Michrom™ Chromogenic Coliform Agar with SLS

Intended Use
Michrom™ Chromogenic Coliform Agar with SLS is recommended for the simultaneous detection of *Escherichia coli* and total coliforms in water and food samples.

Summary
Michrom™ Chromogenic Coliform Agar with SLS is a selective medium recommended for the simultaneous detection of *Escherichia coli* and total coliforms in water and food samples.

Principle
Peptone special and sodium pyruvate provide essential growth nutrients to the organisms. The phosphates buffer the medium well. The medium composition helps even the sub-lethally injured coliforms to grow rapidly. Sodium lauryl sulphate inhibits Gram-positive organisms. The chromogenic mixture contains two chromogenic substrates. The enzyme ß-galactosidase produced by coliforms cleaves one chromogen, resulting in the salmon red colouration of coliform colonies. The enzyme ßglucuronidase produced by *E. coli*, cleaves X-glucuronide.
E. coli forms dark blue to violet coloured colonies due to cleavage of both the chromogens. The addition of L-Tryptophan improves the indole reaction, thereby increasing detection reliability in combination with the two chromogens. To confirm *E. coli*, add a drop of Kovac's reagent on the dark-blue to violet colony. Formation of cherry-red colour indicates positive reaction.

Formula*

Ingredients	**g/L**
Peptone, Special	3.0
Sodium Chloride	5.0
Dipotassium Hydrogen Phosphate	3.0
Potassium Dihydrogen Phosphate	1.7
Sodium Pyruvate	1.0
L-Tryptophan	1.0
Sodium Lauryl Sulphate	0.1
Chromogenic Mixture	0.2
Agar	12.0
Final pH (at 25°C)	6.8 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store below 8°C in tightly closed container, preferably in dessicators and use freshly prepared medium. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Food and Dairy samples; Water samples; Clinical samples

Specimen Collection and Handling
Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 27.00 g of the powder in 1000 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Add 5 mg/L novobiocin before autoclaving the medium, when a high number of Gram-positive accompanying bacteria are expected.

Quality Control

Dehydrated Appearance: Light yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Light yellow to light amber coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed after an incubation of 24 hours at 35°C-37°C (48 hours if necessary).

Organism (ATCC)	Growth	Colour of Colony	Indole Colony Production
Citrobacter freundii (8090)	Good	Light pink	Negative reaction
Escherichia coli (25922)	Good	Dark blue	Positive confirmation of red colour around the colony by addition of Kovac's reagent
Enterococcus faecalis (29212)	Inhibited	-	Negative reaction
Klebsiella pneumoniae (13883)	Good	Light pink	Negative reaction

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Precautions / Limitations

1. ß-glucuronidase is present in 97% of *E. coli* strains, however few *E. coli* may be negative.
2. Certain species of *Shigella* and *Salmonella* are ß-glucuronidase positive

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Frampton E. W., Restaino L. and Blaszko N., 1988, J. Food Prot., 51:402.
2. Kilian M. and Bülow P., 1976, Acta. Pathol. Microbiol. Scand., Sect. B, 84:245.
3. LeMinor L. and Hamida F., 1962, Ann. Inst. Pasteur (Paris), 102:267
4. Manafi M. and Kneifel W., 1989, Zentralbl. Hyg., 189:225.
5. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201130450100	Dehydrated Culture Media	100 g
201130450500	Dehydrated Culture Media	500 g