

Amyloid, Animal Control Slides – Technical Memo

CONTROL SLIDES:	Part 4031A	Part 4031B
	10 Slide/Set	98 Slide/Set

PRODUCT SPECIFICATIONS:

Tissue: Positive staining animal organ.

Fixation: Formalin 10%, Phosphate Buffered (Part 1090).

Section/Glass: Paraffin sections cut at 8 microns on Superfrost™ Plus slides.

Quality Control Stain: Bennhold Congo Red 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 under carefully controlled conditions. Quality control measures are used to deliver control slides that are as consistent as possible.

CONTROL SLIDE VALIDATION:

With Amyloid, Bennhold Congo Red Stain Kit:	Part 9103A	Individual Stain Solution
Solution A: Congo Red Stain 1%, Aqueous	250 ml	Part 1038
Solution B: Alkaline Alcohol	250 ml	Part 1038
Solution C: Hematoxylin Stain, Mayer Modified	250 ml	Part 1202

APPLICATION:

Newcomer Supply Amyloid, Animal Control Slides are for the positive histochemical staining of extraneous protein deposits in amyloidosis.

NEWCOMER SUPPLY VALIDATION PROCEDURE:

- Heat dry sections in oven according to your laboratory protocol.
- 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.
- Place slides in Solution A: Congo Red Stain 1%, Aqueous for 1 hour.

Microwave Modification: See Procedure Note #3.

 - Place slides in a plastic Coplin jar (Part 5184) containing Solution A: Congo Red Stain 1%, Aqueous and microwave at 70°C for 3 minutes.
- Rinse in two to three changes of tap water; rinse in distilled water.
- Differentiate in Solution B: Alkaline Alcohol, 5 to 30 seconds, agitating constantly until slide background is cleared of Solution A: Congo Red Stain 1%, Aqueous.
- Rinse in two to three changes of tap water; rinse in distilled water.
- Counterstain with Solution C: Hematoxylin Stain, Mayer Modified, 3 to 5 minutes, depending on preference of nuclear stain intensity.
- Wash in running tap water for 5 to 10 minutes.
- 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:

Light Field Microscopy:	
Amyloid	Pink to red
Nuclei	Blue
Polarized Light:	
Amyloid fluorescence	Apple green

PROCEDURE NOTES:

- Drain slides after each step to prevent solution carry over.
- Do not allow sections to dry out at any point during procedure.
- The suggested microwave procedure has been tested at Newcomer Supply. This procedure is a guideline and techniques should be developed for use in your laboratory.
- For optimal results sections should be cut at 8-10 microns to provide more intense staining and allow smaller amyloid deposits to be identified. Sections cut too thin may show faint staining and sections cut thicker than 8-10 microns may display yellow birefringence.
- If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps.

REFERENCES:

- Luna, Lee G. *Histopathologic Methods and Color Atlas of Special Stains and Tissue Artifacts*. Gaithersburg, MD: American Histolabs, 1992. 366-367.
- Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 177-178.
- Modifications developed by Newcomer Supply Laboratory.

