HiCrome Enterococcus faecium Agar Base

M1580

Intended use

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 purified / 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 (7). 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 (5). The use of selective media for the isolation of Enterococci has been previously reviewed, including those containing chromogenic substrates (8) 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

Type of specimen

Clinical samples : urine, faeces , Food samples , Water samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (6).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(1)

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precaution

In Vitro diagnostic use. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard

precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Some species may show poor growth due to nutritional variations
2. Slight colour variations may be observed depending on the utilization of the substrate by the organism.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

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 (00013*)	>=10^4	inhibited	0%	
Enterococcus faecalis ATCC 29212 (00087*)	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 (00026*)	>=10^4	inhibited	0%	
Staphylococcus aureus subsp.*aureus* ATCC 25923	>=10^4	inhibited	0%	

Storage and Shelf Life

Store below 2-8°C in a tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

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3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.

4. Jorgensen,J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical icrobiology, th dition. ol. .

5.Moellering R. C., 1992, Clin. Infect. Dis. 14:1173.

6. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

7.Skinner F. A. and Quesnel L. B., (Ed.), 1978, Streptococci. Academic Press, Inc. (London) Ltd., London, United Kingdom, p. 245-261

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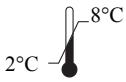
IVD — In vitro diagnostic medical device

CE Marking



Storage temperature

Do not use if package is damaged

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