



HC Agar Base

M1388

HC Agar Base when supplemented with Polysorbate 80 is used for enumerating moulds in cosmetic products.

Composition**

Ingredients	Gms / Litre
Tryptone	2.500
Proteose peptone	2.500
Yeast extract	5.000
Dextrose	20.000
Disodium phosphate	3.500
Monopotassium phosphate	3.400
Ammonium chloride	1.400
Magnesium sulphate	0.060
Sodium carbonate	1.000
Chloramphenicol	0.100
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 54.46 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Add 20 ml of Polysorbate 80. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Cosmetics do not need to be sterile but they must be adequately preserved. Microbial contamination to cosmetics is a substantial risk to product quality, regulatory compliance and consumer health (1). HC Agar Base, formulated by Mead and O'Neill, is used for enumerating moulds in cosmetic products (2). This medium differs from the traditionally used media for testing cosmetics products by addition of Polysorbate 80 and incubation time of 3 days, rather than 7 days, at 27°C ± 0.5°C to obtain a significant mold count (3).

HC Agar Base contains tryptone and proteose peptone, which serve as sources of carbon, nitrogen, vitamins and minerals. Yeast extract acts as a source of B-complex vitamins that helps to stimulate bacterial growth. Dextrose serves as a source of energy by being the fermentable carbohydrate. Ammonium chloride and magnesium sulphate provide 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 also neutralizes preservatives and sequesters surfactants that may be present in the sample (2).

Quality Control

Appearance

Pale yellow to beige homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Medium amber coloured with yellow tinge, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 5.44% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

M1388: Cultural characteristics observed after an incubation at 27.5 ± 0.5°C for 65-72 hours.

Organism	Growth
* <i>Aspergillus brasiliensis</i> ATCC 16404	good
<i>Pseudomonas aeruginosa</i> ATCC 27853	none-poor
<i>Serratia marcescens</i> ATCC 8100	none-poor

*Key: Formerly known as *Aspergillus niger*

Storage and Shelf Life

Store between 15-25°C in tightly closed container and prepared medium at 2-8°C. Use before expiry date on the label.

Reference

- 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 **

Revision : 2 / 2015

Disclaimer :

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