

## Potato Dextrose HiCynth™ Agar

MCD096

Potato Dextrose HiCynth™ Agar is recommended for the isolation and enumeration of yeasts and moulds from dairy and other food products.

### Composition\*\*

Ingredients	Gms / Litre
HiCynth™ Peptone No.2*	4.000
Dextrose	20.000
Agar	15.000
Final pH ( at 25°C)	5.6±0.2

\*\*Formula adjusted, standardized to suit performance parameters

\*Chemically defined peptone

### Directions

Suspend 39 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates. In specific work, when pH 3.5 is required, acidify the medium with sterile 10% tartaric acid. The amount of acid required for 100 ml. of sterile, cooled medium is approximately 1 ml. Do not heat the medium after addition of the acid.

### Principle And Interpretation

Potato Dextrose Agar is recommended by APHA (1) and F.D.A. (2) for plate counts of yeasts and moulds in the examination of foods and dairy products (3). Potato Dextrose Agar is also used for stimulating sporulation, for maintaining stock cultures of certain dermatophytes and for differentiation of typical varieties of dermatophytes on the basis of pigment production (4). It is also recommended by USP (5), BP (6), EP (7) and JP (8) for growth of fungi. Potato Dextrose HiCynth™ Agar is the modified using chemically defined peptone free from vegetable peptones.

HiCynth™ Peptone No.2 and dextrose promote luxuriant fungal growth by providing nitrogen and carbon source, long chain amino acids, vitamins and other growth factors. Adjusting the pH of the medium by tartaric acid to 3.5, inhibits the bacterial growth. Heating the medium after acidification should be avoided as it may hydrolyse the agar which can render the agar unable to solidify.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and clarity of prepared medium

Light amber coloured clear to slightly opalescent gel forms in Petri plates

#### Reaction

pH of 3.9% w/v aqueous solution at 25°C. pH : 5.6±0.2

#### pH

5.40-5.80

#### Cultural Response

MCD096: Cultural characteristics observed after incubation at 20-25 °C for 2-7 days. Recovery rate is considered as 100% for fungus growth on Sabouraud Dextrose Agar.

Organism	Inoculum (CFU)	Growth	Recovery
<b>Cultural Response</b>			
<i>Candida albicans</i> ATCC 10231	50 -100	luxuriant	>=70 %
* <i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	luxuriant	>=70 %

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<i>Saccharomyces cerevisiae</i> ATCC 9763	luxuriant	>=70 %
<i>Rhodotorula mucilaginosa</i> DSM 70403	luxuriant	
<i>Geotrichum candidum</i> DSM 1240	good- luxuriant	
<i>Penicillium commune</i> ATCC 10248	fair -good	
<i>Trichophyton ajelloi</i> ATCC 28454	fair-good	

## 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 the label.

## Reference

1. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
2. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.
3. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
4. MacFaddin J. F., 1985, Media for the Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore
5. The United States Pharmacopoeia, 2016, The United States Pharmacopoeial Convention. Rockville, MD.
6. British Pharmacopoeia, 2016, The Stationery office British Pharmacopoeia
7. European Pharmacopoeia, 2014, European Dept. for the quality of Medicines.
8. Japanese Pharmacopoeia, 2008.

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