DERMATOPYTE TEST MEDIUM

- For in vitro use only - Catalogue No. PD80 & TD80

Our Dermatophyte Test Medium is used for the selective isolation of dermatophytes and other pathogenic fungi from clinical specimens.

Dermatophytes are keratinophilic fungi capable of infecting the keratinized tissues (hair, nail, skin, etc.) of humans and other mammals. Human infections are usually cutaneous infections termed tinea or ringworm.

Taplin et al. developed DTM as a screening medium for the isolation of dermatophytes from clinical specimens. modified version of Sabouraud Dextrose Agar.

Dermatophyte Test Medium is nutritionally rich, and contains papaic digest of soybean meal and dextrose, which supply all the essential amino acids, and growth factors needed to stimulate mold sporulation and pigment production. Cycloheximide, gentamicin and chlortetracycline are potent antibiotics incorporated into the medium to eliminate the growth of saprophytic molds and unwanted bacteria commonly contained in clinical samples. The medium also contains the color indicator phenol red that aids in the detection of dermatophyetes; dermatophytes release alkaline end products during their growth thus causing the medium to change from yellow to pinkish-red.

Formula per Litre of Medium

Papaic Digest of Soybean Meal	10.0 g
Dextrose	10.0 g
Agar	20.0 g
Cycloheximide	0.5 g
Gentamicin	0.1 g
Chlortetracycline	0.1 g

pH 5.5 ± 0.2

Recommended Procedure

General

1. Allow medium to reach room temperature.
2. Streak specimen onto the medium as to obtain isolated colonies.
3. Incubate aerobically at room temperature for up to 7 days.
4. Examine after 48 hours and intermittently there after.

Dermatophyte Detection

1. Allow medium to reach room temperature.
2. Place skin, nail scrapings, hair, or other relevant samples directly on the agar surface. A non-selective Sabouraud Dextrose Agar plates can be concurrently inoculated as a control.
3. Implant cutaneous samples by gently pressing the samples into the agar using a sterile instrument.
4. Incubate aerobically at room temperature (25 to 35°C).
5. Examine after 72 hours and perform a final evaluation after 7 days of incubation.

Interpretation of Results

Dermatophytes will grow as fuzzy colonies and the medium will exhibit a red color change after the 7-day incubation period. Identification of a dermatophyte species is often based on colonial morphology and microscopic morphology. Colony morphology should include the colors of the surface and reverse of the colony, the texture of the surface (powdery, granular, woolly, cottony, velvety, or glabrous), the topography (elevation, folding, margins, etc.), and the rate of growth.

Additional physiological or biochemical tests may be needed for accurate identification of dermatophytes.

- *If growth occurs on the Sabouraud dextrose agar plate but not on the DTM then the organism is not a dermatophyte*
- *Plates should be read after 7 days of incubation. Reading plates after this period may result in false positives as non-dermatophyte fungi but grow and produce a color change*
- *Certain yeasts may grow on this medium and produce a red color change but can be distinguished by their colony morphology*

Quality Control

After checking for correct pH, color, depth, and sterility, the following organisms are used to determine the growth performance of the completed medium.

Organism	Expected Result
Trichophyton mentagrophytes ATCC 9533	Growth, red color change
Candida albicans ATCC 10231	Growth
Escherichia coli ATCC 25922	Inhibition

Storage and Shelf Life

Our Dermatophyte Test Medium should be protected from direct light and stored at 4 to 8°C with the medium side uppermost to prevent excessive accumulation of moisture on the agar surface. Under these conditions this medium has a shelf life of 12 weeks from the date of manufacture. Our tubed medium has a shelf life of 26 weeks from the date of manufacture.

Ordering Information

Cat#	Description	Format
PD80	Dermatophyte Test Medium [Standard 15x100-mm plate]	10/pkg
TD80-16	Dermatophyte Test Medium Slant [20x150-mm Screw Cap Tube]	10/pkg

References

1. Taplin, Zaias, Rebell, Blank. Arch Dermatol 99:203-9, 1969.
2. Rebell E, Taplin D. Dermatophytes. 2nd ed. Miami: University of Miami Press, 1970.
3. Larone. Medically important fungi: a guide to identification. 3rd ed. Washingtion: ASM, 1995.
4. Murray, P.R., E. Baron, M. Pfaller, F. Tenover, R. Yolken. Manual of Clinical Microbiology. 7th ed. Washington: ASM, 1999.

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