# Sabouraud Dextrose Agar,Modified(Dextrose Agar Base,Emmons), GM286 Granulated

Sabouraud Dextrose Agar, Modified (Dextrose Agar, Emmons),granulated is used for selective cultivation of pathogenic fungi.

## Composition**

| Ingredients | Gms / Litre |
|---|---|
| Dextrose | 20.000 |
| Peptone, special | 10.000 |
| Agar | 17.000 |
| Final pH ( at 25°C) | 7.0±0.2 |

**Formula adjusted, standardized to suit performance parameters

## Directions

Suspend 23.5 grams in 500 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. AVOID OVERHEATING. Cool to 45-50°C and aseptically add the rehydrated contents of 1 vial of CC Supplement (FD035). Mix well and pouring in sterile Petri plates or as desired.

## Principle And Interpretation

Sabouraud Dextrose Agar is Carliers modifications (1) of the formulation described by Sabouraud (2) for the cultivation of fungi, particularly those associated with skin infections. Sabouraud Dextrose Agar Base, Modified is the modification of Sabouraud medium (2) as described by Emmons (3). It has reduced dextrose content and a neutral pH (4).

Though the low pH of this medium is favorable for the growth of fungi especially dermatophytes, some fungi are inhibited (3, 5). 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 (6).

Peptone special is the source of nitrogenous growth factors. Dextrose provides as an energy source. The addition of antibiotics increases the selectivity of the medium (3, 6)

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 (7).

## Quality Control

**Appearance**
Cream to yellow coloured granular medium

**Gelling**
Firm, comparable with 1.7% agar gel.

**Colour and Clarity of prepared medium**
Light amber coloured clear to slightly opalescent gel forms in Petri plates

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

**pH**
6.80-7.20

**Cultural Response**
Cultural characteristics observed with added CC Supplement, Modified (FD 035) after an incubation at 25-30°C for 2-3 weeks.

| Organism | Inoculum (CFU) | Growth w/ CC supplement | Recovery |
|---|---|---|---|
| **Cultural Response** | | | |

| | | | |
|---|---|---|---|
| **Aspergillus brasiliensis ATCC 16404* | 50-100 | none - poor | |
| *Candida albicans ATCC 10231* | 50-100 | None-poor | <=10% |
| *Escherichia coli ATCC 25922* | >=$10^3$ | inhibited | 0% |
| *Saccharomyces cerevisiae ATCC 9763* | 50-100 | none-poor | <=10% |
| *Trichophyton rubrum ATCC 28191* | 50-100 | luxuriant | |
| *Trichophyton mentagrophytes ATCC 9533* | 50-100 | luxuriant | |

## Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on label.

## Reference

1. Carlier G. I. M., 1984, Brit. J. Derm. Syph., 60:61
2. Sabouraud R., 1892, Ann. Dermatol. Syphil. 3 : 1061.
3. Emmons C., Binford C, Uty J. and Kwon-Chung, 1970, Medical Mycology, 2nd Edi, Philadelphia: Lea and febiger.
4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore
5. Ajello, George, Kaplan and Kaufman, 1963. CDC laboratory manual for medical mycology. PNS Publication No.994 U.S Government Printing office, Washington, D.C
6. Murray P. R, Baron E, J., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 2007, Manual of Clinical Microbiology, 9th Ed., ASM, Washington, D.C
7. Lorian (ed.) 1996. Antibiotics in laboratory medicine, 4th ed. Williams and Wilkins, Baltimore, Md.

Revision : 00 / 2014