SABOURAUD DEXTROSE AGAR

INTENDED USE

Sabouraud Dextrose Agar is used in qualitative procedures for cultivation of pathogenic and nonpathogenic fungi, particularly dermatophytes. The medium is rendered more selective for fungi by the addition of antimicrobics. Sabouraud Dextrose Broth and Sabouraud Maltose Agar and Broth are also used for culturing yeasts, molds and aciduric microorganisms.

SUMMARY AND EXPLANATION

Sabouraud Dextrose Agar is a general-purpose medium devised by Sabouraud for the cultivation of dermatophytes.[1] The low pH of approximately 5.6 is favorable for the growth of fungi, especially dermatophytes, and slightly inhibitory to contaminating bacteria in clinical specimens.[2] Sabouraud Dextrose Agar is also recommended for the testing of cosmetics[9] and food.[3]

PRINCIPLE

Sabouraud dextrose media are peptone media supplemented with dextrose to support the growth of fungi. Sabouraud agar is also available with maltose substituted for the dextrose. Peptones are sources of nitrogenous growth factors. The carbohydrate provides an energy source for the growth of microorganisms. Gentamicin is an aminoglycoside antibiotic that inhibits the growth of gram-negative bacteria.

REAGENTS (FORMULA)

Peptic Digest of Animal Tissue	5.0	g
Pancreatic Digest of Casein	5.0	g
Dextrose	40.0	g
Agar	15.0	g
Deionized Water	1000.0	ml

Broth consists of the same ingredients without the agar.

PROCEDURE

For clinical specimens, refer to appropriate standard references for details on testing protocol to obtain isolated colonies from specimens using Sabouraud Dextrose Agar and Sabouraud Dextrose Broth.[2]

For cosmetic, food or environmental monitoring samples, refer to appropriate standard references for details on test methods using Sabouraud Dextrose Agar or Sabouraud Dextrose Broth.[3]

For pharmaceutical samples, refer to USP General Chapters <61> and <62> for details on the examination of nonsterile products and performing microbial enumeration tests and the isolation of Candida albicans using Sabouraud Dextrose Agar and Sabouraud Dextrose Broth.

For isolation of fungi from potentially contaminated specimens, a selective medium should be inoculated along with the nonselective medium. Incubate the containers at 25-30°C with increased humidity. All cultures should be examined at least weekly for fungal growth and should be held for 4-6 weeks before being reported as negative.

EXPECTED RESULTS

After sufficient incubation, the containers should show isolated colonies in streaked areas and confluent growth in areas of heavy inoculation. Transfer of growth from slants to plated media may be required in order to obtain pure cultures of fungi.

Examine containers for fungal colonies exhibiting typical color and morphology.[4] Biochemical tests and serological procedures should be performed to confirm findings.

Subculture colonies of interest so that positive identification can be made by means of biochemical testing and/or microscopic examination of organism smears.

QUALITY CONTROL

All lot numbers have been tested and have been found to be acceptable. Customers can test products using the following quality control organisms. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, sample results should not be reported.

Organisms	Incubation	Results
Candida albicans ATCC 60193	25 ± 2°C for 18-24 hours	Growth
Nocardia asteroides ATCC 19247	25 ± 2°C for 18-24 hours	Growth
Penicillium roquefortii ATCC 9295	25 ± 2°C for 18-24 hours	Growth

BIBLIOGRAPHY

1. Sabouraud. 1892. Ann. Dermatol. Syphil. 3:1061.

2. Isenberg and Garcia (ed.). 2004 (update, 2007). Clinical microbiology procedures handbook, 2nd ed. American Society for Microbiology, Washington, D.C.

3. Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.

4. Larone. 1995. Medically important fungi: a guide to identification, 3rd ed. American Society for Microbiology, Washington, D.C.

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