SURGICAL PATHOLOGY - HISTOLOGY      No. **1:8**    Rev. __
STAINING MANUAL                   Date:
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Subject:

## ZENKER'S SOLUTION

**PURPOSE:** Zenker's is a nuclear fixative and is used as a mordant in some staining procedures.

**REAGENTS:**

**Zenker's Stock Solution:**

| | |
|---|---|
| Mercuric chloride | 50.0 gm |
| Potassium dichromate | 25.0 gm |
| Sodium sulfate | 10.0 gm |
| Distilled water | 1000.0 ml |

Mix well, stable for 2 years.

**Working Solution:**

| | |
|---|---|
| Zenker's stock | 95.0 ml |
| Acetic acid | 5.0 ml |

Mix just before use, discard following hazardous waste regulations.
**CAUTION: CARCINOGENIC, CORROSIVE**

**SAFETY/PPE:** Wear gloves, goggles and lab coat. Work in well ventilated area. Keep hot solution under fume hood.

Mercuric chloride: Severe skin and eye irritant; target organ effects on reproductive, urogenital, respiratory, gastrointestinal and fetal systems via ingestion and inhalation routes.

Potassium dichromate: toxic by inhalation of dust and by ingestion; target organ effects on reproductive and fetal systems. Solid form is corrosive to eyes, skin and mucous membranes.

Acetic acid: Skin and eye irritant; target organ effects on respiratory system by inhalation.

**DISPOSAL:** Pour used Zenker's into glass bottle, to be disposed of by Safety Services, attach Hazardous waste label. NOTE: "Contains Mercury".

**PROCEDURE:**
1. The tissues must be treated for mercury pigment.
2. The tissues must be washed well in running water to remove the excess potassium dichromate or the dehydrating alcohols will cause a chrome pigment.

**REFERENCE:** Carson,F, Histotechnology A Self-Instructional Text, pp19-20, 1st Ed, 1990, ASCP Press
Crookham,J, Dapson,R, Hazardous Chemicals in the Histopathology Laboratory, 2nd ED, 1991, Anatech

Prepared: Sept. 1993    By: Susan Wall

Approved: _____      By:

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| Zenker's stock | 95.0 ml |
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Mix just before use. Do not dispose of down the drain, pour into glass bottle labeled "mercury waste".

CAUTION: CARCINOGENIC, CORROSIVE

DATE:_____

TECH:_____

EXPIRATION:_____