Technical Information

Standard Nutrient Agar

Product Code: DM 1877

Application: - Standard Nutrient Agar is used as a general utility medium for cultivation and enumeration of not particularly fastidious microorganisms.

Composition**

Ingredients	Gms / Litre
Beef extract	10.000
Peptic digest of lean meat from	500.000
Sodium chloride	5.000
Agar	20.000
Final pH (at 25°C)	7.6±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Standard Nutrient Agar is formulated according to the recommendation of APHA. This is used as a general purpose medium for the cultivation of non-fastidious organisms from water and wastewater, dairy and food products [1, 2].

Peptic digest of lean meat provides the amino acids and large chain peptides. Beef extract (meat infusion) provides water soluble substances like carbohydrates, vitamins, organic nitrogen compounds and salts [3]. Sodium chloride maintains osmotic equilibrium.

Methodology

Suspend 45 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well before pouring in sterile Petri plates.

Quality Control

Physical Appearance

Yellowish brown coloured homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 4.5% w/v aqueous solution at 25°C. pH : 7.6±0.2

pH range

7.40-7.80

Cultural Response/Characteristics

DM 1877: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Escherichia coli ATCC 25922	50-100	good- luxuriant	>=70%
Staphylococcus aureus ATCC 25923	50-100	good- luxuriant	>=70%
Pseudomonas aeruginosa ATCC 27853	50-100	good- luxuriant	>=70%
Streptococcus pneumoniae ATCC 6303	50-100	good- luxuriant	>=70%
Salmonella Typhi ATCC 6539	50-100	good- luxuriant	>=70%

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Greenberg A. E., Trussell R. R. and Clesceri L. S. (Eds.), 1985, Standard Methods for the Examination of Water and Wastewater, 16th ed., APHA, Washington, D.C.
2. Speck M. (Ed.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd ed., APHA, Washington, D.C.
3. Pelczar, Chan and Kreig, 1986, Microbiology, 5th ed., McGraw-Hill Book Company, New York.

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