



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Potato Dextrose Agar

Product Code: DM 1096H

Application: Potato Dextrose Agar is recommended for the cultivation of yeasts and moulds from pharmaceutical products in accordance with the microbial limit testing by harmonized methodology of USP/EP/BP/JP.

Composition**

Ingredients	Gms / Litre
Infusion from potatoes	200.000
Dextrose	20.000
Agar	15.000
pH after sterilization (at 25°C)	5.6±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Yeast and moulds are the largest group of microorganisms consisting of several thousands species. Yeast and moulds can cause various degrees of food decomposition. Invasion and growth may occur virtually on any type of food if environmental conditions are favourable. Some foodborne yeasts and moulds are undesirable and poses potential hazards to human and animal health ⁽¹⁾.

Potato Dextrose Agar, prepared in accordance with the methodology of USP/EP/BP/JP ⁽²⁻⁵⁾ It is recommended for microbial limit tests in pharmaceutical testing. It 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 ⁽⁶⁾.

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

Methodology

Suspend 39.0 grams of powder media in 1000 ml purified/distilled water. Shake well & heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes or as per validated cycle. 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.

Quality Control

Physical 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 (after sterilization) 5.6±0.2

pH range

5.40-5.80

Growth Promotion Test

Growth Promotion was carried out in accordance with the harmonized method of USP/EP/BP/JP, and growth was observed at 20-25°C for specified time. Recovery rate is considered as 100% for fungus growth on Sabouraud Dextrose Agar





Dehydrated Culture Media
Bases / Media Supplements

Growth Promoting Properties

Growth of microorganism comparable to that previously obtained with previously tested and approved lot of medium occurs at the specified temperature for not more than the shortest period of time specified inoculating ≤ 100 cfu

Cultural Response/Characteristics

DM 1096H: Cultural characteristics observed after incubation at 20-25 °C for 2-5 days. Recovery rate is considered as 100% for fungus growth on Sabouraud Dextrose Agar.

Organism	Inoculum (CFU)	Growth	Observed Lot value (CFU)	Recovery	Recovery	Incubation temperature	Incubation period
Test strain preparation							
* <i>Aspergillus brasiliensis</i> ATCC 16404	50-100	luxuriant	25-100		$\geq 50\%$	20-25°C	5-7 day
Additional Microbiological Testing							
<i>Candida albicans</i> ATCC 10231	50-100	Luxuriant	35-100		$\geq 70\%$	20-25°C	2-3 day
<i>Saccharomyces cerevisiae</i> ATCC 9763	50-100	Luxuriant	35-100		$\geq 70\%$	20-25°C	2-5 day
<i>Rhodotorula mucilaginosa</i> DSM 70403		Luxuriant				20-25°C	3 -5 Day
<i>Geotrichum candidum</i> DSM 1240		Good-luxuriant				25-30°C	3 -5 Day
<i>Penicillium commune</i> ATCC 10248		Fair-good				25-30°C	3 -5 Day
<i>Trichophyton ajelloi</i> ATCC 28454		Fair-good				25-30°C	3 -7 Day

Key :*- Formerly known as *Aspergillus niger*

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

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

Further Reading

- Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
- The United States Pharmacopoeia, 2011, The United States Pharmacopoeial Convention. Rockville, MD.
- British Pharmacopoeia, 2011, The Stationery office British Pharmacopoeia
- European Pharmacopoeia, 2011, European Dept. for the quality of Medicines.
- Japanese Pharmacopoeia, 2008.
- MacFaddin J., 1985, Media for the Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate.
- Central Drug House 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 diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- 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.
- Do not use the products if it fails to meet specifications for identity and performance parameters.

