

TM 1193 - GLUCOSE AZIDE BROTH

INTENDED USE

For enumeration of faecal Streptococci from water by MPN technique.

PRODUCT SUMMARY AND EXPLANATION

Fecal *Streptococcus* is a group of bacteria normally present in large numbers in the intestinal tract of warm-blooded animals other than human. The fecal *Streptococcus* group consists of a number of species of the genus *Streptococcus* such as *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, *Streptococcus bovis*, *Streptococcus equines* and others. They have been used with fecal coliforms to differentiate fecal contamination from humans and from that of other warm-blooded animals. They tend to persist longer in the environment than faecal coliforms. Glucose Azide Broth is recommended by Hannay and Norton for enumeration of faecal streptococci by MPN technique from water, sewage, foods and other materials suspected to be contaminated with sewage.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	10.000
Yeast extract	3.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	5.000
Potassium dihydrogen phosphate	2.000
Dextrose (Glucose)	5.000
Sodium azide	0.250
Bromocresol purple	0.030

PRINCIPLE

Glucose Azide Broth is a highly nutritious medium due to its content of peptone, yeast extract and dextrose, which provide nitrogenous compounds, carbon, sulphur, amino acids and trace ingredients. Sodium chloride maintains osmotic balance of the medium. Sodium azide suppresses the growth of gram-negative organisms and thereby allows the selective growth of faecal Streptococci.

INSTRUCTION FOR USE

- Dissolve 30.28 grams in 1000 ml purified / distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense 5ml amounts in 16 x150 mm test tubes and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- For large inoculate of 5 ml or more quantities, prepare double strength medium.

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)	: 6.7±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour change to yellow	Incubation Temperature	Incubation Period
<i>Enterococcus faecalis</i>	29212	50-100	Good-luxuriant	Positive	35-37°C	18-24 Hours
<i>Enterococcus hirae</i>	8043	50-100	Good-luxuriant	Positive	35-37°C	18-24 Hours
<i>Staphylococcus aureus</i> subsp. <i>aureus</i>	25923	$\geq 10^3$	Inhibited	Negative	35-37°C	18-24 Hours
<i>Escherichia coli</i>	25922	$\geq 10^3$	Inhibited	Negative	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. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. Collee J. G., Duguid J. P., Fraser A. G., Marmion B. P., (Eds) Mackie and McCartney, Practical Medical Microbiology, 1989, 13th Edition, Churchill Livingstone
3. Hannay C. L., Norton I. L., 1947, Proc. Soc. Appl. Bacteriol. 1: 59
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.





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

***For Lab Use Only**
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