

PRODUCT INFORMATION

Product Type: LD529 - Little Dishes 50mm
PD295 - PETRI DISHES 90mm

Cat No. PD295 - LD529 - R2A AGAR

Intended Use:

R2A Agar is used for enumerating heterotrophic organisms in water samples.

Principle and Uses:

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.

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.

Purpose: Designed for the recovery of stressed, chlorine-tolerant, or slow-growing bacteria that may be suppressed on richer media.

Mode of Action: The low nutrient content prevents rapid overgrowth by fast-growing species, allowing slow-growing and stressed bacteria to form colonies. Starch and pyruvate aid in the recovery of injured cells.

Yeast extract provides a source of trace elements and vitamins. Peptone and casamino acids provide nitrogen, vitamins, amino acids, carbon and minerals. Dextrose serves as a carbon source. Soluble starch aids in the recovery of injured organisms by absorbing toxic metabolic by-products. Sodium pyruvate increases the recovery of stressed cells. Potassium phosphate is used to balance the pH and provide phosphate. Magnesium sulfate is a source of divalent cations and sulfate. Agar is the solidifying agent.

Procedure

To minimize changes in bacterial population, water samples should be tested as soon as possible, but at least within 6 hours of collection if the sample has not been refrigerated or within 24 hours if refrigerated.

Limitation of the Procedure

1. R2A Agar is intended for use only with water samples since it is recommended for compromised bacteria.
 2. Incubation time longer than indicated may be necessary to recover additional slow-growing bacteria.
 3. R2A Agar performs best with the spread plate technique; however, that procedure is limited to a small sample volume.
 4. Fast-growing bacteria may produce smaller size colonies on R2A Agar than on nutritionally rich media.
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Composition:

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

Storage: 2-8°C

Appearance: very light amber

pH Range: 7.0 - 7.4

Warning and Precautions - For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Petri dishes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Petri Dishes may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.

If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation. Storage Instructions: On receipt, store plates in the dark at 2–8 °C. Avoid freezing and overheating. Do not open until ready to use.

Performance Testing Results

GPT: inoculum 10-100 cfu.

TEST	ATCC	Incubation Temp. (°C)	Incubation Cond.	Reaction 1
<i>Staphylococcus aureus</i>	6538	30-35 °C	Aerobic, 24-48 hours	Growth
<i>Bacillus cereus</i>	14579	30-35 °C	Aerobic, 24-48 hours	Growth
<i>Bacillus subtilis</i>	6633	30-35 °C	Aerobic, 24-48 hours	Growth
<i>Escherichia coli</i>	8739	30-35 °C	Aerobic, 24-48 hours	Growth
<i>Pseudomonas aeruginosa</i>	27853	30-35 °C	Aerobic, 24-48 hours	Growth
<i>Pseudomonas paraeruginosa</i>	9027	30-35 °C	Aerobic, 24-48 hours	Growth
<i>Aspergillus brasiliensis</i>	16404	20-25 °C	Aerobic, 72-96 hours	Growth