

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

<b>CONTROL SLIDES:</b>	<b>Part 4011A</b>	<b>Part 4011B</b>
	10 Slide/Set	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.

**Intended Use:** To verify histological techniques and reagent reactivity.

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

### CONTROL SLIDE VALIDATION:

<b>With AFB, Ziehl-Neelsen Stain Kit:</b>	<b>Part 9101A</b>	<b>Individual Stain Solution</b>
Solution A: Carbol Fuchsin Stain, Ziehl-Neelsen	250 ml	Part 1030
Solution B: Acid Alcohol 1%	250 ml	Part 10011
Solution C: Light Green SF Yellowish Stain 0.1%, Aqueous	250 ml	Part 12203

### 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:

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

### NEWCOMER SUPPLY VALIDATION PROCEDURE:

- 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.
  - See Procedure Notes #1 and #2.
- Stain in Solution A: Carbol Fuchsin Stain, Ziehl-Neelsen for 15 minutes at room temperature. Keep solution covered.
  - See Procedure Note #3.
- Rinse in running tap water for 2 to 3 minutes.
- 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.
- Wash in running tap water 3 to 5 minutes; rinse in distilled water.
- Counterstain in Solution C: Light Green SF Yellowish Stain 0.1%, Aqueous; 2-5 dips.
- Rinse with one quick dip in distilled water or proceed directly to Step #10 without a distilled water rinse.
- 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:

- Drain slides after each step to prevent solution carry over.
- Do not allow sections to dry out at any point during procedure.
- 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.
- If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps.

### REFERENCES:

- Carson, Freida L., and Christa Hladik Cappellano. *Histotechnology: A Self-instructional Text*. 4th ed. Chicago: ASCP Press, 2015. 218-220.
- Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 237.
- Modifications developed by Newcomer Supply Laboratory.

