



*HiCrome Enterococci Broth

M1376

HiCrome Enterococci Broth is recommended for the identification and differentiation of Enterococci from water samples.

Composition**

Ingredients	Gms / Litre
Peptone, special	10.000
Sodium chloride	5.000
Sodium azide	0.300
Chromogenic substrate	0.040
Polysorbate 80	2.000
Disodium hydrogen phosphate	1.250
Final pH (at 25°C)	7.5±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 37.18 grams (double strength) or 18.59 grams (single strength) in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

HiCrome Enterococci Broth is formulated on the basis of the work carried out by Althous et al (1), Amoras (2), Litsky et al (3), and Manafi and Sommer (4) and Snyder and Lichstein (5). These media is recommended for the rapid detection of Enterococci from water samples. The presence of *Enterococcus* group, which is a subgroup of the faecal Streptococci, serves as a valuable bacterial indicator for determining the extent of faecal contamination (1, 6) and it is more specific than the detection of coliforms, which may originate from non-faecal sources. The enzyme β -glucosidase produced by Enterococci cleaves the chromogenic substrate, resulting in a bluish green colour.

The medium contains peptone special, which provides nitrogenous compounds and other essential nutrients. Sodium chloride maintains the osmotic balance of the medium. Sodium azide inhibits the accompanying microflora, especially gram-negative organisms. Polysorbate 80 acts as a source of fatty acids.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured, clear solution in tubes

Reaction

Reaction of 1.86% w/v aqueous solution at 25°C. pH : 7.5±0.2

pH

7.30-7.70

Cultural Response

M1376: Cultural characteristics observed after an incubation at 35- 37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Colour of Medium
<i>Escherichia coli</i> ATCC 25922	50-100	none-poor	light yellow

<i>Enterococcus faecalis</i> ATCC 50-100 29212	luxuriant	Light blue-green
<i>Pseudomonas aeruginosa</i> 50-100 ATCC 27853	none-poor	light yellow
<i>Staphylococcus aureus</i> 50-100 ATCC 25923	none-poor	light yellow

Storage and Shelf Life

Store dehydrated powder and prepared medium at 2-8°C. Use before expiry period on the label.

Reference

1. Althous, H., Dott, W., Havemeister, G, Muller, H.E, a. Sacre, C., 1982, Zbl. Bakt. Hyg. I. Abt. Orig. A. 252:154-165.
2. Amoras I, 1995, Poster presentation congress of Spanish Society of Microbiology, Madrid.
3. Litsky, W., Mallmann, W.L., a Fifield, C.W. 1953, Amer. J. Pbl. Hlth. 43:873-879.
4. Manafi M., and Sommer R, 1993, Wat. Sci. Tech. 27:271-274.
5. Snyder M.L., and Lichstein, H.C. 1940, J. Infect. Dis. 67. 113-115
6. Standard Methods for the Examination of Water and Wastewater, 20th Edition, Edited by L.S. Clesceri, A.E. Greenberg and A.D. Eaton, Published by APHA, AWWA and WEF (1998).

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