

## Amyloid Control Slides – Technical Memo

<b><u>CONTROL SLIDES:</u></b>	<b>Part 4030A</b>	<b>Part 4030B</b>
	10 Slide/Set	98 Slide/Set

**PRODUCT SPECIFICATIONS:**

**Tissue:** Positive staining 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.

**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 Amyloid, Bennhold Congo Red Stain Kit:</b>	<b>Part 9103A</b>	<b>Individual Stain Solution</b>
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 Control Slides are for the positive histochemical staining of extraneous protein deposits in amyloidosis.

**NEWCOMER SUPPLY VALIDATION PROCEDURE:**

1. 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.
2. Place slides in Solution A: Congo Red Stain 1%, Aqueous for 1 hour.
 

**Microwave Modification:** See Procedure Note #3.

  - a. 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.
3. Rinse in two to three changes of tap water; rinse in distilled water.
4. 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.
5. Rinse in two to three changes of tap water; rinse in distilled water.
6. Counterstain with Solution C: Hematoxylin Stain, Mayer Modified, 3 to 5 minutes, depending on preference of nuclear stain intensity.
7. Wash in running tap water for 5 to 10 minutes.
8. 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:**

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. 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.
4. For optimal results cut sections at 8-10 microns to provide more intense staining and allow smaller amyloid deposits to be identified. Thinner sections may show faint staining and sections thicker than 8-10 microns may display yellow birefringence.
5. If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps.

**REFERENCES:**

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