Congo red (1% aqueous) Solution

Congo red (1% aqueous) Solution is recommended as negative stain for bacteria and spirochaetes.

**Composition**

**Ingredients**

| Congo Red  | 10 gm |
| Distilled water | 1000ml |

**Formula adjusted, standardized to suit performance parameters**

**Directions**

1. Place a drop of Congo Red solution on a clean slide.
2. Mix one or two loops of the microorganism/culture into the drop of Congo red solution.
3. Allow the smear to air-dry. NOTE: Do not heat fix the smear.
4. Rinse the smear gently with tap water and blot dry.
5. Examine the smear under oil immersion objective.

**Principle And Interpretation**

Negative Staining Techniques work in a manner opposite to simple technique. Bacteria are mixed on a slide with an acidic dye such as Congo red or the black stain, nigrosin. The mixture is smeared across the face of the slide and allowed to air dry. Because the stain carries a negative charge, it is repelled by the bacteria, which also have a negative charge. The stain gathers around the cell which often appears larger than stained cells.

**Quality Control**

**Appearance**

Intense red solution.

**Clarity**

Clear without any particles.

**Microscopic Examination**

Negative staining is carried out. Staining characteristics of organism is observed under microscope by using oil immersion lens.

**Results**

- Colourless
- Pink

**Storage and Shelf Life**

Store below 30°C in tightly closed container and away from bright light. Use before expiry date on label.

**Reference**

2nd edition, R.D. Lillie, M.D., E.H. Stotz, Ph.D., V.M. Emmel, Ph.D., M.D.

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