TMK 14- WATER TEST KIT

INTENDED USE

For primary detection of *Salmonella, Citrobacter and E. coli* based on H_2S production in plastic bottles.

PRODUCT SUMMARY AND EXPLANATION

It has been reported that human faecal contamination is one of the main causes of water-borne diseases. In 1993, WHO therefore recommended regular testing of drinking water for thermotolerant coliforms and *Salmonella* species to ensure its complete absence. The frequent testing of drinking water in remote areas, as well as in developing countries, is rather difficult to achieve. Townsend, 1992 has demonstrated the lack of correlation between coliform bacteria and the presence of *Salmonella* species in water, particularly in the tropics and subtropics. In Western Australia, 30% of *Salmonella* all isolations from water have occurred in the absence of indicator bacteria. Iveson and Fleay 1991, found that 3% of tropical waters tested were contaminated with *Salmonella* in the absence of *Escherichia coli*. They suggested that the origin of *Salmonella* may be from faeces of birds and reptiles which did not contain coliform bacteria. The absence of *Escherichia coli* in *Salmonella* contaminated water is more often in the tropics. However, analysis of *Salmonella* using the culture methods is a four stage process involving pre-enrichment, selective enrichment, biochemical identification and confirmation by serological method. Thus, it is a very lengthy process which requires four days for completion. Therefore Manja's method was found most suitable for the detection of Salmonella species which uses H_2S Strip. Water Testing Kit is based on similar lines for detection of hydrogen sulphide producers.

KIT CONTAINS

- H2S medium soaked in filter buds, plastic bottle.

PRINCIPLE

The kit contains all the essential nutrients for the growth of *Salmonella* and *Citrobactor freundii*. Presumptively, presence of these bacteria is indicated by H_2S production, resulting in colour change of broth to black from initial light amber colour.

INSTRUCTION FOR USE

1. Fill vial with water upto arrow level. Allow to soak the rolled filter bud and if required shake gently. On release of medium from bud, colour of water will change from yellow to brown. Keep at room temperature (30°C)/closed room/ pocket or preferably at 35-37°C for 24 to 48 hours.
2. Observe for blackening of contents after specified period.
3. If colour turns black, water is not fit for drinking.
4. Add few drops of some disinfectant (i.e. Dettol, phenyl etc.) and discard the bottle. Preferable to autoclave wherever facility is available.

QUALITY CONTROL SPECIFICATIONS

Appearnce of powder	:	Yellowish brown coloured, rolled filter paper bud, containing H_2S Medium
Appearance of medium	:	Amber coloured, clear solution obtained on addition of water.
Sterility Check	:	Passes release criteria

INTERPRETATION

Cultural characteristics observed after Incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Color change in medium	H_2S Production	Incubation Temperature (NA in refernce)	Incubation Period

Escherichia coli	25922	50-100	Good-Luxuriant	Yellow with haze	-ve	35-37°C	24-48 Hours
Salmonella Typhimurium	23564	50-100	Good-Luxuriant	Black	+ve	35-37°C	24-48 Hours
Citrobacter freundii	8090	50-100	Good-Luxuriant	Black	+ve	35-37°C	24-48 Hours
Salmonella Enteritidis	13076	50-100	Good-Luxuriant	Black	+ve	35-37°C	24-48 Hours
Staphylococcus aureus	25923	50-100	Inhibited	Clear yellowish brown	-ve	35-37°C	24-48 Hours
Enterococcus faecalis	29212	50-100	Inhibited	Clear yellowish brown	-ve	35-37°C	24-48 Hours

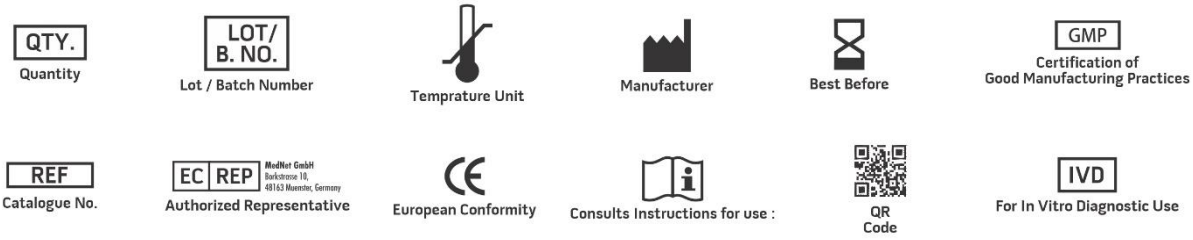
STORAGE

Store the medium in a dark and dry place at 10-25°C and protect from direct sunlight. The medium may be used up to the expiration date and incubated for the recommended incubation times.

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

DISPOSAL

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



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

***For Lab Use Only**

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