

Zamboni Fixative - Technical Memo

SOLUTION:
Zamboni Fixative

1 Liter
Part 1459A

For storage requirements and expiration date refer to individual bottle labels.

APPLICATION:

Newcomer Supply Zamboni Fixative is a ready-to-use phosphate buffered picric acid-formaldehyde (PAF) fixative with applications for light and electron microscopy. This solution is very stable and provides good general fixation with rapid penetration and optimal preservation and stabilization of cellular proteins.

METHOD:

Fixation:

Larger Biopsies: A minimum of 4 hours is recommended.

Small Biopsies: A minimum of 1 hour is recommended.

Solutions: All solutions are manufactured by Newcomer Supply, Inc.

FIXATION PROCEDURE:

1. Place fresh tissue specimen in Zamboni Fixative as soon as possible after surgical excision.
 - a. See Procedure Note #1.
2. Hold tissue specimens in Zamboni Fixative until ready to process.
 - a. See Procedure Note #2.
3. Rinse Zamboni fixed tissue thoroughly in running tap water, Phosphate Buffered Saline 0.1M, pH 7.4 (133104) or preferred buffer solution for a minimum of 15 minutes prior to processing.
4. Processing:
 - a. For light microscopy: place on tissue processor starting in either Formalin 10%, Phosphate Buffered (Part 1090) fixation step or in first dehydration station.
 - b. For electron microscopy: a secondary osmium tetroxide fixation is most often recommended. Refer to your laboratory protocol for electron microscopy processing.

PROCEDURE NOTES:

1. Tissues for electron microscopy studies should be fixed within 15 minutes after surgical excision and minced into 1 mm cubes for expedient fixative infiltration.
2. Tissue can be held indefinitely in Zamboni Fixative in a well-sealed container at room temperature without compromising specimen preservation.
3. Dispose of Zamboni Fixative as hazardous waste and/or according to local and state environmental regulations. Refer to SDS for personal protective measures, handling and storage information.

REFERENCES:

1. Carson, Freida L., and Christa Hladik. *Histotechnology: A Self-Instructional Text*. 3rd ed. Chicago, Ill.: American Society of Clinical Pathologists, 2009. 21, 334, 336.
2. Dapson, Janet Crookham, and Richard Dapson. *Hazardous Materials in the Histopathology Laboratory: Regulations, Risks, Handling, and Disposal*. 4th ed. Battle Creek, MI: Anatech, 2005. 150, 265-266.
3. Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 48, 328-330.
4. Zamboni, Luciano, and Cesare De Martino. "Buffered Picric Acid Formaldehyde: A New Rapid Fixative for Electron Microscopy". *Journal of Cell Biology* (1967) 35: 148.
5. Modifications developed by Newcomer Supply Laboratory.