

## Technical Information

### Sabouraud Dextrose MiVeg Agar Base, Modified (Dextrose MiVeg Agar Base, Emmons)

**Product Code : VM1286**

**Application:-** Sabouraud Dextrose MiVeg Agar Base, Modified (Dextrose MiVeg Agar Base, Emmons) is used for cultivation of fungi.

#### Composition

| Ingredients           | Gms / Litre |
|-----------------------|-------------|
| MiVeg special peptone | 10.0        |
| Dextrose              | 20.0        |
| Agars                 | 17.0        |
| Final pH (at 25°C)    | 7.0 ± 0.2   |

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

#### Principle & Interpretation

Sabouraud Dextrose MiVeg Agar Base, Modified is prepared by adding MiVeg special peptone in place of Peptone special thereby making the medium BSE/TSE risks free. Sabouraud Dextrose Agar was devised by Sabouraud for the cultivation of dermatophytes (1). Low pH of this medium favors the fungal growth especially dermatophytes, some fungi are inhibited (2-4). Emmons modified the original formulation by adjusting the pH close to neutral to increase the recovery of fungi and by reducing the dextrose content from 40 to 20 g/l (4). Sabouraud Dextrose MiVeg Agar Base, Modified is the modification of this medium using vegetable peptone instead of animal based peptone.

MiVeg special peptone supplies the nitrogenous growth factors. Dextrose act as an energy source of the medium. Selectivity of the medium can be increased by adding antibiotics, as they inhibit contaminating bacteria (3,4). Chloramphenicol is inhibitory to a wide range of gram-negative and gram-positive bacteria and cycloheximide is an antifungal agent that is active against saprophytic fungi and does not inhibit yeast or dermatophytes (5).

#### Methodology

Suspend 47 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add one vial of rehydrated contents of CC Supplement (MS2035). Mix well before pouring into sterile petri plates.

**Note:** Avoid undue exposure to heat which encourages hydrolysis of components.

#### Quality Control

##### Physical Appearance

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

##### Gelling

Firm, comparable with 1.7% Agar gel.

##### Colour and Clarity of prepared medium

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

##### Reaction

Reaction of 4.7% w/v aqueous solution is pH 7.0 ± 0.2 at 25°C.

##### pH Range

6.8 - 7.2

### Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 25 - 30°C for 2 - 3 weeks with addition of CC Supplement, (MS2035).

| Organisms (ATCC)                          | Growth    |
|-------------------------------------------|-----------|
| <i>Aspergillus niger</i> (16404)          | none-poor |
| <i>Candida albicans</i> (10231)           | poor-good |
| <i>Escherichia coli</i> (25922)           | inhibited |
| <i>Saccharomyces cerevisiae</i> (9763)    | none-poor |
| <i>Trichophyton mentagrophytes</i> (9533) | luxuriant |
| <i>Trichophyton rubrum</i> (28191)        | 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. Sabouraud K., 1892, Ann. Dermatol. Syphilol, 3:1061.
2. Ajello, George, Kaplan and Kaufman, 1963. CDC laboratory manual for medical mycology. PNS Publication No.994 U.S Government Printing office, Washington, D.C.
3. Patrick R.Murray, Baron, Pfaller, and Tenover (Ed) 2003, In Manual of Clinical Microbiology, 8<sup>th</sup> ASM, Washington, D.C.
4. Kwong\_Chung and Bennett.1992. Medical mycology. Lea and Feriger, Philadelphia, Pa.
5. Lorian (ed.) 1996. Antibiotics in laboratory medicine, 4<sup>th</sup> ed. Williams and Wilkins, Baltimore, MD

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