Hematoxylin Stain Solution (Gill I)

Introduction

Hematoxylin is a basic natural dye that stains cell nuclei. The primary component of nuclear chromatin is DNA; within the double helix structure of DNA, phosphate groups on the two nucleotide chains face outward, causing the exterior of the DNA double helix to carry a negative charge and exhibit acidic properties. Consequently, it readily binds to the positively charged hematoxylin basic dye via ionic or hydrogen bonds, resulting in staining.

This solution is classified as a semi-oxidized hematoxylin solution. It contains a low concentration of hematoxylin and functions as a progressive stain; therefore, hydrochloric acid ethanol differentiation is not required after staining. It is particularly suitable for cytological smear staining.

Storage

Store at room temperature protected from light, stable for 1 year.

Protocol

1. Fix the cell smear in 95% alcohol for 15 min.
2. Gently rinse with tap water for 30 sec.
3. Stain with Hematoxylin Stain Solution (Gill I) for 1.5-3 min, then rinse with water.
4. Rinse with tap water for 10 min or blue with bluing solution for 15-60 sec, followed by rinsing with distilled water for 30 sec.
5. Perform operations according to specific experimental requirements.

Note

1. For your safety and health, please wear lab coats and gloves during the experiment.
2. For research use only. Not to be used in clinical diagnostic or clinical trials.

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