

# SABOURAUD Culture Media (introduction)

Modified media proposed by SABOURAUD (1910) for the cultivation, isolation and identification of pathogenic fungi. The media containing glucose are especially suitable for dermatophytes, whilst those containing maltose are to be preferred for yeasts and moulds. The liquid SABOURAUD culture media are used primarily for sterility tests and membrane filtration. SABOURAUD-2 % dextrose broth corresponds to GROVE and RANDALL medium No. 13 for antibiotic assays.

## Mode of Action

Optimal fungal growth is obtained on these culture media due to their relatively high carbohydrate concentration (2 or 4 %). They do not contain any agents which could selectively inhibit undesired accompanying microbial flora. The pH of 5.6 inhibits bacterial growth; this effect can be enhanced by adjusting the pH to extreme values (approx. 3.5 or 10.0).

If fungi have to be isolated from material which is heavily contaminated with bacteria, selective inhibitory agents should be added. The medium devoid of inhibitor must then also be inoculated.

Additives: 500 mg cycloheximide/litre, 20,000 I.U. penicillin/litre and 40 mg streptomycin/litre (GEORG et al. 1954) or substitute 40 mg chloramphenicol/litre for the penicillin and streptomycin (AJELLO 1957); for the detection of yeasts add 40mg neomycin/litre and 20,000 I.U. penicillin/litre (WILLIAMS-SMITH and JONES 1963); 80 mg colistin/litre, 100 mg novobiocin/litre and 300 mg cycloheximide/litre (HANTSCHKE 1968); for the isolation of *Candida albicans* use SABOURAUD-4 % dextrose agar as a base and add 100 mg triphenyltetrazolium chloride/litre (PAGANO et al. 1957-1958).

## Preparation

See the individual SABOURAUD culture media for details. The additives should be mixed with the media at about 50 °C after they have been sterilized.

## Experimental Procedure and Evaluation

Incubate the inoculated media at approx 22 °C (room temperature) and, if necessary, at 35 °C. Dermatophytes develop after about 5-20 days, other fungi usually after 2-5 days. The procedure used depends on the purpose for which the medium is used.

Manufacturer	Product
Warner-Chillcott, USA	Colistin

## Literature

AJELLO, L.: Cultural methods for human pathogenic fungi. - **J. Chron. Dis.**; 545-551 (1957).

GEORG, L.K., AJELLO, L., a. PAPAGEORGE, C.: Use of cycloheximide in the selective isolation of fungi pathogenic to man. - **J. Lab. Clin. Med.**, **44**: 422-428 (1954).

HANTSCHKE, D.: Ein Colistin-Novobiocin-Actidion-Agar als Anzuchtmedium für humanpathogene Pilze. - **Mykosen**, **11**; 769-778 (1968).

PAGANO, J., LEVIN, J.D., a. TREJO, W.: Diagnostic medium for differentiation of species of *Candida*. - **Antib. Ann.**; **137**-143 (1957/58).

SABOURAUD, R.: Les Teignes, (Masson, Paris 1910).

WILLIAMS-SMITH, H., a. JONES, J.E.T.: Observation on the alimentary tract and its bacterial flora in healthy and disease pigs. - **J. Path., Bact.**, **86**: 387-412 (1963).

## Ordering Information

Product	Merck Cat. No.	Pack size
2,3,5-Triphenyltetrazolium chloride	1.08380.0010	10 g
Chloramphenicol	CN Biosciences	
Streptomycin sulfate	CN Biosciences	
Novobiocin monosodium salt	CN Biosciences	
Neomycin sulfate	CN Biosciences	
Penicillin G potassium salt	CN Biosciences	