



Reference : 01-301

Scharlau Microbiology - Technical data sheet

Product :

ROSE BENGAL CHLORAMPHENICOL AGAR



### Also known as

Rose Bengal Chloramphenicol Agar; RBC Agar.

### Specification

Solid and selective medium for the isolation of yeasts and moulds from the environment and food products.

### Formula \* in g/L

|                          |        |
|--------------------------|--------|
| Peptone.....             | 5,000  |
| Dextrose.....            | 10,000 |
| Potassium phosphate..... | 1,000  |
| Magnesium sulfate.....   | 0,500  |
| Rose bengal.....         | 0,050  |
| Chloramphenicol.....     | 0,100  |
| Agar.....                | 15,000 |

Final pH 7,2 ±0,2 at 25 °C

\* Adjusted and /or supplemented as required to meet performance criteria

### Directions

Dissolve 32 g in 1 l of purified water and bring to the boil with frequent stirring. Distribute into final containers and sterilise by autoclaving at 121°C for 15 minutes.

### Description

Rose Bengal Agar is a selective medium used to detect and enumerate moulds and yeasts in food samples. In addition the nutritional requirements for moulds and yeasts, this medium also contains Rose Bengal, which apart from turning the yeast a pink colour, facilitates counting, by reducing the luxuriant growth of moulds such as *Rhizopus* and *Neurospora*. This makes it easier to detect other slower growing moulds.

The chloramphenicol included in the formulation inhibits bacterial growth, but does not interfere with the growth of fungi.

### Technique

After making a dilution bank, take 0.1 ml from each dilution and inoculate on Rose Bengal agar plates with a Drigalsky Loop or glass spreader. Should the pour plate method be preferred, take 1 ml from each dilution and put it in an empty Petri dish. Pour the molten medium at 50°C and homogenize it by gently swirling the plate in the shape of a figure 8. Incubate at 25 ± 1°C for 5 days enumerate the fungi.

After making a dilution bank, take 0.1 ml from each dilution and inoculate with a Drigalsky Loop or glass spreader on Rose Bengal agar plates. Should the massive seed method be preferred, take 1 ml from each dilution and put it in an empty plate. Pour the molten medium at 50°C and homogenize it by gently moving the plate in an eight (8) shape. Incubate at 25 ± 1 °C for 5 days and proceed to enumerate the fungi.

### Limitations:

- The low concentration of antibiotic that contains the culture medium can be expected that the growth of certain strains of bacteria is inhibited only partially.
- This medium is photo-sensitive. Do not expose this medium to the light since photo-degradation of Rose Bengal produce compounds toxic to fungi.
- The prepared medium or ready-to-use plates haven a short shelf life and retain these at 4 ± 2°C in the dark.



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### Quality control

**Incubation temperature:** 25 ± 1°C

**Incubation time:** ≤ 5 days

**Inoculum:** Practical range 100 ± 20 CFU. Min. 50 CFU (Productivity) / 10<sup>4</sup>-10<sup>6</sup> CFU (Selectivity) according to ISO 11133:2014/Amd 1:2018

### Microorganism

*Bacillus subtilis* ATCC® 6633

*Escherichia coli* ATCC® 8739

*Aspergillus brasiliensis* ATCC® 16404

*Saccharomyces cerevisiae* ATCC® 9763

*Candida albicans* ATCC® 10231

### Growth

Total to partial inhibition

Total to partial inhibition

Productivity > 0.50

Productivity > 0.50

Productivity > 0.50

### Remarks

-

-

Black sporulation (5 days)

-

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*Saccharomyces cerevisiae* ATCC 9763



*Aspergillus brasiliensis* ATCC 16404



*Candida albicans* ATCC 10231

### References

- ATLAS, R.M., L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.
- CLESCERI, L.S., A.E. GREENBERG & A.D. EATON (1998) Standard Methods for the examination of water and wastewater. 20th ed. APHA. Washington DC.
- DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA. Washington DC.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- MARSHALL, R.T. (1993) Standard methods for the examination of dairy products. 16th ed. APHA, Washington DC.

### Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).