



## Dichloran Rose Bengal Chloramphenicol Agar (DRBC Agar)

M1881

Dichloran Rose Bengal Chloramphenicol Agar (DRBC Agar) is used for selective isolation of fungi-yeasts and moulds of significance in food spoilage

### Composition\*\*

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Dextrose	10.000
Monopotassium phosphate	1.000
Magnesium sulphate	0.500
Rose Bengal	0.025
Chloramphenicol	0.100
Dichloran	0.002
Agar	15.000
Final pH ( at 25°C)	5.6±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 31.6 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates

### Principle And Interpretation

Dichloran Rose Bengal Chloramphenicol Agar (DRBC Agar) is formulated by as described by King et.al (1) and is recommended for selective isolation of yeasts and moulds especially in food samples.

This medium is a modification of Rose Bengal Chloramphenicol Agar which additionally contains dichloran.

Peptic digest of animal tissue provides nitrogen, vitamins and minerals. Dextrose is a carbohydrate source. Phosphate buffers the medium. Magnesium sulfate provides divalent cations and sulfate. Dichloran is an antifungal agent, added to the medium to reduce colony diameters of spreading fungi. Rose Bengal exhibits an improved inhibitory activity at pH 5.6 and hence the final pH of the medium is maintained at 5.6 for the inhibition of spreading fungi (1) The presence of rose bengal in the medium suppresses the growth of bacteria and restricts the size and colonies of the more rapidly growing moulds. Chloramphenicol is included to inhibit the growth of bacteria present in environmental and food samples. Inhibition of growth of bacteria and restriction of spreading of more-rapidly growing moulds aids in the isolation of slow-growing fungi by preventing their overgrowth by more-rapidly growing species. Additionally Rose Bengal is taken by yeast and moulds colonies, which allows these colonies to be easily recognized and enumerated.

This medium should not be exposed to direct light as rose bengal undergoes photo-degradation leading to formation of toxic chemicals for fungi (2,3).

### Quality Control

#### Appearance

Light yellow to pink homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of prepared medium

Pink coloured, clear to slightly opalescent gel forms in Petri plates

#### Reaction

Reaction of 3.16% w/v aqueous solution at 25°C. pH : 5.6±0.2

#### pH

5.40-5.80

**Cultural Response**

Cultural characteristics observed after an incubation at 25-30°C for upto 6 days.

**Cultural Response**

Organism	Inoculum (CFU)	Growth	Recovery
<b>Cultural Response</b> <i>Bacillus subtilis</i> ATCC 6633	$\geq 10^3$	inhibited	0%
<i>Candida albicans</i> ATCC 10231	50-100	good-luxuriant	$\geq 50\%$
<i>Escherichia coli</i> ATCC 25922	$\geq 10^3$	inhibited	0%
<i>Mucor racemosus</i> ATCC 42647		good-luxuriant	
<i>Saccharomyces cerevisiae</i> ATCC 9763	50-100	good-luxuriant	$\geq 50\%$

**Storage and Shelf Life**

Store between 15-25°C in tightly closed container and the prepared medium at 2-8°C . Use before expiry period on the label.

**Reference**

- 1.King D.A. Jr., Hocking A.D. and Pitt J.I., 1979, J. Appl. Environ. Microbiol., 37:959.
- 2.Sharp A.N. and Jackson A.K., 1972, J. Appl. Bact., 24:175.
- 3.U.S. Food and Drug Administration, 1995, Bacteriological Analytical Manual, 8th Ed., AOAC International, Gaithersburg, Md.

Revision : 2/ 2013

**Disclaimer :**

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.