

TM 817 – PHENOL RED DULCITOL BROTH

INTENDED USE

For determining the ability of microorganisms to ferment dulcitol.

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 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 acid and gas. Phenol Red Dulcitol Broth is used to study dulcitol fermentation in various bacteria.

COMPOSITION

| Ingredients | Gms / Ltr |
|------------------|-----------|
| Proteose peptone | 10.000 |
| Beef extract | 1.000 |
| Sodium chloride | 5.000 |
| Dulcitol | 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 i.e. on fermentation of dulcitol. Gas formation is seen in Durhams 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 21.02 grams in 1000 ml purified/distilled water.
- Heat if necessary to ensure complete solution.
- Distribute in fermentation tubes (tubes containing inverted Durham's tubes). Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

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| 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 | Acid | Gas | Incubation Temperature | Incubation Period |
|---------------|------|-------------------|--------|------|-----|------------------------|-------------------|
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|-------------------------------|-------|--------|-----------|-------------------------------------|-------------------|-----------|---------------|
| <i>Citrobacter freundii</i> | 8090 | 50-100 | Luxuriant | Negative reaction, no colour change | Negative reaction | 35 - 37°C | 18 - 24 Hours |
| <i>Escherichia coli</i> | 25922 | 50-100 | Luxuriant | Negative reaction, no colour change | Negative reaction | 35 - 37°C | 18 - 24 Hours |
| <i>Enterobacter aerogenes</i> | 13048 | 50-100 | Luxuriant | Negative reaction, no colour change | Negative reaction | 35 - 37°C | 18 - 24 Hours |
| <i>Klebsiella pneumoniae</i> | 13883 | 50-100 | Luxuriant | Negative reaction, no colour change | Negative 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>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 | Positive reaction, yellow colour | Positive 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>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 100 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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2. Vera H. D., 1950, Am. J. Public Health, 40, 1267
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification -Maintenanceof Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4. Finegold S. M. and Baron E. J., 1986, Bailey and Scotts Diagnostic Microbiology, 7th Ed., The C.V. Mosby Co., St. Louis.
5. Ewing W. H., 1986, Edwards and Ewings Identification of Enterobacteriaceae, 4th ed.,Elsevier Science Publishing Co., Inc., New York.
6. MacFaddin J. F., 2000, Biochemical tests for Identification of Medical Bacteria, 3rd edi., Lippincott, Williams and Wilkins, Baltimore.

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|  GMP Good Manufacturing Practices Certified |  IVD For In Vitro Diagnostic Use |  QTY. Quantity |  LOT/B. NO. Lot / Batch Number |  REF Catalogue Number |  Manufacturer |
|  Temperature Unit |  EC REP Authorized Representative <small>MedNet GmbH Barkstrasse 10, 49163 Maenster, Germany</small> |  European Conformity |  QR Code |  Consults Instructions for Use |  Best Before |

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

***For Lab Use Only**
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