



i-Nano Research Facility

De La Salle University Manila

SEM & EDX Analysis Services

Scope of Services · Sample Submission Guidelines · Frequently Asked Questions

📅 Effective 2026 📍 De La Salle University Manila 🌐 www.inanolab.com

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The i-Nano Research Facility at De La Salle University Manila provides professional Scanning Electron Microscopy (SEM) and Energy Dispersive X-ray Spectroscopy (EDX) analysis services to support academic research, industry applications, and quality control. All analyses are performed using the **Phenom XL Desktop SEM Platform** (Thermo Fisher Scientific), a benchtop instrument with integrated EDX. This document outlines our scope of services, sample submission guidelines, and answers to frequently asked questions.

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SERVICE PACKAGES

Basic SEM

Surface Morphology Analysis

High-resolution electron microscopy imaging of your sample's surface structure and topography.

- ✓ Minimum 12 high-resolution SEM micrographs
- ✓ Imaging of up to 3 areas per sample
- ✓ Multiple magnifications (500× – 10,000× or higher)
- ✓ Gold sputter coating of sample
- ✓ Raw digital image files delivered via email
- ✓ Official Certification of Analysis
- ✓ Quick turnaround

SEM + EDX

Morphology + Elemental Analysis

Full surface imaging combined with detailed elemental composition data via EDX spectroscopy.

- ✓ All Basic SEM inclusions
- ✓ Elemental analysis (EDX) of 3 different areas per sample
- ✓ Quantitative concentrations: atomic % and weight %
- ✓ EDS graph spectrum with characteristic peaks
- ✓ Elemental mapping
- ✓ Raw data files delivered via email
- ✓ Official Certification of Analysis

⚠ Not included in any service package: Image processing, annotation, measurements, interpretation and analysis. These remain the sole responsibility of the researcher.

EQUIPMENT SPECIFICATIONS

Model

Phenom Pro & XL

Manufacturer

Thermo Fisher Scientific

Type

Benchstop SEM with EDX

Effective magnification

Up to 20,000×

Sample chamber

Accommodates multiple samples

Applications

Materials Sci., Life Sci., Electronics, QC

WHY CHOOSE I-NANO RESEARCH FACILITY?



Quick turnaround

Results released within 2-3 working days after the scheduled analysis



Certified results

Official Certification of Analysis provided with every service



Affordable rates

High-quality analyses at student- and researcher-friendly pricing



Hassle-free requests

Simple and straightforward sample submission process



Comprehensive imaging

12 high-resolution SEM images per sample at varying magnifications



Precise EDX analysis

3 detailed spot analyses for complete elemental composition

LIMITATIONS OF SERVICE

The following are explicitly outside the scope of services: (1) image processing, annotation, or enhancement; (2) dimensional measurements or scale calculations; (3) interpretation or discussion of morphological or elemental results; (4) guarantee of specific imaging and elemental outcomes if limited by sample quality; (5) return of submitted samples — SEM/EDX analysis is destructive in nature.

2. Sample Submission Guidelines

SAMPLE ELIGIBILITY — SOLID SAMPLES ONLY

Allowed samples

- Powders / powder-like materials
- Rock-like or mineral samples
- Glass pieces
- Plastics / polymers
- Organic solids (wood, leaves, seeds)
- Insects (dry and preserved)
- Teeth / bone fragments
- Rubber pieces
- Paper / cardboard
- Textiles / fabric

Not allowed samples

- Liquids
- Gases
- Samples containing mercury
- Radioactive materials
- Biological hazards (blood, tissue, pathogens)
- Toxic or highly hazardous materials
- Corrosive or strongly reactive chemicals
- Wet, moist, or damp samples
- Samples that may outgas or contaminate the chamber
- Sticky, oily, or adhesive substances

⚠ The laboratory reserves the right to **reject** samples that are wet or moist, excessively large, hazardous, improperly prepared, or not in accordance with laboratory safety and testing requirements. Testing may be terminated at any point if safety risks are identified.

SAMPLE PREPARATION REQUIREMENTS

1

Sample mass & size

Submit small, solid samples for best imaging and EDX results.

- Surface area: approx. 1 cm × 1 cm
- Thickness: a few millimeters
- Ideal mass: ≈ 50 mg
- Submit the minimum amount necessary

2

Drying

Samples must be completely dry before submission to prevent contamination or equipment damage. Note that we do not offer any drying services. Example drying methods: Air drying or sun drying, Oven drying, or Freeze drying

3

Packaging & labeling

Use clean, tightly sealed containers to prevent spills or contamination. Label each container clearly with:

- Client name
- Sample code or identifier
- Brief sample description (if needed)

⚠ Samples will **not be returned** after analysis due to the destructive nature of the SEM procedure. Please submit only the minimum amount of material necessary.

CONFIDENTIALITY & INTELLECTUAL PROPERTY

🔒 All data, images, and results are treated as strictly **confidential**. Results will not be disclosed to any third party without written consent from the client.


📄 All SEM and EDX results remain the **property of the client**. The facility retains the right to use anonymized data for training purposes only, unless stated otherwise in writing.

LIABILITY

SEM analysis is destructive in nature — samples will not be returned. The i-Nano Research Facility shall not be liable for sample damage during preparation or imaging, nor for failure to obtain desired imaging results due to sample quality limitations. The facility reserves the right to reject improperly prepared or unsafe samples and to terminate testing if risks are identified at any stage of the process.

3. Submission & Payment Procedures

STEP-BY-STEP SUBMISSION PROCESS

- 1 Scheduling**
Complete the service request form at www.inanolab.com
 - 2 Confirmation of test schedule**
Confirm your requested analysis within **24 hours** of receiving the schedule email notification. Failure to confirm within this period may result in forfeiture of the reserved slot.
 - 3 Down payment**
A **50% down payment** is required to confirm the test schedule. Bank details and the delivery address will be provided upon confirmation of your request.
 - 4 Prior notice before sample delivery**
Inform the facility before delivering your samples so that the necessary receiving arrangements can be made. The drop-off location is **not necessarily at De La Salle University – Manila**.
 - 5 Sample submission**
Deliver properly packed and labeled samples to the confirmed drop-off address. Samples must comply with all eligibility and preparation requirements outlined in Section 2.
 - 6 Client access policy**
For safety, quality assurance, and regulatory compliance, clients shall deliver samples only at the designated drop-off area. Entry into laboratory work areas and observation of testing procedures are not permitted.
 - 7 Full payment & release of results**
Full payment must be settled prior to the release of results. Results are sent via email **2 to 3 working days** after the scheduled analysis, subject to the absence of technical interruptions or unforeseen delays.
-  All fees are **exclusive of shipping costs**. Clients are responsible for the cost of transporting samples to the facility. Service fees are based on the number of samples and the type of analysis required — contact us for the current rate schedule.

DATA DELIVERABLES BY SERVICE TYPE

Basic SEM

- ✓ Minimum 12 raw SEM micrographs (digital files)
- ✓ Multiple magnifications (500× – 10,000× or higher)
- ✓ Raw data files delivered via email
- ✓ Official Certification of Analysis

SEM + EDX

- ✓ All Basic SEM deliverables
- ✓ EDX spectra and elemental mapping data
- ✓ Quantitative elemental concentrations (at% & wt%)
- ✓ EDS graph spectrum with characteristic peaks
- ✓ Official Certification of Analysis

SUMMARY OF KEY TERMS

Term	Condition
Confirmation deadline	Within 24 hours of receiving the schedule notification
Down payment	50% of total service fee upon schedule confirmation
Full payment	Required prior to release of results
Turnaround time	2-3 working days after scheduled analysis (upon full payment)
Shipping costs	Excluded from service fee; borne by the client
Sample return	Not applicable — analysis is destructive in nature

4. Frequently Asked Questions

ABOUT THE SERVICES

What services does the i-Nano Research Facility offer?

Two main analysis services are offered: (1) **Basic SEM** — high-resolution surface morphology imaging; and (2) **SEM + EDX** — surface morphology imaging combined with elemental composition analysis via Energy Dispersive X-ray Spectroscopy.

What equipment is used for the analysis?

All analyses are performed using the **Phenom XL Desktop SEM Platform** (Thermo Fisher Scientific), a benchtop scanning electron microscope with integrated EDX functionality. The chamber can accommodate multiple samples simultaneously.

What will I receive as output from Basic SEM?

You will receive a minimum of 12 high-resolution SEM micrographs at multiple magnifications (500× to 10,000× or higher), raw digital image files delivered via email, and an Official Certification of Analysis.

What additional outputs are included in the SEM + EDX package?

In addition to all Basic SEM deliverables, the SEM + EDX package includes: elemental analysis (EDX) of 3 different areas on the sample, quantitative elemental concentrations (atomic % and weight %), an EDS graph spectrum showing characteristic peaks, and elemental mapping.

Will the facility interpret or measure my SEM images and EDX results?

No. Only raw SEM micrographs and raw EDX results will be provided. Analysis, interpretation, measurements, and discussion of results are not included in the service and remain the sole responsibility of the researcher.

Who can avail of your services?

Services are open to university researchers, graduate and undergraduate students, and industry partners. Student- and researcher-friendly rates are offered.

SAMPLE REQUIREMENTS

What types of samples are accepted?

Only solid, dry samples are accepted. Acceptable samples include: powders, mineral or rock-like samples, glass, plastics/polymers, organic solids (wood, leaves, seeds), preserved insects, teeth and bone fragments, rubber, paper/cardboard, and textiles.

What samples are NOT accepted?

The following are not allowed: liquids, gases, samples containing mercury, radioactive materials, biological hazards (blood, tissue, pathogens), toxic or corrosive substances, wet or moist samples, samples that may outgas or contaminate the vacuum chamber, and sticky or oily substances.

How much sample material do I need to submit?

Only a small amount is required. An ideal sample has a surface area of approximately 1 cm × 1 cm, a thickness of a few millimeters, and a mass of about 50 mg. Please submit only the minimum necessary, as samples will not be returned after analysis.

Can I submit wet or liquid samples?

No. All samples must be completely dry prior to submission. Wet or moist samples will be rejected, as moisture can cause contamination, outgassing, or damage to the SEM equipment. Acceptable drying methods include air drying, sun drying, oven drying, and freeze drying.

Can the facility reject my sample?

Yes. The laboratory reserves the right to reject samples that are wet, moist, excessively large, hazardous, improperly prepared, or not in compliance with safety and testing requirements. Testing may also be terminated if safety risks are identified during the process.

SUBMISSION & SCHEDULING

How do I request an analysis?

Complete the service request form at www.inanolab.com.

How do I confirm my test schedule?

You must confirm your requested analysis via email or mobile within **24 hours** of receiving the schedule notification. Failure to confirm within this period may result in forfeiture of the reserved testing slot.

Where do I deliver my samples?

The delivery address will be provided upon confirmation of the service request. Please note that the drop-off location is **not necessarily at De La Salle University – Manila**. Always confirm the specific address before delivering your samples.

Can clients enter the laboratory and observe the testing procedures?

No. Clients are not permitted to enter laboratory work areas or oversee testing procedures. Samples must be submitted only at the confirmed drop-off location in accordance with laboratory safety and compliance protocols.

SUBMISSION & SCHEDULING (CONTINUED)

Do I need to notify the facility before delivering my samples?

Yes. Kindly inform the facility prior to delivering your samples so that receiving arrangements can be made. Unannounced deliveries may cause delays in processing.

PAYMENT & FEES

Is a down payment required?

Yes. A **50% down payment** is required to confirm the test schedule. Bank details will be provided upon confirmation of your request.

When is full payment due?

Full payment must be completed **prior to the release of results**. Results will not be sent until payment has been settled in full.

Are shipping costs included in the service fee?

No. All fees are exclusive of shipping costs. Clients are fully responsible for the cost of delivering samples to the facility.

RESULTS & TURNAROUND

When will I receive my results?

Results will be sent via email **2 to 3 working days after the scheduled analysis**, subject to the completion of full payment and the absence of technical interruptions or unforeseen delays.

Will I get my samples back after analysis?

No. SEM analysis is destructive in nature, and samples will not be returned after testing. Please submit only the minimum amount of material necessary for the analysis.

What if clear images cannot be obtained due to my sample's condition?

The facility does not guarantee specific morphological features or imaging outcomes if results are limited by sample quality. Proper sample preparation — including thorough drying and correct sizing — is the client's responsibility.

CONFIDENTIALITY & LIABILITY

Are my results kept confidential?

Yes. All data, images, and information are treated as strictly confidential. Results will not be shared with any third party without written consent from the client.

Who owns the data and results generated from the analysis?

All SEM and EDX results and data remain the **property of the client**. The facility retains the right to use anonymized data for internal training or demonstration purposes only, unless the client explicitly requests otherwise in writing.