#### **CIRCULAR**

It is to be informed that NABL has granted accreditation to **Central Pollution Control Board**, **Regional Laboratory**, **Regional Directorate** (**South**), **Bengaluru** in the discipline of Chemical Testing in accordance with ISO/IEC 17025: 2005. A copy of the Accreditation Certificate and Scope of Accreditation received from NABL are enclosed for kind information.

(S.Suresh) Regional Director

To

Divisional Head, IT Division, CPCB, Delhi – With a kind request to upload the information under activities of RD (South), Bengaluru.







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#### CERTIFICATE OF ACCREDITATION

## CENTRAL POLLUTION CONTROL BOARD, REGIONAL LABORATORY

has been assessed and accredited in accordance with the standard

# ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

Regional Directorate (South), Nisarga Bhawan, I & II Floor, 7th D Main, Thimmaiah Road, Shiva Nagar, Bengaluru, Karnataka in the field of

## **TESTING**

Certificate Number TC-7739

Issue Date

16/08/2018

Valid Until 15/08/2020

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL



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Anil Relia Chief Executive Officer





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#### SCOPE OF ACCREDITATION

Laboratory

Central Pollution Control Board, Regional Laboratory, Regional Directorate (South), Nisarga Bhawan, I & II Floor, 7th D Main, Thimmaiah Road, Shiva Nagar, Bengaluru, Kamataka

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

TC-7739

Page 1 of 6

Validity:

16.08.2018 to 15.08.2020

Last Amended on -

SL	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are	Range of Testing I Limits of Detection
			performed	

#### CHEMICAL TESTING

15	ATMOSPHERIC P	DULUTION		
+	Ambient Air	Particulate Matter (size less than 10 µm) or PM <sub>m</sub>	(S. 5182 (Part 23); 2012	5 µg/m² to 1000 µg/m²
		Sulphur Diaxide	IS 5182 (Part 2): 2001	4 µg/m² to 1050 µg/m²
		Nitrogen Dioxeda	(S 5182 (Part 6) 2006	9 µg/m² to 750 µg/m²
		Ammonia	ISC Method 401, Wethods of Air Sampling and Analysis, 3 <sup>rd</sup> Edition, Lewis Publishers, 1988	20 µg/m² to 700 µg/m²
		Arsenic	EPA-10 3.2	2 ng/m² to 1000 ng/m²
		Cadmium	EPA-10 3.2	0.2 µg/m² to 100 µg/m²
		Niclosi	EPA-30 3.2	2 no/min 1005 no/mi
		Lead	EPA-IO 3.2	0.2 µg/m² to 100 µg/m²
2.	Stack Emission	Particulate Matter or PM	IS 11256 (Part 1): 1985 IS 11256 (Part 3): 1985 for Flow rate	1 mg/km² to 5000 mg/km²
		Sulphur Diexide	Sampling by IS 11265 (Part 2): 1985 and Analysis by ISC Wethod 711, Methods of Air Sampling and Analysis, 3 <sup>rd</sup> Edition, Lewis Publishers, 1968	4 mg/Nm <sup>2</sup> to 8000 mg/Nm <sup>3</sup>
	WATER			
*	Stream Water/ River WateriLake	pH	APHA (23 <sup>rd</sup> Edition); 2017 4500 H° B, 4-95 to 4-99	1 to 14
	Water/ Well Water/ Ground Water	Total Suspended Solids	APHA (23" Edition): 2017 2540 D, 2-70 to 2-71	5 mg/L to 2000 mg/L

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#### SCOPE OF ACCREDITATION

Laboratory

Central Pollution Control Board, Regional Laboratory, Regional Directorate (South), Nisarga Bhawan, I & II Floor, 7th D Main,

Thimmaiah Road, Shiva Nagar, Bengaluru, Karnataka

Accreditation Standard ISO/IEC 17025; 2005

Certificate Number TC-7739 Page 2 of 6

Validity 16.08.2018 to 15.08.2020 Last Amended on -

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total Dissolved Solids	APHA (23 <sup>st</sup> Edition): 2017 2540 C, 2-69 to 2-70	2 mg/L to 5000 mg/L
		Total Solids	APHA (23" Edition): 2017 2540 S, 2-68 to 2-69	10 mg/L to 10000 mg/L
		Turbidity	APHA (23" Edition): 2017 2130 B, 2-13 to 2-15	6 NTU to 400 NTU
		Conductivity	APHA (23" Edition): 2017 2510 B, 2-56 to 2-59	5 µS/cm to 20000 µS/cm
		Chemical Oxygen Demand (CCO)	IS 3025 (Part 50): 2006 (RA 2017)	4 mg/L to 5000 mg/L
		Biochemical Oxygen Demand (BOD) for 3 days at 27 °C	IS 3025 (Part 44): 1963 (RA 2014)	2 mg/L to 1800 mg/L
		Dissolved Oxygen	APHA (23" Edition): 2017 4500 C, 4-146 to 4-148	1 mg/L to 10 mg/L
		Nitrate as N	APHA (23" Edition); 2017 4500 NO <sub>3</sub> E, 4-131 to 4-133	0.02 mg/L to 100 mg/L
	Norte as N	Norite as N	APHA (23 <sup>rd</sup> Edition): 2017 4500 NO <sub>2</sub> B, 4-12416 4-125	0.02 mg/L to 10 mg/L
			APHA (23" Edition); 2017 4500 NH <sub>2</sub> 8, 4-114 to 4-115	1 mg/L to 500 mg/L
		Total Kjeldahi Nitrogen (TKN) as N	APHA (23" Edition): 2017 4500 Norg B,4-139 to 4-140	2 mg/L to 1000 mg/L
		Phosphate as P	APHA (23" Edition): 2017 4500 P D, 4-163 to 4-164	0.01 mg/L to 200 mg/L
		Sulphate as SO <sub>0</sub>	APHA (23" Edition): 2017 4500 SO, E. 4-199 to 4-200	4 mg/L to 500 mg/L
		Total Alkalinity as CaCO <sub>3</sub>	APHA (23" Editure); 2017 2320 B, 2-37 to 2-39	2 mg/L to 1000 mg/L
		Fluoride as F	APHA (23" Edition): 2017 4500 F D, 4-90 to 4-91	0.1 mg/L to 100 mg/L
		Chloride as Cl	APHA (23" Edition): 2017 4500 Cl B, 4-75 to 4-76	2 mg/L to 4000 mg/L

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## SCOPE OF ACCREDITATION

Laboratory Central Pollution Control Board, Regional Laboratory, Regional Directorate (South), Nisarga Bhawan, I & II Floor, 7th D Main,

Thimmaiah Road, Shiva Nagar, Bengaluru, Kamataka

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7739 Page 3 of 6

Validity 16.08.2018 to 15.08.2020 Last Amended on -

80.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Calcum as Ca	APHA (23" Edition): 2017 3500 Ca B, 3-69 to 3-70	4 mg/L to 1000mg /L
		Sodum	APHA (23 <sup>rd</sup> Edition): 2017 3500 Na 6, 3-99 to 3-100	1 mg/L to 2000 mg/L
		Potsesium	APHA (23 <sup>rd</sup> Edition): 2017 3500 K B. 3-99 to 3-90	1 mg/L to 500 mg/L
		Magnesium as Mg	APHA (23" Edition), 2017 3500 Mg B, 3-86	2 mg/L to 1000 mg /L
		Total Hardness as GeCO <sub>2</sub>	APHA (23 <sup>st</sup> Edition): 2017 2340 C, 2-48 to 2-50	5 mg/L to 4000 mg /L
		Sodium Absorption Ratio (SAR)	IS 11624: 1986 (RA 2009)	0.1 to 30
		Percent Sodium	CPCB/RLB/TM/5.4/W-34	0.5 % to 100 %
		Hexavelent Chromium as. Cr. 1	APHA (23" Edition): 2017 3500 Cr B, 3-71 to 3-73	0.1 mg/L to 100 ing/L
		Boron	APHA (23" Edition): 2017 4500 B B. 4-27 to 4-28	0.5 mg/L to 100 mg/L
III.	RESIDUES IN WATE	R		
t.	Trace Metal Elements	Chromium (Total)	APHA (23" Edition): 2017 3120 B, 3-42 to 3-48	0.06 mg/L to 100 mg/L
		Copper	APHA (23 <sup>rd</sup> Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Mickel	APHA (23 <sup>rd</sup> Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Lead	APHA (23" Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		liner	APHA (23 <sup>e</sup> Edition): 2017 3120 B. 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Cattritum	APHA (23" Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Znc	APHA (23" Edition); 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L

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Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7739 Page 4 of 6

Validity 16.08.2018 to 15.08.2020 Last Amended on -

81.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Manganese	APHA (23" Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Cobalt	APHA (23" Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
IV.	POLLUTION & ENV	TROWMENT		
1	Waste Water (Effluents &	pH	APHA (23" Edition): 2017 4500 H <sup>1</sup> B. 4-95 to 4-99	1 to 14
	Sewage)	Total Suspended Solids	APHA (23 <sup>rd</sup> Edition): 2017 2540 D; 2-70 to 2-71	5 mg/L to 2000 mg/L
		Table Diseased Solids	APHA (23° Edition) 2017 2540 C, 2-49 to 2-70	5 mg/L to 100000 mg/L
		Total solids	APHA (23 <sup>st</sup> Edition), 2017 2540 B, 2-68 to 2-69	10 mg/L to 100000 mg/L
		Conductivity	APHA (22 <sup>to</sup> Edition): 2012 2510 B, 2-54 to 2-55	5 ji 5/on to 20000 ji 5/on
		Chemical Oxygen Demand (COD)	18 3025 (Part 58): 2005 (RA 2017)	4 mg/L to 150000 mg/L
		Biochemical Oxygen Demand (BOD) for 3 days at 27 °C	IS 3025 (Part 44): 1983 (RA 2014)	2 mg/L to 75000 mg/L
		Dissolved Oxygen	APHA (23" Edition): 2017 4500 O, 4-146 to 4-148	1 mg/L to 10 mg/L
		Nitrate as N	APHA (22" Edition): 2012 4500 NO, E, 4-125 to 4-127	0.02 mg/L to 100 mg/L
		Nitrite as N	APHA (22" Edition): 2012 4500 NO <sub>2</sub> , 4-120 to 4-121	0.02 mg/L to 10 mg/L
		Ammoniscul Nitrogen as N	APHA (23" Edition): 2017 4500 NH <sub>2</sub> B, 4-114 to 4-115	1 mg/L to 500 mg/L
		Total Kjeldahl Ndrogen (TKN) as M	APHA (23" Edition): 2017 4500 Norg B,4-139 to 6-140	2 mg/L to 1000 mg/L
		Of and Grease	APHA (23 <sup>rd</sup> Edison): 2017 5520 B, 5-42 to 5-44	4 mg/L to 5000 mg/L

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#### SCOPE OF ACCREDITATION

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Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7739 Page 5 of 6

Validity 16.08.2018 to 15.08.2020 Last Amended on -

81.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Dissolved Phosphate as p	APHA (23 <sup>rd</sup> Edition): 2017 4500 P.D., 4-163 to 4-164	0.1 mg/L to 200 mg/L
		Sulphate as SO,	APHA (23 <sup>rd</sup> Edition): 2017 4500 SO <sub>4</sub> E, 4-199 -4-200	4 mg/L to 1000 mg/L
		Total Alkalinity as CaCO <sub>3</sub>	APHA (23 <sup>®</sup> Edition): 2017 2320 B. 2-37 to 2-39	2 mg/L to 2000 mg/L
		Flooride as F	APHA (28 <sup>d</sup> Edition): 2017 4500 F.D., 4-80 to 4-91	0.1 mg/L to 100 mg/L
		Chloride as Cl	APHA (23" Edition): 2017 4500 Ct B, 4-75 to 4-78	2 mg/L to 10000 mg/L
		Calcium as Ca	APHA (23" Edition); 2017 3500 Ca B, 3-60 to 3-70	4 mg/L to 1000 mg/L
		Sodium	APHA (23" Edition); 2017 3900 Na B, 3-99 to 3-100	1 mg/L to 10000 mg/L
		Potassium	APHA (23° Edition): 2017 3500 K B, 3-66 to 3-90	1 mg/L to 500 mg/L
		Magnesium as Mg	APHA (23" Eshten), 2017 3500 Mg B, 3-86	2 mg/L to 1000 mg /L
		Total Harriness as CaCO <sub>3</sub>	APHA (23" Edition): 2017 2340 C, 2-48 to 2-59	5 mg/L to 4000 mg /L
		Sodium Absorption Ratio (SAR)	IS 11624: 1986 (RA 2009)	0.1 to 30
		Percent Sedium	CPCBRLB/TM/S-4/W-34	0.5 % to 100 %
		Hexavalent Chromium as Cr <sup>-4</sup>	APHA (23 <sup>rd</sup> Edition); 2017 3500 Cr 8, 3-71 to 3-73	0.1 mg/L to 500 mg/L
		Boron	APHA (23" Edition); 2017 4500 B B; 4-27 to 4-28	0.1 mg/L to 100 mg/L
		Cobalt	APHA (23" Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Copper	3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		14ckel	APHA (23" Edition): 2017 3120 B. 3-42 to 3-48	0.1 mg/L to 100 mg/L.

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### SCOPE OF ACCREDITATION

Laboratory Central Pollution Control Board, Regional Laboratory, Regional

Directorate (South), Nisarga Bhawan, I & II Floor, 7th D Main,

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Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7738 Page 6 of 6

Validity 16.08.2018 to 15.08.2020 Last Amended on -

81.	Product / Material of Test	Specific Test Performed	Test Wethod Specification against which tests are performed	Range of Testing / Limits of Detection
		Lead	APHA (23 <sup>rd</sup> Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		from	APHA (23 <sup>st</sup> Edition): 2017 3120 B. 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Gadmism	APHA (23" Edition), 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Zina	APHA (23" Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Chromium (Total)	APHA (23" Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L, to 100 mg/L.
		Manganese	APHA (23 <sup>st</sup> Edition); 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
2.	Www.ten	gH Value	US EPA 9045D	T to 14
	(Liquid / Sturry /	Flash Point	ASTM 07094/ 06450	30 °C to 160 °C
	Sludge / Salid / Semi Salid	Gross Calerific Value	IS 1350 (Part 2): 1970 (RA 2000)	1000 cally to 15000 cally

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