

Thioglycolate/Broth (without Resazurine)

356-4224

DEFINITION

Medium used for sterility tests using the membrane-filtration method or direct inoculation.

PRESENTATION

Dehydrated

500 g

code 356-4224

STORAGE

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

THEORETICAL FORMULA

Pancreatic casein hydrolysate	15 g
Yeast extract	5 g
Sodium thioglycollate	0.5 g
Sodium chloride	2.5 g
L-cysteine	0.5 g
Glucose	5.5 g
Distilled water	1,000 ml
Final pH (25°C) = 7.1 ± 0.2	

OTHER PRODUCTS REQUIRED (NOT SUPPLIED)

- Distilled water

EQUIPMENT REQUIRED (NOT SUPPLIED) (non-exhaustive)

- Scales
- Sterile weighing bags
- Grinder
- Hotplate
- Mixer-homogenizer
- Test tubes (16 x 160 mm) with autoclave-proof stoppers
- 50 ml Pyrex bottles with autoclave-proof stoppers
- Sterile pipettes (0.1 ml, 1 ml, etc)
- Sterile Pasteur pipettes (code 355-0751) or inoculating loop
- Filtration apparatus
- Membrane filters ($\varnothing = 47$ mm and ≤ 0.45 μ m)
- Tweezers for handling membranes
- Water-bath precise to $\pm 1^\circ\text{C}$
- Thermostatically-controlled incubator or incubation room, precise to $\pm 1^\circ\text{C}$
- Autoclave
- All usual laboratory equipment.

PREPARATION OF DEHYDRATED MEDIUM

Always shake before use.

Dissolve 29 g of powder in 1 liter of distilled water.

Bring to boiling point until completely dissolved.

Dispense in tubes or bottles and sterilize in autoclave at $121^\circ\text{C} \pm 1^\circ\text{C}$ for 15 minutes.

The medium should be used immediately after its preparation, otherwise it will require regeneration in a boiling water-bath before use, followed by rapid cooling.

Reconstitution ratio: 29 g/l.

500 g of powder makes 17.2 liters of medium.

PROTOCOL

• Preparation of samples

According to the standards applicable to the product concerned.

• Inoculation and incubation

Membrane filtration

Collect the recommended quantity of product to be examined (in solution if the product is solid). Filter, then under aseptic conditions introduce the membrane to the medium.

Direct inoculation

Collect the recommended quantity of product to be analyzed and introduce it to the medium.

In both cases, incubate in anaerobiosis: $30^\circ\text{C} - 35^\circ\text{C}$ for 7 days for the detection of bacteria.

PRECAUTIONS

- The time lapse between the end of preparation of the stock solution (or the 10^{-1} dilution in the case of a solid product) and the moment when the dilutions come into contact with the culture medium must not exceed 15 minutes.
- Comply with Good Laboratory Practice.

PERFORMANCES / QUALITY CONTROL OF THE TEST

The growth performances of the media are verified with the following strains:

See table next page...

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STRAINS	Results after 24h culture at 37 °C
<i>Clostridium perfringens</i> ATCC 13124	Good growth
<i>Staphylococcus aureus</i> ATCC 25923	Good growth
<i>Escherichia coli</i> ATCC 25922	Good growth
<i>Streptococcus pneumoniae</i> ATCC 6303	Good growth
<i>Clostridium sporogenes</i> ATCC 11437	Good growth
<i>Bacteroides vulgatus</i>	Good growth

QUALITY CONTROL OF MANUFACTURER

Every product manufactured and marketed by Bio-Rad is subject to a quality-assurance procedure at all stages, from the reception of raw 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

Thioglycollate without Resazurine / Sterility tests / Filtration / Direct inoculation / Medium.