# Technical Information

## Cystine MiVeg Agar Base

## Product Code : VM1172

**Application:-** Cystine MiVeg Agar Base provides excellent growth of gram-negative cocci and other pathogenic organisms and with hemoglobin enrichment, is used for the cultivation of *Francisella tularensis*.

## Composition

| Ingredients | Gms / Litre |
|---|---|
| MiVeg infusion | 10.0 |
| MiVeg peptone No. 3 | 10.0 |
| Dextrose | 10.0 |
| Sodium chloride | 5.0 |
| L-Cystine | 1.0 |
| Agar | 15.0 |
| Final pH ( at 25°C) | 6.8±0.2 |

** Formula adjusted, standardized to suit performance parameters.

## Principle & Interpretation

Cystine MiVeg Agar Base is prepared by using MiVeg infusion and MiVeg peptone No.3 in place of Heart infusion & proteose peptone which makes the medium free from BSE/TSE risks. This medium is the modification of Cystine Heart Agar Base which is recommended by APHA (1) for the cultivation of *Francisella tularensis*. 0.05% cystine and 1% dextrose can be added to the Base for the cultivation of *Francisella tularensis*. Rhamy (2) used Francis' Blood Dextrose Cystine Agar and reported addition of an autoclaved solution of haemoglobin to Cystine Agar and proved it to be entirely satisfactory for cultivating *Francisella tularensis*. It is rich in nutrient which provides all essential growth factor. This medium may also be used for cultivating many other organisms generally difficult to grow.

## Methodology

Suspend 51 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. When to be enriched with haemoglobin, suspend 10.2 grams in 100 ml distilled water. Sterilize as above. Cool to 50°C and aseptically add 100 ml of 2% sterile hemoglobin solution. Mix well before pouring into sterile plates.

## Quality Control

**Physical Appearance**

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

**Gelling**

Firm, comparable with 1.5% Agar gel.

**Colour and Clarity of prepared medium**

Basal medium yields yellow to amber coloured, clear to slightly opalescent gel. When enriched with haemoglobin, chocolate brown coloured gel forms in petri plates.

**Reaction**

Reaction of 5.1 % w/v aqueous solution pH: 6.8 ±0.2 at 25°C

**pH range**

6.6-7.0

**Cultural Response/Characteristics**

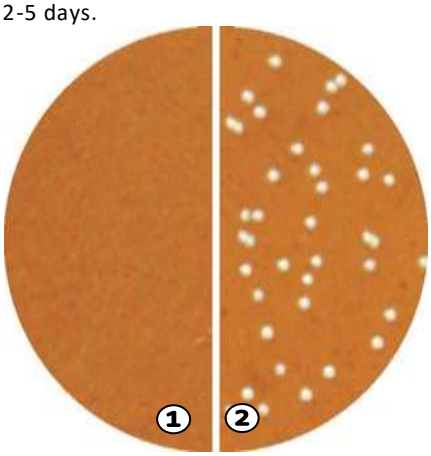
Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours with added 2% Haemoglobin.

| Organisms (ATCC) | Inoculum (CFU) | Growth | Recovery |
|---|---|---|---|
| *Francisella tularensis* (29684) | $10^2$-$10^3$ | luxuriant | >70% |

| | | | |
|---|---|---|---|
| *Neisseria meningitidis* (13090) | $10^2$-$10^3$ | luxuriant | >70% |
| *Streptococcus pneumoniae* (6303) | $10^2$-$10^3$ | luxuriant | >70% |
| *Streptococcus pyogenes* (19615) | $10^2$-$10^3$ | luxuriant | >70% |

## 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$^0$ in sealable plastic bags for 2-5 days.




**VM1172 Cystine MiVeg Agar Base**
1. Control
2. *Streptococcus pyogenes*

## Further Reading

1. American Public Health Association, 1950, Diagnostic Procedures and Re agents, 3rd ed., p. 259.
2. Rhamy, 1933, Am. J. Clin. Path., 3:121.

## 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 in fingement of any patents. Do not use the products if it fails to meet specificatons for identity and performens parameters.