Hitachi High-Tech

News Release

New Tabletop Microscope: TM3030Plus

−Offers real-time Secondary Electron Imaging without Sample Preparation—

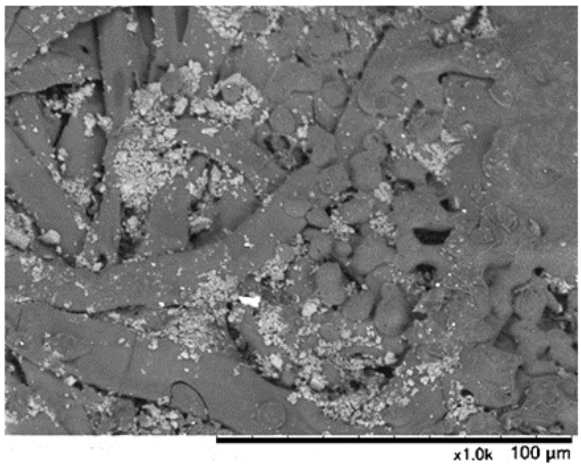
Tokyo Japan, August 4, 2014 – Hitachi High-Technologies Corporation (TOKYO: 8036, Hitachi High-Tech) launches the Tabletop Microscope TM3030Plus (TM3030Plus), a new addition to our tabletop electron microscope family, equipped with a highly sensitive detector enabling the observation of secondary electron images under low-vacuum conditions.

Hitachi High-Tech manufactures and sells electron microscopes used in research and development, quality control, and other applications across a wide range of industries including nanotechnology and biotechnology. The company launched tabletop microscope in April 2005, the world's first tabletop electron microscope, making cutting-edge electron microscopes more user-friendly and accessible. The compact size and robustness of the Tabletop Microscope eliminated the need for a sophisticated laboratory environment and expanded the overall usability of the electron microscope. This new tabletop design with increased utility forever changed the landscape in the field of electron microscopy. The Tabletop Microscope is currently used worldwide, primarily in private-sector companies, government facilities, science museums, and educational institutions from elementary and junior schools to universities. As of September 2014, Hitachi High-Tech is projecting to have shipped over 2,700 Tabletop Microscope.

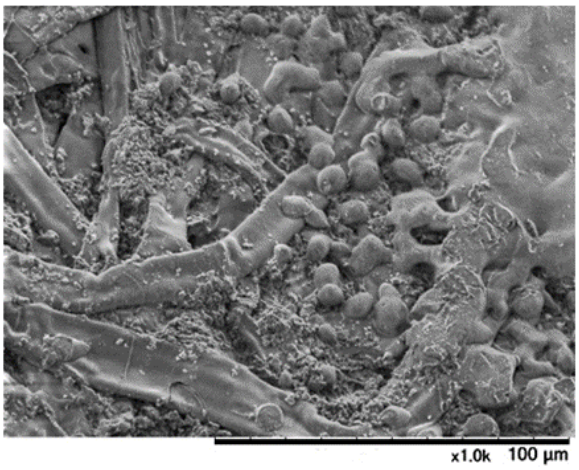
To date the primary value proposition of the tabletop electron microscope has been offering convenient, accessible imaging at higher magnification than optical microscopes. Recently, as tabletop microscopes have become an integral part of high-throughput screening methods, the performance demands have increased. The new TM3030Plus is equipped with a proprietary, highly sensitive low-vacuum secondary electron detector capable of revealing fine sample surface detail information. In low-vacuum mode, the latest Tabletop Microscope now offers both secondary electron images and reflective electron images without any prior sample processing. The result is increased throughput and sample information to meet the growing demands of today's complex microscopy applications.

Hitachi High-Tech will exhibit the TM3030Plus at Microscopy & Microanalysis 2014 in Hartford, Connecticut USA (August 3-7) and at JASIS 2014 at the Makuhari Messe International Convention Complex in Chiba, Japan (September 3-5).

Tabletop microscope TM3030Plus



Backscattered Electron Image



Secondary Electron Image

TM3030Plus Key Features

- Secondary electron imaging and backscattered electron imaging under low-vacuum conditions.
- Composite imaging combining secondary electron and backscattered electron information.
- Powerful auto-functions for user-friendly, simple operation.
- Low-vacuum observation without advance sample preparation.
- Hitachi optimized electron optics for unmatched imaging performance.
- Point-and-Click image optimization (accelerating voltage and vacuum intensity).
- Comprehensive optional accessory items

Specifications

Item	Details
Magnification	15 times ~ 120,000 times*
Accelerating voltage	5 kV, 15 kV
Observation condition settings	Surface / Normal / High Brightness
Signal selection	Reflective electron / Secondary electron / Composite
Sample stage traverse	X:35mm, Y:35mm
Maximum sample size	70 mm in diameter and 50 mm in thickness
Electron gun	Pre-centered cartridge filament
Auto image adjustment function	Auto start, auto focus, auto brightness / contrast
Evacuation system (vacuum pump)	Turbo molecular pump x 1 unit, Diaphragm pump x 1 unit
Auxiliary operating functions	Raster rotation, magnification pre-sets, image shift
Option items	Energy dispersive X-ray analyzer (two models), 3-dimensional image display and measurement function 3D-VIEW, Motor drive stage, Tilt & rotation stage, and Cool stage
Dimensions and weight Main unit (manual stage)	330 (width) x 606 (depth) x 565 (height) mm, 65.0 kg

* When using digital zoom (4x)

Website

http://www.hitachi-hitec.com/global/em/tab/tm3030plus.html

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