
COPPER - RHODANINE METHOD

PURPOSE: To identify copper deposits, such as in Wilson's Disease, left in the liver.

PRINCIPLE: It has been suggested that the rhodanine demonstrates the protein to which the copper binds rather than the copper itself.

CONTROL: Fetal liver, or a known positive. Coverslip the tissue section with Permount, the other fast drying mounting medias leech out the staining reaction.

FIXATIVE: 10% formalin

TECHNIQUE: Cut paraffin sections 4-5 microns.

EQUIPMENT: Rinse all glassware in DI water, coplin jars, microwave oven, course filter paper.

REAGENTS:

Rhodanine

Stock Solution:

5-p-dimethylaminobenzylidene
rhodanine 0.2 gm
Absolute alcohol 100.0 ml

Mix well. Refrigerate, solution is stable for 3 months.

CAUTION: Flammable. Avoid contact and inhalation.

Rhodanine

Working Solution:

Stock Rhodanine 10.0 ml
Distilled water 40.0 ml

Shake stock solution before measuring, filter through course filter paper. Make solution fresh, discard after use.

CAUTION: Avoid contact and inhalation.

Hematoxylin:

Commercial Gill-3

SAFETY: Wear gloves, goggles and lab coat. Avoid contact and inhalation.

PROCEDURE:

1. Deparaffinize and hydrate to distilled water.
2. Working Rhodanine solution, microwave 70 power, 60 seconds. Allow slides to stand in solution for 30 - 60 minutes.
3. Wash in several changes of distilled water.
4. Hematoxylin, 1-3 minutes.
5. Wash in water.
6. Blue slides, 20 dips.
7. Wash in water.
8. Dehydrate quickly through the alcohols, clear, and coverslip in PERMOUNT, or the coverslipper.

RESULTS:

Copper deposits: bright red to orange

Nuclei: blue

REFERENCES:

Sheehan D, Hrapchak B, Theory and practice of Histotechnology, 2nd Ed, 1980, pp 230, Battelle Press, Ohio

Prepared: _____ By: _____

Approved: _____ By: _____

PRODEDURE CARD

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Rhodanine

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rhodanine	0.2 gm
Absolute alcohol	100.0 ml

Mix well. Refrigerate, solution is stable for 3 months.

CAUTION: Flammable. Avoid contact and inhalation.

Rhodanine

Working Solution:

Stock Rhodanine	10.0 ml
Distilled water	40.0 ml

Shake stock solution before measuring, filter through coarse filter paper. Make solution fresh, discard after use.

CAUTION: Avoid contact and inhalation.

Hematoxylin

Commercial Gill-3

RHODANINE STOCK SOLUTION:

5-p-dimethylaminobenzylidene rhodanine	0.2 gm
Absolute alcohol	100.0 ml

Mix well. Refrigerate, solution is stable for 3 months.

CAUTION: Flammable, avoid contact and inhalation.

DATE: _____

TECH: _____

EXPIRATION: _____