Nutrient Agar 1.5%

M087I

Nutrient Agar 1.5% is a general purpose nutrient medium which can be used for cultivation of fastidious microorganisms after appropriate enrichment.

Composition**

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

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 28.0 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. If desired, it can be appropriately enriched with sterile blood, ascitic fluid or serum after cooling to 45-50°C.

Principle And Interpretation

Nutrient Agar is recommended for cultivation and maintenance of nonfastidious microorganisms. Recently ISO Committee (2) has recommended it with a slight modification (M087I) for subcultivation of *Pseudomonas* species isolated from meat and meat products.

Peptic digest of animal tissue is the principal source of organic nitrogen while Beef extract provides carbohydrates, vitamins, organic nitrogen compounds and salts. Sodium chloride makes the medium isotonic preventing haemolysis of red blood corpuscles. This Nutrient Agar may be used for blood culturing work after the addition of sterile 5% v/v defibrinated blood and additional Sodium chloride (3g/l) (1).

Quality Control

Appearance
Cream to yellow coloured homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Yellow coloured clear gel forms in Petri plates. With the addition of blood, cherry red coloured, opaque gel forms in petri plates.

Reaction
Reaction of 2.8% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

Cultural Response
M087I: Cultural characteristics observed after an incubation at 35-37°C for 18 - 24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
Enterococcus faecalis ATCC 29212	50-100	luxuriant	>=70%
Escherichia coli ATCC 25922	50-100	luxuriant	>=70%

Pseudomonas aeruginosa ATCC 27853	50-100	luxuriant	>=70%
Staphylococcus aureus ATCC 25923	50-100	luxuriant	>=70%
Streptococcus pyogenes ATCC 19615	50-100	luxuriant	>=70%
Streptococcus pneumoniae ATCC 6303	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.Speck M. (Ed.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd ed., APHA, Washington D.C.
2.International Organization for Standardization (ISO), 1995, Draft ISO/DIS 13720.
3.Pelczar, Chan and Kreig, 1986, Microbiology, 5th ed., McGraw Hill Book Co., N.Y.

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