Technical Information

Perfringens MiVeg Agar Base (T.S.C./S.F.P. MiVeg Agar Base)

Product Code : VM1837

Application:- Perfringens MiVeg Agar Base with added selective supplement and enrichment is used for the presumptive identification and enumeration of *Clostridium perfringens* from food.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate No. 1	15.0
MiVeg extract	5.0
Papaic digest of soyabean meal	5.0
Yeast extract	5.0
Sodium metabisulphite	1.0
Ferric ammonium citrate	1.0
Agar	15.0
Final pH (at 25°C)	7.6 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Perfringens MiVeg Agar Base is prepared by adding MiVeg hydrolysate No.1 and MiVeg extract in place of Tryptose and Beef extract thereby making the medium BSE/TSE risks free. Perfringens MiVeg Agar Base is the modification of Tryptose Sulphite Cycloserine Agar (TSC) which was originally formulated by Harmon et al (1) for enumeration of *Clostridium perfringens* from food.

Egg Yolk free TSC Agar has been documented as the most useful media for the quantitative recovery of *Clostridium perfringens* while suppressing all facultative anaerobes. Egg Yolk Free TSC Agar is used in pour plating. Like conventional medium Perfringens Agar Base is stable at elevated temperature (46^{0}C) during MPN methods for enumeration of *Clostridium perfringens spores* (2).

MiVeg hydrolysate No.1, papaic digest of soyabean meal, yeast extract, Miveg extract supplies nitrogenous compounds, carbon, sulphur, vitamin B complex and trace ingredients essential for the *Clostridial* growth. Sodium metabisulphite and ferric ammonium citrate act as an indicator of sulphite reduction, indicated by black coloured colonies. Certains *Clostridium perfringens* strains produce an opaque zone around their colonies due to lecithinase activity, but this is not considered to be universal for all *Clostridium perfringens* strains and thus further testing should be done for confirmation.

Methodology

Suspend 23.5 grams of powder media in 475 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. Add 25 ml of Egg Yolk Emulsion (MS2045) and rehydrated contents of 1 vial of S.F.P. Supplement (MS2013) / T.S.C. Supplement (MS2014). Mix well before pouring into sterile petriplates.

Quality Control

Physical Appearance

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

Basal medium yields amber coloured slightly opalescent gel. With the addition of TSC Supplement (MS2014) an opaque gel forms while with addition of Egg Yolk Emulsion (MS2045), yellow coloured opaque gel forms in petri plates.

Reaction

Reaction of 4.7% w/v aqueous solution is pH 7.6 ± 0.2 at 25°C.

pH Range

7.4-7.8

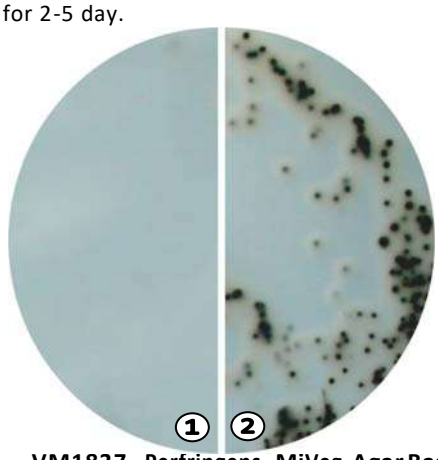
Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours under anaerobic condition with added TSC Supplement (MS2014) and Egg Yolk Emulsion (MS2045).

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Sulphite Reduction
Clostridium perfringens (12924)	10^2-10^3	luxuriant	>70%	+
Clostridium sordellii (9714)	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.



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1. Control
2. *Clostridium perfringens*

Further Reading

1. Harmon S.M., Kauttar D.A. and Peiler J.T., 1971, Appl. Microbiol., 22:688.
2. Harmon S.M., and Kauttar D.A., 1987, J. Asso. off Anal chem., 70:994.

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.
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