

Soyabean HiVeg™ Broth Base

MV1286

Soyabean HiVeg Broth Base with supplement is recommended for enrichment and isolation of *Escherichia coli* 015:H7 from food samples.

Composition ** :

Ingredients	Grams/Litre
HiVeg hydrolysate	17.0
Papaic digest of soyabean meal	3.0
Synthetic detergent No. I	1.12
Dextrose	2.5
Sodium chloride	5.0
Dipotassium hydrogen phosphate	4.0

Final pH (at 25°C) 7.3 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 16.31 grams in 500 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 45-50°C and aseptically add rehydrated contents of 2 vials of Novobiocin Supplement (FD096). Mix well and dispense as desired.

Principle and Interpretation :

This medium is prepared by using HiVeg hydrolysate in place of Casein enzymic hydrolysate which makes the medium free of BSE/TSE risks. Soyabean HiVeg Broth Base is the modification of Soyabean Bile Broth which is formulated as recommended by FDA (1) for the enrichment and isolation of *Escherichia coli* 015:H7.

HiVeg hydrolysate, Papaic digest of soyabean meal provide carbonaceous, nitrogenous compounds and other essential growth nutrients. Dextrose is the fermentable carbohydrate and energy source. Synthetic detergents No. I inhibits gram-positive bacteria. Sodium chloride maintains osmotic equilibrium while phosphate buffers the medium well. Novobiocin renders the medium selective. Whenever low levels of *Escherichia coli* 0157:H7 are suspected, the food is enriched in Soyabean HiVeg Broth Base and further plated on selective medium as MacConkey Sorbitol HiVeg Agar (MV298) for isolation and identification.

Blend 25 grams food sample to be tested in 224 ml Soyabean HiVeg Broth Base and incubate on shaker (about 100 rpm) for 18-24 hours at 37°C. Prepare dilution of the enrichment culture with phosphate buffer and spread 0.1 ml of each dilution on MacConkey Sorbitol HiVeg Agar (MV298) Plates and incubate at 43°C for 24 hours.

Product Profile :

Vegetable based (Code MV)Ⓞ		Animal based (Code M)	
MV1286 HiVeg hydrolysate Synthetic detergent No. I		M1286 Casein enzymic hydrolysate Bile salts mixture	
Recommended for	:	Enrichment and isolation of <i>Escherichia coli</i> 015:H7 from food samples.	
Reconstitution	:	32.62 g/l	
Quantity on preparation (500g)	:	15.32 L	
pH (25°C)	:	7.3 ± 0.2	
Supplement	:	Novobiocin Supplement (FD096)	
Sterilization	:	121°C / 15 minutes.	
Storage	:	Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.	

Quality Control :**Appearance of powder**

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

Colour and Clarity

Light amber coloured clear solution without any precipitate.

Reaction

Reaction of 3.3% w/v aqueous solution is pH 7.3 ± 0.2 at 25°C.

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organisms (ATCC)	Inoculum (CFU)	Recovery*
<i>Escherichia coli</i> (25922)	10 ² -10 ³	good
<i>Escherichia coli</i> 015:H7	10 ² -10 ³	luxuriant
<i>Staphylococcus aureus</i> (25923)	10 ² -10 ³	none
<i>Enterococcus faecalis</i> (29212)	10 ² -10 ³	none

Key: * = On MacConkey Sorbitol HiVeg Agar (MV298)

References :

- Bacteriological Analytical Manual, 1995, 8th ed., Food and Drug Administration, AOAC International, Gaithersburg, USA.