

Tartoff - Hobbs HiVeg™ Broth (Terrific HiVeg™ Broth)**MV1250**

Tartoff - Hobbs HiVeg Broth (Terrific HiVeg Broth) with added glycerol is recommended for cultivation of recombinant strains of *Escherichia coli*.

Composition ** :

Ingredients	Grams/Litre
HiVeg hydrolysate	12.0
Yeast extract	24.0
Monopotassium phosphate	9.4
Dipotassium phosphate	2.2

Final pH (at 25°C) 7.2 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 47.6 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Add 4 ml of glycerol to the medium. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle and Interpretation :

This medium is prepared by using HiVeg hydrolysate which is free from BSE/TSE risks associated with animal based peptone. Terrific HiVeg Broth is the modification of Terrific Broth which is a very nutritious medium designed by Tartoff and Hobbs (1) to improve the yield of plasmid in *Escherichia coli*. Sambrook et al (2) further recommended the protocol for the inoculation and incubation of organisms.

HiVeg hydrolysate and yeast extract supply the necessary nutrients and cofactors for the excellent growth of recombinant strains of *Escherichia coli*. Recombinant strains have an extended growth phase in this medium. High concentration of yeast extract and HiVeg hydrolysate in the medium facilitates higher cell yields. Phosphates provide good buffering action to the medium and prevent cell death due to a drop in pH. Glycerol serves as the carbon and energy source to the organisms. Unlike glucose, glycerol is not fermented to acetic acid.

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 4.76% w/v aqueous solution is pH 7.2 ± 0.2 at 25°C

Product Profile :

Vegetable based (Code MV) ©	Animal based (Code M)
MV1250 HiVeg hydrolysate	M1250 Casein enzymic hydrolysate

Recommended for : Cultivation of recombinant strains of *Escherichia coli*.

Reconstitution : 47.6 g/l

Quantity on preparation (500g) : 10.50 L

pH (25°C) : 7.2 ± 0.2

Supplement : Glycerol

Sterilization : 121°C / 15 minutes.

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

Cultural Response

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

Organisms (ATCC)	Inoculum (CFU)	Growth*
<i>Escherichia coli</i> (23724)	10^2 - 10^3	good
<i>Escherichia coli</i> (39403)	10^2 - 10^3	good
<i>Escherichia coli</i> (47014)	10^2 - 10^3	good
<i>Escherichia coli</i> (53868)	10^2 - 10^3	good

Key : * = growth is evident by turbidity

References :

- Tartoff K.D. and Hobbs C.A., 1987, Improved Media for Growing Plasmid and Cosmid Clones, Bethesda Res. Lab. Focus, 9:12.
- Sambrook J., Fritsch, E.E., and Maniatis T., 1989, Molecular cloning :- A laboratory manual, 2nd ed., Cold Spring Harbor Lab., Cold Spring Harbor, N.Y.



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- Control
- Escherichia coli* (23724)
- Escherichia coli* (39403)
- Escherichia coli* (47014)