

Tryptone Glucose Extract HiVeg™ Agar / Broth**MV014/MV952****(Tryptone Glucose Yeast Extract HiVeg™ Agar / Broth)**

Tryptone Glucose Yeast Extract HiVeg Agar / Broth is recommended for enumeration of bacteria in water, air, milk and dairy products.

Composition ** :

| Ingredients | MV014 | MV952 |
|-----------------------|-------------|-------------|
| | Grams/Litre | Grams/Litre |
| HiVeg hydrolysate | 5.00 | 10.00 |
| Yeast extract | 3.00 | 1.00 |
| Glucose | 1.00 | 5.00 |
| Dipotassium phosphate | — | 1.25 |
| Agar | 15.00 | — |

Final pH (at 25°C) 7.0 ± 0.2 6.8 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 24 grams of MV014 or 17.25 grams of MV952 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 :

These media are prepared by using HiVeg hydrolysate which is free from BSE/TSE risks associated with animal based peptones. These media are the modification of Tryptone Glucose Yeast Extract Agar/Broth which was originally developed by Bowers and Hucker (1). These media serves the same purpose as the conventional media which are recommended for the cultivation and enumeration of bacteria in air, water (2), milk and dairy products (3). Also these media can be used for various studies of thermophilic bacteria in milk (4), influence of incubation temperature (5) etc. Tryptone Glucose Extract HiVeg Agar/Broth like the conventional medium are used for the bacteriological plate count of milk and dairy products (6) and for the enumeration of microorganisms during microbiological examination of food materials by MPN technique (7).

HiVeg hydrolysate, yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients. Glucose is the energy source.

This medium can be used for pour plate technique. Usually 1 ml of appropriate dilution of the test sample are pipetted into sterile petriplates and molten, Tryptone Glucose Yeast Extract HiVeg Agar is added followed by gentle mixing to mix the sample well and incubate the plates for 48 –72 hours at 32 – 35°C.

Quality Control :**Appearance of powder**

Light yellow coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel of MV014.

Product Profile :

| Vegetable based (Code MV)© | | Animal based (Code M) |
|---------------------------------------|---|---|
| MV014/MV952 HiVeg hydrolysate | | M014/M952 Casein enzymic hydrolysate |
| Recommended for | : | Enumeration of bacteria in water, air, milk and dairy products. |
| Reconstitution | : | (MV014) : 24.0 g/l (MV952) : 17.25 g/l |
| Quantity on preparation (500g) | : | (MV014) : 20.83 (MV952) : 28.98 L |
| | : | (100g) : (MV014) : 4.16 L |
| pH (25°C) | : | (MV014) : 7.0 ± 0.2 (MV952) : 6.8 ± 0.2 |
| Supplement | : | None |
| Sterilization | : | 121°C / 15 minutes |
| Storage | : | Dry Medium - Below 30°C, Prepared Medium 2 - 8°C. |

Colour and Clarity

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

Reaction

Reaction of 2.4% w/v aqueous solution of MV014 is pH 7.0 ± 0.2 at 25°C. Reaction of 1.725% w/v aqueous solution of MV952 is pH 6.8 ± 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>Bacillus subtilis</i> (6633) | 30-300 | luxuriant |
| <i>Enterobacter aerogenes</i> (13048) | 30-300 | luxuriant |
| <i>Escherichia coli</i> (25922) | 30-300 | luxuriant |
| <i>Lactobacillus casei</i> (9595) | 30-300 | luxuriant |
| <i>Pseudomonas aeruginosa</i> (27853) | 30-300 | luxuriant |
| <i>Staphylococcus aureus</i> (25923) | 30-300 | luxuriant |
| <i>Enterococcus faecalis</i> (29212) | 30-300 | luxuriant |

References :

- Bowers and Hucker, 1935, Tech. Bull., 228, N.Y.State Agr. Expt. Station.
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