Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Wilkins Chalgren Anaerobic MiVeg Agar Base

Product Code : VM1832

Application:- Wilkins Chalgren Anaerobic MiVeg Agar Base is used for the isolation and cultivation of anaerobic bacteria and also for susceptibility testing of anaerobic bacteria by the agar dilution method.

Composition**

Ingredients	Gms / Litre
MiVeg hydrolysate	10.00
MiVeg peptone	10.00
Yeast extract	5.00
Dextrose	1.00
Sodium chloride	5.00
L-Arginine	1.00
Sodium pyruvate	1.00
Ferric pyrophosphate	0.005
Menadione	0.0005
Agar	10.00
Final pH (at 25°C)	7.1 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Wilkins Chalgren MiVeg Agar Base is prepared by adding vegetable peptones instead of animal based peptones, thereby making the medium BSE /TSE risks free. Wilkins Chalgren MiVeg Agar Base is the modification of Wilkins Chalgren Agar Base which was formulated as described by Wilkins and Chalgren (1) for cultivation of anaerobic bacteria and also for determining the minimal inhibitory concentrations (MICs) of the antibiotics for anaerobic bacteria. Anaerobic organisms grows well in this medium. As compared to other medium for anaerobic cultures this medium is considered the best since it does not require the supplementation of blood.

Yeast extract supplies vitamins and other growth factors like purines and pyrimidines that are essential for the growth of *Prevotella melaninogenica*. Arginine serves as an amino acid source especially for *Eubacterium lentum* and pyruvate is an energy source for asaccharolytic cocci such as *Veillonella* (2). Pyruvate with arginine maintains suitable environment for anaerobic growth. Ferric pyrophosphate is necessary for the growth of *Bacteroides* species and menadione for *Prevotella melaninogenica* (3). MiVeg peptone and MiVeg hydrolysate improve the standardization of the medium.

Methodology

Suspend 43 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C before and then add antibiotics to be tested for performing Antimicrobial susceptibility testing. Mix gently before pouring into sterile petri plates. For cultivation of anaerobes add Non Spore Anaerobic Supplement (MS2001) or G. N. Spore Anaerobic Supplement (MS2002) as desired.

Quality Control

Physical Appearance

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

Gelling
Firm, comparable with 1.0% Agar gel.
Colour and Clarity of prepared medium
Medium amber coloured, clear to slightly opalescent gel forms in petri plates.
Reaction
Reaction of 4.3% w/v aqueous solution is pH 7.1 ± 0.2 at 25°C.
pH Range
6.9-7.3
Cultural Response/Characteristics
Cultural characteristics observed after an incubation at 35°C for 48 hours, with added Non-spore Anaerobic Supplement (MS2001) or G. N. spore Anaerobic supplement (MS2002) under anaerobic conditions.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
Bacteroides fragilis (25285)	10^2 - 10^3	luxuriant	>50%
Prevotella melaninogenica (15930)	10^2 - 10^3	luxuriant	>50%
Clostridium perfringens (12924)	10^2 - 10^3	luxuriant	>50%
Escherichia coli (25922)	10^2 - 10^3	luxuriant	0%

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: 2-8^0 in sealable plastic bags for 2-5 day.

Further Reading

1. Wilkins T.D. and Chalgren S., 1976, Antimicrob. Agents Chemother., 10 : 926
2. Rogosa M., 1964, J. Bacteriol., 87:162.
3. Gibbons R.J. and MacDonald J.B., 1960, J. Bacteriol., 80:164.

Disclaimer :

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