NEWS RELEASE

Hitachi High-Tech HITACHI

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New Tabletop Scanning Electron Microscope Launched – The Hitachi TM3030
—Provides higher-resolution images through optimization of the electron optics system—

Hitachi High-Technologies Corporation (TOKYO: 8036, Hitachi High-Tech) launched the tabletop microscope TM3030 on May 7, 2013. The new microscope enables observation of even higher resolution images.

Hitachi High-Tech manufactures and sells electron microscopes used in research and development, quality management and other operations across every industrial field, including nanotechnology and biotechnology. The Company launched the first tabletop microscope model in April 2005. These electron microscopes were developed with the intention of making cutting-edge microscopes more user-friendly and easily accessible. Hitachi tabletop microscopes enable observations to be made under a higher magnification than with optical microscopes. Hitachi tabletop microscope features a short start-up time of around 3 minutes, compared with about 20 minutes for a conventional electron microscope. The TM3030 features low-vacuum microscopy functionality which allows for sample observations to be performed quickly without any prior processing. The compact size of the equipment means that the Hitachi tabletop microscope can be conveniently installed and operated on tables in offices and other locations.

The tabletop microscope is currently in use worldwide, mainly in private-sector companies, government offices, science museums, as well as educational institutions such as universities, colleges, elementary and junior schools. To date, Hitachi High-Tech has shipped a combined 2,300 units of the first model, the TM-1000, and the second-generation model, the TM3000.

With the newly developed tabletop microscope TM3030, Hitachi High-Tech has improved the resolution of observed images in order to meet the needs of customers seeking to perform high-resolution observations without sample preparation. By optimizing the electron optics system, Hitachi High-Tech has provided a “5kV mode” that enables sharper observations of the finest structures of sample surfaces, which cannot be observed at high accelerating voltages. Observations under high magnification also provide sharper, higher resolution observation images.

Hitachi High-Tech is projecting annual sales volume of 400 units worldwide.Hitachi High-Tech plans to exhibit the new microscope at the 69th Annual Meeting of the Japanese Society of Microscopy to be held in Suita City, Osaka from May 20 to May 22, 2013. By driving further expansion in sales of the tabletop microscope in the world's markets, Hitachi High-Tech is targeting a cumulative shipment volume of more than 3,000 units as early as possible.

Tabletop Microscope SEM TM3030 model

<Main Features>

1. Sharp observation images through optimization of electron optics system
2. Low-vacuum type microscope that enables observation of non-conductive samples without prior processing.
3. Easy operation through auto-functions such as auto-start, auto-focus and auto-brightness/contrast.
4. Choose from among a wide range of observation conditions with one mouse click.

<Main Specifications>

Item	Details
Magnification	x15-x30,000 (digital zoom: x2, x4)
Observation condition settings	Surface / Normal / High Brightness
Observation mode	Standard mode, Charge-up reduction mode
Sample stage traverse	X: ±17.5mm, Y: ±17.5mm
Maximum sample size	70 mm in diameter, 50 mm in thickness
Signal detection system	High-sensitivity four-segment semiconductor BSE detector
Auto image adjustment function	Auto start, auto focus, auto brightness / contrast
Evacuation system (vacuum pump)	Turbomolecular pump x 1 unit, Diaphragm pump x 1 unit
Operation help functions	Image shift
Elemental analysis function (option)	High energy X-ray analyzer
Dimensions and weight Main unit (manual stage)	330 (width) x 606 (depth) x 565 (height) mm, 63kg

The 69th Annual Meeting of the Japanese Society of Microscopy

http://www.microscopy.or.jp/conf2013/english/index.html

Reference Information:

Support for Science Education – Hitachi High-Tech's Proposals to Help Keep Students Interested in Science

http://www.hitachi-hitec.com/global/here-and-now/02/index.html

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