

Littman Bile HiVeg™ Agar Base

MV373

Intended Use:

Recommended for primary isolation of pathogenic fungi.

Composition**

| Ingredients | g / L |
|----------------------------|---------|
| HiVeg™ peptone | 20.000 |
| Dextrose (Glucose) | 10.000 |
| Synthetic detergent No. II | 5.000 |
| Crystal violet | 0.010 |
| Agar | 20.000 |
| Final pH (at 25°C) | 7.0±0.2 |

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 55.01 grams in 1000 ml purified/distilled water. Heat to boiling, to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add sterile Streptomycin to a final concentration of 30 µg/ml of medium. Mix well and pour into sterile Petri plates.

Principle And Interpretation:

Littman Bile Agar Base was formulated by Littman (1,2). Littman Oxgall Agar is used for the primary isolation of pathogenic selective isolation of pathogenic skin fungi (dermatophytes) and saprophytic fungi from various clinical specimens. It provides effective isolation even when the test samples are heavily contaminated with bacterial flora. Littman Bile Agar Base media are also used for the enumeration of fungal populations of air, soil, foodstuffs and other materials of sanitary significance (3). Littman Bile HiVeg™ Agar Base is prepared by using vegetable peptones in place of animal based peptones which make the media free of BSE/TSE risks. Crystal violet and Streptomycin has inhibitory effect on most of the bacteria. Synthetic detergent No. II restricts spreading of fungal colonies. The neutral pH favours the growth of many pathogenic fungi. Littman (2) reported the isolation of fungi on this medium three times more than isolated on Sabouraud Dextrose Agar.

For inoculation, skin or nail scraping or infected hair is directly placed on the surface of agar while sputum, faeces etc. are spread over the surface with sterile swab or the specimen are first enriched in broth and then cultured on agar medium. The incubation should be carried out for upto 8 days. Whenever *Nocardia asteroides*, *Streptomyces* or any Streptomycin sensitive microorganisms are to be cultured use the medium without Streptomycin (3).

Type of specimen

Please add specimens

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. For best results, isolation plates should be made with about 30 ml of medium per plate. Plates should be allowed to stand, preferably for about six hours, before using.

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

Light yellow to light brown may have green tinge homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Blue coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 5.5% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed after an incubation at 25-30°C for 48-72 hours.

| Organism | Growth (Plain medium) | Growth with Streptomycin |
|--|-----------------------|--------------------------|
| <i>Aspergillus flavus</i> ATCC 22547 | luxuriant | good-luxuriant |
| <i>Candida albicans</i> ATCC 10231 (00054*) | good - luxuriant | good - luxuriant |
| <i>Escherichia coli</i> ATCC 25922 (00013*) | luxuriant | inhibited |
| <i>Microsporum audouinii</i> ATCC 9079 | luxuriant | good-luxuriant |
| <i>Saccharomyces cerevisiae</i> ATCC 9763 (00058*) | good - luxuriant | good - luxuriant |
| <i>Saccharomyces uvarum</i> ATCC 28098 | good - luxuriant | good - luxuriant |
| <i>Trichophyton mentagrophytes</i> ATCC 9533 | moderate-good | moderate-good |
| <i>Trichophyton rubrum</i> ATCC 28188 | good | good |

Key : * - Corresponding WDCM numbers.

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 (4,5).

Reference

- Littman M. L., 1947, Science, 106:109.
- Littman M. L., 1948, Am. J. Clin. pathol., 18:409.
- MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore.
- Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
- 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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Disclaimer :

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