

TCBS Agar

Catalog : HB4130-5-250

TCBS Agar is used for the selective isolation of *Vibrios* from a variety of clinical material, water and foods.

Approximate Formula:

Ingredients	gm/liter	Ingredients	gm/liter
Yeast Extract	5.0	Sodium Chloride	10.0
Proteose Peptone	10.0	Ferric Ammonium Citrate	1.0
Sodium Thiosulfate	10.0	Bromothymol Blue	0.04
Sodium Citrate	10.0	Thymol Blue	0.04
Oxgall	8.0	Agar	15.0
Sucrose	20.0		
Final pH 8.6±0.1 at 25°C			

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 89.0 g of the medium in one liter of distilled water or deionized water. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder. When cooling to 50°C, pour into petri dishes. DO NOT AUTOCLAVE.

Principle and Interpretation:

TCBS Agar is highly selective for the isolation of *Vibrios*. Bile salts inhibits the growth of gram-positive bacteria. Sodium thiosulfate serves as a sulfur source and, in combination with ferric ammonium citrate, detects hydrogen sulfide production. Sucrose is included as a fermentable carbohydrate for the metabolism of *Vibrios*. The alkaline pH of the medium enhances the recovery of *Vibrios cholerae*. Thymol blue and bromthymol blue are included as indicators of pH changes. Agar is the solidifying reagent.

Appearance:

Dehydrated medium is a free-flowing light grey powder. The prepared medium is a kind of blue-green gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

TCBS Agar must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 36±1°C for 18-24 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
<i>Vibrio parahaemolyticus</i>	ATCC 17802	20-200	luxuriant	≥20%	Blue-green bamboo hat-like colonies, H ₂ S-
<i>Vibrio alginolyticus</i>	ATCC 33787	20-200	luxuriant	≥20%	Yellow colonies, H ₂ S-
<i>Escherichia coli</i>	ATCC 25922	100-1000	inhibited	<1%	/
<i>Staphylococcus Aureus</i>	ATCC 25923	100-1000	inhibited	<1%	/
<i>Proteus vulgaris</i>	ATCC 13315	100-1000	Poor/ inhibited	<1%	Center black and edge yellow colonies, H ₂ S +

References:

- GB4789.28-2013 People's Republic of China food safety national standard food microbiology test medium and reagent quality requirements.
- GB/T5750.12-2006 People's Republic of China Standard examination Methods for drinking water--Microbiological parameters.
- Downes and Ito. 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
- Eaton, Rice and Baird (ed.). 2005. Standard methods for the examination of water and wastewater, 21st ed, online. American Public Health Association, Washington, D.C.
- Murray, Baron, Jorgensen, Landry and Pfaller (ed.). 2007. Manual of clinical microbiology, 9th ed. American Society for Microbiology, Washington, D.C.