BOUIN'S FIXATIVE SOLUTION

The use of a fixative is the first of the steps involved in the preservation of tissue specimens. The purpose of using any fixative is to preserve a specimen without changing it any more than necessary. The choice of which fixative to use depends on the nature of the specimen to be fixed and the further processing intended for that specimen. Bouin's fixative solution is recommended for fixing:

- Animal fetal tissue,
- Applications where preserving glycogen is an important factor,
- Delicate tissues generally,
- Endocrine biopsies,
- Gastro-intestinal tract biopsies,
- Soft tissues generally,
- Specimens that are to be trichrome stained.

Important considerations in the use of Bouin's fixative:

- Bouin's fixative will lyses/lysis/lyse erythrocytes,
- The picric acid component of Bouin's fixative will color specimens canary yellow, and excess picric acid should be removed from the specimen after fixation with a seventy percent by weight (70% w/w) alcohol in water solution. Picric acid is an alternate name for Trinitro phenol (TNP) a high explosive (CAS 88-89-1, 2,4,6-Trinitrophenol) and should not be handled in dry, solid form. Picric acid in solution is toxic, including by absorption through the skin. Appropriate personal protective measures, including wearing gloves, should be worn when using even a dilute solution containing picric acid.
- The formaldehyde component of Bouin's fixative is a known carcinogen.
- Refer to the Safety Data Sheet supplied with the product and on the hempsteadhalide.com website. Also, refer to the warning label on the bottle or packaging of Hempstead Halide's Bouin's Solution.

Specimen preparation:

- Prepare a volume of Bouin's fixative larger by a factor of twenty (20) in volume to receive a specimen to be fixed. (e.g., a 25ml bottle of Hempstead Halide® Bouin's fixative will accommodate a specimen with a volume of 1.25cc).
- Specimens to be fixed should be less than 5mm thick.
- Immerse a specimen in Bouin's fixative as soon as it is removed from the host organism. Bouin's fixative may serve as a holding solution for specimens that will be processed by a mechanical tissue processor.

Fixation Procedure:

- Immerse the specimen completely in Bouin's fixative.
- This emersion should last for four (4) to eighteen (18) hours, depending on the physical properties of the specimen being fixed (thicker, tougher = longer).
- After fixation, wash the specimen for at least one (1) hour in running tap water.
- Waste the water-washed specimen in a seventy percent by weight (70% w/w) solution of alcohol in water, until the yellow coloring has faded. After fixation, the specimen may be held in a similar aqueous alcohol solution indefinitely. Otherwise, the specimen will be ready for further processing by a tissue processor, a microtome, clarifying (*see* TECH003, staining (*See* TECH004), and/or mounting (*See* TECH 001 & 002).

