TM 898 – TRYPTONE YEAST EXTRACT AGAR (W/ BCP)

INTENDED USE

For isolation and enumeration of Enterobacteriaceae and *Bacillus cereus*

PRODUCT SUMMARY AND EXPLANATION

Enterobacteriaceae are widespread in nature found in water, soil or as a parasite on different animals and plants. Many members of this group form the normal gut microbial flora of humans. It also includes pathogens such as *Salmonella*, *Klebsiella* and others. It can easily contaminate foods, milk products from their natural environment thereby causing foodborne illnesses. Tryptone Yeast Extract Agar with BCP is formulated as per ISO specifications (ISO 7402: 1993) and is recommended for the isolation and enumeration of *Enterobacteriaceae*. Enumeration of *Enterobacteriaceae* can be carried out by either the MPN Technique or colony count technique.

MPN Technique: Inoculate 10 ml of the test sample or 10 ml of the initial suspension into 3 tubes of double strength EE Broth and 1 ml of sample into three tubes of single strength tubes of EE Broth. Inoculate another three single strength tubes of EE Broth with 1 ml of the first decimal dilution (10-1) of the test sample. Incubate these nine tubes at 35-37°C for 24 hours. Streak a loopful from each tube onto VRBGA w/o Lactose. Incubate plates at 35-37°C for 24 hours. On incubation, presumptive typical red to pink colonies or colourless, mucoid colonies are confirmed biochemically. Colony count technique: Transfer 1 ml of the test sample in two sterile Petri plates. To another two sterile Petri dishes, transfer 1 ml of the first decimal dilution. Repeat the procedure for further dilutions. Into each Petri dish, aseptically add 15 ml of sterile, cooled VRBGA w/o Lactose. Mix and cool. After complete solidification, add a covering layer of 10 ml to 15 ml of sterile VRBGA w/o Lactose, cooled to 45-50°C. Allow to solidify and incubate at 35-37°C for 24 hours. Select presumptive colonies, as described in MPN Technique and confirm biochemically. Biochemical testing is done by inoculation in Tryptone Yeast Extract Agar w/ BCP to check fermentation reactions.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	10.000
Yeast extract	1.500
Dextrose	10.000
Sodium chloride	5.000
Bromocresol purple	0.015
Agar	15.000

PRINCIPLE

Casein enzymic hydrolysate and yeast extract provide nitrogenous compounds, vitamin B complex and other growth nutrients. Dextrose is the fermentable carbohydrate and bromocresol purple acts as the pH indicator, with colour change from purple to yellow in acidic conditions. Sodium chloride maintains osmotic equilibrium.

INSTRUCTION FOR USE

- Suspend 41.52 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Dispense in tubes and cool the tubed medium in a slanting position.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to pale green homogeneous free flowing powder.
Appearance of prepared medium : Purple coloured clear to slightly opalescent gel forms in tubes as slants.
pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation at different temperatures.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Color of the medium	Incubation Temperature	Incubation Period
Enterobacter aerogenes	13048	50-100	Luxuriant	Yellow	35-37°C	18-24 Hours
Klebsiella pneumoniae	13883	50-100	Luxuriant	Yellow	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Luxuriant	Yellow	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Luxuriant	Yellow	35-37°C	18-24 Hours
Salmonella Enteritidis	13076	50-100	Luxuriant	Yellow	35-37°C	18-24 Hours

PACKAGING:

In pack size of 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.

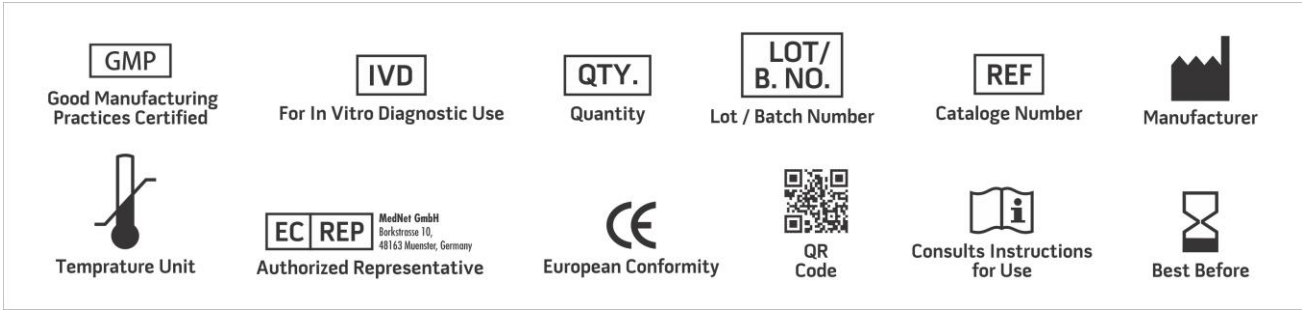
DISPOSAL

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

REFERENCES

1. International Organization for Standardization, (ISO), 1993, Draft ISO/DIS, 7402.

2. Corry J. E. L., Curtis G. D. W., and Baird R. M., Culture Media for Food Microbiology. Vol. 34, Progress in Industrial Microbiology, 1995, Elsevier, Amsterdam.



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

***For Lab Use Only**

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