VITROCELL® Photometer 2.0

Online measurement of particle concentrations

VITROCELL® Photometers are specifically designed and developed to enable online measurements of particle concentrations. The working principe is light-scattering. They may be placed inline at various locations of the exposure system without particles losses – even at low flow rates of e.g. 5 ml/min. The compact size of a mere 62 mm in diameter makes it fit almost anywhere.

Operation Modes – Easy Cleaning

The improved design enables an operation with a vacuum-generated or push-in flow. Examples for a vacuum flow are locations at the dilution system or inlet of the exposure modules. The push-in flow can be a measurement at the exit of an aerosol generator or smoking machine. The aerosol path can be easily cleaned with a soft pipe cleaner and Ethanol.

Sensitivity Ranges

The Photometer 2.0 is available in 2 base sensitivities: **HS** (high sensitivity) and **LS** (low sensitivity). Within the given base sensitivity a further range adjustment can take place via switch in 4 levels.
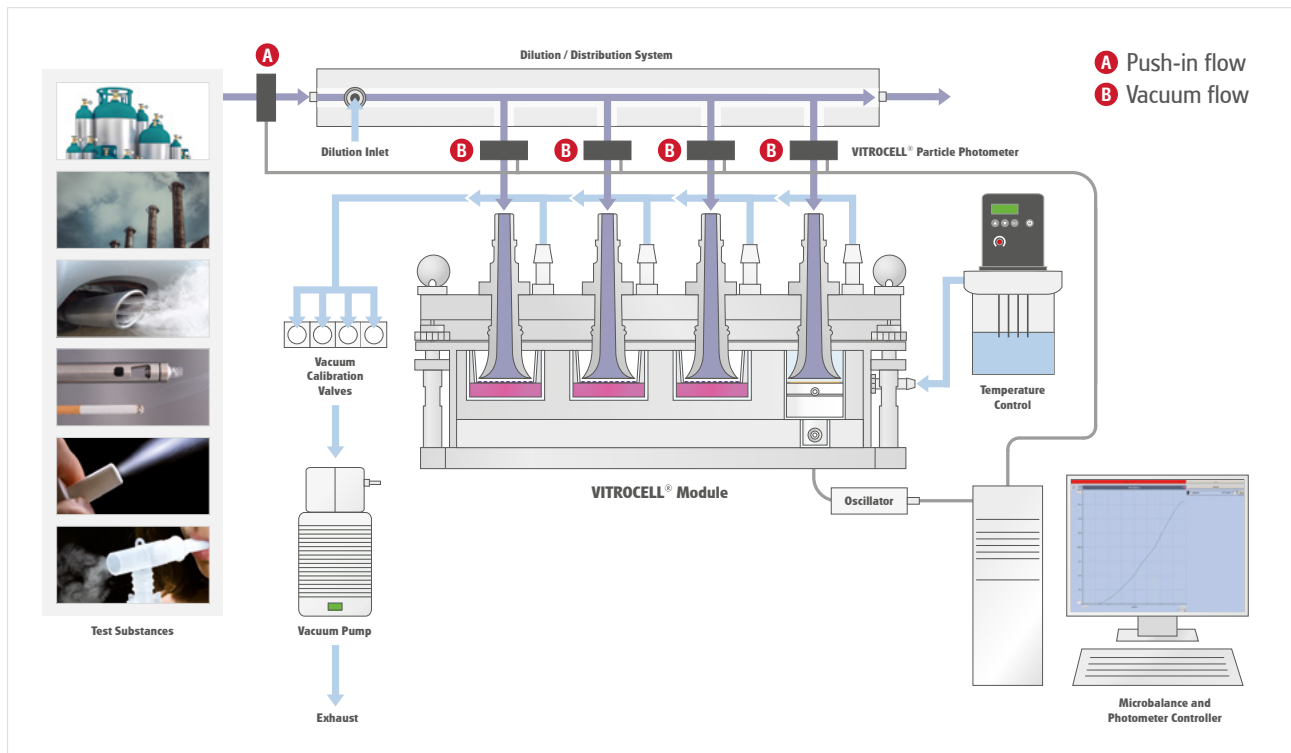
Photometer locations in the exposure system

Photometer Control Box and Software

The photometers are supplied with a control box for 4 Photometers and the VITROCELL® Monitor Software for convenient read-outs. The software features an area-under-curve function for easy determination of the total particle exposure. A calibration factor function enables a mass calculation per time units.
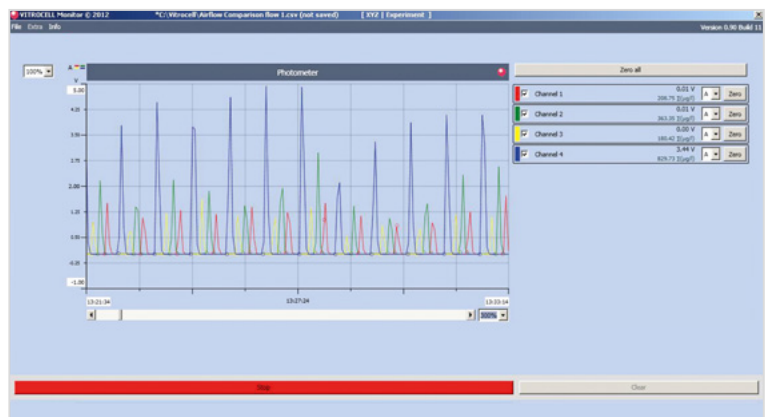

VITROCELL® Photometer Controller connects Photometers and Monitor Software.

Standard Edition

The VITROCELL® Monitor software enables data for max. 9 photometers to be presented online, including an area under curve calculation.

The data is logged into a .csv file which can be opened in Excel®.

The VITROCELL® Monitor software is able to display the data from several Photometers at the same time.

Key Features:

○ Inline measurement with online read-out

○ No losses of mass

○ Extremely small (62 mm diameter)

○ Easy cleaning of aerosol path

○ 2 base sensitivities with fine adjustments in 4 levels

○ Push-in or vacuum flow operation