

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. Zamboni fixative is stable and provides general fixation with rapid penetration, optimal preservation and stabilization of cellular proteins.

METHOD:

Fixation:

- Small Biopsies: Minimum of 1 hour
- Larger Biopsies: Minimum of 4 hours

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

FIXATION PROCEDURE:

1. Place fresh tissue in Zamboni Fixative 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 followed by Phosphate Buffered Saline 0.1M, pH 7.4 (133104) for a minimum of 15 minutes prior to processing.
4. Processing:
 - a. *Light microscopy: place on tissue processor starting in either Formalin 10%, Phosphate Buffered (Part 1090) fixation step or first dehydration station.*
 - b. *Electron microscopy: a secondary osmium tetroxide fixation is recommended. Refer to protocol for electron microscopy processing.*

PROCEDURE NOTES:

1. For electron microscopy studies, fix tissues within 15 minutes after excision. Mince into 1mm cubes for expedient fixative infiltration.
2. Tissue can be held indefinitely in Zamboni Fixative at room temperature without compromising preservation.

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.