# Dichloran Rose Bengal Chloramphenicol (DRBC) Agar

## Intended Use
Dichloran Rose Bengal Chloramphenicol (DRBC) Agar is a selective medium used for the enumeration of yeasts & moulds in food industries.

## Summary
Dichloran Rose Bengal Chloramphenicol Agar (DRBC Agar) is formulated by as described by King *et al,.* and is recommended for selective isolation of yeasts and moulds especially in food samples. This medium is a modification of Rose Bengal Chloramphenicol Agar with the addition of dichloran.

## Principle
Peptone provides nitrogen, vitamins and minerals. Dextrose is a carbohydrate source. Phosphate buffers the medium. Magnesium sulphate provides divalent cations and sulphate. 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. 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.

## Formula*

| **Ingredients** | **g/L** |
|---|---|
| Bacteriological Peptone | 5.0 |
| Magnesium Sulphate | 0.5 |
| Dichloran | 0.002 |
| Rose Bengal | 0.05 |
| Dextrose | 10.0 |
| Potassium Dihydrogen Phosphate | 1.0 |
| Chloramphenicol | 0.1 |
| Agar | 15.0 |
| Final pH (at 25°C) | 5.6 ± 0.2 |

*Adjusted to suit performance parameters

## Storage and Stability
Store below 8°C in tightly closed container, preferably in dessicators and use freshly prepared medium. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

## Type of specimen
Food and dairy samples

## Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

## Directions
1. Suspend 31.65 g of the powder in 1000 mL purified / distilled water and heat to dissolve the powder.
2. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
3. Cool at 50°C and pour into petridishes.

## Quality Control

**Dehydrated Appearance:** Light Pink coloured, homogeneous, free flowing powder
**Prepared Appearance:** Pink to bright pink coloured, very slightly opalescent gel forms in petridishes.
**Cultural Response:** Cultural characteristics observed after an incubation of 18-48 hours at 30°C-35° C for bacteria and 2-5 days for fungi at 20°C-25°C.

| Organism (ATCC) | Growth |
|---|---|
| *Mucor racemosus* (42647) | Good |
| *Saccharomyces cerevisiae* NRRL Y-567 (9763) | Good |
| *Escherichia coli* (8739) | Inhibited |
| *Escherichia coli* (25922) | Inhibited |
| *Bacillus spizizenii* (6633) | Inhibited |

## Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

## Precautions/Limitations

This medium should not be exposed to direct light as Rose Bengal undergoes photo-degradation leading to formation of toxic chemicals for fungi.

## Warranty

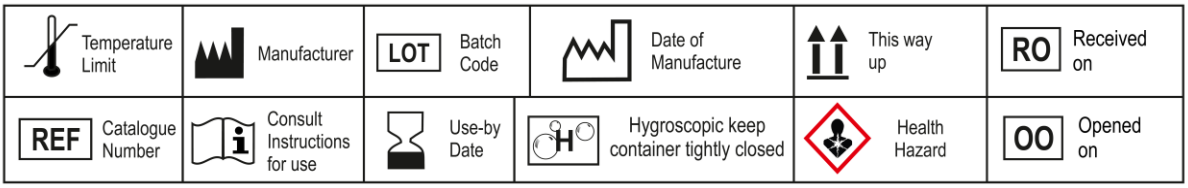
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

## 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.
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.


## Product Presentation:

| Cat No. | Product description | Pack Size |
|---|---|---|
| 201040100100 | Dehydrated Culture Media | 100 g |
| 201040100500 | Dehydrated Culture Media | 500 g |
| 201040102500 | Dehydrated Culture Media | 2.5 k |

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**Disclaimer**

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.