Technical Information

Kohn Two Tube MiVeg Medium No.2

Product Code : VM1802

Application:- Kohn Two Tube MiVeg Medium No. 2 is used for the identification of members of *Enterobacteriaceae* on the basis of sucrose and salicin fermentation, motility, H_2S (hydrogen sulphide) and indole production.

Composition

Ingredients	Gms / Litre
MiVeg peptone	10.0
MiVeg hydrolysate	10.0
Sucrose	10.0
Salicin	10.0
Sodium chloride	5.0
Sodium thiosulphate	0.016
Disodium hydrogen orthophosphate	0.09
Bromo thymol blue	0.02
Agar	3.0
Final pH (at 25°C)	7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Kohn Two Tube MiVeg Medium No. is prepared by adding MiVeg peptone and MiVeg hydrolysate in place of animal peptones (Peptic digest of animal tissue and Casein enzymic hydrolysate) thus making the medium free from BSE/ TSE risks. This medium is the modification of the medium introduced by Russell (1) ie, Double Sugar Medium. Kohn (2) developed a technique employing two tubes of composite media to study the cultural response for the identification of the *Enterobacteriaceae*. Gillies (3) made minor modification in Kohn's Media.

The technique employed involves; inoculation using a straight wire with single stab to about one-third portion of the tubed medium. Two test paper strips suspended above the medium (one is lead acetate strip (PA1125) and the other Kovac's Reagent strip) by bending and trapping between cotton plug and slide of the test tube. Incubate at 37°C for 18-24 hours and examine for motility, H_2S (Hydrogen sulphide) production, sugar fermentation and indole production.

Motility is indicated by turbidity extending out from the line of stab inoculation. H_2S (Hydrogen sulphide) production is indicated by the blackening of the lead acetate paper strip. Fermentation of sucrose or salicin or both is indicated by the colour change to yellow and indole formation by the change in colour of the paper to pinkish red.

Methodology

Suspend 48.13 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 10 lbs pressure (115°C) for 15 minutes. Cool the tubed medium in an upright position.

Quality Control

Physical Appearance

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

Gelling

Semisolid comparable with 0.3% Agar gel.

Colour and Clarity of prepared medium

Green coloured, clear to slightly opalescent semisolid gel forms in tubes.

Reaction

Reaction of 4.8% w/v aqueous solution is pH 7.4 ± 0.2 at 25°C.

pH Range

7.2 - 7.6

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organisms (ATCC)	Fermentation*	Moility	H_2S	Indole
Proteus vulgaris (13315)	AG or -	+	±	±
Salmonella serotype Typhi (6539	_	+	+	_
Salmonella serotype Typhimurium (14028)	_	+	±	_
Shigella flexneri (12022)	_	_	_	±
Shigella schmitzi	_	_	_	±
Shigella sonnei (25931)	_	_	_	_

Key : * => Fermentation of Sucrose / Salicin
AG => acid and gas production
+ => positive reaction
- => negative reaction
± => variable reaction

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. Russell F.F., 1911, J. Med. Res., 25:217.
2. Kohn. J. 1954. J. Path. Bact., 67(1). 286.
3. Gillies R.R., 1956, J. Clin. Path., 9(4):368.

Disclaimer :

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