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Azide Dextrose Agar

Azide Dextrose Agar selective medium used for the quantification of enterococci in water, food, and various other samples.

REF: BS.1/NZ01.100.0100	100 Gram	REF: BS.1/NZ01.250.0250	250 Gram
REF: BS.1/NZ01.500.0500	500 Gram		

PRINCIPLE AND INTERPERTATION

Azide Dextrose Agar is an essential medium used for the detection and enumeration of enterococci/streptococci in various samples, including water and sewage. Due to their resistance to chlorine, enterococci serve as more reliable indicators of fecal contamination than Escherichia coli, particularly in cases of older contamination. Recommended by the APHA, this medium includes sodium azide as a selective agent to suppress the growth of Gram-negative bacteria, thereby promoting the selective growth of enterococci. The presence of enterococci suggests possible fecal pollution, even when more sensitive coliforms like E. coli may no longer be detectable. The medium is highly nutritious, containing meat extract, casein peptone, glucose, and sodium chloride to support bacterial growth and maintain osmotic balance. Agar is included to solidify the medium.

MEDIA COMPOSITION

Item	Formula per liter of medium
Peptone from Casein	15.00 gm
Meat Extract	4.50 gm
Glucose	7.50 gm
Sodium Chloride	7.50 gm
Sodium Azide	0.2 gm
Agar	15.00 gm

Final pH (at 25°C) 7.0 ± 0.2 ** Formula adjusted, standardized to suit performance parameters.

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 Agar material safety data sheet.

STORAGE AND STABILITY

BioScien Azide Dextrose Agar Stored between 15-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in 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.

PREPARATION

Suspend 49.7 g of the powder in 1 L of purified water. Autoclave at 121°C for 15 minutes. . On repeated exposure to air and absorption moisture sodium chloride has tendency to form lumps, therefore we strongly recommend storage in tightly closed containers in dry place away from bright light.

Deterioration

The color of ***BioScien*** Azide Dextrose Agar is Beige, free-flowing, homogeneous. Prepared media is Light amber, clear to very slightly opalescent.. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile petri dishes
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

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

Organisms (ATCC)	Growth
Enterococcus faecalis 19433	Good
Enterococcus faecalis 11700	Good
Escherichia coli 25922	none-poor
Staphylococcus aureus 25923	none-poor

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.

REFERENCE

1. Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.
2. Richardson G., (Ed.), 1985, Standard Methods for the Examination of Dairy Products, 15th Ed, APHA, Washington, D.C.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4. McCrady and Langerin, 1932, J. Dairy Science, 15:321.

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		