R2A AGAR

INTENDED USE:
A medium for the bacterial examination of drinking water.

PRINCIPLE AND INTERPRETATION:
Enzymatic Digest of Casein, Enzymatic Digest of Animal Tissue, and Acid Hydrolysate of Casein provide nitrogen, carbon and minerals in R2A Agar. Yeast Extract is a source of vitamins and trace elements. Dextrose serves as a carbon source in the formula. Soluble Starch aids in the recovery of injured organisms by absorbing toxic metabolic by-products. Dipotassium Phosphate is used to balance the pH, and Magnesium Sulfate Heptahydrate is a source of divalent cations and sulfate. Sodium Pyruvate increases the recovery of stressed cells. Agar is the solidifying agent.

COMPOSITION:

Ingredients	Gr/Liter
Yeast extract	0,5 gr
Proteose peptone	0,5 gr
Casein hydrolysate	0,5 gr
Glucose	0,5 gr
Starch	0,5 gr
Di-potassium phosphate	0,3 gr
Magnesium sulphate	0,24 gr
Sodium pyruvate	0,3 gr
Agar	15 gr

***Formula adjusted, standardized to suit performance parameters
pH: 7,2 ± 0,2

PRECAUTIONS:
For professional use only. Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

TEST PROCEDURE:

R2A Agar may be used in poured plate, spread plate and membrane filtration procedures. Refer to standard methods for sample collection and testing

QUALITY CONTROL:

1.Sterility Control:
Incubation 48 hours at 30-35ºC and 72 hours at 20-25ºC: NO GROWTH

2.Phsical/Chemical Control
pH: 7,2± 0,2
Apperance: Light amber

3.Microbiological Control: Incubation at 35± 2 ºC;24-72 hours and 25±2 °C:5-7d

Microorganism	Inoculum (CFU)	Results	
		Growth	Reaction
Bacillus subtilis ATCC 6633	10-100	Good	Good
Pseudomonas aeruginosa ATCC 9027	10-100	Good	Good
Escherichia coli ATCC 8739	10-100	Good	Good
Candida albicans ATCC 10231	10-100	Good	Good
Staphylococcus aureus ATCC 6538	10-100	Good	Good

LIMITATIONS OF THE PROCEDURE:

1. R2A Agar is intended for use only with treated potable water since it is recommended for compromised bacteria.
2. Use of the pour plate method is discouraged because recovery of stressed bacteria may be compromised by the heat shock (44-46°C) and low oxygen tension that are part of the procedure.7,8
3. Incubation time longer than indicated may be necessary to recover additional slow-growing bacteria.
4. R2A Agar performs best with the spread plate technique; however, that procedure is limited to a small sample volume.
5. Fast-growing bacteria may produce smaller size colonies on R2A Agar than on nutritionally rich media.
6. 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. Each new lot of medium should be performance tested against a previous lot of R2A Agar using tap water.

STORAGE CONDITIONS AND SHELF LIFE:

Store the prepared medium at 2 - 12°C. Use before expiry date on the label..Do not use beyond stated expiry date.

DISPOSAL:

Incubated prepared medium may contain active bacteria and micro-organisms. Do not open infected medium. Infected plate should be autoclaved, incinerated or opened and soaked in a chlorine-based disinfectant (liquid bleach) for 20 minutes prior to disposal.

PACKAGING:

Katalog Number: 02059
Packaging: Single wrap
Content: 10 plates/each package

REFERENCES:

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5. Eaton, Rice and Baird (ed.). 2005. Standard methods for the examination of water and wastewater, 21st ed., online. American Public Health Association, Washington, D.C.
6. Kim and Feng. 2001. In Downes and Ito (ed.), Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
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