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## FLUIDION ALERT LAB (PORTABLE ANALYZER)

The autonomous microbiology mobile analysis lab

*fluidion* introduces the ALERT LAB, a fully portable, autonomous and remotely-controllable analyzer for the measurement of E. coli and other bacteria. Suitable for source water and environmental monitoring at a field location, in a moving vehicle, or in a lab, it performs six measurements using a 12VDC power source or battery. The ALERT LAB enables rapid bacterial enumeration immediately following water sampling by field personnel.

### A miniaturized mobile microbiology lab

The ALERT LAB from *fluidion* is a unique analyzer capable of automatic processing and measurement of a manually collected fluid sample, performing automatic incubation, optical monitoring (multispectral absorbance and fluorescence) and wireless data transmission, and enabling rapid bacterial enumeration. The ALERT LAB greatly simplifies measurement logistics, eliminates the need for sample refrigeration during transportation prior to standard laboratory measurements, and minimizes errors due to sample degradation between collection and measurement.

### On-demand analysis in the field, on-the-go, or in a lab

The ALERT LAB can be used in a variety of settings for quantifying E. coli, Tot Coliforms or Enterococci presence in lakes, rivers, coastal water, catchment sites or in water treatment plants. It can operate on rechargeable batteries at a remote field location, powered via vehicle's power on-the-go, or plugged into an electrical outlet in 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. The mobile ALERT LAB is extremely portable and fully operational out of the box. The maintenance procedure is quick (less than 5 minutes) and field calibration is normally not required.

A floating version is also available (ALERT System), which can be installed directly inside a water tank or floating on surface water, thus eliminating the need for expensive infrastructure (piping, pumps, solar panels, cabinets, communication equipment etc.).

### A fast and reliable response

The ALERT LAB provides a quantified response in terms of bacteria/100 mL present in the sampled water. The system implements *fluidion's* multispectral optical detection technology, which ensures consistent measurements every time and fast time-to-result. 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>	10.2" X 9.6" X 6.6"	<b>Total measurements</b>	6 per charge
<b>Weight</b>	8 lbs	<b>Response time</b>	1 h – 14 h
<b>Measurement trigger</b>	On-demand	<b>Environmental conditions</b>	0 °C - 40 °C
<b>Parameters</b>	<i>E.coli, Total coliforms OR En tero cco ci</i>	<b>Communication</b>	GSM, USB, secure web
<b>Measurement range</b>	4 CFU – 5×10 <sup>5</sup> CFU/100 mL	<b>Antenna</b>	Internal/External (opt.)
<b>Materials</b>	PMMA, PVC, Acetal, SST 316L	<b>Power source</b>	Li Ion battery, AC power, car lighter socket

### ALERT cell phone and web interface



The ALERT LAB 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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