JEOL JXA-8500F Electron Probe Micro analyzer (EPMA)

The **JXA-8500F** is a high performance thermal field emission electron probe micro analyzer combining high SEM resolution with high quality X-ray analysis of submicron areas. The JEOL JXA-8500F instrument is equipped with 5 wavelength dispersive X-ray spectrometers (WDS) and an energy dispersive X-ray spectrometer (EDS). This combination can simultaneously analyse 5 elements WDS + 16 elements EDS plus collect image signals from backscatter and secondary electron detectors.

The use of WDS (wavelength dispersive X-ray spectrometer), high probe current and small probe diameter, the **JXA-8500F** is capable of extreme elemental analysis of sub-micron areas:

- High detection sensitivity for trace elements
- High accuracy of quantitative analysis
- High resolving power for adjacent X-ray spectra
- High accuracy of light elements analysis

The system is highly automated and controlled by a powerful SUN workstation system.

**JXA-8500F Hyperprobe**

JEOL (SKANDINAVISKA) AB

[http://www.jeol.se](http://www.jeol.se)

**Specifications:**

- Spectrometers: 5 WDS, 1 EDS
- Acc.Voltage: 1 to 30 kV (0.1 kV steps)
- Magnification: 40 to 300,000X
- Stage speed max: 15 mm/s
- Probe current: 1x10^{-11} to 5x10^{-7} A
- Current stability: ±0.5%/h (FEG)

- **Detectable element range :**
  - 4Be to 92U

- **Detectable wavelength range :**
  - 0.087 to 9.3 nm

- **Secondary electron image resolution (SEI):**
  - 3.0 nm (WD11mm, 30 kV)

- **Backscattered electron image (BEI):**
  - Topo and composition image

- **Specimen Stage :**
  - High Precision stage (HPSS)
  - X 90 mm
  - Y 90 mm
  - Z 7.5 mm

- **Specimen size :**
  - 100 X 100 X 10 mmH
  - 36 mm dia. X 4 pcs X 20 mmH
  - 25.5 mm dia X 9 pcs X 20 mmH
  - Slide glass spec. holder X 4 pcs