

Capsule Staining Solution (India Ink Method)

C1508185

Store at room temperature long term (12 months). Store in the dark.

Introduction:

1. The capsule of bacteria can protect them against phagocytosis and digestion, and enhance their invasiveness. The capsule is not easily stained by ordinary staining methods and requires special staining techniques to be visualized for observation. The identification of bacterial capsules plays a crucial role in bacterial typing and differentiation.
2. Capsule Staining Solution (India Ink Method) uses high-quality India ink for staining. It is designed to observe the presence or absence of capsule structures on bacterial cells, thereby identifying certain bacteria, such as *Cryptococcus neoformans*. After staining, the capsule of *Cryptococcus neoformans* displaces the colloidal carbon particles in the India ink, and the bacterial cells are surrounded by distinct colorless and transparent halos. This reagent is for research use only (RUO) and is not suitable for clinical diagnosis or other applications.

Materials to Be Prepared by the User:

Glass slides, coverslips, alcohol lamps, microscopes.

Operating Procedures (For Reference Only):

1. Mix the bacterial sample with 1 drop of the staining solution on a glass slide, then cover it with a coverslip.
2. Press gently to thin the bacterial mixture.
3. Search for capsulated bacteria under the low-power microscope, then switch to the high-power or oil immersion lens for detailed identification.

Staining Results:

Cryptococcus neoformans: Thick, broad and transparent capsule with a distinct cell wall.

Background: Black.

Matters needing attention:

1. Opened staining solution within its expiration date should be used up within 6 months. Seal it tightly as much as possible after each use to prevent volatilization or deterioration.
2. Precipitation is likely to occur after long-term storage. If coarse particles are observed under the microscope, the solution should be filtered before use or discarded.
3. The target samples should be as fresh as possible. The samples and capsule staining solution must be evenly distributed.
4. The purity and concentration of the samples should be appropriate. It will be difficult to



detect *Cryptococcus neoformans* under the microscope if the concentration is too low.

5. For your safety and health, please wear a lab coat and disposable gloves during operation.

