

Technical Information

Wesley MiVeg Broth Base

Product Code: VM2152

Application:- Wesley MiVeg Broth is recommended as a selective enrichment medium for isolation of *Campylobacter jejuni* from poultry products.

Composition**

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Ingredients	Gms / Litre	
MiVeg hydrolysate No. 1	20.0	
Yeast extract	2.5	
Sodium chloride	5.0	
Ferrous sulphate	0.25	
Sodium metabisulphite	0.25	
Sodium pyruvate	0.25	
Bicine	10.0	
Agar	1.0	

^{**} Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Wesley MiVeg Broth is prepared by adding MiVeg hydrolysate No.1 in place of Tryptose thereby making the medium BSE/TSE risks free. Wesley MiVeg Broth is the modification of Wesley Broth which is formulated as described by Wesley (1) for selective enrichment of Campylobacter jejuni from poultry products. Campylobacter jejuni is a causal organism of acute bacterial gastroenteritis in humans due to consumption of animal based foods. Campylobacter jejuni is sensitive to normal atmospheric concentration of oxygen and does not grow below 30°C. It survives best in foods held at refrigeration temperature but is highly susceptible to freezing conditions (2, 3) and also sensitive to sodium chloride.

MiVeg hydrolysate No.1 and yeast extract supplies nitrogenous nutrients, vitamin B complex and other essential growth nutrients to the growing organisms. Sodium metabisulphite and ferrous sulphate helps in survival and easy recovery of the organism. Sodium pyruvate added to medium to increase the oxygen tolerance capacity of Campylobacter jejuni (4). Small quantity of agar addition helps to create microaerophilic atmosphere. Bicine buffers the medium.

Methodology

Suspend 39.25 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add rehydrated contents of 1 vial of Campylobacter Selective Supplement (MS2077) and 6.25 ml of cooled alkaline hematin solution. (Dissolve 32.0 mg of bovine hemin in 10 ml of 0.15 N NaOH. Sterilize by autoclaving at 5 lbs pressure (108°C) for 30 minutes.) Mix well before dispensing.

Quality Control

Physical Appearance

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

Colour and Clarity of prepared medium

Amber coloured, clear to slightly opalescent solution.





Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 40°C for 24 hours.

Organisms (ATCC) Growth
Campylobacter jejuni (29428) 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: 2-80 in sealable plastic bags for 2-5 day.

Further Reading

- 1. Wesley R.D., Swaminathan B. and Stadelman W.J., 1983, Appl. Environ. Microbiol., 46:1097.
- 2. Christopher F.M., Smith G.C. and Vanderzant C., 1982, J. Food Prot., 45:260.
- 3. Gill C.O. and Harris L.M., 1984, J. Food Prot., 47:96.
- 4. George H.A., Hoffman P.S., Smibert R.M. and Krieg N.R., 1978, J. Clin. Microbiol., 8:36.

Disclaimer:

- User must ensure suitability of the product(s) in their application prior to use.
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