Technical Information

Tryptophan MiVeg Medium

Product Code : VM2339

Application:- Tryptophan MiVeg Medium is used for detection of indole formation.

Composition**

Ingredients	Gms / Litre
MiVeg hydrolysate	10.00
Sodium chloride	5.00
DL-Tryptophan	1.00
Final pH (at 25°C) ssss	7.5 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Tryptophan MiVeg Medium is prepared by adding MiVeg hydrolysate in place of Casein enzymic hydrolysate thereby making the medium BSE/TSE risks free. This medium is the modification of Tryptophan Medium which is a modification of original formula of APHA where the medium is devoid of Tryptophan (1). This medium can be used to detect indole formation.
MiVeg hydrolysate supply carbonaceous and nitrogenous compound required for the optimum growth of microorganisms. Certain microbes acts on Tryptophan (an amino acid) and thereby leads to formation of indole. The various enzymes involved are collectively called as tryptophanase, a general term used to denote the complete system of enzymes that mediate the indole production by hydrolytic activity on tryptophan (2). Either Kovac's or Ehrlich's reagent can be used to detect the indole produced by tryptophan hydrolyses (3). Indole combines with the aldehyde present in the above reagent to give red colour in the alcohol layer. The alcohol layer extracts and concentrates the red colour complex.

Methodology

Suspend 16 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat if necessary to dissolve the medium completely. Mix well and pour into tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

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

Colour and Clarity of prepared medium

Yellow coloured, clear solution without any precipitate.

Reaction

Reaction of 1.6% w/v aqueous solution is pH 7.5 ± 0.2 at 25°C.

pH Range

7.3-7.7

Cultural Response/Characteristics

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

Organisms (ATCC)	Indole Reaction
Enterobacter aerogenes (13048)	-
Escherichia coli 0157:H7	+
Escherichia coli (25922)	+

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.

VM 2339 Tryptophan MiVeg Medium

1. Control
2. *Enterobacter aerogenes*
3. *Escherichia coli*

Further Reading

1. Greenberg A.E., Clesceri L.S. and Eaton A.D. (Eds.), 1992, Standard methods for the Examination of Water and Wastewater, 18th ed. APHA., Washington, D.C.
2. MacFaddin, 1980, Biochemical Tests for Identification of Medical Bacteria, 2nd ed. Williams and Wilkins Baltimore.
3. Finegold and Baron, 1986, Bailey and Scott's Diagnostic Microbiology, 7th ed., The C.V. Mosby Co., St. Louis.

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