

# INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY

Sophisticated Analytical Instrument Facility (SAIF)

## Field Emission Gun Scanning Electron Microscope (FEG SEM)

### Analysis Request Form

#### Applicant Details

User name: .....

Roll No. .... IIT B Email: .....

Department: ..... Lab contact no: .....

Other Email ID: ..... Mobile No.: .....

Name of Guide/PI: .....

Guide/PI Email ID: .....

#### Sample information:

Number of samples	
Sample code	
Sample type	Biological / Composite Material / Thin Film / Crystalline Solid / Metal/Polymer/Ceramic/Composite/ Other (Please specify): ..... *biological samples should be submitted after primary fixation
Detailed description of the sample (Refer Annexure I before filling)	
Sample form	Powder/Pellet/Suspension/On glass substrate/Film/Others..... If suspension, then medium of suspension.....
If sample is Pellet, thin film (Refer Annexure II before filling)	Mention sample dimensions.....
If sample is powder, Dispersion required (Refer Annexure II before filling)	Yes/No If Yes, Medium for dispersion.....
Nature of the sample	Non-Conducting / Conducting / Semi-Conductor
Sample is	Magnetic /Non Magnetic

#### Type of analysis (Kindly tick):

SEM Image only	SEM Image + EDS	SEM Image + WDS	Only EDS	Only WDS


**SEM Analysis requirement:**

SEM Image	Secondary Electron Image / Back Scattered Electron Image
Analysis requirement	Surface Imaging / Cross Section Imaging / Surface + Cross Section imaging (*Cross-section analysis of powder and suspension samples is not possible)
Sample to be mounted	Planar/Cross Section/ Powder directly loaded on sample holder/ Drop cast for liquid or suspension samples
Expected Morphology	Brief description of shape.....
Expected Particle Size	
If EDS is required	Point EDS /area EDS/EDS mapping/ line scan List of expected elements (for EDS): .....
If WDS is required	Only WDS / EDS + WDS (point scan)/WDS mapping/ WDS line scan List of expected elements (for WDS): .....

**Material safety data:**

**If you are submitting more than one sample which are different in nature/composition, submit separate MSDS**

<b>Sample Properties</b>	Carcinogenic (level) <input type="checkbox"/> Toxic <input type="checkbox"/> Radioactive <input type="checkbox"/> Corrosive <input type="checkbox"/> Explosive <input type="checkbox"/> Flammable <input type="checkbox"/> Other (specify): _____
<b>Moisture</b>	Present <input type="checkbox"/> Absent <input type="checkbox"/> NA <input type="checkbox"/>
<b>Volatile organic compound</b>	Present <input type="checkbox"/> Absent <input type="checkbox"/> NA <input type="checkbox"/>
<b>Stability of sample</b>	Stable under RTP <input type="checkbox"/> Hygroscopic <input type="checkbox"/> Sublimes <input type="checkbox"/> Reactive in: Air <input type="checkbox"/> Light <input type="checkbox"/> Heat <input type="checkbox"/> Vacuum <input type="checkbox"/> Moisture <input type="checkbox"/> May decompose when exposed to accelerated electron beam <input type="checkbox"/>
<b>Mention the storage and handling conditions if anything specific</b>	
<b>Whether incompatible with any material-</b>	Yes <input type="checkbox"/> No <input type="checkbox"/> (Specify the materials): .....
<b>Health hazards</b>	Yes <input type="checkbox"/> No <input type="checkbox"/> (irritant to skin/irritant to eyes/harmful to skin/ toxic if inhaled/toxic if ingested)
<b>First aid measures</b>	Eye/Skin/Inhalation/ Ingestion/Others (specify): .....
<b>Disposal Method of sample</b>	

<p>Please fill appropriate numbers in the NFPA diamond: (*reference image attached below)</p>	
<p>Additional information if any</p>	

**\*Along with this form MSDS should be submitted if available.**

**Note: All Samples will be discarded after 15 days of analysis. If you wish to collect the samples then you are required to make arrangement for the same. SAIF office will not dispatch the same to users under any circumstances**

**Declaration**

I confirm that the samples submitted for analysis are for research purpose only and the above furnished details are correct and true to the best of my knowledge. I understand that I will be held responsible for any damages arising from incorrect information provided by me against material safety data.

I agree to acknowledge DST and SAIF/CRNTS, IIT Bombay for providing (Instrument name) analytical facility for my research work, in my publications. I also agree to send the publication reference (Journal name/volume number/names of the authors/date of issue of the publication etc) to office.saif@iitb.ac.in

I declare that the “Content of this report is meant for our information only and we will not use the content of this report for advertisement, evidence, litigation or quote as certificate to third party” I accept that all the issued reports/results (Soft/hard) will not carry any Signature or Seal and Stamp of SAIF/CRNTS IIT Bombay.

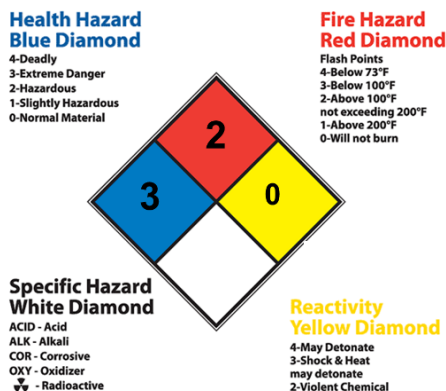
Signature of the User

Signature of the In Charge/HOD/PI with College/P.I.  
Guide seal / stamp

Date:

Place:

**\* Reference image for filling NFPA diamond:**



**Health Hazard  
Blue Diamond**  
4-Deadly  
3-Extreme Danger  
2-Hazardous  
1-Slightly Hazardous  
0-Normal Material

**Fire Hazard  
Red Diamond**  
Flash Points  
4-Below 73°F  
3-Below 100°F  
2-Above 100°F  
not exceeding 200°F  
1-Above 200°F  
0-Will not burn

**Specific Hazard  
White Diamond**  
ACID - Acid  
ALK - Alkali  
COR - Corrosive  
OXY - Oxidizer  
☢ - Radioactive

**Reactivity  
Yellow Diamond**  
4-May Detonate  
3-Shock & Heat  
may detonate  
2-Violent Chemical