

The list of instrument/equipment facilities in DSIR-IITGN-CRTDH Lab

Instruments under NABL (Application under process)

Sr. No.	Instruments	Equipment ID	Brand / Model	Function
1.	Refrigerator 01	CRTDH/NABL/EQP/01	Samsung RT39M5538S8/TL	For cool samples and Chemicals for preservation
2.	Digital Thermometer	CRTDH/NABL/EQP/02	102030394, R-Tek instruments	To check temperature in sample
3.	Glass Thermometer	CRTDH/NABL/EQP/03	VA6505, V&A instruments, China	To check temperature in sample
4.	ICP-MS System	CRTDH/NABL/EQP/04	PerkinElmer NexION 2000, Avio200, USA	Detection of trace metals and isotope analysis
5.	ICP-OES System	CRTDH/NABL/EQP/05	PerkinElmer NexION 2000, Avio200, USA	Detection of trace metals and isotope analysis
6.	UV-Vis Spectrophotometer	CRTDH/NABL/EQP/06	Analytik Jena Specord 210 plus, Germany	Optical properties
7.	TOC & TNb Analyzer	CRTDH/NABL/EQP/07	Analytik Jena Multi N/C 21005 BU, Germany	Total organic carbon analyzer
8.	BOD Incubator	CRTDH/NABL/EQP/08	VELP Scientifica BOD system 6, Italy	Biological Oxygen demand analyzer
9.	Total Suspended Solid Meter	CRTDH/NABL/EQP/09	Lovibond Tintometer, UK	To measure the suspended solid in the water sample
10.	Muffle furnace	CRTDH/NABL/EQP/10	Holy Scientific, Ahmedabad	High temperature testing applications
11.	Hot air Oven	CRTDH/NABL/EQP/11	Patel Scientific Instruments 24"x24"x24" , Ahmedabad	Drying the materials/glasswares
12.	Microwave Oven	CRTDH/NABL/EQP/12	Samsung MW73AD-BXTL	synthesis purpose
13.	Micropipette (10µl)	CRTDH/NABL/EQP/13	Gilson Pipetteman, US	Measure the accurate volume of liquid
14.	Micropipette (200µl)	CRTDH/NABL/EQP/14	Gilson Pipetteman, US	Measure the accurate volume of liquid
15.	Micropipette (1000µl)	CRTDH/NABL/EQP/15	Gilson Pipetteman, US	Measure the accurate volume of liquid
16.	Micropipette (5ml)	CRTDH/NABL/EQP/16	Gilson Pipetteman, US	Measure the accurate volume of liquid
17.	Magnetic Stirrer	CRTDH/NABL/EQP/17	Remi 5 MLH plus, Mumbai	Magnetic bar immersed in a liquid to Spin
18.	pH meter	CRTDH/NABL/EQP/18	Eutech ECPHTUTOR-D, Singapore	Measure the hydrogen ion activity (acidity or alkanity) in solution

19.	TDS Meter	CRTDH/NABL/EQP/19	Milwaukee Mi306, USA	Concentration of total dissolved solid particles
20.	DO Meter	CRTDH/NABL/EQP/20	Hanna Instruments, US	For dissolved oxygen measure
21.	Quick COD analyzer	CRTDH/NABL/EQP/21	LAR, Germany	Quick COD measurement
22.	Refrigerator 02	CRTDH/NABL/EQP/22	Samsung, RT30T37225S8/HL/2021	To slow down the activity of bacteria / increases the durability of sample
23.	Weighing Balance	CRTDH/NABL/EQP/23	Shimadzu ATX224, Japan	Measure the amount of chemicals
24.	Microwave digestion system	CRTDH/NABL/EQP/24	Titan MPS 16, Perkin Elmer, USA	For digestion of ICP sample
25.	Merck Millipore system	CRTDH/NABL/EQP/25	Type 1 Ultrapure, Merck, Germany	Milli-Q water for instrument calibration
26.	COD Digester 01	CRTDH/NABL/EQP/26	Patel Scientific Instruments Pvt Ltd, Ahmedabad	To digest and process water samples to determine the COD, TOC, total phosphate and total nitrogen
27.	Hot Plate	CRTDH/NABL/EQP/27	Remi 5 MLH plus, Mumbai	To perform reaction at a certain temperature

Rest of the instruments in DSIR-IITGN-CRTDH:

Sr. No.	Instruments		Brand / Model	Function
1.	Fluorescence Spectrophotometer	CRTDH/EQP/01	Jasco FP-8300, Japan	Optical properties
2.	Multimode Plate Reader	CRTDH/EQP/02	BioTek Cytation 5, USA	Microbial/cell line studies
3.	HPTLC	CRTDH/EQP/03	CAMAG	Qualitative and Quantitative analysis of Dyes and other compounds
4.	Gas Chromatography	CRTDH/EQP/04	CIC Baroda, Dhurvua	Detection of Gases
5.	Water Distillation Unit	CRTDH/EQP/05	KM scientific instruments 4L/hr., Ahmedabad	For samples preparation
6.	Vacuum Pump	CRTDH/EQP/06	TECHNICS TID-75-S, Mumbai	For filtration of treated effluent
7.	D C Power Supply	CRTDH/EQP/07	Aplab L3205, Mumbai	For Electrocoagulation process
8.	Multi Place magnetic Stirrer	CRTDH/EQP/08	Neuation I stir HP 5M, Gandhinagar	Magnetic bar immersed in a liquid to Spin (5 samples on a same plate)
9.	Ultra Sonicator	CRTDH/EQP/09	Aczet CUB-5, Mumbai	For dispersion of particles

10.	Vortex	CRTDH/EQP/10	Dlab MX-S, China	To mix small vials liquid
11.	Orbital Shaker	CRTDH/EQP/11	Dlab SK-O330-Pro, China	To mix substance in a tube by shaking them
12.	Magnetic Stirrer	CRTDH/EQP/12	Remi 5 MLH plus, Mumbai	Magnetic bar immersed in a liquid to Spin
13.	5 L Refrigerated Circulator	CRTDH/EQP/13	DP Analytics, Ahmedabad	To maintain the temperature in jacketed reactor
14.	Ozone Generator	CRTDH/EQP/14	Ozone Engineers, Tamil Nadu	For ozonation treatment
15.	Thermo Reactor	CRTDH/EQP/15	Merck, Germany	To digest COD sample
16.	500 ml Microbubble Generator	CRTDH/EQP/16	V. L. Sons and Engineering, Ahmedabad	Bubble based effluent treatment
17.	Fermentation	CRTDH/EQP/17	Murhopye Scientific Co., Karnataka	Bioreactor to study the bioprocess
18.	O ₂ Analyzer	CRTDH/EQP/18	Bhoomi Analyzers, Mumbai	To check the purity of oxygen
19.	COD Digester 02	CRTDH/EQP/19	Patel Scientific Instruments Pvt ltd, Ahmedabad	To digest and process water samples to determine the COD, TOC, total phosphate and total nitrogen
20.	Air Compressor	CRTDH /EQP/20	Gujjar compressors, Ahmedabad	To get pressurized gas by compressing it
21.	Biosafety cabinet	CRTDH/EQP/21	ESCO Life Sciences, Class II BSC, Bangladesh	To protect the laboratory personnel and the environment from the pathogenic microorganism
22.	Microscope	CRTDH /EQP/22	Nikon Type 120C, Japan	To observe small objects through magnified lens
23.	Table top centrifuge	CRTDH /EQP/23	Thermo Fisher Scientific, US	Separate or concentrate substances suspended in a liquid medium by density
24.	Peristaltic pump	CRTDH/EQP/24	Electrolab, Mumbai	To pump variety of fluids
25.	Muffle furnace	CRTDH/EQP/25	Holy Scientific, Ahmedabad	High temperature testing applications
26.	Spray dryer	CRTDH/EQP/26	Techno Search Pvt. Ltd. SPD-P-111, Maharashtra	Particle drying
27.	1L Photochemical reactor	CRTDH/EQP/27	Equipline Technologies Pvt Ltd, Ghaziabad	To carry out photochemical reactions