CNSolution™ Available Cyanide Analyzer Features, Advantages, & Benefits

FEATURE: ***Measures Available Cyanide by 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 Available Cyanide Analysis by U.S. EPA Method OIA-1677 and ASTM D6888-04***

ADVANTAGE: OIA-1677 is EPA–approved for Safe Drinking Water Act (SDWA) compliance monitoring of cyanide in drinking water and National Pollutant Discharge Elimination System (NPDES) compliance monitoring of available cyanide (equivalent to Cyanide Amenable to Chlorination [CATC] and Weak Acid Dissociable [WAD] cyanide).

BENEFIT: Provides data that drinking water and wastewater treatment facilities can use for regulatory compliance.

FEATURE: ***Quick and Simple Sample Pre-treatment Step***

ADVANTAGE: Samples are pre-treated with a ligand exchange reagent to liberate the cyanide ion (CN^-) prior to analysis.

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

FEATURE: ***Ligand Exchange, 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 available cyanide from 2 – 5,000 ppb.

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: ***OI Analytical Ligand-Exchange Reagents Support Automated, Unattended Operation***

ADVANTAGE: A simple pre-treatment as samples are placed in the autosampler permits overnight operation without lab technicians present.

BENEFIT: Increased sample throughput with decreased direct labor costs.

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.

FEATURE: ***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: ***Highest Sample Throughput Rate***

ADVANTAGE: A quick and simple ligand exchange pretreatment step eliminates the acid distillation sample-processing bottleneck.

BENEFIT: Runs 90 tests per hour (720 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-place Micro-Distillation apparatus.

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