

FUNGAL CULTURE SYSTEM DERMATOPHYTE TEST MEDIUM

PRODUCT INFORMATION AND INSTRUCTIONS FOR VETERINAY USE ONLY

Introduction

This fungal culture system is designed to provide a simple and comprehensive analysis of the pathogenic fungus that cause most fungal infections seen in veterinary medicine.

History / Summary

DTM is a preferred medium for isolation and early detection of members of Microsporium, Trichophyton, and Epidermophyton genera by means of the distinct color change. Rapid growing species may effect a complete medium color change in as few as 23 days. The slower growing species will change the indicator in proportionately longer time periods. Other organisms may grow on DTM but can be recognized as non dermatophytes by the absence of color change. A few organisms, including saprophytes and yeasts are capable of changing the medium from orange to red, but they are easily recognized by their distinctive colonial morphology.

Specimen Collection

Sample collection (critical to successful culturing of dermatophytes): Samples can be collected from any animal species with a suspected dermatophyte infection. The site should be cleaned if grossly contaminated. Soap and water may be used gently to avoid mechanical removal of infected material. A gauze sponge soaked in 70% alcohol may be laid over the sample site for 30 seconds or wiped gently over the site. Let the site dry

before collecting sample. Clean forceps and/or scalpel may be used to obtain infected hairs, skin scales and crusts. The periphery of active lesions is the best area to obtain the samples. Fluorescing hairs and skin fragments observed under a Wood's lamp are excellent specimens.

Procedure

Allow vial to warm to room temperature before inoculation. As soon as possible after receipt, the specimen should be inoculated onto the DTM Agar surface. Transfer specimen to agar surface and gently implant specimen in the surface of the agar. Specimens may contain fragments of skin, nails, hair, pus, etc. Replace lid on plate or cap vial loosely and incubate in the dark at room temperature (25-30°C) for 10 days maximum. Incubate plates in an inverted position. (Lid on Bottom)

Interpretation

Examine vial every 23 days for characteristic color change on DTM and colony appearance. The orange to red color change must occur simultaneous with a white fluffy or white granular growth to interpret as a positive test. Most pathogenic dermatophytes will produce full color change from orange to red in 36 days on the DTM medium while most saprophytic fungi and bacteria are inhibited. Certain strains of yeast (Candida albicans) are capable of converting the indicator to red, but the yeasts can be identified by their white bacteria like colonial appearance on the DTM medium.

Microsporium canis	
DTM Red color change	White fluffy middle area, golden yellow border, yellow underside.
Microsporium gypseum	
DTM Red color change	Light brown border, white rapidly spreading mycelium. Tan underside.
Trichophyton mentagrophytes	
DTM Red color change	Granular, white, sugarlike. Variable colours on underside.
Trichophyton tonsures	
DTM Red color change	Velvety texture with rugose folds. Reddishbrown underside.
Trichophyton tonsures	
DTM Red color change	Velvety texture with rugose folds. Reddishbrown underside.
Trichophyton rubrum	
DTM Red color change	White, fluffy downy appearance. Dark red underside.
Epidermophyton floccosum	
DTM Red color change	Restricted growth, olive green to pale yellow. Brownish underside.
Trichophyton terrestre	
DTM Red color change	Buff yellow, powdery. Pale to yellow underside

Limitations

The complete classification of dermatophytes depends upon microscopic observations of direct and slide culture preparations along with physiological and serological tests.

Storage

Store vials or plates at 28°C. Vials, and plates in sealed bags are stable at room temperature for up to 90 days. DO NOT ALLOW VIALS TO FREEZE. If vials freeze they cannot be used.

Agar Formulations

On file at Shelby Scientific



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