

Potato Dextrose Broth (i23146)

For the cultivation, isolation and enumeration of yeasts and molds from foodstuffs and other materials.

Industry: Final product Quality Control / Clinical / Pharmaceutical / Veterinary / Food

Principles & Uses

Potato Dextrose Broth (PDB) is a versatile liquid medium with diverse applications in microbiology. Recommended by respected authorities such as APHA and the FDA, PDB is primarily used for plate counts of yeasts and molds in the examination of foods and dairy products. This medium supports the cultivation of clinically significant yeasts and molds, making it valuable in food microbiology.

PDB's adaptable composition includes a nutritionally rich base derived from potato infusion, promoting robust fungal and mold growth. Dextrose serves as the fermentable carbohydrate, providing essential carbon and energy for microbial proliferation. An important feature is the medium's low pH, adjusted to 3.5 with tartaric acid, which efficiently inhibits bacterial growth. This low pH aspect makes PDB ideal for selective culturing of yeasts and molds while hindering unwanted bacteria. PDB can also be supplemented with acid or antibiotics to further control bacterial growth.

Besides its role in food and dairy examinations, PDB serves additional purposes. It's employed to stimulate sporulation, maintain stock cultures of certain dermatophytes, and differentiate dermatophytes based on pigment production.

Composition (gr/L)

Potato Infusion 4, Dextrose 20.

Final pH at 25°C 5.1 ± 0.2

Preparation from dehydrated Powder

Suspend 24 grams in 1 Liter of purified water.
Autoclave at 121°C for 15 minutes.

Quality Control

Dehydrated Appearance: Light beige, free-flowing, homogeneous.

Prepared Appearance: Very, very light amber, clear to very slightly opalescent.

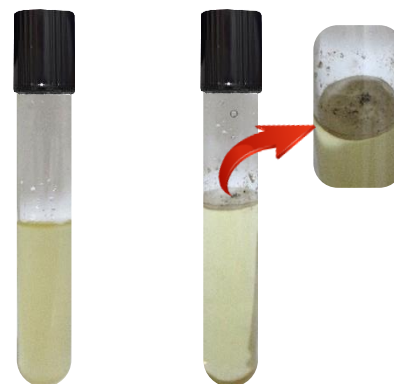
Reaction of 3.15% Solution at 25°C: pH 5.1 ± 0.2

Cultural Response

Cultural response was observed after 40-48 hours of incubation at 25 ± 2°C.

Organism (ATCC*)	Recovery
<i>Candida albicans</i> (10231)	Good
<i>Saccharomyces cerevisiae</i> (9763)	Good
<i>Aspergillus brasiliensis</i> (<i>niger</i>) (16404)	Good

*ATCC is a registered trade mark of the American Type Culture Collection.



C. albicans (left) and *A. niger* (right) both cause turbidity in the medium due to their growth.

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.