

TM 049 – BROMO CRESOL PURPLE AZIDE BROTH

INTENDED USE

For confirmation of the presence of faecal Streptococci in water.

PRODUCT SUMMARY AND EXPLANATION

Enterococci are widely distributed and occur in different habitats. The Enterococci portion of the faecal *Streptococcus* group is a valuable bacterial indicator for determining the extent of faecal contamination of recreational surface waters. Studies indicate that swimming associated gastroenteritis is related directly to the quality of bathing water and that enterococci are the most efficient bacterial indicators of water quality. Bromo Cresol Purple Azide Broth formulated as per Hajna & Perry is used for the confirmation of the presence of faecal streptococci in water and wastewater. This medium is used for testing water samples, after preliminary testing of water samples in Azide Dextrose broth. Bromo Cresol Purple Azide Broth is recommended by APHA for enumerating faecal streptococci by the MPN technique.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Yeast extract	10.000
D-Glucose	5.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	2.700
Potassium dihydrogen phosphate	2.700
Sodium azide	0.500
Bromocresol purple	0.032

PRINCIPLE

Bromo Cresol Purple Azide Broth has dextrose (D-glucose) as the fermentable carbon source and bromocresol purple as an indicator. The colour change of the medium from purple to yellow indicates fermentation of dextrose (D-glucose) and subsequent acid production. According to Hajna, enterococcal dextrose fermentation is improved by the addition of glycerol. Tryptone and yeast extract supply nitrogenous compounds, sulphur, and long chain amino acids and trace ingredients. Sodium chloride maintains osmotic balance of the medium. Sodium azide inhibits the entire bacterial flora including those species that may have grown in the preliminary test media. Colour change to yellow with turbidity indicates and confirms the growth of *Enterococci*.

INSTRUCTION FOR USE

- Dissolve 35.93 grams in 1000 ml purified / distilled water.
- Add 5 ml glycerol if desired. Heat, if necessary to dissolve the medium completely.
- Dispense into test tubes or flasks as desired. Sterilize by autoclaving at 10 psi pressure (115°C) for 15 minutes

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to beige homogeneous free flowing powder.
Appearance of prepared medium	: Purple coloured, clear solution without any precipitate.
pH (at 25°C)	: 7.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Acid	Incubation Temperature	Incubation Period
<i>Enterococcus faecalis</i>	29212	50-100	Good-luxuriant	Positive reaction, yellow colour	35-37°C	24-48 Hours
<i>Escherichia coli</i>	25922	$\geq 10^4$	Inhibited	-	35-37°C	24-48 Hours
<i>Pseudomonas aeruginosa</i>	27853	$\geq 10^4$	Inhibited	-	35-37°C	24-48 Hours
<i>Streptococcus agalactiae</i>	13813	50-100	None-poor	Negative reaction, no colour change	35-37°C	24-48 Hours
<i>Streptococcus pyogenes</i>	19615	50-100	None-poor	Negative reaction, no colour change	35-37°C	24-48 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. Cabelli V. J., 1983, EPA-600/1-80-031, U. S. Environmental Protection Agency, Cincinnati, Ohio.
2. Dufour A. P., 1984, EPA-600/1-84-004, U. S. Environmental Protection Agency, Cincinnati, Ohio.
3. Hajna A.A. and Perry C.A., 1943, Am. J. Publ. Health, 33:550.
4. Hajna A.A., 1951, Public Health Lab., 9:80-81



 Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 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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