Tryptone Glucose Yeast Extract Agar

Intended Use
Tryptone Glucose Yeast Extract Agar is recommended for enumeration of bacteria in water, air, milk and dairyproducts.

Summary
Bowers and Hucker originally developed a media which they called as Tryptone Glucose Skim Milk Agar which was later modified to present composition of Tryptone Glucose Yeast Extract Agar. This media is used for thecultivation and enumeration of bacteria in air, water, milk and dairy products. It is also used as a standard medium for the bacteriological plate count of milk and dairy products. Various authors have studied different aspects of this medium like study of thermophilic bacteria in milk, influence of incubation temperature etc.

Principle
Casein enzymic hydrolysate, yeast extract provides nitrogenous compounds, vitamin B complex and other essential growth nutrients. Glucose is the energy source. For the enumeration purposes, pour plate method is suggested. Medium must be quickly poured into petridishes if milk sample is to be tested, because the milk may get flocculated if the medium remains hot for longer period of time.

Formula*

Ingredients	**g/L**
Casein enzymic hydrolysate	5.0
Yeast 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.

Types of specimen
Water sample; Dairy sample

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 1000mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely
3. Sterilize by autoclaving at 121°C (15psi) for 15 minutes as per validated cycle.
4. Mix well and pour into sterile petridishes.

Quality Control
Dehydrated Appearance: Cream to 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 at 35°C-37°C for 18-48 hours.

Organism (ATCC)	Growth
Bacillus spizizenii (6633)	Good
Klebsiella aerogenes (13048)	Good
Escherichia coli (25922)	Good
Enterococcus faecalis (29212)	Good
Lactobacillus casei (9595)	Good
Pseudomonas aeruginosa Strain Boston 41501 (27853)	Good
Staphylococcus aureus subsp. *aureus* (25923)	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. Eaton A. D., Clesceri L. S. and Greenberg A. W., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.
3. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of DairyProducts, 17th Ed., APHA Inc., Washington, D.C.
4. Pickett, 1928, Tech. Bull. 147, N.Y. State Agr. Expt. Station.
5. Dennis and Weiser, 1937, J.Dairy Science, 20 : 445.
6. Abele C. A., Am. J. Pub. Health, 1939, 29: 821
7. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201200260500	Dehydrated Culture Media	500 g