

TM 948 – BORIC ACID BROTH

INTENDED USE

For detection and presumptive identification of *E.coli* on the basis of the ability to grow at 43°C and gas production.

PRODUCT SUMMARY AND EXPLANATION

Boric acid has been used as a medium for the detection of *E.coli* from foods and water. This medium has been suggested by Levine et.al. When isolates from agar slant or samples are inoculated into lactose broth and boric acid broth. Only *E.coli* grow and produce gas in both the broths, while *Aerobacter* species grow only in lactose broth.

COMPOSITION

Ingredients	Gms / Ltr
Proteose peptone	10.000
Lactose	5.000
Dipotassium hydrogen phosphate	12.200
Potassium dihydrogen phosphate	4.100
Boric acid	3.250

PRINCIPLE

Proteose peptone supplies carbon, nitrogen substances, long chain amino acids, vitamins and other growth supplements to the microorganisms. Lactose is the fermentable carbohydrate. Phosphates buffer the medium. Boric acid allows the growth of *E.coli*.

INSTRUCTION FOR USE

- Dissolve 34.55 grams in 1000 ml purified/distilled water.
- Dispense in test tubes with inverted Durham's tubes.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- For inocula larger than one ml, the medium should be prepared in proportionately greater concentration.
- A pH indicator may be added if desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to pink homogeneous free flowing powder.
Appearance of prepared medium	: Light amber coloured clear solution.
pH (at 25°C)	: 7.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Gas	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Luxuriant	Positive reaction	43°C	18-24 Hours



<i>Klebsiella aerogenes</i>	13048	50-100	Inhibited	Negative reaction	43°C	18-24 Hours
<i>Salmonella Typhi</i>	6539	50-100	Inhibited	Negative reaction	43°C	18-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. A. Njoku-Obi and C. E. Skinner. Boric Acid Lactose Broth as a Medium for the Detection of Fecal Coliform Bacteria. Appl Microbiol. 1957 March; 5(2): 80-82.
2. Levine, M., Epstein S.S.,1934. Differential reactions in the colon group of bacteria. American Journal of Public Health.24-505-510

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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