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.
# SASS 3010 Particle Extractor Specifications

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter compatibility</td>
<td>For use with SASS 3100 and SASS 4100 filters</td>
</tr>
<tr>
<td>Extraction method</td>
<td>Acoustic vibration of the fluid-saturated filter is followed by counter-flow discharge of the suspended aerosol particles.</td>
</tr>
<tr>
<td>Extraction efficiency</td>
<td>60-80% typical</td>
</tr>
<tr>
<td>Carry-over</td>
<td>1.1% with dry wiping, and 0.01% to 0.1% with a 5 ml flush. Additional flushes will reduce carry-over further.</td>
</tr>
<tr>
<td>Extraction time</td>
<td>1 to 2 minutes, typical, with a flush cycle.</td>
</tr>
<tr>
<td>Extraction fluid</td>
<td>A pre-filled dropper bottle provides enough buffered extraction fluid to make a 5 ml sample. Other fill levels to 10ml on user request.</td>
</tr>
<tr>
<td>Sample fluid storage</td>
<td>The extraction fluid bottle is also used for fluid sample storage upon extraction completion.</td>
</tr>
<tr>
<td>Physical size</td>
<td>• Body: 10.2 cm (W) x 13.4 cm (D) x 14.5 cm (H)</td>
</tr>
<tr>
<td></td>
<td>• A 7.8 cm-high plunger protrudes from the extractor’s top surface.</td>
</tr>
<tr>
<td>Weight</td>
<td>800 grams</td>
</tr>
<tr>
<td>Electrical power</td>
<td>Two size “D” primary batteries.</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>0°C to 70°C</td>
</tr>
</tbody>
</table>

*Research International reserves the right to change specifications without prior notice.*

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