



Dehydrated Culture Media  
Bases / Media Supplements

## Technical Information

### PSB Broth Modified

#### Product Code: DM 1941I

**Application:** - PSB Broth Modified is recommended for primary enrichment and enumeration of *Yersinia enterocolitica* from foods.

#### Composition\*\*

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

\*\*Formula adjusted, standardized to suit performance parameters

#### Principle & Interpretation

*Yersinia enterocolitica* are ubiquitous, being isolated frequently from soil, water, animals, and a variety of foods. Biochemically they comprise of a heterogeneous group of microorganisms that can grow at refrigeration temperatures. PSB Broth Base is recommended by APHA <sup>(1)</sup> for enrichment of *Yersinia* species. PSB Broth, Modified is a modification of PSB Broth (DM1941) also recommended by ISO Committee <sup>(2)</sup>. Supplementation of phosphate buffer with sorbitol and bile salts appears to be better for cold enrichment treatment <sup>(3)</sup>.

Peptic digest of animal tissue provides essential growth nutrients. Sodium chloride maintains osmotic equilibrium while phosphates buffer the medium well. Sorbitol is the energy source. Bile salts are added to make the medium selective for *Yersinia* species by inhibiting the growth of accompanying gram-positive bacteria.

Inoculate 25 grams of food sample to 225 ml of PSB Broth Modified and incubate at 4°C for 14-28 days. 1 ml of this primary enrichment is inoculated in 100 ml of PSTA Enrichment Broth Base (DM1940) and incubated at 28°C for 48 hours. This secondary enrichment is then streaked on SS Agar (DM1108), *Yersinia* Selective Agar Base (DM1843).

#### Methodology

Suspend 30.78 grams of dehydrated medium in 1000 ml distilled water. Shake well & heat if necessary to dissolve the medium completely. Dispense in tubes and 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

Light yellow coloured clear to very slightly hazy solution

##### Reaction

Reaction of 3.08% w/v aqueous solution at 25°C. pH : 7.6±0.2

pH Range 7.40-7.80

##### Cultural Response/ characteristics

DM 1941I: Cultural characteristics observed after an incubation at 25-30°C for 3-5 days or at refrigeration temperature for 14-28 days, with added cycloheximide solution





Dehydrated Culture Media  
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth
Yersinia enterocolitica ATCC 27729	50-100	good-luxuriant
Yersinia pseudotuberculosis ATCC 19833	50-100	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 days.

## Further Reading

1. Speck M. (Ed.), 1984, Compendium of Methods for The Microbiological Examination of Foods, 3rd ed., APHA, Washington, D.C.
2. International Organization for Standardization(ISO), 1994, Draft, ISO/DIS 10273
3. Mehlman I.J., Aulisio C.C.G. and Sander A.C., 1978, J. Assoc. Off. Anal. Chem. 61:761.

## Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
- **Central Drug House 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 diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- 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.
- Donot use the products if it fails to meet specificatons for identity and performens parameters.

