



Technical Data

HiEncap™ Potato Dextrose Agar

EC096CCL

HiEncap™ Potato Dextrose agar is recommended for the isolation and enumeration of yeasts and moulds.

Composition**

| Ingredients | Gms / Litre |
|-------------------------|-------------|
| Potatoes, infusion from | 200.000 |
| Dextrose | 20.000 |
| Agar | 15.000 |
| Final pH (at 25°C) | 5.6±0.2 |

**Formula adjusted, standardized to suit performance parameters

Directions

Each capsule contains 9.75 grams of medium. Suspend 1 capsule in 250 ml (4 capsules in 1000 ml) distilled or purified water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well before dispensing. 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 infusion and dextrose promote luxuriant fungal growth. 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

Gelatin capsule containing cream to yellow coloured granular media

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

Quantity

Each capsule contains 9.75 grams of medium sufficient for 250 ml media

Reaction

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

pH

5.40-5.80

Cultural Response

Cultural characteristics observed after incubation at 20-25 °C for 2-5 days.

| Organism | Inoculum (CFU) | Growth | Recovery | Incubation temperature | Incubation period |
|--|----------------|-----------|----------|------------------------|-------------------|
| Cultural Response | | | | | |
| <i>Candida albicans</i> ATCC 10231 | 50 -100 | luxuriant | ≥70 % | 20 -25 °C | 2 -3 d |
| * <i>Aspergillus brasiliensis</i> ATCC 16404 | 50 -100 | luxuriant | ≥70 % | 20 -25 °C | 5 -7 d |

| | | | | | |
|--|---------|-----------------|--------|-----------|--------|
| <i>Saccharomyces cerevisiae</i> ATCC 9763 | 50 -100 | luxuriant | >=70 % | 30 -35 °C | 2 -5 d |
| <i>Rhodotorula mucilaginosa</i> DSM 70403 | | luxuriant | | 20 -25 °C | 3 -5 d |
| <i>Geotrichum candidum</i> DSM 1240 | | good- luxuriant | | 25 -30 °C | 3 -5 d |
| <i>Penicillium commune</i> ATCC 10248 | | fair -good | | 25 -30 °C | 3 -5 d |
| <i>Trichophyton ajelloi</i> ATCC 28454 | | fair-good | | 25 -30 °C | 3 -7 d |

* Key: Formerly known as *Aspergillus niger*

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

- Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
- FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.
- Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
- MacFaddin J. F., 1985, Media for the Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore
- The United States Pharmacopoeia, 2009, The United States Pharmacopoeial Convention. Rockville, MD.
- British Pharmacopoeia, 2009, The Stationery office British Pharmacopoeia
- European Pharmacopoeia, 2009, European Dept. for the quality of Medicines.
- Japanese Pharmacopoeia, 2008.

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