POTATO DEXTROSE AGAR (7149)

Intended Use
Potato Dextrose Agar is used for the cultivation of fungi in a laboratory setting. Potato Dextrose Agar is not intended for use in the diagnosis of disease or other conditions in humans. Conforms to Harmonized USP/EP/JP Requirements.¹ ² ³

Product Summary and Explanation
Potato Dextrose Agar (PDA) is a general purpose medium for yeasts and molds that can be supplemented with acid or antibiotics to inhibit bacterial growth. It is recommended for plate count methods for foods, dairy products⁴-⁶ and testing cosmetics.⁷ PDA can be used for growing certain yeast and molds.⁸ The nutritionally rich base (potato infusion) encourages mold sporulation and pigment production in some dermatophytes.⁹

Principles of the Procedure
Potato Dextrose Agar is composed of dehydrated Potato Infusion and Dextrose that encourage luxuriant fungal growth. Agar is added as the solidifying agent. Many standard procedures use a specified amount of sterile tartaric acid (10%) to lower the pH of this medium to 3.5 ± 0.1, inhibiting bacterial growth. Do not reheat the acidified medium; heating in the acid state will hydrolyze the agar.

Formula / Liter
Potato Infusion from 200 g........................................... 4 g* ¹ ² ³ ⁴ ¹ ² ³ ⁴ ¹ ² ³ ⁴
Dextrose................................................................. 20 g
Agar ................................................................. 15 g

*4.0 g of potato extract is equivalent to 200 g of infusion from potatoes.

Final pH: 5.6 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precaution
1. For Laboratory Use Only.

Directions
1. Suspend 39 g of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free flowing, and light beige.

Prepared Appearance: Prepared medium is trace to slightly hazy, and pale to light yellow.

Expected Cultural Response and USP/EP/JP Growth Promotion Testing: Cultural response on Potato Dextrose Agar incubated at Harmonized USP/EP/JP specified temperatures, incubation times, and examined for growth at defined time periods.¹ ² ³

<table>
<thead>
<tr>
<th>Microorganism</th>
<th>Approx. Inoculum (CFU)</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspergillus niger ATCC® 16404</td>
<td>Point Inoculation</td>
<td>Growth</td>
</tr>
<tr>
<td>Candida albicans ATCC® 10231</td>
<td>10 - 100</td>
<td>Growth</td>
</tr>
<tr>
<td>Penicillium roquefortii ATCC® 10110</td>
<td>Point Inoculation</td>
<td>Growth</td>
</tr>
<tr>
<td>Trichophyton mentagrophytes ATCC® 9533</td>
<td>Point Inoculation</td>
<td>Growth</td>
</tr>
</tbody>
</table>

The organisms listed are the minimum that should be used for quality control testing.
**Test Procedure**

**Pour Plate Methods**

1. Add 1 mL of test sample to a sterile petri dish.
2. Add the specified amount (10 or 20 mL) of sterile, molten agar (cooled to 45 - 50°C) and swirl gently to mix well. Allow to solidify.
3. Incubate at 22 - 25°C or 30 - 32°C (depending on the method being followed) for 2 - 7 days or longer.

**Results**

Yeast will grow as creamy to white colonies. Molds will grow as filamentous colonies of various colors. Count the number of colonies and consider the dilution factor (if the test sample was diluted) in determining the yeast and/or mold counts per gram or milliliter of material.

**Storage**

Store sealed bottle containing the dehydrated medium at 2 - 30°. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

**Expiration**

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

**Limitation of the Procedure**

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

**Packaging**

<table>
<thead>
<tr>
<th>Potato Dextrose Agar</th>
<th>Code No.</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7149A</td>
<td>500 g</td>
</tr>
<tr>
<td></td>
<td>7149B</td>
<td>2 kg</td>
</tr>
<tr>
<td></td>
<td>7149C</td>
<td>10 kg</td>
</tr>
</tbody>
</table>

**References**


**Technical Information**

Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (517)372-9200 or fax us at (517)372-2006.