



Modified Teepol Broth (Teepol Broth, Modified) (Twin pack)

M529I

Intended Use:

Recommended for selective isolation and identification of enteric lactose fermenting bacteria. The composition and performance criteria are in accordance with ISO 9308-1:2014.

Composition**

Ingredients	g/ L
Part A	-
Peptone	40.000
Lactose	30.000
Yeast extract	6.000
Phenol red	0.200
Part B	-
Teepol	4.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 76.2 grams of Part A in 1000 ml purified / distilled water containing 4ml of Part B. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure at (121°C) for 15 minutes. Cool to 45-50°C.

Principle And Interpretation

Modified Teepol Broth is formulated as described by Burman (1) where he substituted teepol in place of bile salts in the formulation of Membrane Enriched Teepol Broth which is also recommended by ISO Committee (2). The use of teepol in place of bile salts was previously recommended by Jameson and Emberley (3). Burman (4) showed that if a preliminary incubation is carried out at lower temperature resuscitation is not required. Non-chlorinated organisms benefit from 4 hours incubation at 30°C but chlorinated organisms require 6 hours incubation at 25°C.

The coliform and *Escherichia coli* count are made on separate volumes of water. The water samples are filtered through membrane filter and this filter is placed face upwards on an absorbent pad saturated with Modified Teepol Broth. The yellow colonies formed are further identified.

Type of specimen

Water samples

Specimen Collection and Handling:

Presumptive coliform organisms : Yellow colonies from membranes incubated at 35°C, when subcultured in Lactose Peptone Water produce gas at 35°C after 43 hours.

Presumptive *Escherichia coli* : Yellow colonies from membrane at 44°C when subcultured into Lauryl Tryptose Mannitol Broth, incubated at 44°C produce gas and indole after 24 hours.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Further biochemical and serological tests must be carried out for further identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Part A : Light yellow to light pink homogeneous free flowing powder. Part B: Colourless viscous solution

Colour and Clarity of prepared medium

Red coloured clear to slightly opalescent solution

Reaction

Reaction of (7.62% w/v Part A + 0.4% w/v Part B) aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed after an incubation for 24-48 hours at following temperatures.

Organism	Growth at 35-37°C	Growth at 43-45°C
<i>Escherichia coli</i> ATCC 25922 (00013*)	good-luxuriant	good-luxuriant
# <i>Klebsiella aerogenes</i> ATCC 13048 (00175*)	good-luxuriant	inhibited

Key : (*) Corresponding WDCM numbers. (#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1. Burman N.P., 1967 a, Proc. Soc. Wat. Treat. Exam., 16:40.
2. International Organization for Standardization (ISO), 1990, Draft ISO/DIS : 9308-
3. Jameson J.E. and Emberley N.W., 1956, J. Gen. Microbiol., 15:198.
4. Burman N.P., 1967 b, Rec. Adv. in Bacteriological Examination of Water, Collins C. H. (Ed.), Butterworth, London, pg. 185.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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Disclaimer :

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