

## FLUIDION ALERT SYSTEM (IN-SITU ANALYZER)

The industry's first fully-automated in-situ microbiology lab

The ALERT System is a fully autonomous and remotely controllable analyzer for the measurement of E.Coli, Total Coliforms and other bacteria. Suitable for source water and environmental monitoring, it performs seven measurements on a battery charge. Installed in-situ, it enables rapid response to bacterial contamination, quantifies the content and provides automatic alerts in real-time.

### A fully-automated in-situ microbiology lab

The ALERT System from *fluidion* is a unique analyzer capable of automatic contamination-free sample collection in-situ, reagent mixing and incubation, optical detection (absorbance and fluorescence), bacterial quantification (E. coli, Total Coliforms or Enterococci) and wireless data transmission.

### On-demand remote analysis in any aquatic environment

The ALERT System can be used for quantifying E. coli presence in lakes, rivers, coastal water, storm water, at catchment sites or in water treatment plants, and for obtaining bacterial concentration time series. It can float like a buoy or be installed in a facility, and can operate without an external power supply in harsh environments under the most unforgiving weather conditions. The system is quick to install (few minutes), can be remotely controlled from a cell phone or web interface, and supplies data to the operator wirelessly. Capable of carrying out seven measurements on a battery charge, with maintenance of less than 30 minutes in the field, full water quality monitoring is considerably simplified!



A portable version is also available (ALERT LAB), which can be operate on rechargeable batteries at a remote field location, or powered via vehicle's power on-the-go, or plugged into an electrical outlet in a laboratory setting. Capable of carrying out six measurements on a battery charge, full water quality monitoring at remote field locations is considerably simplified while minimizing cost and time-to-result.

### A reliable response

The ALERT System provides a quantified response in terms of bacteria/100 mL present in the sampled water. The system is controlled by an internal vacuum sampling module and implements *fluidion's* multispectral optical detection technology, which ensures consistent, uncontaminated sampling and measurements every time. Triggered via a mobile phone, the analyzer measures a wide range of concentrations and can send out automatic alerts if the threshold is exceeded in order to enable greater operator responsiveness.

*fluidion SAS* is a high-technology company that designs and manufactures innovative sample collection and chemical/microbiological in-line analysis instruments for water quality monitoring and environmental applications. The core technology relies on *fluidion's* proprietary patented fluidic systems.

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## TECHNICAL SPECIFICATIONS

<b>Dimensions</b>	<i>L : 16", D : 10"</i>	<b>Total measurements</b>	<i>7 per charge</i>
<b>Weight</b>	<i>22 lbs</i>	<b>Response time</b>	<i>1 h-12 h</i>
<b>Measurement trigger</b>	<i>On-demand, pre-program, inline sensor (optional)</i>	<b>Environmental conditions</b>	<i>0 °C - 40 °C</i>
<b>Parameters</b>	<i>E.coli, Total Coliforms OR Enterococci</i>	<b>Communication</b>	<i>GSM/GPRS, USB, secure web interface (optional)</i>
<b>Measurement range</b>	<i>4 CFU – 5×10<sup>5</sup> CFU/100 mL</i>	<b>Antenna</b>	<i>Internal</i>
<b>Materials</b>	<i>PMMA, PVC, Acetal, SST 316L</i>	<b>Autonomy</b>	<i>2 weeks to 2 months depending on operational mode</i>
<b>Battery type</b>	<i>Li Ion</i>		

## ALERT cell phone and web interface



The ALERT System uses a wireless communication protocol based on the GSM network for both system configuration and data management. Alternatively, the system can operate on long-range radio networks using the LoRaWAN protocol (optional). The system can be fully configured from an operator cell phone using intuitive SMS-based commands, and can generate cell phone alerts. Real-time data is sent via the GSM network/LoRaWAN to a telecomm server, which pushes data to the fluidion cloud-based data management and visualization server (server installation in client datacenter is a possible option). In case there is no cell coverage in the installation area and LoRaWAN is not installed, the system can be pre-configured from a PC via the USB interface, and data can be sent via serial protocols such as RS232 (optional).

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