

## D.T.M Agar Plate (Dermatophyte Test Agar Plate)

MP188

### Intended use

Recommended for selective isolation of dermatophytes.

### Composition\*\*

<b>Ingredients</b>	<b>g / L</b>
Soya peptone	10.000
Glucose (Dextrose)	10.000
Phenol red	0.200
Agar	20.000
<b>CCG Selective Supplement (FD015) 1 vial</b>	
Cycloheximide	250mg
Chlortetracycline	50mg
Gentamicin	50mg
Final pH ( at 25°C)	5.5±0.2

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

### Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

### 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 (1). Dermatophytes like *Trichophyton*, *Microsporum* and *Epidermatophyton* are responsible for most of the cutaneous fungal infections (2). DTM Agar Base was developed by Taplin as a selective and differential medium for detection and identification of dermatophytes (1). 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 (1,3,1).

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, etc.

### 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. For professional use only. Read the label before opening the pack. 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. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

## 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

Sterile D.T.M Agar in 90 mm disposable plates with smooth surface and absence of black particles/cracks/bubbles.

#### Colour of medium

Orange red coloured medium.

#### Quantity of medium

25 ml of medium in 90 mm disposable plates.

#### pH

5.30 - 5.70

#### Sterility Check

Passes release criteria

#### Cultural Response

Cultural characteristics observed after an incubation at 25-30°C for 6 days.

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

Key : \*- Corresponding WDCM numbers ;

# - Formerly known as *Aspergillus niger*;

§Formerly known as *Trichophyton mentagrophytes* .

## Storage and Shelf Life

On receipt store between 2-8°C 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

1. Rosenthal S., Stritzler R. and Villafane J., 1968, Arch. Dermatol., 97:685.
2. Kwon-Chung and Bennett, 1992, Medical Mycology, Lea & Febiger, Philadelphia, Pa.
3. Murray P. R., Baron J. H., Pfaller M. A., Tenover J. C. and Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

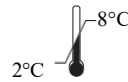
Revision : 02/ 2024



HiMedia Laboratories Pvt. Limited,  
Plot No.C-40, Road No.21Y,  
MIDC, Wagle Industrial Area,  
Thane (W) -400604, MS, India



*In vitro* diagnostic  
medical device



Storage temperature



CEpartner4U, Esdoornlaan 13,  
3951DB Maarn, NL  
www.cepartner4u.eu



CE Marking



Do not use if  
package is damaged

**Disclaimer :**

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.