Decal® Decalcifier
Technical Data Sheet & IFU

Decal® is a hydrochloric acid solution which contains a chelating agent. Decal® is used for the rapid decalcification of bone and it removes and binds all calcium in specimens being treated. Minimal distortion of tissue and cellular structure after the decalcification process make this an ideal product for your calcified tissues when Immunohistochemistry (IHC) procedures are *not* being considered. If IHC is part of the diagnostic workup, then Formical 4™, Formical 2000™, or Immunocal ™ should be considered.

APPLICATIONS/INTENDED USE
Decal® may be used to process all types of calcified histological specimens.

Tissue containing calcium must undergo calcium removal before tissue processing for best results.

Fix tissue in 10% Neutral Buffered Formalin or other suitable tissue fixative such as Bouins, B5, or Zinc Formalin. The volume of fixative solution should be 20 times the tissue volume.

RESULTS
To determine the end point of the decalcification process use either x-ray or chemical end –point determination techniques. Do not use probes, needs, scalpels or bending as this may cause physical damage to the specimen.

PROCEDURE
1. Specimens must be fixed before exposure to an acid solution.
2. It is best to suspend the specimen so it is not in contact with any of the surfaces of the container. This allows exposure to all specimen surfaces and allows the precipitated calcium salts to sink to the bottom of the container.
3. Small specimens should not be left in the solution overnight. If decalcification process is incomplete, wash it in water and return to fixative. Wash again before returning to the decalcification solution to complete the process.
4. Continue Step #3 until specimen is completely decalcified.
5. If decalcification time exceeds 24 hours, it is best to replace the decalcifying solution with fresh solution daily.
6. **Please Note:** *If you plan* to stain the section with a Potassium Ferrocyanide / HCL stain (Iron stain), a minimum 10 minute rinse after decalcification is recommended.
7. Process tissues, embed and cut per Lab SOP (Standard Operating Procedure)

STORAGE/ SAFETY
Storage: Room Temperature
Refer to SDS for details-

Caution:
Specimens must be washed in running water before and after exposure to acid solutions, especially hydrochloric acid. The combination of formalin and hydrochloric acid can create the formation of **bis-chloromethyl ether which is a known carcinogen.**

TECHNICAL INFORMATION
1. If decalcification process was incomplete, surface decalcification techniques may be used.

2. To surface decal: Place a small dish of Decal® on ice. Place the face of the block in the dish for 5-10 minutes. Rinse the block in cold water. Icing tends to make the block harder and the water shed tends to soften the tissue face. Icing will greatly reduce the amount of chattering, especially in large blocks. Be certain to rinse the block before it is placed on the microtome (decal solution is corrosive)

3. Remember that bone has all of the same tissue elements as any other tissue and in order to demonstrate them effectively the specimens must be well fixed and carefully monitored during the decalcification process.

CONTACT INFORMATION
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