

Product Information

Poly-NoCal & Fixative

Catalog Number **F5430**

Store at Room Temperature

Product Description

Poly-NoCal & Fixative is a formic acid and formaldehyde based solution designed to fix and decalcify bone and high-calcium containing samples in a single step. Decalcification removes calcium carbonate (lime) salts within the tissue that prevent sectioning for histological analysis.¹

Formic acid-based decalcifiers such as Poly-NoCal & Fixative can be used for immunoperoxidase staining without significant loss of immunoreactivity.²

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store Poly-NoCal & Fixative at room temperature.

Procedure

1. Immerse the fresh or fixed bone specimen in Poly-NoCal & Fixative. The volume of Poly-NoCal & Fixative used should be 10× to 20× the volume of the specimen.
2. Allow the specimen to process for several hours. Small histological specimens such as bone marrow processed with Poly-NoCal & Fixative will achieve softening sufficient for sectioning in less than four hours. Large bone sections may require additional fixation after decalcification. Stirring the reaction during processing will accelerate the decalcification process.

Note: Decalcification times are approximate.

3. Check the bone specimen periodically for decalcification. The control of decalcification is very important to obtain well stained sections.¹ Decalcification processing time is dependent on size and weight of bone.³
4. **Do not** leave tissue in Poly-NoCal solutions for more than 48 to 72 hours without testing. Processed specimens that are excessively decalcified cannot be recovered.
5. If decalcification processing requires more than one day, remove the used Poly-NoCal & Fixative and replace with fresh Poly-NoCal & Fixative each day of processing. Do not combine fresh Poly-NoCal & Fixative with used fixative.
6. To avoid processing the specimen overnight and risking overdecalcification, remove the specimen from the Poly-NoCal & Fixative solution. Place the specimen in an embedding mold. Wash the specimen in water and store in one of the following suggested fixatives: 10% neutral buffered formalin (NBF), Bouin's solution, or zinc formalin. On the following day, repeat the processing Procedure beginning with Step 1.
7. After decalcification is completed, remove the specimen from the Poly-NoCal & Fixative solution. Place the specimen in an embedding mold, and wash the specimen in water. Bone specimens may be embedded as for fixed soft tissue.

References

1. Clayden, E.C., *J. Med. Lab. Tech.*, **10**(3):103-123 (1952).
2. Mukai, K., Yoshimura, S., and Anzai, M., Effects of decalcification on immunoperoxidase staining. *Am. J. Surg. Pathol.*, **10**(6):413-9 (1986).
3. Villanueva, A.R., Experimental studies in demineralization and its effects on cytology and staining of bone and marrow cells. *J. Histotechnology*, **9**(3):155-61 (1986).

VNC,PHC 07/12-1