CM 20339 – BUFFERED PEPTONE WATER (VEG.)

INTENDED USE

For pre-enrichment of injured Salmonella species prior to selective enrichment and isolation.

PRODUCT SUMMARY AND EXPLANATION

Microorganismsthat aresubjected to environmental stresses may become structurally or metabolically damaged or injured. These microorganisms are unable to replicate in selective environments. Therefore, these injured organisms must be resuscitated or permitted to repair the damage by incubation in an appropriate, non-selective environment. Edel and Kampelmacher noted that sublethal injury to Salmonellae may occur in many food preservation processes. Enriching injured cells in Lactose Broth (pH 6.9) may be further detrimental to their recovery. Buffered Veg Peptone water is prepared by replacing casein enzymic hydrolysate with Veg hydrolysate to avoid BSE/ TSE risks associated with animal based peptones. Pre enrichment in Buffered Veg Peptone Water at 35°C for 18-24 hours results in repair of injured cells.

Inoculate 10 grams of specimen in 50 ml of Buffered Veg Peptone Water and incubate at 35°C for 18 hours. Transfer 10 ml from this medium to 100 ml of Rappaport Vassiliadis Soya Broth (RVS Broth) and incubate at 43°C for 24-48 hours and then subculture on selective media like XLD Veg Agar. Examine the plates for colonies of Salmonella species.

COMPOSITION

Ingredients	Gms / Ltr
Veg hydrolysate	10.000
Sodium chloride	5.000
Disodium hydrogen phosphate.12H_2O	9.000
Monopotassium hydrogen phosphate	1.500

PRINCIPLE

Thebuffering system prevents bacterial damage due to change in the pH of the medium. Veg hydrolysate provides carbonaceous and nitrogenous compounds, amino acids long chain peptides and vitamins required for the growth. Recently ISO committee has also recommended Buffered Peptone water for the detection of Enterobacteriaceae from food stuffs and other materials.

INSTRUCTION FOR USE

Dissolve 20.07grams (equivalent weight of dehydrated medium) in 1000 ml distilled water.
Heat if necessary to dissolve the medium completely.
Dispense as desired and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light yellow coloured clear solution without any precipitate.
pH (at 25°C)	: 7.0±0.2

INTERPRETATION

Culturalcharacteristics observed after incubation. (Recovery is observed on XLD Veg Agar)

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Salmonella Enteritidis	13076	50-100	Luxuriant	>=70%	Red with black centres	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Luxuriant	>=70%	Red with black centres	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	>=70%	Red with black centres	35-37°C	18-24 Hours

PACKAGING:

Inpacksizeof100 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

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

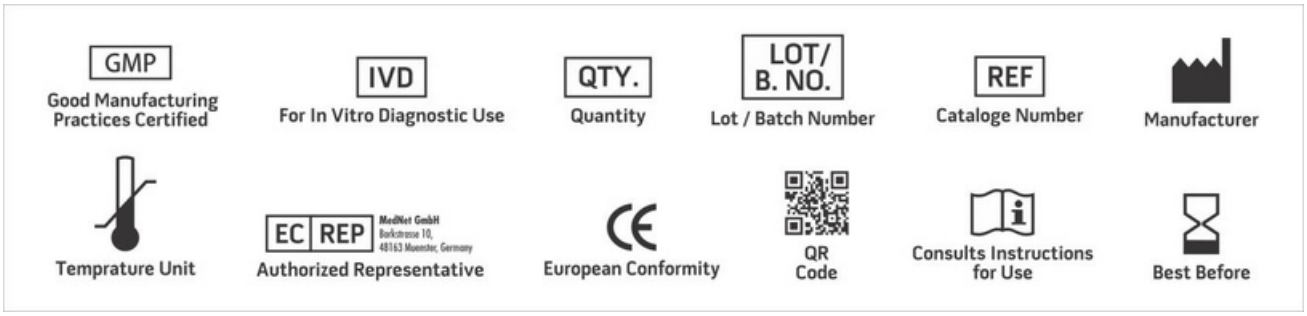
REFERENCES

1.Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.

2. Edel W. and Kampelmacher E. H., 1973, Bull. Wld. Hlth. Org., 48: 167. 3.Angelotti R., 1963, “Microbiological Quality of Foods”, Academic Press, New York.

4.Sadovski A. Y., 1977, J. Food Technol., 12.85.

5.International Organization for Standardization (ISO), 2002, Draft ISO/DIS, 6579.



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

*For LabUse Only