BILE - HALL'S BILIRUBIN STAIN

PURPOSE: Bilirubin is the principal bile pigment, and is a normal product of red cell degradation. Excessive amounts of bile pigment in the liver may be found in cases of hepatic or extrahepatic biliary obstruction.

PRINCIPLE: The oxidizing action of Fouchet's reagent converts the bile pigment to green biliverdin (if it has been transported to the liver and reduced, it is referred to as bilirubin.). Colors range from olive green to emerald green, depending on the concentration of bile pigment present.

CONTROL: Tissue with a known positive control, an obstructed bile duct. Coverslip slide with Permount, the fast drying media leeches out the staining reaction.

FIXATIVE: 10% formalin

TECHNIQUE: Cut paraffin sections 4m.

EQUIPMENT: Balance, weigh boats, acid cleaned glassware.

REAGENTS:

10% Ferric Chloride:

Ferric chloride	0.5 gm
Distilled water	5.0 ml

Make FRESH.

CAUTION: Avoid contact and inhalation.

Van Gieson's Solution:

1% Acid fuchsin	1.0 ml
Picric acid, saturated	45.0 ml

Mix well, stable for 2 WEEKS.

CAUTION: Avoid contact and inhalation.

Fouchet's Reagent:

Trichloracetic acid	12.5 gm
Distilled water	50.0 ml

Mix well, then add:

10% ferric chloride	5.0 ml

Make FRESH discard after use.

CAUTION: Corrosive, avoid contact and inhalation. Can cause burns.

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

Ferric chloride; causes GI distress when ingested. Solution reacts with metal.

Trichloracetic acid; Corrosive to skin, can cause burns. Can cause damage to the respiratory system on inhalation.

Picric acid; Toxic by skin exposure. Can become explosive when dry.

PROCEDURE:

1. Deparaffinize and hydrate to distilled water.
2. Fouchet's reagent, 5 minutes.
3. Rinse in tap water, followed by distilled water.
4. Van Gieson's solution, 3-5 minutes.
5. Rinse in distilled.
6. Dehydrate, clear, and mount in PERMOUNT, or the coverslipper.

RESULTS:

Bile pigment:	green
Muscle and cell cytoplasm:	yellow
Collagen:	red

REFERENCES:

Sheehan D, Hrapchak B, Theory and practice of Histotechnology, 2nd Ed, 1980, pp 219, Battelle Press, Ohio

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

Prepared:_____By: _____

Approved:_____By:_____

PROCEDURE CARD

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