

Chemical analysis has long been an integral component of complete water and sediment quality assessments. At GLEC we have the experienced staff, equipment, and resources necessary to conduct environmental chemistry evaluations, either in support of other programs or as stand-alone projects. GLEC has especially strong capabilities in sediment and tissue analysis. GLEC has completed numerous integrated surveys of large and small water bodies involving the collection and chemical analysis of water and effluent samples, biological tissues, and sediment samples for both organic and inorganic constituents. GLEC's chemistry lab is equipped to conduct low-level nutrient chemistry and a wide array of organic chemistry analyses. Stringent Quality Assurance/Quality Control (QA/QC) procedures are routinely applied and Good Laboratory Practices (GLP) are implemented when necessary. All laboratory practices follow written Standard Operating Procedures.

Inorganic/Nutrient Chemistry

•Phosphorus	<i>Method 365.1/A4500-P F</i>
•Chloride	<i>Method A4500-Cl- E</i>
•Nitrogen	
Total	<i>Method Valderrama/A4500-N C</i>
TKN	<i>Method 351.2</i>
NO ₃ ⁻ /NO ₂ ⁻	<i>Method A4500-NO₃⁻-H or 353.2</i>
NO ₃ ⁻	<i>Method A4500-NO₃⁻-H or 353.2</i>
NO ₂ ⁻	<i>Method A4500-NO₂⁻-B or 353.2</i>
Ammonia	<i>Method A4500-NH₃-D</i>
•Solids	<i>Methods A2540 B, C and D</i>
•Alkalinity	<i>Method A2320 B</i>
•Hardness	<i>Method A2340 C</i>
•Conductivity	<i>Method A2510 B</i>
•Dissolved Oxygen	<i>Method A4500-O G or C</i>
•BOD and UBOD	<i>Methods A5210 B and C</i>
•Ash Free Dry Weight	<i>Method A10300 D</i>
•Percent Solids	<i>Method A2540 G</i>
•Chlorophyll a	<i>Method A10200 H</i>

Organic Chemistry

- Total PCBs
- PAHs
- Organochlorine Pesticides
- Semi Volatile and Non Volatile Organics

Analytical Equipment

- Gas Chromatograph/Mass Spectral Detector (GC/MS)
- Gas Chromatograph/Electron Capture Detector (GC/ECD)
- High Performance Liquid Chromatograph (HPLC)
- Gel Permeation Chromatograph (GPC)
- Technicon Autoanalyzer
- Spectrophotometer
- Various Meters with Ion-Selective Electrodes



Capabilities

Methods Development, Refinement and Validation

Toxicant ID for Toxicity Reduction Evaluations

Site-Specific Criteria Development

Bioconcentratable Contaminant Assessments

Low-Level Chlorophyll a Monitoring

Organic Contaminant Investigations

Electronic Data Deliverables

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