Acid Fast Bacteria (AFB), Animal Control Slides – Technical Memo

CONTROL SLIDES: Part 4011A 10 Slide/Set Part 4011B 98 Slide/Set

PRODUCT SPECIFICATIONS:
- **Tissue:** Positive staining animal organ and negative staining human lung.
- **Fixation:** Formalin 10%, Phosphate Buffered (Part 1090).
- **Section/Glass:** Paraffin sections cut at 4 microns on Superfrost™ Plus slides.
- **Quality Control Stain:** AFB, Ziehl-Neelsen quality control stained slide(s) included.
- **Reactivity:** Guaranteed product specific reactivity for one year from date of receipt. Revalidate after one year to verify continued reactivity.
- **Storage:** 15-30°C in a light deprived and humidity controlled environment.

Before using unstained control slides, review the enclosed stained slide(s) to ensure that this tissue source is acceptable for testing needs.

PRODUCT DESCRIPTION:
The enclosed positive control slides are intended to verify histological techniques and reagent reactivity. The intended use is for the qualitative purpose of determining positive or negative results, and not intended for any quantitative purpose. The positive control sections are produced from animal tissues and the negative control sections from human surgical or autopsy tissues under carefully controlled conditions. Quality control measures are used to deliver control slides that are as consistent as possible.

CONTROL SLIDE VALIDATION:

<table>
<thead>
<tr>
<th>Part 9101A</th>
<th>Individual Stain Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solution A: Carbol Fuchsin Stain, Ziehl-Neelsen</td>
<td>Part 1030</td>
</tr>
<tr>
<td>Solution B: Acid Alcohol 1%</td>
<td>Part 10011</td>
</tr>
<tr>
<td>Solution C: Light Green SF Yellowish Stain 0.1%, Aqueous</td>
<td>Part 12203</td>
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</tbody>
</table>

APPLICATION:

Newcomer Supply Acid Fast Bacteria (AFB), Animal Control Slides are for the positive histochemical staining of acid-fast mycobacteria in tissue sections.

PRESTAINING PREPARATION:
1. Heat dry sections in oven according to your laboratory protocol.
2. Filter Solution A: Carbol Fuchsin Stain, Ziehl-Neelsen with filter paper whenever a thick sheen develops on solution surface.

NEWCOMER SUPPLY VALIDATION PROCEDURE:
3. Deparaffinize sections thoroughly in three changes of xylene, 3 minutes each. Hydrate through two changes each of 100% and 95% ethyl alcohols, 10 dips each. Wash well with distilled water.
   a. See Procedure Notes #1 and #2.
   a. See Procedure Note #3.
5. Rinse in running tap water for 2 to 3 minutes.
6. Differentiate in Solution B: Acid Alcohol 1% until color no longer runs off the slide and sections are pale pink; 3 to 10 rapid dips.
7. Wash in running tap water 3 to 5 minutes; rinse in distilled water.
8. Counterstain in Solution C: Light Green SF Yellowish Stain 0.1%, Aqueous; 2-5 dips.
9. Rinse with one quick dip in distilled water or proceed directly to Step #10 without a distilled water rinse.
10. Dehydrate in two changes each of 95% and 100% ethyl alcohol. Clear in three changes of xylene, 10 dips each; coverslip with compatible mounting medium.

RESULTS:
- **Acid-fast bacilli:** Bright red
- **Background:** Green
- **Lung:** Negative for AFB

PROCEDURE NOTES:
1. Drain slides after each step to prevent solution carry over.
2. Do not allow sections to dry out at any point during procedure.
3. Sections can remain in Carbol Fuchsin Stain, Ziehl-Neelsen for up to 60 minutes without adverse effect. Additional differentiation may be required in Step #6.
4. If using a xylene substitute, closely follow the manufacturer’s recommendations for deparaffinization and clearing steps.

REFERENCES:
3. Modifications developed by Newcomer Supply Laboratory.