

## LAURYL SULFATE AGAR (FOR MEMBRANE FILTRATION)

**CAT N°: 1309**

Selective isolation and enumeration of coliforms

### FORMULA IN g/l

Casein Peptone	40.00	Sodium Lauryl Sulfate	1.00
Lactose	30.00	Phenol Red	0.20
Yeast Extract	6.00	Bacteriological Agar	15.00

**Final pH 7.4 ± 0.2 at 25°C**

### PREPARATION

Suspend 92.2 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C, mix well and dispense into plates. The prepared medium should be stored at 8-15°C. The color is red.

The dehydrated medium should be homogeneous, free-flowing and beige pink in color. If there are any physical changes, discard the medium.

### USES

LAURYL SULFATE AGAR is a selective medium used in the presumptive Coliforms detection Method in waters, dairy products, seafood and foods, according to APHA Standard Methods.

The Coliform group is both aerobic and anaerobic facultative, Gram-negative, non-spore forming rods which ferment lactose producing acid and gas at 35°C within 48 hours.

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 complex carbohydrate energy source. Sodium Lauryl Sulfate is the selective agent used to inhibit organisms other than Coliforms. Sporulating aerobic bacteria are completely inhibited. Phenol Red is a pH indicator. Bacteriological agar is the solidifying agent.

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

### MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 35 ± 2°C and observed after 24 - 48 hours.

Microorganisms	Growth	Colony Color
<i>Enterobacter aerogenes</i> ATCC 13048	Good	Yellow
<i>Escherichia coli</i> ATCC 25922	Good	Yellow
<i>Salmonella enteritidis</i> ATCC 13076	Good	Colorless
<i>Staphylococcus aureus</i> ATCC 25923	Inhibited	
<i>Enterococcus faecalis</i> ATCC 19433	Inhibited	
<i>Pseudomonas aeruginosa</i> ATCC 10145	Inhibited	

## BIBLIOGRAPHY

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

## STORAGE

Once opened keep powdered medium closed to avoid hydration.

