

Technical Data Sheet

Enterococci Broth

Chromocult®, Used as a test for Enterococci and their selective enrichment in the bacteriological water examination.
1102940500

Mode of Action

The presence of enterococci (as well as the less frequent D-Streptococci), which account for most of the fecal Streptococci, serves as an indicator for fecal contamination. This is, in some respect, more specific than the presence of coliforms which may originate from non-fecal sources, whereas enterococci can come only from feces of human or animal origin.

The concentration of sodium-azide present in this medium largely inhibits the growth of the accompanying, especially the Gram-negative microbial flora while sparing the enterococci.

The substrate X-GLU (5-bromo-4-chloro-3-indolyl-β-D-glucopyranoside) is cleaved, stimulated by selected peptones, by the enzyme β-D-glucosidase which is characteristic for Enterococci. This results in an intensive blue-green color of the broth. Azide, at the same time, prevents a false positive result by most other β-D-glucosidase positive bacteria. Therefore, the color change of the broth largely confirms the presence of Enterococci and D-Streptococci in water.

Typical Composition (g/L)

Peptones 8.6; Sodium chloride 6.4; Sodium azide 0.6; 5-bromo-4-chloro-3-indolyl-β-D-glucopyranoside (X-GLU) 0.04; Tween® 80 2.2.

Preparation

Suspend 18 g (single-strength) or 36 g (double-strength) in 1 liter of demineralized water, dispense into suitable vessels, and autoclave (15 minutes at 121 °C).

pH: 7.5 ± 0.2 at 25 °C.

The prepared broth is clear and yellowish.

Experimental Procedure

Small sample volumes (up to 1 mL) can be added to the single-strength broth. Larger volumes (10 mL or more) should be diluted with the aliquot volume of double-strength broth to give the normal concentration.

Incubation: 18 - 24 hours at 35 °C to 37 °C. If incubated at room temperature (20 °C to 25 °C) the incubation time is prolonged to 48 hours.

Storage

Store at 15 °C to 25 °C, dry and tightly closed. Do not use clumped or discolored medium. Protect from UV light (including sunlight). For *in vitro* use only.

Quality Control

Test strains	Growth	Color change to blue-green
<i>Enterococcus faecalis</i> ATCC 11700	fair / good	+
<i>Enterococcus faecalis</i> ATCC 19433	fair / good	+
<i>Enterococcus faecium</i> ATCC 6057	fair / good	+
<i>Streptococcus bovis</i> DSMZ 20480	not limited	+
<i>Staphylococcus aureus</i> ATCC 25923	fair / good	-
<i>Aeromonas hydrophila</i> DSMZ 30187	none / poor	-
<i>Escherichia coli</i> ATCC 25922	none / poor	-
<i>Pseudomonas aeruginosa</i> ATCC 27853	none / poor	-

Evaluation

A strong blue-green color of the broth indicates the presence of Enterococci and D-Streptococci. The observed turbidity from growth may be very weak.



No growth



Enterococcus faecalis

Literature

ALTHAUS, H., DOT, W., HAVEMEISTER, G., MÜLLER, H.E., a. SACRÉ, C.: Faecal streptococci as indicator organisms of drinking water. – Zbl. Bakt. Hyg., I. Abt. Orig. A 252; 154-165 (1982).

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Ordering Information

Product	Cat. No.	Pack size
Chromocult® Enterococci Broth	1102940500	500 g

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