

Potato Dextrose Agar

Intended Use

Potato Dextrose Agar is used for the cultivation and enumeration of yeasts and moulds from foodstuffs, pharmaceutical products and other materials in accordance with the microbial limit testing by harmonized methodology of USP.

Typical Composition (g/litre)

Potato infusion 200.0; Dextrose 20.0; agar-agar 15.0.

Saccharomyces cerevisiae



Mode of Action

Potato Dextrose Agar is prepared as described in USP and is in accordance with the harmonized methodology of USP/EP/BP/JP. It is recommended for microbial limit tests in pharmaceutical testing. Carbohydrate and potato infusion (BEEVER and BOLLARD 1970) promote the growth of yeasts and moulds while the low pH value partially inhibits the growth of the accompanying bacterial flora. If the medium is to be used for fungal counts, the pH should be adjusted to approximately 3.5. Fungi grow on this medium to develop typical morphology.

Preparation

Suspend 39.0 grams in 1-liter purified/distilled 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.

Final pH (at 25°C) 5.6±0.2

Storage

Store below 30°C in tightly closed container and the prepared medium between 2 - 8°C. Use before expiry date on the label.

Experimental Procedure and Evaluation

Inoculate by the pour-plate method or by spreading the sample on the surface of the culture medium.

Incubation: up to 5 days at 28 °C aerobically.

Experimental procedure depends on the purpose for which the medium is used.

Quality Control

Organism	Growth	Ascospore formation
Aspergillus brasiliensis ATCC 16404	Luxuriant	>=50 %
Candida albicans ATCC 10231	Luxuriant	>=70 %
Saccharomyces cerevisiae ATCC 9763	Luxuriant	>=70 %

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. The United States Pharmacopoeia, 2011, The United States Pharmacopoeial Convention. Rockville, MD.
3. British Pharmacopoeia, 2011, The Stationery office British Pharmacopoeia
4. European Pharmacopoeia, 2011, European Dept. for the quality of Medicines.
5. Japanese Pharmacopoeia, 2008.
6. MacFaddin J., 1985, Media for the Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore
7. BEEVER, R.E., a. BOLLARD, E.G: The nature of the stimulation of fungal growth by potato extract. – J. Gen. Microbiol., 60; 273-279 (1970).