

Laboratory	Perfact Researchers Pvt. Ltd., 506-507, 5th Floor, NN Mall, Mangalam Place, Sec-3, Rohini, New Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	17.01.2016
Certificate Number	T- 2108	Valid Until	16.01.2018
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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.	AIR, GASES & ATMOSPHERE			
1.	Ambient Air Quality Monitoring	Oxides Of Nitrogen	IS 5182 (Part 6): 2006	5 µg/m ³ to 250 µg/m ³
		Sulphur Dioxide As SO ₂	IS 5182 (Part 2): 2001 (RA 2006)	3 µg/m ³ to 250 µg/m ³
		Suspended Particulate Matter	IS 5182 (Part 4): 1999 (RA 2010)	3 µg/m ³ to 1000 µg/m ³
		Particulate Matter Size Less Than 10 µm (PM ₁₀)	IS 5182 (Part 23): 2006	5 µg/m ³ to 1000 µg/m ³
		Particulate Matter Size Less Than 2.5 µm (PM _{2.5})	Lab SOP No.005, Dated. 30.06.2015	10 µg/m ³ to 500 µg/m ³
		Ammonia (NH ₃)	Lab SOP No.006, Dated. 30.06.2015	20 µg/m ³ to 700 µg/m ³
		Carbon Monoxide (CO)	IS 5182 (Part 10): 1999	0.1 mg/m ³ to 20 mg/m ³
		Ozone (O ₃)	LAB SOP No.007, Dated. 30.06.2015	10 µg/m ³ to 500 µg/m ³
		Chlorine	IS 5182 (Part 19): 1982 (RA 2003)	10 µg/m ³ to 100 µg/m ³
		Lead	IS 5182 (Part 22): 2004 (RA 2009)	0.1 µg/m ³ to 10 µg/m ³
		Benzene	IS 5182 (Part 11): 2006	1 µg/m ³ to 20 µg/m ³
		Toluene	IS 5182 (Part 11): 2006	1 µg/m ³ to 20 µg/m ³
		Ethyl Benzene	Lab SOP No.012, Dated. 30.06.2015	1 µg/m ³ to 20 µg/m ³

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	Ambient Air Quality Monitoring	Xylenes	IS 5182 (Part 11): 2006	1 µg/m ³ to 20 µg/m ³
		Nickel	LAB SOP No.008, Dated. 30.06.2015	10 µg/m ³ to 300 µg/m ³
		Fluoride	LAB SOP No.009, Dated. 30.06.2015	0.2 µg/m ³ to 20 µg/m ³
		Non Methane Hydrocarbon	LAB SOP No.010, Dated. 30.06.2015	0.1 µg/m ³ to 100 µg/m ³
		Methane	Lab SOP No.012, Dated. 30.06. 2015	0.1 µg/m ³ to 100 µg/m ³
		Polynuclear Aromatic Hydrocarbon (PAH) (Acenaphthene, Acenaphthylene, Anthracene, Benz[A]Anthracene, Benzo[B]Fluoranthene, Benzo[K]Fluoranthene, Chrysene, Dibenz[A,H]Anthracene, Fluoranthene, Fluorene, Naphthalene, Phenanthrene, Pyrene, Benzo(A)Pyrene, Indeno(123-Cd)Pyrene, Benzo(Ghl)Perylene)	IS 5182 (Part 12): 2004	0.5 ng/m ³ to 100 ng/m ³
		Volatile Organic Carbons: (Alcohols; Aldehydes; C1-C8 Alkanes; C1-C6 Alkenes; Low Molecular Weight. Aromatics, Pahs-Pcbs; Phenols; Halogenated Organic.)	Lab SOP No.011, Dated. 30.06.	0.01 µg/m ³ to 100 µg/m ³

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2.	Stack Emission Monitoring	Particulate Matter	IS 11255 (Part 1): 1985 (RA 2009)	10 mg/Nm ³ to 5000 mg/Nm ³
		Velocity	IS 11255 (Part 3): 2008	1 m/s to 30 m/s
		Volume Of Flue Gas Discharge (Flow Rate)	IS 11255 (Part 3): 2008	10 Nm ³ /h to 75000 Nm ³ /h
		Oxides Of Nitrogen	IS11255 (Part 7): 2005	1 mg/ Nm ³ to 750 mg/ Nm ³
		Sulphur Dioxide	IS 11255 (Part 2): 1985 (RA 2003)	1 mg/ Nm ³ to 1000 mg/ Nm ³
		Carbon Dioxide	IS 13270: 1992 (RA 2009)	0.2 % to 20 %
		Carbon Monoxide	IS 13270: 1992 (RA 2009)	0.01 % to 10 %
		Temperature	IS 11255 (Part 3): 2008	Ambient to 600 °C
		Oxygen	IS 13270: 1992 (RA 2009)	0.2 % to 20 %
		Ammonia (NH ₃)	IS 11255 (Part 6): 1999 (RA 2009)	0.3 mg/Nm ³ to 100 mg/Nm ³
		Carbon Disulphide (CS ₂)	IS 11255 (Part 4): 2006	1 mg/Nm ³ to 500 mg/Nm ³
		Total Fluoride	USEPA Method 13A	0.02 mg/Nm ³ to 2.0 mg/Nm ³
		Acid Mist	USEPA Method 8	1 mg/Nm ³ to 1000 mg/Nm ³
		Hydrogen Sulfide	IS 11255 (Part 4): 2006	1 mg/Nm ³ to 500 mg/Nm ³

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3.	Noise Level Monitoring (Ambient)	Leq. Lmin. Lmax.	Lab SOP 010, Dated. 30.06.2015 Based on Protocol for Ambient Level Noise Monitoring by CPCB : 2015	35 dBA to 140 dBA
		Insertion Loss, SPL	IS 9989: 1981 (RA 2008)	35 dBA to 140 dBA
4.	Meteorological Monitoring	Ambient Temperature	SOP PRPL /OP/073 Dated. 30.06.2015 based on instructions to observers at the surface observations (Part 1): 1987 of IMD & CPCB Guideline	1°C to 60 °C
		Wind Direction	SOP PRPL /OP/074, Dated. 30.06.2015 based on instructions to observers at the surface observations (Part 1): 1987 of IMD & CPCB Guideline	0 to 360° (16 directions)
		Wind Speed	SOP PRPL /OP/075 Dated. 30.06.2015 based on instructions to observers at the surface observations (Part 1): 1987 of IMD & CPCB Guideline	0.1 km/h to 140 km/h
		Relative Humidity	SOP PRPL /OP/076, Dated. 30.06.2015 based on instructions to observers at the surface observations (Part 1): 1987 of IMD & CPCB Guideline	1 % to 99 %

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II.	WATER			
1.	Domestic & Potable Water	Conductivity (Specific Conductance at 25 °C)	APHA (22 nd Edition) 2510 B: 2012 (Electrometric)	1 µmhos/cm to 20000 µmhos/cm
		Colour	APHA (22 nd Edition) 2120 B: 2012 Colorimetric (Platinum Cobalt)- Visual Comparison	1 Hazen to 50 Hazen
		Ph At 25°C	APHA (22 nd Edition) 4500-H ⁺ B: 2012, Electrometric	2 to 12
		Fixed Solid	APHA (22 nd Edition) 2540 E: 2012 Gravimetric Method	1 mg/l to 500 mg/l
		Total Solids	APHA (22 nd Edition) 2540 B: 2012, Gravimetric Method	1 mg/l to 20000 mg/l
		Total Dissolve Solids	APHA (22 nd Edition) 2540 C: 2012 Gravimetric Method	1 mg/l to 20000 mg/l
		Total Suspended Solids	APHA (22 nd Edition) 2540 D: 2012, Gravimetric Method	1 mg/l to 10000 mg/l
		Turbidity	APHA (22 nd Edition) 2130 B: 2012, Nephelometric Method	1 NTU to 400 NTU
		Temperature	APHA (22 nd Edition) 2150 B: 2012, Thermometric Method	1 °C to 60°C
		Odour	APHA (22 nd Edition) 2550 B: 2012, Organoleptic	Qualitative (Unobjectionable/ Objectionable)

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	Domestic & Potable Water	Acidity (As CaCO_3)	APHA (22 nd Edition) 2310 B: 2012, Titrimetric Method	2 mg/l to 4000 mg/l
		Alkalinity (CaCO_3)	APHA (22 nd Edition) 2320 B: 2012 Titrimetric Method (Indicator Method)	2 mg/l to 4000 mg/l
		Ammonical Nitrogen (NH_3)	APHA (22 nd Edition) 4500 – NH_3 : 2012, Titrimetric Method	1 mg/l to 500 mg/l
		Chloride	APHA (22 nd Edition) 4500 – Cl, B: 2012, Argentometric	2 mg/l to 10000 mg/l
		Chlorine Residual	APHA (22 nd Edition) 4500 – Cl, B: 2012, Titrimetric Method	0.1 mg/l to 100 mg/l
		Dissolved Oxygen	APHA (22 nd Edition) 4500 – O, C: 2012, Iodometric	0.2 mg/l to 10 mg/l
		Fluoride	APHA (22 nd Edition) 4500 – F D: 2012, Colorimetric	0.1 mg/l to 10 mg/l
		Total Hardness (As CaCO_3)	APHA (22 nd Edition) 2340 C: 2012, EDTA Titrimetric method	2 mg/l to 2000 mg/l
		Total Kjeldahl Nitrogen	APHA (22 nd Edition) 4500 – N_{Org} B: 2012 Digestion Distillation Titration method (> 5 mg/l) Nesslerization method (< 5 mg/l)	1 mg/l to 1000 mg/l
		Nitrite Nitrogen (As $\text{NO}_2\text{-N}$)	APHA (22 nd Edition) 4500 NO_2 B: 2012, Colorimetric	0.01 mg/l to 10 mg/l

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	Domestic & Potable Water	Nitrate Nitrogen	APHA (22 nd Edition) 4500 NO ₃ B, 2012, Colorimetric	1 mg/l to 100 mg/l
		Total & Dissolved Phosphate	APHA (22 nd Edition) 4500–P D: 2012, Colorimetric	0.01 mg/l to 100 mg/l
		Sulphates (As SO ₄)	APHA (22 nd Edition) 4500–So ₄ E,: 2012, Turbidimetric	2 mg/l to 2000 mg/l
		Carbon Dioxide	APHA (22 nd Edition) 4500 CO ₂ C: 2012, By Calculation	2 mg/l to 2000 mg/l
		Boron	APHA (22 nd Edition) 4500–B, C: 2012 Colorimetric	0.1 mg/l to 10.0 mg/l
		Calcium	APHA (22 nd Edition) 3500–Ca B: 2012 EDTA Titrimetric method	1 mg/l to 1000 mg/l
		Chromium (Cr) Total	APHA (22 nd Edition) 3500–Cr B: 2012, Colorimetric	0.1 mg/l to 15 mg/l
		Chromium (Cr) Total Hexavalent	APHA (22 nd Edition) 3500–Cr B: 2012, Colorimetric	0.02 -10 mg/l
		Iron (Fe)	APHA (22 nd Edition) 3111–Fe B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 50 mg/l
		Magnesium (Mg)	APHA (22 nd Edition) 3500–Mg B: 2012 By Calculation	2 mg/l to 500 mg/l

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	Domestic & Potable Water	Potassium (K)	APHA (22 nd Edition) 3111-K B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 100 mg/l
		Sodium (Na)	APHA (22 nd Edition) 3111-Na B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 5000 mg/l
		Sodium Absorption Ratio (Sar)	IS 11624: 1986 (RA 2009) By Calculation	1 meq/l to 10 meq/l
		Aluminium (Al)	APHA (22 nd Edition) 3500-AI B: 2012, Colorimetric	0.02 mg/l to 20 mg/l
		Lithium	APHA (22 nd Edition) 3500- Li (B) 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 10 mg/l
		Biochemical Oxygen Demand (Bod @ 20 ⁰ c For 5 Days)	APHA (22 nd Edition) 5210 B: 2012 Bio Assay method (Titrimetric method)	1 mg/l to 100 mg/l
		Biochemical Oxygen Demand (Bod @ 27 ⁰ c For 3 Days)	IS 3025 (Part 44) (RA 2009) Bio Assay method (Titrimetric method)	1 mg/l to 100 mg/l
		Chemical Oxygen Demand	APHA (22 nd Edition) 5220 B&C: 2012 Open & Closed reflux method	5 mg/l to 500 mg/l

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	Domestic & Potable Water	Oil And Grease	APHA (22 nd Edition) 5520 B: 2012 Liquid –liquid partition Gravimetric method	1 mg/l to 25 mg/l
		Zinc	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.01 mg/l to 100 mg/l
		Cadmium	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.001 mg/l to 10 mg/l
		Nickel	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.02 mg/l to 10 mg/l
		Copper	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.02 mg/l to 10 mg/l
		Lead	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.01 mg/l to 10 mg/l
		Iron	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 100 mg/l

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	Domestic & Potable Water	Manganese	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 100 mg/l
		Silver	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 10 mg/l
		Gold	APHA (22 nd Edition) 3111 B: 2012, Atomic Absorption Spectrophotometer	0.1 mg/l to 10 mg/l
		Mercury (Hg)	APHA (22 nd Edition) 3111-B: 2012 Atomic Absorption Spectrophotometer	0.01 mg/l to 1 mg/l
		Bromide	APHA (22 nd Edition) 4500 Br-B: 2012 Spectrophotometric	0.1 mg/l to 10 mg/l
		Sulphide	APHA (22 nd Edition) 4500 –S ² B: 2012, Titrimetric	0.1 mg/l to 100 mg/l
		Arsenic	APHA (22 nd Edition) 3500 –As: 2012, Spectrophotometric	1.0 mg/l to 100 mg/l
		Trihalomethanes (THM) (Chloroform, Bromodichloromethane, Dibromochloromethane, Bromoform)	ASTM D6520_06: 2012 Gas Chromatography	0.1 µg/l to 500 µg/l

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	Domestic & Potable Water	Polynuclear Aromatic Hydrocarbon (PAH) (Acenaphthene, Acenaphthylene, Anthracene, Benzo[A]Anthracene, Benzo[B]Fluoranthene, Benzo[K]Fluoranthene, Chrysene, Dibenzo[A,H]Anthracene, Fluoranthene, Fluorene, Naphthalene, Phenanthrene, Pyrene, Benzo(A) Pyrene, Indeno(123-Cd)Pyrene, Benzo(Ghi)Perylene)	Lab SOP No.052 Dated. 30.06.2015 USEPA 8272 Gas Chromatography	0.0005 mg/l to 10 mg/l
		Total Phenols	APHA (22 nd Edition) 5530D: 2012 Colorimetric Method	0.1 mg/l to 10 mg/l
		Btex Compounds (Benzene, Toluene, Xylenes, Ethyl Benzene)	Lab SOP no.054, Dated. 30.06.2015 ASTM D6520_06 2012, Gas Chromatography	0.0001 mg/l to 10 mg/l
2.	Waste Water	Conductivity (Specific Conductance At 25°C)	APHA (22 nd Edition) 2510 B: 2012, Electrometric	1 µmhos/cm to 200000 µmhos/cm
		Colour	APHA (22 nd Edition) 2120 B: 2012 Colorimetric (Platinum Cobalt) Visual Comparison	1 Hazen to 50 Hazen
		Ph At 25°C	APHA (22 nd Edition) 4500 –H ⁺ B: 2012, Electrometric	2 to 12

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	Waste Water	Fixed Solid	APHA (22 nd Edition) 2540 E: 2012, Gravimetric method	1 mg/l to 5000 mg/l
		Volatile Solids	APHA (22 nd Edition) 2540 E: 2012 Gravimetric method	1 mg/l to 10000 mg/l
		Total Solids	APHA (22 nd Edition) 2540 B: 2012 Gravimetric method	1 mg/l to 200000 mg/l
		Total Dissolved Solids	APHA (22 nd Edition) 2540 C: 2012 Gravimetric method	1 mg/l to 200000 mg/l
		Total Suspended Solids	APHA (22 nd Edition) 2540 D: 2012 Gravimetric method	1 mg/l to 100000 mg/l
		Turbidity	APHA (22 nd Edition): 2012 2006 Nephelometric method	1 NTU to 400 NTU
		Temperature	APHA (22 nd Edition) 2550 B: 2012 Thermometric method	1°C to 60°C
		Odour	APHA (22 nd Edition) 2150 B: 2012 Organoleptic	Qualitative (Unobjectionable/ Objectionable)
		Settable Solids	APHA (22 nd Edition) 2540 F: 2012 Gravimetric method	1 ml/l to 400 ml/l

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	Waste Water	Sludge Volume Index	APHA (22 nd Edition) 2710D: 2012 Gravimetric method	2 ml/g to 100 ml/g
		Acidity (As CaCO ₃)	APHA (22 nd Edition) 2310 B: 2012 Titrimetric method	2 mg/l to 4000 mg/l
		Alkalinity (CaCO ₃)	APHA (22 nd Edition) 2320 B: 2012 Titrimetric method (Indicator method)	2 mg/l to 4000 mg/l
		Ammonical Nitrogen (NH ₃)	APHA (22 nd Edition) 4500 – NH ₃ ,C: 2012 Titrimetric method	1 mg/l to 500 mg/l
		Chloride	APHA (22 nd Edition) 4500CI, B: 2012, Argentometric method	2 mg/l to 10000 mg/l
		Chlorine Residual	APHA (22 nd Edition) 4500CI, B: 2012 Titrimetric Method	0.1 mg/l to 100 mg/l
		Dissolved Oxygen	APHA (22 nd Edition) 4500O, C: 2012 Iodometric method	0.1 mg/l to 10 mg/l
		Fluoride	APHA 4500-FD (22 nd Edition): 2012 Colorimetric method	0.1 mg/l to 10 mg/l
		Total Hardness (As CaCO ₃)	APHA 2340C (22 nd Edition): 2012 EDTA Titrimetric method	2 mg/l to 20000 mg/l

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	Waste Water	Total Kjeldahl Nitrogen	APHA (22 nd Edition) 4500 N _{Org} B: 2012 Digestion Distillation Titration method (> 5 mg/l) Nesslerization method (< 5 mg/l)	1 mg/l to 1000 mg/l
		Nitrite Nitrogen (As NO ₂ -N)	APHA (22 nd Edition) 4500 NO ₂ B: 2012, Colorimetric	0.01 mg/l to 10 mg/l
		Nitrate Nitrogen	APHA (22 nd Edition) 4500 NO ₃ B: 2012, Colorimetric	1 mg/l to 100 mg/l
		Total & Dissolved Phosphate	APHA (22 nd Edition) 4500-P D: 2012, Colorimetric	0.01 mg/l to 100 mg/l
		Sulphates (as SO ₄)	APHA (22 nd Edition) 4500 SO ₄ E: 2012 Turbidimetric	2 mg/l to 2000 mg/l
		Bromide	APHA (22 nd Edition) 4500 Br-B : 2012 Spectrophotometric	0.1 mg/l to 10 mg/l
		Carbon Dioxide	APHA (22 nd Edition) 4500 CO ₂ C: 2012 By Calculation	2 mg/l to 2000 mg/l
		Iodide	APHA (22 nd Edition) 4500 I, B: 2012 Colorimetric	0.01 mg/l to 5.0 mg/l
		Boron	APHA (22 nd Edition) 4500-B, C: 2012 Colorimetric	0.1 mg/l to 10.0 mg/l

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	Waste Water	Calcium	APHA (22 nd Edition) 3500 Ca B: 2012 EDTA Titrimetric method	1 mg/l to 1000 mg/l
		Chromium (Cr) Total	APHA (22 nd Edition) 3500-Cr B: 2012 Colorimetric	0.1 mg/l to 15 mg/l
		Chromium (Cr) Hexavalent	APHA (22 nd Edition) 3500-Cr B: 2012 Colorimetric	0.02 mg/l to 10 mg/l
		Iron (Fe)	APHA (22 nd Edition) 3111-Fe B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 50 mg/l
		Magnesium (Mg)	APHA (22 nd Edition) 3500-Mg B: 2012 By Calculation	2 mg/l to 500 mg/l
		Potassium (K)	APHA (22 nd Edition) 3111-K B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 1000 mg/l
		Sodium (Na)	APHA (22 nd Edition) 3111-Na B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 5000 mg/l
		Sodium Absorption Ratio (SAR)	IS 11624: 1986 (RA 2009) By Calculation	1 meq/l to 10 meq/l

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	Waste Water	Aluminium (Al)	APHA (22 nd Edition) 3500-Al B: 2012 Colorimetric	0.2 mg/l to 20 mg/l
		Lithium	APHA (22 nd Edition) 3500-Li (B); 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 10 mg/l
		Biochemical Oxygen Demand (Bod @ 20 ^o c For 5 Days)	APHA (22 nd Edition) 5210 B: 2012 Bio Assay method (Titrimetric method)	2 mg/l to 50000 mg/l
		Biochemical Oxygen Demand (Bod @ 27 ^o c For 3 Days)	IS 3025 (Part 44) Bio Assay method (Titrimetric method)	2 mg/l to 50000 mg/l
		Chemical Oxygen Demand	APHA (22 nd Edition) 5220 B&C: 2012 Open & Closed reflux method	5 mg/l to 100000 mg/l
		Oil And Grease	APHA (22 nd Edition) 5520 B: 2012 Liquid –liquid partition Gravimetric method	0.1 mg/l to 2000 mg/l
		Zinc	APHA (22 nd Edition) 3111 B: 2012, Atomic Absorption Spectrophotometer	0.05 mg/l to 1000 mg/l
		Cadmium	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.005 mg/l to 1000 mg/l

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Waste Water	Nickel	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 1000 mg/l
		Copper	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 1000 mg/l
		Lead	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 1000 mg/l
		Iron	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 1000 mg/l
		Manganese	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 1000 mg/l
		Silver	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 100 mg/l
		Gold	APHA (22 nd Edition) 3111 B: 2012 Atomic Absorption Spectrophotometer	0.1 mg/l to 100 mg/l

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Waste Water	Sulphide	APHA (22 nd Edition) 4500 –S ² B: 2012 Titrimetric method	0.1 mg/l to 100 mg/l
		Arsenic	APHA (22 nd Edition) 3500 –As: 2012 Spectrophotometric	1 mg/l to 100 mg/l
		Polynuclear Aromatic Hydrocarbon (PAH) (Acenaphthene, Acenaphthylene, Anthracene, Benzo[A]Anthracene, Benzo[B]Fluoranthene, Benzo[K]Fluoranthene, Chrysene, Dibenzo[A,H]Anthracene, Fluoranthene, Fluorene, Naphthalene, Phenanthrene, Pyrene, Benzo(A) Pyrene, Indeno(123-Cd)Pyrene, Benzo(Ghi)Perylene)	USEPA 8272 Gas Chromatography	0.005 mg/l to 100 mg/l
		Trihalomethanes (Chloroform, Bromodichloromethane, Dibromochloromethane, Bromoform)	ASTM D6520_06: 2012 Gas Chromatography	0.0005 mg/l to 500 mg/l
		Total Phenols	APHA (22 nd Edition) 5530 D: 2012, Colorimetric method	0.1 mg/l to 10 mg/l
		Btex Compounds (Benzene, Toluene, Xylenes, Ethyl Benzene)	ASTM D6520_06: 2012 Gas Chromatography	0.0001 mg/l to 10 mg/l

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S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
III	BUILDING MATERIALS			
1.	Soil	Boron	Lab SOP No.001, Dated. 30.06.2015	1 mg/kg to 100 mg/kg
		Cation Exchange Capacity (CEC)	ISO 11260: 1994 (E)	5 meq/100g to 300 meq/100g
		Electrical Conductivity (EC)	ISO 14767: 2000	1 μ S/cm to 10000 μ S/cm
		Available Nitrogen	ISO 14256: 2003-03-15	5 g to 1000 g
		Organic Matter	IS 2720 (Part 22): 1972, (RA 2010)	0.01 % to 10 %
		pH	ISO 10390: 2005	2 to 12
		Phosphorus (Available)	Lab SOP No.002, Dated. 30.06.2015	5 mg/kg to 5000 mg/kg
		Phosphorus (Ortho)	APHA (22 nd Edition) 4500-P: 2012	1 mg/kg to 5000 mg/kg
		Phosphate (Total)	IS 10158: 1982 (RA 2009)	5 mg/kg to 5000 mg/kg
		Potassium	Lab SOP No.003, Dated. 30.06.2015	5 mg/kg to 20000 mg/kg
		SAR In Soil Extract	Lab SOP No.004, Dated. 30.06.2015	1 mEq/100g to 100 mEq/100g
		Sodium	Lab SOP No.005, Dated. 30.06.2015	5 mg/kg to 20000 mg/kg

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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
	Soil	Moisture Content	Lab SOP No.006, Dated. 30.06.2015	0.1 % to 100 %
		TKN	APHA (22 nd Edition) 4500-N _{Org} B: 2012	5 mg/kg to 10000 mg/kg
		Available Calcium	Lab SOP No.007, Dated. 30.06.2015	5 mg/kg to 3000 mg/kg
		Bicarbonate Alkalinity As (CaCO ₃)	Lab SOP No.008, Dated. 30.06.2015	2 mg/kg to 2000 mg/kg
		Color	USDA 18: 1994	1-10 unit on Munsell chart
		Gypsum Requirement	Lab SOP No.009, Dated. 30.06.2015	20 mg/kg to 1200 mg/kg
		Available Chloride (As Cl)	Lab SOP No.010, Dated. 30.06.	5.0 mg/kg to 3000 mg/kg
		Available Magnesium (As Mg)	Lab SOP No.011, Dated. 30.06.	10 mg/kg to 2500 mg/kg
		Nitrate (As NO ₃)	ISO 14256: 2003-03-15	5 mg/kg to 1000 mg/kg
		Sulphur (As S)	Lab SOP No.012, Dated. 30.06.2015	5 mg/kg to 200 mg/kg
		Total Soluble Sulphate (As SO ₄)	IS 2720 (Part 27): 1977	0.5 mg/kg to 2000 mg/kg
		Exchangable Sodium Percentage	Lab SOP No.013, Dated. 30.06.2015	0.2 % to 100 %
		Texture (Silt, Clay, Sand)	Lab SOP No.014, Dated. :30.06.2015	Silt: 0 to 100 % Clay: 0 to 100% Sand: 0 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
	Soil	Bulk Density	Lab SOP No.015, Dated. 30.06.2015	0.1 g/cc to 8 g/cc
		Porosity	Lab SOP No.016, Dated. 30.06.2015	0 to 100 %
		Permeability	Lab SOP No.017, Dated. 30.06.2015	0 to 100 %
		Copper	Lab SOP No.018, Dated. 30.06.2015	5 mg/kg to 2000 mg/kg
		Lead	ISO 11466: 1995	5 mg/kg to 2000 mg/kg
		Cadmium	ISO 11466: 1995	1 mg/kg to 2000 mg/kg
		Zinc	ISO 11466: 1995	1 mg/kg to 2000 mg/kg
		Aluminium	ISO 11466: 1995	30 mg/kg to 2000 mg/kg
		Manganese	ISO 11466: 1995	5 mg/kg to 5000 mg/kg
		Calcium Carbonate	IS 2720 (Part 23): 1976	1 % to 100 %
		Potash Available	Lab SOP No.019, Dated. 30.06.2015	1 mg/kg to 1000 mg/kg
		Total Soluble Solids	IS 2720-21: 1977	1 % to 100 %
		Water Holding Capacity	IS 14765s: 2000	0.1 % to 100 %

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