Yeast Extract Glucose Chloramphenicol Agar

Intended Use
Yeast Extract Glucose Chloramphenicol Agar is a selective agar recommended by the International Dairy Federation for enumerating yeasts and molds in milk and milk products.

Summary and Explanation
The antibiotic method for enumerating yeasts and molds in dairy products has become the method of choice, 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.

Yeast Extract Glucose Chloramphenicol Agar is a nutrient medium that inhibits the growth of organisms other than yeasts and molds due to the presence of chloramphenicol. When a sample contains predominantly yeasts and/or injured yeasts, the use of Yeast Extract Glucose Chloramphenicol Agar may offer some advantage. After incubation at 25°C, colonies are counted and yeast colonies are distinguished from molds by colony morphology.

Principles of the Procedure
Yeast extract provides basic nutrients. Glucose is a carbon energy source. Chloramphenicol inhibits bacterial growth. Agar is the solidifying agent.

Formula
**Difco™ Yeast Extract Glucose Chloramphenicol Agar**

- **Approximate Formula* Per Liter**
  - Yeast Extract ............................................................... 5.0 g
  - Glucose ..................................................................... 20.0 g
  - Chloramphenicol ......................................................... 0.1 g
  - Agar ......................................................................... 13.0 g

*Adjusted and/or supplemented as required to meet performance criteria.

Directions for Preparation from Dehydrated Product
1. Suspend 38.1 g of the powder in 1 L of purified water. Mix thoroughly.
2. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder.
3. Autoclave at 121°C for 15 minutes.
4. Test samples of the finished product for performance using stable, typical control cultures.
2. Add 10 mL from the initial dilution prepared above (#1) to 90 mL of 1/4-strength Ringer’s solution. One milliliter (1 mL) of this dilution corresponds to 0.01 g/mL of sample.
3. Prepare further dilutions by adding 10 mL of the 0.01 g/mL dilution above (#2) to 90 mL of diluent.
4. Pipette 1 mL of each dilution into two Petri dishes.
5. Pour 10 mL of sterile molten agar (cooled to 45°C) into each dish. Mix thoroughly.
6. Incubate at 25°C for 4 days.

Expected Results
1. Select plates containing 10-300 colonies and count the colonies. Distinguish yeasts from molds by colony morphology.
2. Express results as yeasts and molds “per gram” or “per milliliter.”

References

Availability
**Difco™ Yeast Extract Glucose Chloramphenicol Agar**

- **Cat. No.** 219001
- **Dehydrated – 500 g**