



Product Specification

cdhfinechemical.com

METHYLENE BLUE AQUEOUS STAINING SOLUTION

PRODUCT CODE 865650

Intended Use

Methylene Blue (Aqueous) is used for capsule stain and simple staining.

Principle And Interpretation

The main purpose of capsule stain is to distinguish capsular material from the bacterial cell. A capsule is a gelatinous outer layer secreted by bacterial cell and that surrounds and adheres to the cell wall. Most capsules are composed of polysaccharides, but some are composed of polypeptides. The capsule differs from the slime layer that most bacterial cells produce in that it is a thick, detectable, discrete layer outside the cell wall. The capsule stain employs an acidic stain and a basic stain to detect capsule production. A positive capsule stain requires a mordant that precipitates the capsule. By counterstaining with dyes like crystal violet or methylene blue, bacterial cell wall takes up the dye. Capsules appear colourless with stained cells against dark background. Capsules are fragile and can be diminished, desiccated, distorted, or destroyed by heating. A drop of serum can be used during smearing to enhance the size of the capsule and make it more easily observed with a typical compound light microscope. The capsule stain begins as a negative stain. Cells are spread in a film of the acidic stain and are not heat-fixed. Heat-fixing causes shrinkage of the cells, leaving an artefactual white halo around them that might be falsely interpreted as a capsule. Methylene Blue was earlier recognized as a good nuclear stain, the staining solutions are always either aged or alkalized, if not both. More importantly it is an excellent stain for ribonucleic acid, which is the important stainable constituent of bacterial bodies, of lymphocyte and hemoprotoal cytoplasm, and of nerve cell tigroid granules. Simple staining is staining with only one stain/dye. Methylene blue in simple staining gives up a hydroxide ion which leaves the stain positively charged. Since the surface of most Methylene Blue (Aqueous) is used for capsule stain and simple staining.

PARAMETER

LIMIT

Description	Blue coloured solution.
Residue on evaporation	About 0.25% w/v.
Suitability for microscopy	To pass the test.

Directions

1. Transfer aseptically a loopful of culture on a clean and dry slide.
2. Mix it with a loopful of aqueous Methylene Blue.
3. Make a smear by using a glass slide.
4. Allow it to air dry slowly.
5. Observe under oil immersion objective.

Results

Bluish Colourless (hollow bodies)

Note(s) : Assay (if applicable) method mentioned.

WARNING : -

Hazard statements :- Not hazardous. No hazards.

Precautionary statements : -

Prevention : -

Response : -

Disposal: - Dispose of contents and container in accordance with relevant legislation.

Hazard Pictogram(s) :

IMDG Code :

UN No. :

IATA :

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