

49522 M-Lauryl Sulfate Broth, Vegitone (Vegitone M-Lauryl Sulfate Broth)

A medium with plant peptone, free of any animal derived material. It is used for enumeration of *Escherichia coli* and coliforms in water, using membrane filter technique. It is recommended by ISO Committee under the specification ISO 9308-1:1990.

Composition:

Ingredients	Grams/Litre
Peptone (vegetable)	39.0
Yeast extract	6.0
Lactose	30.0
Sodium lauryl sulphate	1.0
Phenol red	0.2
Final pH 7.4 +/- 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.

Appearance of Powder: Light pink coloured, homogeneous, free flowing powder.
 Colour and Clarity: Red coloured, clear solution without any precipitate.

Directions :

Suspend 76.2 g in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense as desired and sterilize by steaming for 30 minutes on three consecutive days or by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle and Interpretation:

Burman (1) substituted bile salts with teepol in Membrane Enriched Teepol Broth, the membrane filtration test medium used to detect coliform organisms in water. Membrane or M-Lauryl Sulphate Broth recommended (2,3) is similar to M-Enriched Teepol Broth except teepol has been replaced by sodium lauryl sulphate.

The water samples are filtered through sterile membrane filter and then placed face upward on an absorbent pad saturated with M-Lauryl Sulphate Broth. Burman (5) recommended the following incubation temperatures and durations.

Unchlorinated waters:

Coliform organisms 4 hours at 30°C followed by 14 hours at 35°C
Escherichia coli 4 hours at 30°C followed by 14 hours at 44°C

Non-chlorinated organisms benefit from 4 hours incubation at 30°C but chlorinated organisms require 6 hours incubation at 25°C. After incubation, yellow colonies are formed which should be confirmed further.

Cultural characteristics after 18 hours at...

Organisms (ATCC)	Growth at 35°C	Growth at 44°C
<i>Escherichia coli</i> (25922)	+	+
<i>Enterobacter aerogenes</i> (13048)	+	-



References:

1. Burman N.P., 1967, Proc. Soc. Wat. Treat. Exam., 16:40.
2. Joint Committee of PHLS and the Standing Committee of Analysis, 1980, J. Hyg. Camb., 85:181.
3. Stanfied G. and Irving T.E., 1981, Water Research, 15:469.
4. International Organization for Standardization, 1990, Draft ISO/DIS:9308-1.
5. Burman N.P., 1967, Rec. Adv. in Bacteriological Examination of waters; C.H. Collins (Ed.), Butterworth, London.

Precautions and Disclaimer

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