

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.

