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Part 4212
May 2020

Fite, Leprosy, Animal Control Slides – Technical Memo

CONTROL SLIDES:

Part 4212A	**Part 4212B**
10 Slide/Set	98 Slide/Set

PRODUCT SPECIFICATIONS:
Tissue: Positive staining animal spleen 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, Fite 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:

With AFB, Fite Stain Kit:	**Part 91013A**	**Individual Stain Solution**
Solution A: Xylene/Peanut Oil, 2:1	500 ml	Part 1449
Solution B: Carbol Fuchsin Stain, Ziehl-Neelsen	250 ml	Part 1030
Solution C: Acid Alcohol 1%	250 ml	Part 10011
Solution D: Light Green SF Yellowish 0.1%, Aqueous	250 ml	Part 12203

APPLICATION:

Newcomer Supply Fite, Leprosy, Animal Control Slides are for the positive histochemical staining of *Mycobacterium leprae sp.,* the causative agent of leprosy.

PRESTAINING PREPARATION:

1. Heat dry sections in oven according to your laboratory protocol.
2. Filter Solution B: Carbol Fuchsin Stain, Ziehl-Neelsen with high quality filter paper.

NEWCOMER SUPPLY VALIDATION PROCEDURE:

3. Deparaffinize slides in Solution A: Xylene/Peanut Oil, 2:1, two changes for 10 minutes each.
    a. *See Procedure Note #1.*
4. Drain slides, wipe off excess oil, and blot to opacity taking care to remove residual oil.
    a. *See Procedure Note #2.*
5. Stain in freshly filtered Solution B: Carbol Fuchsin Stain, Ziehl-Neelsen for 15 minutes at room temperature.
6. Rinse well in distilled water.
7. Differentiate slides individually in Solution C: Acid Alcohol 1% until sections are light pink; 5-10 dips.
8. Rinse well in distilled water.
9. Counterstain in Solution D: Light Green SF Yellowish 0.1%, Aqueous; 5-10 dips.
10. Rinse in distilled water.
11. Blot excess water from slide and air-dry or oven-dry completely.
12. Dip dried slides in xylene and coverslip with a compatible mounting medium.

RESULTS:

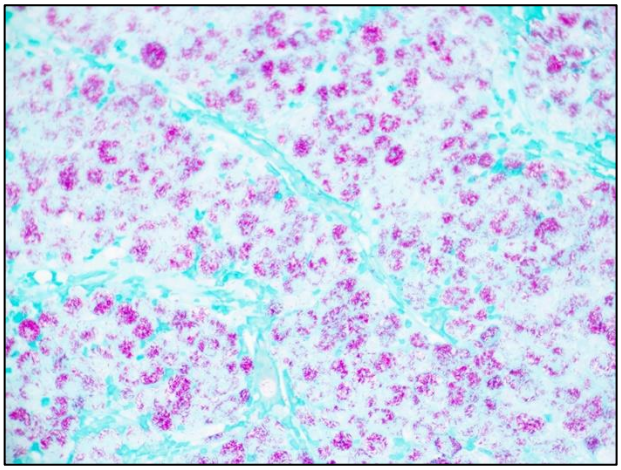
Mycobacterium leprae	Red
Other tissue elements	Green
Negative lung	Negative for *Mycobacterium leprae*

PROCEDURE NOTES:

1. Acid-fastness of leprosy organisms is enhanced when the waxy capsule is protected by the mixture of xylene/peanut oil and avoidance of dehydrating solutions.
2. It is important to blot well, residual oil may produce staining artifact.
3. If using a xylene substitute, closely follow the manufacturer's recommendations for coverslipping step.

REFERENCES:

1. Carson, Freida L., and Christa Hladik Cappellano. *Histotechnology: A Self-instructional Text*. 4th ed. Chicago: ASCP Press, 2015. 220-221.
2. Fite, George, P.J. Cambre and M.H. Turner. "Procedure for Demonstrating Lepra Bacilli in Paraffin Sections". *Archives of Pathology* 43 (1947). 624-625.
3. Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 237.
4. Modifications developed by Newcomer Supply Laboratory.



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