



## Hematoxylin (Delafield's)

S014

Hematoxylin (Delafield's) is used as staining solution for Blood films for spirochaetes, Protozoa and other purpose.

### Composition\*\*

#### Ingredients

Haematoxylin	4.0 gm
Alcohol 95%	25.0 ml
Saturated ammonium alum solution	400.0 ml
Glycerine	100.0 ml
Methyl alcohol	100.0 ml

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

#### Procedure :

1. Flame the slide and place in Xylene for 3-4 minutes. Repeat xylene treatment with agitation.
2. Dip in 100% absolute alcohol for 30-60 seconds. Next dip in 90%, 80% and in 70% absolute alcohol. Wash in tap water and rinse in distilled water.
3. Stain with Haematoxylin Delafields (S014) for 15 minutes. Wash in tap water.
4. Dip in 0.5% (v/v) hydrochloric acid.
5. Rinse in tap water for 30-60 seconds.
6. Dip in dilute ammonia water till section appears blue.
7. Wash in tap water and then rinse in 95% alcohol.
8. Agitate in eosin solution for 10-60 seconds. Drain stain solution.
9. Dip slide in 70% alcohol for 30-60 seconds.
10. Place in 95% alcohol for 30-60 seconds.
11. Place in absolute alcohol 2 changes (30-60 seconds)
12. Place the slide twice in xylene for 30-60 seconds.
13. Drain excess xylene and mount on DPX or Canada balsam with a cover slip.

The first 2 steps of the procedure are collectively referred to in all staining procedures as “deparaffinize.” The last 3- 8 steps are referred to in all staining methods as “dehydrate, clear, and mount.”

### Principle And Interpretation

Haematoxylin - Eosin is the most commonly used stain, which is specific for certain substances of diagnostic importance. Here, acid reacting components of the cell combine with alkaline dyes and the alkaline area react with acid dyes. This stain is available for amyloid, lipids, inorganic substances such as iron and calcium, pigments like melanin and hemosiderin, carbohydrates and mucopolysaccharides.

### Quality Control

#### Appearance

Violet coloured solution.

#### Clarity

Clear without any insoluble particles.

#### Microscopic Examination

Blood staining is carried out where hematoxylin is used as one of the stains and staining characteristics are observed under microscope by using the oil immersion lens.

**Results**

Nuclei : blue

Cytoplasm : pink

**Storage and Shelf Life**

Store below 30°C in tightly closed container and away from bright light. Use before expiry date on label.

**Reference**

- 1.Clark G (Ed) 1981, Staining Procedures, 4th edition, Published for the Biological Stain Commission by Williams & Wilkins, London.
- 2)Bauer J.D., Ackermann P.G. and Toro G. (Eds.), 1974, Clinical Laboratory Methods, 8th ed., The C.V. Mosby Co., St. Louis.

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