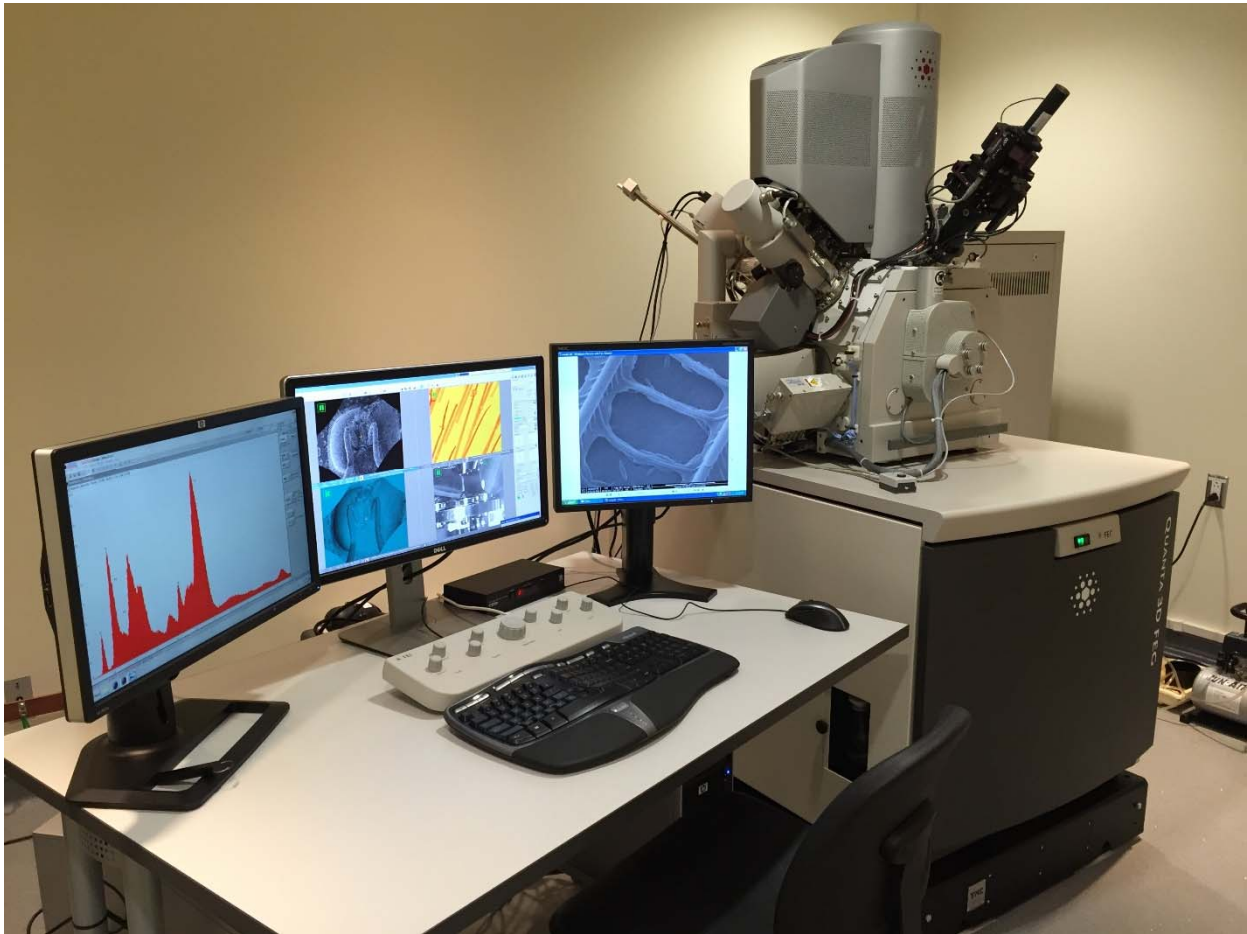
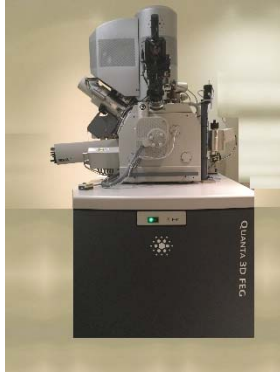


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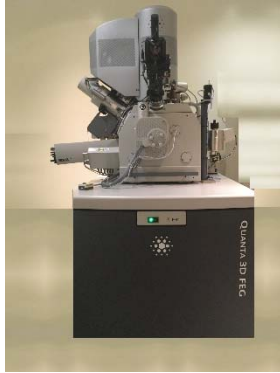




Thermofisher Quanta 3D Radiation and Magnetic Field Safety Manual

The scope of this manual covers Thermo Fisher Scientific Quanta3D SN D9560 instrument and it is intended for trained users.

Radiation Type	Danger Zone	Isolation Point (Locking / Blocking / Linkage removal as applicable)	Verification: no residual energy exists (Method / point)
Ionizing	Electron Column/Chamber	Mains power cord and plug	Verify the system power is removed
Non- ionizing	Electron Column/Chamber	Mains power cord and plug	Verify the system power is removed



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X-Ray safety



- The electron microscope is a potential source of ionizing (X-ray) radiation that can be dangerous.
- Thermofisher Quanta 3D microscope is designed to comply with the international standards
- Every microscope has been thoroughly tested in the factory. Nevertheless whenever some part of the microscope gun, column or chamber is disassembled or exchanged, the service engineer must perform X-ray leakage checks.
- The X-ray limit conforms to the international standards. The limit is $1 \mu\text{Sv} / \text{h}$ at 10 cm distance from the surface.
- In general the user is NOT allowed to remove any covers to maintain a safe operation conditions of the microscope. Some covers may act as X-ray shields.



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- X-ray shields (if present) are marked by the yellow warning sign. If any of the X-ray shields is missing, the microscope **MUST NOT** be operated.
- Unauthorized installation of any accessories (detectors, flanges, etc.) or alternation of the vacuum system may lead to a violation of microscope safety and is strongly forbidden.
- Only authorized personnel are allowed to perform radiation checks.
- Under no circumstances is it allowed to switch on the HV when using vacuum test flanges.



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Static magnetic field



The cold cathode gauge (Penning) and Ion getter pumps (IGP) generate a strong magnetic field even if the equipment is not powered.

Do not approach to the vicinity with objects sensitive to the magnetic field (prosthesis, heart stimulator).