

Tetrathionate HiVeg™ Broth Base, Hajna (TT HiVeg™ Broth Base)**MV327**

Tetrathionate HiVeg Broth Base, Hajna is used for enrichment and isolation of *Salmonellae*.

Composition ** :

Ingredients	Grams/Litre
HiVeg special peptone	18.0
Yeast extract	2.0
Sodium chloride	5.0
D-Mannitol	2.5
Dextrose	0.5
Synthetic detergent No. III	0.5
Sodium thiosulphate	38.0
Calcium carbonate	25.0
Brilliant green	0.01

Final pH (at 25°C) 7.6 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

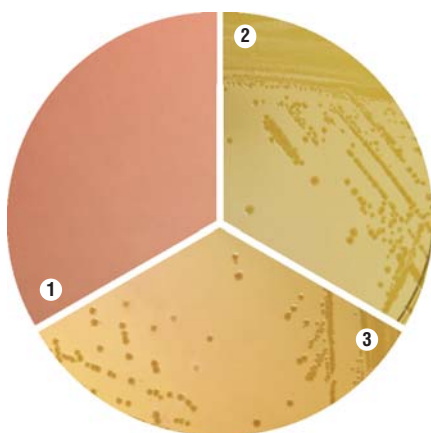
Directions :

Suspend 91.5 grams in 1000 ml distilled water. Heat just to boiling or place in flowing steam for 30 minutes. DO NOT AUTOCLAVE. Cool to 45°C. Mix and add 40 ml of Iodine solution (8 g Potassium iodide and 5 g Iodine per 40 ml). Mix and dispense 10 ml amounts in tubes. Do not heat after addition of Iodine.

Note: Due to presence of calcium carbonate, the prepared medium forms opalescent solution with white precipitate.

Principle and Interpretation :

Tetrathionate HiVeg Broth Base is developed by using HiVeg special peptone and synthetic detergent No. III which is free of BSE/TSE risks associated with animal based ingredients. TT HiVeg Broth base is the modification of TT Broth formulated according to Hajna and Damon (1) who modified the medium described by Kauffmann (2) and Knox (3). HiVeg special peptone and yeast extract provide nitrogenous compounds, vitamin B complex and other essential nutrients. Synthetic detergent No. III and brilliant green inhibit gram-positive bacteria. Dextrose and mannitol are the fermentable carbohydrates which help in differentiation of the enteric pathogens especially *Salmonella* group. The combination of sodium thiosulphate



MV327 Tetrathionate HiVeg Broth Base, Hajna
(Recovery on MacConkey HiVeg Agar - MV082)

1. Control
2. *Salmonella* serotype Enteritidis
3. *Salmonella* serotype Typhimurium

Product Profile :

Vegetable based (Code MV) ©	Animal based (Code M)
MV327 HiVeg special peptone Synthetic detergent No. III	M327 Peptone special Sodium deoxycholate

Recommended for : Enrichment and isolation of *Salmonellae*.

Reconstitution : 91.5 g/l

Quantity on preparation (500g) : 5.46 L

(100g) : 1.09 L

pH (25°C) : 7.6 ± 0.2

Supplement : Iodine solution

Sterilization : Boiling (DO NOT AUTOCLAVE)

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

and tetrathionate helps in suppressing coliform organisms making this medium more selective (3). Tetrathionate is formed in the medium by the addition of a solution containing iodine and potassium iodide. Sodium chloride maintains the osmotic balance of the medium whereas calcium carbonate is a neutralizer that absorbs toxic metabolites.

After enrichment, the growth may be streaked for further confirmation on MacConkey HiVeg agar (MV082).

Quality Control :**Appearance of powder**

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

Colour and Clarity

Light green coloured, opalescent solution with heavy white precipitate. On standing, the precipitate settles down.

Reaction

Reaction of 9.15% w/v aqueous solution is pH 7.6 ± 0.2 at 25°C.

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth*	Colour of colony*	Recovery
<i>Escherichia coli</i> (25922)	10 ² -10 ³	fair - good	pink-red	>20%
<i>Salmonella</i> serotype Arizonae (13314)	10 ² -10 ³	good-luxuriant	colourless	>50%
<i>Salmonella</i> serotype Enteritidis (13076)	10 ² -10 ³	good-luxuriant	colourless	>50%
<i>Salmonella</i> serotype Typhimurium (14028)	10 ² -10 ³	good-luxuriant	colourless	>50%
<i>Shigella dysenteriae</i> (13313)	10 ² -10 ³	good-luxuriant	colourless	>50%

Key: * = on MacConkey HiVeg Agar (MV082)

References :

1. Hajna and Damon, 1956, Appl. Microbiol., 4:341.
2. Kauffman F., 1930, Zentralb. Bakteriol. Parasitenkd. Infektionskr.-Hyg. Abt. I. Orig., 113:148.
3. Knox R., Gell P. and Pollack M., 1942, J. Pathol. Bacteriol, 54:469.