

## Membrane Lauryl Sulphate Broth (NCM0039)

### Intended Use

Membrane Lauryl Sulphate Broth is used for the enumeration of coliforms in water and is not intended for use in the diagnosis of disease or other conditions in humans.

### Description

This medium superseded Membrane Enriched Teepol Broth when Shell Chemicals withdrew Teepol 610 from sale. Sodium lauryl sulphate was found to be an adequate reproducible substitute and this medium is recommended for the enumeration of coliform and organisms in water and sewage.

### Typical Formulation

Peptone	39.0 g/L
Yeast Extract	6.0 g/L
Lactose	30.0 g/L
Phenol Red	0.2 g/L
Sodium Lauryl Sulphate	1.0 g/L

Final pH: 7.4 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

### Precaution

Refer to SDS

### Preparation

1. Dissolve 76.2 grams of the medium in one liter of purified water.
2. Heat with frequent agitation to completely dissolve the medium if necessary.
3. Autoclave at 115°C for 10 minutes.

### Test Procedure

*E. coli* and coliform counts should be made on separate samples of water. The volumes should be chosen so as the number of colonies on the membrane lies between 10 and 100. With waters expected to contain less than 1 coliform per ml, a sample of 100ml should be filtered. The membrane filter should be placed face upwards on a pad soaked in Membrane Lauryl Sulphate Broth, after filtration. These membranes should be incubated in a container which does not allow evaporation to occur. Water tight metal containers placed in an accurate water bath are required for incubation of membranes at 44°C.

*E. coli* 4 hours at 30°C 14 hours at 44°C; Coliforms 4 hours at 30°C 14 hours at 35°C.

### Quality Control Specifications

**Dehydrated Appearance:** Red, clear solution.

### Minimum QC:

*Escherichia coli* WDCM 00013

### Results

No colonies:- assume a nil count. Small colonies of an intermediate color:- return to incubation for a full period.

***E. coli*:** Yellow-colored colonies from membranes incubated at 44°C should be sub-cultured to Lactose Broth NCM0005 and Tryptone Water to confirm gas and indole production respectively, after 24 hours incubation at 44°C.



# Technical Specification Sheet



**Coliform organisms:** Yellow colonies from membranes incubated at 35°C or 37°C should be sub-cultured into Lactose Broth NCM0005. After 48 hours incubation at 37°C a result should be obtained regarding the production of gas. Full details of the methodology can be found in The Bacteriological Examination of Water Supplies 71, 1969.

## **Expiration**

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing or appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

## **Limitations of the Procedures**

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

## **Storage**

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

## **References**

1. Burnham, N.P. (1967). Proc. Soc. Wat. Treat, Exam. 16:40.
2. Environment Agency: The Microbiology of Drinking Water (2002). Methods for the Examination of Water and Associated Materials. Windle Taylor, E. (1961) Glutamic acid medium, 40th Ann Rep. Div. Water Exam. Met. Water Board London pp 18-22.



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