

Bouin Fluid – Technical Memo

SOLUTION: Bouin Fluid	1 Liter Part 1020A	1 Gallon Part 1020B	20 Liter Cube Part 1020C
Bouin Fluid Vial	40 ml vial, 20 ml fill (100/cs) Part 10201B	60 ml vial, 20 ml fill (72/cs) Part 10201E	60 ml vial, 40 ml fill (72/cs) Part 10201C

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

APPLICATION:

Newcomer Supply Bouin Fluid, is a ready-to-use picric acid based fixative that is recommended for a variety of specimens including bone marrow clots and biopsies, gastrointestinal tract biopsies, testicular biopsies and lymph nodes. This fixative solution is excellent for providing crisp nuclear staining, preserving structures with soft and delicate features and serves as both fixative and mordant for tissues to be stained with trichrome procedures. Bouin Fluid penetrates rapidly, fixes evenly, and preserves many cellular constituents with minimal alteration.

METHOD:

Fixation:

Bone Marrow: Bone marrow clot and bone marrow biopsy a minimum of 4 hours to 24 hours is recommended.

Lymph Nodes: Up to 24 hours is recommended. Small nodes (5 mm or less) should be halved. If larger, cut in such a way that no piece is thicker than 2-3 mm.

Small Biopsies: A minimum of 4 hours is recommended.

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

FIXATION PROCEDURE:

1. Place fresh tissue specimen in Bouin Fluid as soon as possible after surgical excision.
 - a. See Procedure Notes #1 and #2.
2. Hold tissue specimens in Bouin Fluid until ready to process or a maximum of 72 hours.
 - a. See Procedure Note #3.
3. Rinse Bouin fixed tissue thoroughly in 70% ethyl alcohol (Part 10844) for 1 hour prior to processing.
4. Place on tissue processor starting in Formalin 10%, Phosphate Buffered (Part 1090) fixation step.
5. Blocked and sectioned tissues may retain excess picric acid. The yellow picric acid pigment will normally be removed from tissue sections in the deparaffinization process. Additional methods of removing picric acid are as follows:
 - a. Wash deparaffinized tissue sections in running tap water or in 70% ethyl alcohol until yellow pigment is removed.
 - b. Rinse deparaffinized tissue sections in 70% ethyl alcohol saturated with lithium carbonate until yellow pigment is removed.
6. Post-fixation applications of Bouin Fluid include the use of this fixative as a mordant to intensify color reactions in trichrome staining procedures. Refer to individual trichrome stain protocols for additional information.

PROCEDURE NOTES:

1. A specimen initially received in Formalin 10%, Phosphate Buffered should be thoroughly rinsed in tap water prior to placing tissue in Bouin Fluid.
2. Bouin Fluid should not be used for preservation of red blood cells or tissues for electron microscopy examination.
3. Extended storage of tissue in Bouin Fluid is not recommended. After a maximum fixation time of 72 hours transfer Bouin fixed wet tissue to 70% ethyl alcohol or Formalin 10%, Phosphate Buffered for long-term storage purposes.
4. Dispose of Bouin Fluid as hazardous waste and/or according to local and state environmental regulations.

REFERENCES:

1. Carson, Freida L., and Christa Hladik. *Histotechnology: A Self-Instructional Text*. 3rd ed. Chicago, Ill.: American Society of Clinical Pathologists, 2009. 7, 19.
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. 43.
4. Modifications developed by Newcomer Supply Laboratory.