MOELLER DECARBOXYLASE BROTH(5 ML)

INTENDED USE:
Moeller Decarboxylase Broth Base with the addition of appropriate L-amino acid is used to differentiate bacteria on the basis of their ability to decarboxylate the amino acids.

PRINCIPLE AND INTERPRETATION:
Moeller Decarboxylase Broth Base is used for differentiating gram-negative enteric bacilli on the basis of their ability to decarboxylate amino acids.
This medium contains beef extract and peptic digest of animal tissue, which provide nitrogenous nutrients for the growth of bacteria. Dextrose is the fermentable carbohydrate and pyridoxal is the co-factor for the decarboxylase enzyme. Bromo cresol purple and cresol red are the pH indicators in this medium. When the medium is inoculated with the dextrose fermenting bacteria, the pH is lowered due to acid production, which changes the colour of the indicator from purple to yellow. Acid produced stimulates decarboxylase enzyme. Decarboxylation of lysine yields cadaverine while putrescine is produced due to ornithine decarboxylation. Arginine is first hydrolyzed to ornithine which is then decarboxylated to form putrescine. Formation of these amines increases the pH of the medium, changing the colour of the indicator from yellow to purple. If the organisms do not produce the appropriate enzyme, the medium remains acidic, yellow in colour. Each isolate to be tested should also be inoculated into Moeller Decarboxylase Broth Base medium tube lacking the amino acid.
Inoculated tubes must be protected from air with a layer of sterile mineral oil. Exposure to air may cause alkalinization at the surface of the medium which makes the test invalid.

COMPOSITION:

Ingredients	Gr/Liter
Peptic digest of animal tissue	5 gr
Beef extract	5 gr
Dextrose	0,005 gr
Bromocresol purple	0,01 gr
Cresol red	0,005 gr
Pyridoxal	0,005 gr

***Formula adjusted, standardized to suit performance parameters
pH: 6,0 ± 0,2

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

TEST PROCEDURE:
Incubation at a temperature of 35±2ºC and observed after 96 hours.

QUALITY CONTROL:

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

2.Phsical/Chemical Control
pH: 6,0 ± 0,2
Apperance: Purple coloured

3.Microbiological Control: Incubation at a temperature of 35±2°C and observed after 96 hours.

Microorganism	Inoculum (CFU)	Results	
		Growth	Reaction
Enterobacter aerogenes ATCC 13048	10-100	Good	Negative reaction , (yellow)

LIMITATIONS OF THE PROCEDURE:

For identification, organisms must be in pure culture. Morphological, biochemical, and/or serological tests should be performed for final identification. Consult appropriate texts for detailed information and recommended procedures.

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

PACKAGING:

Katalog Number: 01067
Content/Packaging: 50 Tubes/Box

REFERENCES:

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3. Gale G. F., 1940, Biochem. J., 34:392.
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6. FDA Bacteriological Analytical Manual, 8th Ed., AOAC International, Gaithersburg, Md.
7. Eaton A. D., Clesceri L. S. and Greenberg A. E., (Ed.), 1998, Standard Methods for the Examination of Water and Wastewater, 20th Ed., American Public Health Association, Washington, D.C