

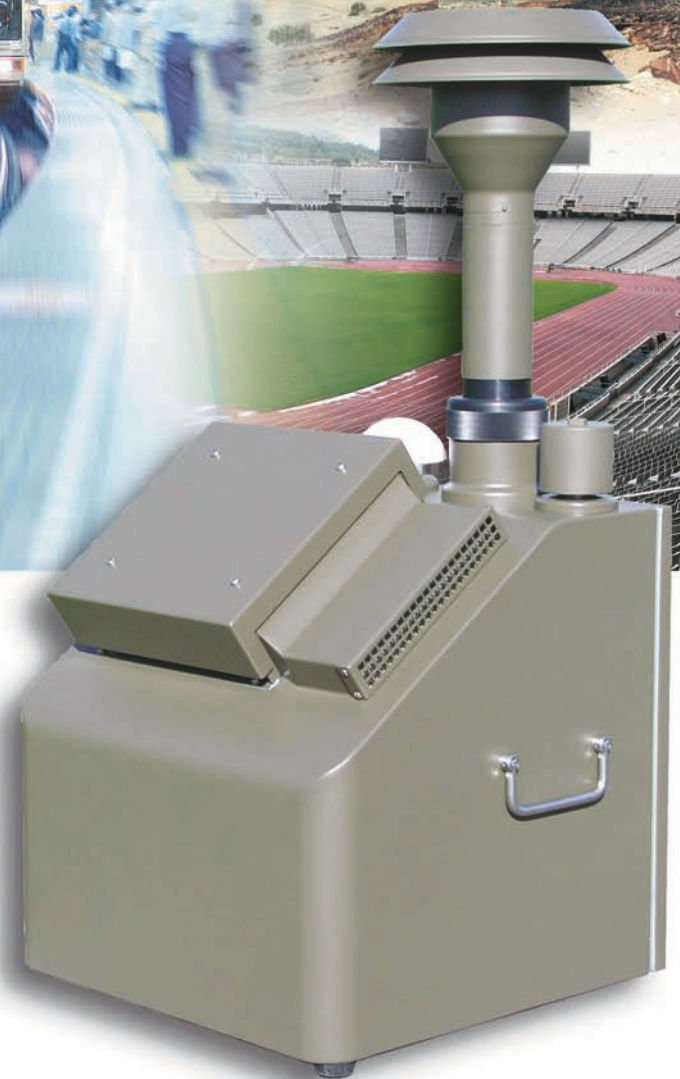
The best protection . . .

. . . is rapid detection



VeroTect

real-time
generic biodetector



Biral

Real-time, generic biodetection

VeroTect™ is the latest addition to the Biral family of aerosol sensors and provides next generation, real-time, generic biodetection capability to counter an ever increasing threat.

VeroTect™ adds fluorescence characterisation to the proven Biral ASAS™ (Aerosol Size And Shape) technology. This unique combination allows VeroTect™ to characterise airborne particles to an unparalleled extent, providing a reliable early warning of bioaerosol attack.

VeroTect™ has wide ranging applications in military and civil defence for both standalone point detection or as part of a sophisticated sensor network and in areas of aerosol research and environmental monitoring.

Features

- Very low cost of ownership (no operational consumables)
- VeroWarn™ sophisticated detection software
- High level of discrimination and low false alarm rates
- Compact and easily deployed
- Operational within 5 minutes
- High reliability, low maintenance
- Wide range of applications in military, civil defence and aerosol research

● Principle of operation

VeroTect™ characterises the ambient background aerosol and detects changes associated with the presence of biological threats.

Sampling

A sophisticated air sampling system which includes an aerosol to air concentrator is used to ensure optimum sensitivity.

Fluorescence

Fluorescence is measured on a bulk sample of the aerosol. VeroTect™ uses an innovative light source centred on 280 nm, which is considered to be the optimum excitation wavelength for biodetection.

Characterisation – ASAS™ Technology

Characterisation by size, concentration and especially particle shape is a powerful means of distinguishing between potential threat and benign interferents such as pollen and diesel fuels. ASAS™ technology has been operationally deployed in the UK armed forces for several years.



Real-time, generic biodetection

● Modular design

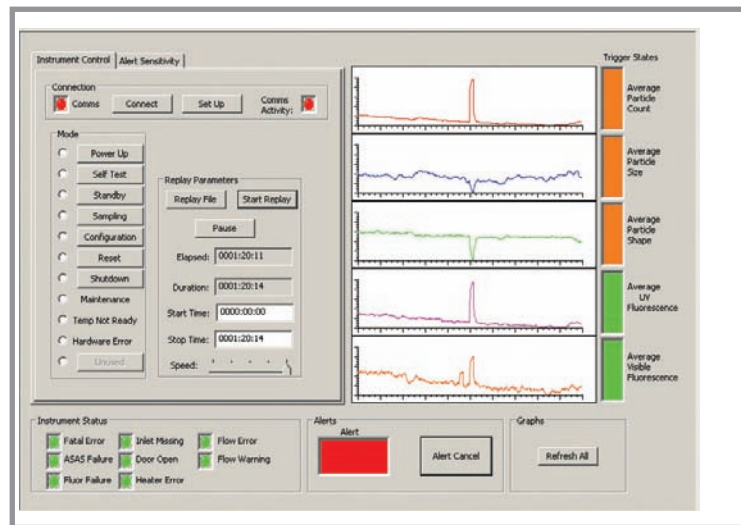
VeroTect's™ modular design allows easy integration into systems and multi-platform applications. Data processing and instrument control is provided by an embedded computer that provides external communications via a high-speed RS422 link.

● Detection software

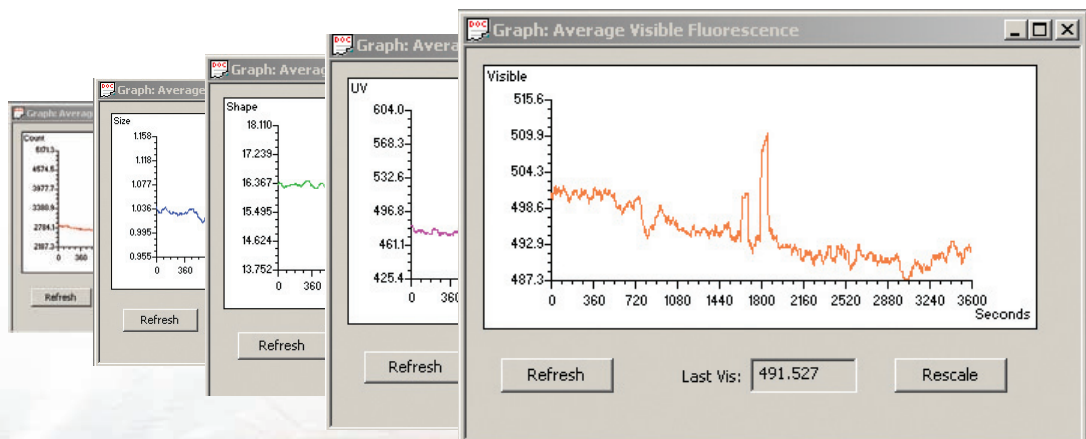
VeroWarn™ detection software provides a complete bio agent detection solution. By constantly monitoring all of the ambient aerosol parameters measured by VeroTect™, the software rapidly and reliably detects the presence of bio agents. Combining sophisticated detection algorithms with a multi-parameter measurement approach ensures optimum sensitivity whilst minimising false alarms.

The VeroWarn™ software can be supplied already installed in the VeroTect™, as a stand alone application or integrated into the users' system software. No matter how it is deployed the simple interface provides the user with all the operational information required.

The easy to use VeroWarn™ detection software provides a complete bio agent detection solution



User configurable displays



Specifications

As a testament to its pedigree, VeroTect™ has been independently tested and selected as the generic* biosensor for the UK armed forces ISMS system.

A key component of VeroTect™ is the Biral ASAS™** technology which has been successfully deployed in the UK Armed Forces PBDS biodetection systems for several years and is now a key element in the upgraded IBDS system.

* In biodetection, the term generic refers to the ability to discriminate bioaerosols from the normal background.

**Originally developed in conjunction with the University of Hertfordshire and Dstl, Porton Down, UK.

GENERAL	
Dimensions:	
In service (with sampling head):	496 mm (d) x 460 mm (w) x 960 mm (h)
Mass:	42 kg
Power:	200 W 18-36 VDC
Total instrument flow rate:	33 litres per minute through x 10 concentrator
External interfaces:	Communication via high-speed RS422 link
PERFORMANCE	
ASAS	
Flow rate:	1 litre per minute
Particle size range:	0.5 µm to 15 µm
Size resolution:	0.5 µm
Asymmetry factor range:	0 to 100
Max. particle throughput:	20,000 particles per second (=1,250 p/cc)
Fluorescence	
Flow rate:	2 litres per minute
Excitation wavelength:	280 nm
Fluorescence channel 1:	330 nm to 650 nm
Fluorescence channel 2:	420 nm to 650 nm
ENVIRONMENTAL	
Temperature range	
Operational:	-33°C to +55°C
Storage:	-33°C to +70°C
Humidity range:	up to 95% RH, non condensing
Shock and vibration:	to DEF STAN 00-35
EMC:	to BS EN 61000-1-6 and BS EN 61000-6-3

ASAS+
TECHNOLOGY




The VeroTect™ is in continuous development and specifications may be subject to change without prior notice. E. & O.E.



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