TM 255 – PHENOL RED BROTH BASE

INTENDED USE

For determination of fermentation reactions of pure cultures of microorganisms.

PRODUCT SUMMARY AND EXPLANATION

Phenol Red Broth medium is formulated as per Vera and is recommended to determine the fermentation reaction of carbohydrates for the differentiation of microorganisms. Phenol Red Broth Medium with various added carbohydrates serves as a differential medium by aiding in differentiation of various species and genera by their ability to ferment the specific carbohydrate, with the production of acid or gas. Phenol Red Broth Base is a complete medium without added carbohydrate, which can be used with the addition of 5-10%, desired carbohydrate. It is used as a negative control for studying fermentations or as a base for the addition of carbohydrates.

COMPOSITION

Ingredients	Gms / Ltr
Proteose peptone	10.000
Beef extract	1.000
Sodium chloride	5.000
Phenol red	0.018

PRINCIPLE

The medium consists of Proteose peptone and Beef extract which serve as sources for carbon and nitrogen. Sodium chloride is the osmotic stabilizer. Phenol red is the pH indicator, which turns yellow at acidic pH. Gas formation is seen in Durham's tubes. All of the *Enterobacteriaceae* grow well in this medium. In addition to producing a pH colour shift, the production of mixed acids, notably butyric acids, often results in a pungent, foul odour from the culture medium.

INSTRUCTION FOR USE

- Dissolve 16.02 grams in 1000 ml purified/distilled water, mix well.
- Heat if necessary to dissolve the medium completely.
- Mix well and dispense in fermentation tubes (tubes containing inverted Durham's tubes).
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Aseptically add filter sterilized or autoclave sterilized carbohydrate solution to sterile basal medium.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to pink coloured homogeneous free flowing powder.
Appearance of prepared medium : Red coloured clear solution without any precipitate.
pH (at 25°C) : 7.4 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	without carbohydrate, (Acid)	without carbohydrate, (Gas)	with dextrose, (Acid)	with dextrose, (Gas)	Incubation Temperature	Incubation Period
Citrobacter freundii	8090	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction	35 - 37°C	18 - 24 Hours
Escherichia coli	25922	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction	35 - 37°C	18 - 24 Hours
Klebsiella aerogenes	13048	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction	35 - 37°C	18 - 24 Hours
Klebsiella pneumoniae	13883	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction	35 - 37°C	18 - 24 Hours
Proteus vulgaris	13315	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction	35 - 37°C	18 - 24 Hours
Salmonella Typhi	6539	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction	35 - 37°C	18 - 24 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction	35 - 37°C	18 - 24 Hours
Serratia marcescens	8100	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction	35 - 37°C	18 - 24 Hours
Shigella flexneri	12022	50-100	Luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Negative reaction	35 - 37°C	18 - 24 Hours

PACKAGING:
In pack size of 100 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

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

REFERENCES

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4. Vera H. D., 1950, Am. J. Public Health, 40, 1267
5. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification -Maintenanceof Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
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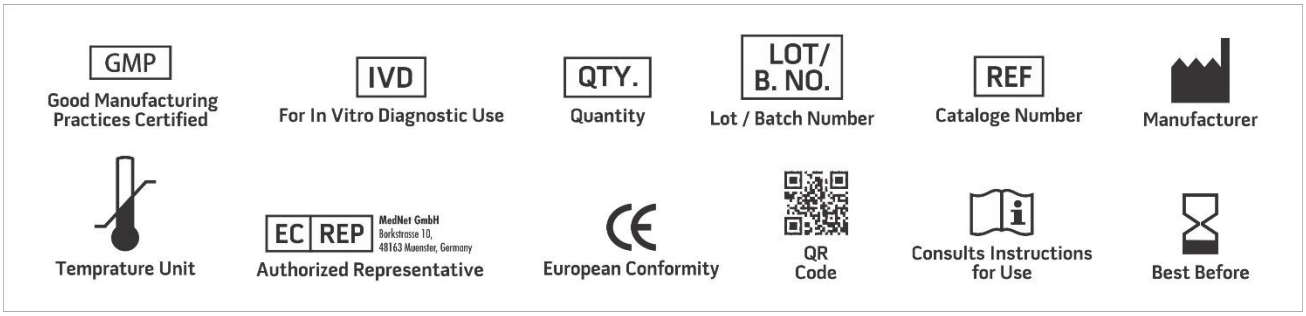

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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