



PRODUCT SPECIFICATION SHEET

Liver Veal Agar (DM766)

Intended Use

Liver Veal Agar (DM766) is recommended for cultivation of fastidious anaerobic organisms.

Product Summary and Explanation

Anaerobic bacteria reside in an oxygen-free environment. In the presence of oxygen is present some anaerobic bacteria actually die, while others fail to grow and multiply.⁽¹⁾ Spray described a procedure using the anaerobic culture dish for the cultivation of these organisms.⁽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.⁽⁴⁻⁶⁾ Liver Veal Agar provides a rich supply of nutrients for anaerobic and fastidious aerobic pathogens. The medium supports excellent growth of sporulating anaerobes and can be used for deep tube cultures.⁽²⁾

Principles of the Procedure

Liver Veal Agar contains liver and veal infusions, peptones, casein enzymic hydrolysate and gelatin which provide the rich nitrogen, amino acids and vitamin content to the medium. Soluble starch is added to enhance the growth of anaerobes and dextrose is a carbon source. Sodium chloride maintains osmotic balance and agar is the solidifying agent.

Formula / Liter

Ingredients	Gms / Liter
Liver, infusion from	50.00
Veal, infusion from	500.00
Proteose peptone	20.00
Casein enzymic hydrolysate	1.30
Peptone, special	1.30
Gelatin	20.00
Starch, soluble	10.00
Casein, purified	2.00
Dextrose	5.00
Sodium chloride	5.00
Sodium nitrate	2.00
Agar	15.00
Final pH: 7.3 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.
3. *C. botulinum* and *C. tetani* are highly hazardous and extreme care should be taken while handling these cultures.
4. Biosafety Level 2 practices, containment equipment and facilities are recommended for activities with clinical specimens of human or animal origin containing or potentially containing *C. Botulinum* or *C. Tetani* or their toxins.
5. Biosafety Level practices, containment equipment and facilities are recommended for all manipulations of cultures of *C. botulinum* and for activities with a high potential for aerosol or droplet production, and those involving production quantities of toxin.

Directions

1. Suspend 97 grams of the medium in one litre of water distilled water.
2. Heat to boiling to dissolve the media completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile Petri plates.





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Quality Control Specifications

Dehydrated Appearance	Light yellow to brownish yellow homogeneous free flowing powder
Prepared Medium	Amber coloured clear to slightly opalescent gel forms in Petri plates, may have slight precipitate
Reaction of 9.7% solution	pH 7.3 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

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

Sr. No.	Organisms	Results to be achieved
		Growth
1.	<i>Clostridium botulinum</i> ATCC 25763	good-luxuriant
2.	<i>Clostridium tetani</i> ATCC 10709	good-luxuriant
3.	<i>Neisseria meningitidis</i> ATCC 13090	good-luxuriant
4.	<i>Streptococcus pneumoniae</i> ATCC 6303	good-luxuriant

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

1. 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.
2. For a complete discussion of the isolation and identification of anaerobic bacteria and other fastidious aerobic pathogens, refer to the procedures described in *Clinical Microbiology Procedures Handbook*⁽⁷⁾ and *Manual of Clinical Microbiology*.⁽⁸⁾ Refer appropriate references for standard test procedures.

Results

Refer appropriate references and procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. Spray reported isolation of *Clostridium perfringens* within 6 hours of inoculation and *Clostridium tetani* within 8 hours.
2. When the medium is inoculated with a small inoculum, gas production is not evident.
3. 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.
4. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
5. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Liver Veal Agar

Product Code : DM766

Available Pack sizes : 500gm





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References

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6. Atlas R. M., 2004, Handbook of Microbiological Media, CRC Press, Boca Raton, Fla.
7. Isenberg, (Ed.), 1992, Clinical Microbiology Procedures Handbook, Vol. I, ASM, Washington, D.C.
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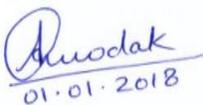
Further Information

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