

Technical Information

Glucose Cysteine MiVeg Agar Base w/Thiamine

Product Code : VM1433

Application:- Glucose Cysteine MiVeg Agar Base w/Thiamine with addition of blood is recommended for the cultivation and enumeration of *Francisella tularensis* (*Pasteurella tularensis*).

Composition

| Ingredients | Gms / Litre |
|--------------------------------|-------------|
| MiVeg peptone No.1 | 3.0 |
| Papaic digest of soyabean meal | 10.0 |
| Sodium chloride | 5.0 |
| Cysteine hydrochloride | 1.0 |
| Dextrose | 25.0 |
| Thiamine | 0.0005 |
| Agar | 14.0 |
| Final pH (at 25°C) | 6.9 ± 0.2 |

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

This medium is prepared by adding MiVeg peptone No. 1 which is free from BSE/TSE associated risks. Glucose Cysteine MiVeg Agar Base w/ Thiamine is the modification of Glucose Cysteine Agar Base w/ Thiamine which when supplemented with blood is used for the cultivation and enumeration of fastidious *Francisella tularensis* (*Pasteurella tularensis*) (1). *Pasteurella* species cannot be cultured on ordinary medium since they require a complex medium containing blood, Thiamine and Cystine (2, 3). Minute droplet like colonies develop within 48 hours.

MiVeg peptone No.1 and Papaic digest of soyabean meal supplies necessary growth enhancing nutrients. Dextrose is the fermentable carbohydrate and sodium chloride maintains the osmotic balance.

Methodology

Suspend 58 grams of powder media in 1000 ml distilled water. Mix thoroughly. 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 and aseptically add sterile 4-5% defibrinated rabbit blood.

Quality Control

Physical Appearance

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

Gelling

Firm, comparable, with 1.4% Agar gel.

Colour and Clarity of prepared medium

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

Reaction

Reaction of 5.8% w/v aqueous solution is pH 6.9 ± 0.2 at 25°C.

pH Range

6.7 - 7.1

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 48-72 hours with 10% Carbon dioxide (CO₂).

Organisms (ATCC)

Francisella tularensis (29684)

Growth

luxuriant

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 day.

Further Reading

1. Ronald M. Atlas (2004), Handbook of Microbiological Media, Lawrence C. Parks (ed.), 3rd Edition, CRC Press, p. No. 717.
2. Collee, J.G., Marmin, B.P., Fraser, A.G. and Simmons A (eds) Mackie and McCartney Practical Medical Microbiology (1996), 14th edition, Churchill Livingstone, New York.
3. Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, 2004, 5th edition, OIE World Organisation for Animal Health.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents. Do not use the products if it fails to meet specifications for identity and performance parameters.