MenidiMedica
Biotechnology Applications

Gill's Hematoxylin

The Ideal Staining Solution for Cellular Analysis

Let's Work Together

FLEXIBILITY IN NUCLEAR STAINING

Unlock the power of precise cellular staining with Gill's Hematoxylin, meticulously formulated to provide exceptional results for both cytology and histology applications. Discover the merits of Gill's Hematoxylin and harness the chemical principles behind its effectiveness for outstanding staining outcomes.

PRODUCT

Ref.No.: 70420 - Gill I, 70421 - Gill II, 70422 - Gill III

1. Gill's Hematoxylin No. 1 (Single Strength):
   - Lower strength formulation, ideal for staining cytology specimens.
2. Gill's Hematoxylin No. 2 (Double Strength):
   - An intermediate formulation suitable for counterstaining in immunohistochemistry (IHC) and routine histology. Offers more intense cytological staining.
3. Gill's Hematoxylin No. 3 (Triple Strength):
   - The most potent formulation for intense histological staining of nuclei, significantly reducing staining times.

BACKGROUND

Cytomorphology, the study of cellular health and disease, is paramount in understanding cellular function and growth activity. Hematoxylin, a widely used nuclear stain, plays a vital role in visualizing cytomorphologic patterns.

CHEMICAL PRINCIPLES

Gill's Hematoxylin is derived from logwood extract, consisting of hematoxylin and hematein. It is effectively oxidized to hematein and combined with an iron mordant to enhance chromatin selectivity. This formulation is enriched with acidifier to maintain pH and solvent to prevent sheen formation, ensuring longer stability and controlled nuclear staining.

DIRECTIONS FOR USE

- Use Gill's Hematoxylin formulations at full strength.
- No mixing or dilution is required.
- Filtration is recommended for repeated use to control cellular cross-contamination in cytology.

CYTOLOGY SPECIMEN PREPARATION

- Best results with fresh, unfixed material, wet-fixed in 95% ethyl alcohol.
- Air-dried cells protected by water-soluble wax should be immersed in 95% ethyl alcohol.
- Maintain wet conditions for wet-fixed cells, and avoid air-drying before or after fixation.

HISTOLOGY SECTIONS

- Suitable for tissue fixed by any fixative, except those with mercuric chloride.
- Removal of mercury deposits is necessary, and the process is detailed in standard histological texts.

RESULTS

- Chromatin is stained blue to blue-black, while nucleoli are delicately stained.
- Cytoplasm is scarcely tinted, eliminating the need for acid differentiation.
- Barr bodies are conspicuously stained.
- Extended shelf life ensures cost-effective usage.

STORAGE

- Store in the dark at room temperature in tightly capped containers.
- Minimize air oxidation by limiting air-space in containers.

INDICATIONS OF DETERIORATION

- Brown solutions indicate excessive acetic acid or over-oxidization.
- Purple solutions suggest diminished acetic acid, causing a loss of selectivity for chromatin.
- Metallic sheen or scum formation occurs with prolonged exposure to air.
- Unlock the full potential of cellular staining with Gill's Hematoxylin, a reliable choice for accurate results in cytology and histology. Trust the expertise of Gary W. Gill's formulation for your staining needs.

REFERENCES

1. Frost, J.K. The Cell in Health and Disease, Williams and Wilkins, Baltimore, 1969.
2. Bohmer, F: Awerztl, Intelligenzb, (Munich) 12:539-550, 1865.
3. Baker,J.R.:Quart,J.Micr.Sci103:493-517,1962.
4. Gill,G.W.:Cytotechn,Bull.12(3):12-13,1975.
5. Gill, G.W.: "Principles and Practice of Cytopreparation," chapter in Handbook of Laboratory Animal Science, Vol. III. Altman, N.H. and Melby, E.C., Eds., CRC Press, Cleveland, 1976, pp.519-551.
6.Sagi, E.S. and MacKenzie, L.L.: Am. J. Ob. Gyn, 73:437-439, 1957.

CONTACT US TODAY

Website: www.menidimedica.gr
Phone: +302681088000, +306937115868
Email: menidimedica@gmail.com