**UW Medicine - Pathology**

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Decalcification Procedure

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| Adopted Date: 05/29/08  Review Date: 01/13/11  Revision Date: 02/13/13 |

PURPOSE

To ensure the proper handling and decalcification of tissue.

*Note:* Bone marrow biopsies are monitored and processed by support staff and do not follow this procedure below; please refer to bone marrow decal procedure.

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PROCEDURE

Materials:

* RDO
* Formalin

Procedure:

* 1. Decalcification of Surgical or Autopsy Tissue
     1. The following information is required on **all** decal containers:

1. A bar coded Specimen Label (that includes patient name, hospital number, specimen number with and specimen type)
2. Date Submitted
3. Attending, Resident or PA Name
4. Word Decal. By labeling the container as "Decal", this will facilitate identifying the tissue on your gross day.
   1. Whenever possible cut the tissue into cassette size portions and place the tissue into the properly labeled container with formalin. Most specimens can be placed into 16 oz containers. Do not decal specimens in small oral path specimen containers.

Once the tissue is placed into the formalin filled container, place it on the left side of the decal processing shelf. Pre printed bar-coded cassettes are **NOT** to be used since exposure over 45 minutes to RDO will cause the cassette labeling to dissolve. Please hand label the sides of the cassette with pencil. Some specimens will need to be decalcified prior to sectioning into cassette size portions. Please section tissue 0.3-0.4 cm to ensure proper fixation, subsequent sectioning, and decalcification. If tissue is less than 0.3 cm in thickness it may fall out of the paraffin block during microtomy.

* 1. After overnight formalin fixation of the tissue, the support staff will pour off the formalin through a clean strainer in the morning (8am) and pour RDO into the specimen container to cover all tissue. The specimen container with the decalcifying tissue is placed on the decal shelf on the right side. It is the Attending, Resident or PA's responsibility to ensure that decalcified tissue placed is handled properly. Responsible personnel should check at appropriate intervals to assess decalcification.
  2. When decalcification is complete, print new labeled cassettes and submit the tissue.
  3. If the tissue needs additional decalcification, the Attending, Resident, PA or Support Staff should pour off the RDO through a clean strainer into the discard RDO container. Put the tissue back into formalin. The specimen should then be placed back on the left side of the decal shelf. The above process will then repeat. **Most protein will denature after 16 hours of exposure to RDO; therefore, careful monitoring is essential to maintaining optimal histological detail.** 
     1. Special Decaling
        1. Bone marrow, please refer to bone marrow decal procedure.
        2. Fetal ribs are placed in RDO for 3 hours.

Written By: Director Approval:

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