



Phenol Red Dextrose Agar

M055

Intended Use:

Recommended for Dextrose fermentation studies of microorganisms.

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
HM peptone B #	1.000
Sodium chloride	5.000
Dextrose (Glucose)	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

Equivalent to Beef extract

Directions

Suspend 41.02 grams in 1000 ml purified / distilled water. Heat to boiling 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.

Principle And Interpretation

Phenol Red Agar media are recommended (1, 2, 5) for studying the fermentation of various carbohydrates individually by the pure cultures of microorganisms.

Proteose peptone and HM Peptone B 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.

Type of specimen

Isolated Microorganisms

Specimen Collection and Handling

For Isolated Microorganisms samples follow appropriate techniques for handling specimens as per established guidelines. After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

- 1.This media is not intended for primary isolation of specimens.
2. Overincubation is not recommended.
- 3 Since the medium is pH dependent, adjustment of pH is important for correct results.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

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

7.20-7.60

Cultural Response

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

Organism	Inoculum (CFU)	Growth	Acid	Gas
<i>Alcaligenes faecalis</i> ATCC 8750	50-100	luxuriant	Negative reaction, no colour change	Negative reaction
# <i>Klebsiella aerogenes</i> ATCC 13048 (00175*)	50-100	luxuriant	Positive reaction, yellow colour	Positive reaction
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	luxuriant	Positive reaction, yellow colour	Positive reaction
<i>Klebsiella pneumoniae</i> ATCC 13883 (00097*)	50-100	luxuriant	Positive reaction, yellow colour	Positive reaction
<i>Proteus vulgaris</i> ATCC 13315	50-100	luxuriant	Positive reaction, yellow colour	Positive reaction
<i>Salmonella</i> Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	Positive reaction, yellow colour	Positive reaction
<i>Shigella flexneri</i> ATCC 12022 (00126*)	50-100	luxuriant	Positive reaction, yellow colour	Negative reaction

Key : (*) Corresponding WDCM numbers.

(#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Ewing, 1986, Edwards and Ewings Identification of Enterobacteriaceae, 4th ed., Elsevier Science Publishing Co., Inc., New York.
2. Finegold and Baron, 1986, Bailey and Scotts Diagnostic Microbiology, 7th ed., The C.V. Mosby Co., St. Louis.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

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Disclaimer :

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