



Electron Microscope General Safety Checklist

Machine Identification:

Manufacturer: _____ Model: _____

Principal Investigator: _____ Telephone: _____

General Safety Regulations:

1. Only personnel trained and approved by the responsible Principal Investigator may operate an electron microscope.
2. An operational fail-safe light is visible to the operator indicating when x-rays are being produced.
3. Use interlocks, barriers or administrative controls to ensure no one can gain access to the primary beam or high scatter radiation areas.
4. Use a calibrated thin-window GM survey meter to verify shielding effectiveness and monitor radiation levels.
5. Secure electron microscopes against unauthorized use by using a unit key control or the room lock. Stop the primary beam by secured shielding that cannot be readily displaced.
6. Secure unused ports to prevent accidental exposures.
7. Maintain an operating log that includes the date, operator, beam voltage, and current time on and off (or total exposure time).
8. Do not modify the built-in shielding and viewing ports. If modifications must be made, contact the Radiation Safety Services (RSS) for a safety survey of the unit.
9. Notify the RSS immediately in the event of any abnormal personnel radiation exposure.
10. Changes in the location or disposition of electron microscopes must have the approval of RSS. Notify the RSS prior to the acquisition, disposal, or transfer of any electron microscope.
11. Contact the RSS for information regarding radiation safety or radiation survey instrumentation. A copy of the Massachusetts Radiation Control Regulations is available at the Radiation Safety Office.

Email radiation_safety@harvard.edu to send comments and suggestions to Radiation Safety Services.

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Laboratory Safety