Technical Information

Candida Agar

Product Code: DM 2602

Application: - Candida Agar is recommended for isolating and differentiating *Candida albicans*.

Composition**

Ingredients	Gms / Litre
Yeast extract	3.000
Malt extract	3.000
Peptic digest of animal tissue	5.000
Dextrose	10.000
Aniline blue	0.100
Agar	20.000
Final pH (at 25°C)	6.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Candidiasis is an acute or sub-acute infection caused by members of the genus *Candida*, mainly *Candida albicans*, although all species may be pathogenic. *C. albicans* produce lesions in the mouth, oesophagus, genitourinary tract, skin, nails, bronchi, lungs and other organs in patients whose normal defense mechanism may have been altered by underlying disease, antimicrobial therapy or immunosuppressive agents (1). Since saprophytic yeast are microscopically similar to the pathogenic species, all infected material should be cultured on duplicate sets of media with and without antifungal agents.

Candida Agar was developed as described by Fung and Liang (2), which is a modification of Yeast and Mould Agar. It is a nutritionally rich medium, which supports the growth of many yeasts and moulds and is differential for *C. albicans*. Goldschmidt demonstrated that YM agar with aniline blue could be used to identify *C. albicans* with high accuracy and predictability (3). Aniline blue is a fluorescent indicator, metabolized by *C. albicans* to produce a fluorescent moiety that can be easily detected under UV light.

Peptic digest of animal tissue, yeast extract and malt extract in the medium supply nitrogen, carbon, vitamins, and other essential nutrients required for the growth of *C. albicans*. Dextrose is an energy source. Aniline blue is a fluorescent indicator.

Some strains of *C. parapsilosis*, *C. krusei* and *C. pulcherrima* may give slight fluorescence and that may be distinguished from *C. albicans* by germ tube formation (3, 4). Specimen is processed and inoculated directly onto the surface of the media.

Methodology

Suspend 41.1 grams of dehydrated media in 1000 ml distilled water. Mix thoroughly & heat to boiling with frequent agitation to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Shake well before pour into sterile Petri plates.

Quality Control

Appearance
Light yellow to pink homogeneous free flowing powder

Gelling
Firm, comparable with 2.0% Agar gel

Colour and Clarity
Bluish green coloured, clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4.11% w/v aqueous solution at 25°C. pH : 6.2±0.2

pH Range
6.00-6.40

Cultural Response
DM2602: Cultural characteristics observed after an incubation at 25-30°C for 24- 48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Fluorescence
Cultural Response				
Bacillus subtilis ATCC 6633	50-100	good-luxuriant	>=70%	negative reaction, no fluorescence
Candida albicans ATCC 10231	50-100	good-luxuriant	>=70%	positive reaction, yellow-green fluorescence
Candida krusei ATCC 24408	50-100	good-luxuriant	>=70%	variable reaction
Candida tropicalis ATCC 1369	50-100	good-luxuriant	>=70%	variable reaction
Escherichia coli ATCC 8739	50-100	luxuriant	>=70%	negative reaction

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on label.
Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Utz J. P., 1967, Med. Clin. North Am. 51:519-527
2. Fung and Liang, 1988, Bull Inf. Lab. Serv. Vet (France), 39/30:1
3. Goldschmidt, Fung, Grant White and Brown, 1991, J. Clin. Microbiol., 29:1095.
4. Murray P. R., Baron J. H., Pfaller M. A., Tenover F. C., and YolkenR. H., (Eds.), 1999, Manual of Clinical Microbiology, 7th Ed. American Society for Microbiology, Washington, D.C.

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