

# **Technical Data**

## **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 fi _h\bf\Xfl	20.000
Chloramphenicol	0.100
Agar	14.900
Final pH ( at 25°C)	6.6±0.2

<sup>\*\*</sup>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  $45 \pm 1$ °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  $\pm$  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:**

#### Limitations

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#### **Performance and Evaluation**

CXeYbe`TaVXbYg'X`XV\h``Y`XkcX\g\VYJ [Xa`hfXVVIF`cXe`g'XV\eX\g\ba`ba`g'X\_TUX\_j`\g'\a`g'XXkc\d`cXe\bVYJ [Xa`fgbeXVVIg`

eXVb` XaVXVQX cXeTgheX

## **Quality Control**

## **Appearance**

Cream to yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.49% Agar gel.

#### Colour and Clarity of prepared medium

Yellow 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

#### pН

6.40-6.80

#### **Cultural Response**

M1008: Cultural characteristics observed after an incubation at 22-25°C for 2-5 days.

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
*Aspergillus brasiliensis ATCC 16404 (00053*)	50-100	good-luxuriant	
Candida albicans ATCC 10231 (00054*)	50-100	good-luxuriant	>=50%
Escherichia coli ATCC 25922 (00013*)	>=103	inhibited	0%
Saccharomyces cerevisiae ATCC 9763 (00058*)	50-100	good-luxuriant	>=50%
Staphylococcus aureus ATCC 25923 (00034*)	>=103	inhibited	0%

Key: \*Corresponding WDCM numbers.

### **Storage and Shelf Life**

FgbeXUkween 10-30°C `\a`T'gZ[g] `V\_bfXWWbagT\aXe`TaWgf XceYcTeXW`XWh` `Tg2-8°C!`HfXUXbeXXkc\d`WgXba`gf X\_TUX!'Oa`bcXa\aZZcebWhYgf[bh\_WUXcebcXe] `fgbeXWwl ZTYgYe`gZ[g] `Vloc\aZ`g XUbggX\abeWe`gb`ceYi Xag\_h` c`Ybe` Tgba`WhXgb`gf X[1 ZebfVbc\VaTgheXbYgf XcebWhYg' < cebcXe`fgbe1ZXbYgf XcebWhYg` `Tl`\_XIWgb`\_h` c`Ybe` Tgba!`FgbeX`\a`Wli` i Xag\_TgWVleXT`cebgNgWVYeb` `XxgeX Xf`bYgX cXeTgheXTaWfbhe\M`bY\Za\gba`FXI\_`gf X\bagf\aXe`gZ[g] `TYgYe`hfX`HfX UXbeXXkc\d`WgXba`gf X\_TUX!

CebVMVgcXeVbe`TaVXYfUMg\*\YhfXVJj \g \afgTgXVVkc\d `cXebVV

### **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 (4,5).

## **Storage and Shelf Life**

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

#### Reference

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- 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.
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Revision: 03 / 2017

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