Dextrose Salt Agar

M102

Intended Use:

Recommended for enumeration of yeasts and moulds in butter and other dairy products.

Composition**

Ingredients	Gms / Litre
Dextrose (Glucose)	10.000
Yeast extract	1.000
Ammonium nitrate	1.000
Ammonium sulphate	1.000
Disodium hydrogen phosphate	4.000
Potassium dihydrogen phosphate	2.000
Sodium chloride	1.000
Agar	15.000
Final pH (at 25°C)	6.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 35.0 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 10 lbs pressure (115°C) for 15 minutes. Cool to 45-50°C. If desired pH can be adjusted to 3.5 by adding sterile 10% aqueous citric acid. Mix well before pouring into sterile Petri plates. Do not reheat the medium after addition of citric acid.

Principle And Interpretation

Dextrose Salt Agar is prepared according to the standard formula 31 of the International Dairy Federation (2). It is used for enumeration of yeasts and moulds in butter and other dairy products (5,6).

Yeast extract and dextrose provide growth nutrients. A 2.5 gm sample of chilled butter is diluted with 5 ml of quarter strength Ringers solution. Plates are poured by addition of 0.2 ml of the solution, which corresponds to 0.1 gm butter. Plates are incubated at 30°C for 2 days. If growth is not visible then incubation is continued at 30°C for 3 days and visible colonies of yeasts and moulds are counted.

Type of specimen

Dairy samples

Specimen Collection and Handling:

For dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1,7).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Some organism may show poor growth due to nutritional variation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to 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

Reaction
Reaction of 3.5% w/v aqueous solution at 25°C. pH : 6.6±0.2

pH
6.40-6.80

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

Organism	Inoculum (CFU)	Growth	Recovery
#*Aspergillus brasiliensis ATCC 16404* (00053*)	50-100	good-luxuriant	
Candida albicans ATCC 10231 (00054*)	50-100	good-luxuriant	>=50%
Saccharomyces cerevisiae ATCC 9763 (00058*)	50-100	good-luxuriant	>=50%

Key: *Corresponding WDCM numbers.
- Formewrly known as *Aspergillus niger*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
2. International Dairy Federation, 1964, International Standard FIL-1 DF31 Brussels.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. Ritter and Eschmann, 1966, Alimenta., 5:43.
6. Ritter and Eschmann, 1966, Alimenta., 5:46.
7. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed.,APHA Inc., Washington, D.C.

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