



HiCrome M-Lauryl Sulphate Agar

M1569

HiCrome M-Lauryl Sulphate Agar is recommended for the differentiation and enumeration of *Escherichia coli* and other coliforms by a single membrane filtration technique

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	40.000
Yeast extract	6.000
Lactose	30.000
Phenol red	0.200
Sodium lauryl sulphate	1.000
Sodium pyruvate	0.500
Chromogen	0.200
Agar	10.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 87.9 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Mix well. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool the medium to 50°C and pour into sterile Petri plates.

Principle And Interpretation

HiCrome M-Lauryl sulphate Agar is a modification of the Lauryl Tryptose Broth, formulated by Mallman and Darby, (1). This chromogenic medium is recommended for the presumptive identification and differentiation of *Escherichia coli* and other coliforms by a single membrane filtration technique (2, 3). The incorporation of chromogen X-glucuronide and the dye phenol red favours the differentiation of *E. coli* and other coliforms on the basis of colour.

Peptic digest of animal tissue and yeast extract provide essential growth nutrients to the organisms. Lactose acts as a source of fermentable sugar while sodium lauryl sulphate inhibits organisms other than coliforms. The enzyme β-D-glucuronidase produced by *E. coli*, cleaves X-glucuronide, imparting a green colour to the colonies. Lactose fermentation is detected by phenol red indicator.

Quality Control

Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.0% Agar gel.

Colour and Clarity

Red coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 8.8% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

M1569: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Colour of Colony
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	green

<i>Klebsiella pneumoniae</i> ATCC 13883	50-100	good	yellow, mucoid
<i>Staphylococcus aureus</i> ATCC 25923	$\geq 10^3$	inhibited	
<i>Salmonella Enteritidis</i> ATCC 50-100 13076		good	pink

Storage and Shelf Life

Store dehydrated powder in tightly closed container and prepared medium at 2-8°C. Use before expiry period on the label.

Reference

- 1.Mallman and Darby, 1941, Am.J. Public Health, 31:127.
- 2.Sartory D.P. and Howard L, 1992, Lett Appl. Microbiol. 15:273-276.
- 3.Methods for Examination of Waters and Associated Materials, Environment Agency, 1998, Standing Committee of Analysts.

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