Analytical Instruments Facility
Department of Instrumentation- USIC
H. N. B. Garhwal University, Srinagar (Garhwal) - 246174,
Uttarakhand, India
E-mail- vtflab.usic2010@gmail.com
Contact No. - 01370-267888

User Registration Form

Registration No.:

1. Name: _____ 2. Research area: _____

3. Address: _____

4. Contact Number: _____ E-mail Address: _____

5. User Category: From HNBGU campus/ Industry / Edu. Int./any other _____
(Please write the name of your organization)

6. Only for HNB Garhwal University Campus Users:

☐ Research Scholar/ P.I., in a Research Project. ☐ Ph.D. Scholar, with Fellowship.

☐ Research Scholar/ student, without Fellowship. ☐ Teacher / Research staff.

7. Detail of the sample(s) to be measured [Nature / Composition of Sample (organic/inorganic), form, mp/bp, etc.]
_____

8. Facilities to be used: (a) Facility Code(Please write from 'Table for Facility Charges'): _____
(b) Number of samples: _____
(c) Parameter(s) to be measured _____
_____
(d) No. of scans[1]/ Temp. step[2]/spot[3]/ /hrs[4]/litre[5] (if required) _____

(Note: - [1-2]XRD-HT, XRD-SM, PE-BS-HT, PE-CM-HT, RCL-D;. [3] SEM-EDS; [4] MF, OV-300; [5] LN2, DW).

Certified that (a) the sample(s) to be measured are part of my research work, (b) the samples submitted are non- toxic / non-hazardous, and do not require any special precaution(s) while handling. And also, "I/we agree to acknowledge the Department of Instrumentation-USIC, HNB Garhwal University, Srinagar (Garhwal), in my/our publications and thesis, if the analytical results are incorporated/ used therein."

Signature of User

Note: Results are provided in CD only. Please submit a blank CD with samples.

Recommendation and Declaration by Head of Department/ Organization

The above sample(s) may be accepted on behalf of our department/Organization and Certified that Mr./Ms/Dr./Prof. _____ is working as Researcher/ Teacher/staff _____(in a research project/ Ph.D. course with fellowship/ without fellowship/ with salary) in the department of _____.
Also certified that the analyses/ measurements are for research purpose only.

Supervisor's Signature

Signature of Head of Department/ Organization
With Seal

For Departmental Office use only

No. of samples	Rate (Rs)	No. & Rate for Extra parameters	Postal and/or CD charges (Rs.)	Total charges (Rs.) (without tax)	signature

For Fee Counter use only

Total charges (without tax) (Rs.	Tax (Rs.) @ …….	Total payable amount (Rs.)	Payment received (Rs.) vide receipt No.	DD/Cash, and Date	Sign. Of cashier

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User Guide

1. The analytical data / spectra are provided only for research / development purposes. These can not be used as certificates in legal dispute(s).
2. All the payments/ DD should be in favour of the **'Finance Officer, H.N.B. Garhwal University Srinagar (Garhwal)'.** Samples and duly filled **User Registration form**(s) should be submitted to the **Head, Department of Instrumentation- USIC, Chauras Campus, P.O.- Kilkileshwar, Via- Kirtinagar (Tehri) -249161, Uttarakhand.** User can also deposit service charge directly in the university fee counter.
3. Samples and payment should be sent in the same cover. Samples are not analyzed till Payment is received. However, the user should workout the possible measurement(s)/ facility with the consultation of the Contact Person of the machine/ facility (Please see the 'Table for Facility Charges'), and accordingly payments should be made.
4. For each Analysis separate sample is necessary.
5. Samples will not be returned, unless a request is made timely.
6. In all the analysis related correspondence the allotted user Registration Number must be mentioned.
7. Radio-active, unstable and explosive materials are not accepted for analysis.
8. An additional Rs.100/- will be charged if the user wishes to receive his/her results by Speed Post, and also those who do not submit a blank CD will be charged Rs.100/- extra. Dispatch address will be same as the user address on User Registration Form.
9. Services are rendered to only those users who regularly give us feed -back about the use of the results, e.g., in thesis, patent(s), publication(s), etc.
10. Research fellows and students are advised to send the duly filled User Registration Form and samples through their Supervisor and/or Head of department.
11. For getting samples back please mention in your request letter.
12. Please collect your samples at the time of report collection.

How to use the Facility

Registration : To avail the facility, user has to apply to the **Head, Instrumentation Engineering Dept.-USIC, HNB Garhwal University, Chauras Campus, P.O.- Kilkileshwar, Via- Kritinagar (Tehri)– 249161, Uttarakhand**; by filling up the **User Registration Form**. User Registration Form can be downloaded from the university web site www.hnbgu.ac.in. Registration is absolutely essential to all the users. It gives a priority number and a reference to a user to his/her samples.

User can visit in-person or send the sample(s) along with duly filled **User Registration Form** signed by the respective Head / Supervisor of the department/College/Institute/ Organization. In experiments where user's presence is required, prior appointment for analysis/ studying samples should be sought.

In their request letter following is mandatory to all users to mention, " I/we agree to acknowledge the Department of Instrumentation-USIC, HNB Garhwal University, Srinagar (Garhwal), in my/our publications and thesis, if the analytical results are incorporated/ used therein."

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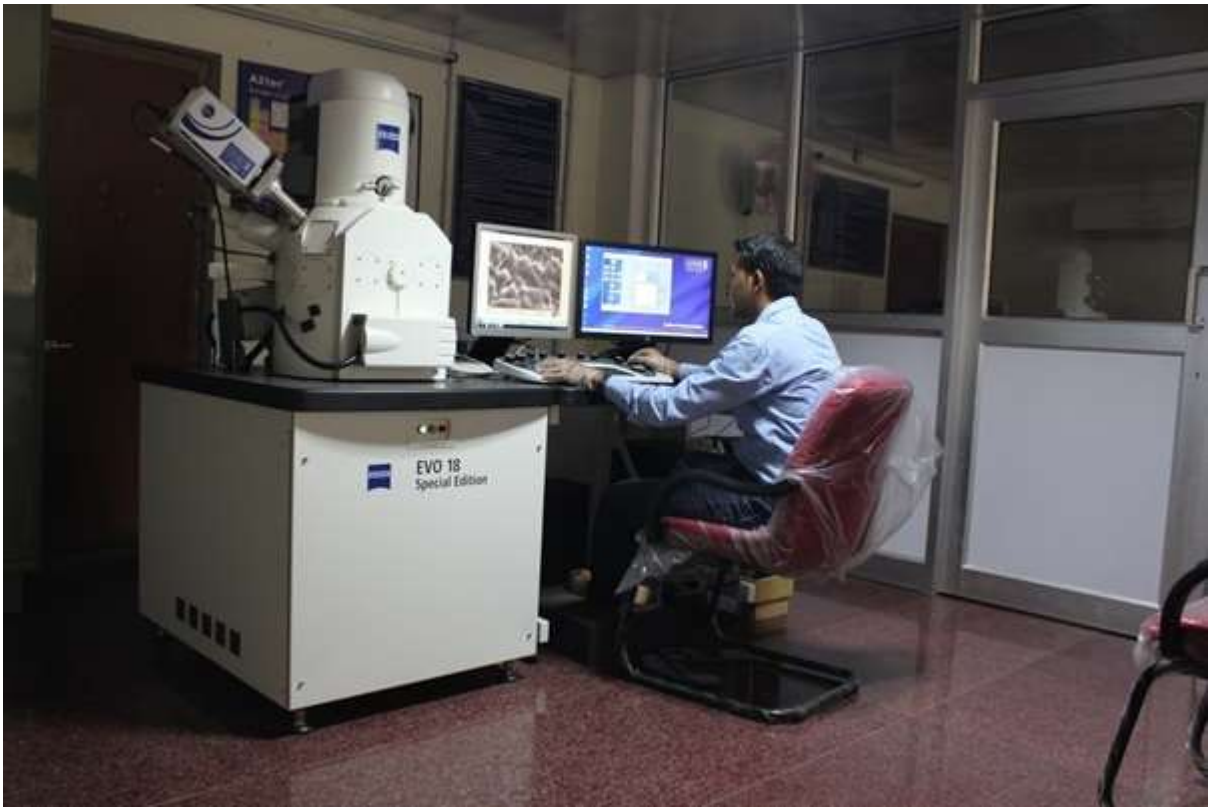
Table for Facility Charges

Equipment(s)		Facility Code	Facility	Charges (Rs.) per sample per measurement*						Contact Person:
				User Category						
				External		HNBGU campuses				
				Users from Industries/ Private users	Edu. Inst./ Govt. organization	Research Scholar/P.I./Co-P.I. Of a research project	Ph.D. scholar with fellowship	Student / Research Scholar without fellowship	Teachers/ Research staff	
				A	B	C	D	E	F	
X-ray Diffractometer (PANalytical)	1	**XRD-PS**	*XRD of Powder sample*	1000/-	500/-	400/-	250/-	100/-	200/-	**1. Mr. G. S. Kathait** Email- gambhir11186@gmail.com & gs.kathait@hnbgu.ac.in Mob. No. - 09897108774 **2. Mr. Prashant Thapliyal** Email- pra.thapli1986@gmail.com & p.thapliyal@hnbgu.ac.in Mob. No - 07830506095
	2	**XRD-TF**	*XRD of Thin film sample*	1500/-	750/-	600/-	450/-	150/-	350/-	
	3	**XRD-HT**	*XRD at High Temp. (upto 500 ^{0} C) (Extra charge per 2θ scan)*	1200/-	600/-	500/-	300/-	150/-	250/-	
	4	**XRD-RM**	*X- ray Reflectivity measurment in Thin Film*	2000/-	800/-	500/-	400/-	200/-	300/-	
	5	**XRD-SM**	*XRD Search match for identification with PDF 2012 (Extra charge per 2θ scan)*	500/-	250/-	200/-	150/-	50/-	100/-	
Scanning Electron Microscope (SEM) with EDAX	1	***High Vacuum Mode***								**Mr. Prashant Thapliyal** Email - pra.thapli1986@gmail.com & p.thapliyal@hnbgu.ac.in Mob. No - 07830506095
		SEM-HV-TF	*SEM Image (upto 3-4 nm resolution)*	750/-	400/-	300/-	175/-	80/-	125/-	
		SEM-HV-LF	*SEM Image (upto 1-2 nm resolution)*	1500/-	800/-	600/-	350/-	160/-	250/-	
		SEM-D	*Sample drying upto 200 ^{0} C for 2 hrs (if required)*	75/-	50/-	40/-	25/-	10/-	35/-	
	2	***Low Vacuum Mode***								
		SEM-LV-TF	*SEM Image (upto 3-4 nm resolution)*	1500/-	800/-	600/-	350/-	160/-	250/-	
		SEM-LV-LF	*SEM Image (upto 1-2 nm resolution)*	3000/-	1600/-	1200/-	750/-	320/-	500/-	
	3	**SEM-C**	*Coating with Au-Pd target (for non-conducting sample)*	200/-	100/-	75/-	50/-	15/-	60/-	
	4	**SEM-EDX**	*Elements identification and quantification with EDAX (Charges per selected spot)*	500/-	300/-	200/-	125/-	40/-	100/-	
ICP-MS Spectroscopy with Laser Ablation system (Perkin Elmer)	1	**ICPMS-SE**	*Standardization and Estimation per element*	1500/-	750/-	600/-	450/-	150/-	350/-	**1. Mr. Vishal Rohilla** Email- mail.vishal.pd@gmail.com & vishal.rohilla@hnbgu.ac.in Mob. No. - 09411301658 **2. Mr. Don Viswas** Email- donusic06@gmail.com & d.biswas@hnbgu.ac.in Mob. No. - 07579021861
	2	**ICPMS-SS**	*Same element of subsequent sample*	500/-	250/-	200/-	150/-	50/-	100/-	
	3	**ICPMS-P&C**	*Sample preparation and consumables*	500/-	250/-	200/-	150/-	50/-	100/-	

Ellipsometer	1	**EM-T&R**	*Thickness and refractive index of thin films*	1100/-	550/-	450/-	300/-	100/-	150/-	**Mr. Prashant Thapliyal** Email - pra.thapli1986@gmail.com & p.thapliyal@hnbgu.ac.in Mob. No.- 07830506095
PE Loop tracer with Piezo-electric measurments	1	**PE-BS**	*PE Loop of Bulk sample*	1800/-	500/-	400/-	300/-	100/-	150/-	
	2	**PE-BS-HT**	*PE Loop of Bulk sample, upto 300 ^{0} C (per scan, at one temp.)*	2500/-	700/-	500/-	400/-	150/-	200/-	
	3	**PE-TF**	*PE Loop of Thin film sample*	1800/-	500/-	400/-	300/-	100/-	150/-	
	4	**PE-PC-B**	*Piezoelectric coefficient of Bulk sample*	1800/-	500/-	400/-	300/-	100/-	150/-	
	5	**PE-CM-RT**	*Capacitance measurement, upto 1 MHz, at RT*	500/-	300/-	250/-	150/-	50/-	75/-	
	6	**PE-CM-HT**	*Capacitance measurement, upto 1 MHz, at RT $<T\leq 300^0$ C, at a step of 5 ^{0} C (extra charges)*	800/-	500/-	300/-	200/-	75/-	100/-	
RCL meter (upto 1 MHz)	1	***Bulk sample - Capacitance vs. frquency.***								
		RCL-RT	*At room temp.*	500/-	300/-	250/-	150/-	50/-	75/-	
		RCL--HT	*At different temp., RT<T≤ 500 ^{0} C, at a step of 5 ^{0} C (extra charges than RT)*	1000/-	500/-	300/-	100/-	75/-	100/-	
		RCL--DC	*with per DC bias, upto 40V (extra)*	1000/-	600/-	500/-	300/-	100/-	150/-	
	2	***Thin Film Sample - Capacitance vs. frquency***								
		RCL-CF	*At RT*	1100/-	550/-	450/-	300/-	100/-	200/-	
		RCL-CV	*Capacitance vs. Voltage, at RT, and 1MHz*	1100/-	550/-	450/-	300/-	100/-	200/-	
Source Meter	1	**SM-IV**	*I-V (upto 10 V, for thin films; and 200 V, for bulk,*	1100/-	550/-	450/-	300/-	100/-	200/-	
Spectrophotometer (Visible + UV)	1	**SP-TR/W**	*T%/R %/ Abs% vs. Wavelength*	1000/-	500/-	400/-	250/-	100/-	200/-	
	2	**SP-DR/W**	*Diffused reflectance vs. Wavelength*	1500/-	800/-	600/-	350/-	160/-	250/-	
Muffel Furnance	1	**MF-1150**	*RT to 1150 ^{0} C (per hr. charges)*	500/-	200/-	150/-	100/-	50/-	75/-	
	2	**MF-1750**	*RT to 1400 ^{0} C (per hr. charges)*	1000/-	400/-	300/-	200/-	100/-	150/-	
Oven	1	**OV-300**	*Drying upto 300 ^{0} C, per hr.*	250/-	100/-	75/-	50/-	25/-	45/-	
Double Distilled water Plant	1	**DW**	*Distilled Water*	20/-	15/-	10/-	10/-	10/-	10/-	
Liquid Nitrogen Plant	1	**LN2**	*LN2 [B.P. - (-)196 ^{0} C]*	50/-	30/-	20/-	20/-	20/-	20/-	**Dr. V. S. Bist** Email - vsbist_usic68@yahoo.com & vs.bisht@hnbgu.ac.in Mob. No.- 09410526989


Inductively Coupled Plasma Mass Spectrometer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