07348 M-Lauryl Sulfate Broth (Membrane Lauryl Sulfate Broth)

M-Lauryl Sulfate Broth is used for enumeration of *Escherichia coli* and coliforms in water, using membrane filter technique, replacing Membrane Enriched Teepol Broth. It is recommended by ISO Committee under the specification ISO 9308-1: 1990.

Composition:

Ingredients	Grams/Litre
Peptic digest of animal tissue	39.0
Yeast extract	6.0
Lactose	30.0
Sodium lauryl sulfate	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. The appearance of the broth is red coloured and clear.

Directions:
Suspend 76.2 g 1000 ml distilled water. Boil to dissolve the medium completely. Dispense as desired and sterilise by steaming for 30 min. on three consecutive days or by autoclaving at 121°C for 15 min.

Inoculation:
The water samples are filtered through sterile membrane filter and then placed face upward on an sterile absorbent pad saturated with M-Lauryl Sulfate Broth.

Incubation:
Burman (6) recommended following incubation temperatures and periods.

Unchlorinated waters:

Coliform organisms	1. 4 hours incubation at 30°C 2. 14 hours at 35°C
Escherichia coli	1. 4 hours incubation at 30°C 2. 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 further confirmed.

Principle and Interpretation:
Burman substituted Teepol in place of bile salts in the Membrane Enriched Teepol Broth (1), a membrane filtration test medium used to detect coliform organisms in water. The replacement of bile salts by Teepol was previously mentioned by other microbiology groups (2,4,5). Membrane Lauryl Sulfate Broth is similar to Membrane Enriched Teepol Broth except that the selective agent Teepol has been replaced by 0.1% (w/v) sodium lauryl sulfate (7,8).
Peptic digest of animal tissue and yeast extract provide carbon, nitrogen, amino acids, minerals, vitamins, trace elements and other essential nutrients for growth. Lactose is the fermentable sugar. Phenol red is the indicator and change from red to yellow because of the acid production from the fermentation. Sodium lauryl sulphate inhibits gram-positive organisms.

Cultural characteristics after 24 hours at …

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

References:

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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.