

89916 Modified Lauryl Sulfate Tryptose Broth acc. to ISO/TS 22964

Modified Lauryl Sulphate Tryptose Broth is recommended by ISO Committee as selective enrichment medium for *Enterobacter sakazakii* (Cronobacter spp.) from milk and milk products.

Composition:

Ingredients	Grams/Litre
Enzymatic Digest of plants & animal tissue	20.0
Sodium chloride	34.0
Lactose	5.0
Monopotassium phosphate	2.75
Dipotassium phosphate	2.75
Lauryl sulfate	0.1
Final pH 6.8 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:

Dissolve 64.6 grams in 1000 ml distilled water. Sterilize by autoclaving at 121°C for 15 minutes. Cool to 50°C and aseptically add rehydrated contents of 1 vial of Vancomycin Supplement (Cat. No. 75423). Mix well and distribute in tubes as desired so as to obtain final concentration of 10µg of vancomycin per ml of the medium.

Principle and Interpretation:

Cronobacter spp. formerly called *Enterobacter sakazakii* are widely distributed in nature occurring in fresh water, soil sewage, plants, vegetables, animal and human faeces. It is a gram-negative rod, associated with neonatal meningitis and sepsis (1). ISO recommends Modified Lauryl Sulphate Tryptose Broth for selective pre-enrichment of *Cronobacter* spp. (2,3).

Enzymatic digest of animal and plant tissue provides nitrogen, carbon compounds, vitamins and amino acids. Sodium chloride is for the osmotic balance and the potassium phosphates buffers the pH of the medium. Lactose is the fermentable sugar. Lauryl sulfate act as an inhibitor for non-coliforms.

Vancomycin inhibits all gram-positive bacteria and some non-gonococcal species of *Neisseria*.

Culture procedure:

1 gram of the sample is inoculated in 9 ml of Buffered Peptone Water (Cat. No. 08105) and incubated at 37°C for 18 hours. Then 0.1ml is transferred into Modified Lauryl Sulphate Tryptose Broth for selective enrichment of *Cronobacter* spp. The medium is incubated at 44°C for 24 hours and streaked on *Cronobacter* spp. *ChromoSelect* Agar, modified (Cat. No. 14703). Incubate the plates at 44°C for 24 hours and observe for typical blue-green colonies of *Cronobacter* spp. Further biochemically confirmation has to be done (3).



Cultural characteristics after 18-24 hours at 44°C (with vancomycin), when subcultured on *Cronobacter* spp. *ChromoSelect* Agar, modified.

Organisms (ATCC)	Inoculum	Recovery
<i>Cronobacter sakazakii</i> (12868)	50-100	+++
<i>Enterobacter aerogenes</i> (13048)	50-100	+++
<i>Escherichia coli</i> (25922)	50-100	+++
<i>Enterococcus faecalis</i> (29212)	$\geq 10^3$	-
<i>Staphylococcus aureus</i>	$\geq 10^3$	-

References:

1. H.L. Muytjens, H.C. Zanen, H.J. Sonderkamp et al., *J. Clin. Microbiol.*, 18, 115-120 (1983)
2. International Organization for Standardization Draft ISO/TS 22964: 2006 (E).
3. P.R. Murray, J.H. Baron, M.A. Pfaller, J.H. Jorgensen, R.H. Yolken, (Ed.), *Manual of Clinical Microbiology*, 8th Ed., American Society for Microbiology, Washington, D.C. Revision (2003)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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