Bouin's Fixative

Intended use
Bouin's Fixative is used as a fixative for Histological specimens.

Summary
Bouin's Fixative is generally used for testicular fixation because it preserves nuclei and chromosomes especially observe well during meiosis. Formalin is a more general fixative, used widely for other tissues when mitotic or meiotic cycles are not necessary to observe. Also used as a mordant for staining procedures.

Principle
Bouin's fixative consists of picric acid, formaldehyde, and acetic acid. The primary use of Bouin's fixative is for lymph nodes, prostate biopsies and kidney biopsies; however, it can also be used for decalcifying bones with the addition of formic acid. Bouin's fixative preserves tissue detail well and will not destroy morphology when the bone specimen is left in solution for several days or weeks. The addition of 25% ethanol to the Bouin's can be used for adipose rich tissues, such as breast. Bouin's fix stops the chromogenic substrates very effectively and also helps remove some of the trapped background stain. It stains tissue yellow. This yellow stain can be removed with multiple washes in buffered ethanol or PBS-Tween. Current protocols suggest that several changes of 70% ethanol are used to wash the tissue until the yellow color disappears. Do not use Bouin's to fix before in situ since unable to detect RNA at all. Fix small specimens for at least 6 hours, and other specimens can be fixed up to two days. Large specimens can be fixed for up to three days. The specimen is usually kept in Bouin's for 24 hours and then transferred to 70% alcohol. If the tissue is still yellow in the paraffin block, put the hydrated sections in something weakly alkaline to remove residual picric acid, then was well with water before staining. Retained picric acid
interferes with some stains, including those used for blood cells. Bouin's fixative is the primary mordant solution in the trichrome stains.

Reagents / Contents
Saturated picric acid, Formaldehyde, Glacial acetic acid
Appearance: Clear, colourless solution.

Storage and Stability
All reagents are stable at room temperature until the expiry date stated on each label. Do not spray fixative onto open fire. Avoid inhaling the spray.

Procedure
Fixed tissue may be retained in 10% formalin or 70% alcohol. Prior
to staining, remove the picric acid from the tissue by: -
a) washing in tap water, b) grades of alcohol (50%), or c) 70% alcohol saturated with lithium carbonate.
Note: For small biopsies fix in 2-4 hours, for large specimens may remain in fixative for a maximum of 72 hours.

Warranty
This product is designed to perform as described on the label and pack insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference
Carson, F, Histotechnology: A Self-Instructional Text, pp 19, 1st ED, 1992, ASCP Press
Crookham, J, Dapson, R, Hazardous Chemicals in the Histopathology Laboratory, 2nd ED,1991,
Anatech. Data on file: UltraCare Diagnostics.

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