

TECHNICAL DATA SHEET

Tryptone Glucose Beef Extract Agar (TGB Agar)

Principle

Tryptone glucose meat extract agar is simple media used for enumeration of bacteria from water, air and food and dairy products. It is composed of tryptone, beef extract, glucose and agar. Tryptone and beef extract provide nitrogen, carbon, vitamins and other essential growth factors. Glucose is carbon source. Agar is solidifying agent.

Use: For cultivation and enumeration of bacteria in water, air, milk and dairy products.

Contents*

Ingredients	Gram/Litre
Tryptone	5.00
Beef Extract	3.00
Glucose	1.00
Agar	15.00
pH at 25°C	7.0 ±0.2

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 24.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Water samples, air samples, food and dairy samples etc.

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Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored free flowing, homogeneous powder
Reaction of 2.40% solution	7.0 $\pm$ 0.2 at 25 °C
pH	6.80- 7.20
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Light amber colored, clear to slightly opalescent gel
Growth Promotion properties	Best at $\leq$ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at $\leq$ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Prepare medium as per label directions, Inoculate and incubate at 35 $\pm$ 2°C for 24-48 hours.

Organism	ATCC	Inoculum (CFU)	Growth	Recovery
<i>Escherichia coli</i>	8739	50-100	Luxuriant	$\geq$ 75%
<i>Salmonella typhimurium</i>	14028	50-100	Luxuriant	$\geq$ 75%
<i>Enterococcus faecalis</i>	14506	50-100	Luxuriant	$\geq$ 75%
<i>Bacillus spizizenii</i>	6633	50-100	Luxuriant	$\geq$ 75%
<i>Staphylococcus aureus</i>	25923	50-100	Luxuriant	$\geq$ 75%
<i>Lactobacillus casei</i>	393	50-100	Luxuriant	$\geq$ 75%
<i>Pseudomonas aeruginosa</i>	27853	50-100	Luxuriant	$\geq$ 75%

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.
2. Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.

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