RATE LIST FOR OUTSIDE SAMPLES TO BE ANALYSED USING HI-END ANALYTICAL EQUIPMENT OF CIL

Sr. No.	Instrument Facility	Type of Service	Industry / Private R&D Charges (in Rs.)	Academic Charges (in Rs.)	Institute s under MoU Charges (in Rs.)	Internal Users Projects/ PhD Scholar* Charges (in Rs.)		
1	NMR (600MHz) ^{\$}	¹ H (without	400/-	240/-	200/-	20/-		
	(600N1HZ)	solvent) 13C (without solvent) (per hour/per sample whichever is earlier)	500/-	375/-	300/-	50/-		
		2D COSY, NOESY, HSQC, etc.(per hour/per sample whichever is earlier)	1000/-	750/-	600/-	100/-		
		Variable Temperature (per hour/per sample whichever is earlier)	2000/-	1500/-	1200/-	200/-		
		Other Nucei 31P, 19F, 11B, 29Si, etc. (per hour/per sample whichever is earlier)	500/-	375/-	300/-	50/-		
		D O Exchange (per 2 hour/per sample whichever is earlier)	600/-	450/-	360/-	60/-		
		Solvent in deuterated for	rm#	L				
		CdCl 3		50,	/_			
		3 Methanol-D4		500)/-			
		Acetonitrile-d3		500)/-			
		Deuterium oxide (D_O)		300)/-			
		Acetone-d6		400)/-			
		DMSO-d6	250/-					
		✓ The solve	railability of the solvent vent charges are subject to revision depending upon curement price of the same.					
		✓ In case an advised to bring/send	In case any other (deuterated) solvent is needed, the user is advised to make arrangements to procure on their own and bring/send them to us for use of their samples. Per sample a minimum of around 0.7 mL of solvent is required.					
2	Powdered XRD	Powder Sample (per sample)	500/-	375/-	300/-	50/-		
		Any specific requirement such as low temp., high temp. and thin film (per hour	2500/-	1875/-	1500/-	250/-		

	T			· · · · · · · · · · · · · · · · · · ·		
		of Instrument				
		time)		2=-/		
3	Gas	GC-MS in EI	500/-	375/-	300/-	50/-
	Chromatograph	mode including				
	y-Mass	Library search				
	Spectroscopy	upto 3 peaks				
	(GC-MS)	(per Sample)		2=-/		
		MS in EI mode	500/-	375/-	300/-	50/-
		with Direct				
		Insertion Probe				
		Analysis (DIP)				
		(per Sample)	10001		-0.0 /	1001
		Method	1000/-	750/-	600/-	100/-
		Development				
		(per Hour of				
		Instrument				
		time)				
		ECD /FID	500/-	375/-	300/-	50/-
	T71.	mode	5 00'	277	2001	5 0.
4	Ultra-High	Qualitative	500/-	375/-	300/-	50/-
	Performance	Analysis using				
	Liquid	DAD/RID -				
	Chromatograph	Reverse Phase				
	y (UHPLC)	Chromatograph				
		y (per injection)				
		• RM to be				
		provided by				
		party	10001			1001
		HPLC Method	1000/-	750/-	600/-	100/-
		Development				
		(per hour of				
		instrument				
		time)				
5	ICP-MS	Elemental	1000/-	750/-	600/-	100/-
	(Calibration	Analysis (up to	+	+	+	+
	Standard1: Al,	10 elements	100	100	100	100
	As, B, Ba, Be,	from same	Filtration	Filtration	Filtration	Filtration
	Bi, Ca, Cd, Ce,	Calibration	charge per	charge per	charge	charge
	Co, Cr, Cs, Cu,	Standard)	sample ([@] PTFE	sample	per	per
	Dy, Er, Eu, Fe,	- I		([®] PTFE	sample	sample
	Ga, Gd, Ho, In,			syringe	([®] PTFE	(PTFE
	K, La, Li, Lu,		filter 0.22micro	filter 0.22micro	syringe	syringe
	Mg, Mn, Na, Nd,				filter 0.22micr	filter
	Ni, P, Pb, Pr, Rb,		n)	n)		0.22micro
	Re, Sc, Se, Sm,	After 10	100/-	75/-	on)	n)
	Sr, Tb, Th, Ti, Tm, U, V, Y, Yb,		100/-	/3/-	60/-	10/-
	Zn, Hg)					
	Δ11, 11g <i>)</i>	same Calibration				
	(Calibration	a 1 1				
	Standard2: Ag,	Standard or different				
	Ge, Hf, Mo, Nb,	Calibration				
	Sb, Si, Sn, Ta,	Standard per				
	50, 51, 511, 1a,	Dianuaru per		1		

	T. W 7	1 , 111 1				
	Ti, W, Zr)	element will be charged extra				
	(Calibration	Elemental	2500/-	1875/-	1500/-	250/-
	Standard3: Au,	Analysis >30	+	+	+	+
	Ir, Os, Pd, Pt,	elements (per	100	100	100	100
	Rh, Ru, Te)	sample)	Filtration	Filtration	Filtration	Filtration
	, ., .,		charge per	charge per	charge	charge
			sample	sample	per	per
			([®] PTFE	([®] PTFE	sample	sample
			syringe	syringe	([®] PTFE	([®] PTFE
			filter	filter	syringe	syringe
			0.22micro	0.22micro	filter	filter
			n)	n)	0.22micr	0.22micro
			11)	11)	on)	n)
					OII)	11)
6	Atomic	Using Flame	200/-	150/-	120/-	20/-
	Absorption	(per sample per				
	Spectrometer	Element)				
	(AAS) (Al, As,	Using Graphite	600/-	450/-	360/-	60/-
	Co, Cr, Cu, Fe,	Furnace (per				
	Hg, Mg, Mn, Na,	sample per				
	Se, Sn, Te, V,	Element)				
	Ni, Zn, Cd, In,	HVG (per	600/-	450/-	360/-	60/-
	Pb, Mo, Sr, Ba,	sample per				
	Be, B, Si, Tl, Li,	Element)				
	1 C h 1					
	Sb)	N. 4 1 DN.	400/	1) . 10	O Elle el	1
7	Microwave	Method or RM		sample) + 10		
7	Microwave Digestion	to be provided	sample (*P7	ΓFE syringe f	ilter 0.22 mi	icron)
7	Microwave Digestion charges for		sample (*P7 450/- (upto	TFE syringe f 6 samples) fo	ilter 0.22 mi r similar sar	ecron) nple + 100
7	Microwave Digestion charges for AAS/ICP-MS	to be provided by the party	sample (*P7 450/- (upto Filtration ch	FFE syringe f 6 samples) fo large per sam	ilter 0.22 mi r similar sar	ecron) nple + 100
7	Microwave Digestion charges for	to be provided by the party Note:	sample (*P7 450/- (upto Filtration ch 0.22micron)	FFE syringe f 6 samples) fo large per sam	ilter 0.22 mi r similar san ple (PTFE s	nple + 100 yringe filter
7	Microwave Digestion charges for AAS/ICP-MS	to be provided by the party Note: -If the samples	sample (*P7 450/- (upto Filtration ch 0.22micron) 800/- (7-12	FFE syringe f 6 samples) fo targe per sam samples) for	ilter 0.22 mi r similar san ple (PTFE s similar samp	icron) inple + 100 yringe filter inple + 100
7	Microwave Digestion charges for AAS/ICP-MS	to be provided by the party Note: -If the samples are different	sample (*P7 450/- (upto Filtration ch 0.22micron) 800/- (7-12 Filtration ch	FFE syringe f 6 samples) for large per sam samples) for large per sam	ilter 0.22 mi r similar san ple (PTFE s similar samp	icron) inple + 100 yringe filter inple + 100
7	Microwave Digestion charges for AAS/ICP-MS	to be provided by the party Note: -If the samples are different types, each	sample (*P7 450/- (upto Filtration ch 0.22micron) 800/- (7-12	FFE syringe f 6 samples) for large per sam samples) for large per sam	ilter 0.22 mi r similar san ple (PTFE s similar samp	icron) inple + 100 yringe filter inple + 100
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7	Microwave Digestion charges for AAS/ICP-MS	to be provided by the party Note: -If the samples are different types, each sample will be charged separate -Geological Samples will not be accepted	sample (*P7 450/- (upto Filtration ch 0.22micron) 800/- (7-12 Filtration ch	FFE syringe f 6 samples) for large per sam samples) for large per sam	ilter 0.22 mi r similar san ple (PTFE s similar samp	icron) inple + 100 yringe filter inple + 100
7	Microwave Digestion charges for AAS/ICP-MS including acids	to be provided by the party Note: -If the samples are different types, each sample will be charged separate -Geological Samples will not be accepted for MDS	sample (*P7 450/- (upto Filtration ch 0.22micron) 800/- (7-12 Filtration ch filter 0.22m	FFE syringe f 6 samples) for parge per sam samples) for parge per sam parge per sam parge per sam	ilter 0.22 mi r similar san ple (PTFE s similar samp nple (*PTFE	nple + 100 yringe filter ole + 100 syringe
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	Microwave Digestion charges for AAS/ICP-MS including acids Microwave Digestion charges for AAS/ICP-MS excluding acids Confocal Laser Scanning	to be provided by the party Note: -If the samples are different types, each sample will be charged separate -Geological Samples will not be accepted for MDS Method or RM to be provided by the party dafeqfeqwfqfcq fwfd	sample (*PT 450/- (upto Filtration ch 0.22micron) 800/- (7-12 Filtration ch filter 0.22micron) 300/- per ho Filtration ch 0.22micron	FE syringe f 6 samples) for samples) for samples) for sarge per sam icron) our of instrum sarge per sam	ilter 0.22 mir similar sample (PTFE system) similar sample (*PTFE) ent time+ 10 ple (PTFE system)	nple + 100 yringe filter ole + 100 syringe olympe o
	Microwave Digestion charges for AAS/ICP-MS including acids Microwave Digestion charges for AAS/ICP-MS excluding acids Confocal Laser Scanning	to be provided by the party Note: -If the samples are different types, each sample will be charged separate -Geological Samples will not be accepted for MDS Method or RM to be provided by the party dafeqfeqwfqfcq fwfd Live cell	sample (*PT 450/- (upto Filtration ch 0.22micron) 800/- (7-12 Filtration ch filter 0.22micron) 300/- per ho Filtration ch 0.22micron	FE syringe f 6 samples) for samples) for samples) for sarge per sam icron) our of instrum sarge per sam	ilter 0.22 mir similar sample (PTFE system) similar sample (*PTFE) ent time+ 10 ple (PTFE system)	nple + 100 yringe filter ole + 100 syringe olympe o

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		sample	Sliver	200/-	200/-	Sliver
		sample			Sliver	
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- 10			• • • • • • • • • • • • • • • • • • • •	Coating	Coating	200/
10	Flow Cytometer	For prepared	2000/-	1775/-	1600/-	200/-
		sample (per				
		hour)				
11	Clinical	Per hour	1800/-	1350/-	1080/-	180/-
	Chemistry	without				
	Analyzer	consumables				
12	Gas	TCD/FID (per	200/-	150/-	120/-	20/-
	Chromatograph	sample)				
	y – (TCD/FID)	Per sample / per	500/-	375/-	300/-	50/-
		hour				
13	UV-Vis	Per sample / per	50/-	35/-	30/-	5/-
	Spectrometer	hour				
14	Fourier	Routine	100/-	75/-	60/-	10/-
	Transmission	Spectrum (ATR				
	Infrared	& TR) (per				
	Spectrometer	sample)				
	(FTIR)					
15	Fluorescence	For prepared	500/-	350/-	300/-	50/-
	Microscope	sample fixed				
	_	slide (per hour)				
16	DNA	Sanger	500/-	375/-	300/-	50/-
	Sequencer**	Sequencing and				
	_	Fragment				
		Analysis				
		Anarysis				

RM: Reference Material

Note: Work related to consultancy will be treated as external work. Provision may please be made accordingly while estimating consultancy fee.

Central Instrumentation Laboratory Central University of Punjab, Bathinda Guideline for Sample Submission

*Internal users have to provide prepared samples for analysis with reference standards except for ICP-MS and AAS

**Prepared sample to be submitted for Sanger Sequencing and Fragment Analysis

- ➤ The analytical data / spectra provided cannot be used as certificates in legal disputes.
- Service charges including GST will be applicable as per Govt. Regulation from time to time.
- ➤ Consumables provided by the CIL for sample analysis will be charged extra as per actual cost of the consumables.
- The payment mode is through online banking only via debit/credit card and UPI address. Samples will not be analyzed until payment is received.
- Separate samples should be sent for different analysis.
- ➤ Infectious / hazardous sample will not be entertained for analysis.
- For Data, the user should provide new CD/DVD.
- ➤ In all correspondence related to analysis, our reference number must be mentioned.
- ➤ Interpretation of Data / Spectra will not be done.
- ➤ It is mandatory for user to acknowledge the facility in their research work and communicate the same to Central Instrumentation Laboratory, CUPB as and when the results are published in public domain.

For Central Instrumentation Laboratory visit, it is mandatory to take prior appointment from Incharge, CIL before your visit. The application should be sent through the head of the department / institution / company.

<u>Instruction for NMR Measurement and Sample Submission Procedure</u> for Internal & External Users

\$Users are strongly advised to check the solubility of the samples before sending the same to us for NMR measurement to avoid wastage. For routine NMR measurements, only solvents in the deuterated form can be used.

Sample Requirements

¹H: 5-10 mg

¹³C, 2D etc.: 20-30 mg

For Internal Users

- 1. Internal users of NMR facility are requested to submit their samples in good quality NMR tubes (Wilmad, Norell, Sigma-Aldrich etc.)
- 2. $0.5 \text{ mL} (500 \mu\text{L})$ of clear solution is required to record good spectra.
- 3. Do not use dichromate solution for cleaning NMR tubes.
- 4. The caps should be cleaned separately
- 5. Do not keep the NMR tubes in Oven for drying.
- 6. After cleaning, rinse it with Acetone/CCl₄, keep it inverted for 2-3 hrs and dry it in Air overnight.
- 7. Label your samples clearly.
- **8.** Please do not submit samples in broken NMR tubes. If the tube breaks inside the probe, it may damage the probe insert.
- 9. Maximum number of samples per requisition is restricted to four.
- 10. Also mention if the sample is paramagnetic or ferromagnetic in nature.

For External Users

- 1. Please check the solubility of your samples before submitting samples for recording solution state NMR
- 2. Mention the deuterated solvent to be used for recording the NMR spectrum
- 3. Deuterated solvents available at our centre are CDCl₃, DMSO-D₆, D₂O,Acetonitrile-d3
- 4. The user has to provide the other deuterated solvents
- 5. Clearly mention the nucleus to be studied(¹H, ¹³C, ²⁹Si, ³¹P, ¹¹B etc) and the type of measurement(1D, DEPT, 2D,etc)
- 6. If you need, 2D measurement, clearly mention the type of measurement (COSY, DQFCOSY, NOESY, ROESY, HSQC, HMBC etc)
- 7. For Variable Temperature (VT) measurement, please mention the temperature range. Check the BP/MP of the solvent before selecting the temperature for VT experiments.
- 8. If you are submitting your samples in NMR tubes, use only good quality NMR tubes (Wilmad, Norell, Sigma-Aldrich etc).
- 9. Also mention if the sample is paramagnetic or ferromagnetic in nature.