Biomed Global

Rev: 0

Nutrient Broth | Ready-to-use Media

a product by Biomed MDX

Effective Date: 22/12/2025

REF TB05N2001

Intended Use:

Nutrient Broth is for enrichment and enumeration of a wide range of bacteria in various samples, including water, sewage, faeces, and other materials.

Principle of the Procedure:

The principle of nutrient broth serves as the foundation for the liquid cultivation of non-fastidious microorganisms by providing a basal medium rich in organic nitrogen, vitamins, and minerals. Its formulation relies on the synergistic combination of enzymatic digests of protein (peptone) and beef extract, which collectively supply the essential carbon and nitrogen sources required for cellular metabolism and replication. The medium maintains physiological stability through the inclusion of sodium chloride for osmotic equilibrium and is typically adjusted to a neutral pH (6.8 ± 0.2) to optimise enzymatic activity. In a liquid state, nutrients are uniformly distributed, allowing for rapid microbial proliferation, which is macroscopically evidenced by turbidity (opalescence) within the medium. This non-selective environment is designed to support a broad spectrum of microbial life, making it an indispensable tool for inoculum preparation, biomass yield, and the physiological study of growth characteristics such as pellicle formation or sedimentation.

Product Summary:

Nutrient broth is a versatile, non-selective liquid medium that provides essential organic nitrogen, vitamins, and minerals through a combination of peptone and beef extract. It is designed to support the rapid proliferation of non-fastidious microorganisms in an osmotically balanced, neutral pH environment. Growth is macroscopically evident by the transition from a clear solution to a turbid state, making it an ideal tool for inoculum preparation and observing bacterial growth patterns.

Formulation* (PER LITER):

Beef Extract	3.0g
Peptone	5.0g

pH 6.8 +/- 0.2

*Adjust and/or supplemental as required to meet performance criteria

Procedure

Materials Provided

5mL Nutrient Broth.

Materials Required But Not Provided

Ancillary culture media, reagents, and laboratory equipment as required.

Test Procedure

1. Inoculate and streak the specimen as soon as possible after it is received in the laboratory with an aseptic technique.
2. Incubate at 35 ± 2°C for up to 6 to 8 hours.
3. Observe the result according to user requirements.
4. Dispose of all used reagents and contaminated materials as infectious waste. Laboratories must handle and dispose of all waste safely according to regulations.

Results

Examine for colonies exhibiting typical microscopic and colonial morphology. Appropriate biochemical or immunological tests may be required for final identification

Quality Control

Inoculate representative samples with the following strains. Incubate the inoculated tubes at 35 ± 2°C for up to 18 to 240 hours.

Strains	ATCC®	Growth Results
Pseudomonas aeruginosa	27853	Turbid growth
Escherichia coli	25922	Turbid growth
Enterococcus faecalis	29212	Turbid growth
Negative Control	-	No growth

Transportation:

Temperature fluctuations may occur during transportation. However, these fluctuations do not affect the performance, quality, or safety of the media.

Storage and Shelf Life:

Upon receipt, store tubes at 2 to 8°C in their original sleeve wrapping until just before use. Avoid freezing and overheating.

The tubes may be inoculated up to the expiration date (see package label) and incubated for the recommended incubation times.

Warning and Precautions:

For in vitro diagnostic use. For Professional Use Only. Do Not Reuse.

Do not use tubes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration.

Limitations of the Procedure

This medium is for laboratory use only and is not intended for the diagnosis of disease or other conditions. Identifications are presumptive and colonies should be identified using appropriate methods

Reference

1. Azzahra, Aira. *Pengaruh Sterilisasi terhadap pH Media Nutrient Broth*. Diss. Universitas Bhakti Kencana, 2024.

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Packaging Symbol

Symbol	Definition
	Catalogue number
	In Vitro Diagnostic Medical Device
	Batch code
	Date of manufacture
	Temperature limit
	Use-by date
	Keep away from sunlight
	Do not re-use
	Fragile, handle with care
	Consult instructions for use or consult electronic instructions for use
	Do not use if packaging damaged and consult instructions for use
	Manufacturer

Further Information:

For further information please contact your Biomed MDX representative.

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