90924 M-TEC ChromoSelect Agar

M-TEC ChromoSelect Agar is recommended by the U.S. Environmental Protection Agency (USEPA) for differentiation and enumeration of thermotolerant *E.coli* from water by membrane filtration technique.

Composition:

Ingredients	Grams/Litre
Proteose peptone	5.0
Yeast extract	3.0
Lactose	10.0
Sodium chloride	7.5
Dipotassium phosphate	3.3
Monopotassium phosphate	1.0
Chromogen	0.5
Sodium lauryl sulphate	0.2
Sodium deoxycholate	0.1
Agar	15.0
Final pH 7.3 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

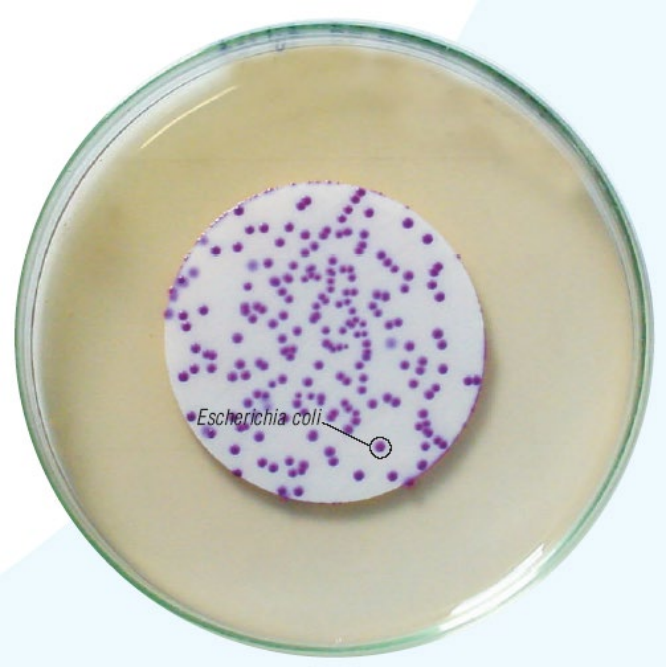
Appearance:	Light yellow coloured, homogeneous, free flowing powder.
Gelling:	Firm
Color and Clarity:	Light amber coloured clear to slightly opalescent gel forms in petri plates.

Directions:
Suspend 45.6 g in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 minutes. Cool to 45-50°C and pour into sterile petri plates.

Principle and Interpretation:
M-TEC ChromoSelect Agar is a chromogenic medium used for detection and enumeration of thermotolerant *E. coli* (TEC) in water by membrane filtration technique (1). It is a modification of the M-TEC Agar developed by Dufour (2). The modified medium contains the chromogen, X-glucuronide that is cleaved by the enzyme β-glucuronidase to yield glucuronic acid, produced by *E. coli* strains. This selectively imparts a purple-magenta colour to the colonies of *E. coli*. Proteose peptone and yeast extract provides essential nutrients along with carbonaceous, nitrogenous and Vitamin B complex nutrients. Lactose is the fermentable carbohydrate. Sodium chloride maintains osmotic equilibrium. Monopotassium phosphate and dipotassium phosphate provide strong buffering system to control the pH in the presence of fermentative action. Sodium lauryl sulphate and Sodium deoxycholate make the medium more selective by inhibiting gram-positive bacteria.

Cultural characteristics after 22-24 hours at 44.5 +/- 0.2°C.

Organisms (ATCC)	Growth	Color of Colony
Escherichia coli (25922)	+++	purple / magenta
Enterococcus faecalis (29212)	-	-
Klebsiella pneumoniae (13883)	++	colourless
Proteus mirabilis (25933)	++	colourless



References:
1. U.S. Environmental Protection Agency, Method 1603, Publication EPA-821-R-02-023 (2002)
2. Dufour, Strickland and Cabelli, Appl. Environ. Microbiol. 41, 1152 (1981)

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.