

# TM 2020 – BUFFERED PEPTONE WATER W/ PYRUVATE

#### **INTENDED USE**

For the isolation of Enterohemorrhagic E. coli (EHEC).

## **PRODUCT SUMMARY AND EXPLANATION**

Enterohemorrhagic *E. coli* (EHEC) can cause severe foodborne disease. EHEC is the primary cause of hemorrhagic colitis. This infection can also lead to hemolytic uremic syndrome. It is transmitted to humans primarily through consumption of contaminated foods, such as raw or undercooked ground meat products and raw milk. Its significance as a public health problem was recognized in 1982, following an outbreak in the United States of America. EHEC produces toxins, known as verotoxins or Shiga-like toxins because of their similarity to the toxins produced by *Shigella dysenteriae*.

Antibiotic supplement contains Acriflavin, Cefsulodin, and Vancomycin which effectively suppress the normal flora while allow the growth of Escherichia coli O157:H7. After the sample has been prepared, material will be placed in Buffered Peptone Water w/Pyruvate and incubated at  $37 \pm 1$  °C for 5 hours. Next add rehydrated contents of one vial of Acriflavin-Cefsulodin-Vancomycin Supplement (ACV Supplement, TS 267) and incubate at  $42\pm 1$  °C for 18-24 hours.

## COMPOSITION

Ingredients	Gms / Ltr	
Tryptone	10.000	
Lactose	10.000	
Yeast extract	6.000	
Casein acid hydrolysate	5.000	
Sodium chloride	5.000	
Disodium hydrogen phosphate	3.600	
Potassium dihydrogen phosphate	1.500	
Sodium pyruvate	1.000	

#### PRINCIPLE

The media contains Tryptone, Casein acid hydrolysate and Yeast extract as carbon and nitrogen sources, long chain amino acids, vitamins and sources for bacterial growth. Phosphates buffer the medium. The phosphate buffer system prevents bacterial damage due to changes in the pH of the medium. Sodium chloride maintains the osmotic balance. Lactose serves as a carbon source.

#### **INSTRUCTION FOR USE**

- Suspend 21.05 grams in 500 ml purified / distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add the rehydrated contents of one vial of Acriflavin-Cefsulodin-Vancomycin Supplement (ACV Supplement, FD284).

## QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Amber coloured, clear solution without any precipitate.
pH (at 25°C)	: 7.2±0.2

#### **INTERPRETATION**

A- 902A, RIICO Industrial Area, Phase III, Bhiwadi-301019.





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## Cultural characteristics observed after incubation.

Microorganism	ATCC	Growth	Recovery	Incubation Temperature	Incubation Period
Staphylococcus aureus subsp. aureus	25923	Inhibited	0%	42±1°C	18-24 Hours
<i>Salmonella</i> Typhimurium	14028	Good	40-50%	42±1°C	18-24 Hours
Enterococcus faecalis	29212	Inhibited	0%	42± 1 °C	18-24 Hours
Escherichia coli	25922	Inhibited	0%	42±1°C	18-24 Hours

## PACKAGING:

In pack size of 100gm 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.

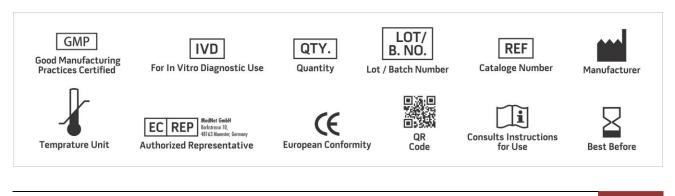
## DISPOSAL

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

#### REFERENCES

1. www.fda.gov/Food/ScienceResearch/LaboratoryMethods/BacteriologicalAnalyticalmanualBAM/default.html.

2. www.who.int/mediacentre/factsheets/fs125/en/.





## **PRODUCT DATA SHEET**



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices. \*For Lab Use Only Revision: 08 Nov., 2019

A- 902A, RIICO Industrial Area, Phase III, Bhiwadi-301019.

