# Technical Information

## Potato Dextrose Broth

## Product Code: DM 1403

**Application:** Potato Dextrose Broth is recommended for the isolation and enumeration of yeasts and moulds from dairy and other food products.

## Composition**

| Ingredients | Gms / Litre |
|---|---|
| Potatoes, infusion from | 200.000 |
| Dextrose | 20.000 |
| Final pH ( at 25°C) | 5.1±0.2 |

**Formula adjusted, standardized to suit performance parameters

## Principle & Interpretation

Potato Dextrose Broth is recommended by APHA [1] and F.D.A. [2] for plate counts of yeasts and moulds in the examination of foods and dairy products [3]. Potato Dextrose Broth 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 [4]. Potato infusion and dextrose promote luxuriant fungal growth. Adjusting the pH of the medium by tartaric acid to 3.5, to inhibit the bacterial growth. Heating the medium after acidification should be avoided as it renders the media unsuitable for use.

## Methodology

Suspend 24 grams of powder media in 1000 ml distilled water. Shake well & heat if necessary 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. Under the media unsuitable far use.

## Quality Control

**Physical Appearance**
Off-white to yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**
Light amber coloured clear to slightly opalescent solution in tubes

**Reaction**
Reaction of 2.4% w/v aqueous solution at 25°C. pH : 5.1±0.2

**pH Range** 4.90-5.30

**Cultural Response/Characteristics**
DM1403: Cultural characteristics observed after an incubation at 25-30°C for 4-5 days.

| Organism | Inoculum (CFU) | Growth | Ascospore formation |
|---|---|---|---|
| **Aspergillus brasiliensis ATCC 16404* | 50-100 | luxuriant | Negative |
| *Candida albi cans ATCC 10231* | 50-100 | luxuriant | Negative |
| *Saccharomyces cerevisiae ATCC 9763* | 50-100 | luxuriant | Positive |

## 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$^0$ in sealable plastic bags for 2-5 days.

## Further Reading

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. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.

3. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

4. MacFaddin J. F., 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.
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