

School Of Chemistry

Sl.no	Equipment Name	Make (Manufacturer)	Equipment Description
1	NMR (Old 400 MHz)	Bruker Corporation / JEOL Ltd.	Determines molecular structure using nuclear magnetic resonance spectroscopy.
2	NMR (New 400 MHz)	Bruker / JEOL	Advanced NMR for structural and quantitative analysis of compounds.
3	NMR (500 MHz)	Bruker	High-resolution NMR for detailed molecular structure elucidation.
4	NMR (4 th)	Bruker / JEOL	Additional NMR system for routine and advanced analysis.
5	FESEM, TEM	Carl Zeiss AG / JEOL Ltd.	High-resolution electron microscopy for surface and internal structure analysis.
6	Confocal Raman Microscope	Horiba Ltd. / Renishaw plc	Chemical imaging using Raman spectroscopy with spatial resolution.
7	AFM-2	Bruker Corporation	Nanoscale surface imaging using atomic force interactions.
8	Fluorescence Life Time imaging	Leica Microsystems	Measures fluorescence decay for imaging molecular environments.
9	Single Crystal XRD (OXFORD)	Oxford Instruments	Determines crystal structure at atomic level.
10	Single Crystal XRD (BRUKER)	Bruker	High-precision crystal structure determination.
11	Chillers	Julabo GmbH	Maintains controlled cooling for instruments.
12	Single Crystal XRD (microfocus)	Bruker / Oxford Instruments	XRD with microfocus source for small crystals.
13	SWAX	Rigaku Corporation	Studies nano- to mesoscale structures via X-ray scattering.
14	PXRD	Rigaku / Bruker	Phase identification and crystallinity analysis of powders.
15	Femtosecond Pump Probe	Spectra-Physics	Ultrafast spectroscopy for studying excited-state dynamics.
16	DLS	Malvern Panalytical	Measures particle size distribution in solution.
17	DSC	TA Instruments	Measures heat flow for phase transitions.
18	TGA-MS	TA Instruments / Netzsch Group	Thermal decomposition with gas analysis.
19	DVS	Surface Measurement Systems	Measures vapor sorption properties.
20	Laser Flash Photolysis	Edinburgh Instruments	Studies fast photochemical reactions.
21	CD Spectrometer	JASCO Corporation	Analyzes chiral molecules and protein structure.
22	FTIR-Thermo	Thermo Fisher Scientific	Identifies functional groups via IR absorption.

23	Fluorimeter	Horiba / JASCO	Measures fluorescence emission.
24	Uv-VIS	JASCO / Shimadzu	Measures UV-visible absorbance.
25	ITC	Malvern Panalytical	Measures thermodynamics of molecular interactions.
26	DSC (Nano)	TA Instruments	High-sensitivity calorimetry for biomolecules.
27	UV VIS-NIR	JASCO / PerkinElmer	Extends absorbance measurement into near-IR region.
28	Fluorimeter	Horiba / JASCO	Fluorescence measurement instrument.
29	HRMS and accessories	Agilent Technologies / Waters Corporation	High-resolution mass analysis for accurate molecular weight.
30	Hydrogenation Apparatus and Ozoniser	Parr Instruments	Performs hydrogenation and ozone reactions.
31	Glove Box-1	MBraun	Inert atmosphere handling of sensitive materials.
32	Glove Box-2	MBraun	Controlled environment for air/moisture-sensitive work.
33	Spin coater	Laurell Technologies	Produces thin films on substrates.
34	freeze Dryer	Labconco	Removes solvents via sublimation.
35	LC-MS-8040	Shimadzu Corporation	Liquid chromatography with mass detection.
36	GCMS QP2010	Shimadzu	Gas chromatography-mass spectrometry.
37	GC-MS-QP2020NX	Shimadzu	Advanced GC-MS for trace analysis.
38	impedence Analyzer	Keysight Technologies	Measures electrical impedance properties.
39	Solar Simulator	Newport Corporation	Simulates sunlight for photovoltaic testing.
40	BET /Gas adsorption	Micromeritics	Surface area and porosity analysis.
41	HPLC	Agilent / Shimadzu	Separates and quantifies liquid samples.
42	EPR	Bruker	Detects unpaired electrons in materials.
43	polarimeter (2Nos)	JASCO	Measures optical rotation.
44	Time resolved fluorescence spectrophotometer	Edinburgh Instruments	Measures fluorescence lifetimes.
45	Langmuir blodgett flim	KSV NIMA	Prepares molecular thin films.
46	Dual channel fluorescence Spectrophotometer	Horiba	Simultaneous dual fluorescence measurement.

47	GPC	Waters	Polymer molecular weight distribution.
48	GC-2010plus	Shimadzu	Gas chromatograph for volatile compounds.
49	Electrochemical Workstation	CH Instruments	Electrochemical analysis.
50	Photochemical reactor	Heidolph	Light-driven chemical reactions.
51	Microwave Reactor	CEM Corporation	Accelerates synthesis using microwaves.
52	CHN Analyser	PerkinElmer	Elemental analysis (C, H, N).
53	ice machines (6 Nos)	Scotsman	Produces lab ice.
54	Milipore Water	Merck Millipore	Produces ultrapure water.
55	School licenced software	Various (MATLAB, Origin, etc.)	Data analysis and academic software tools.
56	translational Cluster	Dell / HP	High-performance computing system.
57	UV-Visible (M.Sc Lab) Jasco V730	JASCO	UV-Vis spectrophotometer for teaching labs.
58	Fluorimeter (M.Sc Lab) Jasco 8200	JASCO	Fluorescence measurement instrument.
59	polarimeter (M.Sc Lab) JASCO P2000	JASCO	Optical rotation measurement for teaching.