

News Release

FOR IMMEDIATE RELEASE

Hitachi High-Tech Announces a New Tabletop Atmospheric Scanning Electron Microscope, AeroSurf 1500, for observation of wet specimens at atmospheric pressure

TOKYO, Japan, March 7, 2016 – Hitachi High-Technologies Corporation (TSE: 8036, Hitachi High-Tech) has announced the release of the new tabletop atmospheric scanning electron microscope (ASEM), AeroSurf 1500, in the U.S.A. The AeroSurf 1500 accommodates the observation of high-moisture specimens, such as soft materials and biological specimens, in their natural state.

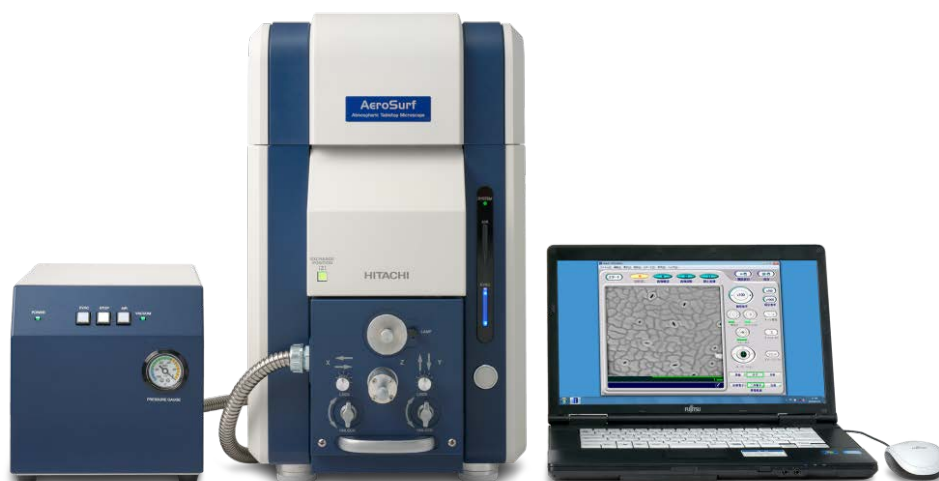
With a conventional SEM, specimens with high-moisture content need to be dehydrated and dried so that they will not deform while under vacuum. Such complicated preprocessing often causes alterations to specimens. A popular approach to observe high-moisture specimens is a cryogenic method; however, cryogenic systems can be costly and not readily accessible.

Hitachi High-Tech, a leading provider of electron microscopes, responded to the diversity of our customers' requirements and developed the AeroSurf 1500.

The AeroSurf 1500 enables SEM observation of high-moisture specimens at an atmospheric pressure, not under vacuum. The specimen chamber and the SEM column are separated by a membrane which isolates the high-vacuum column from the atmospheric specimen chamber while allowing electron beam irradiation of the specimen. This greatly reduces the need for time-consuming preprocessing of high-moisture specimens. The use of this membrane is optional, allowing both atmospheric and traditional SEM analysis with one instrument.

The AeroSurf 1500 is ideal for observing high-moisture specimens during the drying process.

Hitachi High-Tech introduces the AeroSurf 1500 at the Pittsburgh Conference & Exposition 2016 (Pittcon 2016), held at the Georgia World Congress Center in Atlanta, U.S.A, from Sunday, March 6 through Thursday, March 10, 2016.



Tabletop Atmospheric Scanning Electron Microscope AeroSurf 1500

Main Applications

- SEM observation of high-moisture specimens at an atmospheric pressure without preprocessing
- SEM observation under a wide range of pressures from low vacuum (several Pa) to atmosphere (10^5 Pa)
- ES-Corrector equipped for wide scatter signal discrimination and enhanced image quality
- A compact design (330 mm wide) minimizes system footprint
- EDS analysis optionally available (vacuum mode)

Main Specifications

Electron Gun	Pre-centered cartridge filament
Detector	High-sensitivity semiconductor BSE Detector
Accelerated Voltage	5 kV / 15 kV
Magnifications	15x to 60,000x (Up to 240,000x with digital zoom)
Observation Pressure	<ul style="list-style-type: none"> • Atmospheric mode (10^5 Pa) with the membrane • Negative pressure mode (approx. 10^3 Pa to 10^5 Pa) with the membrane • Vacuum mode (approx. values between few Pa to several tens Pa) without the membrane
Max Sample Size	55 mm in diameter

Web site

http://www.hitachi-hightech.com/us/product_detail/?pn=em-aerosurf1500

About Hitachi High-Technologies Corporation

Hitachi High-Technologies Corporation, headquartered in Tokyo, Japan, is engaged in activities in a broad range of fields, including Electronic Device Systems, Fine Technology Systems, Science & Medical Systems, Industrial & IT Systems, and Advanced Industrial Products. The company's consolidated revenues for FY 2014 were ¥620billion [approx. USD5.4 billion]. For further information, visit <http://www.hitachi-hightech.com/global/>.

About Hitachi High Technologies America, Inc.

Hitachi High Technologies America, Inc. ("HTA"), headquartered in Schaumburg, Illinois, is a privately-owned global affiliate company that operates within the Hitachi Group Companies. HTA sells and services semiconductor manufacturing equipment, analytical instrumentation, scientific instruments, and bio-related products as well as industrial equipment, electronic devices, and electronic and industrial materials.

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