

## Nutrient Agar pH 7.0, Granulated

GM561A

Nutrient Agars pH 7.0, granulated is used for the cultivation of *Salmonella* species.

### Composition\*\*

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Meat extract	3.000
Agar	15.000
Final pH ( at 25°C)	7.0±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 23 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. If desired, the medium can be enriched with 5 - 10% v/v sterile defibrinated blood. Mix well and pour into sterile Petri plates or as desired.

### Principle And Interpretation

Nutrient Agar is a basic culture medium used for maintenance or to check purity of subcultures prior to biochemical or serological tests from water (1) and Dairy (2). Many bacteria have the optimum pH growth range of 6.6 to 7.0. This medium may be used as slants or plates for routine work with non-fastidious organisms. Wetmore and Gochenour (3) maintained cultures of *Malleomyces* and *Pseudomonas* on Nutrient Agar to which glycerol was added. Greenberg and Cooper (4) employed this medium in cultivation of Staphylococci for the preparation of vaccines and antigens. Nutrient Agars have relatively simple formulation which provides the necessary nutrients for the growth of many microorganisms which are not very fastidious.

Meat extract contains vitamins, organic nitrogen compounds, salts and little carbohydrates (5). Peptic digest of animal tissue provide amino acids and long chain peptides for the organisms.

### Quality Control

#### Appearance

Cream to yellow coloured granular medium

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of Prepared medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates

#### Reaction

Reaction of 2.3% w/v aqueous solution at 25°C. pH : 7.0±0.2

#### pH

6.80-7.20

#### Cultural Response

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

#### Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery
<b>Cultural Response</b>			
<i>Enterococcus faecalis</i> ATCC 50-100 29212		luxuriant	>=70%
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	>=70%
<i>Salmonella</i> Enteritidis ATCC 50-100 13076		luxuriant	>=70%

---

<i>Salmonella</i> Typhi ATCC 6539	50-100	luxuriant	≥70%
<i>Salmonella</i> Typhimurium ATCC 14028	50-100	luxuriant	≥70%
<i>Shigella flexneri</i> ATCC 12022	50-100	luxuriant	≥70%
<i>Staphylococcus aureus</i> ATCC 25923	50-100	luxuriant	≥70%

### Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

### Reference

1. Rice E.W., Baird R.B., Eaton A. D., and Clesceri L. S. (Eds.), 2012, Standard Methods for the Examination of Water and Wastewater, 22nd Ed., APHA, Washington, D.C.
2. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
3. Wetmore and Gochenour, 1956, J. Bact., 72:79.
4. Greenberg and Cooper, 1960, Can. Med. Assn. J., 83:143.
5. Pelczar, Chan and Kreig, 1986, Microbiology, 5th ed., McGraw-Hill Book Company, New York.

Revision : 00 / 2014



#### Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.