Tryptone Glucose Beef Extract Agar (TGB Agar)

Intended Use
Tryptone Glucose Beef Extract Agar (TGB Agar) is used for the enumeration of bacteria in water, air, milk and dairyproducts.

Summary
Accurate methods are essential in the determination of the number of bacteria found in milk. The composition of medium is the most important factor that affects this accuracy. Bowers and Huckers originally developed Tryptone Glucose Extract Agar, which was initially called Tryptone Glucose Skim Milk Agar. It was later modified to thepresent composition for the cultivation and enumeration of bacteria in air, water, milk and dairy products. Tryptone Glucose Beef Extract Agar has been used for the study of various aspects like study of thermophilic bacteria inmilk, influence of incubation temperature etc.
Tryptone Glucose Beef Extract Agar used for the standard plate count of milk and ice cream has been adopted by the committee on standard Methods for the examination of dairy products. It is also recommended in Compendium of methods for the Microbiological Examination of Foods for performing the heterotrophic plate count procedure in testing bottled water.

Principle
Tryptone, Beef extract and glucose supply nutrients, amino acids, carbon compounds, carbohydrates, minerals and trace elements. Glucose is the energy source.

Formula*
Ingredients	**g/L**
Tryptone	5.0
Beef Extract	3.0
Glucose	1.0
Agar	15.0
Final pH (at 25°C)	7.0 ± 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 2°C-8°C. Avoidfreezing 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; Water 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 24.00 g of the powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Boil with frequent agitation to dissolve the powder completely.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control
Dehydrated Appearance: Yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Light yellow coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed after an incubation of 18-24 hours at 30°C-35°C.

Organism (ATCC)	Growth
Staphylococcus aureus subsp. *aureus* (25923)	Good
Escherichia coli (25922)	Good
Pseudomonas aeruginosa Strain Boston 41501 (27853)	Good
Pseudomonas aeruginosa (9027)	Good
Staphylococcus aureus subsp. *aureus* (6538)	Good
Escherichia coli (8739)	Good
Enterococcus faecalis (29212)	Good
Lactobacillus casei (9595)	Good

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.

References

1. Bowers and Hucker, 1935, Tech. Bull; 228, N.Y. state Agr. Expt. Station.
2. Yale.1938. Department of Bacteriology, New York State Agricultural Experiment station, Geneva, N.Y.
3. Nelson F.E., 1939.Kansas Agricultural Experiment Station, Manhattan, Kansas.
4. Downes and Ito (ed.) 2001, Compendium of Methods for The Microbiological Examination of Foods, 4th edition, APHA.
5. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201200250500	Dehydrated Culture Media	500 g