

# H&E (HEMATOXYLIN & EOSIN) STAIN

METHOD – MICROSCOPY  
PRODUCT CODE – ST28



## INSTRUCTIONS FOR USE

**INTENDED USE: Test for differential staining of cells for detection of parasites by Giemsa stain.**

### SUMMARY

Hematoxylin and Eosin (H & E) staining is the most common staining technique in histopathology. This uses a combination of two dyes, Hematoxylin and Eosin used for demonstration of nucleus and cytoplasmic inclusions in clinical specimens.

### METHOD PRINCIPLE

Alum acts as mordant and hematoxylin containing alum stains the nucleus light blue. This turns red in presence of acid, as differentiation is achieved by treating the tissue with acid solution. Bluing step converts the initial soluble red colour within the nucleus to an insoluble blue colour. The counterstaining is done by using eosin which imparts pink colour to the cytoplasm.

### REAGENTS

Haematoxylin (Harris) : Haematoxylin, Potassium alum and Mercuric oxide  
Eosin : Eosin, Buffer

### PRECAUTIONS

This product should be used by properly trained individuals. Precautions should be taken against the dangers of microbiological hazards by properly sterilizing specimens, containers and media after use. Directions should be read and followed carefully.

### STORAGE

Store product in its original container at room temperature (<30 °C) until expiry. Keep container tightly closed during storage. Avoid exposure to bright light.

### PRODUCT DETERIORATION

This product should not be used if:

1. The colour has changed.
2. The expiration date has passed.
3. There are other signs of deterioration.

### MATERIALS REQUIRED BUT NOT SUPPLIED

1. Microscopic Slides.
2. Microscope.
3. DPX mountant.
4. Dehydrant (Denatured Alcohol)
5. Spirit Lamp
6. Coplin Jars with Lids

### SPECIMEN COLLECTION

Clinical Samples – Blood Smear, Body Fluids, Soft tissue, Normal tissue. For clinical samples follow appropriate techniques for handling specimens as per established guidelines.

### REAGENT PREPARATION:

Reagents are ready to use. No prior preparation is required

### PROCEDURE

1. Bring the section to slide using suitable adhering agent.
2. Slightly warm to melt the wax.
3. Remove the wax with Xylene by giving 3 times washing.

4. Remove the Xylene in 3 times washing with Dehydrant.
5. Dip the smear into distilled water for 3 minutes.
6. Dip the smear in Haematoxylin (Harris) stain for 1min.
7. Wash with Distilled water.
8. Dip the smear in Eosin stain for 60 seconds.
9. Wash with distilled water for 15 seconds.
10. Rinse with Dehydrant and Xylene till it gets cleared.
11. Mount with glass cover using a drop of DPX.

### RESULTS AND INTERPRETATION

Refer to appropriate references for appearance of cytoplasm or differential characteristics of Papnicolau stained smears.

### RESULTS AND INTERPRETATION

Nuclei : Blue and Black  
Cytoplasm : Pink  
Muscle Fibres : Deep Red  
RBCs : Orange Red  
Fibrin : Deep Red

### QUALITY CONTROL

All lot numbers of H&E have been tested and found to be acceptable. The patient smear can serve as quality control to verify the efficacy of the staining reagents. A smear made from a patient specimen (previously identified as positive) with at least one field may also be included to verify differential staining characteristics and compare with specimen stain results. If aberrant quality control results are noted, patient results should not be reported.

### BIBLIOGRAPHY

1. Carson, Freida L; Hladik, Christa (2009). Histotechnology: A Self-Instructional Text (3 ed.). Hong Kong: American Society for Clinical Pathology Press. pp. 361–3363. ISBN 978-0-89189-581-7.

Symbol	Explanation	Symbol	Explanation
	Manufactured By		In Vitro Diagnostic Use
	Lot Number		Read Instructions Before Use
	Catalogue Number		Storage Temperature
	Manufacturing Date		Number of Tests / Volume
	Expiry Date		Do Not Reuse
	Protect from Sunlight		Keep Dry

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ISO 9001: 2015  
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