

## Nutrient Agar

REF.	Pack size
1407 001	100 gm
1407 002	500 gm

### Intended Use

Nutrient Agar is used as a general purpose medium for the cultivation of less fastidious microorganisms, can be enriched with blood or 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, Beef extract and yeast extract provide the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients necessary for the growth of bacteria. Sodium chloride maintains the osmotic equilibrium of the medium. Nutrient Agar is suitable for teaching and demonstration purposes. It contains a concentration of 1.5% agar to permit the addition of up to 10% blood or other biological fluid, as required. The medium, without additions, may be used for the cultivation of organisms which are not exacting in their nutritional requirements.

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 dissolve the powder completely.
3. Sterilize by autoclaving at 121°C for 15 minutes.
4. Cool to 45-50°C and pour into sterile petri plates.

SYMBOLS IN PRODUCT LABELLING	
 Authorised Representative	 Use by/Expiration Date
 For in-vitro diagnostic use	 CAUTION. Consult instructions for use
 Batch Code/Lot number	 Manufactured by
 Catalogue Number	 (Xi) - Irritant
 Consult instructions for use	 Temperature Limitation

### 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)

Organism	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.

 **Egyptian Co for Biotechnology - Spectrum Diagnostics (S.A.E)**  
 Obour city industrial area. block 20008 piece 19 A. Cairo. Egypt.  
 Tel: +202 4489 2248 - Fax: +202 4489 2247  
 www.spectrum-diagnostics.com  
 E-mail: info@spectrum-diagnostics.com

 **MDSS GmbH**  
 Schiffgraben 41  
 30175 Hannover, Germany

