

# Colifast ALARM

Automated measurement of indicator bacteria in drinking water

## Colifast ALARM

The Colifast ALARM™ (At-Line Automated Remote Monitor) detects indicator bacteria in drinking water. The system combines a fully automated instrument with patented culture media and performs a presence/absence test for *E. coli*, fecal or total coliforms in a 100 mL water sample.

Colifast ALARM is user friendly and easily operated via the embedded touch screen computer or by remote control via an external PC. Communication with the instrument through GSM is also available.

A Colifast growth medium flask contains 21 tests. With one analysis per day, the instrument will run for three weeks with out any hands on. The procedure for changing growth medium, empty non-hazardous waste and on a new three-week run is easy to perform and requires no qualified personnel.



## Technology

The patented Colifast technology combines the unique liquid media with fully automated detection systems.

A 100 mL water sample is automatically collected at pre-programmed intervals and added to the Colifast growth medium. The growth medium contains a substrate that the target bacteria will transform into a fluorescent product. The fluorescence is then measured by a spectrometer in the Colifast ALARM instrument.

Incubator temperatures for the selection of thermotolerant coliforms (44 °C) and total coliforms / *E. coli* (37 °C) is preset.

Additional features for the Colifast ALARM are turbidity measurements and the possibility to sample from two water sources or automatically take a spare sample for further analysis if presence of bacteria is detected.

## Applications

The Colifast ALARM has a wide span of applications. It can measure the bacterial water quality of ground or surface water reservoirs. It can also be placed to monitor the water treatment process and throughout the distribution network, for example on water towers.

### CASE STUDY: Ground Water Monitoring

Colifast ALARM monitors the process and distribution of drinking water at the large Danish waterworks. They state that short time to result and the good options for remote monitoring and remote warning has improved their possibilities for action.

## Results

The Colifast ALARM can automatically collect and analyse a new sample every 15 hours.

If a sample contains high levels of bacteria and/or the contamination is relatively fresh the instrument can give an early warning only after 6 hours. Within 14/15 hours the system detects bacteria in concentrations as low as 1 cfu per 100 mL.

The results are given in presence/absence of total coliforms, fecal coliforms or *E. coli*. The system can automatically send results to the control room or operators via LAN remote control, digital signals or a mobile phone network (SMS).

## ETV -verification

The U.S. EPA Environmental Technology Verification (ETV) program's Advanced Monitoring Systems Center, operated by Battelle, has evaluated the performance of the Colifast ALARM.

Verification results show that the Colifast ALARM detects both total coliforms and *E. coli* in water samples. The verification staff found the ALARM easy to use and stated that the time to result, reagent use and staff time is reduced compared to the reference methods. Additional information is available in the verification reports and statements on the EPA/ETV website.

The EPA Environmental Technology Verification Program (ETV) Name and/or Logo does not imply approval or certification of this product, nor does it make any explicit or implied warranties or guarantees as to product performance. Information on the performance characteristics of the Colifast ALARM can be found at [www.epa.gov/etv](http://www.epa.gov/etv), or call Colifast AS at +47 67 10 05 10 to obtain a copy of the ETV verification report.



The Colifast ALARM monitoring the drinking water produced at a drinking water treatment plant



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