

Technical Information

Peptone Sorbitol MiVeg Broth

Product Code : VM2231

Application:- Peptone Sorbitol MiVeg Broth is used for identification of *Yersinia enterocolitica* from dairy products.

Composition

Ingredients	Gms / Litre
MiVeg peptone	5.0
Sorbitol	10.0
Disodium phosphate	8.23
Monosodium phosphate	1.2
Synthetic detergent No.1	1.5
Sodium chloride	5.0
Final pH (at 25°C)	7.6 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Peptone Sorbitol MiVeg Broth is prepared by adding MiVeg peptone and Synthetic detergent No. 1 in place of Peptic digest of animal tissue and Bile salts mixture thereby making the medium BSE/TSE risks free. Peptone Sorbitol MiVeg Broth is the modification of Peptone Sorbitol Broth which is formulated as per APHA (1) for the identification of *Yersinia enterocolitica* from dairy products. *Yersinia enterocolitica* is a food borne pathogen which causes gastroenteritis and terminal ileitis in humans.

MiVeg peptone provides nitrogenous growth factors and trace ingredients for the growth of *Yersinia enterocolitica*. Sorbitol is polyhydric alcohol corresponding to glucose which is an important substrate in biochemical characterization tests for bacteria. Sorbitol can be degraded by *Yersinia enterocolitica* while *Yersinia pestis* and *Yersinia pseudotuberculosis* can not utilize it (1). Phosphate buffers the medium while synthetic detergent No. 1 inhibits gram-positive organisms. The pH of the medium is slightly alkaline as *Yersinia* species are tolerant to dilute

Methodology

Suspend 30.93 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat if necessary to dissolve the medium completely. Dispense 100 ml into Wheaton bottles. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

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

Colour and Clarity of prepared medium

Light yellow coloured, clear solution without any precipitate.

Reaction

Reaction of 3.09% w/v aqueous solution is pH 7.6 ± 0.2 at 25°C.

pH Range

7.4 - 7.8

Cultural Response/Characteristics

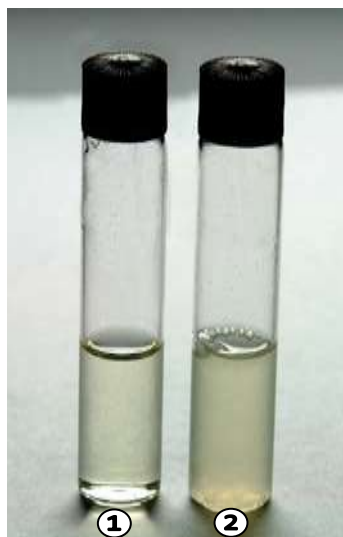
Cultural characteristics observed after an incubation at 25-30°C for 24-48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Sorbitol utilization
<i>Yersinia enterocolitica</i> (27729)	10^2 - 10^3	luxuriant	+
<i>Yersinia pseudotuberculosis</i> (29833)	10^2 - 10^3	good-luxuriant	–

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.



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1. Control
2. *Yersinia enterocolitica*

Further Reading

1. Standard Methods for the Examination of Dairy Products. 17th Edition, 2004 Edited by H. Michael Wehr and Joseph H. Frank.
2. Aulisio C.C.G., Mehlman I.J. and Sanders A.C., 1980, Appl. Environ. Microbiol., 39:135.

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