

## **METHOD TO FACILITATE SECTIONING INCOMPLETELY DECALCIFIED BONE**

Shirley A. Powell, HT (ASCP) HTL  
Technical Director, Histopathology Laboratory  
MERCER UNIVERSITY SCHOOL OF MEDICINE

### **MICROTOME**

The Official Newsletter of the Georgia Society for Histotechnology  
Volume XV Summer 1993, No. 3

Bone Biopsies are sometimes difficult to obtain and uncomfortable for the patient. Therefore, incomplete decalcification before processing can create problems if the bone sections cannot be achieved without loss of tissue, and require re-decalcification, which takes precious time.

Ideally, the specimen should not be processed until decalcification is complete but as we know, many times the histologist is rushed by the pathologist or clinician to produce sections in an inadequate period of time. Sections of bone that have been hurriedly processed and fail to section because of incomplete decalcification may be placed in a decal solution for a short period of time (this will vary the density and size of the bone), washed in ammonia water, re-chilled and sectioned in the same day without having to remove from the block and reprocess. Small pieces of bone such as bone marrow biopsies take only a short soak of about 30 minutes and will section easily. Larger pieces also will section but take a longer soak. The depth of effectiveness is minimal and if levels are needed, the block may have to be reintroduced to the decal solution more than once.

RDO is one of the decal solutions, which produce the fastest results. There are other rapid decalcifiers that are on the market and may work as well. This is a solution to an uncontrollable problem, but the best method is to do it right the first time. Necessity is the mother of invention but you cannot beat "...the right way, baby." Most assuredly the patient will appreciate this, "uh huh!"

**EDITORS NOTE:** Given a Pathology Residency Program at Emory University Hospital, we have specimens submitted for processing which, at times, should have been submitted for decalcification. After we've "crunched" through and faced the block, and have determined that reprocessing and re-decalcification may not be necessary, we will soak the block either on plain ice if the specimen is not too hard or in a standard formic acid/formaldehyde decal solution or **RDO** if more harsh treatment is necessary. We have had success in acquiring good quality sections and stains without an ammonia rinse.

Not only is this a helpful technical tip from Shirley but it shows how far a little "TLC" during sectioning can go...to separate the histotech from the histohack.