

Park and Sanders Enrichment HiVeg™ Broth Base

MV1185

Park and Sanders Enrichment HiVeg Broth Base is recommended for selective enumeration of thermotolerant *Campylobacter* species from food.

Composition ** :

Ingredients	Grams/Litre
HiVeg hydrolysate	10.0
HiVeg peptone	10.0
Yeast extract	2.0
Dextrose	1.0
Sodium chloride	5.0
Sodium biselenite	0.1
Sodium pyruvate	0.25

Final pH (at 25°C) 7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 28.35 grams in 940 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45°C and aseptically add 50 ml of sterile defibrinated lysed horse blood and reconstituted contents of Park and Sanders Selective Supplement I (FD104). Mix well. Allow it to stand for 4 hours at 31° to 32°C. Add Park and Sanders Selective Supplement II (FD105) and incubate for 24 hours at 37°C then at 42°C under microaerobic atmosphere for additional 40 to 42 hour with agitation at 100 rpm.

Principle and Interpretation :

Park and Sanders Enrichment HiVeg Broth Base is prepared by using HiVeg hydrolysate and HiVeg peptone in place of Peptic digest of animal tissue and Casein enzymic hydrolysate which makes the medium free of BSE/TSE risks. Park and Sanders HiVeg Broth Base is the modification of Park and Sanders Broth Base formulated by Park and Sanders (1) and recommended by APHA (2), for selective enumeration of thermotolerant *Campylobacter* species in food and animal feed.

HiVeg hydrolysate, HiVeg peptone, yeast extract provide nitrogenous compounds, carbon, sulphur, vitamins and trace elements. Glucose is the energy source. *Campylobacter* species are microaerophilic. Sodium pyruvate helps for aerotolerance. Sodium sulphite helps in survival of the organism in higher nitrogen atmosphere (3). After addition of blood and FD104, the medium is incubated at 31 to 32°C for 4 hours for the recovery of injured cells. The resuscitation and enrichment of culture must be performed in a microaerobic environment. Subsequently, the enriched culture is supplemented with antibiotic held at 35°C - 37°C for 1 to 2 hours, and is further incubated at 42°C for additional 40 - 42 hours with agitation.

Product Profile :

Vegetable based (Code MV)☉	Animal based (Code M)
MV1185 HiVeg peptone HiVeg hydrolysate	M1185 Peptic digest of animal tissue Casein enzymic hydrolysate

Recommended for : Selective enumeration of thermotolerant *Campylobacter* species from foods.

Reconstitution : 28.35 g/l

Quantity on preparation (500g) : 17.63 L

pH (25°C) : 7.0 ± 0.2

Supplement : Horse blood, Park and Sanders Selective Supplement I (FD104) & Park & Sanders Selective Supplement II (FD105).

Sterilization : 121°C / 15 minutes.

Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Quality Control :**Appearance of powder**

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

Colour and Clarity

Light yellow coloured, clear solution. On addition of blood, solution turns opalescent and cherry red coloured.

Reaction

Reaction of 2.84% aqueous solution is pH 7.0 ± 0.2 at 25°C.

Cultural Response

Cultural characteristics observed after an incubation at 42°C for 48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth
<i>Campylobacter coli</i> (33559)	10 ² -10 ³	good
<i>Campylobacter jejuni</i> (29428)	10 ² -10 ³	good-luxuriant

References :

- Park C.E. and Sanders G.W., 1989, Abstr. 5th International Workshop on *Campylobacter* Infections, Puerto Vallarta, Mexico.
- Downes FP and Ito K (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
- Koidis P. and Doyle M.P., 1983, Eur. J. Clin. Microbiol., 2:384.