OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

PA Broth
(Presence-Absence Broth)

Principle

The Presence Absence (PA) broth is used for detection of the coliform organisms. A simple modification of the multiple-tube procedures and provides a qualitative estimate of coliforms. This test is intended for use on routine samples collected from distribution system or water treatment plants. When PA test is positive, coliform densities can be determined quantitatively in repeat samples to indicate the magnitude of the contamination. The medium contains meat peptone, tryptose, meat extract which supply nitrogenous growth factors and trace ingredients to the coliforms. Lactose serves as the fermentable carbohydrate and energy source. Phosphates act as buffering agent. Sodium lauryl sulphate inhibits many organisms other than coliforms. Bromocresol purple is the pH indicator which turns yellow at acidic pH. Majority of the lactose fermenting coliforms utilize the lactose to form acid. This acidity is detected by the pH indicator (Bromocresol purple) which change colour from purple to yellow at acidic pH. The medium is used a triple strength medium when examining 100 ml samples.

Use: For detection of presence and absence of coliform bacteria in water.

Contents*

Ingredients	Gram/Litre
Meat peptone	5.000
Tryptose	9.800
Meat extract	3.000
Lactose	7.460
Sodium chloride	2.460
Dipotassium phosphate	1.350
Monopotassium phosphate	1.350
Sodium lauryl sulphate	0.050
Bromocresol purple	0.0085
pH at 25˚C	6.8 ±0.2

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

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Directions: Dissolve 30.51 grams in 1000 ml distilled water. Boil to dissolve the medium completely and distribute in desired. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45 °C and inoculate test sample aseptically. To prepare triple strength medium, dissolve 91.53 grams in 1000 ml distilled water.

Specimens types analyzed

Packaging Drinking water and water samples etc.

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 to green colored free flowing, homogeneous powder**
Reaction of 3.05% solution	**6.8 ±0.2 at 25 ˚C**
pH	**6.60- 7.00**
Color and clarity of ready medium	**Purple colored clear solution without any precipitate**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

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Different Microbial Response: Cultural characteristics observed after incubation at 35-37°C for 18-24 hours.

Organism	ATCC	Inoculum (CFU)	Growth	Color of medium
Escherichia coli	8739	50-100	Luxuriant	Yellow
Klebsiella aerogenes	13048	50-100	Luxuriant	Light yellow
Klebsiella pneumoniae	13883	50-100	Luxuriant	Yellow
Salmonella typhimurium	14028	50-100	Luxuriant	No change
Enterococcus faecalis	14506	50-100	Inhibited	--

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. **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..**

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