

Technical Information

Phenol Red Maltose Agar

Product Code: DM 1271

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

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
Beef extract	1.000
Sodium chloride	5.000
maltose	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 ⁽¹⁻³⁾ to study the fermentation behavior of various carbohydrates individually using pure cultures of microorganisms.

Proteose peptone which is free from fermentable carbohydrates is added in the medium to prevent the occurrence of any false positive reactions. When Phenol Red Agar with Maltose 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 coloured homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Red 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 : 7.4±0.2

pH Range 7.20-7.60

Cultural Response/ characteristics

DM 1271: 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
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.

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