

Laboratory	Kiwis Eco Laboratories Private Limited, Plot No.19, Sy. No 342, ALEAP Industrial Estate, Gajularamaram (Vill), Quthbullapur (MD), Ranga Reddy (Dist.), Telangana		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	18.09.2014
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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.	Surface water / Bore water/ Ground water/ Drinking water	pH	APHA (22 nd Edition) 4500 H ⁺ B: 2012	4 to 12
		Color	APHA (22 nd Edition) 2120 C: 2012	5 Pt-Co to 100 Pt-Co 100 Pt-Co to 500 Pt-Co
		Temperature	APHA (22 nd Edition) 2550 A, B: 2012	Ambient to 60°C
		Conductivity	APHA (22 nd Edition) 2510 B: 2012	2 µS/cm to 10000 µS/cm 10 mS/cm to 20 mS/cm
		Acidity as CaCO ₃	APHA (22 nd Edition) 2310 B: 2012	10 mg/L to 400 mg/L 400 mg/L to 5000 mg/L
		Alkalinity as CaCO ₃	APHA (22 nd Edition) 2320 B: 2012	10 mg/L to 400 mg/L 400 mg/L to 10000 mg/L
		Turbidity	APHA (22 nd Edition) 2130 B: 2012	5 NTU to 100 NTU
		Total Dissolved Solids at 180°C	APHA (22 nd Edition) 2540 C: 2012	10 mg/L to 1000 mg/L 1000 mg/L to 15000 mg/L
		Total Suspended Solids at 103°C to 105°C	APHA (22 nd Edition) 2540 D: 2012	10 mg/L to 500 mg/L 500 mg/L to 1000 mg/L
	Chlorides as Cl ⁻	APHA (22 nd Edition) 4500 Cl ⁻ B: 2012	10 mg/L to 1000 mg/L 1000 mg/L to 5000 mg/L	

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	Surface water / Bore water/ Ground water/ Drinking water	Sulphates as SO ₄ ⁻²	APHA (22 nd Edition) 4500 SO ₄ ⁻² D: 2012	20 mg/L to 1000 mg/L 1000 mg/L to 5000 mg/L
		Nitrate Nitrogen as N	APHA (22 nd Edition) 4500 NO ₃ ⁻ B: 2012	1 mg/L to 100 mg/L
		Nitrite Nitrogen as N	APHA (22 nd Edition) 4500 NO ₂ B: 2012 (Colorimetric Method)	0.5 mg/L to 10 mg/L 10 mg/L to 100 mg/L
		Fluorides as F ⁻	APHA (22 nd Edition) 4500 F ⁻ D: 2012	0.2 mg/L to 10 mg/L 10 mg/L to 50 mg/L
		Total Hardness as CaCO ₃	APHA (22 nd Edition) 2340 C: 2012	10 mg/L to 1000 mg/L 1000 mg/L to 10000 mg/L
		Phosphorus as P	APHA (22 nd Edition) 4500 P C: 2012	1 mg/L to 30 mg/L 30 mg/L to 100 mg/L
		Dissolved Oxygen	APHA (22 nd Edition) 4500 O C: 2012	1 mg/L to 10 mg/L
		Oil & Grease	APHA (22 nd Edition) 5220 B: 2012	10 mg/L to 150 mg/L 150 mg/L to 500 mg/L
		Chemical Oxygen Demand	APHA (22 nd Edition) 5220 B: 2012	5 mg/L to 1000 mg/L 1000 mg/L to 5000 mg/L
		Biochemical Oxygen Demand		
	5 Days at 20 °C	APHA (22 nd Edition) 5210 B, 4500 O C: 2012	4 mg/L to 500 mg/L 500 mg/L to 2500 mg/L	
	3 Days at 27 °C	IS 3025 (Part 44): 1999 (RA 2003) Amd. 1		

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	Surface water / Bore water/ Ground water/ Drinking water	Phenols as phenolic compounds	APHA (22 nd Edition) 5530 D: 2012 (Direct Photometric Method)	0.1 mg/L to 100 mg/L
		Cyanides Total as CN ⁻	APHA (22 nd Edition) 4500 CN ⁻ C, E: 2012	0.1 mg/L to 10 mg/L
		Calcium as Ca	APHA (22 nd Edition) 3500 Ca B: 2012	10 mg/L to 500 mg/L 500 mg/L to 5000 mg/L
		Magnesium as Mg	APHA (22 nd Edition) 3500 Mg B: 2012	5 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Sodium as Na	APHA (22 nd Edition) 3500 Na B: 2012	2 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Potassium as K	APHA (22 nd Edition) 3500 K B: 2012	2 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Boron as B	APHA (22 nd Edition) 4500 B B: 2012 (Curcumin Method)	0.1 mg/L to 10 mg/L
		Cadmium Cd	APHA (22 nd Edition) 3111 B: 2012	0.1 mg/L to 10 mg/L 10 mg/L to 150 mg/L
		Total Chromium as Cr	APHA (22 nd Edition) 3111 B: 2012	0.5 mg/L to 10mg/L 10 mg/L to 500 mg/L
		Hexavalent Chromium as Cr ⁺⁶	APHA (22 nd Edition) 3500 Cr B: 2012	0.05 mg/L to 10mg/L 10 mg/L to 500 mg/L

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	Surface water / Bore water/ Ground water/ Drinking water	Iron as Fe	APHA (22 nd Edition) 3500 Fe B: 2012	0.3 mg/L to 10 mg/L 10 mg/L to 500 mg/L
		Lead as Pb	APHA (22 nd Edition) 3111 B: 2012	0.1 mg/L to 50 mg/L
		Manganese as Mn	APHA (22 nd Edition) 3111 B: 2012	0.5 mg/L to 100 mg/L
		Nickel as Ni	APHA (22 nd Edition) 3111 B: 2012	0.5 mg/L to 100 mg/L
		Silica as SiO ₂	APHA (22 nd Edition) 4500 SiO ₂ C: 2012	0.5 mg/L to 50 mg/L
		Zinc as Zn	APHA (22 nd Edition) 3111 B: 2012	0.2 mg/L to 50 mg/L 50 mg/L to 500 mg/L
		Copper as Cu	APHA (22 nd Edition) 3111 B: 2012	0.1 mg/L to 10 mg/L 10 mg/L to 500 mg/L
II. POLLUTION & ENVIRONMENT				
1.	Liquid Effluents (ETP Water, STP Water, Treated effluents, Waste water)	pH	APHA (22 nd Edition) 4500 H ⁺ B: 2012	1 to 14
		Color	APHA (22 nd Edition) 2120 D: 2012	Qualitative
		Temperature	APHA (22 nd Edition) 2550 A B: 2012	Ambient to 60°C
		Conductivity	APHA (22 nd Edition) 2510 B: 2012	2 µS/cm to 10000 µS/cm 10 mS/cm to 100 mS/cm

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	Liquid Effluents (ETP Water, STP Water, Treated effluents, Waste water)	Oil & Grease	APHA (22 nd Edition) 5520 B: 2012	10 mg/L to 500 mg/L 500 mg/L to 5000 mg/L
		Chemical Oxygen Demand	APHA (22 nd Edition) 5220 B: 2012	5 mg/L to 2500 mg/L 2500 mg/L to 500000 mg/L
		Biochemical Oxygen Demand		
		5 Days at 20°C	APHA (22 nd Edition) 5210 B, 4500 O C: 2012	4 mg/L to 1000 mg/L 1000 mg/L to 200000 mg/L
		3 Days at 27°C	IS 3025 (Part 44): 1999 (RA 2003) Amd. 1	
		Phenolic Compounds as Phenols	APHA (22 nd Edition) 5530 D 2012 (Direct Photometric Method)	1.0 mg/L to 100 mg/L
		Cyanide	APHA (22 nd Edition) 4500 CN ⁻ C E: 2012	0.1 mg/L to 50 mg/L 50 mg/L to 1000 mg/L
		Calcium as Ca	APHA (22 nd Edition) 3500 Ca B: 2012	10 mg/L to 1000 mg/L 1000 mg/L to 30000 mg/L
		Magnesium as Mg	APHA (22 nd Edition) 3500 Mg B: 2012	5 mg/L to 200 mg/L 200 mg/L to 20000 mg/L
	Sodium as Na	APHA (22 nd Edition) 3500 Na B: 2012	2 mg/L to 100 mg/L 100 mg/L to 5000 mg/L	
	Potassium as K	APHA (22 nd Edition) 3500 K B: 2012	2 mg/L to 100 mg/L 100 mg/L to 5000 mg/L	

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	Liquid Effluents (ETP Water, STP Water, Treated effluents, Waste water)	Boron as B	APHA (22 nd Edition) 4500 B B: 2012 (Curcumin Method)	1 mg/L to 100 mg/L
		Cadmium Cd	APHA (22 nd Edition) 3111 B: 2012	0.1 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Total Chromium as Cr	APHA (22 nd Edition) 3111 B: 2012	0.5 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Hexavalent Chromium as Cr ⁺⁶	APHA (22 nd Edition) 3500 Cr B: 2012	0.05 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Iron as Fe	APHA (22 nd Edition) 3500 Fe B: 2012	0.5 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Lead as Pb	APHA (22 nd Edition) 3111 B: 2012	0.5 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Manganese as Mn	APHA (22 nd Edition) 3111 B: 2012	0.5 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Nickel as Ni	APHA (22 nd Edition) 3111 B: 2012	0.5 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Silica as SiO ₂	APHA (22 nd Edition) 4500 SiO ₂ C: 2012	0.5 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
	Zinc as Zn	APHA (22 nd Edition) 3111 B: 2012	0.2 mg/L to 100 mg/L 100 mg/L to 1000 mg/L	

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	Liquid Effluents (ETP Water, STP Water, Treated effluents, Waste water)	Copper as Cu	APHA (22 nd Edition) 3111 B: 2012	0.5 mg/L to 100 mg/L 100 mg/L to 1000 mg/L
		Mercury as Hg	KIWIS/SOP/LAB-307 Issue No: 01, Issue Date: 30.05.2014 Based on APHA (22 nd Edition) 3112 B: 2012	0.02 mg/L to 1 mg/L 1 mg/L to 100 mg/L

III. AIR, GASES & ATMOSPHERE

1. Ambient Air	Sulphur Dioxide (SO ₂)	KIWIS/SOP/AAQ/LAB-243 Issue No: 01, Issue Date: 30.05.2014	10 µg/m ³ to 1050 µg/m ³
	Nitrogen Dioxide (NO ₂)	KIWIS/SOP/AAQ/LAB-238 Issue No:01, Issue Date: 30.05.2014	6 µg/m ³ to 750 µg/m ³
	Particulate Matter (Size less than 10µm or PM ₁₀)	KIWIS/SOP/AAQ/LAB-242 Issue No: 01, Issue Date: 30.05.2014	5 µg/m ³ to 1000 µg/m ³
	Particulate Matter (Size less than 2.5µm or PM _{2.5})	KIWIS/SOP/AAQ/LAB-241 Issue No: 01, Issue Date: 30.05.2014	5 µg/m ³ to 1000 µg/m ³
	Ozone (O ₃)	KIWIS/SOP/AAQ/LAB-239 Issue No: 01, Issue Date: 30.05.2014	0.1 µg/m ³ to 180 µg/m ³
	Lead (Pb)	KIWIS/SOP/AAQ/LAB-240 Issue No: 01, Issue Date: 30.05.2014	0.5 µg/m ³ to 50 µg/m ³

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IV.	SOIL	pH	KIWIS/SOP/SOIL/LAB-255 Issue No: 01, Issue Date: 30.05.2014	1 to 14
		Electrical Conductivity	KIWIS/SOP/SOIL/LAB-254 Issue No: 01, Issue Date: 30.05.2014	2 µS/cm to 10000 µS/cm
		Bulk Density	KIWIS/SOP/SOIL/LAB-244 Issue No: 01, Issue Date: 30.05.2014 ASTM D 5057	1.0 g/cc to 3 g/cc
		Moisture	KIWIS/SOP/SOIL/LAB-257 Issue No: 01, Issue Date: 30.05.2014	1.0 % to 50 % 50 % to 90 %
		Calorific value	KIWIS/SOP/SOIL/LAB-303 Issue No: 01, Issue Date: 30.05.2014 IS 3050 (Part II): 1970	500 cal/g to 5000 cal/g 5000 cal/g to 15000 cal/g
		Available Calcium as Ca	KIWIS/SOP/SOIL/LAB-247 Issue No: 01, Issue Date: 30.05.2014	10 mg/kg to 500 mg/kg 500 mg/kg to 5000 mg/kg
		Available Sodium as Na	KIWIS/SOP/SOIL/LAB-252 Issue No: 01, Issue Date: 30.05.2014	5 mg/kg to 500 mg/kg 500 mg/kg to 2000 mg/kg
		Available Potassium as K	KIWIS/SOP/SOIL/LAB-251 Issue No: 01, Issue Date: 30.05.2014	5 mg/kg to 500 mg/kg 500 mg/kg to 2000 mg/kg
		Available Phosphorus as P	KIWIS/SOP/SOIL/LAB-304 Issue No: 01, Issue Date: 30.05.2014	5 mg/kg to 500 mg/kg 500 mg/kg to 5000 mg/kg

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	Soil	Total Nitrogen (K)	KIWIS/SOP/SOIL/LAB-305 Issue No: 01, Issue Date: 30.05.2014	20 mg/kg to 100 mg/kg 100 mg/kg to 10000 mg/kg
		Organic Carbon	KIWIS/SOP/SOIL/LAB-308 Issue No: 01, Issue Date: 30.05.2014	0.1 % to 10 %
		Iron as Fe	SW 846 : 3050B & Iron by UV-Vis spectrophotometer, KIWIS/SOP/SOIL/LAB-267 Issue No: 01, Issue Date: 30.05.2014 APHA (22 nd Edition) 3500 Fe B: 2012	5 mg/kg to 100 mg/kg 100 mg/kg to 1000 mg/kg
		Copper as Cu	SW 846 : 3050 B, 7210 & Copper by Flame AAS KIWIS/SOP/SOIL/LAB-266 Issue No: 01, Issue Date: 30.05.2014	2 mg/kg to 100 mg/kg 100 mg/kg to 1000 mg/kg
		Chromium as Cr	SW 846 : 3050 B, 7190 & Chromium by Flame AAS KIWIS/SOP/SOIL/LAB-264 Issue No: 01, Issue Date: 30.05.2014	2 mg/kg to 100 mg/kg 100 mg/kg to 1000 mg/kg
		Cadmium as Cd	SW 846 : 3050 B, 7130 & Cadmium by Flame AAS KIWIS/SOP/SOIL/LAB-262 Issue No: 01, Issue Date: 30.05.2014	2 mg/kg to 100 mg/kg 100 mg/kg to 1000 mg/kg

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	Soil	Lead as Pb	SW 846 : 3050 B, 7420 & Lead by Flame AAS KIWIS/SOP/SOIL/LAB-269 Issue No: 01, Issue Date: 30.05.2014	2 mg/kg to 100 mg/kg 100 mg/kg to 1000 mg/kg
		Manganese as Mn	SW 846 : 3050 B, 7460 & Manganese by Flame AAS KIWIS/SOP/SOIL/LAB-306 Issue No: 01, Issue Date: 30.05.2014	2 mg/kg to 100 mg/kg 100 mg/kg to 1000 mg/kg
		Zinc as Zn	SW 846 : 3050B, 7950 & Zinc by Flame AAS KIWIS/SOP/SOIL/LAB-270 Issue No: 01, Issue Date: 30.05.2014	2 mg/kg to 100 mg/kg 100 mg/kg to 5000 mg/kg
		Nickel as Ni	SW 846 : 3050B, 7520 & Nickel by Flame AAS KIWIS/SOP/SOIL/LAB-274 Issue No: 01, Issue Date: 30.05.2014	2 mg/kg to 100 mg/kg 100 mg/kg to 5000 mg/kg
		Available Magnesium as Mg	KIWIS/SOP/SOIL/LAB-247 Issue No: 01, Issue Date: 30.05.2014	10 mg/kg to 1000 mg/kg

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