

TM 412 – AZIDE DEXTROSE BROTH

INTENDED USE

For detection of faecal Streptococci in water, sewage, food and other materials.

PRODUCT SUMMARY AND EXPLANATION

Enterococci are more resistant to chlorine in water, hence are better indicators of sewage pollution than *Escherichia coli*. Until 1984, members of the genus *Enterococcus* were classified as Group D Streptococci. Upon genomic DNA analysis, a separate genus status was provided to them. Azide Dextrose Broth is recommended by APHA for enumeration of faecal Streptococci by MPN technique. Azide Dextrose Broth was initially formulated by Rothe, Mullmann and Seligmann for quantitative determination of Enterococci in water, sewage, foods and other materials suspected of contamination with sewage. When large volumes of water samples are to be examined, double strength medium is used. Turbidity in tubes indicates presence of Enterococci, however, it should be further confirmed by inoculation in Ethyl Violet Azide Broth.

COMPOSITION

Ingredients	Gms / Ltr
Peptone, special	15.000
Beef extract	4.500
Dextrose (Glucose)	7.500
Sodium chloride	7.500
Sodium azide	0.200

PRINCIPLE

Azide Dextrose Broth is a highly nutritious medium due to the presence of nutrient rich peptone special, beef extract and dextrose. Sodium azide inhibits growth of gram-negative bacteria, allowing Enterococci to grow.

INSTRUCTION FOR USE

- Dissolve 34.7 grams in 1000 ml purified/ distilled water for preparing single strength broth or use 69.4 grams in 1000 ml purified / distilled water for double strength broth.
- Heat, if necessary, to ensure complete solution.
- Dispense in test tubes and sterilize by autoclaving at 118°C for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Amber coloured clear solution without any precipitate.
pH (at 25°C)	: 7.2±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period



<i>Escherichia coli</i>	25922	$\geq 10^3$	Inhibited	35-37°C	18-24 Hours
<i>Enterococcus faecalis</i>	29212	50-100	Good-luxuriant	35-37°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. Eaton A.D., Clesceri L.S., and Greenberg A.E., (Eds), 1998, Standard Methods for the Examination of Water and Wastewater.
2. Edwards S.J., 1933, J. Comp. Path. Therap., 46:2111.
3. Hartman G., 1937, Milchw. Forsch, 18:166.
4. Mallmann and Seligmann, 1950, Am. J. Publ. Health, 40:286.
5. Rothe, 1948, Illinois State Health Department.
6. Schleider K.H., Kilpper Bolz R., 1984, Int.J.Sys.Bacteriol., 34:31

 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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