

TITAN MEDIA

DICHLORAN MEDIUM BASE W/ROSE BENGAL

TM 982

For selective isolation and enumeration of yeasts and mold

Composition

Ingredients	Gms/Ltr.
Agar	15.00
Glucose	10.00
Peptone	5.00
Potassium dihydrogen phosphate	1.00
Magnesium sulphate	0.50
Rose Bengal	0.025
Dichloran	0.002

* Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 31.50gms 1000ml in distilled water. Gently heat to dissolve the medium completely. Add the rehydrated content of 2 vial of **CHLORAMPHENICOL SELECTIVE SUPPLEMENT (TS 053)** to the molten medium. Sterilize at 15psi (121°C) for 15 minutes. Cool to 45-50°C, mix well and dispense into sterile Petri plates.

Technique:

- Prepare the Dichloran Medium Base with Rose Bengal (DRBC Medium) as per above directions.
- Add 40ml of food sample to 200ml of 0.1% Peptone water and shake periodically for 30 minutes.
- Inoculate 0.1 ml of this sample on Dichloran Medium Base with Rose Bengal.
Observe and count the number of colonies per gram of food.

Appearance: Pink colour, clear gel

pH (at 25°C): 5.6 ± 0.2

Principle

DICHLORAN MEDIUM BASE W/ ROSE BENGAL is used for selective isolation and enumeration of yeasts and mold. This formulation is first described by King *et al.* which is a modification of Rose Bengal Chloramphenicol Agar. Medium contains Peptone which provides the carbon and nitrogen sources for the growth. Dextrose is a fermentable carbohydrate. Potassium dihydrogen phosphate is the buffering agent. Magnesium sulphate is responsible to provide necessary trace elements. Dichloran inhibits spreading of moulds such as *Rhizopus* and *Mucor* and restricts colony sizes to excess growth. Chloramphenicol supplement is added to inhibits the bacterial growth specially gram negative. Agar is solidifying agent.

Interpretation

Cultural characteristics observed after inoculating sample in 10³CFU/ml and with point inoculation, on incubation at a temperature of 25°C for 3 - 5 days.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth
<i>Saccharomyces cerevisiae</i>	9763	10 ³	Good
<i>Mucor racemosus</i>	42647	10 ³	Good

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<i>Aspergillus niger</i>	9642	Point inoculation	White to yellow mycelium with black spores
<i>Bacillus subtilis</i>	6633	10 ³	inhibited

References

1. King D. A. Jr., Hocking A. D. and Pitt J. I., *J. Appl. & Environ. Microbiol.* 37. 959-964. (1979).
2. Jarvis B., Comparison of an improved rose-bengal-chlortetracycline agar with other media for the selective isolation and enumeration of moulds and yeasts in food, *J. Appl. Bact.*, 36, 723. (1973).
3. ISO 21527 - 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.