

Technical Data

Field's Stain B S009

Intended use

Field's Stain B is used as staining solution for blood films for Spirochaetes, Protozoa and other purposes.

Composition**

Ingredients

Eosin Y 2.60 gm
Disodium hydrogen phosphate 10.0 gm
Potassium dihydrogen phosphate 12.50 gm
Distilled water 974.90 ml

Directions

- 1. Dry the blood film and immerse in methanol for 2-3 minutes.
- 2. Blow off with Fields Stain A (S008) for 2-3 seconds.
- 3. Wash it with distilled water, and again blow with Fields Stain B (S009) for 2-3 seconds and wash with distilled water.
- 4. Dry it and observe under microscope.

Principle And Interpretation

Field Stains contain methylene blue and eosin. These basic and acidic dyes induce multiple colours when applied to cells. The fixative, methanol does not allow any further change in slide. The basic component of white cells (cytoplasm) is stained by acidic dye and they are described as eosinophilic or acidophilic. The acidic component (nucleus with nuclei acid) takes blue to purple shades of the basic dye and are called basophilic. The neutral component of the cells are stained by both the dyes. This staining method is used for screening thick films of malarial parasites.

Type of specimen

Clinical samples: Blood sample

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines. After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/ eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Please refer disclaimer Overleaf.

^{**}Formula adjusted, standardized to suit performance parameters

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Limitations

- 1. Films for malaria must be made immediately or no longer than 3-4 hours after blood collection.
- 2. Methanol used as fixative should be completely water free. As little as 1% water may affect the appearance of the films and a higher water content causes gross changes.
- 3. The red cells will also be affected by traces of detergent on inadequately washed slides.
- 4. Sometimes when thick films are stained they become overlaid by a residue of stain or spoil by the envelopes of the lysed red cells.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Quality Control

- → Appearance : Orange coloured solution.
- → Clarity: Clear without any particles.
- → **Microscopic Examination :** Blood staining is carried out where Field's Stain B is used as one of the stains and staining characteristic is observed under microscope.
- → **Results**: Nuclei: blue

Neutrophilic granules: lilac Eosinophilic granules: orange

Red cells: pink

Storage and Shelf Life

Store between $10 - 30^{\circ}$ C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

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Reference

1. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

- 2. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
- 3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
- 4. Shanhooltzer, C.J., P. Schaper, and L.R. Peterson Concentrated Gram stain smear prepared with a cytospin centrifuge. J. clin. Microbiol.16:1052-1056.
- 5. Staining Procedures; Fourth Edition; Williams & Wilkins; Baltimore.
- 6. Lewis M. S., Bane J. B. and Bates I., 2008, 10th
- 7. Godkar B. P., 1996, Textbook of medical laboratory technology: 34(454-458).



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