

Technical Information

Schaedler MiVeg Broth

Product Code :VM1292

Application:- Schaedler MiVeg Broth is used for the cultivation of wide variety of aerobic and anaerobic bacterial species present in the gastrointestinal tract.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	5.67
MiVeg peptone No. 3	5.00
Papaic digest of soyabean meal	1.00
Yeast extract	5.00
Dextrose	5.83
Sodium chloride	1.67
Dipotassium hydrogen phosphate	0.83
Tris hydroxymethyl aminomethane	3.00
L-Cysteine	0.40
Ferric pyrophosphate	0.01
Final pH (at 25°C)	7.6 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Schaedler MiVeg Broth is prepared by adding MiVeg hydrolysate and MiVeg peptone No.3 in place of Casein enzymic hydrolysate and Protose Peptone thereby making the medium free from BSE/TSE risks. Schaedler MiVeg Broth is the modification of Schaedler Broth which was originally formulated by Schaedler et al (1) and further modified by Mata et al (2) with formulation changes (3) for cultivation and enumeration of aerobic and anaerobic microorganisms. Schaedler MiVeg Broth serve as an excellent basal media to which blood or other enrichments can be added to enhance the recovery of fastidious anaerobic organisms. Stalons et al found the broth medium to be most effective for the growth of obligatory anaerobic bacteria in an atmosphere of 5% carbon dioxide, 10% hydrogen and 85% nitrogen. It can also be used to determine the MIC levels of antibiotics for anaerobic organisms. Fass et al used tube method for antibiotic MIC determination.

The medium contains MiVeg hydrolysate, MiVeg peptone No.3 and Papaic digest of soyabean meal, yeast extract and L-Cysteine which supplies all the essential nutrients required for the growth of the organisms. Dextrose serves as an energy source. Ferric pyrophosphate and sheep blood stimulates the growth of fastidious microorganisms. Vitamin K1 allows the *Bacteroides melaninogenicus* cultivation (5) and stimulates growth of other *Bacteroides* species and gram-positive spore formers (6). Addition of Sodium Polyanethol Sulphonate (SPS) is recommended when using this medium for blood culture (7). It inhibits phagocytosis and neutralizes the antibacterial activity of fresh blood components (8).

Methodology

Suspend 28.41 grams of powder media in 1000 ml distilled water. Mix well and boil with frequent agitation to dissolve the medium completely. Add 0.02-0.2% agar in broth, if desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Avoid overheating and photo-oxidation of the medium, as it will retard the bacterial growth.

Quality Control

Physical Appearance

Light yellow coloured, may have slightly greenish tinge homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Light amber coloured, clear solution in tubes.

Reaction

Reaction of 2.84% w/v aqueous solution is pH 7.6 \pm 0.2 at 25°C.

pH Range

7.4 - 7.8

Cultural Response/Characteristics

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

Organisms (ATCC)	Growth
<i>Bacteroides fragilis</i> (25285)	luxuriant
<i>Clostridium butyricum</i> (9690)	luxuriant
<i>Clostridium perfringens</i> (12924)	luxuriant
<i>Clostridium sporogenes</i> (11437)	luxuriant
<i>Streptococcus pyogenes</i> (19615)	luxuriant

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 day.

Further Reading

1. Schaedler R.W., Dubos R. and Castello R., 1965, J. Exp. Med., 122:59.
2. Mata L.J., Carrillo C. and Villatoro E., 1969, Appl. Microbiol., 17:596.
3. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.I, Williams and Wilkins, Baltimore.
4. Estevez, 1984, Lab Med., 15:258.
5. Finegold et al, 1974, Manual of Clinical Microbiology, 2nd ed., Lennette and others (Eds.), ASM, Washington, D.C.
6. Rosner, 1968, Am. J. Clin. Pathol., 49:216.
7. Garrod, 1966, J. Pathol. Bacteriol., 91:621.
8. Lowrence and Traub, 1969, Appl. Microbiol., 17:839.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents. Do not use the products if it fails to meet specifications for identity and performance parameters.