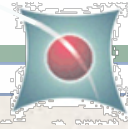


Thermal field Emission Scanning Electron Microscope (TFESEM)



Maker & Model :JEOL JSM-7800F

Attached equipment :

- ◆ Backscattered Electron Detector (BEI)
- ◆ Low Vacuum System
- ◆ X-ray Energy Dispersive Spectrometer (EDS)
- ◆ Cryo System

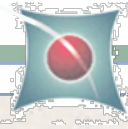
Periphery Device :

- ◆ Auto Fine Coater (Pt)
- ◆ Critical Point Dryer (CPD)

The T-FESEM is made of JEOL JSM-7800F belonging In-lens schottky FEG. The advantage of Schottky field-emission electron gun, one can easily obtain stable and high probe current compared with the traditional cold field-emission electron gun. It also can work at low voltage (~ 0.1 KV). This function can help to observe the biological and non-biological materials without coating.

EDS can analyze the quality and quantity of element in sample, While cryo preparation techniques for SEM are essential for the successful observation of wet or 'beam sensitive' specimens. Cryo-SEM removes the need for specimenunfriendly conventional preparation techniques, such as critical point drying, allowing observation of specimens in a close-to-life hydrated state.





Standard Specifications:

TFESEM : JEOL JSM-7800F

- Electron Gun : In-lens schottky FEG (JEOL patent)
- Resolution : High resolution condition 0.8 nm (15kV) , 1.2 nm (1 kV)
- Objective Lens : Super Hybrid lens (SHL)
- Magnification : x25 to x1,000,000
- Accelerating Voltage : 0.01KV to 30 KV
- Low vacuum function in specimen :10Pa to 300Pa
- GB(Gentle Beam) Mode : Apply a Bias Voltage to the Specimen
- Detector : Upper Electron Detector, Lower Electron Detector and SRBE Detector

EDS : Oxford X-Act 10mm²

- SDD(Silicon Drift Detector) : Window size : 10 mm²
- Energy Resolution : $\leq 129\text{eV}$ (Mn K α : 5.899KeV)
- Polymer Based Thin Window · (The range of elements Be₄~U₉₂)
- Analysis Software : AZtec Standard package Microanalysis System with INCA 250 system

Cryo System : Quorou Technologies PP3010T Cryo-SEM Preparation System

- SEM cold stage and anti-contaminator
- Column mounted preparation chamber
- PrepDek[®] specimen preparation desk
- Turbo pumping unit
- CHE3010 cold gas cooling system

Service Field:

chemistry, molecular biology, agriculture chemistry, nano-technology, material science, chemistry industry, Livestock science, pharmacy, biotechnology and food science.