



## Liver Meat Agar, Modified

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Liver Meat Agar, Modified is used for cultivation of fastidious anaerobic microorganisms.

### Composition\*\*

Ingredients	Gms / Litre
Meat liver infusion Base	20.000
Dextrose	0.750
Starch	0.750
Agar	11.000
Final pH ( at 25°C)	7.6±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 32.5 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes.

### Principle And Interpretation

Anaerobic bacteria live in an oxygen-free environment. Some anaerobic bacteria actually die if oxygen is present, while others fail to grow and multiply (1). Meat liver base provides adequate degree of anaerobiosis and is also rich source of growth nutrients, which enables even the strict and fastidious anaerobes to grow well. *Clostridium* is a large genus of gram-positive spore-bearing anaerobes. They are normally present in soil, some are responsible for human and animal diseases and others are associated with food spoilage. The present formulation is a modification, which supports the growth of many spore forming and non-spore forming strict anaerobes.

The growth is promoted by Meat liver base, which contains growth nutrients such as nitrogen, vitamins, minerals and amino acids. Dextrose is the source of fermentable carbohydrate.

### Quality Control

#### Appearance

Light yellow to light brown homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.1% Agar gel

#### Colour and Clarity of prepared medium

Brown coloured opalescent gel with suspended particles forms in Petri plates.

#### Reaction

Reaction of 3.25% w/v aqueous solution at 25°C. pH : 7.6±0.2

#### pH

7.40-7.80

#### Cultural Response

Cultural characteristics observed under anaerobic condition, after an incubation at 35-37°C for 18-48 hours.

#### Cultural Response

Organism	Growth	Inoculum (CFU)	Recovery
<b>Cultural Response</b>			
<i>Clostridium perfringens</i> ATCC 12924	luxuriant	50-100	≥50%
<i>Proteus mirabilis</i> ATCC 25933	luxuriant	50-100	≥50%
<i>Clostridium tetani</i> ATCC 10779	luxuriant	50-100	≥50%

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<i>Clostridium botulinum</i> ATCC 25763	luxuriant	50-100	>=50%
<i>Escherichia coli</i> ATCC 25922	luxuriant	50-100	>=50%
<i>Bacteroides vulgatus</i> ATCC 8482	good-luxuriant	50-100	>=50%

### 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. Alcamo E. I., 2001, Fundamentals of Microbiology, 6th Ed., Jones and Bartlett Publishers

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