Picric Acid (Saturated, Aqueous)

**Intended Use**
Picric Acid (Saturated, Aqueous) is used as solution for fungal testing.

**Composition**

**Ingredients**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picric acid</td>
<td>1.180 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. Place a drop of Picric Acid (S026) on a clean and dry slide and place fungal culture in it. The stain imparts a yellow colouration on hyphae.
2. By using a nichrome inoculating wire, carefully tease the fungal culture into a thin preparation.
3. Place a coverslip on the preparation. Wait for about 5 minutes and observe first under microscope with low power for screening in low intensity.

**Principle And Interpretation**

Fungus are eukaryotic organism and they are classified into two main groups that is yeast and molds. Its cell wall is made up of chitin. Fungal cells have both macroscopic as well as microscopic structure. Picric Acid (Saturated, Aqueous) is used as solution for fungal testing.

Wet mount preparation is the most widely used method of staining and observing fungi and is simple to prepare. Picric acid is one of the nitrophenols. It is 2,4,6-trinitrophenol. It has antibacterial as well as antifungal properties and stains the fungal spores and hyphae as pale to dark yellow coloured.

**Type of specimen**

Primarily with pure cultures ; Clinical samples - skin, hair and nail tissue (Certain specimens may be examined directly using this stain, others may require processing).

**Specimen Collection and Handling**

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3, 4).

After use, contaminated materials must be sterilized by autoclaving before discarding.

**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. Picric Acid is useful in the recognition and presumptive identification of fungi. Additional/ detective studies including colony morphology and biochemical tests should be used where appropriate for final identification (2).
2. Disruption of the fragile fungal architecture during sampling may occur.
3. Wet mount staining do not allow observation of early stage differentiation of the fungus.
4. Wet mount can not be stored over longer period of time.

**Performance and Evaluation**

Performance of the product is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.
Quality Control
Appearance
Yellow coloured solution.

Clarity
Clear may have slight precipitate at the bottom.

Microscopic Examination
Fungal staining is carried out. Fungal Spores and hyphae are observed under microscope after staining with Lactophenol along with picric acid.

Results
Fungal spores and hyphae: pale to dark yellow.

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 (3, 4).

Reference