TCBS Agar - Selective Media

Intended Use
TCBS Agar-Selective Media is recommended for the selective isolation of *Vibrio cholerae* and other enteropathogenic Vibrios.

Summary
Thiosulfate Citrate Bile Sucrose Agar proposed by Nakanishi, modified by Kobayashi *et al.*, is used for the isolation and selective cultivation of *Vibrio cholerae* and other enteropathogenic vibrios (*V. parahaemolyticus*, NAG vibrios). This culture medium complies with the recommendations of the World Health Organization WHO and the APHA.

Principle
The high concentrations of thiosulfate and citrate and the strong alkalinity of this medium largely inhibit the growth of *Enterobacteriaceae*. Oxgall and cholate suppress primarily enterococci. Any coliform bacteria, which may grow, cannot metabolize sucrose. Only a few sucrose-positive *Proteus* strains can grow to form yellow, vibrio-like colonies. The mixed indicator thymol blue-bromothymol blue changes its colour to yellow, when acid is formed, even in this strongly alkaline medium.

Formula*

Ingredients	g/L
Peptone, special	10.0
Yeast Extract	5.0
Sodium Citrate	10.0
Sodium Thiosulphate	10.0
Sodium Cholate	3.0
Oxgall	5.0
Sucrose	20.0
Sodium chloride	10.0
Ferric Citrate	1.0
Bromothymol Blue	0.04
Thymol Blue	0.04
Agar	15.0
Final pH (at 25°C)	8.8 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Clinical samples; Food samples; Water samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 89.08 g of the powder in 1000 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely. DO NOT AUTOCLAVE.
3. Cool to 50°C and pour into sterile petridishes.

Quality Control

Dehydrated Appearance: Cream to yellow coloured with tan cast, homogeneous, free flowing powder.
Prepared Appearance: Green coloured, slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed after an incubation of 18-24 hours at 35-37°C.

Organism (ATCC)	Growth	Colour of Colony
Vibrio cholerae (14748)	Good	Yellow
Vibrio parahaemolyticus (MTCC 451)	Good	Blue green
Vibrio fluvialis (ATCC 33809)	Good	Yellow
Vibrio vulnificus (ATCC 29306)	Good	Greenish Yellow
Escherichia coli (ATCC 25922)	Inhibited	-
Enterococcus faecalis (ATCC 29212)	Inhibited	-
Shigella flexneri serotype 2b (12022)	Inhibited	-

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

References

1. Nakanishi, 1963, Modern Media, 9:246.
2. Kobayashi, Enomoto, Sakazaki and Kuwahara, 1963, Jap. J. Bacteriol; 18: 387.
3. Downes and Ito (ed.) 2001, Compendium of Methods for The Microbiological Examination of Foods, 4th edition, APHA Washington DC.
4. Greenberg AE; Clesceri LS and Eaton AD (Eds), 1998, Std Methods for The Examination of Water and Wastewater, 20th edition, APHA, Washington, DC.
5. US Food and Drug Adm; 1998, Bacteriological Analytical Manual, 8th Ed; Rev. A, AOAC, International, Gaithersburg, Md.
6. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201200020500	Dehydrated Culture Media	500 g