39885 Rose Bengal Chloramphenicol Agar acc. GB (RBC Agar)

For the selective isolation and enumeration of yeasts and moulds from environmental materials and food stuffs.

Composition:

Ingredients	Grams/Litre
Peptone	5.0
Glucose	10.0
Potassium dihydrogen phosphate	1.0
Magnesium sulfate	0.5
Rose Bengal	0.033
Chloramphenicol	0.1
Agar	20.0
Final pH 7.2 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:
Suspend 36.6 g in 1 litre distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:
Rose Bengal Chloramphenicol Agar was formulated originally by Jarvis (1) and further modified by Overcast and Weakley (2). The use of rose bengal in the media having neutral pH was reported by Smith and Dawson (3).
Mycological peptone act as source of carbon, nitrogen, minerals, vitamins and other essential growth nutrients. Dextrose is the fermentable carbohydrate. Monpotassium Phosphate provides buffering capability and Magnesium sulfate is a necessary trace element. Chloramphenicol has inhibitory action on gram-negative bacteria. Rose bengal dye suppresses the development of bacteria and restricts the size and the spreading of mould colonies such as *Rhizopus* species (4). The medium has neutral pH which with the antibiotics have noted to be advantageous (5, 6). Rose bengal is taken up by mould and yeast colonies thereby assist in enumeration (1).
The number of yeasts or moulds is calculated per 1 g or 1 ml of sample to be tested by multiplying the number of colonies by dilution factor. Colonies of bacteria and yeasts could be confused by appearance and thus should be examined microscopically.

Cultural characteristics after 5 days at 28 ℃±1 ℃ :

Organisms (ATCC)	Quality control evaluation standards	Characteristic reactions
Aspergillus niger (16404)	PR≥0.7	White mycelia, black spores
Saccharomyces cerevisiae (9763)	PR≥0.7	Cream colony
*Escherichia coli (*25922)	G≤1	
Staphylococcus aureus (6538)	G≤1	

Note:
PR =Growth rate (Quantitative methods using Sabouraud's dextrose agar as Reference culture Media)
G= Growth Index (Semi-quantitative methods)

References:
1. B. Jarvis, 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 (1973)
2. W.W. Overcast, D.J. Weakley, J. MiIk Food Technol., 32, 442 (1969)
3. Smith and Dawson V. T., Soil Sci., 58, 467 (1944)
4. J.C.G. Ottow, H. Glathe, AppI. Miorobiol., 16(1), 170 (1968)
5. J.A. Koburger, Bact. Proc., 13, A73 (1968)
6. J.F. MacFaddin, Media for Isolation-Cultivatjon-IdentificationMaintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore (1985)
7. GB4789.28 Annex D Standard for quality control of the culture media and reagents made by manufacturer and laboratory
8. National Standard of the People's Republic of China-- GB 4789.15-2016-- Food microbiological examination: Enumeration of moulds and yeasts

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.