TM 1173 – EDWARDS AND BRUNER SEMISOLID MEDIUM

INTENDED USE

For detection of motility and separation of H and O phases of enteric bacilli.

PRODUCT SUMMARY AND EXPLANATION

Edwards and Bruner formulated a semisolid medium, which is used in routine identification of enteric bacilli by means of motility and separation of H and O phases. *Salmonella* is found in nature and occurs in the intestinal tract of many animals, both wild and domestic. Infection in humans occurs through consumption of contaminated vegetables, raw meat and other food products. Serotypes of *Salmonella* are defined based on the antigenic structure of both somatic cell wall antigen (O) and flagellar antigen (H).

Complete identification of *Salmonella* involves isolation on selective media, biochemical characterization and then confirmation by serotyping. Serological confirmation involves the procedure in which the microorganism (antigen) reacts with its corresponding antibody. *Salmonella* can be recovered when samples are processed to recover injured microorganisms. The purity of the cultures and their biochemical test reactions should be determined. These aid in the identification of the organisms as a *Salmonella* species. After these criteria have been met, serological identification can be performed. It is often necessary to increase the motility of the test organism. To accomplish this, make several consecutive transfers in motility medium.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	10.000
Beef extract	3.000
Gelatin	80.000
Sodium chloride	5.000
Agar	4.000

PRINCIPLE

The medium consists of Peptone and Beef extract which provide all the essential growth nutrients required by enteric bacilli. Cultures are inoculated by stabbing with a straight wire. Motile organisms grow diffusely and spread through the medium while non-motile organisms grow along the line of stab inoculation.

INSTRUCTION FOR USE

- Dissolve 102.0 grams in 1000 ml warm purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense in tubes and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C in an upright position.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to beige homogeneous free flowing powder.

Appearance of prepared medium : Light amber coloured, clear to slightly opalescent gel forms in tubes as butts.

pH (at 25°C) : 6.9 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Motility	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Good-luxuriant	Positive, growth away from stabline causing turbidity	35-37°C	18-24 Hours
Klebsiella aerogenes	13048	50-100	Luxuriant	Positive, growth away from stabline causing turbidity	35-37°C	18-24 Hours
Proteus mirabilis	25933	50-100	Luxuriant	Positive, growth away from stabline causing turbidity	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Good-luxuriant	Positive, growth away from stabline causing turbidity	35-37°C	18-24 Hours
Salmonella Enteritidis	13076	50-100	Good-luxuriant	Positive, growth away from stabline causing turbidity	35-37°C	18-24 Hours
Shigella sonnei	25931	50-100	Good-luxuriant	Negative, growth along the stabline, surrounding medium remains clear	35-37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	Good-luxuriant	Negative, growth along the stabline, surrounding medium remains clear	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.

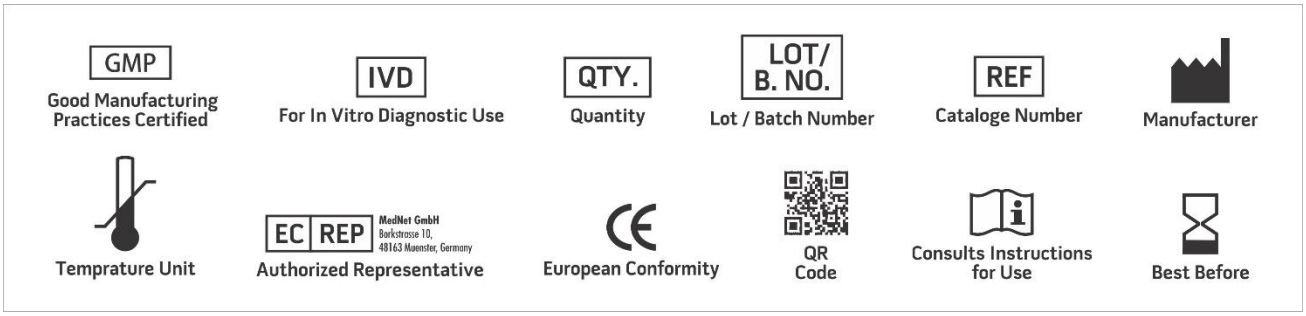
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Edwards and Bruner, 1942, Univ. Ky. Cir., 154.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. 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.



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

***For Lab Use Only**

Revision: 08 Nov., 2019