A New Compact Hydride Generation System for ICP with Improved Stability and Performance

ESI’s new hydrideICP, a hydride generation system with integrated precision micro peristaltic pump, improves ICP detection limits for hydride-forming elements such as As, Se, and Sb. Sub-ppb levels of such elements are often difficult to detect with ICP, but hydrideICP converts hydride-forming elements to gas, increasing signal intensity. In a low-volume quartz gas-liquid separator (GLS) hydrides are separated from liquid waste then carried to the ICP injector. The hydrideICP system can increase ICP sensitivity by an order of magnitude or more over a nebulizer-only system.

Benefits:

- **Improved detection limits for As, Se, Sb and other hydride-forming elements.**
- **Improved stability**
  MP² Micro peripump creates a stable flow of sample and reagent, producing a stable formation of H₂ gas and hydrides.
- **Compact**
  hydrideICP is the smallest system of its kind on the market. (95mm x 118mm x 140mm)
- **Chemically Resistant Construction**
  Micro peripump with ceramic pins
  PFA mixing block
  Quartz GLS
- **Convenient**
  hydrideICP, including PFA mixing block, is completely integrated into the MP² pump.

The hydrideICP is available with 4 or 6 channels. The 4-channel version is for basic hydride formation, and the 6-channel version allows the user to add an internal standard, such as Bi.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>HG-MP2-4-A</td>
<td>Hydride generation system, including MP² 4 channel precision micro peristaltic pump and gas-liquid separator.</td>
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<tr>
<td>HG-MP2-6-A</td>
<td>Hydride generation system, including MP² 6 channel precision micro peristaltic pump and gas-liquid separator and internal standard tee.</td>
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As Hydride Calibration. Calibration points at 0, 0.5, 1, 5, and 10 ppb.

Se Hydride Calibration. Calibration points at 0, 0.5, 1, 5, and 10 ppb.