

# PRODUCT SPECIFICATION SHEET



## HC Agar Base (DM1271)

### Intended Use

HC Agar Base (DM1271) is recommended for enumeration of mould in cosmetic products when supplemented with Polysorbate 80.

### Product Summary and Explanation

Cosmetics are not liable to be sterile but must be adequately preserved. Microbial contamination to cosmetics is a substantial risk to product quality, regulatory compliance and consumer health.<sup>(1)</sup> Using traditional agar media, methods for isolating molds from cosmetic products require incubation for 5 to 7 days. In 1986, Mead and O'Neill formulated a new medium, HC Agar, for enumerating molds in cosmetic products that decreased incubation time to 3 days at  $27.5 \pm 0.5^\circ\text{C}$ .<sup>(2)</sup> This medium is supplemented by Polysorbate 80 to obtain a significant mold count.<sup>(3)</sup>

### Principles of the Procedure

HC Agar Base contains tryptone and proteose peptone, which provides carbon, nitrogen, vitamins, minerals and other essential nutrients required for growth. Yeast extract acts as a source of B-complex vitamins that helps to stimulate bacterial growth. Dextrose is a fermentable carbohydrate and energy source. Ammonium chloride and magnesium sulphate provides essential ions. Phosphates buffer the medium. Sodium carbonate helps to inactivate the low levels of preservatives if present (e.g. benzoic acid). Chloramphenicol inhibits accompanying bacteria, including *Pseudomonas aeruginosa* and *Serratia marcescens*. Polysorbate 80 neutralizes preservatives and sequesters surfactants that may be present in the sample.<sup>(2)</sup>

### Formula / Liter

Ingredients	Gms / Liter
Tryptone	2.50
Proteose peptone	2.50
Yeast extract	5.00
Dextrose	20.00
Disodium phosphate	3.50
Monopotassium phosphate	3.40
Ammonium chloride	1.40
Magnesium sulphate	0.06
Sodium carbonate	1.00
Chloramphenicol	0.10
Agar	15.00
Final pH: $7.0 \pm 0.2$ at $25^\circ\text{C}$	
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.

### Directions

1. Suspend 54.46 grams of the medium in one liter of distilled water.
2. Heat to boiling to dissolve the medium completely. Add 20 ml of Polysorbate 80.
3. Autoclave at  $121^\circ\text{C}$ , 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile Petri plates.

# PRODUCT SPECIFICATION SHEET



## Quality Control Specifications

Dehydrated Appearance	Pale yellow to beige homogeneous free flowing powder
Prepared Medium	Medium amber coloured with yellow tinge, clear to slightly opalescent gel forms in Petri plates
Reaction of 5.44% Solution	pH : 7.0 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

**Expected Cultural Response:** Cultural characteristics observed after an incubation at 27.5 ± 0.5°C for 65-72 hours.

Sr. No.	Organisms	Results to be achieved
		Growth
1.	<i>Aspergillus brasiliensis</i> ATCC 16404	good-luxuriant
2.	<i>Pseudomonas aeruginosa</i> ATCC 27853	none-poor
3.	<i>Serratia marcescens</i> ATCC 8100	none-poor

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

## Test Procedure

Refer appropriate references for specific test procedures.

## Results

Refer appropriate references and test procedures for interpretation of results.

## Storage

Store the sealed bottle containing the dehydrated medium at 2 - 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.

## Packaging

Product Name : HC Agar Base

Product Code : DM1271

Available Pack sizes : 500gm

## References

1. Brannan D. K., (Ed.), Cosmetic Microbiology, A Practical Handbook, CRC Press.
2. Mead C. and O'Neill J., 1986, J. Soc. Cosmet Chem., 37:49-57.
3. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, D.C. Composition.

# PRODUCT SPECIFICATION SHEET



## Further Information

For further information please contact your local MICROMASTER Representative.



### MICROMASTER LABORATORIES PRIVATE LIMITED

Unit 38/39, Kalpataru Industrial Estate,  
Off G.B. Road, Near 'R-Mall', Thane (W) - 400607. M.S. INDIA.  
Ph: +91-22-25895505, 4760, 4681. Cell: 9320126789.  
Email: [micromaster@micromasterlab.com](mailto:micromaster@micromasterlab.com)

DM1271PSS, Rev.00, Ver.00 01.02.2016

## Disclaimer :

All Products conform exclusively to the information contained in this and other related Micromaster Publications. Users must ensure that the product(s) is appropriate for their application, prior to use. The information published in this publication is based on research and development work carried out in our laboratory and is to the best of our knowledge true and accurate. Micromaster Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are intended for laboratory, diagnostic, research or further manufacturing use only and not for human or animal or therapeutic use, unless otherwise specified. Statements included herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.