Malaviya National Institute of Technology Jaipur

Materials Research Centre

The following are the charges for testing sample at MRC, MNIT Jaipur

S. No.	Equipment		MNIT Jaipur Charges (GST applicable extra as per rules)		
			Internal Users	External (Academic)	External (Industries)
1.	NMR A. For Proton (1H)		250 per sample + *Solvent Charges Extra	500 per sample + *Solvent Charges Extra	1000 per sample + *Solvent Charges Extra
	B. C^{13} & DEPT		300 per sample + *Solvent Charges Extra	600 per sample + *Solvent Charges Extra	1200 per sample + *Solvent Charges Extra
	C. For Other Nuclei (^{19}F, Si, P, N, Cd, Metal, F & Sn etc)		500 per sample + *Solvent Charges Extra	800 per sample + *Solvent Charges Extra	1000 per sample + *Solvent Charges Extra
	D. Other than 1D for 2D & 3D Additional charges of Rs. 500 per sample on per mode is applicable.		800 per sample + *Solvent Charges Extra	1200 per sample + *Solvent Charges Extra	2000 per sample + *Solvent Charges Extra
***Solvent charges for NMR: 1. Rs. 100/sample - $CDCl_3$, 2. Rs. 250/ sample - DMSO, 3. Rs. 250/sample - D_2O, 4. Rs. 500/sample - CD_3OD, 5. Rs. 500/sample - CD_3CN**					
2.	Mass Spectrometer For direct mass and MS/MS* a. ESI (Charges will be separate for $+^{ve}$ and $-^{ve}$ mode)		300 per sample with solvent	600 per sample with solvent	1000 per sample with solvent
	b. APCI		300 per sample with solvent	600 per sample with solvent	1000 per sample with solvent
	c. Solid State Probe Mode		400 per sample	1200 per sample	2400 per sample
	d. LCMS (per run)		600 per sample with solvent	1200 per sample with solvent	1500 per sample with solvent
3.	FTIR (KBr Mode)		75 per sample (max. 16 scan)	125 per sample (max. 16 scan)	300 per sample (max. 16 scan)
	FTIR (ATR Mode)		50 per sample (max. 16 scan)	100 per sample (max. 16 scan)	300 per sample (max. 16 scan)
4.	UV-Vis Spectrophotometer		50 per sample & per run	100 per sample & per run	300 per sample & per run
5.	Fluorescence Spectrophotometer		50 per sample & per run	75 per sample & per run	400 per sample & per run
6.	XRD (Max. 2 samples/hour)	Powder or Solid Sample	300 per sample	500 per sample	800 per sample
		Thin Film	350 per sample	600 per sample	1200 per sample

7.	FE-SEM	FESEM (Imaging)	350 per sample	700 per sample	2000 per sample
		FESEM + EDS	450 per sample	900 per sample	2200 per sample
		FESEM + EDS + Mapping	550 per sample	1200 per sample	2400 per sample
		EBSD	1500/ Sample (Excluding Sample Preparation)	2650/ Sample (Excluding Sample Preparation)	12000/ Sample (Excluding Sample Preparation)
	Sputter Coater	Au, Pt coating	350/Run (5 sample)	400/Run (Max 5 samples)	500/Run (Max 5 samples)
		Carbon Evaporator	300/Run (Max 5 sample)	300/Run (Max 5 samples)	300/Run (Max 5 samples)
8.	HR-TEM	HRTEM (Max 1 sample / hour)	500/sample+ 600 (Ion Milling if needed) Cu-Grid - Rs. 350 Extra if not provided by user	1500/sample + 600 (Ion Milling if needed) Cu-Grid - Rs. 350 Extra if not provided by user	3000/Sample + 600 (Ion Milling if needed) Cu-Grid - Rs. 350 Extra if not provided by user
		HRTEM + EDS (Max 1 sample / hour)	600/sample+ 600 (Ion Milling if needed) Cu-Grid - Rs. 350 Extra if not provided by user	1750/sample + 600 (Ion Milling if needed) Cu-Grid - Rs. 350 Extra if not provided by user	3200/Sample + 600 (Ion Milling if needed) Cu-Grid - Rs. 350 Extra if not provided by user
		HRTEM + EDS + MAPPING	800/sample + 600 (Ion Milling if needed) Cu-Grid - Rs. 350 Extra if not provided by user	2000/sample + 600 (Ion Milling if needed) Cu-Grid - Rs. 350 Extra if not provided by user	3500/Sample + 600 (Ion Milling if needed) Cu-Grid - Rs. 350 Extra if not provided by user
9.	Multimode AFM	AFM (Max. 2 samples/hour)	400 per sample	600 per sample	1500 per sample
		MFM or STM	1200 per Sample	2200 per Sample	5000 per Sample
		Nano indentation	1500 per sample	3500 per sample	7200 per sample
10.	DMA		500 per hour	800 per hour	1500 per hour
11.	STA/TGA		400 per hour	600 per hour	2000 per hour
12.	OES/GDS		160 per Sample	300 per Sample	800 per Sample
13.	AAS (For As & Hg)		400 per sample	500 per sample	1000 per sample
	AAS (Other elements)		200 per sample	300 per sample	1000 per sample
14.	Thermal CVD		800 per run	1800 per run	3500 per run
15.	Vacuum Coating Unit		800 per run Thickness limit 500nm	1800 per run Thickness limit 500nm	3500 per run Thickness limit 500nm
16	RF/DC Sputtering (For Oxides)		800 per run Thickness limit 200nm	1800 per run Thickness limit 200nm	3500 per run Thickness limit 200nm

	RF/DC Sputtering (For Metals)		800 per run Thickness limit 500nm	1800 per run Thickness limit 500nm	3500 per run Thickness limit 500nm
17	Available Targets	1. ZnO (99.99% purity)	500 Thickness limit 200nm	800 Thickness limit 200nm	2000 Thickness limit 200nm
		2. TiO_2 (99.99% purity)	500 Thickness limit 200nm	800 Thickness limit 200nm	2000 Thickness limit 200nm
		3. Al (99.99% purity)	500 Thickness limit 500nm	800 Thickness limit 500nm	2000 Thickness limit 500nm
		5. Zn (99.99% purity)	500 Thickness limit 500nm	800 Thickness limit 500nm	2000 Thickness limit 500nm
		6. Cu (99.99% purity)	500 Thickness limit 500nm	800 Thickness limit 500nm	2000 Thickness limit 500nm
		7. Silver (99.99% purity)	600 Thickness limit 100nm	1000 Thickness limit 100nm	2500 Thickness limit 100nm
18.	Planetary Ball Milling		100 per hour	250 per hour	500 per hour
19.	Microwave Reactor		100 per Reaction	300 per Reaction	800 per Reaction
20.	Spin Coater		50 per Run	200 per Run	500 per Run
21.	XPS (i) Surface Survey (C + 4 Elements HR scan included)		1000/Sample 100 for extra per element HR scan	2000/Sample 200 for extra per element HR scan	3000/Sample 400 for extra per element HR scan
	(ii) Depth Profile (Max 5 hrs)		1500/Sample	3000/Sample	5500/Sample
	(iii) UPS		1500/ Sample	3000/ Sample	5500/ Sample
	(iv) AES		600/ Sample	1500/ Sample	2000/ Sample
	(v) Heating (>RT) up to 400^0 C		200/ for one specific Temp.	200/ for one specific Temp.	200/ for one specific Temp.
22.	Raman / PL		300/ Sample	450/ Sample	1000/ Sample
	Raman Mapping		12000 per hour (apprx 100 points)	12000 per hour (apprx 100 points)	25000 per hour (apprx 100 points)
Characterization at different temperatures (-150 degree centigrade to 200 degree centigrade) will be treated as different sample and charges will be applicable accordingly. For temperature stage solid sample size is limited to L x B x H = 1cm x1cmX 1mm.					
23.	Zeta Potential / Particle Size Analyzer		110/ Sample	175/ Sample	500/ Sample
24.	Impedance Analyzer		125/ Sample	150/ Sample	1000/ Sample
25.	SDA + Probe Station (I-V)		150/ Sample at Room Temp. (And 450 per hr. Will be charge for Temp.	285/ Sample at Room Temp. (And 725 per hr. Will be charge for Temp.	1000/ Sample at Room Temp. (And 2000 per hr. Will be charge for Temp.

			Variation measurement)	Variation measurement)	Variation measurement)
26.	Micro Hardness Tester		100/ Sample	250/ Sample	500/ Sample
27.	Optical Microscope		100/sample	200/sample	500/sample
28.	Hall Measurement		150 per sample (And 300/hour for Temp. Variable measurement)	250/ sample (And 600/hour for Temp. Variable measurement).	1000/sample (And 2000/hour for Temp. Variable measurement)
29.	UTM (Universal Testing Machine)		200 per sample	500 per sample	1000 per sample
30.	DI Water		10 per liter	10 per liter	10 per liter
31.	LN_2		50 per liter	50 per liter	50 per liter
32.	Sample Preparation Facility	Abrasive Cutter Or Diamond Cutter	100 per sample	100 per sample	100 per sample
		Hot mounting press	100 per sample	100 per sample	100 per sample
		Automatic Polisher or manual Polisher	100 per sample	100 per sample	100 per sample
		PIPS ion Milling for TEM	600 per sample	600 per sample	600 per sample
		Electro jet Polishing For TEM	600 per sample	600 per sample	600 per sample
		X-Section sample Prep for TEM	600 per sample	600 per sample	600 per sample
		Illion X-section sample Prep for FESEM	600 per sample	600 per sample	600 per sample
		EBSD sample Prep.	600 per sample	600 per sample	600 per sample
		Sonicator Bath or probe	--	--	--
33	Electro Chemical Work Station		500 per test	1000 per test	2000 per test
34	BET Surface Area Analyser (Multi Point)		1500 per sample	2000 per sample	3000 per sample