

CM 21,354 – PEPTONE SORBITOL BILE BROTH

INTENDED USE

For identification of *Yersinia enterocolitica* from dairy products.

PRODUCT SUMMARY AND EXPLANATION

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. *Yersinia enterocolitica* is capable of growth at refrigeration temperatures, 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 for the identification of *Y. enterocolitica* from dairy products.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Sorbitol	10.000
Disodium hydrogen phosphate	8.230
Monosodium phosphate	1.200
Bile salt mixture	1.500
Sodium chloride	5.000

PRINCIPLE

The medium consists of peptone which provides nitrogenous and carbonaceous compounds, long chain amino acids and 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. Phosphates maintain the buffering action of the medium while bile salt mixture inhibits majority of the gram-positive organisms. The pH of the medium is slightly alkaline as *Yersinia* species are tolerant to dilute alkali.

INSTRUCTION FOR USE

Dissolve 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 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light yellow coloured clear solution without any precipitate.
pH (at 25°C)	: 7.6 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Sorbitol Utilization	Incubation Temperature	Incubation Period
Yersinia enterocolitica	27729	50-100	Luxuriant	Positive reaction	10°C	10 Days
Yersinia pseudotuberculosis	29833	50-100	Good-Luxuriant	Negative reaction	10°C	10 Days

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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. 1. A.
4. Aulisio C. C. G., Mehlman I.J. and Sanders A. C., 1980, Appl. Environ. Microbiol., 39:135.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only

