



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Potato Dextrose Sucrose Agar

Product Code: DM 2174

Application: - Potato Dextrose Sucrose Agar is used for the isolation and cultivation of *Zygosaccharomyces rouxii* from chocolate syrup.

Composition**

Ingredients	Gms / Litre
Sucrose	600.000
Dextrose	40.000
Potato infusion from	4.000
Agar	15.000

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Potato Dextrose media is recommended both by APHA ⁽¹⁾ and F.D.A. ⁽²⁾ for plate counts of yeasts and moulds in the examination of foods and dairy products ⁽³⁾. Yeasts are the main causes of spoilage in confectionaries ⁽⁴⁾. *Zygosaccharomyces rouxii* is identified as a principal cause of spoilage, which grows over a wide range of pH ⁽⁵⁾. *Z. rouxii* is an osmophillic yeast that has been found commercially important for the production of soy sauce ⁽⁶⁾. Yeast spoilage of chocolate-covered creams is observed by cracking of the coating and leaking of the fondant and syrup.

Potato Dextrose Sucrose Agar is formulated as per the advise of APHA ⁽¹⁾ and used for the isolation and cultivation of *Z. rouxii* from chocolate syrup.

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. Very high percentage of sucrose along with the 4% dextrose and the potato infusion supports good growth of *Z. rouxii*.

Methodology

Suspend 65.9 grams of powder media in 100 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

White to light yellow homogeneous free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent gel forms in Petri plates.

pH Range 6.80-7.20

Cultural Response/ characteristics

DM 2174: Cultural characteristics observed after an incubation at 22-30°C for 48-72 hours.





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Organism

Zygosaccharomyces rouxii ATCC 34890

Growth

luxuriant

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. Windisch S., Kowalski G. and Zander I., 1978, CCB Review for Chocolate, Confectionery and Bakery, 3(2): 28.
5. English M. P., 1953, J. Gen. Microbiol., 9 : 15.
6. Horitsu H., Wang M. Y. & Kawai K., 1991, A modified process for soy sauce fermentation by immobilized yeasts, Agric. Biol. Chem. 55, 269 - 271.

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