

TM 2287 – POTATO DEXTROSE SUCROSE AGAR

INTENDED USE

For the isolation and cultivation of *Zygosaccharomyces rouxii* from chocolate syrup.

PRODUCT SUMMARY AND EXPLANATION

Potato Dextrose media are recommended by APHA and F.D.A. for plate counts of yeasts and moulds in the examination of foods and dairy products. Yeasts are the principle causes of spoilage in confectionaries. *Zygosaccharomyces rouxii* is identified as a principal cause of spoilage, which grows over a wide range of pH. *Z. rouxii* is an osmophilic yeast that has been commercially important for the production of soy sauce. 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 and used for the isolation and cultivation of *Z. rouxii* from chocolate syrup.

COMPOSITION

| Ingredients | Gms / Ltr |
|-------------------------|-----------|
| Potatoes, infusion from | 4.000 |
| Dextrose | 40.000 |
| Sucrose | 600.000 |
| Agar | 15.000 |

PRINCIPLE

This medium consists of Potato infusion and dextrose that 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 hydrolyze 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*.

INSTRUCTION FOR USE

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

QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder** : White to light yellow homogeneous free flowing powder.
- Appearance of prepared medium** : Light amber coloured clear to slightly opalescent gel forms in Petri plates.
- pH (at 25°C)** : 6.8 -7.2

INTERPRETATION

Cultural characteristics observed after incubation.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Incubation Temperature | Incubation Period |
|---------------------------------|-------|-------------------|-----------|----------|------------------------|-------------------|
| <i>Zygosaccharomyces rouxii</i> | 34890 | 10-100 | Luxuriant | >=70% | 22-30°C | 48-72 Hours |

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

- Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
- FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.
- Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
- Windisch S., Kowalski G. and Zander I., 1978, CCB Review for Chocolate, Confectionery and Bakery, 3(2): 28.
- English M. P., 1953, J. Gen. Microbiol., 9: 15.
- 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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|  GMP Good Manufacturing Practices Certified |  Best Before |  QTY. Quantity |  REF Catalogue Number |  Manufacturer |
|  Temperature Unit |  LOT/ B. NO. Lot / Batch Number |  Consults Instructions for Use |  QR Code | |

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only
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