



## Trichophyton Agar-7

M152

Trichophyton Agar-7 is used for differentiation of *Trichophyton* species.

### Composition\*\*

Ingredients	Gms / Litre
Ammonium nitrate	1.500
Dextrose	40.000
Monopotassium dihydrogen phosphate	1.800
Magnesium sulphate	0.100
L-Histidine hydrochloride	0.030
Agar	15.000
Final pH ( at 25°C)	6.8±0.2

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

### Directions

Suspend 58.43 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense in test tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow to cool the tubes in slanted position.

### Principle And Interpretation

Nutritional tests were originally described by George and Camp (2) as an aid in the routine identification of *Trichophyton* species that seldom produce conidia or that resemble each other morphologically (2). Certain species have distinctive nutritional requirements, whereas others do not.

The method employs a casein basal medium that is vitamin-free (Trichophyton Agar-1, M531) to which different vitamins are added i.e. inositol (Trichophyton Agar-2, M532), thiamine and inositol (Trichophyton Agar-3, M533), thiamine (Trichophyton Agar-4) (M534) and nicotinic acid (Trichophyton Agar-5) (M535). The method also employs an ammonium nitrate basal medium (Trichophyton Agar-6, M536) to which histidine is added (Trichophyton Agar-7, M152) (1). The various additives added help to determine the specific vitamin and amino acid requirements of the isolates. Trichophyton Agar contains L-Histidine hydrochloride (along with the other nutrients) which is required for the growth of *Trichophyton meningii*.

The *Trichophyton* fungi are closely related to the genus *Microsporum*. *Microsporum* fungi are also saprophytic, parasitic and pathogenic in the skin, hair and nails of man and other animals. Good growth of *M. gallinae* also takes place on Trichophyton Agar-7 Medium at 25°C incubation within a week.

Nutritional requirements are determined by inoculating a control medium and a medium enriched with a specific vitamin or amino acid with *Trichophyton* isolates that have been presumptively identified by gross colony characteristics and microscopic morphology (1, 2, 3-6). Moderate to heavy growth in the vitamin or amino acid-enriched medium compared to little or no growth in the basal medium indicates that the isolate requires that nutrient.

### Quality Control

#### Appearance

White to light yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent gel forms in tubes as slants

#### Reaction

Reaction of 5.84% w/v aqueous solution at 25°C. pH : 6.8±0.2

#### pH

6.60-7.00

### Cultural Response

Cultural characteristics observed after an incubation at 25-30°C for 1 week.

### Cultural Response

#### Organism

#### Growth

### Cultural Response

*Microsporum gallinae* ATCC 12108 good-luxuriant

*Trichophyton megninii* ATCC 12106 good-luxuriant

### Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

### Reference

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- 4.Weitzman I., Rosenthal S. A. and Silva-Hutner M., 1988, In Wentworth (Eds.), Diagnostic Procedures for Mycotic and Parasitic Infections, 7th Ed., American Public Health Association, Washington, D.C.
- 5.Haley L. D., Trandel J. and Coyle M. B., 1980, Cumitech 11, Practical methods for culture and identification of fungi in the clinical mycology laboratory, Coord. Ed., Sherris, American Society for Microbiology, Washington, D.C.
- 6.McGinnis M. R. and Pasarell L., 1992, In Isenberg (Ed.), Clinical Microbiology Procedures Handbook, Vol. 1, American Society for Microbiology, Washington, D.C.

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