Michrom™ Enterococcus Agar

Intended Use
Michrom™ Enterococcus Agar is recommended for the chromogenic identification of *Enterococcus faecium* from faeces, sewage and water supplies.

Summary
Michrom™ Enterococcus Agar is recommended for the chromogenic identification of *Enterococcus faecium* from urine, faeces, soil, food, water, plants and animals. *E. faecium* is commonly found in the gastrointestinal tracts of humans. The resistance exhibited by *Enterococcus* species to various antimicrobials has led them to being a major cause of human infections including nosocomial infections. *E. faecalis* causes 80-90% of infection while *E. faecium* causes the majority of the remainder. The use of selective media for the isolation of Enterococci has been previously reviewed, including those containing chromogenic substrates and media containing cephalexin-aztreonam supplements.

Principle
Enterococcus species possess the enzyme ß-glucosidase, which specifically cleaves the chromogenic substrate to produce blue-coloured colonies. *E. faecium* ferment arabinose; and cleaves the chromogenic substrate present in the media to produce green coloured colonies along with yellow colouration to the medium. *E. faecalis* does not ferment arabinose and therefore retains the blue colour. Peptone special serves as a source of carbon, nitrogen and essential growth nutrients. Corn starch neutralizes the toxic metabolites while sodium chloride maintains the osmotic equilibrium. Phenol red serves as a pH indicator with arabinose being the fermentable carbohydrate.

Formula*

Ingredients	**g/L**
Peptone, Special	23.0
Corn Starch	1.0
Sodium Chloride	5.0
Arabinose	10.0
Phenol Red	0.1
Chromogenic Substrate	0.1
Agar	15.0
Final pH (at 25°C)	7.8 ± 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
Water and Waste Water samples; Clinical samples -Faeces, Urine

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 27.10 g of powder in 500 mL purified / distilled water.
2. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE.
3. Cool to 45°C-50°C and aseptically add sterile rehydrated contents of 1 vial of Enterococcus faecium Selective Supplement.
4. Mix well and pour into sterile petridishes.

Quality Control

Dehydrated Appearance: Light yellow to pinkish beige homogeneous free flowing powder.
Prepared Appearance: Red coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed with added Enterococcus faecium Selective Supplement after incubation at 35°C-37°C for 24-48 hours.

Organism (ATCC)	Growth	Colour of Colony
Escherichia coli (25922)	Inhibited	-
Enterococcus faecalis (29212)	Good	Blue
Enterococcus faecium (19434)	Good	Green
Enterococcus hirae (10541)	Good	Blue
Pseudomonas aeruginosa Strain Boston 41501 (27853)	Inhibited	-
Staphylococcus aureus subsp. *aureus* (25923)	Inhibited	-

Performance and Evaluation

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

1. Directions
2. Storage
3. Expiry

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. Skinner F. A. and Quesnel L. B., (Ed.), 1978, Streptococci. Academic Press, Inc. (London) Ltd., London, United Kingdom, p. 245-261
2. Chenoweth C., Schaberg D., The Epidemiology of Enterococci, Eur. J.Clin. Micorbiol. Infect. Dis., 9:80-89, 1990.
3. Moellering R. C., 1992, Clin. Infect. Dis. 14:1173.
4. Willinger B. and Manafi M., 1995, Lett. Appl. Microbiol.,20:300-302.
5. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201130480500	Dehydrated Culture Media	500 g