TMV 417 – EC BROTH (VEG.)

INTENDED USE

For selective enumeration of faecal and non faecal coliforms in water.

PRODUCT SUMMARY AND EXPLANATION

This medium is prepared by replacing Casein enzymic hydrolysate and Bile salt mixture with Veg hydrolysate and Synthetic detergent No. I making the medium free of BSE/TSE risks. EC Broth (Veg) is the modification of the medium formulated by Hajna and Perry. This medium, like the conventional medium is used for estimation of *Escherichia coli* densities from sea water and shellfish as reported by Tennant et al or for confirmation of *Escherichia coli* from frozen foods and nut meats as used by Fishbein and Surkiewicz. This medium can be used like the conventional medium for use in Most Probable Number (MPN) procedure for examination of water, waste water and foods. It should not be used for the direct isolation of coliforms since prior enrichment in a presumptive medium for optimal recovery of fecal coliform is required.

COMPOSITION

Ingredients	Gms / Ltr
Veg hydrolysate	20.0
Lactose	5.0
Synthetic detergent No. I	1.5
Dipotassium phosphate	4.0
Monopotassium phosphate	1.5
Sodium chloride	5.0

PRINCIPLE

The medium consists of Veg hydrolysate which provides essential growth nutrients. Lactose is the fermentable sugar. Synthetic detergent No.I inhibit gram-positive bacteria especially bacilli and faecal Streptococci. Potassium phosphates control the pH during fermentation of lactose. Sodium chloride maintains the osmotic balance of the medium. Gas production in a fermentation tube within 24 hour or less is a presumptive evidence of the presence of coliform bacteria. This medium like the conventional medium can be used at 37°C for the detection of coliform organisms or at 44.5°C for the isolation of *Escherichia coli* from water and shellfish or 45.5°C for foods.

INSTRUCTION FOR USE

- Dissolve 37.0 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in test tubes with inverted Durham tubes. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Adjust the concentration of medium in accordance with sample size.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Appearance of prepared medium : Yellow coloured, clear solution without any precipitate, forms in tubes.

pH (at 25°C) : 6.9 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Gas	Incubation Temperature	Incubation Period
Bacillus subtilis	6633	50-100	Inhibited	-	44.5°C ± 0.2	24 Hours
Enterococcus faecalis	29212	50-100	Inhibited	-	44.5°C ± 0.2	24 Hours
Escherichia coli	25922	50-100	Inhibited	+	44.5°C ± 0.2	24 Hours
Enterobacter aerogenes	13048	50-100	Luxuriant	-	44.5°C ± 0.2	24 Hours
Pseudomonas aeruginosa	27853	50-100	Fair-good	-	44.5°C ± 0.2	24 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

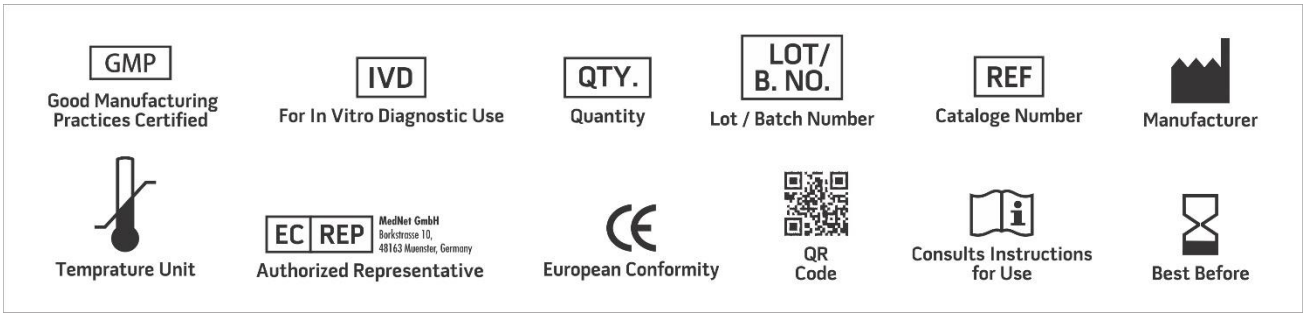
DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Hajna and Perry, 1943, Am. J. Publ. Health, 33:550.
2. Tennant et al, 1961, Can. J. Microbiol., 1:733.
3. Fishbein and Surkiewicz, 1964, Appl. Microbiol., 12:127.

4. Eaton A.D., Clesceri L.S. and Greenberg A.E., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st ed, APHA, Washington, DC.
5. Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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