

Technical Information

Coliform MiVeg Broth w/ SLS

Product Code :VM2826

Application:- Coliform MiVeg Broth w/ SLS is recommended for detection of *E.coli* and other *Enterobacteriaceae* in water samples.

Composition

Ingredients	Gms / Litre
MiVeg special peptone	3.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	3.000
Potassium dihydrogen phosphate	1.700
Sodium pyruvate	1.000
L-Tryptophan	1.000
Sodium lauryl sulphate	0.100
Chromogenic mixture	0.300
Final pH (at 25°C)	6.8±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Coliform MiVeg Broth w/ SLS is prepared by using vegetable peptone in place of animal based peptones which makes it BSE/TSE risk free.

This medium is a selective medium recommended for the simultaneous detection of *Escherichia coli* and total coliforms in water and food samples (4). It is a slight modification of Coliform Broth w/ SLS.

This medium contains MiVeg special peptone which supplies the essential growth nutrients to the organisms. The phosphates maintain the buffering system in the medium. Sodium chloride maintains the osmotic equilibrium. Sodium lauryl sulphate inhibits the gram positive organisms. L- Tryptophan in the medium enhances the indole reaction. The enzyme beta-glucuronidase produced by *E.coli* cleaves X- glucuronide thus imparting blue colour to the medium (1,2,3). After addition of few drops (0.5ml) of Kovac's reagent, the colour of medium changes to cherry red colour which indicates the presence of *E.coli*.

Methodology

Suspend 15.10 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Cream, clear to slightly opalescent solution may have slight precipitate

Reaction

Reaction of 1.51 % w/v aqueous solution pH: 6.8 ±0.2 at 25°C

pH range

6.60-7.00

Cultural Response/Characteristics

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



Dehydrated Culture Media
Bases / Media Supplements

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
<i>Citrobacter freundii</i> ATCC8090	50-100	Luxuriant	coloreless
<i>Escherichia coli</i> ATCC25922	50-100	Luxuriant	blue
<i>Escherichia coli</i> ATCC35213	50-100	Luxuriant	blue
<i>Enterococcus faecalis</i> ATCC29212	$\geq 10^3$	Inhibited	
<i>Klebsiella pneumoniae</i> 13883	50-100	Luxuriant	coloreless
<i>Salmonella Enteritidis</i> ATCC13076	50-100	Good	coloreless
<i>Shigella flexneri</i> ATCC12022	50-100	Luxuriant	coloreless
<i>Staphylococcus aureus</i> ATCC 25923	$\geq 10^3$	Inhibited	
<i>Staphylococcus aureus</i> ATCC 6538	$\geq 10^3$	Inhibited	

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 days.

Further Reading

1. Frampton E. W., Restaino L. and Blaszkowski N., 1988, J. Food Prot., 51:402.
2. Kilian M. and Bülow P., 1976, Acta. Pathol. Microbiol. Scand., Sect. B, 84:245.
3. LeMinor L. and Hamida F., 1962, Ann. Inst. Pasteur (Paris), 102:267.
4. Manafi M. and Kneifel W., 1989, Zentralbl. Hyg., 189:225.

Disclaimer :

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