

## Technical Information

### Fermentation MiVeg Medium for Staphylococcus and Micrococcus

#### Product Code : VM1827

**Application:-** Fermentation MiVeg Medium for Staphylococcus and Micrococcus is used for studying fermentation by *Staphylococcus* and *Micrococcus* species.

#### Composition

| Ingredients         | Gms / Litre |
|---------------------|-------------|
| MiVeg hydrolysate   | 10.0        |
| Yeast extract       | 1.0         |
| Glucose             | 10.0        |
| Bromo cresol purple | 0.04        |
| Agar                | 2.2         |
| Final pH (at 25°C)  | 7.0 ± 0.2   |

\*\* Formula adjusted, standardized to suit performance parameters.

#### Principle & Interpretation

This medium is prepared by adding MiVeg hydrolysate which is free from BSE/TSE associated risks. Fermentation MiVeg Medium for *Staphylococcus* and *Micrococcus* is recommended for differentiation of these two organisms on the basis of glucose fermentation reaction. *Staphylococcus* produces acid from glucose anaerobically whereas *Micrococcus* fails to do so (1).

MiVeg hydrolysate and yeast extract provide necessary nitrogenous nutrients for the growth of organisms. Glucose is the fermentable carbohydrate source in the medium. Bromo cresol purple is the pH indicator which is yellow in the acidic range. The colour of medium changes to yellow on fermentation of glucose due to the production of acid. Agar is incorporated in this medium to create anaerobic condition in the depths of the tubes.

#### Methodology

Suspend 23.2 grams of powder media in 1000ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Dispense in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow tubed medium to cool in an upright position.

#### Quality Control

##### Physical Appearance

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

##### Gelling

Semisolid, comparable with 0.22% Agar gel.

##### Colour and Clarity of prepared medium

Purple coloured, clear to slightly opalescent semisolid gel forms in tubes as butts.

##### Reaction

Reaction of 2.32% w/v aqueous solution is pH 7.2 ± 0.2 at 25°C

##### pH Range

6.8-7.2

### Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35°C for 18-24 hours.

| Organisms (ATCC)                     | Inoculum (CFU)  | Growth         | Acid production |
|--------------------------------------|-----------------|----------------|-----------------|
| <i>Micrococcus luteus</i> (10240)    | 10 <sup>2</sup> | Good-luxuriant | -               |
| <i>Staphylococcus aureus</i> (25923) | 10 <sup>2</sup> | Good-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. Finegold S.M. and Martin W.J., 1982, Diagnostic Microbiology, 6<sup>th</sup> ed., The C.V. Mosby Co., St. Louis.

## Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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