



COIMBATORE INSTITUTE OF TECHNOLOGY

(Govt. Aided Autonomous Institution)

Coimbatore – 641014, Tamilnadu

FIELD EMISSION SCANNING ELECTRON MICROSCOPE LABORATORY

E-Mail: fesemlab@cit.edu.in

SAMPLE SPECIFICATION REQUIREMENT FOR FESEM & EDS ANALYSIS

FESEM operates under high-vacuum conditions and uses an electron beam for imaging. Therefore, samples must comply with the following specifications:

- Samples must be completely dry and may be in the form of powder, film, pellet, coating, etc.
- All water and volatile components must be removed, as they will vaporize under vacuum conditions.
- Solid samples must be thoroughly cleaned or ultrasonicated to avoid contamination. The maximum permissible dimensions for solid samples are **10 mm × 10 mm** and the base of the sample must be perfectly flat. Samples exceeding these dimensions require prior approval from the instrument in-charge.
- Electrically conductive samples do not require special preparation; however, they must be dry and free from volatile substances.
- Non-conductive samples must be made conductive by coating with a thin layer of conductive material (e.g., Au or C) using a sputter coater.
- For magnetic samples, complete details regarding the nature of the sample must be provided to the operator before submission.
- Never use cello tape or any adhesive tape for packaging samples, as it can contaminate the chamber and affect analysis.
- Samples that are incompatible with high vacuum or unstable under electron beam exposure cannot be analyzed.

SAMPLE SUBMISSION PROCEDURE FOR FESEM & EDS ANALYSIS

- Samples must be submitted along with a duly filled application form.
- Samples should be packed in airtight, undamaged vials.
- Basic sample details must be provided to ensure accurate analysis.
- Samples submitted for analysis will not be returned; please submit only the required quantity (e.g., approximately 200 mg for powder samples).

Samples along with sample submission form can be submitted in person at FESEM Lab, CIT (Room No. M146) or it can be sent to the following address

YOU CAN SEND YOUR SAMPLES TO ANY ONE OF THE FOLLOWING ADDRESS		
Dr. G. SUGANYA PRIYADHARSHINI Assistant Professor, Department of Mechanical Engineering, Coimbatore Institute of Technology, Coimbatore – 641 014, Tamil Nadu Mob: +91 – 98439 80133	Dr. P. BALRAJU, Assistant Professor, Department of Physics, Coimbatore Institute of Technology, Coimbatore – 641 014, Tamil Nadu Mob: +91 – 79041 10624	Dr. R.Sathiskumar Assistant Professor, Department of Mechanical Engineering, Coimbatore Institute of Technology, Coimbatore – 641 014, Tamil Nadu Mob: +91 – 9943350848
e-mail: fesemlab@cit.edu.in		

ANALYSIS CHARGES

The analysis charge is as given below and the amount has to be paid in advance before the characterization is carried out.

For External users other than industry (Faculty members / Research Scholars / Students)			
Analysis charge per sample (Rs.)			
Particulars	Amount without Tax	GST (18%)	Total Amount
FESEM analysis	850	153	1,003
EDS Analysis	300	54	354
FESEM with EDS analysis	1050	189	1,239
EDS mapping	400	72	472
Sputtering charge (For non-conductive samples)	150	27	177

PAYMENT DETAILS

YOU CAN REMIT THE ANALYSIS CHARGES IN THE FOLLOWING ACCOUNT
Account Number: 940927784 Beneficiary Name: The Principal, CIT Bank: Indian Bank Branch: Peelamedu IFSC: IDIB000S107

After remitting the analysis charges to the above account, please email the transaction details (Transaction ID, date of transaction, bank name, amount, etc.) along with a copy of the transaction receipt to fesemblab@cit.edu.in.

Please specify the billing address along with the GST or PAN number ([GST is mandatory for bills issued in the name of the Head of the Institution/Department, while PAN is mandatory for bills issued in the name of an individual faculty member or researcher](#)). A soft copy of the invoice will be sent via email. If a hard copy is required, kindly enclose a self-addressed stamped envelope along with the samples.