ARENA BioScien

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Lauryl Sulphate agar

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

REF: BS.1/LS01.100.0100	100 Gram	REF: BS.1/LS01.250.0250	250 Gram
REF: BS.1/LS01.500.0500	500 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 per liter of medium
- Peptic digest of animal tissue	39.00 gm.
- Yeast extract	6.000 gm.
- Lactose	30.00 gm.
- Sodium Lauryl sulphate	1.000 gm.
- Phenol red	0.200 gm.
- Agar	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 adviceimmediately.
- 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 safetydata sheet.

STORAGE AND STABILITY

BioScien 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 oftemperature 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 ***BioScien*** 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 positiveand negative control included in each run. If control values are foundoutside the defined range, check the system performance. If control still out of range please contact ***BioScien*** 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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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 ***BioScien*** technical support.

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.

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