

# SASS® 2400

## Low-Volume Wet Air Sampler

COLLECT Airborne Pathogens, Virus-Sized Particulates, Bacteria and Spores



*Sass 2400 Low-Volume Wetted-Wall  
Air Sampler*

The SASS® 2400 is our smallest wetted-wall aerosol particle collection system. It is designed to operate with a much lower air flow and fluid sample volume than the SASS 2300, while still employing the highly successful wetted wall aerosol collection strategy that has received U.S. Department of Homeland Security Certification under the U.S. Safety Act of 2002. It is available in a case (as seen in the photo) or as OEM components.

The cyclone operates at a 40 LPM air processing rate and requires only 1 ml

of fluid, whereas the larger SASS® 2300 processes 325 LPM of air and requires 4 to 5 ml of sample fluid. Water loss through evaporation is correspondingly reduced so that makeup water sources will last longer, or can be reduced in size.

Sample fluid is maintained at a constant amount independent of collection time, ambient air temperature, or relative humidity, providing unsurpassed monitoring capabilities in environments ranging from farmyards to hospitals to battlefields.

This is the only wet-type air sampler technology that has been shown able, in concert with real-time PCR, to efficiently collect and identify airborne viruses. It has, for example, been successfully used to detect the airborne viral pathogens that cause exotic Newcastle disease and hoof-and-mouth disease, as well as strains of avian flu virus.\*

**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.

### FEATURES

- 40 LPM wetted wall cyclone
- An onboard sample vial filling station
- A water reservoir sufficient for 7 days of operation
- Makeup water metering via onboard peristaltic pump
- Peristaltic pump/pinch valve-based fluid sample routing
- Impact- and water-resistant case
- Convenient tube stub inlet and threaded outlet port
- Firmware upgradeable and/or customizable via the RS-232 port
- 30,000 hour blower

### APPLICATION AREAS

- Environmental
- Air quality
- Agriculture
- Public Health
- Medical facilities
- Homeland security
- Military
- Power plants

SPECIFICATIONS for SASS 2400 and 2400-OEM	
Characteristic	Description
Operating principle	Multi-stage wetted-wall cyclone with enhanced particulate collection.
Air collection rate	40 LPM using 30,000 hour life brushless fan.
Particulates collection range	1-10 µm. 70% collection efficiency at 3 micron particle size.
Concentration ratio	40,000/min., nominal.
Liquid inventory	1 cc; set at factory. 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	1.3 liter on-board reservoir; supplemental off-board reservoirs may be used in fixed installations: 0.1 cc/min typical evaporation rate at 20°C/50% RH.
Physical size	18.4 cm x 21.3 cm x 34.3 cm (7.2" W x 8.4" D x 13.5" H).
Weight	3.7 kg without battery, 4.7 kg with battery (8.2/10.4 lbs). Add 1 kg (2.2 lbs) for 1 liter of water.
Air inlet connection	15.4 mm diameter tube stub. It is recommended that third-party accessories have an airflow channel of comparable diameter or larger.
Air outlet connection	Industry-standard threaded adapter. It is recommended that third-party accessories have an airflow channel 2.54 cm diameter or larger.
Humidity range	Non-condensing conditions.
Operating temperature	Above freezing conditions to 66°C.
Power source	12 VDC BA-5590/U primary battery; or UBI 2590 rechargeable battery; or 82-265 Volt (47-63 Hz) AC lump-in-cord power supply.
Power consumption	Power consumption 12 V @ 0.75A, 9 W
Sample extraction	On-board 12 cc/min peristaltic pump, manual or remotely controlled. Vial filling module included. Air sampling may continue during extraction.
System controls	Microprocessor controlled. RS-232 or optional wireless link for remote operation or reprogramming.
Sound level	70 dB (A) at 1 meter.
Package	Lightweight two-piece molded plastic shell with swivel-style carrying handle.
Decontamination	Auto-flush protocol using onboard water, or manual flush with detergent and/or disinfectant. Disposable high-performance pull-through fan module.
Optional Accessories	Carrying case; inlet hose; 8cc sample bottles; sample bottles; rechargeable battery, charger.
Approvals	U.S. Dept. of Homeland Security certified under U.S. Safety Act of 2002
<i>Research International reserves the right to change specifications without prior notice.</i>	

## Research International, Inc.

### U.S. Headquarters Office

17161 Beaton Road SE, Monroe, WA 98272-1034  
 Phone: 360-805-4930 • Fax: 360-863-0439  
 Toll Free: 1-800-927-7831  
 Email: [info@resrchintl.com](mailto:info@resrchintl.com) • Web: [www.resrchintl.com](http://www.resrchintl.com)

### U.S. East Coast Office

Jon Tobelmann  
 Phone: 703-625-8381  
 Email: [jontobelmann@resrchintl.com](mailto:jontobelmann@resrchintl.com)

*To locate an international distributor, please contact our headquarters office.*



Visit us at [www.resrchintl.com](http://www.resrchintl.com)  
 or call 1-800-927-7831