Sabouraud Glucose Agar

Intended Use
Sabouraud Glucose Agar is a general-purpose medium used for the isolation and cultivation of Yeasts, Moulds and Aciduric bacteria.

Summary
Sabouraud Glucose Agar is Carlier's modification of the formulation described by Sabouraud for the cultivation of fungi, particularly those associated with skin infections. It is used in qualitative procedures for cultivation of pathogenic and non-pathogenic fungi, particularly dermatophytes. Carlier showed that this medium gives reliable results with *Microsporum audouinii*, *M. canis*, *Trichophyton mentagrophytes*, *T. flavum, T. rubrum* and *Candida albicans*. The fungi maintain their typical cultural appearance and thus may be readily identified according to the standard macroscopic characters described by Sabouraud.

Principle
Tryptone and peptone provide nitrogenous compounds, carbon and other growth factors. Glucose is the carbohydrate source. The low pH of approximately 5.6 is favourable for the growth of fungi, especially dermatophytes and is slightly inhibitory to contaminating bacteria. Various antibiotics can be added to this medium for bacterial inhibition as well as to make it selective for the isolation of pathogenic fungi from material containing large number of other fungi or bacteria. Sabouraud Glucose Agar may also be used as the basis of Pagano-Levin medium for the isolation of *Candida albicans.* 0.1 g of filter sterilized triphenyltetrazolium chloride is added to each litre of autoclaved molten medium cooled to 55ºC. After incubation at 25ºC for 3 days, *Candida albicans* colonies are unpigmented or pale pink while other *Candida* species and other fungi form deep pink or red colonies. Other tests should be performed for identification of *Candida albicans*.

Formula*

Ingredients	**g/L**
Peptone	5.0
Tryptone	5.0
Glucose	20.0
Agar	15.0
Final pH (at 25ºC)	5.6 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30ºC in tightly closed container and the prepared medium at 2ºC-8ºC. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling
Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 65.00 g of the powder in 1000 mL purified / distilled water and mix thoroughly.
2. Boil with frequent agitation to dissolve the powder completely. Avoid overheating the agar as it could cause a softer medium.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control
Dehydrated Appearance: Cream to yellow coloured, homogeneous, coarse free flowing powder.
Prepared Appearance: Light amber coloured, clear to slightly opalescent gel forms in petridishes.
Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 20°C-25°C for ≤ 5 days for fungi.

Growth Promotion Properties: The test results observed are within the specified temperature and shortest period of time specified in the, inoculating ≤ 100 cfu of appropriate microorganism at 20°C-25°C.

Organism (ATCC)	Growth
Candida albicans 3147 (10231)	Good
Aspergillus brasiliensis WLRI 034(120) (16404)	Good

Note: For good growth - Growth obtained on test media should not differ by a factor greater than 2 from calculated value for a standardized inoculum.

Precautions / Limitations

1. Some of the pathogenic fungi may produce infective spores, which can be easily dispersed in the laboratory.
2. Examine such organisms only within a protective cabinet.
3. When used for selective isolation, antimicrobials like chloramphenicol and cycloheximide may inhibit some pathogenic fungi. However, mycelial phase of *Histoplasma capsulatum*, *Paracoccidioides brasiliensis*, *Sporothrix schoenckii*, *Blastomyces dermatidis* is not inhibited by these antibiotics when incubated at 25ºC-30ºC.
4. A non-selective and selective medium should be inoculated for isolation of fungi from potentially contaminated specimens.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Carlier G I M, 1948, Brit.J. Derm.Syph: 60261.
2. Sabouraud K;1892,Ann.Dermalol.Syphilol,3; i061.
3. US Pharmacopeial Convention, inc. 2001. The United States Pharmacopoeia 25/NF 20-2002. The US Pharmacopeial Convention, Inc; Rockville, Md.
4. IP, 1996, Ministry of Health and Faniily Weltare, Govt. of India. Vol.2.
5. US Food and Drug Adm; 1990, Bacteriological Analytical Manual, 8th Ed; Rev. A, AOAC, International, Gaithersburg, Md.
6. Downes and Ito (ed) 2001, Compendium Of Methods For The Microbiological Examination Of Foods, 4“ edition, APHA Washington DC.
7. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201190100500	Dehydrated Culture Media	500 g

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.