Rice Extract Agar

M1026A

Rice Extract Agar is recommended for differentiation of yeasts by means of their typical chlamydospores and on basis of micromorphological criteria.

Composition**

Ingredients	Gms / Litre
Rice extract, concentrated	0.700
Agar	14.300
Final pH (at 25°C)	5.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 15.0 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121ºC) for 15 minutes. Mix well and pour into sterile Petri plates to give a thin layer of medium (1-2 mm).

Principle And Interpretation

Rice Extract Agar was developed by Taschdjian to aid in the identification of chlamydospore producing species of *Candida* (1).This medium can be used for culturing yeasts and differentiating them on basis of micromorphological characteristics particularly for differentiation of *C.albicans* and *C. stellatoidea* on basis of formation of chlamydospsores. Rieth had demonstrated that this medium can be used for mycological diagnostic procedures (2). Rice extract in the medium serves as sole nutrient source. A small inoculum of suspected *Candida* colony can be inoculated by streaking (very thinly) on the surface of rice extract agar in 3-4 broad zig zag lines and covered with cover glass This oxygen deficient condition favours chlamydospore formation and pseudomycelial growth of yeasts. If the specimen is heavily infected with *Candida* it can be streaked directly on agar. On incubation for approximately 96 hours at 22-250C culture can be directly examined under microscope through cover glass.

Culture may be confirmed further as suggested by Ajello et.al (3).Typical morphologies can be revelaed as under:

Fungal structures	Fungi
Chlamydospores (diameter 6-12 µm, thick, refractile cell wall with double contours), pseudomycelium, blastospores (diameter 3-6 µm)	C.albicans Very occasionally C. stellatoidea Other Candida species,
Pseudomycelium, some times also true mycelium, usually balstospores. No chlamydospores	
Arthrospores, blastospores, true mycelium, occasionally also pseudomycelium	Trichospore species
Blastospores, no chlamydospores, no pseudomycelium	Other yeast species
Ascospores in the asci	Perfect yeasts
Arthrospores, true mycelium, no blastospores	Geotrichium species

Quality Control

Appearance
Off-white to light yellow coloured homogeneous free flowing powder

Gelling
Firm, comparable with 1.43% Agar gel.

Colour and Clarity of prepared medium
White-light yellow coloured clear to slightly opalescent gel forms in Petri plates.

Reaction
Reaction of 1.5% aqueous solution is pH 5.8 ± 0.2 at 25°C. pH : 5.8±0.2

pH
5.60-6.00

Cultural Response
M1026A: Cultural characteristics observed after an incubation of 96 hours at 22-25°C.

Organism	Growth	Pseudomycelium	Chlamydospores
Cultural Response			
Candida albicans ATCC 10231	Good-luxuriant	Positive reaction	Positive reaction
Candida stellatoidea	Good-luxuriant	Positive reaction	Negative reaction
Saccharomyces cerevesiae ATCC 7752	Poor-fair	Negative reaction	Negative reaction

Storage and Shelf Life

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

Reference

1. Taschdjian. 1953. Mycologia 45 : 474.
2. Reith, H., Hansen ,P. El-Fikl, A.Y., u ITO,K. Hefedifferenzierung auf Reisagar-Bill.Pharm.Res., Inst., (Osaka) 19; 13-(1959).
3. Ajello,L., Georg ,L.K., Kaplan,W.A., Kaufman,L. :Laboratory AManual for medical Mycology Communicable Disease Center, Atalanta, Georgia, USA,1966.

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