

CHO HiVeg™ Medium Base

MV351

CHO HiVeg Medium Base is a basal medium to which carbohydrates may be added for use in fermentation studies of anaerobic bacteria.

Composition ** :

| Ingredients | Grams/Litre |
|-----------------------|-------------|
| HiVeg hydrolysate | 15.0 |
| Yeast extract | 7.0 |
| L-Cystine | 0.25 |
| Sodium chloride | 2.5 |
| Ascorbic acid | 0.1 |
| Sodium thioglycollate | 0.5 |
| Bromo thymol blue | 0.01 |
| Agar | 0.75 |

Final pH (at 25°C) 7.0 ± 0.2

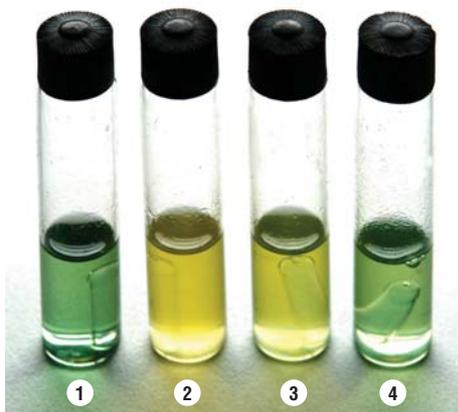
** Formula adjusted, standardize to suit performance parameters.

Directions :

Suspend 26 grams 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. Cool to 45-50°C. Aseptically add 6.25 ml of 10% sterile carbohydrate solution. Mix well and dispense in sterile tubes containing inverted Durham's tubes.

Principle and Interpretation :

This medium is prepared by completely replacing animal based peptones with vegetable peptones that are free of BSE/TSE risks. CHO HiVeg Medium Base is the modification of CHO Medium Base. Identification of anaerobes is based on cellular morphology, colony characteristics on blood agar and biochemical tests (1). For the anaerobic microorganisms, proper collection and transport of suspected specimens is of pivotal importance. Exposure of the specimens to air should be minimized to the possible extent and they should be promptly cultured in the laboratory under proper atmospheric conditions.



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1. Control
2. *Clostridium perfringens*
3. *Bacteroides fragilis*
4. *Bacteriodes vulgatus*

Product Profile :

| Vegetable based (Code MV)© | Animal based (Code M) |
|-----------------------------------|---|
| MV351 HiVeg hydrolysate | M351 Casein enzymic hydrolysate |

| | |
|--|---|
| Recommended for | : Fermentation studies of anaerobic bacteria |
| Reconstitution | : 26.0 g/l |
| Quantity on preparation (500g): | : 19.23 L |
| pH (25°C) | : 7.0 ± 0.2 |
| Supplement | : Carbohydrate solution |
| Sterilization | : 121°C / 15 minutes. |
| Storage | : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C. |

Carbohydrate utilization patterns play a key role in identification of anaerobes. Although metabolism of anaerobes is less efficient, they require auxillary growth factors, which are available from HiVeg hydrolysate. Also high concentration of carbohydrate is required for their growth. Sodium thioglycollate helps in maintaining reduced atmosphere in the medium and the presence of small quantity of agar also aid in anaerobiosis. Sodium chloride maintains osmotic balance while bromo thymol blue is a pH indicator included in this medium.

Quality Control :

Appearance of powder

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

Colour and Clarity

Light green coloured, clear to slightly opalescent solution without any precipitate.

Reaction

Reaction of 2.6% 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 upto 7 days when incubated anaerobically.

| Organisms (ATCC) | Growth | Fermentation w/Lactose | Fermentation w/Dextrose |
|---|-----------|------------------------|-------------------------|
| <i>Bacillus melaninogenicus</i> (15930) | luxuriant | - | + |
| <i>Bacteriodes vulgatus</i> (8482) | luxuriant | - | - |
| <i>Bacteroides fragilis</i> (25285) | luxuriant | + | + |
| <i>Clostridium botulinum</i> (25763) | luxuriant | + | - |
| <i>Clostridium perfringens</i> (12924) | luxuriant | + | + |

Key : + = positive reaction, yellow colour
 - = negative reaction, no colour change

References :

1. Laboratory Methods in Anaerobic Bacteriology, 1974, CDC Laboratory Manual, U.S. Dept. HEW, Pub. No. 74-8262.