fluidion
Water Intelligence

Alert Lab

Portable E.coli & Total Coliforms Analyser

- Fully portable, autonomous and remotely-controllable analyser 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.
- Performs six measurements using a 12V 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 analyser capable of automatic processing and measurement of a manually-collected fluid sample. It performs automatic incubation, optical monitoring (multispectral absorbance and fluorescence) and wireless data transmission, providing 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. It has been shown to have similar accuracy and repeatability to an approved laboratory using MPN methods.

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, Total Coliforms or Enterococci presence in lakes, rivers, coastal water, catchment sites or in water treatment plants. It can be operated on a rechargeable battery at a remote field location, powered via a vehicle's power on-the-go, or plugged into an electrical outlet in a laboratory setting. Capable of carrying out six independent measurements on a battery charge, full water quality monitoring at remote field locations is considerably simplified while minimising cost and time-to result. The mobile ALERT LAB is extremely portable and fully operational out-of-the-box. A fully-automated floating version (ALERT System V2) is also available, which can be installed directly in situ, thus eliminating the need for expensive infrastructure (piping, pumps, cabinets, communication equipment etc.).

A fast and reliable response

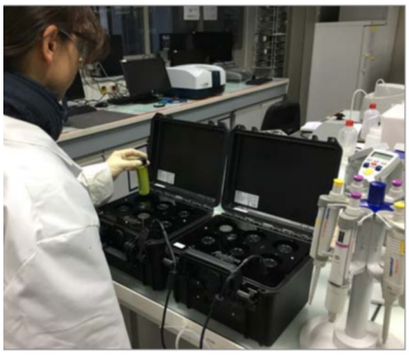
The ALERT LAB provides a quantified response in terms of bacteria/100 ml present in the sampled water, that has been validated through numerous side-by-side studies with approved laboratories. The system implements Fluidion's multispectral optical detection technology, which ensures high accuracy consistent measurements and rapid time-to result. Triggered via mobile phone through an online command portal, the analyser measures a wide range of concentrations, sends data wirelessly and can generate automatic alerts if a control threshold is exceeded in order to enable greater operator responsiveness.

TECHNICAL SPECIFICATIONS

Dimensions	*26cm X 24cm X 17cm 10.2" X 9.6" X 6.6"*	**Total Measurements**	*6 in parallel*
Weight	*3.7kg; 8 lbs*	**Response Time**	*2 h-14 h*
Measurement Trigger	*On-demand*	**Environmental Conditions**	*-10 °C to 40 °C*
Parameters	*E.coli, Total Coliforms; Enteroccoci*	**Communication**	*Global SIM card, USB*
Measurement Range	*4 CFU - 5x1a5 CFU/100 ml*	**Antenna**	*Internal/External (opt.)*
Materials	*PMMA, PVC, Aceto/, SST 316L*	**Power source**	*Li Ion battery, AC power, 12V car socket*

ALERT command portal and cloud interface

The ALERT LAB uses a wireless communication protocol based on the mobile network for both system configuration and data management. The system can be fully configured from an operator mobile phone using an intuitive online command portal, and can generate email alerts. Real-time data is sent via the mobile network to a secure cloud-based data analytics and visualisation server (installation in client data centre possible as an option). In case there is no mobile coverage in the installation area, 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).



Left: ALERT LAB being used in a water quality analysis laboratory. *Middle:* The equipment during a field operation, analysing six samples simultaneously. *Right:* ALERT LAB as used by regulatory agency agent in the field.