TMK 03- RAPID COLIFORM KIT

INTENDED USE

For rapid detection and confirmation of *Escherichia coli* and other coliforms from water on the basis of enzyme substrate reaction

PRODUCT SUMMARY AND EXPLANATION

There is a need for rapid methods to quickly determine the indicator bacteria and pathogens in water. Monitoring microbiological quality of drinking water relies on examination for indicator bacteria such as *Escherichia coli* and coliforms by using Rapid coliform broth. Rapid coliform kit is one such kit used for rapid detection of coliforms in water. It is user-friendly and allows low-cost rapid test. It is also suitable for handling by untrained personnel for monitoring of rural drinking water sources.

KIT CONTAINS

- Rapid coliform broth dehydrated powder (1.75g)
- Sterile PET bottle 200ml

PRINCIPLE

Rapid coliform broth contains all the essential nutrients for the growth of *Escherichia coli* and coliforms along with a chromogenic (X-gal) and a fluorogenic substrate (MUG). Presumptively, presence of *Escherichia coli* and coliforms is indicated by colour change of broth to blue-green from initial yellow colour. Further, *E. coli* is confirmed by detecting fluorescence in the broth on exposure to UV. The non-fluorescent substrate is cleaved by the enzyme produced by *E. coli* to release the fluorogen (4-methylumbelliferone), which exhibits a bluish fluorescence when exposed to UV (366nm). Other Coliforms, on the other hand, will not produce fluorescence.

INSTRUCTION FOR USE

1. Carefully remove the bottle cap and collect 100ml water sample in provided bottle.
2. Add Rapid coliform medium into collected water sample.
3. Quickly re-cap the test bottle and secure it tightly.
4. Shake well to dissolve the medium completely and incubate at 35-37°C for 18 - 24 hours and take observation.

QUALITY CONTROL SPECIFICATIONS

Appearance of powder	:	Cream to yellow colored, homogeneous powder
Appearance of Medium	:	Yellow coloured clear solution on addition of water
Sterility Test	:	Passes release criteria

INTERPRETATION

Cultural characteristics observed after Incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of the medium	Fluorescence (at 366nm)	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	Bluish green	+ve	35-37°C	18-24 Hours
Salmonella Typhimurium	23564	50-100	Luxuriant	Yellow	-ve	35-37°C	18-24 Hours
Salmonella Typhimurium	13048	50-100	Luxuriant	Yellow	-ve	35-37°C	18-24 Hours
#Klebsiella aerogenes	13048	50-100	Luxuriant	Bluish green	-ve	35-37°C	18-24 Hours

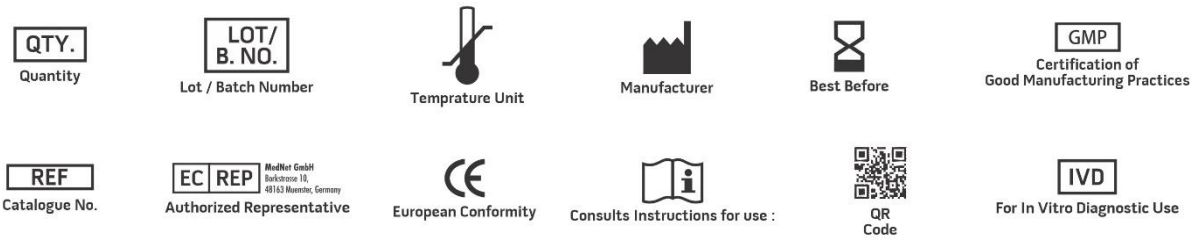
Formerly known as *Enterobacter aerogenes*

STORAGE

Store the dehydrated powder in a dry place, in tightly-sealed containers between 2-8°C and protect from direct sunlight. The powder 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 as per standard protocol.



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

***For Lab Use Only**

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