

Technical Data Sheet

Thioglycollate Broth

Ordering number: 1.08190.0500 / 1.08190.5000

Thioglycollate Broth is used for cultivation and isolation of obligate and facultative anaerobic and microaerophilic bacteria and for aseptic process simulations.

The culture media complies with the recommendations of the United States Pharmacopeia XXVI (2003), the European Pharmacopeia II (2003) and APHA (1992).

This medium is suggested as an alternative to Fluid Thioglycollate Medium (FTM) for media fill application in the Sterility Testing chapters of EP and USP. In contrast to FTM (article number 1.08191) it does not contain agar-agar and Resazurin.

Mode of Action

In Thioglycollate Broth glucose, peptone from casein and yeast extract provide growth factors necessary for bacterial growth. The reducing agents thioglycollate and L-cystine ensure an anaerobiosis which is adequate even for fastidious anaerobes and prevent the accumulation of peroxides which are lethal to some microorganisms. The sulfhydryl groups of these substances inactivate arsenic, mercury and other heavy metal compounds. Thioglycollate media are thus suitable for the examination of materials which contain heavy metals or heavy metal preservatives.

Typical Composition

Peptone from Casein	15 g/l
Yeast Extract	5 g/l
D(+)-Glucose	5.5 g/l
L-Cystine	0.5 g/l
NaCl	2.5 g/l
Sodium Thioglycollate	0.5 g/l

Preparation

Suspend 29 g Thioglycollate Broth/l. Dispense into tubes. Autoclave 15 min at 121 °C.

The prepared media is clear and yellowish.

The pH value at 25 °C is in the range of 6.9 -7.3.

Experimental Procedure and Evaluation

Inoculate the culture medium with the sample material taking care that the sample reaches the bottom of the tubes. In order to ensure anaerobiosis, the medium can then be overlaid with 1 cm of sterile liquid paraffin or agar solution.

Incubation: several days at the optimal incubation temperature (30-35 °C).

Anaerobes grow in the lower part of the culture.

Storage

The product can be used for sampling until the expiry date if stored upright, protected from light and properly sealed at +15 °C to +25 °C.

After first opening of the bottle the content can be used up to the expiry date when stored dry and tightly closed at +15 °C to +25 °C.

The culture media should always be freshly prepared.

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.).

Quality Control

Control Strains	ATCC #	Inoculum CFU	Incubation	Expected Results
<i>Clostridium sporogenes</i>	11437	10-100	≤ 3 days at 30-35 °C, anaerobic	Good growth
<i>Clostridium sporogenes</i>	19404	10-100	≤ 3 days at 30-35 °C, anaerobic	Good growth
<i>Bacillus subtilis</i>	6633	10-100	≤ 3 days at 30-35 °C, aerobic	Good growth
<i>Kocuria rhizophila</i>	9341	10-100	≤ 3 days at 30-35 °C, aerobic	Good growth
<i>Pseudomonas aeruginosa</i>	9027	10-100	≤ 3 days at 30-35 °C, aerobic	Good growth
<i>Bacteroides vulgatus</i>	8482	10-100	≤ 3 days at 30-35 °C, anaerobic	Good growth
<i>Staphylococcus aureus</i>	6538	10-100	≤ 3 days at 30-35 °C, aerobic	Good growth

Please refer to the actual batch related Certificate of Analysis.



We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.

Merck Millipore and the M logo are registered trademarks of Merck KGaA, Darmstadt, Germany. Lit. No. TN1363EN00

Literature

American Public Health Association (1992): Compendium of methods for the microbiological examination of foods. 3rd edition.

European Pharmacopeia II (2003). Chapter VIII. 3.

United States Pharmacopeia XXVI (2003). Chapter "Microbial Limit Tests".

Ordering Information

Product	Cat. No.	Pack size
Thioglycollate Broth for microbiology	1.08190.0500	500 g
Thioglycollate Broth for microbiology	1.08190.5000	5 kg

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

Find contact information for your country at:
www.merckmillipore.com/offices
For Technical Service, please visit:
www.merckmillipore.com/techservice



We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.

Merck Millipore and the M logo are registered trademarks of Merck KGaA, Darmstadt, Germany. Lit. No. TN1363EN00