

Dichloran-Rose Bengal Chloramphenicol (DRBC) Agar

DRBC Agar is used for the enumeration and isolation of Molds and yeasts in foods.

Industry: Food / Dairy products

Principles & Uses

Dichloran Rose Bengal Chloramphenicol Agar (DRBC Agar) is a specialized medium designed for the selective isolation of yeasts and molds, particularly in food samples. It is derived from Rose Bengal Chloramphenicol Agar but incorporates dichloran as an additional component. The medium's composition includes peptone for nitrogen, vitamins, and minerals, dextrose as a carbohydrate source, phosphate to buffer the medium, magnesium sulfate for divalent cations and sulfate, dichloran as an antifungal agent to reduce the size of fungal colonies, and chloramphenicol to inhibit bacterial growth commonly found in environmental and food samples.

Rose Bengal, used in the medium, restricts bacterial growth and the size of rapidly growing molds. The pH is maintained at 5.6, favoring the inhibition of spreading fungi. This medium provides an environment where slower-growing fungi are not overrun by faster-growing species. Yeast and mold colonies readily take up Rose Bengal, making them easily distinguishable and countable.

However, it's important to protect DRBC Agar from direct light exposure as Rose Bengal can degrade and produce toxic substances in the presence of light.

Composition (gr/L)

Peptone 5, Glucose 10, Potassium Dihydrogen Phosphate 1, Dichloran 0.002, Magnesium Sulfate 0.5, Rose Bengal 0.025, Chloramphenicol 0.1, Agar 15.

Final pH at 25°C 5.6 ± 0.2

Preparation from dehydrated Powder

Suspend 31.6 g of powder in 1 Liter of distilled water. Autoclave at 121°C for 15 minutes. Cool to approximately 50 °C, mix well and pour plates.

Quality Control

Dehydrated Appearance: Pink, free-flowing, homogeneous.

Prepared Appearance: Light to medium amber, clear to slightly opalescent.

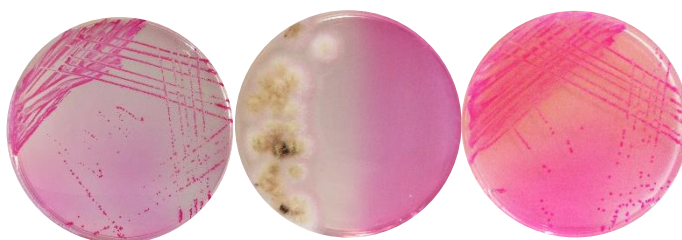
Reaction of 3.16% Solution at 25°C: pH 5.6 ± 0.2

Cultural Response

Inoculate and incubate at 25 ± 2°C for up to 5 days. For *A. niger*, spot inoculate.

Organism (ATCC*)	Recovery
<i>Saccharomyces cerevisiae</i> (9763)	Good
<i>Aspergillus niger</i> (1015)	Good
<i>Candida albicans</i> (10231)	Good
<i>Escherichia coli</i> (25922)	None
<i>Bacillus subtilis</i> (6633)	None

*ATCC is a registered trade mark of the American Type Culture Collection.



Saccharomyces cerevisiae (left). *Aspergillus niger* (middle). *Candida albicans* (right).

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.