

Technical Information

HC Agar Base

Product Code: DM 2388

Application: - HC Agar Base when supplemented with Polysorbate 80 is recommended 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

Principle & 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 ONeill, 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).

Methodology

Suspend 54.46 grams of dehydrated media powder in 1000 ml distilled water. Mix thoroughly & 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.

Quality Control

Appearance

Pale yellow to beige homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel



Dehydrated Culture Media
Bases / Media Supplements

Colour and Clarity

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 Range

6.80-7.20

Cultural Response

DM2388: Cultural characteristics observed after an incubation at 27.5 ± 0.5°C for 65-72 hours.

Organism

Growth

**Aspergillus brasiliensis ATCC 16404*

good

Pseudomonas aeruginosa ATCC 27853

none-poor

Serratia marcescens ATCC8100

none-poor

**Key: Formerly known as Aspergillus niger*

Storage and Shelf Life

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

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

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 **

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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