



U.S. Geological Survey National Water Quality Laboratory

Capabilities Summary

USGS National Water Quality Laboratory
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NWQL USGS-visible web site:
<http://www.nwql.cr.usgs.gov/USGS>

The U.S. Geological Survey (USGS) National Water Quality Laboratory (NWQL) offers environmental analytical services, including inorganic, organic, and radiochemical constituents, and provides high-quality, reproducible data. The laboratory specializes in trace- and ultratrace-level analyses of water, sediment, and tissue, and the taxonomic identification and quantitation of benthic invertebrates. The NWQL also provides specialized services to its customers, including project planning, method development, customized projects, and data management.

Areas of Expertise

- Inorganic, organic, and radiochemistry
- Trace- and ultratrace-level detection
- Advanced environmental analytical methodologies (i.e. GC-MS/MS, ICP-MS, LC-MS/MS, ICP-MS/MS, Colorimetric, GC-MS)
- Different matrices (i.e. surface water, groundwater, wastewater treatment influent & effluent, sediment, tissue)
- Taxonomic identification and quantitation of benthic invertebrates
- Methods research and development (R&D)
- Methods scale-up for high capacity analytical support
- Quality-assured supplies for field sampling

Personnel

- Diverse staff of analytical and research scientists and technicians
- Expertise includes analytical chemistry, environmental biology and chemistry, information technology, supply and business administration

Facilities

- State-of-the-art, secure facility
- Sequestered area for chain-of-custody samples
- High-production capability
- High-efficiency-particle-arresting (HEPA) filtered air to remove air-borne contaminants

Laboratory Information Management System (LIMS)

- Customized LIMS manages workflow from receipt of samples through data release to customers and archival
- Sample-status page provides customers web-based access to sample status information, including preliminary results

Customer Service

- Online laboratory services catalog searchable by analyte, schedule, laboratory and parameter codes
- 1-866-ASK-NWQL or by email at LabHelp@usgs.gov

- Online sample status and tracking
- Coordination of contract laboratories for extended capabilities and analytical support

Full Service Analytical Support

- Analytical chemistry consulting
- Commercial contract laboratory capability

Commitment to Safety, Health, & Environmental Compliance

- Fully audited and compliant with Federal and State of Colorado regulations
- Metropolitan Wastewater Reclamation District discharge permit: recipient of Gold (2005-2008, 2011-2012) and Platinum performance awards (2009)
- Up-to-date inventory of all chemicals
- U.S. Department of Agriculture-approved and permitted to receive regulated soils
- Continuing effort toward green analytical chemistry, including minimizing energy usage, waste streams, and waste disposal costs

Quality Assurance & Quality Control External Accreditations

- National Environmental Laboratory Accreditation Program (NELAP)
- States of New York, Florida, Texas, North Carolina, and Connecticut for nonpotable constituents

Performance Testing, Audits, and Evaluations

- New York State Department of Health
- USGS Quality Systems Branch
- Environment Canada Federal Provincial Studies
- New York State Department of Health

Representation on Scientific Committees

- ASTM International
- National Environmental Methods Index
- Multi-Agency Radiological Laboratory Analytical Protocols
- Methods and Data Comparability Board