

Dichloran Rose Bengal Chloramphenicol (DRBC) Agar

Selective agar for the enumeration of food spoiling yeasts and moulds.

Mode of Action

DRBC was developed by KING et al. (1979) and is a modification of Rose-Bengal-Chloramphenicol Agar (RBC from JARVIS (1973). In comparison to RBC, the medium contains Dichloran (0.002 g/l), the pH is lowered to 5.6 and the Rose-Bengal concentration is cut in half (0.025 g/l). This results in an increased inhibition of bacteria and yeasts.

The inclusion of dichloran serves to inhibit the rapid spreading of mucoraceous fungi and restricts colony sizes of other genera, easing the colony count.

Typical Composition (g/litre)

Peptone 5.0; glucose 10.0; potassium dihydrogen phosphate 1.0; dichloran 0.002; magnesium sulfate 0.5; Rose Bengal 0.025; chloramphenicol 0.1; agar-agar 15.0.

pH: 5.6 ± 0.2 at 25 °C.

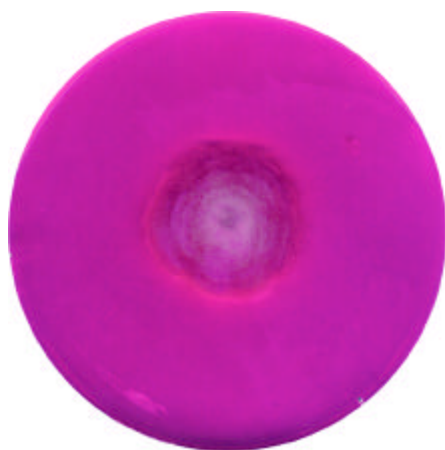
Preparation

Suspend 31.6 g in 1 litre of demin. water and heat to boiling until completely dissolved. Autoclave the medium at 121 °C for 15min. Cool to approx. 50 °C, mix well and pour plates.

The appearance of the prepared medium is clear and pink. When stored at +2 to +8 °C in the dark, the shelf life of plates is approximately 1 week and in bottles approx. 2 months.

Quality control

Test strains	Growth
<i>Saccharomyces cerevisiae</i> ATCC 9763	good / very good
<i>Rhodotorula mucilaginosa</i> DSMZ 70403	good / very good, colony colour: orange
<i>Mucor racemosus</i> ATCC 42647	fair / good
<i>Bacillus subtilis</i> ATCC 6633	none
<i>Escherichia coli</i> ATCC 25922	none



Mucor racemosus ATCC 42647



Saccharomyces cerevisiae ATCC 9763

Experimental Procedure

Directly inoculate agar plates using surface spreading technique with serial dilutions.

Incubate at 25 °C and look for growth after 3, 4 and 5 days.

Interpretation of Results

Count the number of colonies per gram of food.

Attention:

Some fungi may be inhibited on this medium. Therefore it is recommended to use Rose Bengal Chloramphenicol Agar (Merck Cat. No. 1.00467.) additionally to examine and identify the complete fungal flora.

Literature

KING, D.A., HOCKING, A.D., and PITT, J.I. (1979) Dichloran-rose bengal medium for enumeration and isolation of moulds from foods. **Appl. Environm. Microbiol.** **37**, 959-964.

JARVIS, B. 1973 Comparison of an improved rose-bengal-chlortetracycline agar with other media for the selective isolation and enumeration of moulds and yeasts in food. **J. Appl. Bacteriol.** **36**, 723-727.

Ordering Information

Product	Merck Cat. No.	Pack size
Dichloran Rose Bengal Chloramphenicol (DRBC) Agar	1.00466.0500	500 g