

Dermatophytes Selective Agar (DTM) acc. to TAPLIN

Culture medium proposed by TAPLIN et al. (1969, 1970) for the isolation and rapid differentiation of dermatophytes from specimens including those infected with other microorganisms.

IVD

In Vitro Diagnostic Medical Device –

For professional use only



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Merck KGaA, 64271 Darmstadt

*See also General Instruction for Use
„How to use Dehydrated Culture Media“*

*For MSDS, warnings and precautions see our website:
www.merck-chemicals.com*

Principle

Microbiological method.

General Information

The comparative studies of MERTZ et al. (1970) demonstrated that the selectivity of Dermatophytes selective agar (DTM) is superior to that of other media used for cultivating fungi. According to ALLEN et al. (1970), this medium offers the advantage that the dermatophytes grow rapidly and produce an unmistakable colour change.

Mode of Action

This culture medium contains the pH indicator phenol red and the selective inhibitors cycloheximide, gentamicin and chlorotetracycline, which partly suppress the growth of bacteria, yeasts and moulds. When grown on DTM, most dermatophytes produce basic metabolites, which bring about an alkalization of the acidic culture medium, causing the phenol red to change its colour from yellow to red. This colour change may, however, occasionally be caused by other microorganisms, too. Many moulds produce acidic metabolites, which do not change the colour of the culture medium. According to the authors, it is thus possible to differentiate rapidly between dermatophytes and other fungi with a high degree of accuracy (approx. 97 %).

Typical Composition (g/litre)

Peptone from soymeal 10.0; D(+)-glucose 10.0; cycloheximide 0.5; gentamicin sulfate 0.1; chlorotetracycline 0.1; phenol red 0.2; agar-agar 17.0.

Preparation and Storage, Cat. No. 1.10896. Dermatophytes Selective Agar (DTM) acc. to TAPLIN (500 g).

Preparation

Suspend 38 g/litre, autoclave under mild conditions (10 min at 121 °C), pour plates or prepare slant tubes.

pH: 5.5 ± 0.2 at 25 °C.

The plates are clear and yellow-orange.

Storage

Usable up to the expiry date when stored dry and tightly closed at +15 to +25 °C. Protect from light.

After first opening of the bottle the content can be used up to the expiry date when stored dry and tightly closed at +15 to +25 °C.

Specimen

e.g. Nails, hair, skin.

Clinical specimen collection, handling and processing, see general instructions of use.

Experimental Procedure

Inoculate the surface of the culture medium with specimens obtained by appropriate methods.

Incubation: 7 days, possibly up to 3 weeks at approx. 28 °C aerobically.

Literature

ALLEN, A.M., DREWRY, R.A., a. WEAVER, R.E.: Evaluation of a new color indicator media for diagnosis of dermatophytosis. - Arch. Derm., 102; 68-70 (1970).

MERTZ, W.G., BERGER, C.L., a. SILVA-HUTNER, M.: Media with pH-indicator for the isolation of dermatophytes. - Arch. Derm., 99; 203-209 (1969).

TAPLIN, D., ALLEN, A.M., a. MERTZ, P.M.: Experience with a new indicator medium (DTM) for the isolation of dermatophyte fungi, in "Proceedings of the International Symposium of Mycoses", scientific publication 205. Washington, D.C. Pan American Health Organization, 55-58 (1970).

Ordering Information

Product	Ordering No.	Pack size
Dermatophytes Selective Agar (DTM) acc. to TAPLIN	1.10896.0500	500 g
Merckoplate® Dermatophytes Selective Agar (DTM) acc. to TAPLIN	1.10422.0001	1 x 20 plates

Dermatophytes Selective Agar (DTM) acc. to TAPLIN

Quality control (incubation: 7 days at 28 °C, aerobic)

Test strains	Growth	Colour change to red
Trichophyton mentagrophytes ATCC 18748	poor / good	+
Trichophyton rubrum ATCC 28188	poor / good	+
Microsporum gallinae ATCC 12108	poor / good	+
Microsporum canis ATCC 36299	poor / good	+
Geotrichum candidum DSMZ 1240	fair / good	±
Candida albicans ATCC 10231	good / very good	+
Aspergillus brasiliensis formerly Asp. niger ATCC 16404	none / poor	
Penicillium commune ATCC 10428	none / poor	
Saccharomyces cerevisiae ATCC 9763	none	
Bacillus cereus ATCC 11778	none	
Escherichia coli ATCC 25922	none	
Staphylococcus aureus ATCC 25923	none	



Candida albicans ATCC 10231



Geotrichum candidum DSMZ 1240