

Nutrient Agar

REF.	Pack size
630 01 100	100 gm
630 01 500	500 gm

Intended Use

Nutrient agar is used for the cultivation of a wide variety of micro-organisms such as *Pseudomonas aeruginosa* isolated from faeces and other biological fluids.

Background

Nutrient Agar is a general purpose non- selective medium for the cultivation of organisms that are not demanding in their nutritional requirements e.g. organisms that can be isolated from air, water, dust etc. It can be used for the cultivation and enumeration of bacteria which are not particularly fastidious. Nutrient Agar is suitable for teaching and demonstration purposes, it is isotonic and can be enriched with biological fluids such as sterile blood and egg yolk.

Principle

Peptone and beef extract provide water-soluble substances including carbohydrates, vitamins, organic nitrogen compounds and salts.

Peptone is the principle source of organic nitrogen, particularly amino acids and long chained peptides.

Components	gm/Liter
Peptone	5.0
Sodium Chloride	5.0
Beef extract	1.5
Yeast extract	1.5
Agar	15.0

Final pH (at 25°C) 7.4±0.2

Preparation, Storage and Stability

Store the dehydrated medium at 10-30°C and use before the expiry date on the label. Store the prepared medium at 2-8°C After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Procedure

1. Suspend 28 grams of the medium in one liter of purified water.
2. Heat with frequent agitation to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.

Quality Control

Appearance

- 1-Dehydrated Appearance : Cream to yellow homogeneous free flowing powder
- 2- Prepared Appearance : Light yellow coloured clear to slightly opalescent gel
- 3- Cultural Response : after 18-24 hours at 30-35°C or at 35±2°C for clinical specimens.

Organisms (ATCC)

Organisms (ATCC)	Growth
<i>E. Coli</i>	good
<i>Pseudomonas aeruginosa</i>	good
<i>Staphylococcus aureus</i>	good
<i>Streptococcus pyogenes</i>	good

Interpretation of the results

- 1- Use standard procedures like streak plate method to obtain isolated colonies.
- 2- Examine plates for growth.

Precautions

1-Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Bibliography

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington DC
2. 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
3. MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Lippincott, Williams and Wilkins, Baltimore.