

TMK 12 – WATER TESTING KIT

INTENDED USE

For rapid and simultaneous detection of *Salmonella species*, *E. coli*, *Citrobacter species* and *Vibrio species*.

- Kit includes Part I , Part II and sterile bottles.
- Easy to perform
- User-friendly
- Screening tests
- Low-cost rapid test
- Suitable for handling by untrained personnel for monitoring of rural drinking water sources

Kit contains

- Rapid coliform broth dehydrated powder
- Sterile PET bottle 200ml

PRODUCT SUMMARY AND EXPLANATION

Part I : For *Salmonella*, *E. coli*, *Citrobacter species* :

Water testing kit which is a modification of Manja et al allows the simultaneous detection of *Salmonella*, *E. coli* and *Citrobacter species*. Differentiation is based on production of H₂S whereas *E. coli* is identified on the basis of colour change in the medium. The medium contains peptone special as a source of nitrogen, carbon, long chain amino acids and other essential nutrients. Ferric ammonium citrate and sodium thiosulphate are reduced by certain species of enteric organisms to produce H₂S. Dipotassium hydrogen phosphate provides buffering action and sodium lauryl sulphate inhibits the growth of accompanying gram positive organisms. Bromo cresol purple indicates change in the pH of the medium by colour change from light-purple to yellow. Lactose is the fermentable carbohydrate. Lactose fermentors induce acid production leading to lowering of pH and hence the colour change.

Part II : For *Vibrio species* :

Vibrio broth is a selective medium for *Vibrio cholerae*, *Vibrio parahaemolyticus* and other *Vibrios*. Peptone, special provides nitrogen, carbon, sulphur, vitamin B complex and other essential nutrients. Sodium citrate and bile salt inhibit gram positive organisms and coliforms. Sucrose is the fermentable carbohydrate. Thiosulphate acts as a source of sulphur. The alkaline pH of the medium aids in the recovery of *Vibrio cholerae*.

COMPOSITION

Ingredients	Gms / Ltr
Part I: For detection of <i>Salmonella species</i>, <i>E. coli</i>, <i>Citrobacter species</i>	
Peptone, special	2.000
Lactose	0.500
Dipotassium hydrogen phosphate	0.150
Ferric ammonium citrate	0.075
Sodium thiosulphate	0.100
Sodium lauryl sulphate	0.010
Bromo cresol purple	0.0005

Part II : for detection of <i>Vibrio species</i>	
Peptone, special	1.200
Scurose	2.000
Sodium thiosulphate	0.650
Sodium citrate	1.000
Bile salt	0.600
Sodium chloride	1.000
Indicator mix	0.060

INSTRUCTION FOR USE

- Collect 100 ml water in each sterile disposable bottles.
- Add entire quantity of Part I powder slowly to one bottle with 100 ml water. Swirl to dissolve the powder completely.
- Similarly add entire quantity of part II powder to another bottle with 100 ml water.
- Repeat the same procedure for dissolution of powder as specified for medium A.
- After dissolution, incubate both the bottles at 35-37 C for 24-48 hours.

QUALITY CONTROL SPECIFICATIONS

Colour and clarity of solution

Part I: Light purple coloured, clear solution.

Part II: Purple coloured, clear solution.

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Colour change	H ₂ S production	Incubation Temperature	Incubation Period
For Part I						
<i>Escherichia coli</i>	25922	50-100	Yellow	Negative	35-37°C	24-48 Hours
<i>Salmonella typhimurium</i>	14028	50-100	Black	Positive	35-37°C	24-48 Hours
<i>Citrobacter freundii</i>	13076	50-100	Black	Positive	35-37°C	24-48 Hours



For Part II

<i>Vibrio cholera</i>	15748	50-100	Dark burgundy	-	35-37°C	24-48 Hours
<i>Vibrio parahaemolyticus</i>	17802	50-100	Red	-	35-37°C	24-48 Hours

PACKAGING:

In pack size of 10 Nos.

STORAGE













On receipt store between 10-30°C. Use before expiry date on the label. Product performance is best if used within stated expiry period. Store in a dry place, below 25°C and protect from direct Sunlight.

DISPOSAL

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

REFERENCES

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
- 2.. Manja K.S., Maurya M.S., and Rao, K.M. (1982) Bulletin of World Health Organization 60(5): 797-801

 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 Barkstrasse 10, 49163 Moenchter, 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**
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