

JXA-8230

Electron Probe Micro Analyzer

Powerful Analysis Tools
Simple PC Operation

CP 10µm

10µm

Fe 10µm

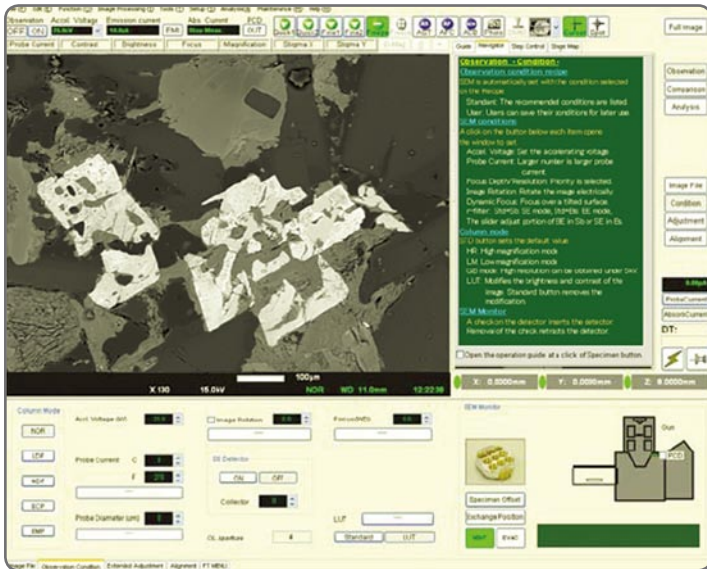


SUPERPROBE

JEOL

Serving Advanced Technology

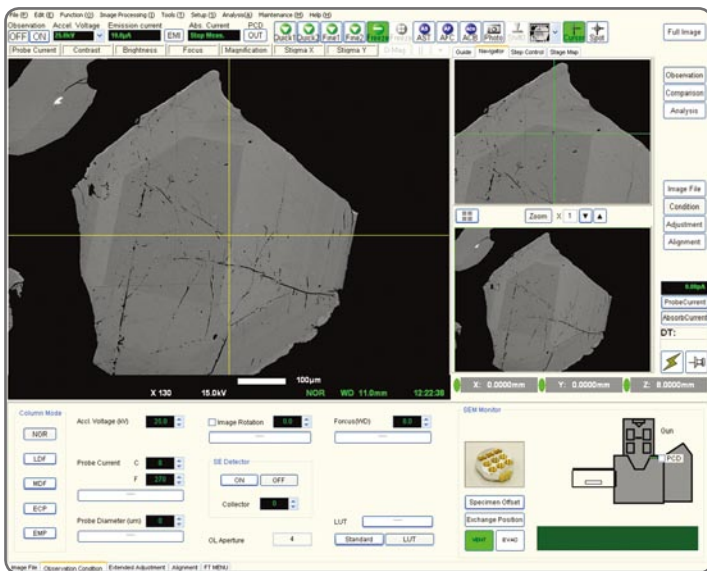
Powerful Analysis Tools - New PC Interface



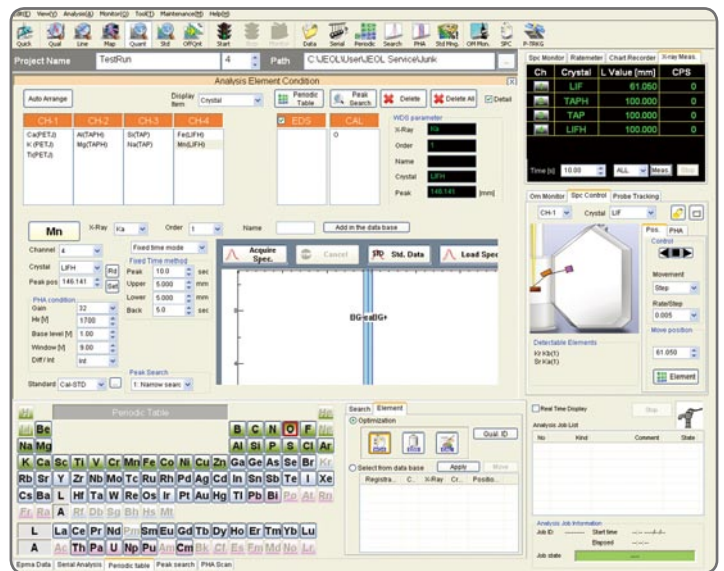
SEM image setup and Help display

Full Complement of Analysis Programs

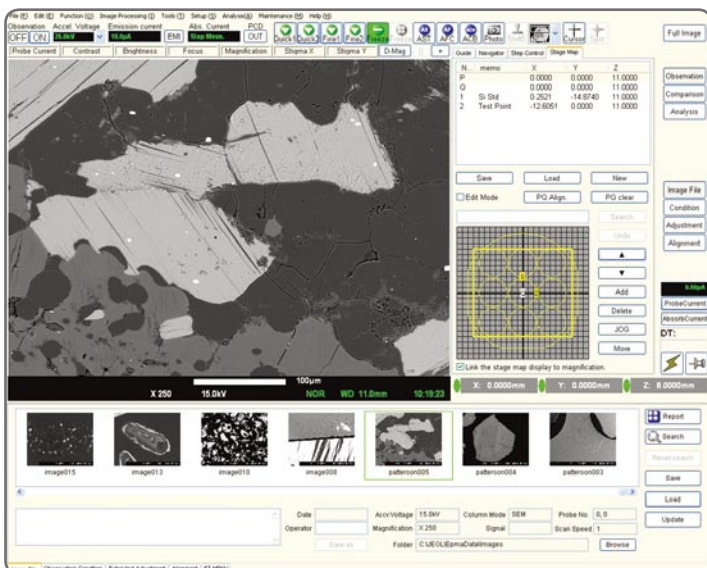
- Qualitative analysis
- Quantitative analysis
- Chemical state analysis
- Line analysis
- Electron Flight Simulator (Monte Carlo)
- Area analysis
- Phase analysis



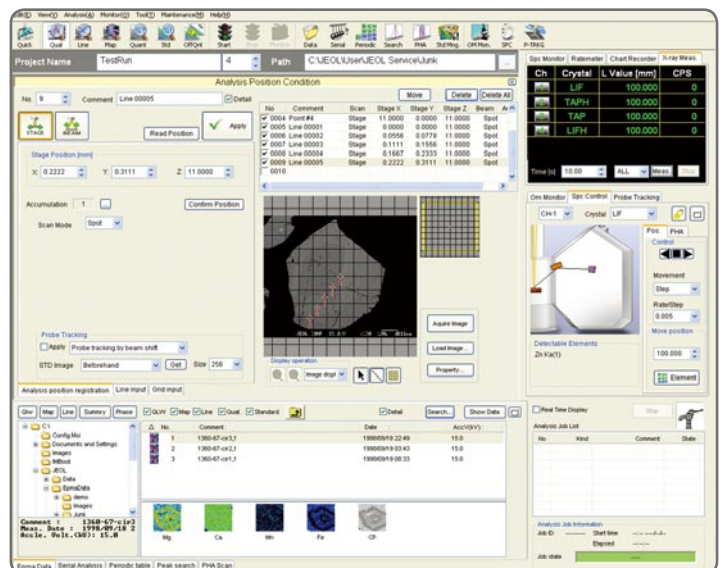
Imaging mode display



Analysis setup display



Viewing and navigation display

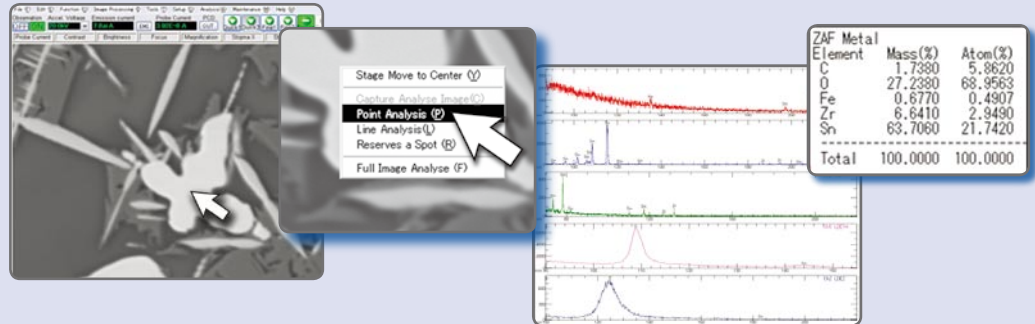


Analysis position setup

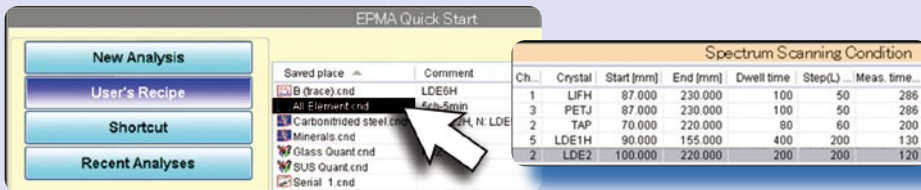
Simple Operation

The *SuperProbe JXA-8230* has a new PC-based operating environment for easy data acquisition and analysis coupled with JEOL's proven EPMA hardware. Its refined analysis menus are designed to navigate the operator through the analytical process to achieve the best results with speed and simplicity. The software contains new tools for:

- EPMA quick start: Click any point and then an analysis type to start a preset qualitative or quantitative ED or WD analysis



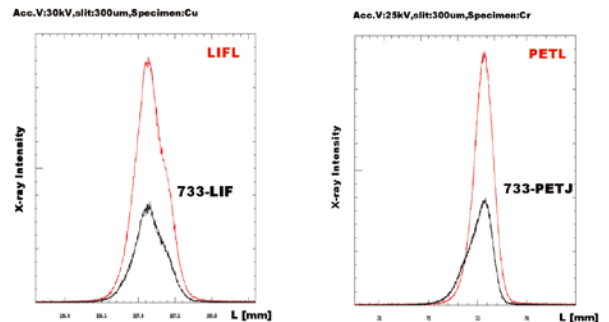
- User recipes: Save or recall a frequently used set of analytical conditions for a variety of different sample types. All column, EDS and WDS parameters are included in the recipe.



New L-type Spectrometer

Two large-crystal wavelength spectrometer with large Rowland circle. Allows increase in count rate without sacrificing energy resolution and P/B ratio. Includes PETL (to resolve trace element overlaps such as Pb-U-Th) and LIFL (useful for resolving minor peaks such as rare earth elements) crystals.

Peak profile: CuK α -LIF Peak profile: CrK α -PET

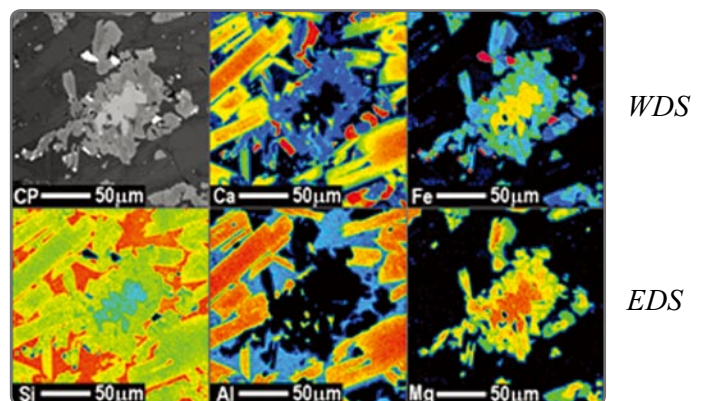


EDS Capabilities

- Digital pulse processor
- Spectral mapping (WD/ED, stage and beam scanning)
- Fan free SDD (option)



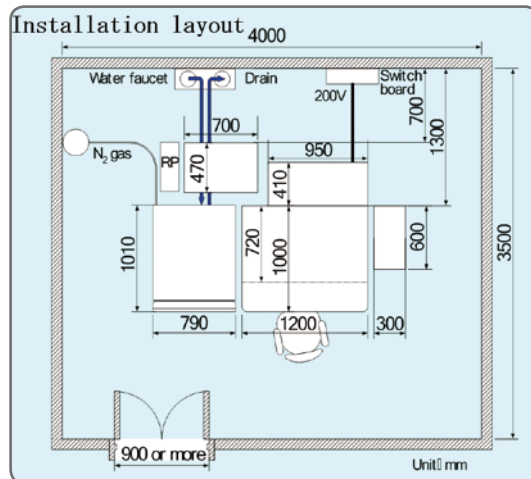
Combined WD and ED Mapping



SuperProbe JXA-8230 Electron Probe Micro Analyzer

Accessories

XCE-type X-ray Spectrometer
L-type X-ray Spectrometer
H-type X-ray Spectrometer
XCE-type Four Crystal Spectrometer
Transmission Illuminator
LaB₆ Gun
LN₂ Cold Finger
Tilt/Rotation Substage



Installation Requirements

Power Supply

Main Console Single phase 200V ±10%, 50/60Hz, 6kVA
Computer System Single-phase 100V ±10%, 50/60Hz, 15A or more
Grounding One, 100Ω or less

Cooling Water

Faucet One, Rc3/8 (hose side: R3/8)
Flow Rate 3 to 3.5 lit/min
Pressure 0.1 to 0.25MPa (gauge pressure)
Temperature 20±5°C
Drain 1 or more, two 10mm O.D. hoses should be used.

Water recirculation system with fluctuation of ±0.1°C is recommended.

Dry N₂ Gas

Pressure 0.4 to 0.5 MPa (gauge pressure)
Gas Outlet ISO7/1, Rc1/4 (internal thread)

PR Gas

Installation Room

Temperature 20±5°C (fluctuation ±1°C recommended)
Humidity 60% or less (dew must not condense)
Stray Magnetic Field 0.3μT(p-p) or less (50/60Hz)
0.1μT(p-p) or less (DC)

Floor Vibration 3μT(p-p) or less at 6Hz
Floor Space 4000mm × 3500mm or more

With every JEOL instrument comes the promise of a reliable partnership and a source for solutions to your instrument and applications needs. JEOL provides the highest level of technical experience and support.



High technology for quality assurance and the environment.

Specifications

Detectable Elements

WDS: (Be*¹) B to U, EDS: B to U

X-ray Range

WDS: 0.087 to 9.3nm,
EDS energy range: 20keV

X-ray Spectrometers

WDS: 1 to 5; EDS: 1

Maximum Sample Size

100mm × 100mm × 50mm(H)

Accelerating Voltage

0.2 to 30kV (0.1kV steps)

Probe Current Range

10⁻¹² to 10⁻⁵A

Beam Current Stability

±0.05 %/h, ±0.3 %/12h (W)

Secondary Electron Resolution

6nm (W), 5nm (LaB₆*²) (WD 11mm, 30kV)

Scanning Magnification

40 to 300,000 × (WD 11mm)

Scanning Image Resolution

Maximum 5120 × 3840

Color Display

For EPMA analysis: LCD 1280 × 1024

For SEM operation and EDS analysis: LCD 1280 × 1024

*1: With optional analyzing crystal for Be analysis

*2: LaB₆: Optional

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