

ADVANCED MATERIAL CHARACTERIZATION LABOATORY
VJTI, MECHANICAL ENGINEERING DEPARTMENT

UNLOCK THE INVISIBLE WORLD WITH CUTTING-EDGE IMAGING TECHNOLOGY!

SCANNING ELECTRON MICROSCOPE (SEM)

Model	JSM-IT210
Resolution	SE Detector - 3nm at 30 kV and 20nm or better at 1kV.
Magnification	10X to 300,000X
Acceleration Voltage	300V to 30kV
Probe Current	1pA to 1 μ A

SERVICES OFFERED

- Material Science: Analyze metals, ceramics, and polymers
- Biology: Visualize cells, tissues, and microorganisms
- Electronics: Inspect circuits and microchips
- Forensics: Examine trace evidence with unparalleled detail
- Education & Research: Enhance learning and discovery
- Surface morphology imaging
- Elemental analysis (EDX included)
- Failure analysis
- Quality control inspections
- Customized reports and consultations

INSTRUCTIONS

1. A requisition letter addressed to Head, Central Testing Facility along with a printout of electronic fund transfer (NEFT) proof should be sent by post or submitted in person to VJTI account Section, Matunga, Mumbai-400019. Analysis request form will require:
 - a. Requester's Name and Contact Information
 - b. Company/Organization
 - c. Date of Request
 - d. Description of Sample(s)
 - e. Type of Analysis Required
 - f. Quantity and Sample ID (if applicable)
 - g. Purpose of Analysis

- h. Special Instructions or Notes
 - i. Signature and Date
2. If you are not supposed to be present during the measurements, please mention as many details as possible, such as:
 - a. Expected features you are looking for (send a representative picture if available).
 - b. Images up to what magnification factor you want.
 - c. Nature of your sample, for example, whether it is conducting or non-conducting.
 - d. If it needs to be dispersed in any solvent (for powdered samples).

If required, please attach a separate sheet.

3. Once we receive the requisition letter and advance payment, you will receive tentative date of appointment.
4. The user will be informed about their date and time of slot by e-mail.
5. The sample should be dry and should withstand high vacuum ($\sim 10^{-5}$ Pa).
6. The sample size should be less than 12.5 mm x 12.5 mm x 10 mm (height) and the side opposite the side of interest, should be flat (to enable sample mounting).
7. The user is welcome to be present in the laboratory during analysis.
8. The payment should be made in advance by RTGS on given bank details.

GSTIN/UIN: 27AAATV2693J1Z0; PAN No: AAATV2693J; TAN: MUMV10895D. Details for ECS payments: A/c name: TTF A/c (VJTI Technical Testing fee, A/c) No: 10716849822.

Bank: SBI, VJTI, Matunga Branch, IFSC Code: SBIN0011075, MICR Code: 400002180.

Kindly share the invoice or payment instructions at your earliest convenience. We aim to complete the payment promptly to ensure timely processing of the analysis.

SEM CHARGES WITHOUT GST (Rs.)

Sr.no.		Academic	National Lab	Industry	VJTI	Unit
1	SEM Image (Surface OR Cross Section)	1240/-	3100/-	6200/-	620/-	Per Sample
2	SEM Image (Surface + Cross Section)	1770/-	4425/-	8850/-	885/-	Per Sample
3	EDS	350/-	875/-	1750/-	175/-	Per EDS analysis
4	EDS Mapping	700/-	1750/-	3500/-	350/-	Per EDS map
5	WDS	700/-	1750/-	3500/-	350/-	Per WDS analysis
6	WDS Mapping(For 3 element maps)	1420/-	3550/-	7100/-	710/-	(For 3 element maps)
7	WDS Mapping(Above 3 elements maps)	1900/-	4750/-	9500/-	950/-	(Above 3 elements maps)

HOW TO USE THE FACILITY

1. **Registration:**

Registration is absolutely essential. External users can register through ISTEM portal. At the end of the registration process, you receive a FBR number which should be used in all future communications regarding the analysis.

2. In order to make a request for registration, external users should visit Instruments Portal

3. External User's Category:

4. University/Colleges:

You can come in person or send your samples by post. The samples should be sent along with a letter duly signed and sealed by the head/guide on his/her official letterhead. The letter should clearly state that the analysis is for academic research purposes only to qualify for academic concession. The letter should be addressed to " Head, Central Testing Facility ".

5. National Labs:

You can come in person or send your samples by post. The samples should be sent along with a letter duly signed and sealed by the head/guide on his/her official letterhead. The letter should clearly state that the analysis is for research purposes only. The letter should be addressed to " Head, Central Testing Facility ".

6. Industry:

You can come in person or send your samples along with a letter for registration.

Covering letter should be on original letterhead of your company duly signed and sealed. The letter should also consists the following undertaking:

In any event, the content of report/bill is meant for our information only and we will not use the content of this bill/report for advertisement, evidence, litigation or quote as certificate to third party."

7. If your letter does not contain the above undertaking then your letter and samples for analysis will not be accepted. The letter should be addressed to " Head, Central Testing Facility ".

8. In your letter mention that you agree to acknowledge VJTI, in your publications and thesis if analysis results of any central testing facility are used.

9. For any further details mail to **wsrathod@me.vjti.ac.in**

NOTE

- a. Dispatch address will be same as address on letter head.
- b. The analytical data/spectra are provided only for research/development purposes. These can not be used as certificates in legal disputes.
- c. Service charges are payable at prevailing rates.
- d. Samples, letter and payment should be sent in the same cover only. If samples are received without covering letter/payment, the samples will be sent back to the user without any further intimation/notice. Separate sample should be sent for different analysis. Samples are not analysed until payment is received.
- e. If you are sending samples for multiple Analysis. Please send separate samples for each analysis.
- f. Please send the samples in quantity as mentioned in the brochure. Samples are not recovered, unless a special request is made.
- g. In all correspondence related to analysis our reference/registration number must be mentioned.
- h. Radio-active material should be clearly mentioned and handed over personally.
- i. Unstable and explosive compounds are not accepted for analysis.
- j. Services are rendered to only those users who regularly give us feed -back about the use of the result ,e.g. thesis, patent, process publication etc.
- k. Research fellows and students are advised to send their application and samples through their Supervisor or Head of department.
- l. Interpretation of spectra is not undertaken normally. In special cases this service can be provided on payment on extra charges .
- m. If you want samples back, please inform to particular lab or mention in your letter. Kindly collect your samples back at the time of collecting your report. Samples which are not collected within a week from the date of report collected/sample analysis will be disposed of immediately without any further notice.
- n. We do not provide any accommodation. You have to arrange on your own.

10. Sample Submission

Samples have to be submitted at the time of registration or brought along on the date of your appointment for your sample analysis. All the users are required to submit MSDS (Material Safety Data Sheets) for each sample, a certificate stating that the samples submitted are non-toxic / non-hazardous and that the sample does not require special precaution while handling.

11. Results :

After the sample analysis is completed, the results may be dispatched by post or email. The user does not have to pay any additional fee for dispatch of the analysis results that are sent by post.

The analysis results/reports will carry signature and stamp of VJTI.

Dr. Walmik Sadashiv Rathod
Associate Professor V. J. T. I., Matunga, Mumbai-400019

Contact Numbers:

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Email:-wsrathod@me.vjti.ac.in

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