



## LV Agar (Liver Veal Agar)

M176

### Intended Use:

Recommended for cultivation of fastidious anaerobic organisms.

### Composition\*\*

Ingredients	g / L
HL infusion from 50 g #	1.400
HMV infusion from \$	14.000
Proteose peptone	20.000
Peptone, special	1.300
Tryptone	1.300
Gelatin	20.000
Starch, soluble	10.000
M-Protein, purified##	2.000
Dextrose (Glucose)	5.000
Sodium chloride	5.000
Sodium nitrate	2.000
Agar	15.000
Final pH ( at 25°C)	7.3±0.2

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

# Equivalent to Liver, infusion from    \$ Equivalent to Veal, infusion from    ## Equivalent to Casein, purified

### Directions

Suspend 97.0 grams in 1000 ml warm purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

### 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). One of the methods of cultivation of anaerobes is using the Sprays medium by using the anaerobic culture dish (2). Liver Veal Agar is formulated as per the medium of Spray (3). Liver Veal Agar is recommended by APHA (4) and the FDA Bacteriological Analytical Manual (BAM) (5). Liver Veal Agar on supplementation of 50% egg yolk is recommended for the cultivation of anaerobic organisms (4,5,6). The medium is highly nutritious and therefore is an excellent medium for growth of sporulating anaerobic bacteria.

HL infusion from, HMV infusion from. Tryptone and gelatin serve as sources of carbon, nitrogen, amino acids and various vitamins. Dextrose serves as the carbon source. Starch enhances growth of anaerobic bacteria. Spray reported isolation of *Clostridium perfringens* within 6 hours of inoculation and *Clostridium tetani* within 8 hours. When the medium is inoculated with a small inoculum, gas production is not evident. Spray recommended that the medium should be taken directly from the sterilizer or should be boiled for 10 minutes to drive off dissolved oxygen and cooled without agitation. Serial inoculations are made and the medium is poured into plates. After solidification, 5 ml sterile Liver Veal Agar is poured over the medium as a cover layer to prevent the spreading of surface colonies. Refer standard procedures for isolation and cultivation of anaerobic bacteria (7,8). *C. botulinum* and *C. tetani* are highly hazardous and extreme care should be taken while handling these cultures.

### Type of specimen

Food and dairy samples Clinical samples - pus

### Specimen Collection and Handling

For clinical samples, follow appropriate techniques for sample collection and processing as per guidelines (7,9).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (4,10,11).

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

## Warning and Precautions :

In Vitro Diagnostic use. For professional 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. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

## 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 brownish yellow homogeneous free flowing powder

### Gelling

Firm, comparable with 1.5% Agar gel

### Colour and Clarity of prepared medium

Amber coloured clear to slightly opalescent gel forms in Petri plates, may have slight precipitate.

### Reaction

Reaction of 9.7% w/v aqueous solution at 25°C. pH : 7.3±0.2

### pH

7.10-7.50

### Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours (under the atmospheric requirement of organism).

Organism	Inoculum (CFU)	Growth	Recovery
<i>Clostridium botulinum</i> ATCC 25763	50-100	luxuriant	≥50%
<i>Clostridium tetani</i> ATCC 10709	50-100	luxuriant	≥50%
<i>Neisseria meningitidis</i> ATCC 13090	50-100	luxuriant	≥50%
<i>Streptococcus pneumoniae</i> ATCC 6303	50-100	luxuriant	≥50%

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,9).

## Reference

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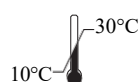
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