Technical Data Sheet

GranuCult™
EC (Escherichia coli) Broth
acc. ISO 7251 and FDA-BAM

Ordering number: 1.10765.0500

For the selective enrichment, enumeration and confirmation of coliform bacteria from food and animal feed and other materials.

This culture medium complies with the specifications given by ISO 7251 and FDA-BAM.

Mode of Action

The lactose content of this medium favors the growth of lactose-positive bacteria, especially of coliform bacteria and *E. coli*. The bile salts, however, largely inhibit the growth of Gram-positive bacteria or microorganisms which are not adapted to the intestinal environment. Lactose-positive bacteria metabolize lactose with gas formation.

Typical Composition

Specified by ISO 7251		**Specified by FDA-BAM M49**		**GranuCult™ EC (Escherichia coli) Broth acc. ISO 7251 and FDA-BAM**	
Enzymatic Digest of Casein	20 g/l	Trypticase or Tryptose	20 g/l	Enzymatic Digest of Casein*	20 g/l
Lactose	5 g/l	Lactose	5 g/l	Lactose	5 g/l
Bile Salts No. 3	1.5 g/l	Bile Salts No. 3	1.5 g/l	Bile Salts Mixture**	1.5 g/l
K_2HPO_4	4 g/l	K_2HPO_4	4 g/l	K_2HPO_4	4 g/l
KH_2PO_4	1.5 g/l	KH_2PO_4	1.5 g/l	KH_2PO_4	1.5 g/l
NaCl	5 g/l	NaCl	5 g/l	NaCl	5 g/l
Water	1000 ml/l	Water	1000 ml/l	Water	n/a
pH at 25 °C	6.8 ± 0.2	pH at 25 °C	6.9 ± 0.2	pH at 25 °C	6.9 ± 0.2

* Enzymatic digest of casein is equivalent to trypticase.

** Bile salts mixture includes bile salts No. 3 (see EN ISO 11133).

Preparation

Dissolve 37 g in 1 l of purified water. Dispense into tubes containing Durham tubes. Autoclave 15 min at 121 °C. The Durham tubes shall not contain any air bubbles after autoclaving.

The prepared medium is clear and yellowish-brown.

Experimental Procedure and Evaluation

Depend on the purpose for which the medium is used.

Incubate the inoculated tubes under aerobic conditions, e.g. acc. to ISO 7251 at 43-45 °C for 22-26 h or, if gas formation is not observed at this stage, continue incubation for up to 46-50 h.

Formation of gas is shown in the inverted Durham tubes.

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

Function	Control strains	Incubation	Method of control	Expected results
Productivity	*Escherichia coli* ATCC® 8739	22- 26 h at 43- 45 °C aerobic	Qualitative	Growth (good turbidity) and gas formation in the Durham tube: gas production and turbidity
	Escherichia coli ATCC® 25922			
Selectivity	Pseudomonas aeruginosa ATCC® 27853	46-50 h at 43-45 °C aerobic	Qualitative	Total inhibition without gas production
	*Ent*erococ*cus faecalis* ATCC® 19433			

Please refer to the actual batch related Certificate of Analysis.

The performance test is in accordance with the current version of EN ISO 11133.

Literature

FDA-BAM (2002): Chapter No. 4: Enumeration of Escherichia coli and the Coliform Bacteria. U.S. Food and Drug Administration - Bacteriological Analytical Manual.

ISO International Standardisation Organisation Microbiology of food and animal feeding stuffs -- Horizontal method for the detection and enumeration of presumptive Escherichia coli - Most probable number technique. ISO 7251:2005.

ISO International Standardisation Organisation. Microbiology of food, animal feed and water - Preparation, production, storage and performance testing of culture media. EN ISO 11133:2014.

Ordering Information

Product	Cat. No.	Pack size
GranuCult™ EC (Escherichia coli) Broth acc. ISO 7251 and FDA-BAM	1.10765.0500	500 g
GranuCult™ Lauryl Sulfate Broth acc. ISO 4831, ISO 7251 and FDA-BAM	1.10266.0500	500 g

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