

TERGITOL AGAR BASE

Basal medium for detection and enumeration of *E.coli* and coliforms, according to ISO 9308-1.

TYPICAL FORMULA	(g/l)
Lactose	20.0
Peptone	10.0
Yeast Extract	6.0
Meat Extract	5.0
Bromothymol Blue	0.05
Agar	15.0
Final pH 7.2 ± 0.1 at 25°C	

DESCRIPTION

TERGITOL AGAR BASE is a basal medium recommended by ISO 9308-1 for detection and enumeration of *Escherichia coli* and coliforms in water by membrane filtration technique.

PRINCIPLE

Peptone and meat extract are sources of nitrogen, carbon and amino acids. Yeast extract supplies B-group vitamins that stimulate bacterial growth. Lactose is the fermentable carbohydrate. Bromothymol blue is an indicator dye. Agar is the solidifying agent. Sodium heptadecylsulfate (Tergitol 7) is added to inhibit the growth of Gram-positive microorganisms, allowing for superior recovery of coliforms. Complete medium requires also the addition of triphenyltetrazolium chloride (TTC), a colorless compound that can be reduced to formazan, a red compound.

PREPARATION

Suspend 56.0 g of powder in 1 litre of deionized or distilled sterile water. Heat to boiling until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C. Aseptically add 2.5 ml of TTC 1% Supplement (ref. 80300) and 7 ml of Tergitol 1.5% Supplement (included in the box). Mix well and dispense in Petri dishes.

TECHNIQUE

Membrane Filtration Method

1. Filter two 100 ml aliquots of the water sample through two sterile membranes.
2. Place each membrane on a agar plate.
3. Incubate one plate at 37°C for 24 h (total coliforms) and the other one at 44°C for 16-24 h (*Escherichia coli*).

INTERPRETATION OF RESULTS

Escherichia coli cultivates with yellow-orange colonies on yellow medium.

Enterobacter/Klebsiella cultivate with yellow colonies on yellow medium.

Salmonella/Shigella/Proteus/Pseudomonas cultivate with dark red colonies on green medium.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product must be used only by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

- Tartoff, K.D., and C.A. Hobbs. (1987). Bethesda Research Laboratories Focus.9: 12.
- Sambrook, J., E.F. Fritsch, and T. Maniatis. (1989). Molecular cloning: a laboratory manual, 2nd ed.
- Chapman, G.H. (1947). J. Bact. 53: 504.
- ISO 9308-1:2000. Water quality – Detection and enumeration of *Escherichia coli* and coliform bacteria. Part 1: Membrane filtration method.



LIOFILCHEM® S.r.l.

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PRODUCT SPECIFICATIONS

NAME

TERGITOL AGAR BASE

PRESENTATION

Dehydrated medium

STORAGE

10-30°C

PACKAGE

Ref.	Content	Packaging
610184	500 g	500 g of powder in plastic bottle + 2 x 40 ml TERGITOL 1.5% Supplement
620184	100 g	100 g of powder in plastic bottle + 1 x 25 ml TERGITOL 1.5% Supplement

pH OF THE MEDIUM

7.2 ± 0.1

USE

TERGITOL AGAR BASE is a basal medium recommended by ISO 9308-1 for detection and enumeration of *Escherichia coli* and coliforms in water by membrane filtration technique

TECHNIQUE

Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: beige, may have slight greenish tint

Prepared medium

Appearance: slightly opalescent, without precipitate

Color: green

SHELF LIFE










4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
Inoculum for productivity: 10-100 CFU/ml
Inoculum for selectivity: 10⁴-10⁵ CFU/ml
Inoculum for specificity: ≤10⁴ CFU/ml
Incubation conditions: 18-24 h at 35 ± 2°C

Microorganism		Growth	Colony color	Medium color
<i>Escherichia coli</i>	ATCC® 25922	Good	Yellow-orange	Yellow
<i>Salmonella typhimurium</i>	ATCC® 14028	Good	Dark red	Green
<i>Enterococcus faecalis</i>	ATCC® 29212	Inhibited	---	---

TABLE OF SYMBOLS

 Batch code	 Keep away from heat sources	 Manufacturer	 Use by	 Fragile, handle with care
 Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Consult instruction for use	



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