Colifast ALARM

Presence / absence of indicator bacteria in drinking water

Colifast ALARM

Colifast ALARM™ (At-Line Automated Remote Monitor) detects indicators in drinking water by using the patented Colifast technology. The fully automated system consists of an analysing instrument and a bacterial growth medium and is delivered with all required equipment.

The 100 ml water samples are automatically collected at programmed intervals and analysed for total coliforms, thermotolerant coliforms or *E.coli*. In addition, the Colifast ALARM measures the turbidity level of the water. The system can automatically send results to the control room / operators via LAN remote control, digitale signals or by mobile phone network (SMS).

This system can detect down to 1cfu per 100ml, and results are obtained within 6-14/15 hours.

Technology

The main components of the Colifast ALARM are the incubator reaction chamber, a flow injection pump system for liquid handling and a detector system including wavelength specific emitters combined with a spectrometer.

The detection of down to 1 viable target bacterium is based on bacterial growth, group specific enzyme activity and measured concentrations of a fluorescent product (ppb MU). An increase in the number of target bacteria means an increase in the amount of β-D-glucuronidase (*E.coli* enzyme). The enzyme hydrolyse the growth medium substrate that releases MU (the fluorescent product) which yields a higher fluorescence signal on the Colifast ALARM. The Colifast growth media contains inhibitors to prevent growth of non-coliforms.

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

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 state that the time to result, reagent use and staff time is reduced compared to the referance 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 warrantees or guarantees as to product performance. Information on the performance characteristics of the Colifast ALARM can be found at www.epa.gov/etv, or call Colifast AS at +47 67 10 05 10 to obtain a copy of the ETV verification report.

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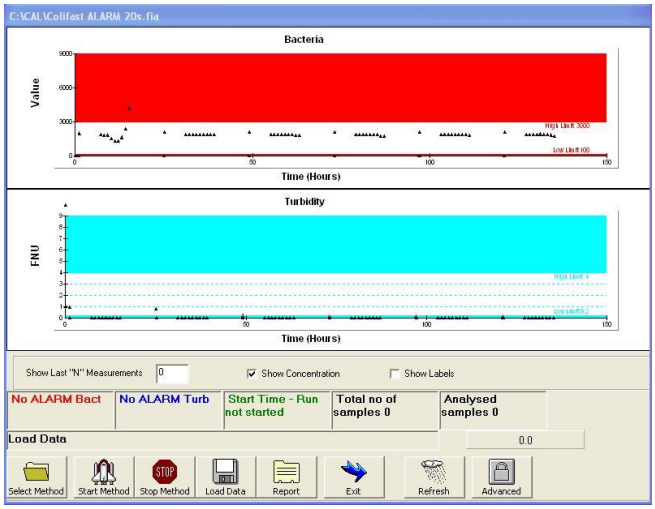
Results

Colifast ALARM is user friendly, and is easily operated via the embedded touch screen computer or by remote control via an external PC. A phone call can also be used to start or stop the instrument. The software will automatically generate a folder with the date and time of the run start and will save report files in this folder. Detector readings above threshold will indicate presence of target bacteria (red) or high turbidity (blue) on the screen. This will activate selected audio visual alarms and update report files and information boxes below. The Colifast ALARM will detect 1 cfu/ 100 ml and turbidity results are presented as 0,1-10 FNU / NTU. The operator will receive the results via SMS, network or PLC.

A 200 ml refrigerated reference sample option, dual source sampling and addition of 10 % sodium thio-sulphate is available.



Colifast ALARM software screenshot

Colifast ALARM has patents and patents pending

Periodic duty

The Colifast ALARM can automatically collect and analyze a new sample every 15 hours. It is very easy to operate: A Colifast growth medium flask contains 21 tests, and typically needs to be replaced every 3rd week (test frequency: 1 sample every 24 hours). The flask is accompanied by a disinfecting cloth and disposable gloves and can be tossed when replaced. The systems waste container is emptied, wash solution re-filled and the new test run is initiated.

System and installation site specifications

Environmental	IP 33 protection. 0-35 °C, <95% Rel.Hum. Overheat, overload, leak and spill protection. CE.
Power Supply	110-230V AC - 150W (110/230V AC - 24V DC 5A power supply included).
Interface	LAN: Remote control, results download. GSM Alarm modem: SMS alarm messages to optional telephone numbers. Digital outputs (relays): Alarms via PLC / industrial interface system.
Accessories	External overflow sample collection container (included). External Acid, Na-thiosulfate and waste containers (included). Tubing and adaptors (included). Reagents including disposable ready-to-use media flask (ordered for application). 500 ml external sample flask (ordered for application). External sample flask refrigerator (ordered for application).
Water sample	Nearby (< 3 meters) water / sample supply line with flow regulator for at-line testing.
Dimensions	645 X 420 X 360 mm (H X W X D). Dry weight: 31 kg.

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Colifast AS | Strandveien 33 | 1366 Lysaker | Norway | Tel: +47 67100510 | e-mail: post@colifast.no | www.colifast.no