Fite’s Acid-Fast (AFB) Stain

<table>
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<tr>
<th>Final Approval: May 2010</th>
<th>Effective: May 2010</th>
<th>Next Review Date: April 2015</th>
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</thead>
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List all stakeholder(s) and dates of approval:

- **Stakeholder Name(s):** Shelly Siegel HT Date: 4/29/13 Reviewed ❑ Revised ❑
- **Stakeholder Name(s):** Shelly M. Siegel HT Date: 4/1/14 Reviewed ❑ Revised ❑
- **Stakeholder Name(s):** Shelly M. Siegel HT Date: 11/15/10 Reviewed ❑ Revised ❑
- **Stakeholder Name(s):** Shelly Siegel Date: 5/3/11 Reviewed ❑ Revised ❑
- **Stakeholder Name(s):** Shelly Siegel HT Date: 5/7/12 Reviewed ❑ Revised ❑

Describe briefly the most recent revision made to this policy, procedure or protocol & why:

11/15/10- Revised hydrochloric acid instead of glacial.

Purpose/Policy Statement:

For diagnostic purposes, to demonstrate the presence of Lepra bacilli and some strains of Nocardia.

Definitions:

- n/a

**STEPS / KEY POINTS**

**PROCEDURE:**

1. Deparaffinize in two changes of room temperature **Xylene-Peanut Oil** (found in refrigerator) for 12-30 min. each.
2. Drain, wipe off excess solution, and gently blot to opacity.
3. Stain in filtered **Ziehl-Neelsen Carbol Fuchsin** for 10 min.
4. Thorough tap H2O wash.
5. Differentiate sections in **0.5% Acid Alcohol** for 10 min or until pale pink in color.
6. Thorough H2O wash.
7. Counterstain with **Working Methylene Blue** for 10 sec.
8. Thorough tap H2O rinse.
10. Dip briefly in xylene and mount with synthetic medium.

**CALCULATIONS:** N/A

**CALIBRATION:** N/A

**QUALITY CONTROL:** Each time the procedure is performed, a known acid-fast positive tissue slide labeled with the current date and “FITE AFB CONTROL” shall be stained simultaneously with the patient slide(s).

**PROFICIENCY TESTING:** College of American Pathologists HistoQIP.
RESULTS:
Acid-fast bacilli - red.
Nocardia filaments - red.
Lepra bacilli - red.
Background - light blue

PROCEDURE NOTES: Xylene-Peanut Oil needs to be refrigerated after each use.

LIMITATIONS OF PROCEDURE: N/A

Equipment/Supplies (If Applicable):

MATERIALS, REAGENTS:

### Xylene-Peanut Oil (2:1)
- Pure non-recycled Xylene: 30 ml
- Peanut Oil: 15 ml
- 6 month expiration, refrigerate

**CAUTION:** FLAMMABLE, IRRITANT, HEALTH HAZARD.
Wear appropriate protective equipment.

### Ziehl-Neelsen Carbol Fuchsin
- Richard-Allan Scientific #88001
- Filter before each use.

### WORKING Methylene Blue
- Tap H2O: 45 ml
- STOCK Methylene Blue: 5 ml
- 3 month expiration

**CAUTION:** CORROSIVE, IRRITANT.
Wear appropriate protective equipment.

### 0.5% Acid Alcohol
- 70% Alcohol: 400 ml
- Hydrochloric Acid: 2 ml
- 1 year expiration

### STOCK Methylene Blue
- 95% EtOH: 100 ml
- Methylene Blue: 1.4 gm
- 1 year expiration

**CAUTION:** FLAMMABLE, IRRITANT.
Wear appropriate protective equipment.

Fite’s AFB Control Slides
Newcomer Supply Cat # 4215B

CALIBRATION: N/A

Form Name & Number or Attachment Name (If Applicable):
histo11

Author Position:
Lead Histologist

Review/Revision Authority (Position Not Individual Name):
Lead Histologist

Expert Consultant Position/s (Not Individual Name/s):
N/A

References (Required for Clinical Documents):
SUPPLEMENTAL MATERIALS: N/A

Is there a Regulatory Requirement? Yes ☐ No ☑
If yes, insert requirement information here:

Review History (No Changes):
Shelly M. Siegel HT Date: 8/26/2010 Reviewed ☑ Revised ☑
Mark Magilner, MD Date: 8/27/10 Reviewed ☑ Revised ☐

Revision History (Note changes in area under header):
N/A

Computer Search Words:
N/A

Policy, Procedure or Protocol Cross Reference Information:
N/A