



## Liver Meat Infusion Agar

M1206

Liver Meat Infusion Agar is recommended for the enumeration of sulphite reducing Clostridia and *Clostridium perfringens* in water and milk.

### Composition\*\*

Ingredients	Gms / Litre
Meat liver infusion powder	20.000
Dextrose	0.750
Starch	0.750
Sodium sulphite	1.200
Ferric ammonium citrate	0.500
Sodium carbonate	0.670
Agar	11.000
Final pH ( at 25°C)	7.6±0.2

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

### Directions

Suspend 34.87 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Medium can be used in tubes or plates as desired.

### 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).

Presence of Meat liver infusion in the medium provides adequate degree of anaerobiosis besides provision of rich supply of nutrients, enabling even strict and fastidious anaerobes to grow well. *Clostridium* species reduce sulphite present in the medium to hydrogen sulphide (H<sub>2</sub>S), which is indicated by blackening due to the presence of iron salt. The agar medium is inoculated either by pour plate method or by surface spreading methods.

### 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 3.48% w/v aqueous solution at 25°C. pH : 7.6±0.2

#### pH

7.40-7.80

#### Cultural Response

M1206: Cultural characteristics observed under anaerobic condition, after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	H <sub>2</sub> S
<b>Cultural Response</b>				
<i>Clostridium perfringens</i> ATCC 12924	50-100	luxuriant	≥50%	positive
<i>Clostridium tetani</i> ATCC 10779	50-100	luxuriant	≥50%	positive
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	≥50%	negative

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<i>Proteus mirabilis</i> ATCC 25933	50-100	luxuriant	$\geq 50\%$	negative or weakly positive
<i>Clostridium botulinum</i> ATCC 25763	50-100	luxuriant	$\geq 50\%$	positive
<i>Bacteroides vulgatus</i> ATCC 8482	50-100	good-luxuriant	$\geq 50\%$	negative

### 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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