

CM 21502 – RHAMNOSE BROTH

INTENDED USE

For demonstration of rhamnose fermentation by *Listeria monocytogenes*.

PRODUCT SUMMARY AND EXPLANATION

Rhamnose Broth Base is formulated for demonstration of rhamnose fermentation. 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.

COMPOSITION

Ingredients	Gms / Ltr
Meat extract	1.000
Meat peptone	10.000
Sodium chloride	5.000
Bromo cresol purple	0.020

PRINCIPLE

This medium consists of 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.

INSTRUCTION FOR USE

Dissolve 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 psi pressure (121°C) for 15 minutes.

Aseptically add filter sterilized rhamnose solution (final concentration of 1%) to sterile media.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to bluish grey coloured homogeneous free flowing powder.
Appearance of prepared medium	: Purple coloured clear solution in tube.
pH (at 25°C)	: 6.8 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Acid	Gas	Incubation Temperature	Incubation Period
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Listeria grayi	19120	50-100	Luxuriant	Positive reaction, yellow colour	Negative reaction	35-37°C	18-24 Hours
Listeria innocua	33090	50-100	Luxuriant	Positive reaction, yellow colour	Negative reaction	35-37°C	18-24 Hours
Listeria ivanovii	19119	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	35-37°C	18-24 Hours
Listeria monocytogenes	19111	50-100	Luxuriant	Positive reaction, yellow colour	Negative reaction	35-37°C	18-24 Hours
Listeria monocytogenes	19112	50-100	Luxuriant	Positive reaction, yellow colour	Negative reaction	35-37°C	18-24 Hours
Listeria seeligeri	35967	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	35-37°C	18-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Murray P. R., Baron J. H., Tenover F. C., Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. Schweizerisches Lebensmittelbuch, Jan. 201. Chapter 56.

