

Fluid Thioglycolate with Resazurine medium/ 355-4689

FTM (culture of anaerobic bacteria) 356-3613

356-4084

DEFINITION

Medium used for confirmation tests in the enumeration of *Clostridium perfringens* in food products and sterility testing in the pharmaceutical and cosmetic industry.

STANDARDS

• **European Pharmacopeia 6.0** - Biological methods - **2.6.13.**: Microbiological test of non-sterile products (Detection of specified microorganisms).

• **USP 30/NF 25 US Pharmacopeia and National Formulary (2007)**: Microbial Limit Tests (**61**) - Microbiological Tests.

PRINCIPLE

The medium's composition enables the development of a wide variety of strict or facultative anaerobic bacteria with diverse growth requirements. Sodium thioglycollate lowers the medium's oxidation-reduction potential and neutralizes the bacteriostatic properties of mercurial compounds used as preservatives of biological products.

Resazurine is used as an oxidation-reduction indicator: the medium is colorless in the reduced state, and becomes pink when oxidized.

PRESENTATION

- **Ready to use**
100 ml x 10 bottles **code 355-4689**
10 ml x 25 tubes **code 356-3613**
- **Dehydrated**
500 g **code 356-4084**

STORAGE

- Ready to use: + 15° to 20°C
- Dehydrated: + 15° to 25°C, in carefully-sealed bottles in a cool, dry place.
- Expiration date and batch number are shown on the pack.

TYPICAL FORMULA

Pancreatic casein hydrolysate	15 g
Yeast extract	5 g
Sodium thioglycollate	500 mg
Sodium chloride	2,5 g
L-cystine	500 mg
Glucose	5,5 g
Resazurin	1 mg
Agar	500 mg
Distilled water	1000 ml

Final pH (25°C) = 7,1 ± 0,2

Remark: the formula has been adapted to attain the required performance criteria.

PREPARATION OF DEHYDRATED MEDIUM

Always shake well before use

Dissolve 29.5 g of powder in 1 liter of distilled water. Mix until a homogenous suspension is obtained. Heat slowly, swirling frequently, then bring to boiling point until completely dissolved. Dispense 14 ml per tube or 100 ml per bottle and sterilize in autoclave at 121°C ± 1°C for 15 minutes.

Reconstitution ratio: 29.5 g/l.
500 g of powder makes 11.5 liters of medium

PROTOCOL

- **Preparation of samples**
According to standards or recommendations for the product concerned.
- **Inoculation and incubation**
Confirmation of *Clostridium perfringens* in food products:
After isolation on T.S.C agar (**code 356-9644**), select 10 characteristic colonies and inoculate the thioglycollate medium.
Incubate in anaerobiosis at 35°C or 37°C ± 1°C for 18 - 24 hours.
- **Sterility test:**
Inoculate the recommended quantity of product to be analyzed and incubate at 30° - 35°C for 14 days.

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PRECAUTIONS

- Re-oxygenation of the broth after regeneration should be avoided.
The inoculum should be mixed with the broth by means of circular movements, avoiding entrapping any air. Use of mechanical shakers (e.g. Vortex type) is not recommended.
- Comply with Good Laboratory Practice

QUALITY CONTROL

STRAINS	Result of 18-24h culture at 32.5°C
<i>Pseudomonas aeruginosa</i> ATCC 9027	Good growth
STRAINS	Result of 3 days culture at 32.5°C
<i>Clostridium sporogenes</i> ATCC 19404	Good growth
STRAINS	Result of 5 days culture at 32.5°C
<i>Staphylococcus aureus</i> ATCC 6538	Good growth
STRAINS	Result of 5 days culture at 30-35°C
<i>Clostridium sporogenes</i> ATCC 11437	Good growth

Every product manufactured and marketed by Bio-Rad is subject to a quality-assurance program materials to the marketing of the end-product. Each batch of finished product undergoes quality control and is marketed only if it satisfies the acceptability criteria.

Documentation relative to the production and control of each batch is kept on file.

KEY WORDS

Thioglycolate + Resazurine/
Clostridium perfringens/Food products/
Enumeration/Confirmation test/
Sterility test/Medium.