Trichophyton HiVeg™ Agar-3

MV533

Intended Use:

Recommended for differentiation of *Trichophyton* species.

Composition**

Ingredients	g / L
Vitamin free HiVeg™ hydrolysate	2.500
Dextrose (Glucose)	40.000
Potassium dihydrogen phosphate	1.800
Magnesium sulphate	0.100
Inositol	0.050
Thiamine hydrochloride	0.0002
Agar	15.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 59.45 grams in 1000 ml purified/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 the tubed medium to cool in a slanted position.

Principle And Interpretation

Nutritional tests were originally described by George and Camp (1) as an aid in the routine identification of *Trichophyton* species that seldom produce conidia or that resemble each other morphologically (1). Certain species have distinctive nutritional requirements, whereas others do not.

The method employs a Vitamin free HiVeg™ hydrolysate that is vitamin-free (Trichophyton HiVeg™ Agar-1, MV531) to which different vitamins are added i.e. inositol (Trichophyton HiVeg™ Agar-2, MV532), thiamine and inositol (Trichophyton HiVeg™ Agar-3, MV533), thiamine (Trichophyton HiVeg™ Agar-4) (MV534) and nicotinic acid (Trichophyton HiVeg™ Agar-5) (MV535). 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 HiVeg™ Agar-3 contains added inositol and thiamine. The medium is used along with Trichophyton HiVeg™ Agar-1 to determine whether the isolate requires inositol, thiamine or both.

Trichophyton HiVeg™ Agar-3 is prepared by completely replacing animal based peptone with vegetable peptones to avoid BSE/TSE risks associate with animal peptones. 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 (1,2,3,4,5,6). 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.

Type of specimen

Isolated Microorganism

Specimen Collection and Handling:

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

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 specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Cultures contaminated with bacteria must be repeatedly grown on a medium containing antimicrobials such as BHI CC Agar, HiVeg™(MV209). Many bacteria synthesize vitamins which may erroneous the results.

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

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 5.95% 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 within 2 weeks

Organism	Growth
Trichophyton mentagrophytes ATCC 9533	luxuriant
Trichophyton rubrum ATCC 28191	luxuriant

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

Reference

1. George L. K., Camp L. B., 1957, J. Bacteriol., 74:113.
2. Murray P. R., Baron E. J., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
3. 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.
4. McGinnis M. R. and Pasarell L., 1992, In Isenberg (Ed.), Clinical Microbiology Procedures Handbook, Vol. 1, American Society for Microbiology, Washington, D.C.
5. Roberts G. D., 1985, In Washington (Ed.), Laboratory Procedures in Clinical Microbiology, 2nd Ed., Springer- Verlag, New York, N.Y.
6. 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.
7. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
8. 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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