



Technical Data

Schaeffer & Fulton's Spore Stain-Kit

K006L

Schaeffer & Fulton's Spore Stain-Kit is used for staining bacterial spores.

Composition**

Schaeffer & Fulton's Spore Stain A (S028)

Ingredients

Malachite green	5.000 gm
Distilled water	100.000 ml

Schaeffer & Fulton's Spore Stain B(S029)

Ingredients

Safranin O	0.500 gm
Distilled water	100.000 ml

**Formula adjusted, standardized to suit performance parameters

Directions

- 1) Prepare a smear of the culture. Air dry it and fix with gentle heat.
- 2) Flood the entire slide, with aqueous malachite green/Schaeffer and Fulton's Spore Stain A (S028).
- 3) Steam for 3-6 minutes, and rinse under running tap water.
- 4) Counterstain with 0.5% aqueous safranin/Schaeffer and Fulton's Spore Stain B (S029) for 30 seconds.
- 5) Wash with water, dry and observe under oil immersion lens.

Principle And Interpretation

A spore is a dormant form of the bacterium that allows it to survive in drastic environmental conditions. Spores have a tough outer covering made of the protein keratin and are resistant to heat and chemicals. The keratin also resists staining, so extreme measures must be taken to stain the spore. In the Schaeffer-Fulton's method, a primary stain- malachite green is forced into the spore by steaming the bacterial emulsion. Malachite green is water soluble and has a low affinity for cellular material, so vegetative cells may be decolorized with water. Vegetative cells are then counterstained with safranin.

Spores may be located in the middle of the cell, at the end of the cell, or between the end and middle of the cell. Spore shape may also be of diagnostic use. Spores may be spherical or elliptical.

Members of the genus *Corynebacterium* may exhibit club-shaped swellings that might be confused with spores. Spore staining distinguishes between true spores and these structures.

Quality Control

Microscopic examination

Spore staining is carried out and staining characteristic of the organism is observed under microscope by using oil immersion lens.

Results

Spores : green

Vegetative cells : red

Storage and Shelf Life

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

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