## Comparison: Liquids Sampling Technologies

<table>
<thead>
<tr>
<th>Technology:</th>
<th>Sample Transfer Stripper (ASI Membrane Technologies)</th>
<th>Stripping Column / Sparger Flame Ionization Detector or similar</th>
<th>Gas Chromatography Injection valves</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 204</strong></td>
<td><strong>Henry’s Law &amp; proprietary methods</strong></td>
<td><strong>Henry’s Law</strong></td>
<td><strong>Absorption</strong></td>
</tr>
<tr>
<td><strong>Principles incorporated</strong></td>
<td><strong>LOW</strong></td>
<td><strong>X HIGH</strong></td>
<td><strong>X HIGH</strong></td>
</tr>
<tr>
<td><strong>Maintenance requirements</strong></td>
<td>STS Membrane creates ultra-clean sample for detector &amp; physically blocks liquids from passing through to detector. Clean only one to two times per year typical</td>
<td>Plagued by frequent liquid “carry-overs”. No physical block to prevent liquids from contaminating detector and gas sample lines. User reported constant cleaning &amp; upkeep</td>
<td>Column fouling common occurrence with liquid measurements. Requires high upkeep and cleaning</td>
</tr>
<tr>
<td><strong>Moving parts</strong></td>
<td><strong>✓</strong> NONE</td>
<td><strong>X</strong> HIGH</td>
<td><strong>X</strong> HIGH</td>
</tr>
<tr>
<td><strong>Cost of ownership</strong></td>
<td><strong>Cost-Effective</strong></td>
<td><strong>HIGH</strong></td>
<td><strong>HIGH</strong></td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td><strong>✓</strong> HIGH</td>
<td><strong>LOW</strong></td>
<td><strong>LOW</strong></td>
</tr>
<tr>
<td><strong>Versatility</strong></td>
<td><strong>✓</strong> YES</td>
<td><strong>NO</strong></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td><strong>✓</strong> PPB, PPM and up to 100% ranges with high precision</td>
<td><strong>X</strong> Low ppm ranges not reliable</td>
<td>Wide range ability but fouling reduces ability over time</td>
</tr>
<tr>
<td><strong>Consumables</strong></td>
<td><strong>✓</strong> LOW</td>
<td><strong>HIGH</strong></td>
<td><strong>HIGH</strong></td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td><strong>✓</strong> SAFE</td>
<td><strong>X CAUTION</strong></td>
<td><strong>X CAUTION</strong></td>
</tr>
</tbody>
</table>

**NOTE:** Data listed is typical and may vary based on manufacturer.