

## TM 1372 – LACTOSE PEPTONE WATER

### INTENDED USE

For detection of coliforms in fermentation studies.

### PRODUCT SUMMARY AND EXPLANATION

The fermentation of Lactose is important for differentiating microbial species, especially for members of the *Enterobacteriaceae*. Lactose peptone water is recommended for Lactose fermentation studies.

### COMPOSITION

Ingredients	Gms / Ltr
Peptic digest of animal tissue	10.000
Yeast extract	5.000
Lactose	10.000
Phenol red	0.040

### PRINCIPLE

This medium is rich in additional growth factors and nitrogen source provided by peptic digest of animal tissue and yeast extract. Lactose acts as carbohydrate and energy source for growth of organism. Lactose fermenting species will utilize lactose to produce acid which can be detected by change in pH of the medium, which is indicated by phenol red indicator to yellow colour. Durham's tubes enable the detection of gas production.

### INSTRUCTION FOR USE

- Dissolve 25.04 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in tubes containing inverted Durham's tubes and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

### QUALITY CONTROL SPECIFICATIONS

**Appearance of Powder** : Light yellow to pink coloured homogeneous free flowing powder.

**Appearance of prepared medium** : Pink coloured clear solution without any precipitate.

**pH (at 25°C)** : 7.5 ± 0.2

### INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Acid production	Gas production	Incubation Temperature	Incubation Period
<i>Citrobacter freundii</i>	8090	50-100	Luxuriant	Positive reaction, yellow colour	Positive reaction	35-37°C	18-24 Hours



<i>Enterobacter aerogenes</i>	13048	50-100	Luxuriant	Positive reaction, yellow colour	Positive reaction	35-37°C	18-24 Hours
<i>Escherichia coli</i>	25922	50-100	Luxuriant	Positive reaction, yellow colour	Positive reaction	35-37°C	18-24 Hours
<i>Klebsiella pneumoniae</i>	13883	50-100	Luxuriant	Positive reaction, yellow colour	Positive reaction	35-37°C	18-24 Hours
<i>Proteus vulgaris</i>	13315	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	35-37°C	18-24 Hours
<i>Serratia marcescens</i>	8100	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	35-37°C	18-24 Hours
<i>Salmonella Typhi</i>	6539	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	35-37°C	18-24 Hours
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	35-37°C	18-24 Hours
<i>Shigella flexneri</i>	12022	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	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. Ewing, 1986, Edwards and Ewing's identification of Enterobacteriaceae, 4th Ed. Elsevier Science Publishing Co., Inc., New York.



 GMP Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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

**\*For Lab Use Only**  
**Revision: 08 Nov., 2019**