

Application Note

Colifast ALARM on purified drinking water in a remote, Brazilian village

The customer

Sabesp is one of the largest sanitation companies in the world, with 28.2 million customers. The company is responsible for water distribution to 373 municipalities in the state of São Paulo. A new stage was implemented in the program for monitoring drinking water in remote areas in 2020, **and a need for automated detection of levels of Total Coliform / E. coli arose.**

Technical information

Colifast ALARM is a fully automated online instrument that collects a 100 mL water sample, incubate it at a given temperature, before analysing it for total coliforms, fecal coliforms or *E. coli*. The instrument produce a PDF report for each run with a graph, a table, and data presented in an accessible manner. The Colifast ALARM also sends a result to control room via PLC or to operator via SMS.

From inner city to rural location

The Colifast ALARM was in 2018 installed in the largest and oldest reservoir in the center of the city of São Paulo. After two years, Sabesp decided to move the instrument to a more remote location. **The instrument's ability to run for 21 days without any hands on is ideal for this type of application.**



The application

A water crisis in this Brazilian area in the last decades, drove it to water scarcity and therefore diminishing of water pressure and supply. Sabesp decided it was about time to implement an additional control to assure the safety of water disinfection processes.

The Colifast ALARM instrument is currently installed in **Paranapiacaba**, a remote town in Brazil. Sabesp decided it would be convenient to place an automatic instrument for measuring Total Coliform / *E. coli*. **The robustness of the instrument is important, as the drive from central São Paulo takes 1,5 h each way.** In addition to monitoring fecal pollution events, Sabesp were able to implement the ISO 17025 accreditation for the simple laboratory facility, a laborant and the Colifast ALARM instrument.

One of the requirements of the ISO approval was to **deliver a PDF report for each analysis.** Together with Carvalhaes, Colifast designed and developed a program that generates a report for each bacterial analysis. Please see next page for more details.

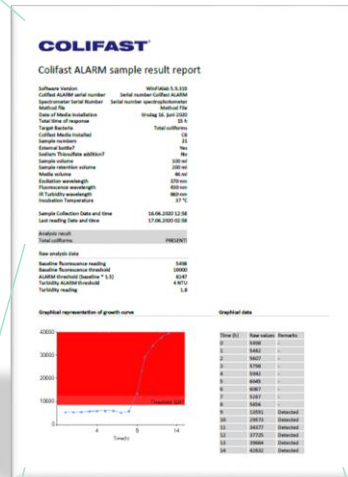
COLIFAST®

Colifast ALARM sample result report

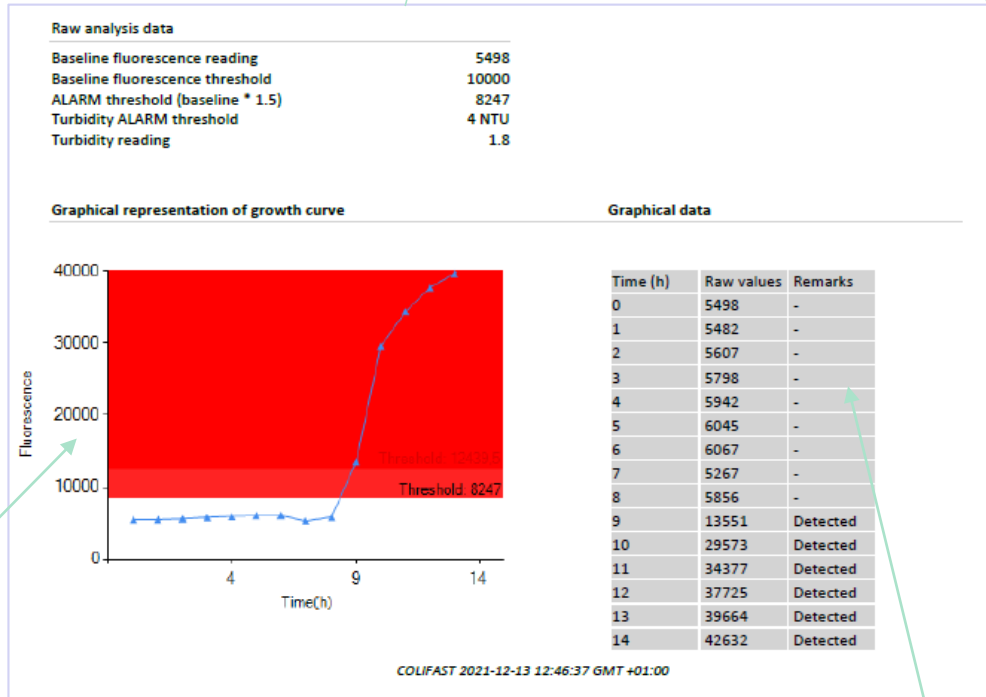
Software Version WinFIAlab 5.9.319
Colifast ALARM serial number Serial number Colifast ALARM
Spectrometer Serial Number Serial number spectrophotometer
Method file Method File
Date of Media installation tirsdag 16. juni 2020
Total time of response 15 h
Target Bacteria Total coliforms
Colifast Media Installed C6
Sample numbers 21
External bottle? Yes
Sodium Thiosulfate addition? No
Sample volume 100 ml
Sample retention volume 200 ml
Media volume 46 ml
Excitation wavelength 370 nm
Fluorescence wavelength 430 nm
IR Turbidity wavelength 860 nm
Incubation Temperature 37 °C

Sample Collection Date and time 16.06.2020 12:58
Last reading Date and time 17.06.2020 02:58

Analysis result
Total coliforms PRESENT!



The Colifast ALARM Sample Result Report is a one-sheet pdf automatically generated after each analysis



This is a graphical representation of the growth curve (fluorescence vs. time)

Graphical data in table with raw data included