#  A green and blue logo  Description automatically generated

**Lauryl Sulphate agar**

Used for enumeration of Escherichia coli and coliforms in water, using membrane filter technique.

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| REF: V.1/LS01.100 100 Gram REF: V.1/LS01.500 500 Gram | REF: V.1/LS01.250 250 Gram |

## CLINICAL SIGNIFICANCE

## Burman (1) substituted bile salts with teepol in Membrane Enriched Teepol Broth, the membrane filtration test medium used to detect coliform organisms in water. M-Lauryl Sulphate Agar is prepared by substituting teepol with sodium lauryl sulphate. The water samples are filtered through sterile membrane filter and then placed face upward on agar plates contains M-Lauryl Sulphate Agar. Burman (2) 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.

## METHOD PRINCIPLE

## Peptic digest of animal tissue and yeast extract act as a source of nitrogen, carbon and amino acids. Lactose is the source of fermentable carbohydrate. Phenol red serves as an indicator. Sodium lauryl sulphate inhibits gram positive bacteria

## MEDIA COMPOSITION

|  |  |
| --- | --- |
| Item | Formula perliter of medium |
| * Peptic digest of animal tissue
* Yeast extract
* Lactose
* Sodium Lauryl sulphate
* Phenol red
* Agar
 | 39.00 gm.6.000 gm.30.00 gm.1.000 gm.0.200 gm.15.00 gm. |

**PRECAUTIONS AND WARNINGS**

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

* Wearing personnel protective equipment (overall, gloves, glasses,).
* Do not pipette by mouth.
* In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
* Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the Lauryl Sulphate Agar material safety data sheet.

## STORAGE AND STABILITY

**Lab.Vie**. Lauryl Sulphate Agar should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

***Final pH 7.4 ± 0.2 at 25°C***

## PREPARATION

* Suspend 91.2 grams in 1000 ml distilled water.
* Adjust pH to 7.4 ± 0.2 at 25°C
* Heat to boiling to dissolve the medium completely.
* Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Deterioration**

The color of **Lab.Vie**. Lauryl Sulphate Agar is Light yellow to pink homogeneous free flowing powder. If there are any physical changes, discard the medium. Prepared medium is Red coloured clear to slightly opalescent gel forms in Petri plates, media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations.

**SPECIMEN**

Clinical samples: faeces

## EQUIPMENT REQUIRED NOT PROVIDED

* + Sterile Petri plates
	+ Incubator
	+ Autoclave

## QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **Lab.Vie**. technical support.

**Performance Characteristics**

Cultural characteristics observed after incubation at 35 - 37°C for 18 - 24 hours.

|  |  |  |
| --- | --- | --- |
| Organism | Growth at 35 – 37 °C | Growth at 44 °C |
| Enterobacter aerogenes ATCC 13048 | Luxuriant | inhibited |
| Escherichia coli ATCC 25922 | Luxuriant | Luxuriant |
| Bacillus subtilis ATCC 6633 | Inhibited | Inhibited |
| Staphylococcus aureus ATCC 25923 | Inhibited | Inhibited |
| Enterococcus faecalis ATCC 29212 | Inhibited | Inhibited |

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## REFERENCES

1. Burman N.P., 1967, Proc. Soc. Wat. Treat. Exam., 16:40.

2. Burman N.P., 1967, Rec. Adv. in Bacteriological Examination of waters; C.H. Collins (Ed.), Butterworth, London.

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| SYMBOLS IN PRODUCT LABELLING |
| IVD | For in-vitro diagnostic use | Number of <n> test in the pack |
| LOT | Batch Code/Lot number | Caution |
|  |  |  |
| REF | Catalogue Number | Do not use if package isdamaged |
|  | Temperature Limitation |  Consult Instruction for use |
|  | Expiration Date |  |
|  | Manufactured by |  |

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