

PHENOL RED MANNITOL AGAR
TM 254

For determining the ability of microorganism to ferment mannitol.

Composition

| Ingredients | g/L |
|------------------|-------|
| Agar | 15.00 |
| Proteose peptone | 10.00 |
| Mannitol | 10.00 |
| Sodium chloride | 5.00 |
| Beef extract | 1.00 |
| Phenol red | 0.025 |

*Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly - sealed containers below 25°C and protect from direct Sunlight.

Instructions for use

Dissolve 41.02g in 1000ml distilled water. Gently heat to boil with gentle swirling and dissolve the medium completely. Dispense as desired in tubes. Sterilize by autoclaving at 15 psi (at 121°C) for 15 minutes. Cool to 45-50°C and keep in slanted position for preparation of slants with deep butts.

Appearance: Red coloured clear to slightly opalescent gel forms in tube as slants

pH (at 25°C): 7.4 ± 0.2

Principle

PHENOL RED MANNITOL AGAR is used for determining the ability of microorganism to ferment mannitol.

Medium composed of proteose peptone essential for prevention of false positive reaction. Mannitol is the fermentable carbohydrate providing carbon and energy. Phenol red is the pH indicator, which turns yellow at acidic pH i.e. on fermentation of mannitol.

The bubble formation indicates the gas production. Sodium chloride maintains the osmotic equilibrium of the medium.

Microbiological parameters (Growth promotion test)

Cultural characteristics observed after inoculation (10³ CFU/ml) and incubation at 35 - 37°C for 24 – 48 hours.

| Test strains | ATCC | Inoculum (CFU/ml) | Growth | Acid | Gas |
|-------------------------------|-------|-------------------|-----------|----------|----------|
| <i>Alcaligenes faecalis</i> | 8750 | 10 ³ | Luxuriant | Negative | Negative |
| <i>Klebsiella pneumoniae</i> | 13883 | 10 ³ | Luxuriant | Positive | Positive |
| <i>Escherichia coli</i> | 25922 | 10 ³ | Luxuriant | Positive | Positive |
| <i>Salmonella Typhimurium</i> | 14028 | 10 ³ | Luxuriant | Positive | Positive |
| <i>Proteus vulgaris</i> | 13315 | 10 ³ | Luxuriant | Negative | Negative |



PRODUCT DATA SHEET

Positive; Medium colour changes to Yellow

Negative; No change in medium colour

References

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.