Potato Dextrose Sucrose Agar

M1174

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

Directions

Suspend 65.9 grams in 100 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well before dispensing.

Principle And Interpretation

Potato Dextrose media are 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). Yeasts are the principle 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 commercially important for the production of soy sauce (6). Yeast spoilage of chocolate-covered creams is evident by cracking of the coating and leaking of the fondant and syrup.

Potato Dextrose Sucrose Agar is formulated as recommended by 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* .

Quality Control

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

Cultural Response
M1174: Cultural characteristics observed after an incubation at22-30°C for 48-72 hours.

Organism	Growth
Cultural Response	
Zygosaccharomyces rouxii ATCC 34890	luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

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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