TINSDALE AGAR BASE TM 450

For selective isolation and differentiation of *Cornybacterium diptheriae*

Composition

Ingredients	Gms/Ltr.
Peptone digest of animal tissue	20.00
Agar	15.00
Sodium chloride	5.00
L-Cystine	0.24
Sodium thiosulphate	0.43

* 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 40.70gms in 100ml distilled water to make a double strength base. Gently heat to boiling with gentle swirling and dissolve the medium completely. **DO NOT AUTOCLAVE**. Mix well and allow cool to 50°C and aseptically add 1vial content of Diphtheria Virulence Supplement (TS 059). Pour into sterile plates to increase the selectivity of medium.

Appearance: Light straw colour, clear to slightly opalescent gel
pH (at 25°C): 7.9 ± 0.2

Principle

TINSDALE AGAR BASE is used selective isolation and differentiation of *Cornybacterium diptheriae*. Peptone digest of animal tissue provide nitrogen, vitamins and amino acids. Sodium chloride maintains osmotic balance of the medium. Agar is the solidifying agent. L - Cystine and Sodium thiosulphate are substrates used for the production of H_2S. Potassium tellurite, small amount of Sodium thiosulphate and Serum present I supplement contains essential growth factors. Due to the production of H_2S the potassium tellurite (present in the supplement) is reduced to a metallic tellurite and forms a dark (black to brown) halo surrounding the colony. Potassium tellurite also inhibits the gram negative bacteria and most of the upper respiratory tract normal flora. Do not incubate the plates in 5-10% CO_2 as it retards the development of characteristic halos.

Interpretation

Cultural characteristics observed after inoculating (10^3CFU / ml), on incubation at 35 ± 2ºC for 24 - 48 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Appearance of colonies
Cornybacterium diphtheria biotype *gravis*	8028	10^3	Good	Black small colour colonies
Cornybacterium diphtheria biotype *intermedius*	8032	10^3	Good	Pale brown colonies which forms halos after 36 hours of incubation period
Haemophilus influenzae	49766	10^3	Good	Small dark brown colonies appears without halos, no discoloration of the medium

Neisseria gonorrhoeae	19424	10^3	Good	Small dark brown colonies appears without halos, no discoloration of the medium
Proteus vulgaris	6380	10^3	Good	Small black colonies showing characteristic odour and morphology

References

1. G.F. Tinsdale, J. Path. and Bacteriol., 59, 461 (1955).
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3. S. Moore Mary and I. Parsons Eliz. *J. Infect. Dis*. 102. 88-91. (1958).
4. Lennette and others (Eds.), Manualof Clinical Microbiology, 4th ed. ASM. (1985).
5. H.D. Isenberg, Clinical microbiology procedures handbook, American Society for Microbiology, Washington D.C. (1992).