# LM Agar

**M1001**

## Intended Use:

Recommended for cultivation of fastidious anaerobes.

## Composition**

| Ingredients | Gms / Litre |
|---|---|
| HML infusion powder# | 20.000 |
| Dextrose (Glucose) | 0.750 |
| Starch | 0.750 |
| Sodium sulphite | 1.200 |
| Ammonium ferric citrate | 0.500 |
| Agar | 11.000 |
| Final pH ( at 25°C) | 7.6±0.2 |

**Formula adjusted, standardized to suit performance parameters

# Equivalent to Meat liver infusion powder

## Directions

Suspend 34.2 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs 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). HML infusion powder provides adequate degree of anaerobiosis and is also rich source of growth nutrients, which enables even the strict and fastidious anaerobes to grow well.

Some anaerobes (e.g. certain *Clostridium* species) reduce the sulphite present in the medium to hydrogen sulphide ($H_2S$) which is indicated by the blackening of colonies due to presence of ferric ammonium citrate. Inoculation can be performed by the pour plate method or by surface smearing

## Type of specimen

Clinical samples; Food samples; Soil samples.

## Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3).

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (4).

For soil samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (5).

After use, contaminated materials must be sterilized by autoclaving before discarding.

## Warning and Precautions

In Vitro diagnostic Use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

## Limitations

1. Further biochemical and serological test must be carried out for complete identification.

## Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## 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 opalascent gel with suspended particles forms in Petri plates.

**Reaction**
Reaction of 3.42% 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.

| Organism | Inoculum (CFU) | Growth | Recovery | H2S |
|---|---|---|---|---|
| *Clostridium perfringens ATCC 12924* | 50-100 | luxuriant | >=50% | positive |
| *Clostridium tetani ATCC 10779* | 50-100 | luxuriant | >=50% | positive |
| *Escherichia coli ATCC 25922* (00013*) | 50-100 | luxuriant | >=50% | negative |
| *Proteus mirabilis ATCC 25933* | 50-100 | luxuriant | >=50% | negative or weakly positive |
| *Clostridium botulinum ATCC 25763* | 50-100 | luxuriant | >=50% | positive |
| *Bacteroides vulgatus ATCC 8482* | 50-100 | good-luxuriant | >=50% | negative |

## Reference

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

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