

ReadyStream® Media Bag GranuCult® Tryptic Soy Broth

Acc. FDA-BAM, irradiated

Ordering number: 5.77000.0100

Intended Use

For use with the ReadyStream® instrument and ReadyStream® filter for the preliminary non-selective enrichment of bacteria, especially Salmonella, from food and other materials.

Tryptic Soy Broth acc. FDA-BAM is also known as Trypticase (Tryptic) Soy Broth (TSB).

This culture medium complies with the specifications given by FDA-BAM Medium M154, AOAC Official Method 967.25 and APHA.

Each ReadyStream® media bag contains granulated Tryptic Soy Broth acc. FDA-BAM for the generation of a liquid 10-fold stock concentrate. The ReadyStream® media bags are only to be used on the ReadyStream® instrument in combination with the ReadyStream® filter set for broth stock reconstitution and final dispensing of a diluted portion of the media.

The product has been irradiated at 33 – 66 kGy.

This product is released by the quality control laboratory of Merck KGaA, Darmstadt, Germany. The laboratory is accredited by the German accreditation authority DAkkS as registered test laboratory D-PL-15185-01-00 according to DIN EN ISO/IEC 17025 for the performance testing of media for microbiology according to DIN EN ISO 11133.

Mode of Action

The combination of the two peptones, enzymatic digest of casein and of soy bean provides a high nutrition by supplying organic nitrogen, amino acids and longer-chained peptides. In this complex medium the osmotic balance is supplied by sodium chloride whilst the dipotassium phosphate acts for buffering.

Typical composition

APHA specifies no composition for Tryptic Soy Broth.

Specified by FDA-BAM Medium M154 and AOAC Official Method 967.25		ReadyStream® Media Bag GranuCult® Tryptic Soy Broth acc. FDA-BAM (irradiated)	
Trypticase peptone*	17 g/L	Peptone from casein*	17 g/L
Phytone peptone**	3 g/L	Peptone from soymeal**	3 g/L
Glucose	2.5 g/L	D(+)Glucose monohydrate	2.5 g/L
NaCl	5 g/L	Sodium chloride	5 g/L
K ₂ HPO ₄	2.5 g/L	di-Potassium hydrate phosphate	2.5 g/L
Water	1000 mL/L	Water	n/a
pH at 25 °C	7.3 ± 0.2	pH at 25 °C	7.3 ± 0.2

* Peptone from casein is equivalent to trypticase peptone.

** Peptone from soymeal is equivalent to phytone peptone.

Preparation

Please strictly follow the recommendations in the ReadyStream® instrument user manual.

The prepared medium ready-to-use (1-fold concentration) is clear and yellowish.

The pH value at 25 °C is in the range of 7.3 ± 0.2 .

Experimental Procedure and Evaluation

Depend on the purpose for which the medium is used, e.g. follow directions given by FDA-BAM.

Storage and Disposal

Storage (before use): 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.

Storage of the reconstituted concentrated media bag: Store at +15 °C to +25 °C for maximum 10 days.

- If the ReadyStream® media bag is removed from the instrument, place the ReadyStream® media bag with the tubing connector facing upwards. Do not stack filled ReadyStream® media bags on top of each other.
- After storage, mix to homogenize and visually check for the absence of contaminant.
- Filling and dispensing on 2 different instruments is not recommended. Never attempt to fill a ReadyStream® media bag twice.
- Please dispose the bags in accordance with local waste regulations.

Microbiological Performance

The performance test is in accordance with the current versions of EN ISO 11133 and FDA-BAM

Test method: Qualitative single tube method (turbidity) for performance testing of liquid media.

Function	Control strains	Collection	Inoculum	Incubation	Expected results	Specified by
Productivity	<i>Salmonella</i> Diarizonae	ATCC 12325	≤ 100 CFU	22 ± 2 h/ 35 ± 2 °C aerobic	Good to very good growth	FDA-BAM (2023): Chapter No. 5
	<i>Salmonella</i> Diarizonae	ATCC 29934				
	<i>Salmonella</i> Bispebjerg**	ATCC 9842				
	<i>Salmonella</i> Typhimurium	ATCC 14028 [WDCM 00031]				
	<i>Salmonella</i> Enteritidis	ATCC 13076 [WDCM 00030]				N/A*
	<i>Salmonella</i> Abony	NCTC 6017 [WDCM 00029]				
	<i>Escherichia coli</i>	ATCC 8739 [WDCM 00012]				
	<i>Escherichia coli</i>	ATCC 25922 [WDCM 00013]				

* Control strains not specified by any standard, included as additional strains to further ensure the quality of the culture medium.

** Formerly *Salmonella* Abortusovaequina, *Salmonella* Abortusequi.

Reference medium (inoculum): Tryptic soy agar.

Absence of microbial contamination:

No visual growth after incubation of 1000 mL ready to use medium (1-fold concentration).

Incubation: 48 ± 2 hours at 35 ± 2 °C aerobic.

Please refer to the actual batch related Certificate of Analysis.

Literature

AOAC (2023): Official Method 467.25 *Salmonella* in Foods. Preparation of Culture Media and Reagents. AOAC International, Rockville, MD, USA.

APHA (2015) Chapter No. 36: *Salmonella*. and Chapter No. 67: Microbiological media, reagents and stains. Compendium of Methods for the Microbiological Examination of Foods. 5th ed. American Public Health Association, Washington, D.C.

EN ISO International Standardisation Organisation. Microbiology of food, animal feed and water - Preparation, production, storage and performance testing of culture media + Amendment 1 + Amendment 2. EN ISO 11133:2014/Amd1:2018/Amd2:2020.

FDA-BAM (2023): Chapter No. 5: *Salmonella*. U.S. Food and Drug Administration - Bacteriological Analytical Manual.

FDA-BAM (2023): Media Index for BAM - BAM Media M154: Trypticase (Tryptic) Soy Broth. Food and Drug Administration - Bacteriological Analytical Manual.

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	Packaging	Ordering No.
ReadyStream® Media Bag GranuCult® Tryptic Soy Broth acc. FDA-BAM (irradiated)	3x Bags with dehydrated media	5.77000.0100
ReadyStream® Filter Set	5x Filter sets	5.74826.0001
ReadyStream® System	1x	RDYSTRM01

Note

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