R2A Agar

Medium used for the cultivation and enumeration of heterotrophic organisms in treated potable water or water for injections.
*Equally use with NIER (MB-R1129N) and EP.

• CONTENTS (Liter)

Yeast Extract	0.5 g
Proteose Peptone No.3	0.5 g
Casamino Acid	0.5 g
Dextrose	0.5 g
Soluble Starch	0.5 g
Dipotassium Phosphate	0.3 g
Magnesium Sulfate Heptahydrate**	0.05 g
Sodium Pyruvate	0.3 g
Agar	15.0 g

Final pH = 7.2 ± 0.2 at 25°C

**Equivalent 0.024 G Magnesium Sulfate Anhydrous

• PROCEDURE

Suspend 18.15 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Mix well. Pour into petri dishes.

• INTERPRETATION

R2A Agar is a medium used for the cultivation and enumeration of heterotrophic organisms in treated potable water or water for injections. Yeast extract provides vitamins. Proteose peptone no.3 and casamino acid provide nitrogen, carbon, amino acids and minerals. Dextrose is the carbohydrate. Soluble starch neutralizes toxic metabolic by products. Dipotassium phosphate is the buffering agent. Magnesium sulfate heptahydrate is a cofactor for many metabolic reactions. Sodium pyruvate provides the recovery of stressed cells. Agar is the solidifying agent.

• TECHNIC

Inoculate the specimen using a sterile loop to the medium. Incubate at 21 ± 1 °C for 72 ± 3 hours (*EP: 30 - 35°C / up to 3 days). Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium
Appearance: free-flowing, homogeneous
Color: light beige
Prepared medium
Appearance: opalescent with a slight precipitate
Color: very light amber
Incubation conditions: 21 ± 1°C / 72 ± 3 hours
(*EP: 30 - 35°C / up to 3 days)

Microorganism	ATCC	Inoculum CFU	Growth
Enterococcus faecalis	29212	50-100	good
Escherichia coli	25922	50-100	good
Pseudomonas aeruginosa	27853	50-100	good
Staphylococcus aureus	25923	50-100	good
**Bacillus subtilis*	6633	50-100	good
**Pseudomonas aeruginosa*	9027	50-100	good

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at 2 - 8°C.

• REFERENCES

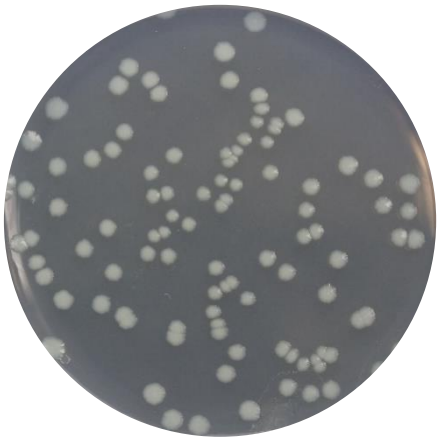
1. European Pharmacopoeia (EP) 3rd Edition. Supplement 4.6, 2004.
2. APHA (1985) –Standard Methods for the Examination of Water and Wastewater 16th edition.
3. Reasoner and Geldreich. 1985. Appl. Environ. Microbiol. 49:1.
4. Fiksdal, Vik, Mills and Staley. 1982. J. Am. Water Works Assoc. 74:313.
5. Kelly, Justice and Nagy. 1983. Abstr. Q122, p. 280. Abstr. 83rd Annu. Meet. Am. Soc. Microbiol. 1983.
6. 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.
7. 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.
8. Van Soestberger and Lee. 1969. Appl. Microbiol. 18:1092.
9. Refer to the NIER.

• PACKAGE

Cat. No : MB-R1129 R2A Agar	500 G

• MICROBIAL CULTURE IMAGES

None



S.aureus ATCC 25923

E. coli ATCC 25922

Incubation conditions : 21 ± 1°C / 72 ± 3 hours

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