

Technical Information

Teepol Broth, Modified (Twin Pack)

Product Code: DM 1529I

Application: - Modified Teepol Broth (Twin Pack) is recommended for selective isolation and identification of enteric lactose fermenting bacteria. The composition and performance criteria of this medium are as per the specifications laid down in ISO 9308-1:1990.

Composition**

| Ingredients | Gms / Litre |
|--------------------------------|-------------|
| Part A | - |
| Peptic digest of animal tissue | 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

Principle & 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.

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.

Methodology

Suspend 76.2 grams of dehydrated powder media **Part A** in 1000 ml distilled water containing 4ml of **Part B**. Mix thoroughly & Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure at (121°C) for 15 minutes.

Quality Control

Appearance

Light yellow to light pink homogeneous free flowing powder Colourless viscous solution

Colour and Clarity

Red coloured clear to slightly opalescent solution



Dehydrated Culture Media
Bases / Media Supplements

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 Range

7.20-7.60

Cultural Response

DM1529I: Cultural characteristics observed after an incubation for 24-48 hours at following temperatures.

| Organism | Growth 35-37°C | Growth 43-45°C |
|--|-------------------|-------------------|
| <i>Escherichia coli</i> ATCC 25922 | good-luxuriant | good- luxuriant |
| <i>Enterobacter aerogenes</i> ATCC 13048 | good-luxuriant | inhibited |

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Burman N.P., 1967 a, Proc. Soc. Wat. Treat. Exam., 16:40.
2. International Organization for Standardization (ISO), 1990, Draft ISO/DIS : 9308-1.
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. Departments of the Environment, Health and Social Security and PHLS, 1982. Report on Public Health and Medical Subjects No. 71, HMSO, London.

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