Yeast Glucose Chloramphenicol Agar

M1590

Yeast Glucose Chloramphenicol Agar is a selective agar recommended for enumerating yeasts and moulds in milk and milk products.

Composition**

Ingredients	Gms / Litre
Yeast extract	5.000
Glucose	20.000
Chloramphenicol	0.100
Agar	15.000
Final pH (at 25°C)	6.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40.1 grams in 1000 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 and pour into sterile Petri plates.

Principle And Interpretation

Traditionally used acidified agar method for enumeration of yeasts and moulds in dairy products is now being replaced by antibiotic agar methods. Use of antibiotics rather than acid for suppressing bacteria results in improved recovery of injured (acid-sensitive) fungal cells, better control of bacteria and less interference during counting from precipitated food particles (1-5). Yeast Glucose Chloramphenicol Agar is recommended by APHA and the International Dairy Federation (6, 7). Yeast Glucose Chloramphenicol Agar is a nutrient medium that inhibits the growth of organisms other than yeasts and moulds due to the presence of chloramphenicol.

Yeast extract provides basic nutrients essential for growth. Glucose is a carbon and energy source. Chloramphenicol inhibits bacterial growth. After incubation at 25°C, colonies are counted and yeast colonies are distinguished from moulds by colony morphology. Refer appropriate references for standard procedures (6).

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 4.0% w/v aqueous solution at 25°C. pH : 6.6±0.2

pH
6.40-6.80

Cultural Response
M1590: Cultural characteristics observed after an i)Fungal-incubated at 25-30°C for 2-7 days ii) Bacteria-incubated at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
**Aspergillus brasiliensis ATCC 16404*	50-100	luxuriant	
Candida albicans ATCC 10231	50-100	luxuriant	>=50%

Escherichia coli ATCC 25922	>=10^3	inhibited	0%
Lactobacillus casei ATCC 9595	>=10^3	inhibited	0%
Staphylococcus aureus ATCC 25923	>=10^3	inhibited	0%
Saccharomyces cerevisiae ATCC 9763	50-100	luxuriant	>=50%

Storage and Shelf Life

Store between 15-25°C in tightly closed container and prepared medium at 2-8°C. Use before expiry period on the label.

Reference

1. Beuchat L. R., 1979, J. Food Prot., 42:427-428.
2. Cooke W. B. and Brazis A. R., 1968, Mycopathol. Mycol. Appl., 35:281.
3. Koburger J. A., 1970, J. Milk Food Technol., 33:433-437.
4. Koburger J. A., 1973, J. Milk Food Technol., 36:434.
5. Overcast W. W., and Weakley D. J., 1969, J. Milk Food Technol.,32:442.
6. Marshall, (Ed), 1993, Standard Methods for Examination of Dairy Products, 16th Ed., American Public Health Association, Washington, D. C.
7. International Dairy Federation. Standard Method ISO/DIS 6611.

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