



# SASS® 3010 Particle Extractor

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



The SASS® 3010 particle extractor

The SASS® 3010 is used to extract and transfer to a small fluid volume, aerosols captured by Research International's electret filters. Captured particulates can be difficult to remove because induced dipole fields create a strong holding force and must be neutralized. Once particulates have been released, they must then be removed from within the fibrous filter matrix and collected in a small amount of sample fluid. These processes are efficiently performed in a matter of 1 to 2 minutes using the SASS 3010 Particle Extractor.

Extraction efficiencies have been found to be in the range of 70 to 80%. To test extraction efficiency several electret filters were used to collect airborne fluorescent polystyrene beads of 1.8 microns diameter. Each filter was operated for a period of 10 minutes.

After the collection phase was completed, the filters were mounted in the SASS 3010 and captured beads transferred to 5 ml of extraction buffer. Extraction efficiencies were then determined using fluorometric assay methods.

It was found that an average recovery of 77% was achieved. A second extraction with an additional 5 ml of extraction fluid resulted in recovery of another 17% of the embedded beads, while two more 5 ml extractions resulted in small 4.5% and 1.5% additions to the total number of beads recovered, respectively.

For complete technical information, visit [www.resrchintl.com](http://www.resrchintl.com).

## FEATURES

- Fast and efficient extraction from "electret" filters
- Extraction efficiencies are typically in the range of 70 to 80%

## APPLICATION AREAS

- Pharmaceutical
- Medical facilities
- Public health
- Clean rooms
- Military
- Food processing
- UAV's (Unmanned Aerial Vehicles)
- Agriculture
- Indoor air quality
- Environmental
- Homeland security



Snap-on electret filter

SASS 3010 Particle Extractor Specifications	
Characteristic	Description
Filter compatibility	For use with SASS 3100 and SASS 4100 filters
Extraction method	Acoustic vibration of the fluid-saturated filter is followed by counter-flow discharge of the suspended aerosol particles.
Extraction efficiency	60-80% typical
Carry-over	1.1% with dry wiping, and 0.01% to 0.1% with a 5 ml flush. Additional flushes will reduce carry-over further.
Extraction time	1 to 2 minutes, typical, with a flush cycle.
Extraction fluid	A pre-filled dropper bottle provides enough buffered extraction fluid to make a 5 ml sample. Other fill levels to 10ml on user request.
Sample fluid storage	The extraction fluid bottle is also used for fluid sample storage upon extraction completion.
Physical size	<ul style="list-style-type: none"> <li>• Body: 10.2 cm (W) x 13.4 cm (D) x 14.5 cm (H)</li> <li>• A 7.8 cm-high plunger protrudes from the extractor's top surface.</li> </ul>
Weight	800 grams
Electrical power	Two size "D" primary batteries.
Operating temperature range	0°C to 70°C
<i>Research International reserves the right to change specifications without prior notice.</i>	

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