

A. Purpose:

To describe the procedure for verifying the levels of magnification on a comparison microscope. Comparison microscope magnification verification is performed on a biannual (twice a year) basis. If the microscope is moved or damaged, or parts affecting magnification are replaced, an additional verification check shall be performed promptly. An annual maintenance for each microscope will be scheduled with a lab-approved vendor.

B. Responsibility:

Forensic Science Examiners and other laboratory personnel assigned to the Firearms Unit.

C. Procedure

1. A stage micrometer is placed on each stage of the microscope. Utilize the toolmark holders if available.
2. Adjust the microscope so each stage is at the microscope's maximum magnification and the field of view is in focus.
3. Check that the micrometer scale divisions on both sides match.
4. View the micrometer images at all utilized levels of magnification (moving from maximum to minimum magnifications) and move the line of demarcation throughout the field of view - from side to side - while comparing alignment of the micrometer divisions.
5. If the corresponding micrometer divisions do not match, notify the Unit lead/supervisor.
 - i. An "out of order" sign will be placed on the microscope
 - ii. A microscope service contractor will be notified by the Quality Unit.
6. Record results on the microscope maintenance/repair log sheets.
 - i. The log sheets are maintained in the maintenance/calibration binder located in the Firearms Unit Microscope Room.

D. Equipment

1. NIST certified glass stage micrometers

FA SOP-39 Microscope Quality Control Check

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