

Shigella HiVeg™ Broth Base**MV1326**

Shigella HiVeg Broth Base is used for the cultivation of *Shigella* species from food.

Composition ** :

Ingredients	Grams/Litre
HiVeg hydrolysate	20.0
Sodium chloride	5.0
Dipotassium hydrogen phosphate	2.0
Monopotassium hydrogen phosphate	2.0
Dextrose	1.0
Polysorbate 80	1.5

Final pH (at 25°C) 7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 31.5 grams in 1000 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 add rehydrated content of 1 vial of Shigella Selective Supplement (FD108) under aseptic conditions. Mix well and dispense in sterile test tubes.

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. Shigella HiVeg Broth Base contains HiVeg hydrolysate as a source of carbon, nitrogen, vitamins and minerals. Dextrose provides carbohydrates. Buffering action in the medium is provided by dipotassium hydrogen phosphate and potassium dihydrogen phosphate. Sodium chloride maintains the osmotic balance of the medium. Polysorbate 80 besides acting as an emulsifier, also to a certain extent serves as a synthetic complex (oleic acid ester), carbon source. Novobiocin is inhibitory towards most gram positive bacteria such as *Staphylococcus aureus* and certain gram-negative organisms such as *Haemophilus influenzae* and some species of *Proteus*.

Product Profile :

Vegetable based (Code MV)©	Animal based (Code M)
MV1326 HiVeg hydrolysate	M1326 Casein enzymic hydrolysate

Recommended for	:	Isolation and cultivation of <i>Shigella</i> species.
Reconstitution	:	31.50 g/l
Quantity on preparation (500g)	:	15.87 L
pH (25°C)	:	7.0 ± 0.2
Supplement	:	Shigella Selective Supplement (FD108)
Sterilization	:	121°C / 15 minutes.
Storage	:	Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Quality Control :**Appearance of powder**

Light 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 3.15% w/v aqueous solution is pH 7.0 ± 0.2 at 25°C.

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth
<i>Shigella dysenteriae</i> (13313)	10 ² -10 ³	luxuriant
<i>Shigella flexneri</i> (12022)	10 ² -10 ³	luxuriant
<i>Shigella sonnei</i> (25931)	10 ² -10 ³	luxuriant
<i>Staphylococcus aureus</i> (25923)	10 ² -10 ³	inhibited
<i>Escherichia coli</i> (25922)	10 ² -10 ³	inhibited

References :

1. Atlas R.M., 1997, Handbook of Microbiological Media 2nd Edition, CRC Press, Boca Raton, New York, London, Tokyo.