

# Tinsdale Agar

Medium used for the isolation and identification of *Corynebacterium diphtheriae*.

## • CONTENTS (Liter)

Proteose Peptone No.3	20.0 g
Sodium Chloride	5.0 g
Yeast Extract	5.0 g
L-Cystine	0.24 g
Agar	15.0 g
Final pH = 7.4 ± 0.2 at 25°C	

## • PROCEDURE

Suspend 45.24 G of powder in 890 mL of distilled or deionized water. Heat to boiling until completely dissolved. DO NOT AUTOCLAVE. Cool to 45 - 50°C in water bath. Aseptically add 2 vials of Tinsdale supplement (MB-T0619). Mix well. Pour into petri dishes.

### Tinsdale supplement

1 vial content (each vial is sufficient for 500 mL of medium)

Horse Serum	50 mL
Potassium Tellurite	0.1725 g
Sodium Thiosulfate	0.2125 g

## • INTERPRETATION

Tinsdale Agar is a medium used for the isolation and identification of *Corynebacterium diphtheriae*. Proteose peptone No.3 and yeast extract are the nitrogen and vitamin sources. Sodium chloride maintains the osmotic balance. L-cystine and sodium thiosulfate are the H<sub>2</sub>S indicator. Agar is the solidifying agent. Horse serum provides essential growth factors. The dark halo of *Corynebacterium diphtheria* is produced by of H<sub>2</sub>S reduced from potassium tellurite. Also, potassium tellurite serves as a selective agent. Further biochemical tests may be necessary to distinguish between *C. diphtheriae* and *C. ulcerans* due to similar characteristics on this medium.

## • TECHNIC

Inoculate the specimen using a sterile loop to the medium. Incubate at 35 ± 2°C for 24 - 48 hours. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous

Color: light beige

### Prepared medium

Appearance : slightly opalescent

Color: light amber

Incubation conditions: 35 ± 2°C / 24 - 48 hours

Microorganism	ATCC	Growth	Characteristics
<i>Corynebacterium diphtheriae</i>	11913	good	brown to black colonies with halo
<i>Staphylococcus aureus</i>	25923	partially inhibited	black colonies without halo
<i>Streptococcus pyogenes</i>	19615	partially inhibited	brown to black colonies without halo
<i>Klebsiella pneumoniae</i>	13883	inhibited	-

## • STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at 2 - 8°C.

## • REFERENCES

1. Microbiology, Washington, D.C.
2. Funke and Bernard. 1999. In Murray, Baron, Pfaller, Tenover and Tenover (ed.), Manual of clinical microbiology, 7th ed. American Society for Microbiology, Washington, D.C.
3. Tinsdale. 1947. J. Pathol. Bacteriol. 59:461.
4. Billings. 1956. An investigation of Tinsdale Tellurite medium: its usefulness and mechanisms of halo-formation. M.S. thesis. University of Michigan, Ann Arbor, Mich.
5. Moore and Parsons. 1958. J. Infect. Dis. 102:88.

## • PACKAGE

Cat. No : MB-T1501 Tinsdale Agar	500 G
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