

## Technical Information

### Phenol Red Dextrose Agar

#### Product Code: DM 1055

**Application:** - Phenol Red Dextrose Agar is used for studying lactose fermentation by the pure cultures of microorganisms.

#### Composition\*\*

| Ingredients         | Gms / Litre |
|---------------------|-------------|
| Proteose peptone    | 10.000      |
| Beef extract        | 1.000       |
| Sodium chloride     | 5.000       |
| Dextrose            | 10.000      |
| Phenol red          | 0.025       |
| Agar                | 15.000      |
| Final pH ( at 25°C) | 7.4±0.2     |

\*\*Formula adjusted, standardized to suit performance parameters

#### Principle & Interpretation

Phenol Red Agar media <sup>(1-3)</sup> are recommended for studying the fermentation of various carbohydrates individually by the pure cultures of microorganisms including their identification biochemically.

Proteose peptone which is free from fermentable carbohydrates is added in the medium thereby preventing the production of false positive reactions. When Phenol Red Agar with Dextrose is used, a positive carbohydrate fermentation reaction is indicated by the production of a yellow colour in agar due to the effect of acid production. Gas production is indicated by the splitting of agar or by the bubbles formation. Plates or tubes may be incubated aerobically or anaerobically depending on the type of the test organism.

#### Methodology

Suspend 41 grams of powder media in 1000 ml distilled water. Shake well & heat with frequent agitation to dissolve the medium completely. Dispense in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow the tubed media to cool in slanted position to form slants with deep butts.

#### Quality Control

##### Physical Appearance

Light yellow to pink homogeneous free flowing powder

##### Gelling

Firm, comparable with 1.5% Agar gel.

##### Colour and Clarity of prepared medium

Red coloured clear to slightly Opalescent gel forms in tubes as slants

##### Reaction

Reaction of 4.1% w/v aqueous solution at 25°C. pH : 7.4±0.2

**pH Range** 7.20-7.60

##### Cultural Response/ characteristics

DM 1055: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.



Dehydrated Culture Media  
Bases / Media Supplements

| Organism                          | Inoculum (CFU) | Growth    | Acid                                | Gas               |
|-----------------------------------|----------------|-----------|-------------------------------------|-------------------|
| Alcaligenes faecalis ATCC 8750    | 50-100         | luxuriant | Negative reaction, no colour change | negative reaction |
| Enterobacter aerogenes ATCC 13048 | 50-100         | luxuriant | Positive reaction, yellow colour    | positive reaction |
| Escherichia coli ATCC 25922       | 50-100         | luxuriant | Positive reaction, yellow colour    | positive reaction |
| Klebsiella pneumoniae ATCC 13883  | 50-100         | luxuriant | Positive reaction, yellow colour    | positive reaction |
| Proteus vulgaris ATCC 13315       | 50-100         | luxuriant | Positive reaction, yellow colour    | positive reaction |
| Salmonella Typhimurium ATCC 14028 | 50-100         | luxuriant | Positive reaction, yellow colour    | positive reaction |
| Shigella flexneri ATCC 12022      | 50-100         | luxuriant | Positive reaction, yellow colour    | negative reaction |

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.

## Further Reading

1. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
2. Finegold and Baron, 1986, Bailey and Scotts Diagnostic Microbiology, 7th ed., The C.V. Mosby Co., St. Louis.
3. Ewing, 1986, Edwards and Ewings Identification of Enterobacteriaceae, 4th ed., Elsevier Science Publishing Co., Inc., New York.

## Disclaimer :

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