



Robinson Medium for Entamoeba (Twin Pack)

M459

Escherichia coli culture grown in this medium is used as a substrate for growth of amoeba.

Composition**

Ingredients	Gms / Litre
Part A	-
Citric acid	20.000
Ammonium sulphate	10.000
Magnesium sulphate	0.500
Monopotassium phosphate	5.000
Sodium chloride	50.000
Bromothymol blue	0.001
Part B	-
Lactic acid	40.000 ml
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 85.5 grams of Part A in 1000 ml distilled water containing 40 ml of Part B (Lactic Acid). This solution can be kept without sterilization for 4 weeks. For use, dilute the medium 10 times by adding 900 ml distilled water to 100 ml medium. Adjust pH to 7.0 ± 0.2 with 10N sodium hydroxide and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to room temperature and inoculate *Escherichia coli* Strain B.

Principle And Interpretation

Entamoeba histolytica causes amoebiasis and is the only amoeba pathogenic for humans (1). Amoebic dysentery is an acute diarrhea with ulcerations of the colonic mucosa. A chronic form, amoebic colitis, produces symptoms similar to those of ulcerative colitis (2).

Robinson Medium for Entamoeba is prepared as per the formulation of Robinson (3). Robinson has described a very sensitive method for culturing *E. histolytica* which includes growth of *Escherichia coli* on a defined medium and subsequent inoculation of these bacteria on saline agar slopes previously inoculated with faeces sample; various nutrients required for amoebic growth are also added (4).

Citric acid and lactic acid provide carbon source and ammonium sulphate provides nitrogen source necessary for the growth of bacteria. Sodium chloride maintains the osmotic balance. Phosphate buffers the medium well. Bromothymol blue acts as a pH indicator. Refer to appropriate references for standard procedures (4).

Quality Control

Appearance

Part A : Off-white to yellow homogeneous free flowing powder Part B : Colourless liquid

Colour and Clarity of prepared medium

Colourless clear solution without any precipitate

Reaction

Reaction of 0.85% w/v aqueous solution containing 0.4% v/v lactic acid at 25°C. pH : 7.0 ± 0.2

pH

6.80-7.20

Cultural Response

M459: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism

Growth

Escherichia coli strain B Good
ATCC 23226

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Bruckner D. A., 1992, Clin. Microbiol. Rev. 5: 356-369.
2. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
3. Robinson G. L., 1968, Transactions of the Royal Society of Tropical Medicine and Hygiene 62:285-294.
4. Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), 1996, Mackie and McCartney, Practical Medical Microbiology, 14th Edition, Churchill Livingstone

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