

Littman Oxgall Agar Base

M373

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

Directions

Suspend 55.01 grams in 1000 ml distilled water. 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.

Principle And Interpretation

Littman Oxgall 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 Oxgall media are also used for the enumeration of fungal populations of air, soil, foodstuffs and other materials of sanitary significance (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 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).

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.

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

M373: 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	good - luxuriant	good - luxuriant
<i>Escherichia coli</i> ATCC 25922	luxuriant	inhibited
<i>Microsporum audouinii</i> ATCC 9079	luxuriant	good-luxuriant
<i>Saccharomyces cerevisiae</i> ATCC 9763	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

Storage and Shelf Life

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

Reference

- 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.

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