

R2A Agar

Catalog : HB0167-500

R2A Agar is used for the detection of total bacteria in drinking water.

Approximate Formula:

Ingredients	gm/liter
Tryptone	0.25
Acid Hydrolyzed Casein	0.5
Yeast Extract	0.5
Soluble Starch	0.5
Dipotassium Hydrogen Phosphate	0.3
Magnesium Sulfate	0.1
Sodium Pyruvate	0.3
Agar	12.0
Peptone	0.25
Glucose	0.5
Final pH7.2±0.2 at 25°C	

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

Directions:

Suspend 15.2g of the medium in one liter of deionized or distilled water. Heat to dissolved. Dispense into flasks. Sterilize in an autoclave at 121°C (15 lbs.) for 15 minutes.

Principle and Interpretation:

Yeast extract provides a source of trace elements and vitamins. Tryptone ,Peptone and Acid Hydrolyzed Casein 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.

Appearance:

Dehydrated medium is a free-flowing white-yellowish powder. The prepared medium is a kind of white transparent gel.

Precautions:

This medium is for laboratory use only. Dried medium which is caking or color variation cannot be used.

Storage conditions and Shelf life:

R2A Agar must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the medium per label directions. Inoculate and incubate at 30-35°C for 48±2 hours.

Microorganism	Strains Number	Inoculum(C FU)	Growth	Recovery	Remarks
<i>Pseudomonas aeruginosa</i>	ATCC 9027	20-200	Luxuriant	≥70%	Green colonies
<i>Escherichia coli</i>	ATCC 25922	20-200	Luxuriant	≥70%	Colorless colonies
<i>Bacillus subtilis</i>	ATCC 6633	20-200	Luxuriant	≥70%	White irregular colonies
<i>Staphylococcus Aureus</i>	ATCC 6538	20-200	Luxuriant	≥70%	Yellowish colonies

References:

1. Reasoner and Geldreich. 1985. Appl. Environ. Microbiol. 49:1.
2. Fiksdal, Vik, Mills and Staley. 1982. J. Am. Water Works Assoc. 74:313.
3. Kelly, Justice and Nagy. 1983. Abstr. Q122, p. 280. Abstr. 83rd Annu. Meet. Am. Soc. Microbiol. 1983