Schaeffer & Fulton's Spore Stain A

**Intended Use:**
Schaeffer & Fulton's Spore Stain A is used for spore staining.

**Composition**

**Ingredients**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malachite green</td>
<td>5.000 gm</td>
</tr>
<tr>
<td>Distilled water</td>
<td>100.000 ml</td>
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</tbody>
</table>

**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 decolourized 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.

**Type of specimen**

Any isolated colony on primary or subculture plates can be isolated from following specimens. Clinical specimen: Blood, urine, CSF, pus, wounds, lesions, body tissues, sputum etc. From environment: Air, water, soil, sludge, waste water, food, dairy samples etc.

**Specimen Collection and Handling**

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4, 5).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1, 3).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards. (2)

Generally the smear is made in laboratory; however, when there is a concern that transport will be delayed or that the preservation for culture will alter the specimen, prepare smear and submit slides to the laboratory.

**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. If over heat fixed, the safranin will replace the malachite green in the spores as well as in vegetative cells.

**Performance and Evaluation**

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

Please refer disclaimer Overleaf.
Quality Control

Appearance
Peacock green coloured solution.

Clarity
Clear without any particles.

Microscopic Examination
Spore staining is carried out, where Schaeffer & Fulton's Stain A is used along with Schaeffer & Fulton's Stain B. Staining characteristics of organisms are observed under microscope by using oil immersion lens.

Results
Spores : green
Vegetative cells : red

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 (6,7).

Reference

In vitro diagnostic medical device
CE Marking
Storage temperature
10°C - 30°C
Do not use if package is damaged

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23 Vadhani Industrial Estate,
LBS Marg,Mumbai-86,MS,India

CE Partner 4U ,Esdoornlaan 13, 3951
DB Maarn The Netherlands,
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