



Water and Food Safety
RAPID | AUTOMATED | AT-LINE

COLIFAST®

A photograph of a wastewater treatment plant. In the foreground, a grey Colifast ALARM monitor is mounted on a metal stand. The monitor has a small screen displaying a red and blue bar chart, and the text 'COLIFAST ALARM' is printed on its front. To the right of the monitor is a white plastic container. The background shows a complex network of large metal pipes and valves, some with blue labels that read 'RENTVANN' and 'KONSENTRAT'. The floor is made of light-colored tiles.

Colifast AS is a world-leader in development and delivery of automated instruments for detection of fecal contamination. The Colifast technology has been in the market since 1992.

The Colifast ALARM™ received the first verification statement for an at-line monitor for fecal contamination from the U.S EPA ETV.

Leading edge technology for detection of bacteria in water and food

The Colifast technology is used to monitor water and food quality in order to protect public health and the environment. The rapid methods combined with early warning options provide information long before the traditional laboratory results are available. In addition, the Colifast instruments perform automated analysis at site and reduce risk of errors during sampling, transportation and sample preparation.



All research, development and manufacturing are done in-house and marketing and sales are handled by Colifast or through our qualified distributors world wide.



ALARM

...Presence/Absence in

The Colifast At-Line Automated Remote Monitor (ALARM™) is an excellent instrument for monitoring of drinking water. The Colifast ALARM has been in the market since 2009.

Fully automated

At any location, the Colifast ALARM will automatically sample water, perform the microbiological analysis and turbidity measurement and alarm the user.

Detection of Coliforms

The at-line Colifast ALARM detects indicators by using the patented Colifast growth media. The presence of ≥ 1 *E.coli*, thermotolerant coliform or total coliform in the 100 ml water sample will be detected.

Rapid Results

Within 6-14 hours, the analysis is completed, and the results/alerts are transmitted to the operator via industrial interfacing (relays), LAN or GSM mobile network, as well as visual and audio alarms on site.

User Friendly

The Colifast ALARM is easily operated via the touch screen computer, LAN interface or by mobile phone. It is robust and easy to move and install. Dual source sampling and automatic collection and storage of a reference sample is available.



drinking water



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 time to result, reagent use and staff time are 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, or call Colifast AS at +47 67 10 05 10 to obtain a copy of the ETV verification report.



Colifast ALARM has patents and patents pending

Applications

- Waterworks
- Drinking water
- Tap water
- Distribution network
- Critical nodes
- Elevated basins
- Treatment
- Vulnerable recipients
- Mobile quality control
- Remote lab
- Contamination episodes

CASE STUDY: *Ground water monitoring*

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



CALM

...automated and rapid

The **Colifast At-Line Monitor** (CALM™) is a powerful tool for monitoring raw water, recreational and environmental water and waste water. The CALM has been in the market since 2001.



Fully automated

CALM automatically samples flowing water at the source and performs the microbiological analysis. The level of *E.coli*, thermotolerant coliforms, total coliforms or *P. aeruginosa* in the water sample will be detected, and the user will instantaneously be alarmed.

Rapid Results

Compared to traditional microbial testing, the CALM significantly reduce the time from sampling to results. Within 4- 12 hours, the analysis is completed, and the results/alarms are transmitted to the operator via industrial interfacing (relays), LAN or GSM mobile network.



quantification of indicator bacteria levels in water



DEMOWATERCOLI
COLIFAST



Easy to use

The CALM is easily operated by the system computer or via LAN interface. The patented Colifast growth media are supplied in multi well Trays™ and the systems flexibility makes it easy to adapt to different applications. The CALM can perform parallel analysis of different target organisms.

Applications

Waterworks
Raw water
Treatment
Environmental water
Rivers
Lakes
Recreational water
Waste water
Food & beverage plants

CASE STUDY: *River water monitoring*

The river running through the city is used as a source for drinking water by the large Swedish waterworks. Three Colifast CALM systems monitor the water quality the intake and up-stream, and the results are used to optimize the control and treatment of the water. This application has more than 10 years of continuous operation and excellent up-time.

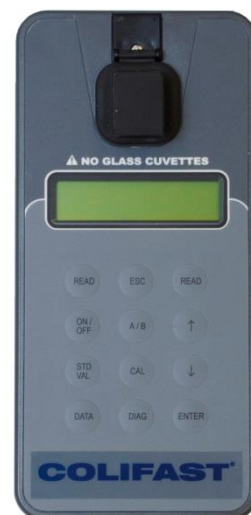


Colifast Field Kit

Tracking fecal contamination in 15 minutes

The Colifast Field Kit contains all equipment necessary to estimate the fecal contamination of environmental samples in less than 2 hours. In addition to the rapid screening test, the Colifast Field Kit also includes methods for quantitative and presence/ absence results.

International aid work agencies, municipalities, military services and universities world wide find their Colifast Field Kits to be useful tools.



Applications

Environmental water	Beaches
Tracing contamination	Recreational water
Rivers	Waterworks
Lakes	Raw water

Features

- Rapid test for fecal contamination (thermotolerant coliforms)
- All included in one case
- Early warning : 15 minutes
- Quantitative : 11 hours (thermotolerant coliforms)
- Easy to use
- Testing at site (12V)
- Low cost per test

CASE STUDY: *Sewage source tracking*

In tunnels under the Norwegian city, the Colifast Field Kit is used for tracking sewage contamination. The rapid results makes it possible to repeatedly test and move up stream to locate the source.



Colifast Media

Colifast *Pseudomonas aeruginosa* Test

Rapid test for detection of *P. aeruginosa* in water



The *Pseudomonas aeruginosa* test can be used manually or with all instrument platforms.

With early warning at 10 hours and presence/ absence at 18 h, the test significantly reduces the time to results compared to the standard method.

Applications

Water works	Recreational water
Ground water	Swimming pools
Food & beverage plants	Bubble bath
Bottled water	Jacuzzi

Colifast Basic Test

Rapid manual test for detection of *E.coli* and total coliforms in drinking water



The Colifast Basic test is an easy and rapid method to detect indicators in drinking water. A 100 ml water sample is added to the Colifast Basic flask with the patented Colifast growth medium and the test is incubated. With early warning at 12 hours and presence/ absence at 16 h, the test significantly reduces the time to results compared to the standard methods.

FAST FISH TEST

Rapid test for detection of spoilage bacteria in fresh marin fish.

Sulphide-producing bacteria (SPB) are largely responsible for microbial spoilage of cold stored fresh fish. The patented FAST™ Fish Test is based on precipitation of iron sulphide resulting from the growth of SPB, and the bright yellow FAST™ media will be colored black. The higher level of SPB, the faster there will be a color change.



Cut 1 cm³ of the fish with a sterile scalpel



Insert the fish into the prefilled FAST vial



Incubate the sample at 30 °C



Observe until the liquid changes color

Features

- Rapid level test
- Easy to use
- Early warning
- Multiple application areas
- Only 1 cm³ sample needed

Bacteriological Quality Guidelines

Quality ¹	Time to detect	SPB/g fish ²
Good	11-12	1000-500 000
Marginal	7-10	500 000- 5 mill
Poor	3-6	> 5 mill

¹Categories based on microbiological guidelines for TVO, Norwegian Food Safety Authority 2002

²Categories from Colifast AS based on joint project with Food Standards Agency in 2003. The categories indicate the bacteriological quality, and do not claim to grade sensing, consumer preference, suitability for human consumption etc.

CASE STUDY: Fish supplier QC

To meet the requirements of the convenience chains, the Norwegian fish supplier weekly perform random sampling and testing using the FAST fish test. The results is recorded by a web camera.



A high-angle, close-up photograph of a female scientist with blonde hair tied back, wearing a white lab coat and white gloves. She is smiling warmly while looking down at a clear plastic multi-well plate she is holding with her gloved hands. The plate contains several small, clear liquid samples. The background is a soft-focus laboratory setting with a blue container visible. The entire image has a warm, golden-yellow color overlay.

Early warning...
...Rapid decisions



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