

SASS® 3100

Dry Filter-Based Air Sampler

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



SASS 3100 Dry Air Sampler

The SASS® 3100 Smart Air Sampler System is a compact, rugged microprocessor-controlled portable air sampler designed for use with state-of-the-art electret filter media. It is highly suited to the collection of biological and radioactive aerosols. In independent tests performed by third parties, it has outperformed all competitors in terms of collection efficiency and suitability.

The standard 44mm diameter electret filter used with the SASS 3100 samples at a maximum rate of 300 liters/minute and has a collection efficiency of 50% at an aerosol particle diameter of 0.5 microns. A second HEPA-style electret filter that is physically interchangeable has 95%+ collection

efficiency for particles greater than 0.3 microns in diameter. It has a maximum sampling rate of 49 liters/minute – a very high rate for a HEPA-style filter of this size. For users interested in collecting radioactive aerosols, the HEPA-style filter meets all key international standards for radioaerosol collection.

Flow rates and sampling protocols are microprocessor controlled and may be pre-programmed for different types of field work using a bundled PC software package. The unit can be operated in local mode wherein the user turns the fan on and off manually or it can also be operated remotely via an RS232 serial link.

For applications where run-to-run cross-contamination is a serious concern, the filter mounting structure may be removed and cleaned as a separate component. The motor/rotor assembly may also be removed and the rotor cleaned.

Field operation may be powered by either a primary or rechargeable battery. The primary battery provides over 20 hours of continuous operation at maximum flow, while the rechargeable battery should power the device for more than 24 hours. A universal wall-plug power supply accepting 100-240 V AC at 50-60 Hz is also provided.

U.S. Patent Nos.: US 9791353, 10677689

For complete technical information, visit resrchintl.com.

FEATURES

- ISO 14698-1 compliant
- Long collection periods
- Usable from -40°C to 70°C
- Adjustable air flow:
50-300 LPM (biological)
10-49 LPM (radiological)
- User-specified automated protocols
- Wireless control option
- Long-life primary and rechargeable battery options
- Easy decontamination, including fan rotor
- Compact and lightweight

APPLICATION AREAS

- Pharmaceutical
- Public health
- Clean rooms
- Military
- Food processing
- UAVs
- Agriculture
- Indoor air quality
- Environmental
- Homeland security



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Specifications

Operating Principle	Collection by electret dry filter media.	
Consumables	Electret filters. <i>Purchased separately.</i>	
Air Collection Rate	Standard (bioaerosol) electret filter:	User adjustable 50 LPM to 300 LPM.
	HEPA-style (radiological) electret filter:	User adjustable 10 LPM to 49 LPM.
Filter Collection Efficiency	Standard (bioaerosol) electret filter:	50% at 0.5 micron diameter.
	HEPA-style (radiological) electret filter:	More than 95% for > 0.3 µm diameter.
Filter Mass and Composition	Standard (bioaerosol) electret filter:	12 mg/cm ² . Polypropylene electret microfiber.
	HEPA-style (radiological) electret filter:	2.2 mg/cm ² for active media; 8.6 mg/cm ² including backing scrim. Polypropylene electret microfiber.
Filter Media Size	4.4 cm active diameter filter, mounted in 6.0 cm diameter injection-molded holder.	
Operating Temp. Range	-40° to 70°C	
Storage Temp. Range	-40° to 70°C	
Humidity range	All-weather. Optional rain shield prevents wetting of filter during rainy conditions.	
Decontamination	Water-tight design allows decontamination with 1 to 5% bleach solution. Fan shell and motor/rotor assembly may be removed for decontamination.	
Drive fan	High efficiency centrifugal fan with electronically commutated drive motor. Fan life is 30,000-40,000 operating hours.	
Dimensions	15.60cm W x 17.04cm D x 19.81cm H	
Weight	2.0 kg (3 lb 15 oz); add 1 kg for battery.	
Power Source	100–240 VAC/50–60 Hz lump-in-cord 28 VDC power supply. Optional BA-5590/U primary battery or UBI-2590 rechargeable battery. <i>Batteries purchased separately.</i>	
Power consumption	< 10 watts	
Operating time with battery	Standby: BA-5590/U Primary battery: > 8 days	UBI-2590 rechargeable battery: > 10 days
	Sampling: BA-5590/U Primary battery: > 20 hrs	UBI-2590 rechargeable battery: > 24 hrs
System Controls	Microprocessor controlled. RS232 or optional wireless link for remote operation or reprogramming. Dimmable LEDs monitor for battery end-of-life and fan rotation.	
Communications	RS232. Optional RF links available. <i>RF links purchased separately.</i>	
Connectors	Standard: DB-9. Optional: Military CCSI (<i>additional cost</i>).	
Sound Level	45-61 dB (A) at 1 meter; peak value at exhaust port.	
Package	EMI-resistant, water-tight extruded aluminum case.	
Optional Accessories Purchased separately	Rain cover, P/N 7000-165-200-01. Rechargeable UBI 2590 battery, P/N 1000-0003-12. Battery charger, P/N 1000-0003-13. Tripod, P/N 1770-0009-02.	

Research International reserves the right to change specifications without notice.

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