

## Colifast Field Kit

The Colifast Field Kit is a portable tool for detection of *E. coli*, fecal or total coliforms in water. The kit contains what is needed to perform any of the three available instrumental analyses:

- Rapid Screening Test
- Most Probable Number Test
- Presence/Absence Test

The Rapid Screening Test provides you with a result within 15 minutes to 2 hours, whereas the Presence/Absence Test can detect down to 1 cfu (colony forming unit) / 100 mL water sample in 11 hours.

All tests come with a user-friendly manual, are easy to perform and require no laboratory skills.



## Method

The Colifast technology is based on a chemical reaction between a substrate in the growth medium and enzymes produced by the coliform bacteria. This chemical reaction yields a fluorescent product, which is measurable and in correlation with the number of bacteria present. The Colifast growth medium contains activators and growth factors, as well as inhibitors that prevent the growth of non-coliform bacteria.

A 10 ml water sample is added to the Colifast growth medium. The following incubation step at a temperature of 37 °C or 44 °C selects for total and fecal coliforms, respectively. After incubation a subsample is transferred to a cuvette and placed in the Colifast Micro Detector for the fluorescence measurement. Depending on the analysis this step may have to be repeated in order to detect fluorescence development over time.

## Applications

Fecal contamination tracking in rivers

Supervision of the bacterial quality on bathing sites (fresh water or salt water)<sup>1</sup>

Process control in industry

Process control in waterworks

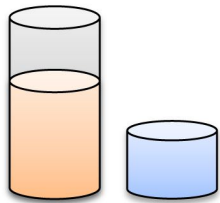
Enhanced drinking water safety in aid work

<sup>1</sup>[For more information view article: Monitoring of  \$\beta\$ -D-Galactosidase Activity as a Surrogate Parameter for Rapid Detection of Sewage Contamination in Urban Recreational Water, Tryvann, I. et al., Water 2016](#)

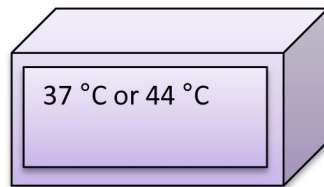
See the Colifast Field Kit application sheets for more information about each of the applications



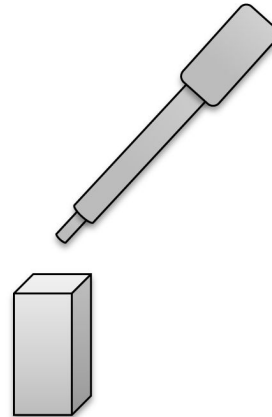
## Procedure Rapid Screening Test



1. Add sample



2. Incubate



3. Subsample



4. Measure

Comment: The Rapid Screening Test is available for fecal coliform analysis only. It has been demonstrated that after selective incubation at 44 °C the majority of the fecal coliforms is *E. coli*.

## Content of Colifast Field Kit

1 Colifast Micro Detector with case	18 vials containing Colifast growth medium
1 incubator with thermometer (220 V, 44 °C)	1 vial containing <i>Blank</i> solution (calibration)
1 battery cable	1 vial containing <i>Cal 48</i> solution (calibration)
1 car converter 12 V – 220 V (power consumption: approx. 3 A with incubator running)	20 3 ml plastic pipettes for sample reading (gradation in ml, one per test)
100 disposable cuvettes	2 dropper bottles with 0,5 M NaOH solution
100 disposable cuvette caps	1 cuvette rack
3 sterile, reusable 10 ml syringes	5 Virkon™ tablets (for optional disinfection of waste)
2 sterile filters (for optional control sample)	1 user manual with quick guides
1 dropper bottle with 10% Na-thiosulphate solution (for neutralisation of chlorine residue)	10 result sheets

