SASS® 2300

Cyclonic Wet Air Sampler

RESEARCH INTERNATIONAL

The trusted solution for liquid sample aerosol collection.

Features

- Extended collection periods
- Liquid sample volume unaffected by ambient conditions
- User-specified automated protocols
- Onboard sample vial filling
- Wireless control option
- Threaded inlet and outlet ports
- Long-life primary and rechargeable battery options

Application Areas

- Medical facilities
- Academic research
- Power plants
- Indoor air quality
- Homeland security
- Public health
- Military
- Agriculture
- Environmental
- Mailrooms

The SASS® 2300 is a highly efficient, portable, multi-stage wetted-wall cyclone sampler that extracts particulates and water-soluble chemical vapors from air and transfers them to a liquid phase for later detection and analysis. This user-friendly sampler has been used in subway systems, public health facilities, nuclear power plants, corporate mail rooms and poultry ranches. It has been proven to possess excellent collection properties.

Extended collection periods Our patented technology can amplify trace aerosol concentration by extending the sampling time and the fluid monitoring system will maintain a fixed liquid volume in the device that is independent of collection time, air temperature or relative humidity. It is highly automated, can be easily carried by a single person, and may operate unattended for extended periods.

Trusted by researchers The SASS 2300 was successfully used to capture COVID-19 in Wuhan, China, and has also been used to detect the airborne viral pathogens that cause exotic Newcastle disease and hoof-and-mouth disease* as well as some strains of avian flu virus. It was the only portable sampler technology to receive US Department of Homeland Security Certification under the US Safety Act of 2002.

U.S. Patent Nos.: 7846228, 8012229, 6484594, 6532835, 7261008.

* Journal of Veterinary Diagnostics Investigation, 17:198–200 (2005), Environmental air sampling to detect exotic Newcastle disease virus in two California commercial poultry flocks, Sharon K. Hietala, Pamela J. Hullinger, Beate M. Crossley, Hailu Kinde, Alex A. Ardans.

SASS® 2300 Sampling Specifications

Operating principle	Multi-stage wetted-wall cyclone with enhanced particulate collection.
Air collection rate	> 300 LPM using 30,000-hour life brushless fan.
Particulates collection range	0.5-10 μm. Contact Research International regarding vapor collection applications.
Concentration ratio	72,000/minute, nominal.
Liquid inventory	4-5 cc range, adjustable by user. Proprietary control loop maintains a constant liquid volume in the sampler, independent of collection time, temperature, or humidity; useful for concentrating trace airborne analytes.
Make-up water	1 liter on-board reservoir; supplemental off-board reservoirs may be used in fixed installations: 0.8 cc/min, typical evaporation rate at 20C/50% RH.
Maximum sampling time	45 days of continuous operation is possible, but it is recommended that the fan should be shut off after 30 days to clean the cyclone tube.
Maximum sampling volume	19,660,500 liters
Sample extraction	On-board 12 cc/min peristaltic pump, manual or remotely controlled. Vial filling module included. Air sampling may continue during extraction.
Decontamination	Auto-flush protocol using onboard water, or manual flush with detergent and/or disinfectant. Disposable fan module.

Physical Specifications

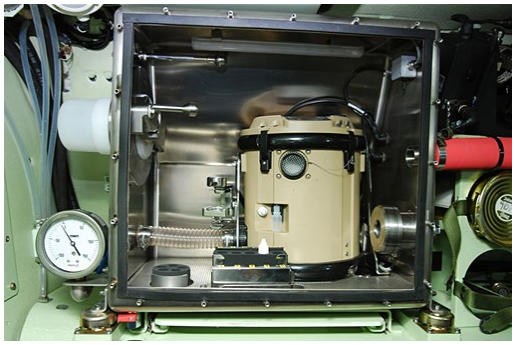
Dimensions	18.4 x 21.3 x 34.3 cm (7.2" W x 8.4" D x 13.5" H).
Weight	3.7 kg w/o battery, 4.7 kg with battery (8.2/10.4 lbs). Add 1 kg (2.2 lbs) for 1 liter of water.
Package	Lightweight two-piece molded plastic shell with swivel-style carrying handle.
Sound level	70-75 dB(A). Lower level possible with sound attenuating accessories.
Air inlet	Industry-standard threaded adapter.
Humidity range	Non-condensing conditions.
Operating temperature	Above freezing conditions to 66°C.

Power

Power source	BA-5590/U primary battery; or UBI 2590 15V rechargeable battery; or 82-265 Volt (47 63Hz) AC lump-in-cord power supply.
Power consumption	1.33 amps @ 12 V, 16 W.
Operating time with primary battery	Standby: > 8 days Sampling: > 13 hours
Operating time with rechargeable battery	Standby: > 10 days Sampling: > 15 hours

Software and Accessories

System controls	Microprocessor controlled. RS-232 or optional wireless link for remote operation or reprogramming. Additional TTL and motor drivers available.
PC interface software requirements	OS: Windows version 7 and up; processor: 400 MHz Pentium or equivalent (min.); RAM: 96 MB (min.), 256 MB (recommended); hard disk: 1.2 MB available space; USB port or CD-ROM.
Optional accessories	Carrying case; inlet hose; 8cc sample bottles; rechargeable battery and charger.



SASS 2300 mounted inside a military vehicle

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