

## R2A AGAR Prepared Media

For the cultivation of bacteria

### PD295 R2A AGAR, 90 mm Petri dish with media

**Appearance:** very light amber

**Intended Use and Principles of the Procedure** – R2A Agar (Reasoner and Geldreich. 1985) is designed to promote the growth of micro-organisms that require low nutrient environments for growth, such as water samples. The reduced amount of nutrients in the medium allows the growth of aerobic, heterotrophic micro-organisms, which are adapted to low nutrient content.

Each ready to use plate is of 90 mm in diameter, and the packs are single-bagged in transparent sleeves.

**Application**-R2A Agar plates are designed for the determination of the total microbial count in treated water, water for injections, purified water, and bulk water.

### Formula- R2A Agar Approximate Formula (Gram/Liter)

Yeast Extract -0.5, Proteose Peptone No. 3- 0.5, Casamino Acids- 0.5, Dextrose- 0.5, Soluble Starch- 0.5, Sodium Pyruvate- 0.3, Dipotassium Phosphate- 0.3, Magnesium Sulfate- 0.05, Agar- 15.0.

### QC performance

pH at RT -  $7.2 \pm 0.2$

GPT: inoculum 10-100 cfu

| Test                            | ATCC No. | Incubation Temp. (°C) | Incubation Cond.     |
|---------------------------------|----------|-----------------------|----------------------|
| <i>Staphylococcus aureus</i>    | 6538     | 30-35                 | Aerobic, 24-48 hours |
| <i>Escherichia coli</i>         | 8739     | 30-35                 | Aerobic, 24-48 hours |
| <i>Bacillus cereus</i>          | 14579    | 30-35                 | Aerobic, 24-48 hours |
| <i>Bacillus subtilis</i>        | 6633     | 30-35                 | Aerobic, 24-48 hours |
| <i>Pseudomonas aeruginosa</i>   | 9027     | 30-35                 | Aerobic, 24-48 hours |
| <i>Aspergillus brasiliensis</i> | 16404    | 20-25                 | Aerobic, 72-96 hours |

**Storage** 2 – 8 °C

**Warning and Precautions** - For laboratory use only. Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Do not use the product beyond its expiry date

### Procedure

1. Water samples should be collected as described in Standard Methods for the Examination of Water and Wastewater To minimize changes in bacterial population, water samples should be tested as soon as possible.
2. Prepare test dilutions for heterotrophic plate count, if required.
3. Plate the test sample and dilutions by the spread plate or membrane filtration method.

### Limitations of the Procedure

1. Incubation time longer than indicated may be necessary to recover additional slow-growing bacteria.
2. R2A Agar is a low nutrient medium intended for culturing compromised microorganisms. Good growth of standard, healthy control organisms does not necessarily reflect the ability of the medium to recover stressed organisms.