

LAURYL SULPHATE AGAR

Selective medium for the isolation and enumeration of coliforms from water

TYPICAL FORMULA	(g/l)
Casein Peptone	40.0
Yeast Extract	6.0
Lactose	30.0
Sodium Lauryl Sulphate	1.0
Phenol Red	0.2
Agar	15.0
Final pH 7.4 ± 0.2 at 25°C	

DESCRIPTION

LAURYL SULFATE AGAR is a selective medium used for the isolation and enumeration of *Escherichia coli* and other coliforms from water by the membrane filtration method.

PRINCIPLE

Casein peptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is the source of vitamins, particularly of the B-group. Lactose is a fermentable carbohydrate energy source. Sodium lauryl sulphate acts as selective inhibitor of sporulating aerobic bacteria while has no effect over coliforms which grow quickly and abundant from minute inocula. Phenol red is a pH indicator which turns from red to yellow when there is acid production from lactose. Agar is the solidifying agent.

PREPARATION

Suspend 92.2 g of powder in 1 liter of distilled water. Mix well and heat until completely dissolved. Autoclave at 121°C for 15 minutes. Cool to 45-50°C. Mix thoroughly and dispense in petri dishes.

TECHNIQUE

Membrane filtration method: filter a suitable volume of sample through a sterile membrane, then place membrane filter, inoculum side up, on the agar surface in the Petri dish. Incubate inverted plates at 35 ± 2°C for 24-48 hours.

Coliform enumeration and *E. coli* enumeration must be done in separate volume of samples. The volume to be filtered must be carefully selected to obtain 10-100 colonies on the membrane.

INTERPRETATION OF RESULTS

Observe and count the yellow colonies over yellow zones in the medium. Report the results as CFU/ml of filtered sample.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product must be used only by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

1. APHA 1998 Standard Methods for the examination of water and wastewater, 20th edition.



LIOFILCHEM® S.r.l.

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PRODUCT SPECIFICATIONS

NAME

LAURYL SULFATE AGAR

PRESENTATION

Dehydrated medium

STORAGE

10-30°C

PACKAGE

REF	Content	Packaging
610503	500 g	500 g of powder in plastic bottle

pH OF THE MEDIUM

7.4 ± 0.2

USE

LAURYL SULFATE AGAR is a selective medium used for the isolation and enumeration of *Escherichia coli* and other coliforms from water by the membrane filtration method

TECHNIQUE

Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM

Dehydrated medium

Appearance: free-flowing, homogeneous

Colour: beige to faint pink

Prepared medium

Appearance: clear

Colour: red

SHELF LIFE










4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
Inoculum for productivity: 10-100 CFU/ml
Inoculum for selectivity: 10⁴-10⁵ CFU/ml
Inoculum for specificity: ≤10⁴ CFU/ml
Incubation conditions: 18-24 h at 36 ± 1°C

Microorganism	ATCC	Growth	Features
<i>Escherichia coli</i>	25922	Good	Orange-Yellow Media. Yellow Colonies
<i>Salmonella typhimurium</i>	14028	Good	Red Media. Colorless Colonies
<i>Pseudomonas aeruginosa</i>	27853	Good	Red Media. Colorless Colonies
<i>Staphylococcus aureus</i>	25923	Inhibited	---
<i>Enterococcus faecalis</i>	19433	Inhibited	---

TABLE OF SYMBOLS

 Batch code	 Keep away from heat sources	 Manufacturer	 Use by	 Fragile, handle with care
 Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Consult instruction for use	



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