

Technical Data Sheet

GranuCult™

Buffered Peptone Water

acc. ISO 6579, ISO 21528, ISO 22964, FDA-BAM
and EP

Ordering number: 1.07228.0500 / 1.07228.5000

For the preliminary non-selective enrichment of bacteria, particularly pathogenic *Enterobacteriaceae* such as *Salmonella* and *Cronobacter*, from food and animal feed, water and other materials.

This culture medium complies with the specifications given by EN ISO 6579, EN ISO/FDIS 6579-1, EN ISO 6785 I IDF 93, EN ISO 19250, EN ISO 21528-1, ISO/TS 22964 I IDF/DRM 210, FDA-BAM, APHA and EP.

Mode of Action

The broth is rich in nutrients and produces high resuscitation rates for sublethally injured bacteria and intense growth. The phosphate buffer system prevents bacterial damage caused by changes in the pH of the medium. Peptone including enzymatic digest of casein acts as a source of carbon, nitrogen, vitamins and minerals whilst sodium chloride maintains the osmotic balance.

Typical Composition

Specified by ISO 6579, ISO/ FDIS 6579-1, ISO 19250, ISO 21528, ISO 22964		Specified by FDA-BAM M192		Specified by EP 2.6.31, ISO 6785 I IDF 93		GranuCult™ Buffered Peptone Water acc. ISO 6579, ISO 21528, ISO 22964, FDA- BAM and EP	
Enzymatic Digest of Casein*	10 g/l	Peptone	10 g/l	Peptone	10 g/l	Peptone (includes Enzymatic Digest of Casein)	10 g/l
NaCl	5 g/l	NaCl	5 g/l	NaCl	5 g/l	NaCl	5 g/l
Na ₂ HPO ₄ x 12 H ₂ O	9 g/l	Na ₂ HPO ₄ **	3.5 g/l	Na ₂ HPO ₄ x 12 H ₂ O	9 g/l	Na ₂ HPO ₄ x 12 H ₂ O	9 g/l
KH ₂ PO ₄	1.5 g/l	KH ₂ PO ₄	1.5 g/l	KH ₂ PO ₄	1.5 g/l	KH ₂ PO ₄	1.5 g/l
Water	1000 ml/l	Water	1000 ml/l	Water	1000 ml/l	Water	n/a
pH at 25 °C	7.0 ± 0.2	pH at 25 °C	7.0 ± 0.2	pH at 25 °C	7.0 ± 0.2	pH at 25 °C	7.0 ± 0.2

* ISO/FDIS 6579-1 specifies: Peptone - for example, enzymatic digest of casein.

** 3.57 g Na₂HPO₄ anhydrous is equivalent to 9 g Na₂HPO₄ x 12 H₂O

Preparation

Dissolve 25.5 g in 1 l of purified water. If desired dispense into smaller vessels and autoclave 15 min at 121 °C.

The prepared medium is clear and yellowish. The pH value at 25 °C is in the range of 6.8-7.2.

Experimental Procedure and Evaluation

Depend on the purpose for which the medium is used.

Incubate the inoculated broth under aerobic conditions, e.g. acc. to EN ISO 6579 36-38 °C for 16-20 h, acc. to EN ISO/FDIS 6579-1 at 34-38 °C for 16-20 h.

Transfer material from the resulting culture to a selective enrichment culture medium following the method given by the appropriate standard.

According to EN ISO/FDIS 6579-1, it is permissible to store the pre-enriched sample after incubation at +2 to +8 °C for a maximum of 72 h.

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.

According to EN ISO/FDIS 6579-1, self-prepared medium can be stored in closed containers at +2 °C to +8 °C in the dark and protected against evaporation for up to six months.

Quality Control

Function	Control strains	ATCC®	Incubation	Method of control	Expected results
Productivity	<i>Salmonella</i> Typhimurium	14028	16-20 h at 36-38 °C	Qualitative	Growth good to very good
	<i>Salmonella</i> Enteritidis	13076			
	<i>Escherichia coli</i>	8739			
	<i>Escherichia coli</i>	25922			
	<i>Salmonella</i> Abony	NCTC 6017	18-24 h at 30-35 °C		

Please refer to the actual batch related Certificate of Analysis.

The performance test is in accordance with the current version of EN ISO 11133 and the harmonised method of EP, USP and JP.

Literature

APHA (2015) Compendium of Methods for the Microbiological Examination of Foods. 5th ed. American Public Health Association, Washington, D.C.

Edel, W. and Kampelmacher, E. H. (1973): Comparative studies on the isolation of „sublethally injured“ salmonellae in nine European laboratories. Bull. WHO **48**: 167-174.

European Directorate for the Quality of Medicines and Healthcare (201): The European Pharmacopoeia. 8th Ed. Chapter 2.6.31 Microbiological examination of herbal medicinal products for oral use and extracts used in their preparation. Strasbourg, France.

FDA-BAM (2012): Chapter No. 29: *Cronobacter*. 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 of *Salmonella* spp. EN ISO 6579:2002.

ISO International Standardisation Organisation. Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* - Part 1: Horizontal method for the detection of *Salmonella* spp. EN ISO/FDIS 6579-1:2015.

ISO International Standardisation Organisation. Milk and milk products - Detection of *Salmonella* spp. EN ISO 6785 I IDF 93:2001.

ISO International Standardisation Organisation. Water quality - Detection of *Salmonella* spp. EN ISO 19250:2010.

ISO International Standardisation Organisation. Microbiology of food and animal feeding stuffs - Horizontal methods for the detection and enumeration of *Enterobacteriaceae* - Part 1: Detection and enumeration by MPN technique with pre-enrichment. EN ISO 21528-1:2004.

ISO International Standardisation Organisation. Milk and milk products -- Detection of Enterobacter sakazakii, ISO/TS 22964 I IDF/DRM 210:2006

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

Mooijman, K.A. (2012): Culture media for the isolation of *Salmonella*. In: Handbook of Culture Media for Food and Water Microbiology. (Corry, J.E.L., Curtis, G.D.W. and Baird, R.M. eds). pp. 261-286. Royal Society of Chemistry, Cambridge, UK.

Ordering Information

Product	Cat. No.	Pack size	Other pack sizes available
GranuCult™ Buffered Peptone Water acc. ISO 6579, ISO 21528, ISO 22964, FDA-BAM and EP	1.07228.0500	500 g	5 kg, 25 kg
Readybag® Buffered Peptone Water acc. ISO 6579, ISO 21528, ISO 22964, FDA-BAM and EP, 5.7 g, irradiated	1.02448.0060	60 bags	60 bags x 29 g 35 bags x 86 g
ReadyTube™ 9 BPW ISO 6579, 6887, 21528	1.46142.0020	20 x 9 ml	100 x 9 ml, 6 x 225 ml, 6 x 1000 ml, 1 x 2000 ml
GranuCult™ RVS (RAPPAPORT-VASSILIADIS-Soya) Broth (Base) acc. ISO 6579	1.07700.0500	500 g	
Novobiocin Sodium Salt	N6160-1-G	1 g	5 g, 25 g
ReadyTube™ 10 RVS Broth ISO 6579	1.46694.0020	20 x 10 ml	100 x 10 ml
GranuCult™ MKTTn (MULLER-KAUFFMANN Tetrathionate Novobiocin) Broth (Base) acc. ISO 6579	1.05878.0500	500 g	
Potassium Iodide	1.05043.0250	250 g	
Iodine resublimed	1.04761.0100	100 g	
MSRV (Modified Semi-solid RAPPAPORT-VASSILIADIS) Medium (Base) acc. ISO 6579	1.09878.0500	500 g	
MSRV Selective Supplement	1.09874.0010	10 x 1 vial	
ReadyTube™ 12 MSRV Medium ISO 6579	1.46622.0100	100 x 12 ml	
GranuCult™ XLD (Xylose Lysine Deoxycholate) agar acc. ISO 6579	1.05287.0500	500 g	
ReadyPlate™ XLD Agar ISO 6579	1.46751.0020	20 x 90 mm	
RAMBACH® Agar	1.07500.0001	4 x 250 ml	4 x 1000 ml, 4 x 50 l
RAMBACH® Agar ready-to-use	1.46719.0020	20 x 90 mm	100 x 90 mm
Singlepath® Salmonella	1.04140.0001	25 test	
Bismuth Sulfite Agar acc WILSON-BLAIR	1.05418.0500	500 g	

Product	Cat. No.	Pack size	Other pack sizes available
Triple Sugar Iron Agar	1.03915.0500	500 g	
Urea Agar (Base) acc CHRISTIANSEN	1.08492.0500	500 g	
Urea GR for Analysis ACS, Reagent Ph Eur	1.08487.0500	500 g	
MR-VP (Methyl Red-VOGES-PROSKAUER) Broth	1.05712.0500	500 g	
KOVACS' Indole Reagent	1.09293.0100	100 ml	

Merck KGaA

Frankfurter Strasse 250 64293
Darmstadt, Germany Fax: +49
(0) 61 51 / 72-60 80

For more information, visit

www.merckmillipore.com/biomonitoring

Find contact information for your
country at:
www.merckmillipore.com/offices

For Technical Service, please visit:
www.merckmillipore.com/techservice

GranuCult, Merck, Millipore, and Sigma-Aldrich are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. Detailed information on trademarks is available via publicly accessible resources. © 2019 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved.

The life science business of Merck operates as
MilliporeSigma in the U.S. and Canada.

1.07228.0500 / 1.07228.5000

Page 5 of 5