Product :
ARGININE GLUCOSE SLANT AGAR (AGS)

Specification

Diferential solid medium used for the presuntive identification of *Vibrio* ssp.

Formula * in g/L

Peptone	5,00	Ammonium ferric citrate	0,50
Tryptone	10,00	Sodium thiosulfate	0,30
Yeast extract	3,00	Bromocresol purple	0,02
Sodium chloride	20,00	Agar	13,50
D(+)Glucose	1,00		
L-Arginin HCl	5,00	pH final a 25 ºC	6,8 ± 0,2

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

Directions

Dissolve 58,32 g of powder in 1 L of distilled water. Bring to the boil. Dispense in tubes and sterilize in the autoclave at 121°C for 10 minutes. Let it solidify with short slant and plenty of butt.

Description

The Bacteriological Analytical Manual FDA recommends the use of this medium in parallel with the Kligler Agar (KIA) or Triple Sugar Iron Agar (TSI) for the early presumptive differentiation between most species of *Vibrio, Aeromonas spp ., Plesiomonas shigelloides* and other bacteria.

The peptone and tryptone are the source of nitrogen and energy. Yeast extract provides vitamins and growth factors, while glucose is the carbon source. Salt in high concentration provides for a suitable osmotic pressure and slightly halophilic marine organisms. Thiosulfate-citrate is the detector system for the production of sulphide and is bromocresol purple pH indicator. Agar-agar is the gelling agent

AGS media formulation according to the BAM differs from the classical to the hydrolysis of arginine (ISO Standard 21872 -1 and 21872-2:2007) in most nutritional richness and the inclusion of indicators of H2S production, but above all at high salt concentration.

Technique

Established protocols for isolation and identification of pathogenic vibrios prescribed enrichment in alkaline peptone water, isolation on a selective agar (TCBS or Cellobiose-polymyxin-colistin), a purification step on a nonselective saline agar (T1N1 or T1N2) and from the colonies obtained go to the stage of primary identification and confirmation (serologic, biochemical and toxicogenic).

The AGS Agar is inoculated from colonies purified by a streak on the surface and a stab in the butt. The tubes are incubated with loose cap at 37 ± 1 ° C for 21 ±3 hours.

Note: longer incubation times may cause changes in biochemical tests (72h).

Quality control

Incubation temperature: 37 ºC ±1 **Incubation time:** 21 h ±3 h

Inoculum: Stab the butt and streak the slant. Note: ALK(Purplish); Ac (YelloWis); H2S (+) = Black.

Microorganism	Growth	Remarks
Vibrio furnissii NCTC® 11218	Good	Slant:ALk; Butt:Ac; H2S (-)
Vibrio parahaemolyticus NCTC® 10885	Good	Slant:ALk; Butt:Ac; H2S (-)
Vibrio fluvialis ATCC® *33809*	Good	Cuña:ALk; Fondo:ALK; H2S (-)
Vibrio alginolyticus ATCC® 17749	Good	Slant:ALk; Butt:Ac; H2S (-)

References

ELLIOT, E.L., C.A. KAYSNER, L. JACKSON y M.L. TAMPLIN (1998) Chapter 9. Vibrio cholerae, V. parahaemolyticus, V. vulnificus and other Vibrio spp. FDA Bacteriological Analytical Manual. 8th ed. Rev A. AOAC International. Gaithersburg. MD.

· ISO 21872-1 Technical Specification (2007) Microbiology of Food chain- Horizontal method for the detection of potentially enteropathogenic Vibrio spp. - Part 1: Detection of *Vibrio parahaemolyticus and Vibrio cholerae and Vibrio vulnificus.*

KAYSNER, C.A. y A. de PAOLA (2001) Vibrio, en Compendium of Methods for the Microbiological Examination of Foods 4th ed by F.P. Downes & K. Ito. APHA. Washington DC.

MURANO, E.A, y J.A. HUDNALL (2001) Media, Reagents and Stains, en Compendium of Methods for the Microbiological Examination of Foods 4th ed by F.P. Downes & K. Ito. APHA. Washington DC.

SOLOMON, H.M. y R.I. MERKER (1998) Appendix 3. Media and Reagents. FDA Bacteriological Analytical Manual. 8th ed. Rev A. AOAC International. Gaithersburg. MD.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 ºC to 30 ºC).