Condalab

Reference: 4004 **Technical Data Sheet**

Product: # THIOGLYCOLLATE FLUID MEDIUM EP/USP/ISO

Specification

Fluid medium used for sterility testing according to the Eur. Pharm., USP, FDA, and for the cultivation of microaerophilic and anaerobic organisms.

Presentation

	Packaging Details	Shelf Life	Storage
20 Tubes Tube 16 x 113 mm with: 9 ± 0.1 ml	1 box with 20 tubes, 16x113 mm glass tubes, inklabelled and metal-Non injectable cap.	12 months	8-25 ºC

Composition

Composition (g/l):

Tryptone	15.000
Yeast extract	5.000
D(+) Glucose	5.500
Sodium chloride	2.500
Sodium thioglycolate	0.500
L-Cystine	0.500
Resarzurin	0.001
Agar	0.750

Description /Technique

Description

Thioglycolate Fluid Medium is a standard medium formulated and recommended by the European Pharmacopoeia, USP, APHA and FDA. The reducing agents thioglycolate and L-Cystine ensure anaerobiosis which is adequate even for fastidious anaerobes.

The -SH groups of these substances also inactivate arsenic, mercury and other heavy metal compounds. Thioglycolate media are thus suitable for the examination of materials which contain heavy metals or heavy metal preservatives.

In the present formulation a special agar with a high viscosity but a very low turbidity is used. A very slow cooling is recommended to prevent stratification. The higher viscosity of the fluid thioglycolate medium prevents rapid uptake of oxygen. Any increase in the oxygen content is indicated by the redox indicator sodium resazurin which changes colour to pink.

Technique

For the inoculation of tubes, follow the standard laboratory method or the applicable norms, (Stab inoculation, loop inoculation, dilution banks , etc ...)

The methodology is according to the standard methods describe in the Pharmacopoeia.

Inoculate the culture medium with the sample material taking care that the sample reaches the bottom of the tube.

Incubate for at least 14 days at the optimal temperature. Anaerobes grow in the lower part of the culture medium container.

Precautions and limitations of the procedure:

- Store the prepared medium away from light at room temperature.
- If more than 30% of the medium is pink prior to use reheat once at 100ºC to drive off absorbed oxygen.
- Do not reheat the medium more than once; continued reheating gives rise to toxicity.
- Due to nutritional variation, some strains may grow poorly or fail to grow on this medium.
- Some glucose-fermenting organisms which are able to reduce the pH of the medium to a critical level may not survive in this medium. Early sub-culture is necessary to isolate these organisms.

Quality control

Physical/Chemical control

Color : yellow pH: 7.1 ± 0.2 at 25ºC

Microbiological control

Inoculate: 50-100 CFU (productivity) according to harmonized Eur. Pharmacopoeia and ISO 11133 standard.

Aerobic.Incubation at 30-35 ºC for 18-72h (bacteria) and 20-25 ºC for 3-5 days (moulds and yeast).

Cl. perfringens ATCC® 13124 at 37 ºC reading after 24 ± 3h

Microorganism	Growth
Clostridium sporogenes ATCC® 19404, WDCM 00008	Good - in anaerobic zone
Ps. aeruginosa ATCC® 9027, WDCM 00026	Good - in aerobic zone
Staphylococcus aureus ATCC® 6538, WDCM 00032	Good - in aerobic and anaerobic zone
Candida albicans ATCC® 10231, WDCM 00054	Good - in aerobic zone
Aspergillus brasiliensis ATCC® 16404	Good - in aerobic zone
Bacillus subtilis ATCC® 6633, WDCM 00003	Good - in aerobic zone
Clostridium perfringens ATCC® 13124, WDCM 00007 (37ºC)	Good - in anaerobic zone

Sterility Control

Incubation 14 days at 22.5 ± 2 ºC: NO GROWTH.
Incubation 14 days at 32.5 ± 2 ºC: NO GROWTH.

Bibliography

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