Rhamnose Broth

M1364

Rhamnose Broth is recommended for demonstration of rhamnose fermentation (*Listeria monocytogenes*).

Composition**

Ingredients	Gms / Litre
Meat extract	1.000
Meat peptone	10.000
Sodium chloride	5.000
Bromo cresol purple	0.020
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 16.02 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes containing inverted Durham's tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Aseptically add filter sterilized rhamnose solution (final concentration of 1%) to sterile media.

Principle And Interpretation

Only *Listeria monocytogenes* among the *Listeria* species is reported to cause infection in humans. In human adults, L. monocytogenes primarily causes meningitis, encephalitis or septicemia. The tropism of *L. monocytogenes* for the central nervous system leads to severe disease, often with high mortality or with neurologic disorders among survivors (1).

Rhamnose Broth Base is formulated for demonstration of rhamnose fermentation. Meat extract and Meat Peptone provides essential growth nutrients for bacterial metabolism. Bromocresol purple acts as pH indicator which turns yellow under acidic condition. Sodium chloride maintains osmotic equilibrium. Gas formation is seen in Durham's tubes.

Quality Control

Appearance

Light yellow to bluish grey coloured homogeneous free flowing powder

Colour and Clarity of prepared medium

Purple coloured clear solution in tube

Reaction

Reaction of 1.6% w/v aqueous solution at 25°C. pH : 6.8±0.2

pH

6.60-7.00

Cultural Response

M1364: Cultural characterisitcs observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Acid	Gas
Cultural Response				
Listeria grayi ATCC 19120	50-100	luxuriant	Positive reaction, yellow colour	Negative reaction
Listeria innocua ATCC 33090	50-100	luxuriant	Positive reaction, yellow colour	Negative reaction
Listeria ivanovii ATCC 19119	50-100	luxuriant	Negative reaction, no colour change	Negative reaction

Listeria monocytogenes ATCC 19111	50-100	luxuriant	Positive reaction, yellow colour	Negative reaction
Listeria monocytogenes ATCC 19112	50-100	luxuriant	Positive reaction, yellow colour	Negative reaction
Listeria seeligeri ATCC 35967	50-100	luxuriant	Negative reaction, no colour change	Negative reaction

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.Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2.Schweizersches Lebensmittelbuch, Jan. 201. Chapter 56.

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