Dextrose Salt Broth

M980

Intended Use:

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

Composition**

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

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 20 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Distribute in tubes containing inverted Durham's tubes. Sterilize by autoclaving at 10 lbs pressure (115°C) for 15 minutes. Cool to 45-50°C. If desired pH can be adjusted by adding sterile 10% aqueous citric acid. Do not reheat the medium after additon of acid. Mix well and dispense into tubes or flasks as desired.

Principle And Interpretation

Dextrose Salt Broth 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. Sodium chloride maintains the osmotic balance while phosphates buffer the medium. Ammonium nitrate and ammonium sulphate are sources of ions.

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. A small inoculum must be used when inoculating broth. Excess of an inoculum may produce turbidity, thus resulting in a false-positive result.
2. Further biochemical and serological tests must be carried out for further identification.

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

Off-white to light yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured, clear solution in tubes

Reaction

Reaction of 2.0% 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
# *Aspergillus brasiliensis* ATCC 16404 (00053*)	50-100	good-luxuriant
Candida albicans ATCC 10231 (00054*)	50-100	good-luxuriant
Saccharomyces cerevisiae ATCC 9763 (00058*)	50-100	good-luxuriant

Key: (*) Corresponding WDCM numbers. (#) Formerly known as *Aspergillus niger*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°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 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.

Revision : 03/2020