

Dehydrated Culture Media Bases / Media Supplements

Technical Information

SPS MiVeg Agar, Modified

Product Code : VM1898

Application:- SPS MiVeg Agar, Modified is used for the selective isolation and enumeration of *Clostridium perfringens* found in foodstuff.

Composition		
Ingredients	Gms / Litre	
MiVeg hydrolysate	15.0	
Yeast extract	10.0	
Ferric citrate	0.5	
Sodium sulphite	0.5	
Sodium thioglycollate	0.1	
Polysorbate 80	0.05	
Sulphadiazine	0.12	
Polymyxin B sulphate	0.01	
Agar	15.0	
Final pH (at 25°C)	7.0 ± 0.2	

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

SPS MiVeg Agar, Modified is prepared by adding MiVeg hydrolysate in place of Casein enzymic hydrolysate thus making the medium free from BSE/TSE risks. SPS MiVeg Agar, Modified is the modification of SPS (Sulphite Polymyxin Sulphadiazine) Agar developed by Angelotti et al (1) which is based on the medium described by Mossel et al(2,3) for the selective isolation and enumeration of *Clostridium perfringens* from foods.

MiVeg hydrolysate and yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients needed for the growth of *Clostridium perfringens*. This organism reduces sulphite to sulphide which reacts with ferric citrate to form a black precipitate of iron sulphide and hence the colonies appear black. Sorbitan monooleate (Polysorbate 80) supplies fatty acids to the organisms. Polymyxin B and Sulphadiazine suppresses the growth of other sulphite gram-positive and gram-negative bacteria. Sodium thioglycollate is a reducing agent. Certain strains of *Clostridium perfringens* fails to grow on this medium.

Methodology

Suspend 41.28 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 and pour into sterile petri plates containing inoculum.

Quality Control

Physical Appearance

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

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Medium amber coloured, slightly opalescent gel forms in petri plates.

Reaction

Reaction of 4.13% w/v aqueous solution is pH 7.0 \pm 0.2 at 25°C.





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pH Range

6.8-7.2

Cultural Response/Characteristics

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

Organisms (AICC)	Inoculum (CFU)	Growth	Colour of colony	
Clostridium perfringens (12924)	102-103	good- luxuriant	black	
Clostridium sporogenes (11437)	102-103	poor-good	black	
Escherichia coli (25922)	102-103	inhibited	-	
Staphylococcus aureus (25923)	102-103	poor-good	white	

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. Angelotti, et al, 1962, Appl. Microbiol., 10:193. 2. Mossel, et al, 1956, J. Appl. Microbiol., 19:142.

3. Mossel, 1959, J. Sci. Food Agric., 19:662.

Disclaimer:

- User must ensure suitability of the product(s) in their application prior to use.
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