

Lotus PES

Ultra-Compact Personal Exposure Sampler

PES (Personal Exposure Sampler) a compact, cutting-edge device that revolutionizes air quality assessment for air sampling in outdoor, indoor, personal exposure and microenvironment investigations. Sapiens PES features an innovative and sophisticated pneumatic microcontrol system that allows users to manage six independent sampling channels for filter, cartridge and absorption tube sampling in ultra compact package. The unparalleled flexibility in experimental design and pollutant collection can unleash your ability for various application. By integrating advanced analytical methods, PES delivers high-resolution temporal data for PM chemical speciation, Oxy-VOC and VOC speciation, empowering you to gain deeper insights into air pollutant composition and elevate your research in environmental and health sciences.

PES-PM F6

PES-PM F6 is compatible with various 47 mm filter membranes including Teflon, Quartz, and Polycarbonate, employing innovative technology to concentrate particles onto a 6 mm diameter spot. This approach ensures high particle accumulation per unit area and enables multiple samplings on a single filter. Equipped with a micro-impactor for precise PM_{2.5} or PM₁₀ selection, featuring extended battery life with replaceable batteries.



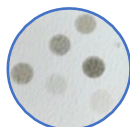
PES-Gas C6

PES-Gas C6 accommodates six DNPH cartridges, utilizing a micro-electromechanical system to precisely control sampling channel activation, ensuring systematic sampling across the cartridges. It features a compact ozone removal component, maintaining high ozone elimination efficiency without introducing additional air resistance. The customizable adsorption tube tray allows users to adapt the device to various cartridge specifications, enhancing its versatility.



PES-Gas T6

PES-Gas T6 employs traditional chemical absorption tubes as sampling medium in 6 independent channel, each programmable by user for set duration and intervals. Precise flow control ensures accurate air volume calculation for the estimation of sampling volume. Various VOCs species can be offline analyzed for unprecedented hourly resolution samples.



Quartz PTFE Polycarbonate
Metals PAHs
Toxicity ROS

x6

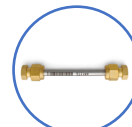


DNPH Cartridge

OVOC

Aldehyde Ketones

x6



Absorption Tubes

VOC

PAMS

BTEX

TO-15

x6

Applications

- Outdoor automatic sampling for PM and gases
- Personal exposure research studies
- Indoor air pollution sampling for chemical speciation
- Microenvironmental pollution monitoring
- Environmental exposure risk for vulnerable groups
- Emergency air quality assessment
- School/community air quality monitoring
- Source apportionment of personal exposure to air pollution

Product Features

x6

Six independent channels for user programmed sequential sampling



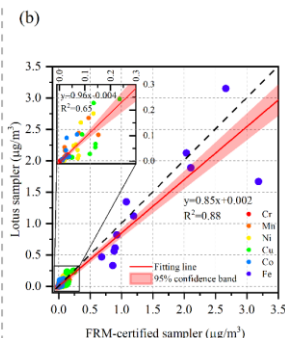
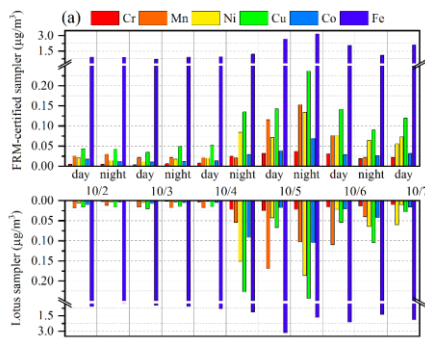
High time resolution of integrated sampling from 1h to 24 for each channel



Ultra compact and light weight for portable and personal application



Conventional chemical analytic methods applicable to the filters, cartridges and tubes



Specifications

PES-PM F6

Item	Descriptions
Dimensions	205 mm × 80 mm × 80 mm
Weight	<850 grams
Flow rate range	1.5 LPM – 3 LPM
Impactor Cut Point	PM _{2.5} at 1.67 LPM with 50% penetration efficiency
Channel Switching Time	< 2 seconds
Battery Charging Time	< 6 hours
Date Storage	16G SD card on board storage
Date Communication	USB direct reading with Sapiens console software
Compatible Sample Medium	47 mm (Teflon, Quartz, and Polycarbonate)
Battery Life	> 30 hours



PES-Gas C6

Item	Descriptions
Dimensions	230 mm × 80 mm × 80 mm
Weight	<850 grams
Compatible Sample Medium	Waters Sep-Pak DNPH-Silica Cartridge (default). Contact Sapiens for other model compatibility.
Flow rate range	0.8 LPM – 1.5 LPM
Ozone scrubber	Multi-porous honeycomb structure for 100 hours operation at 100 ppb Ozone condition
Battery Life	> 36 hours
Battery type	Li-Ion
Channel Switching Time	< 2 seconds
Battery Charging Time	< 6 hours
Screen size	2.8 inches
Date Storage	16G SD card on board storage
Date Communication	USB direct reading with Sapiens console software



PES-Gas T6

Item	Descriptions
Dimensions	270 mm × 80 mm × 80 mm
Weight	<850 grams
Compatible Sample Medium	TenaxGR adsorbent tubes
Flow rate range	0.2 LPM – 0.4LPM
Battery Life	> 36 hours
Battery type	Li-Ion
Channel Switching Time	< 2 seconds
Battery Charging Time	< 6 hours
Screen size	2.8 inches
Date Storage	16G SD card on board storage
Date Communication	USB direct reading with Sapiens console software



Sapiens is an ISO 9001:2015 and GB/T24001-2016/ISO14001:2015 certified company for MAS/NAS/Sirius/PEK series products.



EN 61010:2010+A1:2019
EN 61326-1: 2013
EN 61000-3-2: 2019
EN 61000-3-3: 2013+A1: 2019



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