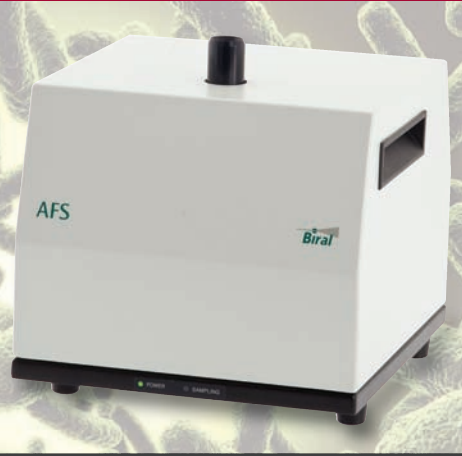
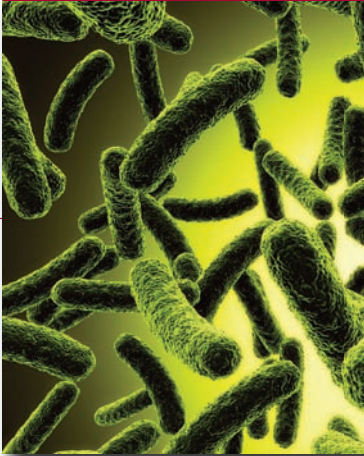


AFS – Aerosol Fluorescence Sensor



HEALTH PROTECTION

Investigating the transmission of airborne diseases, such as SARS and new strains of flu.

ENVIRONMENTAL MONITORING

Detection of atmospheric pollutants such as fuel oils, oil smokes and other natural organic materials.

PHARMACEUTICAL RESEARCH

Investigating the delivery of drugs to the lungs.

Aerosol Fluorescence

The AFS measures the intrinsic fluorescence of aerosols in real time

Biral's **Aerosol Fluorescence Sensor (AFS)** provides the capability to measure the intrinsic fluorescence of aerosols.

Aerosol Fluorescence Technology

When biological particles are illuminated with ultra-violet light they emit a characteristic fluorescence that can be used to distinguish them from the other particles in the atmosphere that do not fluoresce.

While most natural, non-biological particles in the atmospheric aerosol

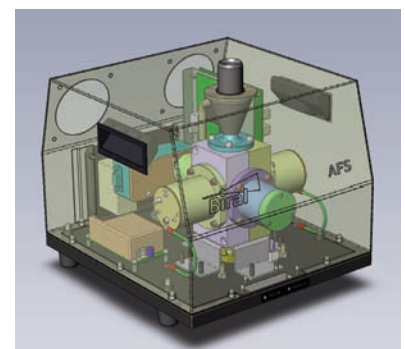
do not fluoresce others, and particularly man-made pollutants, do and so in a simple measure of total fluorescence could be mis-classified as biological. The AFS uses separate measurements on different parts of the fluorescence spectrum to effectively differentiate biological materials from other organic materials that could mimic them.

Detection of Fluorescing Aerosols

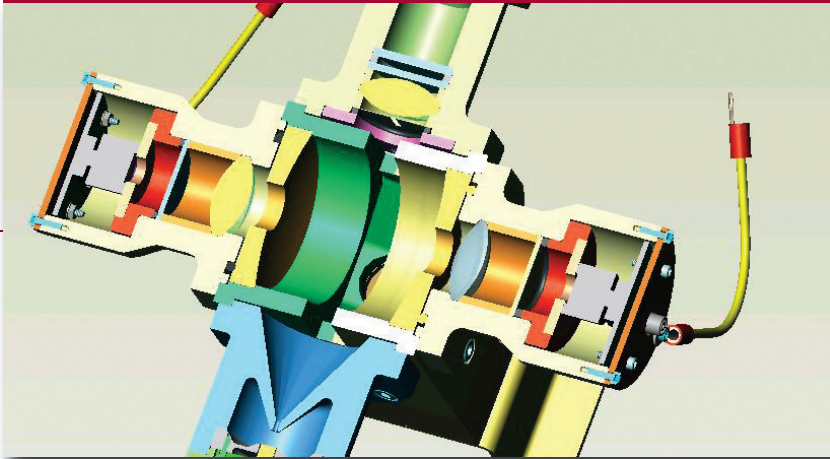
Primarily designed for the detection of biological particles, the optics can be adapted for other materials that fluoresce in different spectral bands. Customers with specific requirements are strongly encouraged to discuss with Biral special versions of the instrument for specific applications.

ASAS⁺ Software

The AFS comes with easy to use ASAS⁺ plug and play software giving full instrument control from your PC with enhanced data display and rapid analysis tools.



AFS – Aerosol Fluorescence Sensor



DETECTION OF BIO-AEROSOLS

The AFS can be fitted with an aerosol concentrator for use when the target is dilute.

CLIMATE RESEARCH

Measurement of the primary and secondary biological components of the atmospheric aerosol.

AEROSOL RESEARCH

Measurement of ultrafine and nanoparticles.

Technical Specification

Pump required for standalone operation	7 litres / min
UV excitation source	280 (+20/-40) nm
Fluorescence detection output 1 (designated UV)	300 - 420 nm
Fluorescence detection output 2 (designated visible)	420 - 650 nm
Detection volume	2.5 ml (cm-3)
Size	W 265 x D 290 x H 280 mm
Weight	5.3 kg (11.3 lbs) approx
Power supply (optional DC powered version available)	90 - 260 VAC (47 - 63 Hz)
Power connection type	IEC 950
Communications link	USB 1.0 or USB 2.0
Temperature range	+5 to +30 °C
Humidity range	0 to 95% RH

Operating system	MS Windows 7 recommended or Windows XP
System requirements	1 GHz processor and 2 Gb RAM
Available hard disk space	1.5 Gb
Graphics	Direct X 9 or super VGA graphics device
Monitor	800 x 600 minimum pixel resolution

Manufactured by:

Biral

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Bristol BS20 7JB, UK

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The AFS can be expanded to measure particle size and shape in real time



The AFS is a versatile instrument that can be operated alone or in tandem with the Aspect™ single particle size and shape analysis system to give the best possible multi-parameter characterisation.