

TECHNICAL DATA SHEET

Tryptone Agar Base

Principle

Tryptone agar base is a medium used for the study of motility and carbohydrate utilization. The tryptone agar base is composed of tryptone, phenol red and agar. The tryptone is source of nitrogen, carbon and other essential nutrients required for the growth of microorganisms. Phenol red is pH indicator dye. Agar is a solidifying agent; the low concentration of agar makes it suitable medium for motility studies. Tryptone Agar Base is also used for the maintenance for both aerobic and anaerobic cultures. It is also used for the study of carbohydrate utilization. To study fermentation reactions, the desired carbohydrates are added into the medium and observed for acid and gas production. Acid production, during fermentation, is detected by the phenol red indicator changes its color from red to yellow.

Use: For determination of motility and carbohydrate fermentation reactions of aerobes and anaerobes.

Contents*

Ingredients	Gram/Litre
Tryptone	20.000
Phenol red	0.020
Agar	3.500
pH at 25°C	7.4 ±0.2

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

Directions: Dissolve 23.50 grams in 1000 ml distilled water, if desired add desired carbohydrate (0.5%). Boil to dissolve the medium completely, and distribute in test tubes. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, cool it to 42-45°C and keep the tubes in upright position and inoculate test organisms aseptically.

Specimens types analyzed

Pure isolates 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	Beige colored free flowing, homogeneous powder
Reaction of 2.35% solution	7.4 $\pm$ 0.2 at 25 °C
pH	7.20- 7.60
Gelling	Firm comparable with 0.35% agar gel
Color and clarity of ready medium	Red colors clear to slightly opalescent semi solid 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

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Different Microbial Response: Prepare media as per the label directions. Inoculate (50-100 CFU) and incubate at $44 \pm 2^{\circ}\text{C}$ for 18-24 hours.

Organism	ATCC	Growth	w/ Dextrose	Motility
<i>Escherichia coli</i>	8739	Luxuriant	Positive reaction (Yellow color)	Positive, growth away from stabline causing turbidity
<i>Escherichia coli</i>	25922	Luxuriant	Positive reaction (Yellow color)	Positive, growth away from stabline causing turbidity
<i>Klebsiella aerogenes</i>	13048	Luxuriant	Positive reaction (Yellow color)	Positive, growth away from stabline causing turbidity
<i>Salmonella typhimurium</i>	14028	Luxuriant	Positive reaction (Yellow color)	Positive, growth away from stabline causing turbidity
<i>Clostridium perfringens</i>	3624	Luxuriant	Positive reaction (Yellow color)	Negative, No growth away from stabline
<i>Clostridium sporogenes</i>	11437	Luxuriant	Positive reaction (Yellow color)	Positive, growth away from stabline causing turbidity
<i>Staphylococcus aureus</i>	25923	Luxuriant	Positive reaction (Yellow color)	Negative, No growth away from stabline

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.

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Reference

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4. MacFaddin J. F., (1985), Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

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