URATE CRYSTALS - GOMORI'S METHENAMINE SILVER

PURPOSE: To demonstrate urate crystals.

PRINCIPLE: The urates take-up the silver, the silver is then reduced to its metallic state.

CONTROL: Tissue containing urate crystals.

FIXATIVE: Absolute alcohol

TECHNIQUE: After fixation the tissue is processed through absolute alcohol, xylene, and paraffin, do not allow the tissue to be hydrated. Cut paraffin sections 4µ.

EQUIPMENT: Acid cleaned glassware, microwave oven (or 60°C waterbath).

REAGENTS:

Methenamine Silver
See GMS

5% Borax:
See GMS

5% Hypo

Working Light Green Solution:
See GMS

SAFETY: Wear gloves, goggles and lab coat. Keep hot uncapped solutions under the fume hood. Avoid contact and inhalation of dyes and chemicals.

Silver nitrate; severe skin and eye irritant. Oxidizer. Ingestion will produce violent gastrointestinal discomfort. Possible carcinogen: equivocal tumorigenic agent.

Sodium thiosulfate: Toxic on ingestion. Can irritate the stomach. Irriant to skin, eyes and respiratory tract.

Light Green SF Yellowish; possible carcinogen.

PROCEDURE:

1. Deparaffinize sections, rinse in several changes of absolute alcohol, do not hydrate.
2. *Working Methenamine Silver, microwave Hi power, 60 seconds.
3. Rinse in distilled water.
4. 5% Hypo, 3 minutes.
5. Wash in tap water, 2-3 minutes, rinse in distilled water.
6. Working Light green solution, 1-2 minutes.
7. Rinse in distilled water.
8. Dehydrate, clear, and coverslip.

*Conventional Method: Preheat solution to 60°C, place slides in heated solution, incubate 30 minutes, in 60°C waterbath.

RESULTS:

Urates	black
Background	green

NOTE: Large calcium deposits may also stain black.

REFERENCES:

Carson F, Histotechnology: a Self-Instuctional Text, 1990, pp222-223, ASCP,Ill

Crookham,J, Dapson,R, Hazardous Chemicals in the Histopathology Laboratory, 2nd ED, 1991, Anatech

Prepared:_____By: _____

Approved:_____By:_____

PROCEDURE CARD

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Methenamine Silver Solution:
See GMS

5% Borax:
See GMS

5% Hypo

Working Light Green Solution:
See GMS