CNSolution™ Total Cyanide Analyzer Features, Advantages, & Benefits

FEATURE: ***Measures Total Cyanide by UV-Digestion, Gas–Diffusion Amperometry Technique***

ADVANTAGE: Eliminates the need to perform a preliminary 2-hour sulfuric acid distillation step prior to analysis.

BENEFIT: Reduces analysis time from hours to minutes, and increases sample throughput.

FEATURE: ***Performs Total Cyanide Analysis by ASTM Method D7511-09 and OIA 1678***

ADVANTAGE: Method is broadly applicable to drinking water, surface water, and domestic or industrial wastewater samples.

BENEFIT: Provides more reliable data than methods employing a preliminary acid distillation step.

FEATURE: ***UV-Digestion, Gas-Diffusion Amperometry Technique Avoids Formation or Destruction of Cyanide Compounds that Occurs During Acid Distillation***

ADVANTAGE: Technique has fewer analytical interferences (positive and negative biases) and consequently supports a lower method detection limit (MDL) and a broader measurement range.

BENEFIT: Allows measurement of total cyanide from 2 – 5,000 ppb.

FEATURE: ***UV Digestion Module***

ADVANTAGE: Performs in-line UV digestion to break down metal-cyanide complexes at ambient temperature.

BENEFIT: Eliminates the need to perform a 2-hour acid distillation and avoids formation of sulfur-species interferences from heating samples in sulfuric acid.

FEATURE: ***Amperometric Detection***

ADVANTAGE: The OI amperometric detector uses a silver electrode that responds selectively to cyanide allowing the use of non-toxic reagents.

BENEFIT: Eliminates use of hazardous pyridine reagents required in cyanide analysis methods using photometric detection.

FEATURE: ***In-line UV Digestion Supports Unattended, Fully Automated Operation***

ADVANTAGE: Permits overnight operation without lab technicians present.

BENEFIT: Increased sample throughput with decreased direct labor costs.

FEATURE: ***In-line UV Digestion Eliminates Expenses Associated with Acid Distillation***

ADVANTAGE: Saves laboratories from purchasing distillation apparatuses and direct labor costs associated with cleaning glassware and performing distillations.

BENEFIT: Significantly reduces cost per analysis from approximately $4 – 8 range for Midi- or Micro-Distillation methods down to $0.50 per analysis.

FEATURE: ***In-line UV Digestion has the Highest Sample Throughput Rate***

ADVANTAGE: Eliminates the acid distillation sample-processing bottleneck.

BENEFIT: Runs 30 tests per hour (240 tests in 8 hours) versus 20 tests in 8 hours using a ten-place Midi-Distillation apparatus, or 168 tests in 8 hours using a 21-position Micro-Distillation apparatus.

FEATURE: ***Compact, Modular Design***

ADVANTAGE: Modular analyzer design occupies minimal bench space and supports easy addition of colorimetric chemistry methods for other analytes in 5 – 10 minutes. Examples of other tests that can be run on the same analyzer include EPA 335.4 – Total Cyanide; EPA 350.1 – Ammonia Nitrogen; EPA 353.2 – Nitrate plus Nitrite Nitrogen; and EPA 365.1 – Phosphorus.

BENEFIT: Using a single analyzer to perform cyanide analysis and other tests minimizes capital investment and reduces the payback period of the investment. At $25 per test, the instrument will be paid off in 1- 2 years running only 80 tests per month.

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