

Technical Data

Bird Seed Agar (Staib's Medium)

Intended Use:

Recommended for selective isolation and differentiation of *Cryptococcus neoformans* from other *Cryptococcus* and other yeasts.

Composition**

Ingredients	g / L
Guizotia abyssinica seeds	70.000
Creatinine	0.780
Dextrose (Glucose)	10.000
Chloramphenicol	0.050
Agar	20.000
Final pH (at 25°C)	6.7±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 10.08 grams in 99 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and add 1vial of Diphenyl Supplement (FD356). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Cryptococcus neoformans is an encapsulated yeast-like fungus that can live in both plants and animals. This species, also known by its teleomorph name, *Filobasidiella neoformans*, belongs to the broad class of organisms called "club fungi" or division Basidiomycota, which is one the five major types of fungi.

C.neoformans usually grows as a yeast (unicellular) and replicates by budding (1). Staibs Medium (Bird Seed Agar) is formulated for selective isolation and differentiation of *C.neoformans* from other *Cryptococcus* species and other yeasts. This media is formulated by Staib (2) and Shields and Ajello (3).

Guizotia abyssinica seeds, creatinine and dextrose provide nutrients for the growth of *C.neoformans*. Chloramphenicol inhibits the bacteria as well as rapidly growing moulds that often overgrow the slow-growing dimorphic fungi.

Type of specimen

Clinical samples - Tissue, exudates, sputum and urine

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Incubate at least 7 days before reporting cultures negative (6).

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to light brown hygroscopic soft lumps which can be easily broken down to powder

Gelling

Firm, comparable with 2.0% Agar gel.

M675

Colour and Clarity of prepared medium

Medium amber coloured opalescent gel forms in Petri plates

Reaction

Reaction of 10.1% w/v aqueous solution at 25°C. pH : 6.7±0.2

pН

6.50-6.90

Cultural Response

Cultural characteristics observed after an incubation at 30°C for 2 weeks.

Organism	Inoculum (CFU)	Growth	Colour of colony
<i>Cryptococcus neoformans</i> ATCC 32045	50-100	good	brownish yellow pigment
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC	>=10 ⁴	inhibited	
25923 (00034*)			

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

1.Casadevall A, Perfect J. R., 1998, Cryptococcus neoformans, ASM Press, Washington, D.C.

2.Staib F., 1962, Med. Microbiol. Immunol., 148,466

3.Shields A. B. and Ajello L., 1966, Science, 151, 208

4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

5.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

6.MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Lippincott, Williams and Wilkins, Baltimore.

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