Thermofisher Quanta 3D Radiation and Magnetic Field Safety Manual
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The scope of this manual covers Thermo Fisher Scientific Quanta3D SN D9560 instrument and it is intended for trained users.

<table>
<thead>
<tr>
<th>Radiation Type</th>
<th>Danger Zone</th>
<th>Isolation Point (Locking / Blocking / Linkage removal as applicable)</th>
<th>Verification: no residual energy exists (Method / point)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ionizing</td>
<td>Electron Column/Chamber</td>
<td>Mains power cord and plug</td>
<td>Verify the system power is removed</td>
</tr>
<tr>
<td>Non- ionizing</td>
<td>Electron Column/Chamber</td>
<td>Mains power cord and plug</td>
<td>Verify the system power is removed</td>
</tr>
</tbody>
</table>
• 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 $\mu$Sv / 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.
• 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.
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).