

Thiosulfate Citrate Bile and Sucrose Agar (TCBS) Agar

Product No.	Product Category	Specification
HCM020	Dehydrated Culture Medium	500g/bottle

Intended Use

For the cultivation of various fastidious, pathogenic microorganisms including yeasts and molds.

Principle and Interpretation

This culture medium contains the selective components bile salts, thiosulfate, citrate and are latively high pH of 8.6. The high concentrations of thiosulfate and citrate and the strong alkalinity of this medium largely inhibit the growth of Enterobacteriaceae. Ox bile and cholate suppress primarily enterococci. Differentiation is based on sucrose fermentation, detected by the pH indicators, and H₂S production from thiosulfate. The combination of thiosulfate as a reactive compound with an iron salt as an indicator causes H₂S-positive colonies to become black in color. Vibrio species do not produce H₂S but, depending on the species, may ferment sucrose .Any coliform bacteria, which may grow, cannot metabolize sucrose. Only a few sucrose-positive Proteus strains can grow to form yellow, vibrioid-like colonies. The mixed indicator thymol blue bromothymol blue changes its color to yellow, when acid is formed, even in this strongly alkaline medium. Peptone and yeast extract allow good growth and agar is the solidifying agent.

Formulation

Ingredients	/liter
Peptone	10.0g
Yeast extract	5.0g
Sodium citrate	10.0g
Sodium thiosulfate	10.0g
Iron (III) citrate	1.0g
Sodium cholate	10.0g
Dried bovine bile	8.0g
Sucrose	20.0g
Bromothymol blue	0.04g
Thymol blue	0.04g
Agar	15.0g
pH8.6±0.2 at 25°C	

Preparation

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Technical Data Sheet



Dissolve 89.0 g in 1 liter of purified water. Heat in boiling water and agitate frequently until completely dissolved. Do not autoclave!.

Quality Control

Cultural characteristics observed after incubation at 35-37°C for 24hours

Quality control strains	Growth
<i>Vibrio parahaemolyticus</i> ATCC17802	Good, green colonies
<i>Vibrio cholerae</i> VBO	Good, yellow colonies
<i>Escherichia coli</i> ATCC25922	total inhibition

Storage and Shelf Life

2-30°C, keep container tightly closed, avoid direct sunlight.

Use before expiry date on the label.

Precautions

1. When weighing the dehydrated medium, please wear masks to avoid causing respiratory system discomfort
2. Keep container tightly closed after using to prevent clumping.

Waste Disposal

Microbiological contamination was disposed by autoclaving at 121°C for 30 minutes.

Revision

On June 14, 2024

References

ISO 21872

BAM Media M147

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