



Potato Dextrose Agar

RDM-PDA-01

Principle

Potato dextrose agar is composed of potato infusion, dextrose and agar. Potato infusion, serve as the source of all essential nutrients such as amino acids, vitamins, other trace elements, required for the growth of yeast and molds. Dextrose supply carbon and energy source. The potato infusion is also known to encourages the sporulation and pigment production in some fungal species. The acidic pH makes the medium partially selective for the growth of fungi and inhibit the growth of bacteria.

Use: Recommended for culturing yeasts and molds from food and dairy products.

Contents*

Ingredients	Gram/Litre
Potatoes, Infusion from	200.00
Dextrose	20.00
Agar	15.00
pH at 25 °C	5.6 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 39.00 grams in 1000 ml distilled water. Sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 min, cool it to 42-45 °C. Distribute aseptically in desired and allow to solidify. Ensure complete solidification and inoculate test sample aseptically.

For more selectivity to fungi, reduce the pH of medium to 3.6 to inhibit bacterial growth. Dissolve 39.00 grams in 1000 ml distilled water. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 45-50 °C. Add 10% sterile tartaric acid (approximately 1ml) till pH reaches to 3.6, mix well and distribute in desired (avoid reheating the medium). Ensure complete solidification and inoculate test sample.

Specimens' types analyzed

Pharmaceutical samples, clinical and non-clinical samples, food and dairy products etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored free flowing, homogeneous powder
Reaction of 3.9% solution	5.6 ±0.2 at 25 °C
pH	5.40- 5.80
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Light amber colored opalescent gel
Negative control	Performed using sterile distilled water

Different Microbial Response

Organism	Inoculum	Growth	Recovery	Incubation Temperature	Incubation period
<i>Candida albicans</i> (ATCC 10231)	10-50	Luxurious	70-80%	33-37 °C	3 to7 days
<i>Aspergillus brasiliensis</i> (ATCC 16404)	10-50	Luxurious	70-80%	33-37 °C	3 to7 days

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.

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