



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Phenol Red Mannitol Agar

Product Code: DM 1571

Application: Phenol Red Mannitol Agar is used for studying Mannitol fermentation by the pure cultures of microorganisms.

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
Beef extract	1.000
Sodium chloride	5.000
Mannitol	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 are used for studying the fermentation of various carbohydrates individually by the pure cultures of microorganisms⁽¹⁻³⁾.

Proteose peptone which is free from fermentable carbohydrates is added in the medium as control to rule out any false positive reactions. When Phenol Red Agar with mannitol 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 41.02 grams of powder media in 1000 ml distilled water. Shake well and 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 1571: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.





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Organism	Inoculum (CFU)	Growth	Acid	Gas
Alcaligenesfaecalis ATCC 8750	50-100	luxuriant	Negative reaction,no colour change	Negative reaction
<i>Escherichia coli</i> 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	Negative reaction,no colour change	Negative 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.

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- User must ensure suitability of the product(s) in their application prior to use.
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