Oxytetra Glucose Yeast Agar Base (OGYE Agar Base)

M639I

Intended use

Recommended for isolation and enumeration of yeasts and moulds from milk and milk products.The composition and performance criteria of this medium are as per the specifications laid down in ISO 1992,ISO/DIS 6611.

Composition**

Ingredients	Gms / Litre
Yeast extract	5.000
Dextrose (Glucose)	20.000
Agar	12.000
Final pH (at 25°C)	6.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 18.5 grams in 500 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add reconstituted contents of one vial of Oxytetra Selective Supplement (FD032) or Genta-Oxy Selective Supplement (FD131). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Acidic media are not completely suitable for counting yeasts and moulds in foods since yeast cells, stressed by heat do not tolerate the acidic conditions necessary to inhibit bacterial contamination. Yeast and mould growth is often limited by the presence of acid-tolerant bacterial flora. Therefore it is evident that more active media and different selective agents are needed in order to deal with various kinds of foodstuffs, incubation conditions and types of microorganisms to be studied. Under certain conditions and when testing certain foods like milk and milk products, the use of oxytetracycline alone was not sufficient to obtain reliable yeast and mould counts. In particular, Mossel et al (1) observed that with proteinaceous foods heavily contaminated with gram-negative rods, it is necessary to use both oxytetracycline and gentamicin (FD131) in order to obtain complete inhibition of the contaminants.

OGYE Media were formulated by Mossel et al for the selective isolation and enumeration of yeast and moulds from foods (1, 2). They found that addition of Oxytetra selective supplement to a neutral pH medium increased the recovery / count of yeast and moulds as compared to acidified medium. Psychotrophic yeasts can also be isolated when gentamicin is also incorporated into the medium (3). ISO Committee (4) has recommended OGYE Media with pH 6.6 ± 0.2 for isolation and enumeration of yeasts and moulds from milk and milk products.

Yeast extract provides essential growth nutrients. Dextrose acts as carbon and energy source. Low pH helps to reduce the bacterial flora. Oxytetracycline makes the medium more selective by inhibiting the growth of Lactobacilli encountered in milk and milk-products at low pH. The choice of a suitable media for enumeration of yeasts and moulds greatly depends on the nature of foodstuffs to be tested and the organisms that grow on them. These media remain bacteriostatic when inoculated with not greater than 1 ml of a 10^{-1} food dilution and incubation at 22°C. The number of yeasts or moulds is calculated per one gram or 1 ml of sample under investigation by multiplying the number of colonies with the dilution factor. Lactic acid bacteria are inhibited on this medium.

Type of specimen

Dairy samples

Specimen Collection and Handling

For Dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (5).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. 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 guidleines should be followed while handling clincal specimens. Saftey guidelines may be referred in individual safety data sheets

Limitations :

Due to variable nutritional requirements, some strains show poor growth on this medium.

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 light yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

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

Reaction

Reaction of 3.7% w/v aqueous solution at 25°C. pH : 6.6±0.2

pH

6.40-6.80

Cultural Response

Cultural characteristics observed with added 1 vial of Oxytetra Selective Supplement(FD032) or Genta-Oxy Selective Supplement (FD131), after an incubation at 25-30°C after 2-5 days.

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
#Aspergillus brasiliensis ATCC 16404	50-100	good-luxuriant	>=50%
Candida albicans ATCC 10231 (00054*)	50-100	good-luxuriant	>=50%
Escherichia coli ATCC 25922 (00013*)	>=10^3	inhibited	0%
Saccharomyces cerevisiae ATCC 9763 (00058*)	50-100	good-luxuriant	>=50%
Saccharomyces uvarum ATCC 9080	50-100	good-luxuriant	>=50%

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

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder 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. Use before expiry date on the label.
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 (6,7).

Reference

1.Mossel D. A. A., Kleynen-Semmeling H. M., Vincentie H., Beerens H. and Catsaras M., 1970, J. Appl. Bacteriol., 33:454
2.Mossel D. A. A., Visser M. and Mengerink W. H. J., 1962, Lab. Pract. 11:109.
3.Mossel D. A. A., Vega Clara L. and Put H. M. C., 1975, J. Appl. Bacteriol., 39:15.
4.Milk and milk products- Enumeration of colony-forming units of yeasts and/or moulds-colony count technique at 25°C. International Organization for Standardization (ISO), 1992, ISO/DIS 6611.
5.Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
6. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
7. 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.

Revision : 02 / 2017