

**SELECTIVE STREPTOCOCCUS AGAR, MODIFIED****TM 1840**

For selective isolation and enumeration of Streptococci including group A beta haemolytic strains

Composition

Ingredients	Gms/Ltr.
Agar	15.00
Casein enzymatic hydrolysate	10.00
Beef extract	6.70
Nucleic acid	6.00
Sodium chloride	5.00
Maltose	0.25
Polymyxin B sulphate	0.024
Neomycin sulphate	0.002
Selective agents	0.00289

* Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight.

Instructions for use

Dissolve 43.0gms in 1000ml of distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15psi (121°C) for 15 minutes. Do not overheat the media. Cool to 45-50°C and pour into sterile Petri plates.

Appearance: Cream to amber colour, slightly opalescent gel (without adding blood), by adding sheep blood it should appear opaque, and cherry red in color.

pH (at 25°C): 7.3 ± 0.2

Principle

SELECTIVE STREPTOCOCCUS AGAR, MODIFIED is used for selective isolation and enumeration of Streptococci including group A beta haemolytic strains. Selective Streptococcus agar is designed and modified to inhibit gram-negative bacilli and staphylococci, thereby allowing for the isolation, subculture, and identification of pathogenic streptococci, including beta-hemolytic streptococci and *S. pneumoniae*. Whereas, Soya Casein Digest Agar is also used as the basal medium. Streptococcus selective agar has organic nitrogen, particularly amino acids and long-chained peptides are supplied by the combination of Casein enzymatic hydrolysate and Nucleic acid. This combination renders the medium highly nutritious. Osmotic equilibrium is maintained by Sodium chloride. Maltose is the fermentable carbohydrate energy source. Sulphate when used produces H₂S. Agar is used as solidifying agent. Sheep blood (5% - defibrinated) has been added to facilitate growth and to detect hemolytic activity. Selective agents are added to suppress much of the oral flora, including coliforms, Staphylococci, *Micrococcus*, *Haemophilus*, *Neisseria* species and non-haemolytic Streptococci and a certain number of Enterobacteriaceae are inhibited wholly or partially, permitting satisfactory fluorescence studies of Group A.

Interpretation

Cultural characteristics observed after inoculating (10³-10⁴CFU/ml), on incubating at 35 - 37°C for 24 hours.

PRODUCT DATA SHEET

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Haemolysis
<i>Streptococcus pneumonia</i>	6305	10 ³ -10 ⁴	Good – excellent	α
<i>Streptococcus pyogenes</i>	19615	10 ³ -10 ⁴	Good – excellent	B
<i>Escherichia coli</i>	25922	10 ³ -10 ⁴	Inhibited	-----
<i>Staphylococcus aureus</i>	25923	10 ³ -10 ⁴	Inhibited	-----

References

1. Murray, P. R., E. J. Baron, M. A. Pfaller, F. C. Tenover, and R. H. Tenover (eds.). Manual of clinical microbiology, 6th ed. American Society of Microbiology, Washington, D.C.
2. Anderson, N.L., et al. *Cumitech 3B; Quality Systems in the Clinical Microbiology Laboratory*, Coordinating ed., A.S. Weissfeld. American Society for Microbiology, Washington, D.C. (2005).
3. Isenberg, H.D. *Clinical Microbiology Procedures Handbook*, Vol. I, II & III. American Society for Microbiology, Washington, D.C.
4. *The United States Pharmacopeia*, XXII, (1990).