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Azide Dextrose Broth

For detection and enumeration of *Streptococci* in water, sewage, food and other materials suspected of sewage contamination.

REF: BS.1/DB01.100.0100	100 Gram	REF: BS.1/DB01.250.0250	250 Gram
REF: BS.1/DB01.500.0500	500 Gram		

CLINICAL SIGNIFICANCE

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.

METHOD PRINCIPLE

Turbidity in tubes indicates presence of *Enterococci*, however, it should be further confirmed by inoculation in Ethyl Violet Azide Broth.
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. *Streptococci* detected by the above media should be further identified using chemicals.

MEDIA COMPOSITION

Item	Formula per liter of medium
- Peptone, special	15.00 gm
- Beef extract	4.50 gm
- Dextrose (Glucose)	7.50 gm
- Sodium chloride	7.50 gm
- Sodium azide	0.200 gm

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.
  S56: dispose of this material and its container at hazardous or special waste collection point.
  S57: use appropriate container to avoid environmental contamination.
  S61: avoid release in environment.

For further information, refer to the Azide Dextrose Broth material safety data sheet.

STORAGE AND STABILITY

BioScien Azide Dextrose Broth should be stored between 10-30°C in a firmly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Final pH 7.2 ± 0.2 at 25°C

PREPARATION

Suspend 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.

Deterioration

The color of ***BioScien*** Azide Dextrose Broth is Cream to yellow homogeneous free flowing powder. Prepared Media is Amber coloured clear solution without any precipitate. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN

Food samples; Water and sewage samples

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile test tubes
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Microorganism	Growth
Enterococcus faecalis ATCC 29212	good-luxuriant
Escherichia coli ATCC 25922	inhibited

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control still out of range please contact ***BioScien*** technical support.

REFERENCES

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SYMBOLS IN PRODUCT LABELLING			
IVD	For in-vitro diagnostic use	Σ	Number of <n> test in the pack
LOT	Batch Code/Lot number		Caution
REF	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		