

Agar Strip - RB (Rose-Bengal-Agar for Yeasts and Moulds)

PS640

These are sterile disposable Plastic Air Sampler strips filled with Rose-Bengal-Agar for total count of Yeasts and Moulds.

Composition**

Ingredients	Gms / Litre
Mycological peptone	5.000
Dextrose	10.000
Monopotassium phosphate	1.000
Magnesium sulphate heptahydrate	0.500
Rose bengal	0.050
Chloramphenicol	0.100
Agar	15.500
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

1) Remove the agar medium strip from the wrapper. Pull it out holding by edges only. Do not touch agar/media surface. 2) Insert it peripherally into the slot of the air sample in the metal cup carefully (without touching the medium). Please be sure that the agar surface faces the impeller only. Insert the strip fully so that only 2cms. of the strips stay out. 3) Carry out the air sampling as directed. 4) After sampling is over, hold the strip by its tab. carefully pullout the strip. 5) Now replace in its original wrapper. Make sure that agar surface faces away from the sliding lid. 6) Slide the lid to seal the wrapper/seal using adhesive tape. 7) Mark the wrapper as desired and incubate.

Principle And Interpretation

Rose Bengal Agar is a selective medium to detect and enumerate yeasts and moulds in food samples. The use of media with an acidic pH that selectively inhibits the growth of bacteria and thereby promotes the growth of fungi has been widely employed (6, 1, 14). Neutral pH media with antibiotics is advantageous for fungal growth compared to acidified media as the later may inhibit fungal growth or fail to inhibit bacterial growth (7, 9) and may restrict the size of mould colonies (13). Smith and Dawson (12) used rose bengal in a neutral pH medium for the selective isolation of fungi from soil samples.

Chloramphenicol, streptomycin, oxytetracycline and chlortetracycline have been used for the improved, selective isolation and enumeration of yeasts and moulds from soil, sewage and foodstuffs (4, 5, 9, 11).

Rose Bengal Agar Base supplemented with chloramphenicol is a modification of the Rose Bengal Chlortetracycline Agar formula of Jarvis (5). Instead of chlortetracycline, chloramphenicol is employed in this medium as a selective supplement. Chloramphenicol is recommended because of its heat stability and broad antibacterial spectrum (8). Rose Bengal Agar is recommended in standard methods for the enumeration of yeasts and moulds from foodstuffs and water (2, 3, 8).

Papaic digest of soyabean meal provides the carbon and nitrogen sources required for good growth of a wide variety of organisms. Dextrose is an energy source. Monopotassium phosphate provides buffering capability. Magnesium sulphate provides necessary trace elements. Rose bengal is a selective agent that inhibits bacterial growth and restricts the size and height of colonies of the more rapidly growing moulds. Rose bengal is taken up by yeast and mould colonies, thereby facilitating their recognition and enumeration.

Due to the selective properties of this medium and the type of specimen being cultured, some strains of fungi may grow poorly or fail to grow on the complete medium; similarly, some strains of bacteria may also not inhibited or only partially inhibited.

Care should be taken not to expose this medium to light, since photodegradation of rose bengal yields compounds that are toxic to fungi (10, 2).

Quality Control

Appearance

Plastic Air Sampler strips filled with sterile Rose Bengal Agar.

Colour

Deep pink coloured medium.

Quantity of Medium

14ml of medium in air sampler strips

Reaction

7.00- 7.40

Cultural response

Cultural characteristics observed after incubation at 22 - 28°C for 48 - 72 hours.

Sterility test

Passes release criteria

Organism	Growth
<i>Bacillus subtilis</i> ATCC 6633	Inhibited
<i>Escherichia coli</i> ATCC 25922	Inhibited
<i>Enterococcus faecalis</i> ATCC 19433	Inhibited
<i>Aspergillus niger</i> ATCC 16404	Luxuriant
<i>Saccharomyces cerevisiae</i> ATCC 9763	Luxuriant

Storage and Shelf Life

Store between 2-8°C. Use before expiry date on the label.

Reference

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