



Department of Chemistry
Indian Institute of Technology Jodhpur

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Faculty In-Charge & Coordinator staff for cluster and department facilities

S. No.	Equipment	Faculty In-Charge-1	Coordinator Staff	Contact Number
1.	FTIR Spectrometer	Dr. Subrata Chakraborty	Mr. Shubham Pandey	0291-1342
2.	UV-Vis Spectrophotometer	Dr. Subrata Chakraborty	Dr. Sangeeta Singh	0291-1341
3.	Fluorescence Spectrophotometer	Dr. Subrata Chakraborty	Dr. Banoth Sonyanaik	0291-1341
4.	Polarimeter	Dr. Subrata Chakraborty	Mr. Ganpat Choudhary	0291-1341
5.	Contac Angle Meter	Dr. Subrata Chakraborty	Mr. Anupriya Bera	0291-1342
6.	Electrochemical workstation	Dr. Subrata Chakraborty	Mr. Ganpat Choudhary	0291-1341
7.	pH & conductivity meter	Head, CY	Mr. Shubham Pandey	0291-1342
8.	Purification Separation Filtration System	Head, CY	Dr. Sangeeta Singh	0291-1341
9.	Die Cast Alum Electronically Controlled Magnetic Stirrer	Head, CY	Dr. Banoth Sonyanaik	0291-1341
10.	Digital calorimeter for 8 filters	Head, CY	Dr. Sangeeta Singh	0291-1341
11.	Low temperature Laboratory Refrigerator (-80 °C)	Head, CY	Dr. Banoth Sonyanaik	0291-1341
12.	Low temperature Laboratory Refrigerator (-20 °C)	Head, CY	Mr. Kamal Kishore	0291-1342
13.	High Vacuum Oven	Head, CY	Mr. Ganpat Choudhary	0291-1341
14.	Centrifuge Machine	Head, CY	Dr. Banoth Sonyanaik	0291-1341
15.	Rotary Evaporator	Head, CY	Mr. Anupriya Bera	0291-1342
16.	Gas-chromatograph	Dr. Subrata Chakraborty	Mr. Ganpat Choudhary	0291-1341
17.	Liquid nitrogen container (Dewar)	Head, CY	Dr. Banoth Sonyanaik	0291-1341
18.	Ultrasonic Bath	Head, CY	Dr. Sangeeta Singh	0291-1341
19.	High performance workstation	Dr. Subrata Chakraborty	Mr. Shubham Pandey	0291-1342
20.	High Resolution Mass Spectrometer (HRMS)	Dr. Rohan D. Erande	Mr. Kamal Kishore	0291-1342
21.	Melting Point Apparatus	Head, CY	Mr. Anupriya Bera	0291-1342
22.	Uv Visible Chamber	Head, CY	Mr. Kamal Kishore	0291-1342
23.	Fume Hood Facilities	Head, CY	Mr. Ganpat Choudhary	0291-1341
24.	Thermo Fisher & Millipore deionized water Type 2	Head, CY	Mr. Shubham Pandey	0291-1342

25.	Electrical Heating Mantles with Controllers (T, Stirrer & time)	Head, CY	Dr. Sangeeta Singh	0291-1341
26.	Soxhlet Apparatus	Head, CY	Mr. Anupriya Bera	0291-1342
27.	Ice Flaker Machine	Head, CY	Mr. Kamal Kishore	0291-1342
28.	Nitrogen Generator	Head, CY	Mr. Shubham Pandey	0291-1342
29.	Hot Air Oven	Head, CY	Mr. Kamal Kishore	0291-1342
30.	Potentiometer	Head, CY	Mr. Anupriya Bera	0291-1342

Annexure-B

Cluster 1: Molecular Spectroscopy and Optical Analysis (*SpectroMolec Analytics*)

1. **Fourier-Transform Infrared Spectrometer (FTIR)**

Used for identifying molecular structures and functional groups by measuring infrared absorption.

Key Functionality: Essential for structural analysis of organic and inorganic compounds, FTIR is critical for both qualitative and quantitative analysis.

2. **UV-Visible Spectrophotometer**

Analyzes the absorbance and transmittance of UV-Visible light to study concentration and optical properties.

Key Functionality: Widely used for the study of reaction kinetics, solution analysis, and the determination of chemical concentrations in both organic and inorganic chemistry.

3. **Fluorescence Spectrophotometer**

Measures the fluorescence emission from compounds, crucial for sensitive molecular detection.

Key Functionality: Frequently applied in biochemical studies, environmental monitoring, and quality control to detect trace amounts of fluorescent molecules.

Cluster 2: Electrochemical and Analytical Instrumentation (*ElectroAnalytica Series*)

1. **Electrochemical Workstation**

Supports various electrochemical techniques like cyclic voltammetry, potentiometry, and impedance spectroscopy.

Key Functionality: Central for studying redox reactions, material corrosion, and electroplating processes in both research and industrial applications.

Cluster 3: Optical and Surface Characterization Techniques (*OpticaSurf Science Division*)

1. **Optical Rotation Measurement System**

Measures the rotation of polarized light as it passes through optically active substances.

Key Functionality: Vital for the characterization of chiral compounds, particularly in pharmaceuticals and natural product chemistry.

2. **Contact Angle Meter**

Quantifies the contact angle between a liquid and a solid surface to assess wettability.

Key Functionality: Used in surface chemistry, coatings, and material science to evaluate surface energy, adhesion, and hydrophobicity.

Cluster 4: Chromatographic and Mass Spectrometric Analysis (*ChromatoMass Division*)

1. **Gas-Chromatograph (GC)**

Separates volatile compounds for analysis.

Key Functionality: Commonly used for environmental testing, food safety analysis, and organic compound separation.

2. **High Resolution Mass Spectrometer (HRMS)**

Delivers high-precision molecular mass data for complex mixtures.

Key Functionality: Instrumental for advanced molecular analysis in pharmaceutical, forensic, and materials research.

Cluster 5: Computational Chemistry and Simulation (*CompuChem Dynamics Division*)

1. High-Performance Workstation

Facilitates large-scale computational simulations of chemical reactions and molecular dynamics.

Key Functionality: Essential for modeling complex chemical reactions, drug design, material discovery, and quantum chemistry simulations. It allows researchers to predict molecular behavior, reaction pathways, and interactions that are challenging to observe experimentally.
