Technical Data Sheet

KF Streptococcus Agar (base)

Ordering number: 1.10707.0500

For the detection and enumeration of enterococci (fecal streptococci) in water, foodstuffs and other materials according to KENNER, CLARK and KABLER (1960, 1961).

KF (Kenner Fecal) Streptococcus agar complies with the recommendations given by APHA for the examination of water (1998) and foodstuffs (1992).

Mode of Action

Maltose and lactose are metabolized by most enterococci with the production of acid and thus promote the growth of these bacteria; undesired microorganisms are largely suppressed by sodium azide. Acid formation is detected by bromocresol purple which changes its colour to yellow. Enterococci reduce TTC to give a red formazan and thus appear as red colonies.

Typical Composition (g/L)

KF Streptococcus Agar Base	
Proteose peptone	10.0
Yeast extract	10.0
Sodium chloride	5.0
Sodium glycerophosphate	10.0
Maltose	20.0
Lactose	1.0
Sodium azide	0.4
Bromocresol purple	0.015
Agar-agar**	15.0

**Agar-agar is equivalent to other different terms of agar.

Also to be added:

2,3,5-triphenyltetrazolium chloride 0.1

Preparation

Suspend 71.5 g in 1 litre of demineralised water. Boil up with frequent agitation. Boil for 5 minutes (or autoclave 10 min at 121°C, if total selectivity is required).

Do not overheat.

Cool to approx. 50 °C, add 10 ml of a 1 % TTC solution (2,3,5- triphenyltetrazolium chloride), mix, pour plates.

pH: 7.2 ± 0.2 at 25 °C.

The plates are clear and purple.

Experimental Procedure and Evaluation

The membrane filtration method should be used for detection and enumeration if only small numbers of enterococci are suspected to be present; the pour plate method should be employed for larger numbers. The inoculated membrane filters are placed on the agar surface.

Incubation: 48 hours at 35 °C aerobically.

Tropical marine water samples should be incubated anaerobically, due to high incidence of false-positive presumptive counts for enterococci.

The red or pink colonies should be counted, the bacterial count can then be calculated.

Appearance of Colonies	Microorganisms
Abundant growth, red colonies, mostly surrounded by a yellow zone	Enterococci (E. faecalis, E.faecalis var. liquefaciens, E.faecalis var. zymogenes), Streptococcus mitis, Str. bovinus, E. equinus, Str. salivarius and others
Usually scanty growth and no colour change	Lactobacillus plantarum, Pediococcus cerevisiae and others

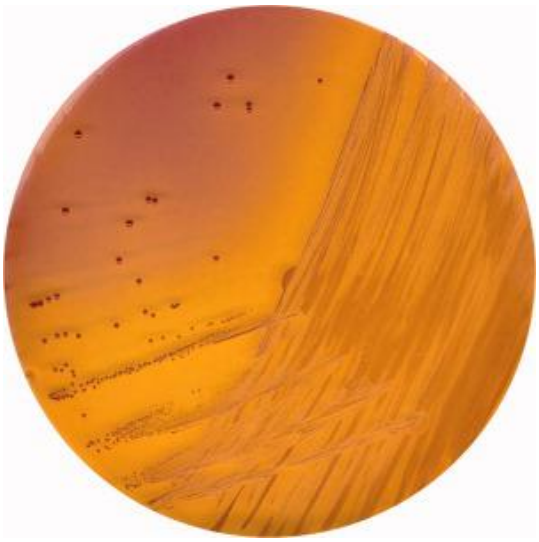
Storage

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

Quality Control

Control strains	Growth, 48h, 35°C, aerobic	Red colonies	Colour change to yellow
Enterococcus faecalis ATCC 11700	Good to very good	+	+
Enterococcus faecalis ATCC 19433 (WDCM 00009)	Good to very good	+	+
Enterococcus hirae ATCC 8043 (WDCM 00089)	Good to very good	+(poor)	+
Streptococcus pyogenes ATCC 12344	None to fair	-	-
Streptococcus agalactiae ATCC 13813	None to fair	-	-
Lactobacillus plantarum ATCC 8014	None to fair	-	-
Escherichia coli ATCC 25922 (WDCM 00013)	None		
Enterobacter cloacae ATCC 13047	None		
Pseudomonas aeruginosa ATCC 27853	none		

Please refer to the actual batch related Certificate of Analysis.



Enterococcus faecalis ATCC 11700

Streptococcus agalactiae ATCC 13813

Literature

American Public Health Association: Compendium of methods for the microbiological examination of foods. – 3 rd. ed., 1992.

American Public Health Association: American Water Works Association and Water Pollution Control Federation: Standard Methods for the Examination of Water and Wastewater 20 th ed., Washington, 1998.

KENNER, B.A., CLARK, H.F., a. KABLER F.W.: Faecal streptococci. II. Quantification of streptococci in faeces. - **Am. J. Publ. Health., 50**; 1553-1559 (1960).

KENNER, B.A., CLARK, H.F., a. KABLER F.W.: Faecal streptococci. I. Cultivation and enumeration of streptococci in surface waters. - **Appl. Microbiol., 9**; 15-20 (1961)

Ordering Information

Product	Cat. No.	Pack size
KF Streptococcus Agar Base	1.10707 .0500	500 g
2,3,5-Triphenyltetrazolium chloride	1.08380.0010	10 g

Merck KGaA, 64271 Darmstadt, Germany
Fax: +49 (0) 61 51 / 72-60 80
mibio@merckgroup.com
www.merckmillipore.com/biomonitoring

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