/l to 0.10 mg/l
		Chromium	APHA (22 nd Edition) 3500-Cr B: 2012 IS 3025 (Part 52): 2003 (RA 2009)	0.1 mg/l to 10 mg/l 0.03 mg/l to 20 mg/l
		Sodium	APHA (22 nd Edition) 3500-Na B : 2012 IS 3025 (Part 45): 1993 (RA 2009)	0.1 mg/l to 1.0 mg/l
		Specific Conductivity	APHA (22 nd Edition) 2510-B: 2012	0.1 µS/cm to 1500 µS/cm

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	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Processed Food Industry, Swimming Pool Water	Potassium	APHA (22 nd Edition) 3500-K B: 2012	0.1 mg/l to 1.0 mg/l
		Phosphorous	APHA (22 nd Edition) 4500-P-C: 2012	0.5 mg/l to 5.0 mg/l
		Antimony	IS 15303: 2003	0.004 mg/l to 0.05 mg/l
		Borates	IS 13428: 2005 Annexure H	1.0 mg/l to 5.0 mg/l
		Acidity	IS 3025 (Part 22): 1986 (RA 2009)	2.0 mg/l to 250 mg/l
		Carbonate	IS 3025 (Part 51): 2001 (RA 2006) (By Calculation)	2.0 mg/l to 250 mg/l
		Bicarbonate	IS 3025 (Part 51): 2001 (RA 2006) (By Calculation)	2.0 mg/l to 500 mg/l
		Silica	IS 3025 (Part 35): 1988 (RA 2009)	0.05 mg/l to 5 mg/l
		Colour Retention	IS 1070: 1992 (RA 2008)	1 min to 60 min
		Oxygen Absorbed	IS 3025 (Part 63): 2007	0.4 mg/l to 10.0 mg/l (in 4 Hours)
		Total Solids	IS 3025 (Part 15): 1984 (RA 2009)	10 mg/l to 2000 mg/l
		Pesticide Residues	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6630-D: 2012	
		A -BHC/HCH		0.01 µg/l to 10.0 µg/l
		B-BHC/HCH		0.01 µg/l to 10.0 µg/l

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	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Processed Food Industry, Swimming Pool Water	Δ- BHC/HCH	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6630-D: 2012	0.01 µg/l to 10.0 µg/l
		Γ - BHC/HCH (Lindane)		0.01 µg/l to 10.0 µg/l
		O,P – DDE		0.01 µg/l to 10.0 µg/l
		P,P – DDE		0.01 µg/l to 10.0 µg/l
		O,P – DDT		0.01 µg/l to 10.0 µg/l
		P,P – DDT		0.01 µg/l to 10.0 µg/l
		O,P – DDD		0.01 µg/l to 10.0 µg/l
		P,P – DDD		0.01 µg/l to 10.0 µg/l
		Endosulfan A		0.01 µg/l to 10.0 µg/l
		Endosulfan B		0.01 µg/l to 10.0 µg/l
		Endosulfan Sulphate		0.01 µg/l to 10.0 µg/l
		Aldrin		0.01 µg/l to 10.0 µg/l
		Dieldrin		0.01 µg/l to 10.0 µg/l
		Alachlor		0.01 µg/l to 10.0 µg/l
		Atrazine		0.01 µg/l to 10.0 µg/l
	Butachlor	0.01 µg/l to 10.0 µg/l		

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	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Processed Food Industry, Swimming Pool Water	Chlorpyrifos	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6630-D: 2012	0.01 µg/l to 10.0 µg/l
		Ethion		0.01 µg/l to 10.0 µg/l
		Malathion	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6630-D: 2012	0.01 µg/l to 10.0 µg/l
		Methyl Parathion		
		Methyl Paraoxon		
		Monocrotophos		
		Phorate	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6630-D: 2012	0.05 µg/l to 25 µg/l
		Phorate Sulfone	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6630-D: 2012	0.01 µg/l to 10 µg/l
		Phorate Sulfoxide		
		Malaaxon		
	2,4-D	EPA 555	0.05 µg/l to 25 µg/l	
	Isoproturon	EPA 532	0.05 µg/l to 25 µg/l	
	Polychlorinated Biphenyls(PCB)	APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l	
	1,1 Biphenyl 2,2',5-Trichloro			
	1,1 Biphenyl 2,4',5-Trichloro	APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l	
	1,1 Biphenyl 2,2',5,6-Tetrachloro	APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l	

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	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Processed Food Industry, Swimming Pool Water	1,1 Biphenyl 2,2',3,5 Tetrachloro	APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l
		1,1 Biphenyl 2,2',3,5',6 Pentachloro	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l
		1,1 Biphenyl 2,2',3,3,4,6' Hexachloro	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l
		1,1 Biphenyl 2,3,3',4,4' Pentachloro	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l
		1,1 Biphenyl 2,2',3,4',5',6 Hexachloro	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l
		1,1 Biphenyl 2,2',3,3',4,6' Hexachloro	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l
		1,1 Biphenyl 2,2',3,4,5,5',6 Heptachloro	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l
		1,1 Biphenyl 2,2',3,3,4,5,5',6 Octachloro	EPA 525.2, REVISION 2.0 (1995). & APHA (22 nd Edition) 6431-C: 2012	0.01 µg/l to 200 µg/l

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	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Processed Food Industry, Swimming Pool Water	PAH (Polynuclear Aromatic Hydrocarbons)	APHA (22 nd Edition) 6440-C: 2012 EPA 525.2, REVISION 2.0 (1995)		
		Naphthalene		0.05 µg/l to 50 µg/l	
		Acenaphthylene		0.05 µg/l to 50 µg/l	
		Acenaphthene		0.05 µg/l to 50 µg/l	
		Fluorene		0.05 µg/l to 50 µg/l	
		Phenanthrene		0.05 µg/l to 50 µg/l	
		Anthracene		APHA (22 nd Edition) 6440-C: 2012 EPA 525.2, REVISION 2.0 (1995)	0.05 µg/l to 50 µg/l
		Fluoranthene			0.05 µg/l to 50 µg/l
		Pyrene			0.05 µg/l to 50 µg/l
		Chrysene			0.05 µg/l to 50 µg/l
		Benzo (B) Fluoranthene			
		Benzo (K) Fluoranthene			
		Benzo (A) Pyrene			
		Benzo (A) Anthracene			
	Dibenzo (A,H) Anthracene				
	Benzo (G,H,I) Perylene				
	Indeno (1,2,3-Cd) Pyrene				

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2.	Waste Water	pH	IS 3025 (Part 11): 1983 (RA 2006)	0.1 to 13.9
		Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006)	10 mg/l to 2000 mg/l
		Total Suspended Solids	IS 3025 (Part 17): 1984 (RA 2006)	4 mg/l to 500 mg/l
		Total Solids	IS 3025 (Part 15): 1984 (RA 2009)	10 mg/l to 2000 mg/l
		Volatile Residue	IS 3025 (Part 18): 1984 (RA 2006)	5.0 mg/l to 2000 mg/l
		Fixed Residue	IS 3025 (Part 18): 1984 (RA 2006)	2.0 mg/l to 2000 mg/l
		Turbidity	IS 3025 (Part 10): 1984 (RA 2002)	0.1 NTU to 40 NTU
		Dissolved Oxygen	IS 3025 (Part 38): 1989 (RA 2009)	0.2 mg/l to 10 mg/l
		Oil And Grease	IS 3025 (Part 39): 1991 (RA 2009)	3.0 mg/l to 500 mg/l
		Chemical Oxygen Demand	IS 3025 (Part 58): 2006 APHA (22 nd Edition) 5220-B & C: 2012	10 mg/l to 1000 mg/l 40 mg/l to 1000 mg/l
		Biological Oxygen Demand	IS 3025 (Part 44): 1993 (RA 2009) APHA (22 nd Edition) 5210-B: 2012	4.0 mg/l to 180 mg/l
		Colour	IS 3025 (Part 4): 1983 (RA 2006)	1 Hazen/TCU to 10 Hazen/TCU
		Aluminum	APHA (22 nd Edition) 3500-AI -B: 2012 IS 3025 (Part 55): 2003 (RA 2009)	0.005 mg/l to 0.20 mg/l 0.02 mg/l to 0.3 mg/l

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	Waste Water	Ammonia	IS 3025 (Part 34): 1988 (RA 2009)	0.01 mg/l to 5 mg/l
			APHA (22 nd Edition): 2012 (4500-NH ₃ -C)	5 mg/l to 25 mg/l
		Calcium	APHA (22 nd Edition) 3500-Ca B): 2012	2 mg/l to 200 mg/l
			IS 3025 (Part 40): 1991 (RA 2009)	
		Chlorides	IS 3025 (Part 32): 1988 (RA 2009)	2 mg/l to 500 mg/l
		Copper	APHA (22 nd Edition): 2012 (3111 B) IS 3025 (Part 42): 1992 (RA 2009)	0.01 mg/l to 5.0 mg/l
		Fluorides	APHA (22 nd Edition) 4500-F-D: 2012	0.1 mg/l to 5 mg/l
		Residual & Free Chlorine	IS 3025 (Part 26): 1986 (RA 2009) APHA (22 nd Edition) 4500-Cl B : 2012	1 mg/l to 10.0 mg/l
		Nitrate	IS 3025 (Part 34): 1988 (RA 2009)	2 mg/l to 50 mg/l
		Iron	APHA (22 nd Edition) 3500-Fe B: 2012 IS 3025 (Part 53): 2003 (RA 2009)	0.03 mg/l to 1.0 mg/l
			APHA (22 nd Edition) 3111-B: 2012	0.1 mg/l to 2.0 mg/l

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	Waste Water	Magnesium	APHA (22 nd Edition) 3500-Mg B & 3111-B: 2012 (AAS) IS 3025 (Part 46): 1994 (RA 2009)	1.0 mg/l to 200 mg/l
		Manganese	APHA (22 nd Edition) 3111-B: 2012	0.1 mg/l to 5.0 mg/l
		Nitrite	IS 3025 (Part 34): 1988 (RA 2009)	0.001 mg/l to 0.2 mg/l
		Phenolic Compound	IS 3025 (Part 43): 1992 (RA 2009)	0.010 mg/l to 2.5 mg/l
		Silver	APHA (22 nd Edition) 3111-B: 2012	0.05 mg/l to 1.0 mg/l
		Sulphate	APHA (22 nd Edition) 4500-SO ₄ ²⁻ E: 2012 & IS 3025 (Part 24): 1986 (RA 2009)	1 mg/l to 40 mg/l
		Sulphide	IS 3025 (Part 29): 1986 (RA 2009)	0.03 mg/l to 20 mg/l
			APHA (22 nd Edition) 4500-S ²⁻ D: 2012	0.1 mg/l to 20 mg/l
		Alkalinity	APHA (22 nd Edition) 2320-B: 2012	2 mg/l to 500mg/l
			IS 3025 (Part 23): 1986 (RA 2009)	
	Total Hardness	IS 3025 (Part 21): 1983 (RA 2006)	2 mg/l to 1000 mg/l	
	Zinc	APHA (22 nd Edition) 3111-B: 2012	0.05 mg/l to 1.0 mg/l	
		IS 3025 (Part 49): 1994 (RA 2009)		

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	Waste Water	Nickel	APHA (22 nd Edition) 3111-B: 2012 IS 3025 (Part 54): 2003 (RA 2009)	0.1 mg/l to 10.0 mg/l
		Total Chromium	APHA (22 nd Edition) 3111-B: 2012	0.2 mg/l to 2.5 mg/l
		Chromium (as Cr ⁶⁺)	APHA (22 nd Edition) 3500-Cr B: 2012	0.1 mg/l to 5.0 mg/l
			IS 3025 (Part 52): 2003 (RA 2009)	0.03 to 20 mg/l
		Sodium	APHA (22 nd Edition) 3500-Na B: 2012	1.0 mg/l to 1000 mg/l
		Conductivity	APHA (22 nd Edition) 2510-B : 2012	0.1 µS/cm to 1500 µS/cm
		Potassium	APHA (22 nd Edition) 3500-K B: 2012	1.0 mg/l to 100.0 mg/l
		Phosphorous	APHA (22 nd Edition) 4500-P C: 2012	0.5 mg/l to 5.0 mg/l
		Acidity (as CaCO ₃)	IS 3025 (Part 22): 1986 (RA 2009)	5.0 mg/l to 250 mg/l
		Carbonate	IS 3025 (Part 51): 2001 (RA 2006) (By Calculation)	2.0 mg/l to 250 mg/l
		Bicarbonate	IS 3025 (Part 51): 2001 (RA 2006)	2.0 mg/l to 500 mg/l
		Silica	IS 3025 (Part 35): 1988 (RA 2009)	0.05 mg/l to 50 mg/l

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II. FOOD & AGRICULTURAL PRODUCTS				
1.	Animal Feed	Moisture	IS 7874 (Part 1): 1975 (RA 2009)	(0.5 g to 15.0 g)/ 100g
		Ash	IS 7874 (Part 1): 1975 (RA 2009)	(0.5 g to 15.0 g)/ 100g
		Protein	IS 7219: 1973 (RA 2009)	(1.0 g to 30.0 g)/ 100g
		Fat	IS 7874 (Part 1): 1975 (RA 2009)	(0.5 g to 15.0 g)/ 100g
		Crude Fibre	IS 7874 (Part 1): 1975 (RA 2009)	(0.5 g to 15.0 g)/ 100g
		Carbohydrate	SOP/C/F/01(g) Issue No: 04, Issue Date: 02/03/2015	(25 g to 80.0 g)/ 100g
		Calories	SOP/C/F/01(g) Issue No: 04 Issue Date: 02/03/2015	(10 kcal to 800 kcal)/ 100g
2.	Food Grains Cereals, Pulses & Flours	Moisture	AOAC (19 th Edition) 925.10: 2012	(1.0 g to 15.0 g)/ 100g
		Ash	AOAC (19 th Edition) 945.38: 2012	(0.5 g to 9.0 g)/ 100g
		Ash	IS 1156: 1957 (RA 2009)	(0.05 g to 1.5 g)/ 100g
		Fat	AOAC (19 th Edition) 945.38: 2012	(0.5 g to 10.0 g)/ 100g
		Protein	IS 7219: 1973 (RA 2009)	(1.0 g to 30.0 g)/ 100g
		Crude Fibre	IS 1155: 1968 (RA 2010)	(0.5 g to 15.0 g)/ 100g

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	Food Grains Cereals, Pulses & Flours	Carbohydrate	SOP/C/F/02(f) Issue No: 04 Issue Date: 02/03/2015	(25 g to 80.0 g)/ 100g
		Calories	SOP/C/F/02(f) Issue No: 04 Issue Date: 02/03/2015	(10 kcal to 800 kcal)/ 100g
		Gluten in Atta	IS 1155: 1968 (RA 2010)	(5.0 g to 15.0 g)/ 100g
		Alcoholic Acidity	IS 1156: 1957 (RA 2009)	(0.05 g to 1.0 g)/ 100g
		Other Food Grains	IS 4333 (Part 1): 1996 (RA 2009)	(0.1 g to 10 g)/ 100g
		Damaged Grains	IS 4333 (Part 1): 1996 (RA 2009)	(0.1 g to 10 g)/ 100g
		Discolored Grains	IS 4333 (Part 1): 1996 (RA 2009)	(0.1 g to 10 g)/ 100g
		Insect Damaged/ Weevilled Grains	IS 4333 (Part 1): 1996 (RA 2009)	(0.1 g to 10 g)/ 100g
		Rodent Hair & Excreta	IS 6261: 1971 (RA 2005)	(0.1 g to 10 g)/ 100g
		Extraneous Matter	IS 4333 (Part 1): 1996 (RA 2009)	(0.1 g to 10 g)/ 100g
	Hydrocyanic Acid	AOAC (19 th Edition) 915.03: 2012	0.5 mg/kg to 5 mg/kg	
3.	Nutritional Supplements	Moisture	IS 4684: 1975 (RA 2010) Appendix B	(0.5 g to 10 g)/ 100g
		Ash	IS 4684: 1975 (RA 2010) Appendix B	(0.5 g to 10 g)/ 100g

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	Nutritional Supplements	Protein	IS 4684: 1975 (RA 2010) Appendix B	(0.5 g to 30 g/100g
		Fat	IS 4684: 1975 (RA 2010) Appendix B	(0.5 g to 15 g)/ 100g
		Crude Fibre	IS 4684: 1975 (RA 2010) Appendix B	(0.5 g to 15 g)/ 100g
		Carbohydrate	IS 1656: 2007 (RA 2009) Annexure C	(25 g to 85.0 g)/ 100g
		Calories	SOP/C/F/20(f) Issue No: 04 Issue Date: 02/03/2015	(10 kcal to 800 kcal)/ 100g
4.	Coffee	Moisture	IS 3077: 1992 (RA 2009)	(0.5 g to 10 g)/ 100g
		Total Ash	IS 3077: 1992 (RA 2009)	(0.5 g to 10 g)/ 100g
		Petroleum Ether Extract	IS 3077: 1992 (RA 2009)	(0.5 g to 12.0 g)/ 100g
		Protein	IS 7219: 1973 (RA 2009)	(0.05 g to 5.0 g)/ 100g
		Crude Fibre	IS 1797: 1985 (RA 2009)	(0.02 g to 1.0 g)/ 100g
		Carbohydrate	SOP/C/F/011(h) Issue No: 04 Issue Date: 02/03/2015	(25 g to 90.0 g)/ 100g
		Calories	SOP/C/F/11(h) Issue No: 04 Issue Date: 02/03/2015	(50 kcal to 800 kcal)/ 100g

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	Coffee	Water Soluble Matter	IS 3077: 1992 (RA 2009)	(25 g to 45 g)/ 100g
		Alkalinity	IS 3077: 1992 (RA 2009)	(2.0 g to 8.0 ml)/g
		Acid Insoluble Ash	IS 3077: 1992 (RA 2009)	(0.02 g to 1.0 g)/ 100g
		Acidity	AOAC (19 th Edition) 920.92: 2012	(0.1 g to 1.5 g)/ 100g
		Caffeine	IS 3077: 1992 (RA 2009)	(0.07 g to 2.5 g)/ 100g
		Chicory	AOAC (19 th Edition) 920.95: 2012	Qualitative (Absent/Present)
5.	Tea	Moisture	AOAC (19 th Edition) 925.19: 2012	(2.0 g to 15 g)/ 100g
		Total Ash	AOAC (19 th Edition) 920.100: 2012	(2.0 g to 9.0 g)/ 100g
		Water Soluble Ash	AOAC (19 th Edition) 920.100: 2012	(2.0 g to 7.0 g)/ 100g
		Petroleum Ether Extract	AOAC (19 th Edition) 925.18: 2012	(0.05 g to 2.0 g)/ 100g
		Protein	IS 7219: 1973 (RA 2009)	(0.25 g to 25.0 g)/ 100g
		Crude Fibre	AOAC (19 th Edition) 920.102: 2012	(5.0 g to 20.0 g)/ 100g
		Water Extract	AOAC (19 th Edition) 920.104: 2012	(30.0 g to 45.0 g)/ 100g
		Acid Insoluble Ash	AOAC (19 th Edition) 920.100: 2012	(0.1 g to 1.5 g)/ 100g
		Alkalinity	AOAC (19 th Edition) 920.100: 2012	(0.5 ml to 4.0 ml)/ 100g

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	Tea	Carbohydrate	SOP/C/F/10(i) Issue No: 04 Issue Date: 02/03/2015	(25 g to 90.0 g)/ 100g
		Calories	SOP/C/F/10(i) Issue No: 04 Issue Date: 02/03/2015	(50 kcal to 800 kcal)/ 100g
		Alkalinity	AOAC (19 th Edition) 920.100: 2012	(0.5 ml to 5.0 ml)/ 100g
		Caffeine Content	AOAC (19 th Edition) 925.17: 2012	(0.07 g to 2.5 g)/ 100g
6.	Milk / Dairy Product Milk			
a.	(Cream, Khoa, Chakka, Amarkhand, Milk Sweet, Curd, Lassi, Paneer Whey Powder Concentrate)	Moisture	IS 1479 (Part 2): 1961 (RA 2009)	(70.0 g to 95 g)/ 100g
		Ash	AOAC (19 th Edition) 945.46: 2012	(0.1 g to 4.0 g)/ 100g
		Fat	AOAC (19 th Edition) 2000.18: 2012 IS 1479 (Part 2): 1961 (RA 2009)	(0.1 g to 55.0 g)/ 100g
		Protein	IS 7219: 1973 (RA 2009)	(1.0 g to 60.0 g)/ 100g
		Carbohydrate	SOP/C/F/13(t) Issue No: 04 Issue Date: 02/03/2015	(1 g to 60.0 g)/ 100g
		Calories	SOP/C/F/13(t) Issue No: 04 Issue Date: 02/03/2015	(10 kcal to 600 kcal)/ 100g
		Solid - Not- Fat	AOAC (19 th Edition) 990.21: 2012	(5 g to 30.0 g)/ 100g
		Titration Acidity	AOAC (19 th Edition) 947.05: 2012	(0.1 g to 2.0 g)/ 100g

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	(Cream, Khoa, Chakka, Amarkhand, Milk Sweet, Curd, Lassi, Paneer Whey Powder Concentrate)	Albumin in Milk	IS 1479 (Part 2): 1961 (RA 2009)	(0.5 g to 4.0 g)/ 100g
		Casein in Milk	IS 1479 (Part 2): 1961 (RA 2009)	(0.5 g to 4.0 g)/ 100g
		Total Solid	IS 1479 (Part 2): 1961 (RA 2009)	(5 g to 70.0 g)/ 100g
		Sugar	IS 1479 (Part 2): 1961 (RA 2009)	(1.0 g to 10.0 g)/ 100g
		Common Salt	AOAC (19 th Edition) 960.29: 2012	(0.01 g to 1.0 g)/ 100g
b.	Milk Powder (Skimmed Milk Powder Whole Milk Powder)	Moisture	IS 16072: 2012	(5.0 g to 10 g)/ 100g
		Ash	IS 1165: 2002 (RA 2009)	(0.5 g to 10.0 g)/ 100g
		Fat	AOAC 19 th Edition): 2012 932.06	(1.0 g to 30.0 g)/ 100g
		Protein	IS 7219: 1973 (RA 2009)	(1.0 g to 40.0 g)/ 100g
		Carbohydrate	SOP/C/F/13(t) Issue No: 04 Issue Date: 02/03/2015	(10 g to 80.0 g)/ 100g
		Calories	SOP/C/F/13(t) Issue No: 04 Issue Date: 02/03/2015	(50 kcal to 800 kcal)/ 100g
		Titration Acidity	IS 1165:2002 (RA 2009)	(0.1 g to 2.0 g)/ 100g
		Total Solid	IS 11623: 2008	(80 g to 100.0 g)/100g

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c.	Milk Adulteration	Cane Sugar	IS 1479 (Part 1): 1960 (RA 2009)	Qualitative (Present/Absent) Min. 0.1%
		Starch	IS 1479 (Part 1): 1960 (RA 2009)	Qualitative (Present/Absent) Min 0.002 g/100ml
		Urea	IS 1479 (Part1): 1960 (RA 2009)	Qualitative (Present/Absent) Min 0.2%
		Vegetable Oil/Foreign Fat	IS 1479 (Part 1): 1960 (RA 2009)	Qualitative (Present/Absent) Min. 1mg/100g
		Ammonium Sulphate	IS 1479 (Part 2): 1961 (RA 2009)	Qualitative (Present/Absent) Min 0.1%
		Dulcin	AOAC (19 th Edition) 957.11-C: 2012	Qualitative (Present/Absent) Min 0.1%
d.	Neutralizer	Presence of Carbonate	IS 1479 (Part1):1960 (RA 2009)	Qualitative (Present/Absent) Min 0.5%
		Presence of Ca(OH) ₂ , NaHCO ₃ & NaOH	IS 1479 (Part1):1960 (RA 2009)	Qualitative (Present/Absent) Min 0.5%

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e.	Preservative in Milk	Boric Acid & Borates Test in Milk	IS 1479 (Part1):1960 (RA 2009)	Qualitative (Present/Absent) Min 0.5%
		Hehner Test for Formaldehyde in Milk	IS 1479 (Part1):1960 (RA 2009)	Qualitative (Present/Absent) Min 0.5%
		Benzoic Acid in Milk	IS 1479 (Part1):1960 (RA 2009)	Qualitative (Present/Absent) Min 0.5%
		Salicylic Acid in Milk	IS 1479 (Part1):1960 (RA 2009)	Qualitative (Present/Absent) Min 0.5%
		Hydrogen Peroxide in Milk	IS 1479 (Part1):1960 (RA 2009)	Qualitative (Present/Absent) Min 0.5%
		Hypochlorites & Chloramines	IS 1479 (Part1):1960 (RA 2009)	Qualitative (Present/Absent) Min 2%
7.	Raw Sugar & Sugar Products (Refined Sugar, Icing Sugar, Brown Sugar, Jaggery)	Moisture	IS 6287: 1985 (RA 2010)	(0.1 g to 10.0 g)/ 100g
		Total Ash	AOAC (19 th Edition): 2012	(0.1 g to 5.0 g)/ 100g
		Acid Insoluble Ash	IS 6287: 1985 (RA 2010)	(0.05 g to 2.0 g)/ 100g
		Colour	IS 15279: 2003 (RA 2008)	35 to 150

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	Raw Sugar & Sugar Products (Refined Sugar, Icing Sugar, Brown Sugar, Jaggery)	Conductivity Ash	IS 15279: 2003 (RA 2008)	(0.01 g to 0.5 g)/ 100g
		Sulphated Ash	IS 15279: 2003 (RA 2008)	(0.05 g to 2.0 g)/ 100g
8.	Spices & Condiment			
a.	Caraway, Cardamom, Chilies & Capsicum, Cinnamon, Cassia, Cloves, Cumin, Coriander, Fennel, Fenugreek, Mace, Nutmeg, Pepper Black Mustard Whole & Powder, Ginger	Acid Insoluble Ash	IS 1797: 1985 (RA 2009)	(0.01 g to 2.0 g)/ 100g
		Moisture	IS 1797: 1985 (RA 2009)	(5.0 g to 20.0 g)/ 100g
		Total Ash	IS 1797: 1985 (RA 2009)	(0.5 g to 10.0 g)/ 100g
		Water Insoluble Ash	IS 1797: 1985 (RA 2009)	(0.05 g to 2.0 g)/ 100g
		Alcohol Soluble Extract	IS 1797: 1985 (RA 2009)	(2.0 g to 15.0 g)/ 100g
		Cold Water Soluble Extract	IS 1797: 1985 (RA 2009)	(2.0 g to 15.0 g)/ 100g
		Non Volatile Ether Extract	IS 1797: 1985 (RA 2009)	(0.1 g to 30.0 g)/ 100g
		Protein	IS 7219: 1973 (RA 2009)	(0.5 to 35.0 g)/ 100g
		Crude Fibre	IS 1797: 1985 (RA 2009)	(0.5 g to 30.0 g)/ 100g
	Carbohydrate	SOP/C/F/06(f) Issue No: 04 Issue Date: 02/03/2015	(10 g to 80.0 g)/ 100g	

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	Caraway, Cardamom, Chillies & Capsicum, Cinnamon, Cassia, Cloves, Cumin, Coriander, Fennel, Fenugreek, Mace, Nutmeg, Pepper Black Mustard Whole & Powder, Ginger	Calories	SOP/C/F/06(f) Issue No: 04 Issue Date: 02/03/2015	(10 kcal to 600 kcal)/ 100g
		Extraneous Matter in Whole Spices	IS 1797: 1985 (RA 2009)	(0.1 g to 10.0 g)/ 100g
		Calcium	IS 1797: 1985 (RA 2009)	(0.02 g to 2.0 g)/ 100g
		Salt	IS 1797: 1985 (RA 2009)	(0.1 g to 5.0 g)/ 100g
		Insect Damaged Matter	AOAC (19 th Edition) 960.51: 2012	(0.1 g to 25.0 g)/ 100g
		Argemone Seeds	IS 2323: 1983 (RA 2009)	Qualitative (Present/Absent)
		Papaya Seeds in Black Pepper	AOAC (19 th Edition) 972.40: 2012	Qualitative (Present/Absent)
b.		Chillies and Coriander	Turmeric content	SOP/C/F/08 (i) Issue No: 04 Issue Date: 02/03/2015
9.	Turmeric Powder	Chromate Test	IS 3576: 2010	Qualitative (Present/Absent)
		Moisture	IS 1797: 1985 (RA 2009)	(1.0 g to 10.0 g)/ 100g
		Curcumin Content	IS 10925: 1984 (RA 2007)	(1.0 g to 10.0 g)/ 100g
10.	Asafetida	Alcoholic Extract	IS 7807: 1975 (RA 2009)	(0.5 g to 4.00 g)/ 100g

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11.	Oils, Fats and Related Products (Including Ghee, Butter)	Moisture	IS 548 (Part 1): 1964 (RA 2009)	(0.01 g to 2.00 g)/ 100g
		Saponification Value	IS 548 (Part 1): 1964 (RA 2009)	100 to 300
		Iodine Value	IS 548 (Part 1): 1964 (RA 2009)	5 to 250
		Acid Value	IS 548 (Part 1): 1964 (RA 2009)	(0.1 to 10 g)/ 100g
		Free Fatty Acid	IS 548 (Part 1): 1964 (RA 2009)	(0.05 to 1.0 g)/ 100g
		Index of Refraction	IS 548 (Part 1): 1964 (RA 2009)	1.4460 to 1.4783
		B. R. Reading	IS 548 (Part 1): 1964 (RA 2009)	30 to 80
		Baudouin Test (Sesame Oil)	IS 548 (Part 2): 1976 (RA 2009)	Qualitative (Positive/Negative)
		Mineral Oil	IS 548 (Part 2): 1976 (RA 2009)	Qualitative (Positive/Negative)
		Argemone Oil	IS 548 (Part 2): 1976 (RA 2009)	Qualitative (Positive/Negative)
		Unsaponifiable Matter	IS 548 (Part 1): 1964 (RA 2009)	(0.5 g to 4.0 g)/ 100g
		Peroxide Value	IS 548 (Part 1): 1964 (RA 2009)	0.1 meq/kg to 10 meq/kg
		Reichert Value	IS 3508: 1966 (RA 2009)	15 to 30
Rancidity Test	SOP/C/F/08(h) Issue No: 04 Issue Date: 02/03/2015	Qualitative (Present/Absent)		

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	Oils, Fats and Related Products (Including Ghee, Butter)	Salt in Butter	IS 3507: 1966 (RA 2003)	(0.5 g to 5.0 g)/ 100g
		Bellier Turbidity Temperature	IS 548 (Part 2): 1976 (RA 2009)	25 °C to 50 °C
		Anisidine Value	ES ISO 6885: 2012	0.1 to 100
12.	Oil Seeds (Linseed/Flaxseed, Mustard Sunflower Seeds Peanut, Niger Seeds)	Moisture	IS 3579: 1966 (RA 2010)	(0.01 g to 2.00 g)/ 100g
		Oil Content	IS 3579: 1966 (RA 2010)	(35 g to 60 g)/ 100g
		Acid Value	IS 3579: 1966 (RA 2010)	(0.1 to 2.0 g)/ 100g
13.	Nut and Nut Products (Almond, Cashew Walnut, Pistachio, Peanut Areca Nut)	Moisture	AOAC (19 th Edition) 925.40: 2012	0.1 % to 50 %
		Ash	AOAC (19 th Edition) 950.49: 2012	0.05 % to 10 %
		Fat	AOAC (19 th Edition) 948.22: 2012	5 % to 60 %
		Protein	IS 7219: 1973 (RA 2009)	1 % to 30 %
		Crude Fibre	IS 1797: 1985 (RA 2009)	1 % to 10 %
		Carbohydrate	SOP/C/F/03(f) Issue No: 04 Issue Date: 02/03/2015	(5 g to 50.0 g)/ 100g
		Calories	SOP/C/F/03(f) Issue No: 04 Issue Date: 02/03/2015	(10 kcal to 800 kcal)/ 100g

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14.	Bakery & Confectionary Products (Desserts, Biscuits, Cakes, Pastries, Toffees, Bread)	Moisture	IS 1011: 2002 (RA 2009)	(0.5 g to 20 g)/ 100g
		Acid Insoluble Ash	IS 1011 : 2002 (RA 2009)	(0.01 g to 1.0 g)/ 100g
		Fat	IS 6287: 1985 (RA 2010)	(1.0 g to 30 g)/ 100g
		Protein	IS 7219: 1973 (RA 2009)	(0.5 g to 10 g)/ 100g
		Crude Fibre	IS 6287: 1985 (RA 2010)	(0.01 g to 3.0 g)/ 100g
		Carbohydrate	SOP/C/F/04(f) Issue No: 04 Issue Date: 02/03/2015	(10 g to 80.0 g)/ 100g
		Calories	SOP/C/F/04(f) Issue No: 04 Issue Date: 02/03/2015	(10 kcal to 800 kcal)/ 100g
	Acidity of Extracted Fat as Oleic Acid	IS 1011 : 2002 (RA 2009)	(0.05 g to 2.0 g)/ 100g	
15.	Processed Fruits and Vegetables	Acidity of Cut-Out Syrup as Citric Acid	IS 2860: 1964 (RA 2008)	(0.1 g to 1.0 g)/ 100g
		Sodium	IS 2860: 1964 (RA 2008)	(1.0 g to 25 g)/ 100g
		Calcium	IS 2860: 1964 (RA 2008)	(0.01 g to 1.0 g)/ 100g
		Vitamin C	IS 5838: 1970 (RA 2009)	(0.1 mg to 1000 mg)/ 100g
		Sodium Benzoate	AOAC (19 th Edition) 963.19: 2012	50 mg/kg to 500 mg/kg
		Acidity	AOAC (19 th Edition) 942.15: 2012	(0.05 g to 2.5 g)/ 100g

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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
16.	Alcoholic Drinks (Rum, Toddy, Country Spirit, Gin, Vodka, Wine, Whiskies & Brandies)	Ethyl Alcohol Content	IS 3752: 2005 (RA 2009)	(5.0 g to 55 g)/ 100g
		Residue on Evaporation	IS 3752: 2005 (RA 2009)	(0.01 g to 10 g)/ 100g
		Total Acidity	IS 3752: 2005 (RA 2009)	(10 g to 1000 g)/ 100l
		Volatile Acidity	IS 3752: 2005 (RA 2009)	(5 g to 200 g)/ 100l
		Ester	IS 3752: 2005 (RA 2009)	(10 g to 500 g)/ 100l
		Aldehyde	IS 3752: 2005 (RA 2009)	(5 g to 200 g)/ 100l
		Copper	IS 3752: 2005 (RA 2009)	1.0 mg/l to 25 mg/l
		Methyl Alcohol	IS 3752: 2005 (RA 2009)	(5 g to 300 g)/ 100l
		Amyl Alcohol	IS 3752: 2005 (RA 2009)	(25 g to 500 g)/ 100l
		Furfural	IS 3752: 2005 (RA 2009)	(2 g to 20 g)/ 100l
		Reducing Sugar in Wine	IS 7585: 1995 (RA 2009)	(0.1 g to 1.5 g)/ 100g

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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
17.	Snacks & Convenience Products Ready to Eat (Burgers, Sandwich, Rolls, All Fresh Snacks, Shev, Chiwada, All Types of Farasan, Wafers)	Moisture	IS 11623: 2008	(1.0 g to 15 g)/ 100g
		Ash	IS 14433 (Part 1): 1997 (RA 2007)	(0.5 g to 10 g)/ 100g
		Protein	IS 7219: 1973 (RA 2009)	(0.5 g to 15 g)/ 100g
		Fat	IS 6287: 1985 (RA 2010)	(1.0 g to 45 g)/ 100g
		Crude Fibre	IS 6287: 1985 (RA 2010)	(0.1 g to 10 g)/ 100g
		Carbohydrate (Available)	SOP/C/F/17(f) Issue No: 04 Issue Date: 02/03/2015	(10 g to 80.0 g)/ 100g
	Calories	SOP/C/F/17(f) Issue No: 04 Issue Date: 02/03/2015	(50 kcal to 800 kcal)/ 100g	

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