Planet Ocean Ltd

fluidion
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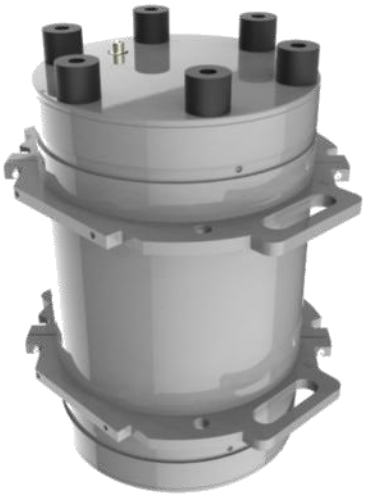
FLUIDION® ALERT SYSTEM V2 (IN-SITU E.COLI ANALYZER)

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

The ALERT System V2 is Fluidion's the latest iteration the autonomous, remotely-controllable analyzer for quantifying *E.Coli*, total and fecal coliforms. Suitable for all types of water quality and environmental monitoring, it uses disposable measurement cartridges which provide unprecedented accuracy and repeatability, while greatly simplifying maintenance procedures. Installed in-situ, ALERT System V2 measures bacterial concentration and provides automatic alerts in real time. It can integrate additional probes for complete water quality data, delivered to you through a modern real-time analytics interface.



A fully-automated in-situ microbiology lab

The ALERT System V2 from Fluidion is a unique analyzer capable of automatic contamination-free sampling in-situ, reagent mixing and incubation, optical detection (absorbance and fluorescence), bacterial quantification (E. coli, total and fecal coliforms) and wireless data transmission. It uses an innovative disposable measurement cartridge concept, which greatly simplifies field maintenance operations, and eliminates any potential for contamination or human error.

On-demand remote analysis in any aquatic environment

The ALERT System is used for obtaining bacterial concentration time series in lakes, rivers, coastal waters, drinking water reservoirs, CSO sites, irrigation pools or in wastewater treatment plants. It can float like a buoy on be installed on a rail at field locations or 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 via a cloud-based data analytics and visualization interface. Capable of seven measurements on a battery charge, with maintenance of less than 5 minutes in the field, full water quality monitoring is greatly simplified!

The ALERT System V2 can also connect to a wide range of water quality probes (single- or multi-parameter), which can provide complete water quality parameters in real time (sensors available for temperature, turbidity, conductivity, pH, chlorophyll, phycocyanin, fDOM, dissolved oxygen, ORP). These data can be used to rapidly recognize water quality degradation phenomena and trigger microbiology measurements when certain conditions are met (adaptive sampling).

A reliable response

The ALERT System V2 provides a quantified response in terms of bacteria/100 mL present in the sampled water. The system uses disposable measurement cartridges, which provide unprecedented accuracy and reliability. Sampling is controlled by an internal vacuum sampling module and the instrument implements Fluidion's multispectral optical detection technology, which ensures consistent, uncontaminated sampling and measurements every time. Triggered via a mobile phone or a web interface, the analyzer can quantify a wide range of bacterial concentrations and can issue automatic alerts if a threshold is exceeded, enabling greater operator responsiveness.

Fluidion® 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 and sampling systems.

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TECHNICAL SPECIFICATIONS

Dimensions	*H: 49cm (19.3"), D: 28cm (11")*	**Total measurements**	*7 per charge*
Weight	*16kg (35lbs)*	**Response time**	*2 h-12 h*
Measurement trigger	*On-demand, pre-program, inline sensor (optional)*	**Environmental conditions**	*0 °C - 40 °C*
Parameters	*E.coli, Total Coliforms Fecal Coliforms*	**Communication**	*Network-hopping global SIM card, USB*
Measurement range	*2 CFU – 1×10^6 CFU/100 mL*	**Installation type**	*Floating or Rail-based*
Materials	*PMMA, PVC, Acetal, SST 316L*	**Autonomy**	*2 weeks to 2 months depends on operation and environmental conditions*
Data interface	*Cloud visualization and analytics interface, API, real-time email alert*	**External probe integration (optional)**	*T, Conductivity, Turbidity, pH, DO, ORP, fDOM, chlorophyll, phycocyanin*
Battery type	*Li Ion, 21Ah*	**GPS capability**	*Yes (GNSS)*
Waterproof rating	*IP68*	**Data Reporting**	*Automated report generation (PDF), archival*

ALERT System V2 disposable cartridge concept

The ALERT System V2 uses Fluidion's innovative disposable measurement cartridge concept. By integrating all the required components for performing a measurement (check valves, filters, mixers, reagent storage, optical cell, vacuum port), the disposable cartridge greatly simplifies operations: field maintenance is now limited to swapping battery and installing new cartridges, which requires only a couple of minutes and can be performed by a minimally-trained person. In addition to gaining precious time, this new design eliminates any potential for human error, improving the system's reliability and the measurement repeatability and accuracy characteristics.

ALERT System V2 remote control and data visualization

ALERT System V2 uses a network-hopping global SIM card that allows it to operate and communicate out of the box, anywhere in the world. The instrument's control interface is accessible online, through a secure portal, and measurement data is supplied wirelessly via a cloud-based data analytics and visualization interface. Automatic measurement report generation and complete archival functionality provides complete documentation of water quality measurements. Automatic alerts can be configured and sent to the operator once bacterial quantification is completed.

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