



九州羽翔 (北京) 贸易有限公司

OPTO-EDU (BEIJING) CO., LTD.

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TECHNICAL DATA SHEET

Microscope (Desktop Scanning Electron Microscope)



Brand: Opto-Edu

Model: A63.7003

Specifications:

Desktop Scanning Electron Microscope with Low-vacuum and EDS

High-resolution, compact desktop-type scanning electron microscope designed for ease of operation.

Magnification range: 1-360,000x

Adjustable accelerating voltage: 3 kV to 30 k continuous

Image capture formats: JPEG, TIFF, and BMP

Image resolution: 512x512, 1024x1024, 2048x2048, 4096x4096

Specified resolution: 4nm@20KV in high-vacuum mode, 10nm in low-vacuum mode

The equipment shall provide both high-vacuum and low-vacuum operating modes, with chamber pressure control, allowing the observation of non-conductive samples without the need for conductive metal coating, equipped with a transition gas chamber, it can achieve a rapid switch from high vacuum (better than 0.01 Pa) to low vacuum (better than 60 Pa), and the control range of vacuum degree is the highest on the market

The equipment shall accommodate samples of up to 50 mm in diameter and 20 mm in height, compatible with standard metal specimen stubs or adapters for glass microscope slides, in order to facilitate the analysis of calcareous and siliceous microfossils, such as diatoms and coccolithophores. Specimen Max 100*78*68.5mm



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The equipment shall allow the observation of structural details within the 50–500 nm range, with an effective resolution of ≤ 5 nm in high-vacuum mode, and a useful magnification sufficient to clearly resolve and distinguish these features. It is clearly visible that gold particles with a size of 50 nm or smaller can be observed, and the resolution is better than 5 nm.

The system shall provide X- and Y-axis motorized control to facilitate precise specimen positioning and automated sample movement. Stage: 2 Axis XY motorized stage, moving 60x55 mm

Specimen observation monitor: 24-inch display

The samples to be examined include foraminifera, whose ornamentation and pores may have dimensions in the range of 1–10 μ m or smaller

The system shall include chamber pressure control

The equipment shall accommodate samples of up to 50 mm in diameter and 20 mm in height, compatible with standard metal specimen stubs or adapters for glass microscope slides, in order to facilitate the analysis of calcareous and siliceous microfossils, such as diatoms and coccolithophores.

The equipment shall allow the observation of structural details within the 50–500 nm range, with an effective resolution of ≤ 5 nm in high-vacuum mode.

Electron source: Factory-precentered tungsten filament electron source.

Microscope size 650x370x642 mm, mechanical pump size 340x160x140 mm

Power supply: AC 110–220 V, 50/60 Hz

Maximum accelerating voltage: 30 kV.

The equipment shall include

Secondary Electron Detector (SE)

Backscattered Electron Detector (BSE)

Energy-Dispersive X-ray Spectroscopy (EDS/EDX) detector

Detector type: SDD (Silicon Drift Detector), thermoelectrically cooled (no liquid N₂ required).

Active detector area ("window size"): 30 mm²

X-ray window: Ultra-thin silicon nitride (Si₃N₄) window, enabling detection of elements from boron (B) to californium (Cf).

Energy resolution: Mn K α $\leq$ 129 eV

Signal processing: 4096-channel multichannel analyzer (MCA) at 2.5 eV/channel

Maximum count rate: 600 kcps

Software included

Control interfaces specific to and necessary for the operation of the equipment.