

LABORATORY FACILITIES

BASIC 	● Autoclave ● De-Ionizer Unit ● Heating Mantle ● High Vacuum Pump ● Hot Air Oven ● Ice Flaker Machine ● Jar Test Apparatus ● Magnetic Stirrer with Heater ● Microbalance ● Muffle Furnace ● Non Refrigerated Centrifuge ● pH Meter ● Total Suspended Solids Apparatus ● Turbidity Meter ● Ultrapure Water Purification system ● Water Bath
INTERMEDIATE 	● Bacteriological Incubator ● COD Digestor ● Colony Counter ● Electrothermal Heater ● Fume Hood ● Loop Sterilizer ● Noise meter ● Orbital Shaker & Incubator ● Portable Water Quality Multimeter ● Refrigerated Centrifuge ● Roto spin ● Sonicator ● Stack Monitoring Equipment ● Ultra low Temperature Freezer ● UV Visible Spectrophotometer ● Vortex shaker
ADVANCED 	● Biosafety Class II Cabinet ● BOD Analyzer with Incubator ● Bomb Calorimeter ● CHNS-O Analyzer ● Fourier Transform Mid Infrared Spectroscopy ● Gas Chromatography - FID, TCD & Headspace Sampler ● Indoor Air Quality Meter & Particle Size Counter ● Inductively Coupled Plasma - Optical Emission Spectroscopy ● Microwave Digestion System ● Optical Microscope with Camera ● Total Kjeldhal Nitrogen Analyzer ● X-Ray Fluorescence Spectroscopy

LABORATORY SERVICES

We provide testing services for environmental samples: water, blackwater, greywater, biosolids, and sludge.

PHYSICAL PARAMETERS	CHEMICAL PARAMETERS	MICROBIAL PARAMETERS
		
● Calorific Value ● Electrical Conductivity ● Moisture Content ● Temperature ● Total Dissolved Solids ● Total Solids ● Total Suspended Solids ● Turbidity	● Alkalinity ● Ammonical Nitrogen ● Biochemical Oxygen Demand ● Chemical Oxygen Demand ● Chloride ● Elemental Analysis - Carbon, Hydrogen, Nitrogen, Sulphur, Oxygen ● Fluoride ● Heavy Metals - Aluminum, Arsenic, Barium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Gallium, Indium, Iron, Lead, Lithium, Magnesium, Manganese, Mercury, Nickel, Phosphorous, Potassium, Selenium, Silica, Silver, Sodium, Strontium, Titanium, Zinc. ● Iron ● Nitrate Nitrogen ● Nitrite Nitrogen ● pH ● Phosphate as P ● Total Hardness ● Total Kjeldahl Nitrogen ● Total Nitrogen ● Total Phosphorus	● Total Coliform ● Faecal Coliform ● Helminths Identification ● Helminths Enumeration

ANALYTICAL CHARGES - Physical, Chemical & Microbial Parameters

S. No	Analytical Parameters	Internal Charges	Internal Charges	External Charges	External Charges
		IIT Palakkad	IIT Palakkad	Other Academic	Industries/
		Students	Faculty/Staff	Institutions	R&D
		(Cost in INR/Sample)	(Cost in INR/Sample)	(Cost in INR/Sample)	(Cost in INR/Sample)
1	Colour	100	110	120	150
2	Odour	100	110	120	150
3	Temperature	100	110	120	150
4	Electrical Conductivity	100	110	120	150
5	pH	100	110	120	150
6	Turbidity	100	110	120	150
7	Dissolved Oxygen	250	275	300	375
8	Sludge Volume Index (S.V.I.)	200	220	240	300
9	Settleable Solids	250	275	300	375
10	Moisture Content	250	275	300	375
11	Total Solids	250	275	300	375
12	Total Fixed Solids	250	275	300	375
13	Total Volatile Solids	250	275	300	375
14	Total Suspended Solids	250	275	300	375
15	Volatile Suspended Solids	350	385	420	525
16	Total Dissolved Solids	350	385	420	525
17	Ash Content	250	275	300	375
18	Sand Content	350	385	420	525
19	Fixed Carbon	250	275	300	375
20	Chemical Oxygen Demand	500	550	600	750
21	Soluble Chemical Oxygen Demand	600	660	720	900
22	Biochemical Oxygen Demand	500	550	600	750
23	Ammonical Nitrogen	500	550	600	750
24	Total Nitrogen	750	825	900	1125
25	Total Kjeldahl Nitrogen	650	715	780	975
26	Nitrite Nitrogen as NO ₂	350	385	420	525
27	Nitrate Nitrogen as NO ₃	350	385	420	525
28	Phosphate as P	250	275	300	375
29	Total Phosphorous	500	550	600	750
30	Chloride	250	275	300	375
31	Total Hardness	250	275	300	375
32	Hardness (Calcium)	250	275	300	375
33	Hardness (Magnesium)	250	275	300	375
34	Acidity	200	220	240	300
35	Alkalinity	200	220	240	300

ANALYTICAL CHARGES - Physical, Chemical & Microbial Parameters

S. No	Analytical Parameters	Internal Charges	Internal Charges	External Charges	External Charges
		IIT Palakkad	IIT Palakkad	Other Academic	Industries/
		Students	Faculty/Staff	Institutions	R&D
		(Cost in INR/Sample)	(Cost in INR/Sample)	(Cost in INR/Sample)	(Cost in INR/Sample)
36	Chlorine Demand	150	165	180	225
37	Chlorine Residual	150	165	180	225
38	Sulphate	250	275	300	375
39	Salinity	150	165	180	225
40	Iron	300	330	360	450
41	Fluoride	300	330	360	450
42	E.coli (MPN Count)	750	825	900	1125
43	E.coli (Colony Count)	750	825	900	1125
44	Coliform (MPN Count)	750	825	900	1125
45	Coliform (Colony Count)	750	825	900	1125
46	Helminth Eggs Enumeration (Liquid)	1200	1320	1440	1800
47	Helminth Eggs Enumeration (Solid)	1500	1650	1800	2250
48	Jar Test	800	880	960	1200

ANALYTICAL CHARGES - Sophisticated Instruments

S. No	Testing of Samples Solid/Liquid/Gaseous Forms	Internal Charges IIT Palakkad Students	Internal Charges IIT Palakkad Faculty/Staff	External Charges Other Academic Institutions	External Charges Industries/ R&D
	Instruments & Parameters	(Cost in INR/Sample)	(Cost in INR/Sample)	(Cost in INR/Sample)	(Cost in INR/Sample)
1	ICP-OES (Heavy Metals - Ag, Al, As, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, In, K, Li, Mg, Mn, Na, Ni, P, Pb, Se, SiO ₂ , Sr, Tl, Zn)	Rs.400/element + Rs.150 additional for each element + Rs.250 for Microwave Digestion/solid sample	Rs.440/element + Rs.150 additional for each element + Rs.250 for Microwave Digestion/solid sample	Rs.480/element + Rs.150 additional for each element + Rs.250 for Microwave Digestion/solid sample	Rs.600/element + Rs.150 additional for each element + Rs.250 for Microwave Digestion/solid sample
2	CHNS Analyzer (% Carbon, Hydrogen, Nitrogen and Sulphur)	1600	1760	1920	2400
3	Oxygen Analyzer (% Oxygen)	1500	1650	1800	2250
4	Bomb Calorimeter (Calorific Value)	750	825	900	1125
5	Gas Chromatography (Gaseous Components - CO, CO ₂ , H ₂ S, H ₂ , N ₂ , CH ₄)	1500 + Rs.750 additional for each element	1650 + Rs.750 additional for each element	1800 + Rs.750 additional for each element	2250 + Rs.750 additional for each element
6	Fourier Transform Mid Infrared Spectroscopy (Chemical Composition of Materials)	750	825	900	1125

DRINKING WATER STANDARD PACKAGE (BIS) 10500: 2012

Parameters Covered

PHYSICAL PARAMETERS	CHEMICAL PARAMETERS	TOXIC PARAMETERS	MICROBIAL PARAMETERS
Colour Odour TDS Turbidity	Alkalinity Ammonical Nitrogen Calcium Fluoride Magnesium Nitrate Nitrogen pH Residual Chlorine Sulphate Total Hardness	Aluminum Arsenic Barium Boron Cadmium Chromium Copper Iron Lead Manganese Mercury Nickel Selenium Silver Zinc	Coliform (MPN Count) E.coli (MPN Count)

Testing Charges

Internal Charges IIT Palakkad Students (Cost in INR/Sample)	Internal Charges IIT Palakkad Faculty/Staff (Cost in INR/Sample)	External Charges Other Academic Institutions (Cost in INR/Sample)	External Charges Industries/ R&D (Cost in INR/Sample)
7500	8250	9000	11250

NATIONAL GREEN TRIBUNAL: STP DISCHARGE STANDARDS 2019

Parameters Covered

PHYSICAL PARAMETERS	CHEMICAL PARAMETERS	MICRIBIAL PARAMETERS
Total Suspended Solids	Biochemical Oxygen Demand Chemical Oxygen Demand pH Total Nitrogen Total Phosphorous	E.coli (MPN Count)

Testing Charges

Internal Charges IIT Palakkad Students (Cost in INR/Sample)	Internal Charges IIT Palakkad Faculty/Staff (Cost in INR/Sample)	External Charges Other Academic Institutions (Cost in INR/Sample)	External Charges Industries/ R&D (Cost in INR/Sample)
3350	3685	4020	5025

NOTE

Taxes	18% GST extra (9% - SGST; 9% - CGST) *Applicable only for external categories
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CONTACT

For further information, please feel free to contact us

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LABORATORY FACILITIES

