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ab245877 Bielschowsky Silver Stain Kit

For the histological visualization of nerve fibers, neurofibrillary tangles and senile plaques in Alzheimer's disease.

View Bielschowsky Silver Stain Kit datasheet:

http://www.abcam.com/ab245877

[use http://www.abcam.cn/ab245877 for China, or http://www.abcam.co.jp/ab245877 for Japan)

This product is for research use only and is not intended for diagnostic use.

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1. Overview

The Bielschowsky Silver Stain Kit is designed for histological visualization of nerve fibers, neurofibrillary tangles and senile plaques in Alzheimer's disease.

Staining Interpretation:

Axons:	Black
Neurofibrillary Tangles:	Black
Senile Plaques:	Black
Nuclei:	Dark Brown
Background:	Yellow to Light Brown

Control Tissue:

Cerebral cortex (cut 8-10µm)

2. Materials Supplied and Storage

Store kit at Room temperature immediately on receipt and check below for storage for individual components. Kit can be stored for 1 year from receipt, if components have not been reconstituted.

Keep away from open flame and refer to the safety datasheet.

Item	Quantity	Storage temperature (before prep)	Storage temperature (after prep)
Silver Nitrate Solution (20%)	500 mL	4°C	4°C
Formalin Solution (20%)	8 mL	RT	RT
Citric Acid Solution (Bielschowsky's)	8 mL	RT	RT
Nitric Acid Solution (Bielschowsky's)	8 mL	RT	RT
Sodium Thiosulfate Solution (5%)	125 mL	RT	RT

3. General guidelines, precautions, and troubleshooting

Please observe safe laboratory practice and consult the safety datasheet.

For general guidelines, precautions, limitations on the use of our assay kits and general assay troubleshooting tips, particularly for first time users, please consult our guide:
www.abcam.com/assaykitguidelines

For typical data produced using the assay, please see the assay kit datasheet on our website.

4. Assay Procedure

– Equilibrate all materials and prepared reagents to room temperature just prior to use and gently agitate.

Prepare working Ammoniacal Silver Solution (used in step 1.4)

Use chemically cleaned glassware in a chemical fume hood as follows:

- Pour 25-50ml of Silver Nitrate Solution (20%) into container (volume used is dependent on amount required to adequately fill staining container).
- Add concentrated ammonium hydroxide (25-30%) (not included in kit); drop by drop, while swirling the flask continuously, until precipitate just dissolves and the reagent goes clear.

ΔNote: If a small excess of ammonium hydroxide (25-30%) is added and solution will not go completely clear, filter the solution using a paper filter prior to use!

ΔNote: Use extreme care in preparation and use of Ammoniacal Silver Solution. Use mixture once and dispose. Dispose of waste observing all local, state and federal laws.

ΔNote: the reaction is completed when the entire solution has turned brown/black and then the entire solution has turned completely clear again with continuous addition of ammonium hydroxide and mixing. Drops should not be added beyond this point even if they cause a small temporary precipitate.

Prepare Developer Solution (used in step 1.8)

Use chemically cleaned glassware immediately prior to use as follows:

- 50 ml Distilled Water
- 8 Drops Formalin Solution (20%)
- 8 Drops Citric Acid Solution (Bielschowsky's)
- 4 Drops Nitric Acid Solution (Bielschowsky's)

ΔNote: Swirl carefully throughout mixing steps.

Prepare working Ammonia Water (used in step 1.8)

- Mix 320µl (8 drops) of concentrated Ammonium hydroxide (25- 30%) (not included) in 50 ml of distilled water.

Staining procedure

1.1 Deparaffinize sections if necessary and hydrate in distilled water.

1.2 Place a chemically cleaned staining jar containing 25ml of Silver Nitrate Solution (20%) in waterbath and allow temperature to equilibrate for 10 minutes.

1.3 Place slide in warmed Silver Nitrate Solution (20%) and incubate for 15 minutes at 40°C.

1.4 During incubation place Ammoniacal Silver Solution in waterbath in allow temperature to equilibrate.

1.5 Remove slide from Silver Nitrate Solution (20%) and rinse in 4 changes of distilled water. *Optional: Stain tissue section with Safranin O Solution for 5 minutes.*

1.6 Place slide in warmed Ammoniacal Silver Solution and incubate for 10 minutes at 40°C.

1.7 Remove slide from Ammoniacal Silver Solution, shake off excess and place directly into Developer Solution. Agitate gently until tissue section takes on a yellow/brown hue (5-20 seconds).

1.8 Remove slide from Developer Solution and immediately place in Ammonia Water for 30 seconds.

1.9 Rinse in 4 changes of distilled water.

1.10 Apply adequate Sodium Thiosulfate Solution (5%) to completely cover tissue section and incubate for 2 minutes.

1.11 Rinse in 4 changes of distilled water.

1.12 Dehydrate in 3 changes of absolute alcohol for 2 minutes each.

1.13 Clear, and mount in synthetic resin.

5. Notes

Technical Support

For all technical or commercial enquiries please go to:

www.abcam.com/contactus

www.abcam.cn/contactus (China)

www.abcam.co.jp/contactus (Japan)