

**Hanahan's HiVeg™ Broth**

**MV1252**

Hanahan's HiVeg Broth is recommended for use in cultivation of recombinant strains of *Escherichia coli*.

**Composition\*\* :**

Ingredients	Grams/Litre
HiVeg hydrolysate	20.00
Yeast extract	5.00
Sodium chloride	0.50
Magnesium sulphate	2.40
Potassium chloride	0.186

Final pH (at 25°C) 7.0 ± 0.2

\*\* Formula adjusted, standardized to suit performance parameters

**Directions :**

Suspend 28 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Principle and Interpretation :**

Hanahan's HiVeg Broth is prepared by using vegetable peptones which is free from BSE/TSE risks associated with animal based peptones. Hanahan's HiVeg Broth is the modification of Hanahan's Broth which is prepared as per the formulation described by Hanahan (1) and is recommended for cultivating recombinant strains of *Escherichia coli*. It is a nutritionally rich growth medium used in the preparation and transformation of competent cells. For the intake or introduction of DNA, competent cells are first grown in Hanahan's HiVeg Broth to prepare them for perforation. For the survival of perforated,

**Product Profile :**

Vegetable based (Code MV)©		Animal based (Code M)	
<b>MV1252</b>	HiVeg hydrolysate	<b>M1252</b>	Casein enzymic hydrolysate
<b>Recommended for</b>	Cultivation of recombinant strains of <i>Escherichia coli</i> .		
<b>Reconstitution</b>	28.0 g/l		
<b>Quantity on preparation (500g):</b>	17.85 L		
<b>pH (25°C)</b>	7.0 ± 0.2		
<b>Supplement</b>	None		
<b>Sterilization</b>	121°C / 15 minutes.		
<b>Storage</b>	Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.		

competent cells a rich, isotonic environment is needed. Hanahan's HiVeg Broth with 0.4% dextrose like, the conventional medium is used in the final stage of transformation since it provides carbon and energy source for *Escherichia coli* and assists mending of perforations and replication (2).

HiVeg hydrolysate and yeast extract supply nitrogenous compounds and growth factors for the recombinant *Escherichia coli* to recover from the stress of transformation and grow well. Potassium and sodium chloride maintains isotonic conditions. Magnesium sulphate is added to the medium as the necessary component for DNA replication.

**Quality Control :**

**Appearance of Powder**

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

**Colour and Clarity**

Medium amber coloured, clear solution without any precipitate.

**Reaction**

Reaction of 2.8% 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 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth
<i>Escherichia coli</i> DH5 (53868)	10 <sup>2</sup> - 3x10 <sup>2</sup>	good-luxuriant

**References :**

- Hanahan D., 1983, J. Mol. Biol., 166:557.
- Sambrook J., Fritsch E.E. and Maniatis T., 1989, Molecular Cloning : A Laboratory Manual, 2<sup>nd</sup> ed., Cold Spring Harbor Lab., Cold Spring Harbor, N.Y.



**MV1252 Hanahan's HiVeg Broth**

- Control
- Escherichia coli* DH5