Anhydrous for Urate Crystals

Clinical Histology
Procedure
hsto02.06

Final Approval: May 2010 Effective: May 2010

List all stakeholder(s) and dates of approval:

<table>
<thead>
<tr>
<th>Stakeholder Name(s):</th>
<th>Shelly M. Siegel Date: 4/11/13 Reviewed</th>
<th>Revised</th>
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<tbody>
<tr>
<td>Stakeholder Name(s):</td>
<td>Shelly M. Siegel Date: 1/24/14 Reviewed</td>
<td>Revised</td>
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<td>Stakeholder Name(s):</td>
<td>Alex Ignatovich Date: 11-8-10 Reviewed</td>
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<td>Stakeholder Name(s):</td>
<td>Alex Ignatovich Date: 2-16-12 Reviewed</td>
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<td>Stakeholder Name(s):</td>
<td>Shelly M. Siegel HT Date: 2/23/12 Reviewed</td>
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<td>Stakeholder Name(s):</td>
<td>Shelly M. Siegel HT Date: 8/21/12 Reviewed</td>
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<td>Stakeholder Name(s):</td>
<td>Shelly M. Siegel HT Date: 4/1/13 Reviewed</td>
<td>Revised</td>
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Describe briefly the most recent revision made to this policy, procedure or protocol & why:

1/24/14, the histologist will need to use Copath at the time of cutting. Tracking and verifying a stain was updated January of 2013.
4/11/13, Processing of Anhydrous specimens have been omitted. Specimens that are listed in step #1 or ordered as Anhydrous will be stained on program #9 on the Leica stainer.
8/21/12, Added stain/process detail for touch prep unstained slides to differentiate H&E slides from unstained.
2/23/12, Research has shown that Hematoxylin and Eosin staining may not allow proper evaluation of birefringence properties of the crystals in a specimen. An alternative stain for anhydrous staining has been added in step #8. Information about handling of tissue specimen received in fixative has been added in step #1.

Purpose/Policy Statement:
To minimize dissolution of urate crystals in tissue specimens by limiting their exposure to aqueous solutions during sample fixation and staining.

Definitions:
• n/a

STEPS / KEY POINTS

PROCEDURE:
1. The tissue specimen shall be delivered to the Pathology Gross Room “fresh”, preferably without fixative. If the specimen is received in fixative, it shall be treated the same way.
   • “CHECK FOR CRYSTALS”
   • “GOUT”
   • “GOUTY TOFUS”
   • “SPECIMEN FROM JOINT”
   • “URATES”
   • “URATE CRYSTALS”

2. Due to the fresh nature of the sample, its gross examination will be prioritized over other formalin-fixed specimens. Immediately accession the specimen and submit to the pathologist/Certified Pathologist Assistant (CPA) accompanied by the requisition form for gross examination and description.

3. Pathologist/CPA will prepare two cytologic scrape preps and label them “TP” for touch prep. Lab assistants will enter “TPUS”, “H&E”, and “Anhydrous” in copath then send slides to Histology. Gout touch preps will be treated exactly as regular touch preps, but without being stained.

4. Label cassette with accession case # as well as mark the cassette “ANHYD”.

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5. The specimen will be paraffin processed on VIP Tissue Processors or Peloris using routine processing.

6. Embed routinely in paraffin. Cut sections at 4um and pick up two slides. Label slide “H & E” for control. Label slide “ANHYDROUS” for program #9 anhydrous staining and place in its own rack. Avoid prolonged floating-out sections on waterbath. See visual of labeled slides below. Verify the stain in COPATH at the time of cutting.

7. **Note:** the pathologist may order this stain after the H&E. Therefore only 1-slide for anhydrous staining will be needed.

8. Anhydrous Staining program #9 on Leica XL stainer:
   - Stations 1-4. Xylene 3 minutes
   - Stations 5-6. 100% alcohol 2 minutes
   - Station 8. 95% alcohol 2 minutes
   - Station 12. Working Eosin with phloxine 2 minutes
   - Station 13. 95% alcohol 20 seconds
   - Stations 14-16. 100% alcohol 30 seconds
   - Stations 17-18. Xylene 1 minute

9. Coverslip on sakura tissue-tek.

10. Place H&E and Anhydrous together on a tray.

CALCULATIONS: N/A
CALIBRATION: N/A
QUALITY CONTROL: N/A
PROFICIENCY TESTING: College of American Pathologists HistoQIP.
RESULTS: N/A.

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**Equipment/Supplies (If Applicable):**

**SPECIMEN:** Fresh tissue examination for urate crystals.

**MATERIALS, REAGENTS:**
Absolute Ethyl Alcohol
100% Alcohol Blend

**CAUTION – FLAMMABLE LIQUID**
Wear appropriate protective equipment.

**INSTRUMENTATION OR EQUIPMENT:**
Sakura V.I.P. Tissue Processing Instrument

**Form Name & Number or Attachment Name (If Applicable):**
histo02

**Author Position:**
Lead Histologist

**Review/Revision Authority (Position Not Individual Name):**
Lead Histologist

**Expert Consultant Position/s (Not Individual Name/s):**
N/A

**References (Required for Clinical Documents):**


**MANUFACTURER'S PACKAGING BROCHURE/INSERT:** N/A

Is there a Regulatory Requirement? Yes ☐ No ☐

If yes, insert requirement information here:

**Review History** (No Changes):
Shelly M. Siegel   HT Date: 8/26/2010 Reviewed ☒
Mark Magilner,   MD Date: 8/2710 Reviewed ☒

**Revision History** (Note changes in area under header):
N/A

**Computer Search Words:**
N/A

**Policy, Procedure or Protocol Cross Reference Information:**
N/A