Chloramphenicol Yeast Glucose Agar

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

Summary
The antibiotic method for enumerating yeasts and moulds in dairy products has become the method of choice, thereby replacing the traditional acidified method. The use of antibiotics for suppressing bacteria results in better recovery of injured fungal cells, which are sensitive to an acid environment and in less interference from precipitated food particles during the counting. Chloramphenicol Yeast Glucose Agar is a nutritive medium that inhibits the growth of organisms other than yeast and moulds due to the presence of chloramphenicol. Chloramphenicol Yeast Glucose Agar is recommended by APHA for the examination of dairy products. The ISO committee recommends this medium for the enumeration of yeasts and moulds.

Principle
Yeast extract provides nitrogen and vitamin B complex. Dextrose is the carbohydrate source. Chloramphenicol, a thermostable antibiotic, suppresses accompanying bacterial flora, which improves the shelf life of the prepared medium; therefore, the prepared medium can be used over a period of at least 4 months.

Formula*
Ingredients	**g/L**
Dextrose	20.0
Yeast Extract	5.0
Chloramphenicol	0.1
Agar	14.9
Final pH (at 25°C)	6.6 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Food and dairy samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 40.00 g of the powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Heat to Boiling to dissolve the powder completely.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Warning: Chloramphenicol is a potent carcinogen and must be handled with care so as to avoid inhalation or contact with skin.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Yellow coloured, clear to slightly opalescent gel forms in petridishes.
Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 30°C-35°C for 48 hours for bacteria and at 20°C-25°C for <= 5 days for fungi.
Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 20°C-25°C for <= 5 days.
Inhibitory Properties: No growth of the test microorganism occurs for the specified temperature and not less than the longest period of the time specified, inoculating >100 cfu of the appropriate microorganism at 30°C-35°C for >= 48 hours.

Organism (ATCC)	**Growth**
Aspergillus brasiliensis WLRI 034(120) (16404)	Good
Candida albicans 3147 (10231)	Good
Saccharomyces cerevisiae NRRL Y-567 (9763)	Good
Inhibitory	
Escherichia coli (25922)	Inhibited
Staphylococcus aureus subsp. *aureus* (25923)	Inhibited

Note: For good growth - Growth obtained on test media should not differ by a factor greater than 2 from calculated value for a standardized inoculum. For inhibition no growth of test microorganism should occur.
Growth for *Aspergillus brasiliensis* is observed after 72 hours at 20°C-25°C for quantitative test and the same is carried out for qualitative test and confirmed characteristic growth (White mycelial growth with black spores) after 4-5 days.

Interpretation of Results

1. Select plates containing 30-300 colonies and count the colonies.
2. Distinguish yeasts from moulds by colony morphology.
3. Express results as yeasts and moulds “per gram” or “per milliliter”.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. DIN Deutsches Institut fur Normung e.v. Reterenzverfahren DIN 10186.
2. International Organization for Standardization (ISO), Draft ISO/DIS 6611.
3. Internationaler Milchwirtschaftsverband: Internationaler IMV-Standard 94 1980.
4. International Organization for Standardization (ISO), 1987, Draft ISO/DIS 7954.
5. Engel G., 1982, Milchwiss, 37:727.
6. International Organization for Standardization (ISO), 1999, ISO 5403:1999.
7. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	**Product description**	**Pack Size**
201030080100	Dehydrated Culture Media	100 g
201030080500	Dehydrated Culture Media	500 g