

## PRODUCT SPECIFICATION SHEET

### Agar Medium C (Sabouraud-Dextrose Agar with Antibiotics) (DM1385I)

#### Intended Use

Agar Medium C (Sabouraud-Dextrose Agar with Antibiotics) (DM1385I) is recommended for selective cultivation and isolation of yeasts and moulds in compliance with IP.

#### Product Summary and Explanation

Sabouraud Dextrose Agar is a general-purpose medium devised by Sabouraud<sup>(1)</sup> for the cultivation of dermatophytes. The low pH of approximately 5.6 is favourable for the growth of fungi, especially dermatophytes, and slightly inhibitory to contaminating bacteria in clinical specimens.<sup>(2)</sup> The addition of antibiotics is a modification designed to increase bacterial inhibition. Sabouraud Glucose Agar w/ Antibiotics is cited as Medium C and recommended for cultivation of yeasts and moulds by Indian Pharmacopoeia.<sup>(3)</sup> This medium is a modification of Sabouraud Dextrose Agar originally formulated by Sabouraud.<sup>(1)</sup> The medium is used with antibiotics such as tetracycline and benzylpenicillin<sup>(4)</sup> for the isolation of pathogenic fungi from materials containing large numbers of fungi or bacteria.

#### Principles of the Procedure

Agar Medium C (Sabouraud-Glucose Agar with Antibiotics) contains peptone which provides the nitrogen, amino acids and carbon. Dextrose monohydrate is an energy and carbon source. Tetracycline and benzyl penicillin inhibits a wide range of Gram-positive and Gram-negative bacteria, which makes the medium selective for fungi.<sup>(5)</sup> The low pH favours fungal growth and inhibits contaminating bacteria from clinical specimen.

#### Formula / Liter

Ingredients	Gms / Liter
Dextrose monohydrate	40.00
Peptone (meat and casein)	10.00
Agar	15.00
Final pH : 5.6 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

#### Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.
3. Some pathogenic fungi may produce infective spores, which are easily dispersed in air, so examination should be carried out in safety cabinet.

#### Directions

1. Suspend 61.36 grams of the medium in 995ml of purified/distilled water.
2. Heat to boiling to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Aseptically add rehydrated contents of 1 vial of Tetracycline Selective Supplement (MS123).
5. Mix well and pour into sterile Petri plates.

#### Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light amber coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 6.14% solution	pH 5.6 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

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### Growth Promotion Test

Growth Promotion is carried out as per Indian Pharmacopoeia. Cultural characteristics observed with added Tetracycline Selective Supplement (FD196) after an incubation at 20-25°C for 48-72 hours (Incubate for 7 days for Trichophyton species)

### Expected Cultural Response:

Sr. No.	Organisms	Results to be achieved				
		Inoculum (CFU)	Growth	Observed Lot value (CFU)	Recovery	Incubation Temperature/ period
1.	<i>Candida albicans</i> ATCC 10231	50 -100	good-luxuriant (white colonies)	25 -100	≥50 %	20 -25 °C/ ≤7 days
2.	<i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	good-luxuriant	25 -100	≥50 %	20 -25 °C/ ≤7 days
3.	<i>Saccharomyces cerevisiae</i> ATCC 9763	50 -100	good-luxuriant	35 -100	≥50 %	20 -25 °C/ ≤7 days
4.	<i>Escherichia coli</i> ATCC 8739	≥10 <sup>3</sup>	inhibited	0	0 %	20 -25 °C/ ≤7 days
5.	<i>Escherichia coli</i> NCTC 9002	≥10 <sup>3</sup>	inhibited	0	0 %	20 -25 °C/ ≤7 days
6.	<i>Trichophyton rubrum</i> ATCC 28191	50 -100	good-luxuriant	25 -100	≥50 %	20 -25 °C/ ≤7 days
7.	<i>Lactobacillus casei</i> ATCC 334	≥10 <sup>3</sup>	inhibited	0	0 %	20 -25 °C/ ≤7 days

The organisms listed are the minimum that should be used for quality control testing.

### Test Procedure

Refer to appropriate references for standard test procedures.

### Results

Refer to appropriate references and test procedures for interpretation of results.

### Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

### Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

### Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.



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### Packaging

**Product Name :** Agar Medium C (Sabouraud-Glucose Agar with Antibiotics)

**Product Code :** DM1385I

**Available Pack sizes :** 500gm

### References

1. Sabouraud K., 1892, Ann. Dermatol. Syphilol, 3:1061.
2. Murray, P. R 2005, In Manual of Clinical Microbiology, 7<sup>th</sup> ed., ASM, Washington, D.C.
3. Indian Pharmacopoeia 2010, Ministry of Health and Family welfare, Government of India, New Delhi
4. Ajello L., 1957, J. Chron. Dis., 5:545.
5. Lorian (Ed.),1980, Antibiotics In Laboratory Medicine, Williams and Wilkins, Baltimore.

### Further Information

For further information please contact your local MICROMASTER Representative.



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