Multiplelabs
Turnkey Laboratories Solutions

Analytical®
Technologies Limited

SEM-3620 Series

Series Scanning Electron Microscope

EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

Product Description:

- Affordable
- English interface, with one key imaging function
- Automatic adjustment function: electron gun heating, bias, alignment, focus, brightness, contrast, dissipate degree, astigmatism and other memories
- Llow maintenance and repair costs

Features:

1.The new control system, one key look image functions, improve the application experience

- Automatic electronic gun heat, automatic bias, self-centering, auto focus, auto brightness, auto contrast
- Automatically eliminate astigmatism, automatic astigmatism memory and so on.
- Automatic calibration, automatic fault detection
- TV mode

2.Molecular pump vacuum system

3.Three Characteristics

- Stable and reliable
- control system finished by collaboration with the United States
- Convenient operation, English interface
- Affordable, low purchase price, low maintenance costs

Working Conditions:

Power supply: 230V (+6%/-10%) / 50Hz (+/-1%)
Operating environment temperature: 17-23 C
Operating environment: Relative humidity < 60% (no condensation)
Noise: < 68dBC
Persistence of instrument operation: continuous operation

Equipment Use:

The electron microscope is mainly used for surface topography analysis of samples.

Model	SEM3620 Series	SEM3620 SeriesZ
Resolution	4.5nm (30KV)	
Magnification	15x ~ 250,000x	
Type electron gun	Hair Fork tungsten cathode	
Acceleration voltage	0 ~ 30KV, 0 to 10kV stepping is 100V, 10kV to 30kV stepping is 1kV	
Lens system	Three electromagnetic lens	
Lens aperture	Three diaphragm can be selected to adjust the vacuum outside	
Sample stage	Manual	X / Y automatic station
Stroke X	0 ~ 50mm（big sample stage 0-80mm)	
Y	0 ~ 50mm	
Z	0 ~ 25mm(big sample stage 0-30mm)	
R	360°	
T	-5° ~ 90°(big sample stage 0°-90°)	
Observable sample	maximum sample φ60mm	
Detector	Secondary electron detector element, backscattered electron detector	
	(optional), X-ray energy dispersive spectroscopy (optional)	
Vacuum system	Molecular pump (diffusible molecular pump)	
Scanning feature	• Scanning method: face, line, point, selection, dual detector scanning. • Image rotation, movement • Lens current automatic digital display, high voltage digital display • Dynamic focus • Character and mark full screen editing • Magnification, automatic correction of working distance, digital realtime display	
Electrical control cabinet	1. PC computer and operating system The Microsoft® Windows® XP/7 operating system is used to manage the entire EM software system. Images can be stored on a large hard drive or other storage medium in the machine at any time, or printed directly. PC computer minimum configuration: CPU 3G frequency; memory DDR3 2G; 19" LCD; 500G high-speed hard disk; Logitech standard keyboard and mouse. 2. Image acquisition module The module collects secondary images and back-reflected images of the SEM. Through software programming, the video can be mediated to achieve 256 gray levels of digital quantization of the user's useful signal amplitude. With automatic brightness, contrast function, auto focus function, automatic astigmatism function, and a new one-click viewing function, the image operation is simpler. 3. Image display module	

	The module can realize the maximum 4096×4096 display mode; the image has 256 gray levels, and the image layer is rich and detailed; the characters can be edited and marked on the image; the magnification can be displayed in real time, the μ scale and the accelerating voltage can be displayed; Display various grayscale curves, and multiple images for various different processing results. 4. Image Processing Module The field programmable logic control device can realize the real-time filtering function of the hardware system, and has the characteristics of small volume, high speed and strong function; and can realize various general image processing functions on the acquired image in the software system.
Electron microscopy operation control software	Based on Microsoft Windows XP/7 operating system, menu, with a shortcut toolbar, users simply move the mouse and press the button to complete the following operations of the electron microscope: 1. High pressure and high pressure regulation 2. Electrical alignment adjustment 3. Astigmatism adjustment 4. Condenser adjustment 5. Objective adjustment 6. Brightness adjustment 7. Contrast adjustment 8. Magnification adjustment 9. Image scaling 10. Regular surface scanning method 11. Selection scanning method 12. Line scanning method 13. Point scanning method 14. Dual detector scanning method 15. Scan speed adjustment 16. Condenser reverse 17. Objective lens reversal 18. Electric rotation adjustment 19. Electric Displacement Adjustment 20. Automatic brightness and contrast adjustment 21. Auto Focus 22. Automatic astigmatism 23. Automatic filament 23. Management of electron microscope parameters 24. Management of frozen images

	25. Histogram display 26. Operation of Electron Microscope Scale (Removable Ruler Measurement) 27. High Resolution Image Printing Module 28. Image files are saved in a common format
Packing size	Main machine box: 1060 mm × 1060 mm × 1900 mm Electrical cabinet box: 1620 mm × 1460 mm × 1750 mm

SEM-3620 Series tungsten filament scanning electron microscope standard host system Electron optical system

1.1 Electron gun: forked tungsten cathode
1.2 Detector: secondary electron detector
1.3 Sample room and sample stage
2. Vacuum system
Turbo molecular pump, mechanical pump secondary pump system
3. Electrical control system
3.1 Electron microscopy operation control software system
3.1 PC computer and operating system (XP)
4. Spare parts (see note)
4.1 Consumables
4.2 Special tools
5. Accessories

Consumables:

1 Tungsten filament ,10pcs/box, one box
2 sample cup φ13, 10pcs
3 sample box, 1pc
4 carbon double-sided conductive tape 6mm, 1 set
5 vacuum grease, 1 box
6 hairless cloth, 10 pieces
7 exhaust pipe, 5m

Special Tools:

1 Tungsten filament ,10pcs/box, one box
2 sample cup φ13, 10pcs
3 sample box, 1pc
4 carbon double-sided conductive tape 6mm, 1 set
5 vacuum grease, 1 box
6 hairless cloth, 10 pieces
7 exhaust pipe, 5m

Regulatory compliances

Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:

1.Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personallities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at Info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXIFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

Reach us @

Analytical®
Technologies Limited

HPLC Solutions | MultipleLabs | Analytical Bio-Med | Analytical Distributors | Analytical Foundation (Trust)

Corporate & Regd. Office:
Analytical House, # E67 & E68,
Ravi Park, Vasna Road, Baroda,
Gujarat 390 015. INDIA

T: +91 265 2253620
+91 265 2252839
+91 265 2252370
F: +91 265 2254395

E: info@hplctechnologies.com
info@multiplelabs.com
info@analyticalgroup.net
info@analyticalbiomed.com

W. www.analycalgroup.net
www.hplctechnologies.com
www.multiplelabs.com
www.ais-india.com

Sales & Support Offices:
across the country :
Distributors & Channel
partners World Wide