

TM 813 – PHENOL RED TARTRATE AGAR

INTENDED USE

For identification and differentiation of Salmonellae on the basis of tartrate utilization.

PRODUCT SUMMARY AND EXPLANATION

Phenol Red Tartrate Agar was originally formulated by Brown et al and further modified by Jordon and Harmon, for the differentiation of *Enterobacteriaceae* especially *Salmonella* species. This medium can also be used to differentiate *V. parahaemolyticus* (positive) from *Aeromonas* species (negative). Phenol Red Tartrate Agar with the addition of sodium chloride (25.0 g/l) can be used to differentiate halophilic *Vibrio* species e.g. *V. parahaemolyticus*, *V. vulnificus*, *V. aglino-lyticus* and *V. metschnikovii*. On this medium, an acidic reaction is produced by *Salmonella Enteritidis*, *Salmonella Choleraesuis*, *Salmonella Typhi*, *Salmonella Typhimurium*, *Escherichia coli*, and *Proteus vulgaris*. However, organisms like *Salmonella Paratyphi A* and *Salmonella Schottmuelleri* produce an alkaline reaction due to non-utilization of tartrate.

COMPOSITION

Ingredients	Gms / Ltr
Peptic digest of animal tissue	10.000
Sodium potassium tartrate	10.000
Sodium chloride	5.000
Phenol red	0.024
Agar	15.000

PRINCIPLE

The medium consists of Peptic digest of animal tissue in the medium which provide the essential growth nutrients like nitrogenous compounds to the organisms. Sodium potassium tartrate is used most frequently because it is easy to be utilized by the organism. Tartrate utilization (fermentation) yields an acidic reaction, which is indicated by the yellow colour formation at the bottom of the tube. Phenol red acts as the pH indicator while sodium chloride maintains the osmotic balance of the medium.

INSTRUCTION FOR USE

- Dissolve 40.02 grams in 1000 ml purified/distilled water, mix well.
- Heat to boiling to dissolve the medium completely.
- Distribute in tubes or as desired and Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Allow the tubed media to cool in an upright position.

QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder** : Light yellow to pink coloured homogeneous free flowing powder.
Appearance of prepared medium : Red coloured clear to slightly opalescent gel forms in tubes as butts.
pH (at 25°C) : 7.4 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Reaction	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Luxuriant	Positive reaction, yellow colour in the lower portion of the tube	35 - 37°C	24 - 48 Hours
<i>Salmonella Schottmuelleri</i>	10719	50-100	Luxuriant	Acid Production, - negative reaction, Pink colour	35 - 37°C	24 - 48 Hours
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	Acid Production, + positive reaction, yellow colour	35 - 37°C	24 - 48 Hours
<i>Salmonella Enteritidis</i>	13076	50-100	Luxuriant	Positive reaction, yellow colour in the lower portion of the tube	35 - 37°C	24 - 48 Hours
<i>Salmonella Schottmuelleri</i>	10719	50-100	Luxuriant	Negative reaction	35 - 37°C	24 - 48 Hours
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	Positive reaction, yellow colour in the lower portion of the tube	35 - 37°C	24 - 48 Hours
<i>Salmonella Typhi</i>	6539	50-100	Luxuriant	Positive reaction, yellow colour in the lower portion of the tube	35 - 37°C	24 - 48 Hours
<i>Edwardsiella tarda</i>	15947	50-100	Luxuriant	Negative reaction	35 - 37°C	24 - 48 Hours
<i>Proteus vulgaris</i>	13315	50-100	Luxuriant	Positive reaction, yellow colour in the lower portion of the tube	35 - 37°C	24 - 48 Hours
<i>Klebsiella pneumoniae</i>	13883	50-100	Luxuriant	Positive reaction, yellow colour in the lower portion of the tube	35 - 37°C	24 - 48 Hours
<i>Salmonella Paratyphi A</i>	9150	50-100	Luxuriant	Negative reaction	35 - 37°C	24 - 48 Hours

<i>Salmonella Paratyphi B</i>	8739	50-100	Luxuriant	Negative reaction	35 - 37°C	24 - 48 Hours
<i>Aeromonas hydrophila</i>	7966	50-100	Luxuriant	Negative reaction	35 - 37°C	24 - 48 Hours
<i>Vibrio parahaemolyticus</i>	17802	50-100	Luxuriant	Positive reaction, yellow colour in the lower portion of the tube	35 - 37°C	24 - 48 Hours

PACKAGING:

In pack size of 100 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.













Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Brown H.C., Duncan J.T. and Henry T.A., 1924, J.Hyg. (Camb.), 23:1.
2. Jordon E.O. and Harmon, P.H., 1928, J. Infect. Dis., 42:238.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Barkhausen 10, 48163 Münster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only
Revision: 08 Nov., 2019