Chaitanya Group Of Industries

ReadyMED®
Dehydrated Cell Culture Media

Technical Data Sheet

Nutrient Broth RDM-NB-01

Principle
NB is a basic media and commonly used for cultivation, enrichment, enumeration, prolonged maintenance and storage of wide variety of microbes. The nutrient broth is widely used as non-selective microbial media for routine microbiology analysis and cultivation of non-fastidious organisms. Nutrient broth is ideal microbial media for teaching, demonstration and routine analysis. Nutrient Broth (NB) is a simple medium composed of the peptone, meat extract (Equivalent to beef extract), yeast extract and sodium chloride. Peptone, meat extract and yeast extract provide ample amount of the carbon and nitrogen essential and non-essential amino acids, along with the vitamins and trace minerals. Sodium chloride maintains the osmotic equilibrium of the medium.

Use: Recommended for the refinement of non-fastidious microorganisms from clinical and non-clinical samples. Nutrient broth is ideal microbial media for teaching, demonstration and routine analysis.

Contents*

Ingredients	**Gram/Litre**
Peptone	5.0
Meat Extract #	1.5
Yeast Extract	1.5
Sodium Chloride	5.0
pH at 25˚C	7.4 ±0.2

* Formula adjusted for optimum performance and parameters
# Equivalent to beef extract

Directions: Dissolve 13.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and distribute aseptically. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45 °C and inoculate test sample aseptically.

Specimens types analyzed
Pharmaceutical samples, clinical and non-clinical samples, soil, water, food and dairy samples etc.

Precautions to be taken
These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation
The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Beige colored free flowing, homogeneous powder
Reaction of 1.3% solution	7.4 ±0.2 at 25 ˚C
pH	7.20- 7.60
Color and clarity of ready medium	Pale yellow colored clear to slightly opalescent solution.
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 ºC for 18-72 h

Indicative properties	Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Organism	ATCC	Inoculum	Growth	Incubation Temperature	Incubation period
Escherichia coli	8739	50-100	Luxurious	33-37 ℃	18-48 h
Salmonella typhi	14028	50-100	Fair- Good	33-37 ℃	18-48 h
Bacillus spizizenii	6633	50-100	Luxurious	33-37 ℃	18-48 h
Staphylococcus aureus	25923	50-100	Luxurious	33-37 ℃	18-48 h

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. 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.
4. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.

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