45183 Enterococcus Selective Agar

Selective medium for enumeration and detection of enterococci acc. to Slanetz and Bartley (1957) in water and sewage with the membrane-filter technique and in the direct application procedure in food acc. to Burkwall and Hartman (1964).

Composition:

Ingredients	Grams/Litre
Tryptose	20.0
Yeast extract	5.0
D(+)-Glucose	2.0
Disodium hydrogen phosphate monohydrate	4.0
Sodium azide	0.4
2,3,5-Triphenyltetrazolium chloride (TTC)	0.1
Agar	10.0
Final pH 7.2 ± 0.2 (at 25°C)	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-
sealed containers at 2-25°C.

Directions:
Dissolve 42 g in 1 litre distilled water. Sterilize in a steamer without excess pressure for 30 minutes. Do NOT autoclave. Pour plates.

Principle and Interpretation:
The enterococcus group is a subgroup of the fecal streptococci that include *E. faecalis*, *E. faecium*, *E. gallinarum* and *E. avium*. They are different to other streptococci by their ability to grow in 6.5% sodium chloride,
at pH 9.6, and at 10°C and 45°C. The presence of enterococci as representatives of the fecal streptococci group is
a valuable bacterial indicator for determining the fecal contamination of water. Enterococcus Selective Agar is used in standard methods for the detection of fecal streptococci and enterococci groups using the membrane flitration technique. Generally, the composition of this media is very close to the Membrane filter Enterococcus Selective Agar and Barnes Agar.
Tryptose, Yeast extract and D(+)-Glucose act as source of carbon, nitrogen and other essential growth nutrients. Sodium azide inhibits gram-negative organisms. TTC indicates the bacterial growth. TTC is reduced to insoluble formazan inside the bacterial cells which gives red colouration to colonies.
The Addition of 0.2% sodium carbonate and 0.05% Tween® 80 to the medium increase the sensitivity for the direct plating method.

Cultural characteristics after 24-48 hours at 37°C.

Organisms (ATCC)	Growth	Color of Colony
Entreococcus faecalis (11700)	+++	pink to dark red
Escherichia coli (25922)	-	-

References:
1. Slanetz, Bent and Bartley, PubI. Health. Rep., 70, 67 (1955)
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3. Burkwell and Hartman, AppI. MicrobioL, 12, 18 (1964)
4. J. F. MacFaddin, Media For Isolation-Cultivation-Identification-Maintenance of Medical Bacteria., Vol. 1, Williams and Wilkins, Baltimore (1985)
5. A. E. Greenberg, R. R. Trussell and L.S. Clesceri (Eds.), Standard Methods for the Examination of Water and Wastewater, 16th ed., APHA, Washington, D.C. (1985)
6. Speck M. (Ed.), Compendium of Methods for the Microbiological Examination of Foods, 2nd ed., APHA, Washington, D.C. (1984)
7. Eaton, A. D., L. S. Clesceri, and A. E. Greenberg (ed.), Standard methods for the examination of water and wastewater, 19th ed. American Public Health Association, Washington, D.C. (1995)

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.