Technical Data

Rapid HiEnterococci HiCynth™ Agar

MCD1414

Rapid Hi-Enterococci HiCynth™ Agar is recommended for the identification and differentiation of Enterococci from water samples.

Composition**

Ingredients	Gms / Litre
HiCynth™ Peptone No.1	10.000
Sodium chloride	5.000
Sodium azide	0.300
Chromogenic mixture	0.060
Polysorbate 80	2.000
Disodium hydrogen phosphate	1.250
Agar	15.000
Final pH (at 25°C)	7.5±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 33.61 gm 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. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Enterococci are commonly found in the faeces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to faecal pollution, the presence of Enterococci in water is an indication of faecal pollution and the possible presence of enteric pathogens. The Enterococci test is recommended as a measure of ambient fresh and marine recreational water quality. Epidemiological studies have lead to the development of criteria which can be used to promulgate recreational water standards based on established relationships between health effects and water quality. The significance of finding Enterococci in recreational fresh or marine water samples is the direct relationship between the density of Enterococci and the risk of gastrointestinal illness associated with swimming in water (1, 2). The Rapid HiEnterococci Agar allows for rapid identification and differentiation of Enterococci from water samples.

HiCynth™ Peptone No.1 supplies nitrogenous, carbonaceous compounds, long chain amino acids and other essential growth nutrients. Sodium chloride provides the osmotic balance for rapid growth of Enterococci. Sodium azide inhibits the accompanying microflora, especially the gram-negative organisms.The enzyme ß-D-glucosidase present in Enterococci cleaves the chromogenic substrate, resulting in a bblue green colour tofthe colonies.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Light amber coloured opalescent gel forms in Petri plates

Reaction
Reaction of 3.36% w/v aqueous solution at 25°C. pH : 7.5±0.2

pH
7.30-7.70

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Cultural Response				
Escherichia coli ATCC 25922	50-100	none to poor	<=10%	
Enterococcus faecalis ATCC 29212	50-100	good	40-50%	blue green
Pseudomonas aeruginosa ATCC 27853	50-100	none to poor	<=10%	
Staphylococcus aureus ATCC 25923	50-100	good	40-50%	colourless

Storage and Shelf Life
Store below 30°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 inorder 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.

Reference
1.Litsky W., Mallmann W. L., a Fifield C. W., 1953, Am. J. Pbl. Hlth.,43:873.
2.Manafi M., Sommer R., 1993, Wat. Sci. Tech. 27:271-274.
3.Rice E.W., Baird, R.B., Eaton A. D., Clesceri L. S. (Eds.), 2012, Standard Methods for the Examination of Water and Wastewater, 22nd ed., APHA, Washington, D.C.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
5. 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 Microbiology, 11th Edition. Vol. 1.

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