

## TRAINING UPDATE

<b>Lab Location:</b>	GEC, SGAH & WAH	<b>Date Distributed:</b>	11/3/2014
<b>Department:</b>	Core & QA	<b>Due Date:</b>	11/30/2014
		<b>Implementation:</b>	<b>12/1/2014</b>

### DESCRIPTION OF PROCEDURE REVISION

<b>Name of procedure:</b>
<b>Microscope Maintenance GEC / SGAH / WAH.QA04 v1</b>
<b>Description of change(s):</b>
<p>Section 3: replace QA supervisor with senior specialist Section 5: remove microbiology verification process Section 6: add current form Section 9: remove outdated logs</p> <p><b>NOTE:</b> The log is NOT changing, attached only as information</p> <p><b>This SOP will be implemented on December 1, 2014</b></p>

Document your compliance with this training update by taking the quiz in the MTS system.

Non-Technical SOP

Approved draft for training (version 1)

<b>Title</b>	<b>Microscope Maintenance</b>	
<b>Prepared by</b>	Leslie Barrett	Date: 3/12/2009
<b>Owner</b>	Cynthia Bowman-Gholston	Date: 3/12/2009

<b>Laboratory Approval</b>		
<b>Print Name and Title</b>	<b>Signature</b>	<b>Date</b>
<i>Refer to the electronic signature page for approval and approval dates.</i>		
Local Issue Date:		Local Effective Date:

<b>Review:</b>		
<b>Print Name</b>	<b>Signature</b>	<b>Date</b>

## **TABLE OF CONTENTS**

1. PURPOSE.....	2
2. SCOPE .....	2
3. RESPONSIBILITY.....	2
4. DEFINITIONS.....	2
5. PROCEDURE.....	2
6. RELATED DOCUMENTS .....	3
7. REFERENCES .....	3
8. REVISION HISTORY.....	4
9. ADDENDA AND APPENDICES.....	4

---

### **1. PURPOSE**

This document sets forth the procedure for daily use and preventive maintenance of microscopes in the laboratory.

### **2. SCOPE**

This procedure applies to all lab sections using microscopes for diagnostic procedures.

### **3. RESPONSIBILITY**

Laboratory technical staff is responsible for performing this procedure.

Managers and supervisors are responsible for ensuring compliance with this procedure in their section and the review of records

The senior QA specialist is responsible for content and review of this procedure.

### **4. DEFINITIONS**

- **Condenser:** A system of lenses located between the light source and the stage that provides even illumination
- **Microscope:** An optical instrument (composed of a light source, a condenser, a set of objective lenses and two ocular lenses) that provides a magnified image of small objects
- **Objectives:** Lenses of differing magnification mounted on a rotating wheel located directly above the stage that focus the image of the object to be examined
- **Oculars:** The two lenses located at the top of the microscope through which the user views the image formed by the objectives
- **Stage:** The flat part of the microscope on which the slide or item to be examined rests

### **5. PROCEDURE**

#### **A. Microscope Labeling**

1. Each microscope carries an identification number.
2. Enter the identification number on the Microscope Maintenance Log.

## B. Daily Maintenance

1. Verify proper operation
  - a. Confirm that all of the objectives (e.g., 10X, 40X, 100X) specified in the procedures for which the microscope is being used are attached and working.
  - b. Check the surface of the oculars, the objectives and the condenser for any scratches, streaks, chips or other irregularities on the surface and or coating.
  - c. Adjust the condenser to ensure that the light source is centered.
  - d. Check fine and course adjustment by turning through the entire ranges.
  - e. Check the mechanical stage through its entire front, back, left and right operations.
  - f. Check the slide fingers on the stage plate by moving it through the entire range without an undue amount of adjustment to the fine focus.
2. Clean the microscope each day of use
  - a. Clean the objectives and oculars with a commercial lens cleaner and lens paper.
  - b. Clean the stage with a commercial lens cleaner and lens paper to avoid accidentally scratching a lens.
3. Document performance by initialing the Microscope Maintenance Log.
4. The lead technologist or designee performs weekly reviews of the daily maintenance and documents with initials and date.
5. Each month, the section supervisor reviews the daily maintenance and documents with initials and date.

## C. Each Use

1. Only the 100X objective lens should be in contact with immersion oil. If other objectives accidentally come in contact with immersion oil, the lens must be thoroughly cleaned IMMEDIATELY using commercial lens cleaner and lens paper.
2. Immersion oil must not be left on the objectives after use. Remove immersion oil using lens paper from the 100X objective IMMEDIATELY AFTER EACH USE. Lens cleaning solution may be necessary to get the lens thoroughly clean in some cases.
3. The condenser lens must not come into contact with immersion oil. If the condenser lens accidentally comes in contact with immersion oil, the lens must be thoroughly cleaned IMMEDIATELY using commercial lens cleaner and lens paper.

## D. Preventive Maintenance (PM)

1. Professional microscope service personnel perform **semi**-annual PM procedures as contracted. ~~through Clinical Engineering.~~
2. The supervisor or manager reviews and initials the completed PM forms.

## 6. RELATED DOCUMENTS

**Microscope Maintenance Log (AG.F21)**

## 7. REFERENCES

Procedure for Microscope Maintenance, Quality Assurance Best Practice Team, Quest Diagnostics, 09/11/03.

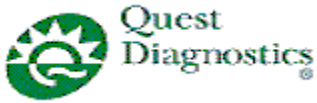
**8. REVISION HISTORY**

Version	Date	Reason for Revision	Revised By	Approved By
		Supersedes SOP L019.002		
000	10/10/14	Cover page: update to current format Section 3: replace QA supervisor with senior specialist Section 5: remove microbiology verification process Section 6: add current form Section 9: remove outdated logs Footer: version # leading zero's dropped due to new EDCS in use as of 10/7/13	L Barrett	C Bowman

**9. ADDENDA AND APPENDICES**

~~A. Microscope Maintenance Log (see Attachment Tab of Infocard)~~

~~B. Microbiology Microscope Performance Verification (see Attachment Tab of Infocard)~~



- Germantown Emergency Center
- Shady Grove Adventist Hospital
- Washington Adventist Hospital

**Microscope Maintenance**  
**Microscope Identification** \_\_\_\_\_

**Month / Year** \_\_\_\_\_

Document daily cleaning and verification of operation. Document any corrective action.

<b>Date</b>	<b>Microscope cleaned - √ if cleaned</b>	<b>Verification of operation - OK</b>	<b>Tech Code</b>	<b>Corrective Action</b> (record on reverse of this sheet if necessary)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

Weekly review:	Weekly review:	Weekly review:
Weekly review:	Weekly review:	Monthly review:

Document:AG.F21[2] Status:RELEASED,Effective:2/1/2013, Check Version Before Use