



Lactophenol Cotton Blue

S016

Intended Use

Lactophenol Cotton Blue is used for staining solution for fungi.

Composition**

Ingredients

Phenol crystals	20.0gm
Cotton blue	0.050gm
Lactic acid	20.0ml
Glycerol	20.0ml
Distilled water	20.0ml

**Formula adjusted, standardized to suit performance parameters

Directions

- 1) Place a drop of Lactophenol Cotton Blue reagent on a clean and dry slide. The stain imparts a blue colouration on hyphae.
- 2) By using a nichrome inoculating wire, carefully tease the fungal culture into a thin preparation.
- 3) Place a coverslip on the preparation. Wait for about 5 minutes.
- 4) Observe first under microscope with low power for screening in low intensity.

Principle And Interpretation

Fungus are eukaryotic organisms and they are classified into two main groups that are yeast and molds. Their cell wall is made up of chitin. Fungal cells have both macroscopic as well as microscopic structure. Lactophenol along with Cotton Blue reagent is used for staining as well as for wet mounting of fungi(1).

Wet mount preparation is the most widely used method of staining and observing fungi and is simple to prepare. The preparation has three components: Lactic acid preserves the fungal structure and clears the tissue while phenol acts as a disinfectant and cotton blue imparts blue colouration to the fungal spores and hyphae(2).

Type of specimen

Primarily with pure cultures ; Clinical samples - skin, hair and nail tissue (Certain specimens may be examined directly using this stain, others may require processing).

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3, 4). 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

Limitations :

1. Lactophenol Cotton Blue is useful in the recognition and presumptive identification of fungi. Additional microbiological tests including colony morphology and biochemical tests should be used where appropriate for final identification (2).
3. Disruption of the fragile fungal architecture during sampling may occur.
3. Wet mount staining does not allow observation of early stage differentiation of the fungus.
4. Wet mount cannot be stored over a longer period of time.

Performance and Evaluation

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

Quality Control

Appearance

Ink blue coloured solution.

Clarity

Clear, without any insoluble particles.

Microscopic Examination

Fungal staining is carried out. Fungal Spores and hyphae are observed under microscope using high power (40X) objective lens after staining with Lactophenol cotton blue.

Results

Fungal spores and hyphae : pale to dark blue.

Storage and Shelf Life

Store between 10- 30°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 (3, 4).

Reference

1. Generalmicroscience.com/microbiollaboratorytechniques/staining-fungus-using-lactophenol-cotton-blue.
2. Koneman, E.W., et al. Color Atlas and Textbook of Diagnostic Microbiology, J.B. Lippincott Company, Philadelphia, PA.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
4. 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.

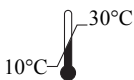
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In vitro diagnostic medical device



CE Marking



Storage temperature



Do not use if package is damaged



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