Technical Information

Littman Oxgall Agar Base

Product Code: DM 1373

Application: Littman Oxgall Agar is used for primary isolation of pathogenic fungi.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Dextrose	10.000
Oxgall	15.000
Crystal violet	0.010
Agar	20.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Littman Oxgall Agar is used for the primary isolation of pathogenic skin fungi (dermatophytes) and saprophytic fungi from various clinical specimens [1, 2]. It provides effective isolation even when the test samples are heavily contaminated with bacterial flora. Littman Oxgall media are also used for the enumeration of fungal populations of air, soil, foodstuffs and other materials of sanitary importance [3].

Crystal violet and Streptomycin has inhibitory effect on most of the bacteria. Oxgall restricts spreading of fungal colonies. The neutral pH favours the growth of many pathogenic fungi. Littman [2] reported the isolation rate of fungi on this medium is three times more as compare to 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].

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

Methodology

Suspend 55.01 grams of powder media in 1000 ml distilled water. Shake well & heat to boiling, to dissolves the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45°C and aseptically add sterile Streptomycin to a final concentration of 30 mcg/ml of medium. Mix well and pour into sterile Petri plates.

Quality Control

Physical Appearance
Cream to yellow 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 Range 6.80-7.20

Cultural Response/Characteristics
DM 1373: Cultural characteristics observed after an incubation at 25-30°C for 48-72 hours.

Organism	Growth (Plain medium)	Growth with Sterptomycin
Aspergillus flavus ATCC 22547	luxuriant	Good-luxuriant
Candida albi cans ATCC 10231	Good-luxuriant	Good-luxuriant
Escherichia coli ATCC 25922	Luxuriant	inhibited
Microsporum audouinii ATCC 9079	Luxuriant	Good-luxuriant
Saccharomyces cerevisiae ATCC 9763	Good-luxuriant	Good-luxuriant
Saccharomyces uvarum ATCC 28098	Good-luxuriant	Good-luxuriant
Trichophyton mentagrophytes ATCC 9533	Moderate-good	Moderate-good
Trichophyton rubrum ATCC 28188	Good	good

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Littman M. L., 1947, Science, 106:109.
2. Littman M. L., 1948, Am. J. Clin. pathol., 18:409.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore.

Disclaimer :