

TECHNICAL DATA SHEET

Dichloran Rose Bengal Chloramphenicol Agar (DRBC Agar)

Principle

Dichloran Rose Bengal Chloramphenicol Agar (DRBC Agar) is formulated by as described by King et.al (1979). DRCB agar composed of peptone, dextrose, dipotassium phosphate, magnesium sulphate, rose Bengal, chloramphenicol, dichloran and agar. Peptone provides nitrogenous compounds, carbon, long chain amino acids, vitamins and other essential growth nutrients. Dextrose is a carbohydrate source. Phosphate buffers the medium. Magnesium sulfate provides divalent cations and sulfate. Dichloran is an antifungal agent, maintain the colony diameters of spreading fungi. Rose Bengal performs dual function; it inhibits the growth of bacteria and restricts the size and colonies of the more rapidly growing molds. Chloramphenicol is included to inhibit the growth of bacteria present in environmental and food samples. Additionally Rose Bengal is taken by yeast and molds colonies, which allows these colonies to be easily recognized and enumerated.

Use: For selective isolation and enumeration of yeasts and moulds from food samples

Contents*

Ingredients	Gram/Liter
Peptone	5.000
Dextrose	10.000
Potassium Phosphate	1.000
Magnesium sulphate	0.500
Rose Bengal	0.025
Chloramphenicol	0.100
Dichloran	0.002
Agar	15.000
pH at 25°C	5.6 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 31.50 grams in 1000 ml distilled water check. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

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Specimens' types analyzed

Food and dairy samples, eggs, meat products and vegetables. Etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Pinkish purple colored free flowing, homogeneous powder
Reaction of 3.15% solution	5.6 $\pm$ 0.2 at 25 °C
pH	5.40- 5.80
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Pink colored clear to slightly colored opalescent gel
Growth Promotion properties	Best at $\leq$ 100 CFU at 32-37 °C for 48 -72 h
Indicative properties	Optimum at $\leq$ 100 CFU at 32-37 °C for 48 - 72 h
Negative control	Performed using sterile distilled water

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Different Microbial Response

Prepare media as per the label directions. Inoculate and incubate the plates at desired temperature and period. The optimum incubation for Yeast and Molds is $25 \pm 2^{\circ}\text{C}$ for 3-5 days and for bacteria $35 \pm 2.0^{\circ}\text{C}$ for 24-48 hrs.

Organism	ATCC	Inoculum	Growth	Recovery
<i>Aspergillus brasiliensis</i>	16404	50-100	Good	$\geq 50\%$
<i>Candida albicans</i>	10231	50-100	Luxuriant	$\geq 60\%$
<i>Saccharomyces cerevisiae</i>	9763	50-100	Luxuriant	$\geq 60\%$
<i>Bacillus subtilis</i>	6633	50-100	Inhibited	--
<i>Escherichia coli</i>	8739	50-100	Inhibited	--

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. American Public Health Association, (1978) Standard Methods for the Examination of Dairy Products, 14th Ed., Washington D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. King D.A. Jr., Hocking A.D. and Pitt J.I., (1979), J. Appl. Environ. Microbiol., 37:959.
4. 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, ISO 215271:2008
5. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.
6. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

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