Simultaneous Analysis of Total Sulfur and Total Nitrogen in One Single Run

- Unrivaled Performance: under 30 ppbw, according to ISO 11843 & Excellent Precision
- Robust & reliable: 4 orders of Linear Dynamic Range, Long term Stability
- Easiest to use: Easy service access, 10” Touchscreen User Interface & Versatile Software
- Spacesaver: Smallest Simultaneous Combustion Analyzer on the Market

WWW.PACLP.COM
PAC ElemeNtS is the most advanced, modular, analytical system available for the detection of Total Nitrogen and/or Total Sulfur content in liquid, gaseous materials and LPG samples. Three configurations are available: ElemeNtS-N for Nitrogen analysis, ElemeNtS-S for Sulfur analysis and ElemeNtS-N/S for simultaneous Nitrogen and Sulfur analysis.

The ElemeNtS analyzer detects these substances through a uniquely efficient process that includes Ultra Violet Fluorescence (UVF) and Chemiluminescence (CLD). The ElemeNtS analyzer combines the testing of Sulfur and Nitrogen for monitoring and protecting key processes in the refining industry.

GLOBAL MARKET LEADER FOR ELEMENTAL COMBUSTION ANALYSIS OF TOTAL SULFUR AND TOTAL NITROGEN

IMPROVED LAB PRODUCTIVITY THROUGH REDUCED USER INTERVENTION

- Factory tuned analyzer; the instrument is ready for analysis once installed
- With optional customized applications development, operators do not need to spend time to develop methods
- High capacity liquid autosampler (324 samples) reduces need for operators to be present when running samples
- Long term stability reduces calibrations by operators for any measurement range

HIGH PERFORMANCE FOR VERSATILITY AND QUICK ANALYSIS

ElemeNtS Analyzes a Wide Application Range all in one Instrument
- Quick analysis of various sample types
- ElemeNtS is able to analyze liquids and gases quickly and accurately
- Long term stability for continuous use

PRECISE ANALYZER FOR HIGH QUALITY DATA

Application Specific Configuration Provides Excellent Precision
- Dedicated sample analyzer means that your analyzer can truly be optimized for its intended application; can be configured for multiple applications
- PAC application specialists can develop customized methods (no on-site method development needed)
- Factory-tuned analyzer prior to shipment

PROVEN COMPLIANCE FOR MULTIPLE INDUSTRIES

- Low detection limits ensures regulatory and quality requirements
- Wide application range helps multiple industries meet standards requirements
Long Term Stability Test

<table>
<thead>
<tr>
<th>Sample</th>
<th># Injections</th>
<th>Results PPM</th>
<th>RSD%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur Analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diesel</td>
<td>10</td>
<td>9.44</td>
<td>0.17</td>
</tr>
<tr>
<td>E85</td>
<td>10</td>
<td>1.72</td>
<td>1.79</td>
</tr>
<tr>
<td>Jet Fuel</td>
<td>10</td>
<td>506.77</td>
<td>0.12</td>
</tr>
<tr>
<td>Enhanced Gasoline</td>
<td>10</td>
<td>4.42</td>
<td>0.96</td>
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<tr>
<td>BOB Gasoline</td>
<td>10</td>
<td>2.55</td>
<td>1.24</td>
</tr>
<tr>
<td>B7 Diesel</td>
<td>10</td>
<td>9.64</td>
<td>0.27</td>
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<tr>
<td>Jet Fuel</td>
<td>10</td>
<td>167.83</td>
<td>0.08</td>
</tr>
<tr>
<td>Heating Oil</td>
<td>10</td>
<td>29.44</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Nitrogen Analysis

<table>
<thead>
<tr>
<th>Sample</th>
<th># Injections</th>
<th>Results PPM</th>
<th>RSD%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel</td>
<td>10</td>
<td>61.65</td>
<td>0.48</td>
</tr>
<tr>
<td>Enhanced Gasoline</td>
<td>10</td>
<td>1.35</td>
<td>1.81</td>
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<tr>
<td>BOB Gasoline</td>
<td>10</td>
<td>1.29</td>
<td>2.75</td>
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<tr>
<td>B7 Diesel</td>
<td>10</td>
<td>39.94</td>
<td>0.92</td>
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<tr>
<td>Heating Oil</td>
<td>10</td>
<td>55.60</td>
<td>0.33</td>
</tr>
</tbody>
</table>

Typical results. Results will vary based on your specific instrument conditions.

HPI Applications

Sulfur Analysis
- LPG
- Condensates
- Naphtha
- Diesel
- Aromatics
- Natural Gas
- Mineral Oil
- Gasoline
- Gaseous Hydrocarbons
- Jet Fuel

Methods: Sulfur
- ASTM D5453
- EN ISO 20846
- ASTM D6667
- ASTM D7183
- ASTM D7551
- EN 15486
- IP 490
- JIS K 2541

Nitrogen Analysis
- Naphtha
- Condensates
- Distillates
- Oils
- Liquid Hydrocarbons
- LPG
- Light Aromatics
- Lubricating oils

Methods: Nitrogen
- ASTM D4629
- ASTM D5176
- ASTM D7184
- DIN 51444
- ISO/TR 11905
- GB/T 17674
- UOP 936
- JIS K 2609

Non-HPI Applications

Sulfur Analysis
- Water
- Wastewater
- Ethyl Alcohol

Nitrogen Analysis
- Water
- Wastewater
- Ethyl Alcohol

10” touchscreen user interface swivels to operate at any position in comfort.

Compatible with high-capacity Liquid Autosampler 749.

Compatible with PAC Accura for gaseous and LPG samples.

Front maintenance door to allow easy access for consumable parts.

Compatible with PAC Accura for gaseous and LPG samples.

10” touchscreen user interface swivels to operate at any position in comfort.
ABOUT PAC

PAC develops advanced instrumentation for lab and process applications based on strong Analytical Expertise that ensures Optimal Performance for our clients. Our analyzers help our clients meet complex industry challenges by providing a low cost of ownership, safe operation, high performance with fast, accurate, and actionable results, high uptime through reliable instrumentation, and compliance with standard methods.

Our solutions are from industry-leading brands: AC Analytical Controls, Advanced Sensors, Alcor, Antek, Herzog, ISL, Cambridge Viscosity, PSPI, and PetroSpec. We are committed to delivering superior and local customer service worldwide with 16 office locations and a network of over 50 distributors. PAC operates as a unit of Roper Technologies, Inc., a diversified technology company and a constituent of S&P 500, Fortune 1000, and Russell 1000 indices.

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