

Technical Data Sheet

ReadyTube™ 10

RVS (RAPPAPORT-VASSILIADIS-Soya) Broth

acc. ISO 6579

Ordering number: 1.46694.0020 / 1.46694.0100

For the selective enrichment of *Salmonella* 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.

#### Mode of Action

A modification of the originally described Rappaport medium, using soya peptone instead of tryptone (peptone from casein) was reported to improve recovery rates of *Salmonella* (Van Schothorst and Renaud, 1983 and Van Schothorst et al., 1987). This is in use as Rappaport-Vassiliadis soya peptone (RVS) broth.

The efficiency of RVS broth for salmonella is based on the following: (a) the ability of *Salmonella* spp. to multiply at relatively high osmotic pressures at relatively low pH values, at a high temperature and with modest nutritional requirements; and (b) the suppression of the toxic effect of malachite green towards salmonellae by the presence of magnesium chloride.

For the detection of some *Salmonella* serovars, other culture steps, e.g. other selective enrichment media, may be needed. For *Salmonella* Typhi and *Salmonella* Paratyphi, the procedure is described by EN ISO/FDIS 6579-1.

## Typical Composition

Specified by ISO 6579		ReadyTube™ 10 RVS Broth	
Enzymatic Digest of Soya	4.5 g/l	Soy Peptone	4.5 g/l
NaCl	7.2 g/l	NaCl	7.2 g/l
K <sub>2</sub> HPO <sub>4</sub>	0.18 g/l	K <sub>2</sub> HPO <sub>4</sub>	0.18 g/l
KH <sub>2</sub> PO <sub>4</sub>	1.26 g/l	KH <sub>2</sub> PO <sub>4</sub>	1.26 g/l
MgCl <sub>2</sub> x 6 H <sub>2</sub> O	28.6 g/l	MgCl <sub>2</sub> x 6 H <sub>2</sub> O	28.6 g/l
Malachite Green Oxalate	0.036 g/l	Malachite Green Oxalate	0.036 g/l
Water	1000 ml/l	Water	1000 ml/l
pH at 25 °C	5.2 ± 0.2	pH at 25 °C	5.2 ± 0.2

## Application and Interpretation

Depend on the purpose for which the medium is used.

Allow the RVS broth to equilibrate at room temperature if it was stored at a lower temperature.

According to EN ISO 6579, transfer 0.1 ml of the culture obtained in the pre-enrichment (Buffered Peptone Water) to a tube containing 10 ml of RVS broth. Minimize the transfer of particulate material from the pre-enrichment into the selective enrichment medium.

Incubate the inoculated broth under aerobic conditions, e.g. according to EN ISO 6579 40.5-42.5 °C for 21-27 h. Care should be taken that the maximum allowed temperature (42.5 °C) is not exceeded.

From the culture obtained in RVS broth selective solid media are inoculated, see details given by EN ISO 6579 or other appropriate standard.

According to EN ISO/FDIS 6579-1, for some products it may be necessary to incubate the selective enrichment medium for an additional 24 h, then follow the same plating-out procedure as described above.

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

## Storage and Shelf Life

The product can be used for sampling until the expiry date if stored upright, protected from light and properly sealed at +2 °C to +25 °C.

The testing procedures as described on the CoA can be started up to the expiry date printed on the label.

## Disposal

Please mind the respective regulations for the disposal of used culture medium (e.g. autoclave for 20 min at 121 °C, disinfect, incinerate etc.).



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## Quality Control

Function	Control strains	Incubation	Method of control	Criteria	Expected results
Productivity	<i>Salmonella</i> Enteritidis ATCC 13076 + <i>Escherichia coli</i> ATCC 8739 + <i>Pseudomonas</i> aeruginosa ATCC 27853	21-27 h at 40.5-42.5 °C	Qualitative	> 10 colonies on XLD	Colorless colonies with black center
	<i>Salmonella</i> Typhimurium ATCC 14028 + <i>Escherichia coli</i> ATCC 25922 + <i>Pseudomonas</i> aeruginosa ATCC 27853				
Selectivity	<i>Escherichia coli</i> ATCC 8739	21-27 h at 40.5-42.5 °C	Qualitative	Partial inhibition ≤ 100 colonies on Tryptic Soy Agar (TSA)	-
	<i>Escherichia coli</i> ATCC 25922			< 10 colonies on Tryptic Soy Agar (TSA)	
	<i>Enterococcus</i> <i>faecalis</i> ATCC 19433				
	<i>Enterococcus</i> <i>faecalis</i> ATCC 29212				

Please refer to the actual batch related Certificate of Analysis.

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



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## Literature

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, 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.

Van Schothorst M. and Renaud, A.M. (1983): Dynamics of salmonellae isolation with modified Rappaport's medium (R 10). J. Appl. Bact. **54**: 209-215.

Van Schothorst, M., Renaud, A.M. and van Beck, C. (1987): *Salmonella* isolation using RVS broth and MLCB agar. Food Microbiol. **4**: 11-18.

## Ordering Information

Product	Cat. No.	Pack size	Other pack sizes available
<b>ReadyTube™ 10</b> RVS Broth ISO 6579	1.46694.0020	20 x 10ml	
<b>GranuCult™</b> RVS Broth ISO 6579	1.07700.0500	500 g	
<b>ReadyTube™ 9</b> BPW ISO 6579, 6887, 21528	1.46142.0020	20 x 9 ml	6 x 225 ml, 6 x 1000 ml,
<b>GranuCult™</b> Buffered Peptone Water ISO 6579, 21528, 22964	1.07228.0500	500g	5 kg, 25 kg
<b>ReadyTube™ 12</b> MSRV Medium ISO 6579	1.46694.0100	100 x 12 ml	
MSRV Selective Supplement	1.09874.0010	10 x 1 vial	
MSRV Medium (Base) ISO 6579	1.09878.0500	500 g	
<b>GranuCult™</b> MKTTn (Muller Kaufmann Tetrathionate Novobiocin) Broth Base	1.05878.0500	500 g	
Iodine resublimed	1.04761.0100	100 g	500 g
Potassium Iodide	1.05043.0250	250 g	500 g, 1 kg
<b>ReadyPlate™</b> XLD Agar ISO 6579	1.46751.0020	20 x 90 mm	



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Product	Cat. No.	Pack size	Other pack sizes available
<b>GranuCult™</b> XLD Agar ISO 6579	1.05287.0500	500 g	
RAMBACH® Agar ready-to-use	1.46719.0020	20 x 90 mm	100 x 90 mm
RAMBACH® Agar	1.07500.0001	4 x 250 ml	4 x 1000 ml 4 x 50 l
Triple Sugar Iron Agar	1.03915.0500	500 g	

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