

# Microbiology

## Merckotube® SABOURAUD 4% dextrose agar 1.18425.0010

- 250 ml glass bottle
- 200 ml filling volume
- Tamper proof screw cap
- 10 bottles per pack

### SABOURAUD-4 % dextrose agar

This culture medium complies with the recommendations of the United States Pharmacopeia XXIX and the European Pharmacopeia 5<sup>th</sup> edition.

### 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 40 mg 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)

### Typical composition (g/l)

Peptone 10.0; D(+)-glucose 40.0; agar-agar 15.0.

pH: 5.6 ± 0.2 at 25 °C.

The appearance of the medium is yellowish-brown.

### Experimental Procedure and Evaluation

The fungi colonies which have grown are judged macro- and microscopically.

Incubation: up to 7 days at 28 °C aerobically.

European Pharmacopeia 5th edition, Chapter VIII, 10.

United States Pharmacopeia XXIX, Chapter "Microbial Limit Tests"

### Shelf life in month

12 month

### Storage

+15°C to +25°C

### Ordering information

Product	Merck Cat.No.	Pack size
Merckotube® SABOURAUD 4% dextrose agar	1.18425.0010	10 bottles (10 x 200 ml)

Merck KGaA

64271 Darmstadt, Germany, Tel.: +49 6151 72-0

[www.merck.de](http://www.merck.de)



Version 2006-26-06

## Quality control

<b>Test strains</b>	<b>Growth</b>
Trichophyton mentagrophytes ATCC 18748	fair to very good
Trichophyton rubrum ATCC 28188	fair to good
Trichophyton ajelloi ATCC 28454	fair to good
Microsporum gallinae ATCC 12108	fair to very good
Microsporum canis ATCC 36299	good to very good
Geotricum candidum DSMZ 1240	good to very good
Aspergillus niger ATCC 16404	good to very good
Penicillium commune ATCC 10428	good to very good
<b>Test strains</b>	<b>Recovery rate</b>
Candida albicans ATCC 10231	≥70 %
Candida albicans ATCC 2091	≥70 %
<b>Growth</b> Pseudomonas aeruginosa ATCC 9027	<b>None</b>
<b>Sterility</b>	<b>Growth</b>
2 weeks at 20 to 25°C	no growth
2 weeks at 30 to 35°C	no growth

Incubation: 7 days at 28°C aerobic. (Yeasts 3 days at 28°C).

**Merck KGaA**  
64271 Darmstadt, Germany, Tel.: +49 6151 72-0

[www.merck.de](http://www.merck.de)



Version 2006-26-06