D.T.M. Agar Base (Dermatophyte Test Agar Base)

Intended Use:
Recommended for selective isolation of dermatophytes.

Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soya peptone</td>
<td>10.000</td>
</tr>
<tr>
<td>Dextrose (Glucose)</td>
<td>10.000</td>
</tr>
<tr>
<td>Phenol red</td>
<td>0.200</td>
</tr>
<tr>
<td>Agar</td>
<td>20.000</td>
</tr>
<tr>
<td>**Final pH (at 25°C)</td>
<td>5.5±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

Directions
Suspend 20.10 grams in 500 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Aseptically add the rehydrated contents of one vial of Dermato Supplement (FD015). Mix well before pouring into sterile Petri plates.

Principle And Interpretation
The Dermatophytes are a distinct group of fungi that infect the hair, skin and nails of humans and animals producing a variety of cutaneous infections known as ringworm (2). Dermatophytes like Trichophyton, Microsporum and Epidermatophyton are responsible for most of the cutaneous fungal infections (1). DTM Agar Base was developed by Taplin as a selective and differential medium for detection and identification of dermatophytes (2). On this medium identification of Dermatophytes are based on morphology and alkaline metabolites production. A combination of three antimicrobial agents (cycloheximide, chlortetracycline and gentamicin) inhibits bacteria and saprophytic yeasts and moulds. Dermatophytes are presumptively identified based on gross morphology and the production of alkaline metabolites, which raise the pH and cause the phenol red indicator to change the color of the medium from yellow to pink-red (2-4).

Soya peptone provides nitrogenous and carbonaceous substances essential for growth. Glucose is the energy source. The pH indicator, phenol red, is used to detect amine production. Cycloheximide (5) (as FD) inhibits most of the saprophytic fungi. Gentamicin inhibits gram-negative bacteria including Pseudomonas species while chlortetracycline inhibits a wide range of gram-positive and gram-negative bacteria. The presence of growth on the medium provides presumptive identification of dermatophytes. D.T.M. Agar helps in isolation and early recognition of members of the Microsporum, Trichophyton by means of the distinct colour change from yellow to red. Rapidly growing species may effect a complete colour change within 3 days while slow growers will change colour in proportionately longer time. Non-Dermatophytes can be recognized by the absence of colour change. A few saprophytes, yeasts and bacteria change the medium from yellow to red, but can be easily distinguished by colonial morphology. Complete classification of Dermatophytes depends on microscopic observations along with biochemical and serological tests.

Type of specimen
Clinical samples - Scraping of skin, hair,nail lesion, scaling scalp lesions

Specimen Collection and Handling:
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5). 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.

Please refer disclaimer Overleaf.
Limitations:
1. False-positive reactions may result, if interpretations are made beyond 6 days of incubation.
2. If the abeyant area of an infection is cultured, false-negative reactions may arise.
3. If the specimen is heavily contaminated, saprophytic fungi may result in a color change on the medium.

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

Quality Control
Appearance
Light yellow to pink homogeneous free flowing powder

Gelling
Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium
Orange red coloured, slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4% w/v aqueous solution at 25°C. pH : 5.5±0.2

pH
5.30-5.70

Cultural Response
Cultural characteristics observed with added Dermato Supplement (FD015), after an incubation at 25-30°C for 6 days.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth</th>
<th>Colour of Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td># Aspergillus brasiliensis ATCC 16404 (00053*)</td>
<td>none-poor</td>
<td></td>
</tr>
<tr>
<td>Candida albicans ATCC 10231 (00054*)</td>
<td>good</td>
<td></td>
</tr>
<tr>
<td>Microsporum audouinii ATCC 9079</td>
<td>good</td>
<td>pink-red</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa ATCC 27853 (00025*)</td>
<td>none-poor</td>
<td></td>
</tr>
<tr>
<td>Trichophyton mentagrophytes ATCC 9533</td>
<td>good</td>
<td>pink-red</td>
</tr>
</tbody>
</table>

Key: *Corresponding WDCM numbers.
# - Formerly known as Aspergillus niger

Storage and Shelf Life
Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Use before expiry date on the label. Product performance is best if used within stated expiry period.

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 (4,5).
Reference


Revision :02/ 2019

In vitro diagnostic medical device
CE Marking
Storage temperature

Do not use if package is damaged

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