STANDARD NUTRIENT AGAR TM 596

For a general purpose medium for cultivation and enumeration of fastidious and non fastidious microorganisms

Composition

Ingredients	Gms/Ltr.
Agar	20.00
Peptic digest of lean meat, from	500.00
Beef extract	10.00
Sodium chloride	5.00

* Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight.
[10.00gm of peptone is equivalent to 500gm of peptic digest of lean meat]**

Instructions for Use

Dissolve 45gms in 1000 ml distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15psi (121°C) for 15 minutes. Cool to 40-50ºC and dispense into sterile Petri plates or test tubes.

Appearance: Light amber colour, clear to slightly opalescent gel
pH (at 25°C): 7.4 ± 0.2

Principle

STANDARD NUTRIENT AGAR is used for the general purpose medium for cultivation and enumeration of fastidious and non fastidious microorganisms. Medium contains Peptic digest of lean meat and Beef extract which are sources of amino acids, nitrogen and carbon. Sodium chloride maintains the osmotic equilibrium. Beef extract provides water soluble substances like carbohydrates, vitamins, organic nitrogen compounds and salts. Agar is a solidifying agent.

Interpretation

Cultural characteristics observed after inoculating (10^3cfu / ml) on incubation at 35 ± 2°C for 18 - 24 hours.

Microorganisms	ATCC	Inoculum (cfu/ml)	Growth	Recovery rate (%)
Escherichia coli	25922	10^3	Good – luxuriant	>=70%
Staphylococcus aureus	25923	10^3	Good - luxuriant	>=70%
Streptococcus pneumoniae	6303	10^3	Good - luxuriant	>=70%
Salmonella Typhi	6539	10^3	Good - luxuriant	>=70%

References

1. Lapage S., Shelton J. and Mitchell T., Methods in Microbiology, Norris J. and Ribbons D. (Eds.), Vol. 3 A., Academic Press, London. (1970).
2. Greenberg A. E., Trussell R. R. and Clesceri L. S. (Eds.), Standard Methods for the Examination of Water andWastewater, 16th ed., APHA, Washington, D.C. (1985).
3. Speck M. (Ed.), Compendium of Methods for the Microbiological Examination of Foods, 2nd ed., APHA, Washington, D.C. (1984).
4. Pelczar, Chan and Kreig, Microbiology, 5th ed., McGraw-Hill Book Company, New York. (1986).