

Technical Information

Inhibitory Mold Agar, Ulrich

Product Code: DM 1246

Application: - Inhibitory Mould Agar, Ulrich is used for selective isolation of pathogenic fungi.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	3.000
Peptic digest of animal tissue	2.000
Yeast extract	5.000
Dextrose	5.000
Starch, soluble	2.000
Dextrin	1.000
Sodium phosphate	2.000
Ferrous sulphate	0.040
Magnesium sulphate	0.800
Sodium chloride	0.040
Manganese sulphate	0.160
Chloramphenicol	0.125
Agar	15.000
Final pH (at 25°C)	6.7±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Fungi with the potential to cause human diseases constitute a very small group and belong to the genera *Aspergillus*, *Candida*, *Cryptococcus*, *Histoplasma* and *Pneumocystis*. Based on their methods of reproduction members of pathogenic fungi group are classified into four taxonomic group's viz. *Zygomycetes*, *Basidiomycetes*, *Ascomycetes* and *Deuteromycetes* (Fungi Imperfecti) ⁽²⁾. To confirm the existence and nature of infection by fungi and yeasts, Identification of the organisms is much more useful than demonstrating the humoral and cellular responses of the host ⁽¹⁾. Inhibitory Mould Agar formulated by Ulrich ⁽³⁾ is used as a general-purpose medium for the selective isolation and cultivation of pathogenic fungi.

Casein enzymic hydrolysate and peptic digest of animal tissue provide essential growth nutrients. Yeast extract is a rich source of vitamin B complex. Dextrose, starch and dextrin are energy sources for the metabolism of fungi. Sodium chloride and metallic salts provide essential ions and minerals. Chloramphenicol inhibits a wide variety of gram-positive and gram-negative bacteria. Potential contaminants of cosmetics and toiletries like *Pseudomonas aeruginosa* and *Serratia marcescens* are effectively inhibited by chloramphenicol. Sodium phosphates buffer the medium.

Methodology

Suspend 36.17 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to dissolve the medium completely.

Sterilize by autoclaving at 118 - 121°C for 15 minutes. Mix well and pour into sterile Petri plates.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Amber coloured, clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 3.62% w/v aqueous solution at 25°C. pH : 6.7±0.2

pH Range 6.50-6.90

Cultural Response/Characteristics

DM 1246: Cultural characteristics observed after an incubation at 25-30°C for upto 7 days ii) Bacterial cultures are incubated at 35-37°C.

Organism	Inoculum (CFU)	Growth	Recovery
<i>Candida albi cans ATCC 10231</i>	50-100	luxuriant	>=50%
<i>Escherichia coli ATCC 25922</i>	>=10 ³	luxuriant	0%
<i>Staphylococcus aureus ATCC 25923</i>	>=10	luxuriant	0%
<i>Trichop hyton mentagrophytes ATCC 9533</i>	50-100	luxuriant	

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: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

1.Cruikshank R., Marmion B. P., Duguid J. P., Swain R.H.A., (Eds.), Medical Microbiology, 12th Edition, Vol. II, Churchill Livingstone 2.Frey D., Oldfield R. J., Bridger R. C., A Colour Atlas of Pathogenic Fungi, Wolfe Medical Publications, London. 3.Ulrich J. A., 1956, Bact. Proc., S.A.B., M75: 87.

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