

Technical Information

Yeast Extract Rose Bengal MiVeg Broth Base

Product Code : VM1955

Application:- Yeast Extract Rose Bengal MiVeg Broth Base is used in cold enrichment for recovery of *Yersinia enterocolitica* and *Yersinia pseudotuberculosis* from foodstuff.

Composition**

Ingredients	Gms / Litre
Yeast extract	5.0
Disodium phosphate	17.25
Synthetic detergent	2.0
Sodium chloride	1.0
Magnesium sulphate	0.01
Sodium pyruvate	1.0
Rose Bengal	0.04
Final pH (at 25°C)	7.9 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Yeast Extract Rose Bengal MiVeg Broth Base is prepared by adding synthetic detergent in place of bile salts thereby making the medium free from BSE/TSE risks. Yeast Extract Rose Bengal MiVeg Broth Base is the modification of Yeast Extract Rose Bengal Broth Base which is formulated as recommended by APHA for enrichment of *Yersinia* species from foods (1). Yeast extract supplies all the essential nutrients required for the optimum growth of *Yersinia* species. Synthetic detergent inhibits gram-positive organisms. Salts help in cold enrichment of *Yersinia* species. *Yersinia enterocolitica* and *Yersinia pseudotuberculosis* can grow at 4°C, thus primary enrichment is done at 4°C for upto for 9 days or 3 days at 10°C (2). From this enrichment medium the organisms are further inoculated into secondary selective enrichment medium for further enrichment such as PSTA MiVeg Broth (VM1940) and then isolated by streaking onto selective plating media such as *Yersinia* Selective MiVeg Agar (VM1843), SS MiVeg Agar (VM1108) and MacConkey MiVeg Agar (VM1082).

Methodology

Suspend 26.3 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 20-25°C and aseptically add 100 ml of 4% filter sterilized sorbose solution. Mix well and dispense aseptically as desired.

Quality Control

Physical Appearance

Pink coloured, homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Reddish pink coloured, clear solution without any precipitate.

Reaction

Reaction of the medium (2.63% w/v Base +0.4% w/v sorbose in distilled water) is pH 7.9 ± 0.2 at 25°C.

pH Range

7.7-8.1

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 4°C for 9-10 days.

Organisms (ATCC)

Growth

Yersinia enterocolitica (27729)

Good-luxuriant

Yersinia pseudotuberculosis (29833)

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*

3. *Yersinia pseudotuberculosis*

Further Reading

1. Downs F.P. and Ito K (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.

2. Schiemann D.A., 1982, Appl. Environ. Microbiol., 43:14.

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