



Peptone Sorbitol Bile Broth

M1231

Peptone Sorbitol Bile Broth is used for identification of *Yersinia enterocolitica* from dairy products.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Sorbitol	10.000
Disodium phosphate	8.230
Monosodium phosphate	1.200
Bile salt mixture	1.500
Sodium chloride	5.000
Final pH (at 25°C)	7.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 30.93 grams in 1000 ml distilled water. 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.

Principle And Interpretation

Yersinia enterocolitica are usually present in finished dairy products as a result of post pasteurization contamination. Swine are recognized as major reservoirs of *Y. enterocolitica* in nature (1). *Yersinia enterocolitica* is capable of growth at refrigeration temperatures (2), therefore measures to prevent post pasteurization contamination must be taken to prevent the proliferation of *Y. enterocolitica* in pasteurized milk. Peptone Sorbitol Bile Broth is formulated as per APHA (3) for the identification of *Y. enterocolitica* from dairy products.

Peptone Sorbitol Bile Broth contains peptic digest of animal tissue which provides nitrogenous growth factors and trace ingredients for the growth of *Y. enterocolitica*. Sorbitol is a polyhydric alcohol (reduced product of glucose) and an important substrate in biochemical characterization tests for *Yersinia*. *Y. enterocolitica* can degrade sorbitol while *Yersinia pestis* and *Yersinia pseudotuberculosis* cannot utilize it (3). Phosphates maintain the buffering action of the medium while bile salt mixture inhibit majority of the gram-positive organisms. The pH of the medium is slightly alkaline as *Yersinia* species are tolerant to dilute alkali (4).

Inoculate 25 grams of food samples into 225 ml of Peptone Sorbitol Bile Broth (M1231). Incubate at 10°C for 10 days. After incubation, spread 0.1 ml onto Yersinia Selective Agar Base (M843). Presumptive *Yersinia* colonies are confirmed by appropriate biochemical test.

Quality Control

Appearance

Cream to yellow 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 at 25°C. pH : 7.6±0.2

pH

7.40-7.80

Cultural Response

M1231: Cultural characteristics observed after an incubation at 10°C for 10 days.

Organism	Inoculum (CFU)	Growth	Sorbitol utilization
----------	-------------------	--------	-------------------------

Cultural Response

<i>Yersinia enterocolitica</i> ATCC 27729	50-100	luxuriant	positive reaction
<i>Yersinia pseudotuberculosis</i> ATCC 29833	50-100	good-luxuriant	negative reaction

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Doyle M.P., Hugdahl M.B., Taylor S. L., 1981, Appl. Environ. Microbiol. 42:661-666
2. Francis D. W., Spaulding P.L., Lovett J., 1980, Appl. Environ. Microbiol. 40:174-176
3. Wehr H.M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
4. Aulisio C. C. G., Mehlman I.J. and Sanders A. C., 1980, Appl. Environ. Microbiol., 39:135.

Revision : 2 / 2015

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.