



## Chloramphenicol Yeast Glucose Agar

M1008

### Intended Use

Chloramphenicol Yeast Glucose Agar is a selective medium recommended for selective enumeration of yeasts and moulds in milk and milk products.

### Composition\*\*

Ingredients	Gms / Litre
Yeast extract	5.000
Dextrose	20.000
Chloramphenicol	0.100
Agar	14.900
Final pH ( at 25°C)	6.6±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 40 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. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

Chloramphenicol Yeast Glucose Agar is a selective medium recommended for isolation and enumeration of fungi-yeasts and moulds in milk and milk products (1, 2, 3). Recently this medium has been recommended by ISO committee for the enumeration of yeasts and moulds (4). The medium contains yeast extract, which provides nitrogenous nutrients and vitamin B complex. Dextrose is the energy source. Chloramphenicol, a thermostable antibiotic, suppresses accompanying bacterial flora. This improves shelflife of the prepared medium and the prepared medium can be used over a period of at least 4 months (5).

Technique: Take two sterile Petri plates and transfer 1 ml of sample (if liquid) or 1 ml of the initial suspension in case of other products. Further take another two sterile plates and transfer 1 ml of 10-1 dilution to each sterile Petri plate or 1 ml of 10-2 dilution for other products. Repeat the procedure using further dilutions if necessary. Pour about 15 ml of Chloramphenicol Yeast Glucose Agar (5) previously melted and maintained at 45 ± 1°C. The time elapsing between the end of the preparation of the initial suspension and the moment when the medium is poured into the dishes shall not exceed 15 minutes. Carefully mix the inoculum with the medium and allow it to solidify. Prepare control plate to check the sterility. Incubate the plates at 25 ± 1°C. Count the colonies on each plate after 3, 4 and 5 days incubation. It is necessary to carry out a microscopic examination in order to distinguish, according to their morphology, the colonies of yeast and moulds from colonies of bacteria.

It is advisable to examine the plates at the end of three days for yeast colonies, as they are likely to be overgrown by mould growth. Make a separate count of yeast colonies, which are characterized, as smooth, moist, elevated surface colonies. Count mould colonies, which are recognized by their profused growth of hyphae. If only yeast counts are required, add 0.25% of sterile sodium propionate solution to the medium at the time of preparation of plates to inhibit the growth of moulds (6).

### Type of specimen

Food and dairy samples

### Specimen Collection and Handling:

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1,2,8). After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions :

Caution: This medium contains Chloramphenicol, a thermostable antibiotic. It should be handled with care to avoid contamination. The medium is intended for laboratory use only and should not be used for clinical diagnosis. Store at room temperature and use within the shelf life indicated on the label.

### Limitations

Not for clinical use.



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4. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2<sup>nd</sup> Edition.
5. 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.
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7. MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Lippincott, Williams and Wilkins, Baltimore.
8. 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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