HiCrome Enterococcus faecium Agar Base

M1580

HiCrome Enterococcus faecium Agar Base is recommended for the chromogenic identification of *Enterococcus faecium* from faeces, sewage and water supplies.

Composition**

Ingredients	Gms / Litre
Peptone, special	23.000
Corn starch	1.000
Sodium chloride	5.000
Arabinose	10.000
Phenol red	0.100
Chromogenic substrate	0.100
Agar	15.000
Final pH (at 25°C)	7.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 27.1 grams in 500 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and aseptically add sterile rehydrated contents of 1 vial of Enterococcus faecium Selective Supplement (FD226). Mix well and pour into sterile Petri plates.

Principle And Interpretation

HiCrome Enterococcus faecium Agar is recommended for the chromogenic detection of *Enterococcus faecium* from urine, faeces, soil, food, water, plants and animals. *E.faecium* is commonly found in the gastrointestinal tracts of humans (1). The resistance exhibited by *Enterococcus* species to various antimicrobials has led them to being a major cause of human infections including nosocomial infections (2). *E.faecalis* causes 80-90% of infection while *E.faecium* causes the majority of the remainder (3). The use of selective media for the isolation of Enterococci has been previously reviewed, including those containing chromogenic substrates (4) and media containing cephalexin-aztreonam supplements. *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

Quality Control

Appearance
Light yellow to pinkish beige homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Red coloured, clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 5.42% w/v aqueous solution at 25°C. pH : 7.8±0.2

pH
7.60-8.00

Cultural Response
Cultural characteristics observed with added Enteroccus faecium Selective Supplement (FD226) after an incubation at 35-37°C for 24-48 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Cultural Response				
Escherichia coli ATCC 25922	>=10^3	inhibited	0%	
Enterococcus faecalis ATCC 29212	50-100	luxuriant	>=50%	blue
Enterococcus faecium ATCC 19434	50-100	luxuriant	>=50%	green
Enterococcus hirae ATCC 10541	50-100	luxuriant	>=50%	blue
Pseudomonas aeruginosa ATCC 27853	>=10^3	inhibited	0%	
Staphylococcus aureus ATCC 25923	>=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.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.

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