

Principle

Silver stain kit for the demonstration of Argentaffin cells and Melanin . In this procedure Argentaffin reactions and Melanin-protein deposits have the ability to reduce the ammoniacal silver reagent to metallic silver forming a black-brown reaction product.

Storage

Store kit contents at room temperature in the dark.

Kit contents

Silver nitrate 100ml Ammonia solution 100ml Sodium thiosulphate 100ml Neutral red counterstain 100ml
1ml plastic pipette (labelled) x 2

Prepare the following reagents:

Silver compounds form turbid solutions with many impurities found on unclean equipment and in tap water. It is essential that all equipment is well rinsed in good deionised /distilled water and that dilution water is of highest possible quality deionised or distilled.

1) Ammoniacal silver.

To 5ml of silver nitrate reagent add strong ammonia solution drop by drop using the pipette provided until the precipitate which forms is redissolved - Stir constantly. When the precipitate has just redissolved add Silver nitrate reagent drop by drop using the pipette provided until a slight opalescence (cloudy/turbid) persists. Dilute this final mixture with 9 volumes (approx 45ml) of very high quality deionised / distilled water.

2) 1% Sodium thiosulphate reagent

Dilute 10ml of the 5% stock thiosulphate reagent to 50ml with deionised/ distilled water.

Method

[Plastic pipettes provided enable easy addition of reagents dropwise- they can be rinsed after use in deionised water and kept in the kit box for re-use on another occasion]

- 1). Bring sections to water.
- 2). Pre-heat the silver solution to 60 Deg C in the dark and immerse test slide in the hot reagent kept in the dark until the tissue is light brown in colour (approx 15-30 minutes)
- 3). Wash well in several changes of distilled water.
- 4). Immerse the slide in 1% Sodium thiosulphate for 30 seconds.
- 5). Rinse well in deionised water.
- 6). Apply Neutral red counterstain to the slide for 3 seconds- 1 minute (this step is optional and can be omitted)
- 7). Wash well.
- 8). Dehydrate clear and mount in synthetic resin (DPX) if required.

Results

Argentaffin cells , melanin pigment deposits - Black (Black-brown)

MSDS Section

- 1). Silver nitrate reagent will oxidise and discolour skin, eyes and internal organs.
- 2). Strong ammonia (max 35%). Vapour will irritate eyes and respiratory system. Use in fume cupboard. Liquid will cause burns to skin, eyes and internal organs, if this occurs seek medical attention.
- 3). Sodium thiosulphate & Neutral red has minimal or no real hazard in use.

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The rule is to exercise maximum and appropriate care in the handling and use of laboratory reagents. You are responsible for how they are used. In all cases – if you feel unwell in any way in using laboratory reagents – seek immediate medical attention on what treatment is appropriate. Show the product leaflets and labels.

GCC Diagnostics guarantees that the highest quality reagents are supplied with this product. However, it is the responsibility of the user to determine the suitability of this product for their intended use.

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