

Technical Information

Potato Dextrose Rose Bengal Agar

Product Code: DM 1938

Application: - Potato Dextrose Rose Bengal Agar is used for promoting ascospore production.

Composition**

Ingredients	Gms / Litre
Potatoes, infusion from	200.000
Dextrose	20.000
Rose Bengal	0.0084
Agar	15.000
Final pH (at 25°C)	5.6±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

APHA ⁽¹⁾ and F.D.A. ⁽²⁾ recommend Potato Dextrose media for plate counts of yeasts and moulds in the examination of foods and dairy products ⁽³⁾. Potato Dextrose Agar is used for stimulating sporulation, maintaining stock cultures of certain dermatophytes and for differentiation of typical varieties of dermatophytes on the basis of pigment production ⁽⁴⁾. Potato Dextrose Rose Bengal Agar enhances ascospore production ⁽⁵⁾.

Potato infusion and dextrose promote luxuriant fungal growth. Acidifying the medium to pH 3.5 by tartaric acid inhibits bacterial growth. Heating the medium after acidification should be avoided as it may hydrolyse the agar, which can render the agar unable to solidify. Rose bengal is the eosin-related dye which inhibits the spreading of some rapidly growing fungi and has antibacterial properties as well.

Methodology

Suspend 39 grams of powder media in 1000 ml distilled water. Shake well & heat 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.

Quality Control

Physical Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Pink coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 3.9% w/v aqueous solution at 25°C. pH : 5.6±0.2

pH Range 5.4-5.8

Cultural Response/Characteristics

DM 1938: Cultural characteristics observed after an incubation at 22-25°C for 4-5 days.



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth	Ascospore formation	Recovery
* <i>Aspergillus brasiliensis</i> ATCC 16404	50-100	luxuriant	negative	
<i>Candida albicans</i> ATCC 10231	50-100	luxuriant	negative	>=70%
<i>Saccharomyces cerevisiae</i> ATCC 9763	50-100	luxuriant	positive	>=70%

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° 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.
5. Speck M. L., (Eds.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd Ed., APHA, Washington, D.C.

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