

TSC Agar Base

Catalog : HB0253-91-250

TSC Agar Base is used for the isolation and enumeration of *Clostridium perfringens* in foodstuffs, clinical specimens and other materials.

Approximate Formula:

Ingredients	gm/liter
Tryptose	15.0
Peptic Digest of Soya Bean	5.0
Yeast Extract	5.0
Sodium Disulfite	1.0
Ammonium Ferric Citrate	1.0
Agar	15.0
Final pH 7.6±0.2 at 25°C	

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

Directions:

Suspend 47.0g of the medium in one liter of distilled water or deionized water. Mix well and heat with frequent agitation to completely dissolve the powder. Dispense 250ml medium into 500ml flasks. Sterilize in an autoclave at 121°C (15 lbs.) for 15 minutes. When cooling to approx 50°C, add 20ml of filtration sterilized 0.5% D-cycloserine solution or 5pcs HB0253-91a to each 250ml medium. Mix thoroughly.

Principle and Interpretation:

Tryptose, Peptic digest of soya bean and Yeast extract provide the necessary nitrogen compounds, carbon and vitamins for the growth of bacteria. The H₂S-positive bacteria reduce the sulfite (from Sodium disulfite) in the culture medium to sulfide, which forms a black salt with ammonium ferric citrate. D-Cycloserine inhibits the accompanying bacterial flora. Agar is the solidifying agent.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellow transparent 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:

TSC Agar Base 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 20-24 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
<i>Clostridium perfringens</i>	ATCC 13124	20-200	Luxuriant	≥70%	Black colonies
<i>Clostridium difficile</i>	ATCC 43593	> 10 ³	Inhibited	/	/

References:

1. International Organization for Standardization (ISO), Meat and meat products: Enumeration of *Clostridium perfringens*, Draft ISO/TC 34/SC 6 (1978)
2. T.J. Easterbrook, P.A. West, Isolation and enumeration of sulphite-reducing *Clostridium* spores and Group D faecal streptococci from oysters, J. Appl. Bact. 62, 413 (1987)
3. D.P. Sartory, Membrane filtration enumeration of faecal clostridia and *C. perfringens* in water, Wat.Res. 20, 1255 (1986)
4. American Public Health Association, Compendium of methods for the microbiological examination of foods, 3rd (1992)
5. D.P. Sartory, M. Field, S.M. Curbishley, A.M. Pritchard, Evaluation of two media for the membrane filtration enumeration of *Clostridium perfringens* from water, Appl. Microbiol. 27 (6), 323-327 (1998)