



Thiosulfate Citrate Bile Salts Sucrose Agar, TCBS Agar | AS-1358

Used for the isolation and selective cultivation of *Vibrio cholerae* and other enteropathogenic vibrios.

A selective and differential culture medium known as TCBS Agar was developed specifically for the purpose of isolating and identifying *Vibrio* species, particularly cholera. The medium ingredients promote biochemical differentiation and selective development. Essential nutrients are supplied by peptone, yeast extract, sodium citrate, sodium thiosulfate, and ox bile, while at the same time they prevent the formation of Gram-positive bacteria. A sulfur source is sodium thiosulfate, while an indication of hydrogen sulfide is ferric ammonium citrate. One fermentable carbohydrate that contributes to the varied colors of colonies is sucrose. *Vibrio cholerae* and *Vibrio alginolyticus* are examples of sucrose-fermenting *Vibrio* species that form yellow colonies because of acid generation, while *Vibrio parahaemolyticus* and other sucrose-nonfermenting species create blue-green colonies. The growth of non-*Vibrio* microbiota is successfully suppressed by the inhibitory characteristics of TCBS agar, which enriches for the target species.

Composition (gr/L)

Yeast Extract	5
Proteose Peptone NO.3	10
Sodium citrate	10
Sodium thiosulfate	10
Ox gall	8
Sucrose	20
Sodium chloride	10
Ferric Ammonium Citrate	1
Bromothymol Blue	0.04
Agar	15
Final pH at 25°C	8.6 ± 0.2

Preparation

Dissolve 89 g of the powder into 1 liter distilled water. Heat with frequent agitation to boil for 1 minute. Mix well to completely dissolve the powder. Cool to 45 - 50°C and use immediately. DO NOT AUTOCLAVE.

Quality Control

Dehydrated Appearance: Light tan with greenish cast, free-flowing, homogeneous.
Prepared Appearance: Green, slightly opalescent.
Reaction of 8.9% Solution at 25°C: pH 8.6 ± 0.2

Microbial Test Results

Incubate at 35 ± 2 °C for 18 to 24 hours. For inoculation using fresh cultures of *E. coli* in TSB and *Vibrios* in BHI.



Organism (ATCC)	Recovery	Colony color
<i>Escherichia coli</i> (25922)	None	-
<i>Vibrio alginolyticus</i> (17749)	Good	Yellow
<i>Vibrio cholerae</i> El Tor (14033)	Good	Yellow
<i>Vibrio parahaemolyticus</i> (17802)	Good	Blue green

Storage

Keep the container at 15-30 °C and prepared medium at 2-8 °C.