Granulated® HIMEDIA®

Technical Data

D.T.M. Agar Base (Dermatophyte Test Agar Base),Granulated® GM188

Intended Use:

For selective isolation of dermatophytes.

Composition**

Ingredients	g / L
Soya peptone	10.000
Dextrose (Glucose)	10.000
Phenol red	0.200
Agar	20.000
Final pH (at 25°C)	5.5±0.2

**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 CCG Selective 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 (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 (1,3,4). 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 (4) (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 (5,6).
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 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. 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 granulated media.

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 CCG Selective Supplement (FD015), after an incubation at 25-30°C for 6 days.

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

Key : *Corresponding WDCM numbers.

Formerly known as *Aspergillus niger*

#Formerly known as *Trichophyton mentagrophytes*

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. 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 (5,6).

Reference

1.Taplin, Zaias, Rebell and Blank, 1969, Arch. Dermatol., 99:203-209.
2.Rosanthal S., Stritzler R. and Villafane J., 1968, Arch. Dermatol., 97:685.
3.Kwon-Chung and Bennett, 1992, Medical Mycology, Lea & Febiger, Philadelphia, Pa.
4.Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
5.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6.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.

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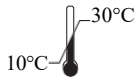
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EU REP

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CE Marking

Do not use if package is damaged

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