INTENDED USE

Harris Hematoxylin may be used as a nuclear stain in cytology and histology.

PRODUCT SUMMARY

Hematoxylin dye is oxidized to hematein, which is reacted with a metal ion (mordant) to form the active staining component. Since alum is typically used as the mordant, the solution is often referred to as hemalum. The hemalum attaches specifically to tissue phosphoric acids (DNA and RNA). Nuclear selectivity is increased in ANATECH's Harris Hematoxylin due to an excess of alum. The excess positively charged aluminum ions compete with the hemalum at tissue binding sites. This theory explains the lack of acidic mucus (e.g., goblet cells) staining with Harris Hematoxylin, unlike Gill formulations, which stain these acidic mucins.

INGREDIENTS

Acetic acid, aluminum ammonium sulfate, SDA-3A alcohol, hematoxylin, sodium iodate

WARNING

Avoid contact with skin and eyes.

For In Vitro Diagnostic Use.

STORAGE

Store at room temperature, away from direct sunlight. Keep containers tightly closed when not in use.

DIRECTIONS FOR USE

1. Filter before use.

2. *Differentiation:* ANATECH Harris Hematoxylin can be used progressively or regressively to produce crisp nuclear chromatin patterns against a colorless background. However, slide adhesives and/or the microscope slide glass itself may bind hematoxylin non-specifically. To remove this unwanted color, differentiate the stained slide with a weak acid solution. Alcoholic acetic acid (10% acetic acid in 95% alcohol) can be used for 1 minute without attacking hematoxylin bound to nucleic acids. For faster acting differentiation, use 0.1% hydrochloric acid in 95% alcohol for a few seconds.

3. *Bluing:* Hemalum acts as a pH indicator that is red at low pH and blue/purple at alkaline pH. The acid differentiation causes the tissue sections to turn red/burgundy in appearance. Exposing the tissue to an alkaline bluing solution (e.g., Scott's Tap water, tap water, ammonium water) results in the final blue color. Exposure to extremely alkaline bluing solutions can result in loss of tissue sections from the glass slide.

ANATECH Harris Hematoxylin will provide the exquisite nuclear staining for which Harris formulations are known, in a solution with unprecedented stability. The following staining schedule is designed to produce satisfactory results for most users. However, optimal staining can be achieved only with properly fixed and processed specimens. Inadequate fixation,

and excessive exposure to dehydrants, clearants, or heat can alter the quality of staining. Please call 1.800.ANATECH (1.800.262.8324) for assistance in obtaining optimal results.

RECOMMENDED STAINING SCHEDULE

1. Clearant x 3 ....3 minutes each
2. 100% alcohol x 2 ....1 minute each
3. 95% alcohol ....1 minute
4. 70% alcohol ....1 minute
5. Distilled or deionized water..................1 minute
6. ANATECH Harris Hematoxylin ....2.0 to 4.0 minutes
7. Water ....1 minute
8. Acid alcohol ....1 minute
9. Water ....1 minute
10. Bluing reagent ....1 minute
11. Water ....1 minute
12. 70% alcohol ....1 minute
13. ANATECH Eosin Y ....0.5 to 3.0 minutes
14. 95% alcohol ....1 minute
15. 100% alcohol x 3 ....1 minute each
16. Clearant x 3 ....1 minute each

DISPOSAL

Dispose of all chemicals in accordance with Federal, state and local codes. In many localities, stain waste can be discarded into the sanitary sewer system after decolorization and neutralization. To prepare hematoxylin for drain disposal:

1. Decolorize the solution by over-oxidizing with sodium iodate (add enough oxidant to turn the solution brown or yellow). WARNING: Do not use bleach to decolorize hematoxylin solutions as toxic chlorine fumes may be released.

2. Neutralize with sufficient sodium bicarbonate to bring to pH 7.0 - 8.0, let sit overnight, and filter.

3. The resultant solution is ready for disposal into the sanitary sewer system provided approval is granted by local authorities. The precipitate consists of aluminum hydroxides, which may be discarded as you would any solid chemical of low toxicity.

MSDS

MSDS available online at www.anatechltdusa.com

ORDERING INFORMATION FOR HARRIS

Cat#	Packaging
842	1 gallon