

DRBC Agar (ISO) (NCM0082)

Intended Use

Dichloran Rose Bengal Chloramphenicol Agar is for the enumeration of yeasts and is not intended for use in the diagnosis of disease or other conditions in humans.

Description

Developed with reference to ISO 21527-1:2008 for the enumeration of yeasts and molds in food and animal products, this medium is tested to the performance requirements of the standard. Used for the enumeration of viable yeasts and molds in products with a water activity of greater than 0.95 such as eggs, meat, some dairy products, fresh pastes, fruit and vegetables, DRBC Agar is designed to suppress the colonial growth of 'spreader' molds and in doing so allow easier performance of the colony count technique on yeasts and molds.

The use of the anti-fungal agent, dichloran, restricts spreading of mucoraceous fungi and restricts the colony size of other genera. Rose bengal also assists in the reduction of colony sizes and is selective against bacteria. Additional selectivity against bacterial growth is achieved through both the low pH of the medium and the incorporation of the heat-stable antibiotic Chloramphenicol. Glucose is incorporated as the fermentable carbohydrate source, with an enzymatic digest of animal & plant tissues providing the essential vitamins, minerals, amino acids, nitrogen and carbon.

Typical Formulation

Enzymatic Digest of Animal & Plant Tissue	5.0 g/L
D-Glucose	10.0 g/L
Potassium Dihydrogen Phosphate	1.0 g/L
Magnesium Sulphate	0.5 g/L
Dichloran	0.002 g/L
Chloramphenicol	0.1 g/L
Rose Bengal	0.025 g/L
Agar	15.0 g/L

Final pH: 5.6 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precaution

1. Refer to SDS

Preparation

1. Suspend 31.7 grams of medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Cool to 45-50°C.

Test Procedure - as per ISO 21527-1:2008

Inoculate plates in duplicate with 0.1ml of test sample. Spread the liquid over the agar surface using a sterile spreader until the liquid is completely absorbed. Incubate aerobically with lids uppermost at 25°C ± 1°C for 5 days.

Results

Read plates between 2 – 5 days. Select dishes containing less than 150 colonies/propagules and count these colonies/propagules.



Technical Specification Sheet



Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing or appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedures

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

1. Bacteriological Analytical Manual, 8th edition, Revision A, 1998. Chapter 18 Yeasts, Molds and Mycotoxins. Authors: Valerie Tournas, Michael E. Stack, Philip B. Mislivec, Herbert A. Koch and Ruth Bandler. Revised: 2000-APR-17
2. Beuchat and Cousin (2001). *In* Downes and Ito (ed.). Compendium of Methods for the Microbiological Examination of Foods, 4th edition. American Public Health Association.
3. ISO 21257-1:2008 Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of yeasts and moulds. Part 1: Colony count technique in products with water activity greater than 0.95.
4. King Jr, A.D., Hocking, A.D. and Pitt, J.I. (1979). Dichloran-Rose Bengal Medium for Enumeration and Isolation of Molds from Foods. *J. Appl. Environ. Microbiol.* 1979, **37**, 959-964.



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