

Casein Yeast Magnesium HiVeg™ Agar / Broth

MV1248/MV1247

Casein Yeast Magnesium HiVeg Agar/Broth is recommended for use in the cultivation of recombinant strains of *Escherichia coli*.

Composition ** :

| Ingredients | MV1248 | MV1247 |
|--------------------|-------------|-------------|
| | Grams/Litre | Grams/Litre |
| HiVeg hydrolysate | 10.0 | 10.0 |
| Yeast extract | 5.0 | 5.0 |
| Sodium chloride | 5.0 | 5.0 |
| Magnesium sulphate | 0.98 | 0.98 |
| Agar | 15.0 | - |

Final pH (at 25°C) 7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 35.98 grams of MV1248 or 21 grams of MV1247 in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle and Interpretation :

This medium is prepared by replacing Casein enzymic hydrolysate with HiVeg hydrolysate that makes the medium free of BSE/TSE risks. Casein Yeast Magnesium HiVeg Agar /Broth is a modification of the formula described by Blattner et al (1, 2) used for cultivating recombinant strains of *Escherichia coli*.

Media constituents like HiVeg hydrolysate and yeast extract supply essential nutrients and cofactors required for excellent growth of recombinant strains of *Escherichia coli*. Sodium chloride maintains the osmotic balance of the media. Magnesium sulphate is incorporated as a source of magnesium ion necessary in a variety of enzymatic reactions including DNA replication. Agar acts as a solidifying agent and provides substratum for growth of *Escherichia coli* colonies.

Quality Control :**Appearance of powder**

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

Gelling

Firm, comparable with 1.5% Agar gel of MV1248.

Colour and Clarity

Light to medium amber coloured, slightly opalescent gel forms in petri plates, clear solution in tubes.

Reaction

Reaction of 3.59% w/v of MV1248 or 2.1% w/v of MV1247 aqueous solution is pH 7.0 ± 0.2 at 25°C.

Product Profile :

| Vegetable based (Code MV)© | | Animal based (Code M) | |
|---|---|---|--|
| MV1248/MV1247 HiVeg hydrolysate | | M1248/M1247 Casein enzymic hydrolysate | |
| Recommended for | : | The cultivation of recombinant strains of <i>Escherichia coli</i> | |
| Reconstitution | : | (MV1248) : 35.98 g/l | |
| | : | (MV1247) : 21.0 g/l | |
| Quantity on preparation (500g) : | | (MV1248) : 13.89 L | |
| | | (MV1247) : 23.80 L | |
| pH (25°C) | : | 7.0 ± 0.2 | |
| Supplement | : | None | |
| 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 | Recovery |
|---------------------------------|----------------------------------|----------------|----------|
| <i>Escherichia coli</i> (23724) | 10 ² -10 ³ | good-luxuriant | >70% |
| <i>Escherichia coli</i> (53868) | 10 ² -10 ³ | good-luxuriant | >70% |

References :

- Blattner F.R., Williams B.G., Blechl A.E., et al, 1977, Science, 196:161.
- Sambrook J., Fritsch E. and Maniatis T., 1989, Molecular Cloning : A Laboratory Manual, 2nd ed., Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.

**MV1247 Casein Yeast Magnesium HiVeg Broth**

- Control
- Escherichia coli* (23724)
- Escherichia coli* (53868)