

# DECALCIFIER

Item Numbers: 3363,3360

## DESCRIPTION

Decalcifier, Formic Acid is a slow acting decalcifying solution which provides end user with ample range of freedom in process. Decalcifier, Hydrochloric Acid solution contains a chelating agent which binds the calcium from the specimen. Although the chelating agent causes no interference with staining protocol, it is essential to remove it from specimen prior to performing subsequent processing steps.

After decalcification is complete, the specimen will need to be rinsed well with water to remove any of the residual acids or chelating agent in the specimen, If not properly removed by washing in water or other neutralizing solution it can affect tissue morphology. To maintain good tissue morphology, it is recommended to fix specimen for 24 hours prior to transferring specimen in a decalcifying solution.

Alternatively, the hydrochloric acid and formic acid decalcifying solutions can be used in conjunction to satisfy the removal of calcium deposits for larger specimens. Use of two decalcifiers can aid in reducing the overall decalcification time.

*In addition, the rate of decalcification can be increased by agitating the solution using a stir bar. The increase rate of decalcification will in turn decrease overall time, yet not cause harm to the tissue. This is true for both formic acid and hydrochloric acid decalcifiers.*

### Decalcifier, Formic Acid

Product Code: 3360-32 (32oz) and 3360-G (Gallon)

Mild decalcifying solution. Ideal for removing calcium from bone marrow and small bones.

Fixes and decalcifies needle biopsies and other small specimens in less than 4 hours.

### Decalcifier, Hydrochloric Acid

Product Code: 3363-32 (32oz), 3363-G (Gallon), 3363-1GC (Gallon cube)

The acid-based solution is use for rapid decalcification of bone. Ideal for use on large bones.

## PROCEDURE

1. Obtain fixed specimen in a labeled cloth biopsy bags or plastic cassettes. (specimen thickness should not exceed 5 mm, to ensure adequate fixation)
2. Select appropriate decalcifying solution for specimen.
  - a. Decalcifier, Formic Acid for small bones (i.e. mouse sternum, femur)
  - b. Decalcifier, Hydrochloric Acid for large bone (i.e. dog skull, femur)
3. Transfer specimen into Decalcifier.
4. Agitate solution with stir bar on a stir plate. No heat.
5. Allow specimen to sit in solution and check periodically using any of the methods listed below:  
Probe with needle in area least likely to be examined, Using end point determination solution, Radiography
6. After complete decalcification is determined, transfer specimen from decalcifying solution to another container and rinse with tap water for several minutes.
7. After complete rinsing to remove any of the residual acids or chelating agent, specimen can be trimmed down further if needed.
8. Continue with procedure to process specimen.

Decalcification times can range from 1 hour to 2 weeks depending on solution, tissue type and size. Check solution periodically during decal process. Overnight decalcification is not recommended unless decaling a large specimen such as whole femur or

Cat. #	Description
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3363	Decalcifier, Hydrochloric Acid

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