microgen
Ready Prepared Media

Technical Information

Sabouraud Dextrose Agar Plate w/Penicillin & Streptomycin

Product Code: PM 6334

Application: Recommended for selective cultivation of yeasts, moulds and aciduric microorganisms.

Composition**

Ingredients	Gms / Litre
Dextrose (Glucose)	40.000
Mycological, peptone	10.000
Penicillin	0.0024
Streptomycin	0.0400
Agar	15.000
Final pH (at 25°C)	5.6±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Sabouraud Dextrose Agar is Carliers modification (1) of the formulation described by Sabouraud 6) for the cultivation of fungi (yeasts, moulds), particularly useful for the fungi associated with skin infections. This medium is also employed to determine microbial contamination in food, cosmetics, and clinical specimens (2).

Mycological peptone provides nitrogenous compounds. Dextrose (Glucose) provides an energy source. High dextrose concentration and low pH favours fungal growth and inhibits contaminating bacteria from test samples (5). The addition of antibiotics such as streptomycin, and penicillin inhibits bacterial contaminants. Some pathogenic fungi may produce infective spores which are easily dispersed in air, so examination should be carried out in safety cabinet. For heavily contaminated samples, the plate must be supplemented with inhibitory agents for inhibiting bacterial growth with lower pH.

Type of specimen

Clinical samples - food samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (7).

After use, contaminated materials must be sterilized by autoclaving before discarding

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Warning and Precautions

In Vitro diagnostic 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 guidleines should be followed while handling clincal specimens. Saftey guidelines may be referred in individual safety data sheets .

Limitations :

1. Individual strain of a microorganism may have unique growth requirements with respect to nutrients and physical conditions. Based on which the growth pattern of each varies on a medium and some even may display significant delay.
2. Some pathogenic fungi may produce infective spores which are easily dispersed in air, so examination should be carriedout in safety cabinet.
3. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
4. Further biochemical tests should be carried out for complete identification .

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.

Methodology

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Quality Control

Appearance
Sterile Sabouraud Dextrose Agar w/Penicillin & Streptomycin in 90mm disposable plate with smooth surface and absence of black particles/cracks/bubbles.
Colour
Light amber coloured, clear to slightly opalescent medium.
Quantity of Medium
25ml of medium in 90mm disposable plates
pH
5.40-5.80
Growth Promotion Test
Growth Promotion was carried out in accordance with the standard method and growth was observed after a specified period. Recovery rate is considered as 100% for fungus growth on Sabouraud Dextrose Agar.
Sterility test
Passes release criteria
Cultural Response
Cultural characteristics observed after incubation at 22-28°C for 48-72 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Candida albicans ATCC 10231 (00054*)	50-100	good-luxuriant	>=50%
Trichophyton mentagrophytes ATCC 9533	50-100	good-luxuriant	>=50%

Escherichia coli ATCC 25922 (00013*)	50-100	non-poor	0-10%
Staphylococcus aureussubsp. aureus ATCC 25923 (00013*)	50-100	non-poor	0-10%

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

- On receipt store between 2-8°C Use before expiry date on the label.
- 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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Further Reading

1. Carlier G. I. M., 1948, Brit. J. Derm. Syph., 60:61.
2. Bacteriological Analytical Manual, 8th Edition, Revision A, 1998. AOAC, Washington D.C.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. 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.
5. Murray PR, Baren EJ, Jorgensen JH, Pfaller MA, Yolken RH (editors) 2003, Manual of clinical Microbiology, 8th ed., ASM, Washington, D.C.
6. Sabouraud K., 1892, Ann. Dermatol. Syphilol, 3:1061.
7. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
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