HiCrome™ M-Coliform Differential Agar Base

M1951

HiCrome™ M-Coliform Differential is a selective and differential agar recommended for the detection of coliform bacteria using membrane filtration technique.

Composition**

Ingredients	Gms / Litre
Peptone	5.000
Casein enzymic hydrolysate	10.000
Yeast extract	3.000
Lactose	12.500
Sodium deoxycholate	0.150
Aniline Blue	0.100
Chromogenic substrate	0.500
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 46.25 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45- 50°C. Aseptically add the rehydrated contents of one vial of Monensin Selective supplement (FD309). Mix well and pour into sterile Petri plates.

Principle And Interpretation

HiCrome™ M-Coliform Differential agar is based on coliform enumeration medium, M-FC Agar (1). This medium was modified for detection and enumeration of total coliforms by addition Monensin supplement to improve the recovery of injured coliforms (2).

Peptone, casein enzymic hydrolysate and yeast extract provides the essential nutrients and vitamins. Lactose is the fermentable carbohydrate. Monensin and sodium deoxycholate acts as selective agents, inhibiting Gram-positive bacteria. Aniline blue forms the indicator system of the medium.The chromogenic mixture induces *E.coli* contains to produce ß-glucuronidase and helps injured coliforms to grow in the presence of selective agents.

Quality Control

Appearance

Light yellow to greyish yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Pale blue, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 4.63% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

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

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony (on membrane filter)
Escherichia coli ATCC 25922	50-100	good-luxuriant	>=50%	blue
Proteus vulgaris ATCC 13315	50-100	good-luxuriant	>=50%	tan
Bacillus subtilis ATCC 6633	>=10^3	inhibited	0%	

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.Brodsky, M. H., P. Entis, A. N. Sharpe, and G. A. Jarvis. 1982.Enumeration of indicator organisms in foods using the automated hydrophobic membrane filter technique.J. Food Prod. 45:292-296.

2.Entis, P., and P. Boleszczuk. 1990. Direct enumeration of coliforms and *Escherichia coli* by hydrophobic grid membrane filter in 24 hours using MUG. J. Food Prot. 53:948-952.

Revision : 02/ 2017