

## 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>

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:  $1 \times 10^{-11}$  to  $5 \times 10^{-7}$  A
  - Current stability:  $\pm 0.5\%/h$  (FEG)
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- **Detectable element range :**
    - $4^{\text{Be}}$  to  $92^{\text{U}}$
  - **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
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- **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