

Job Description



Job Title:	GC-C Isotope Technician
Department:	Environmental Isotope Laboratory
Reports To:	Lab Manager
Jobs Reporting:	None
Salary Grade:	USG 8
Effective Date:	August 2017

Primary Purpose

To support the Environmental Isotope Laboratory (EIL) by performing Compound Specific Isotope Analyses (CSIA) for carbon and hydrogen on a fee for service basis for both University and external researchers and international consulting companies. The EIL charges for these analyses to cover chemicals, equipment and salary costs related to the analyses. The incumbent will be an integral part of the team to provide sample analyses results in a timely manner to clients from around the world. Duties assigned will include the set up and operation of laboratory analytical equipment, conducting data analysis/reporting and interacting with students, co-workers and clients. In addition, time will be used for Research and development of procedures, experimental design and execution and method validation.

Under the supervision of Isotope Lab Manager, the incumbent is responsible for the operation and maintenance of the Thermo Delta XP Thermal Desorption/Purge & Trap-Gas Chromatograph-combustion-isotope ratio mass spectrometer (TD/PT-GC-C/P-IRMS), the IsoPrime MultiFlow/Thermal Desorption-Gas Chromatograph-combustion-isotope ratio mass spectrometer (MF/TD -GC-C-IRMS) and MAT 253.

Key Accountabilities

1.	Scheduling of samples by priority with direction from the Office Administrator and Lab Manager.
2.	Correction and reporting of results to the laboratory administrator and providing additional reports and expert support to clients as needed during the development of new methods and compounds as approved by the Lab Manager.
3.	Proactively maintaining the smooth operation of the EIL by providing assistance and knowledge to co-workers, post-docs, undergraduate and graduate students when trouble-shooting, problem solving or manipulating data.
4.	Responding to client(s) inquires/questions pertaining to various results/analyses performed in a timely manner.
5.	Provide the necessary training to Students to operate various instruments and provide appropriate supervision.
6.	Housekeeping in the work area and proper handling and removal of all chemical wastes produced, while observing all University safety standards.

Required Qualifications

Education

- Masters degree in Chemistry/Geochemistry

Experience

- General laboratory - 10 years, stable isotope mass spectrometry - 5 years.

Knowledge/Skills/Abilities

- Operation of the IsoPrime MF/TD-GC-C-IRMS, Thermo-Delta XP TD/PT-GC-C/P-IRMS and MAT 253 GB/TD/GC-C/HS-IRMS for the analysis of Carbon and Hydrogen isotopic composition of liquid and gas samples. The incumbent is responsible for the monitoring and maintaining of the above mass spectrometer systems.
- Sample preparation and analysis of dissolved organic and inorganic carbon in ground water.
- Well versed in sampling, preparation and introduction techniques such as purge and trap, SPME and thermal desorption in mass spectrometry and chromatography.
- Developing new methods and techniques, generating Technical Procedure (TP) documents.
- Validating current and newly developed methods.
- Familiarity with Good Laboratory Practice (GLP).

Nature and Scope

- **Contacts:** Graduate and undergrad students, Coworkers, Clients including research and full professors internal to UW as well as internationally, Clients from all areas of research and consulting as well as private citizens
- **Level of Responsibility:** Work organization and scheduling, performing assigned duties such as sample preparation, analysis and reporting with little direction
- **Decision-Making Authority:** Selecting the most appropriate procedure or technique for samples analysis and performing them including which instrument is best suited in order to complete assigned tasks and duties.
- **Physical and Sensory Demands:** Manual dexterity and strength is required to open/close samples storage bottle closures and chemicals. Must be able to stand for long periods while performing routine sample preparation and analysis. Attention to details while dealing with large quantities of samples and results.
- **Working Environment:** The incumbent is required to work in a lab environment which is at times cool due to equipment requirements or hot due to sample analysis procedures and may be noisy. Safety issues – hot materials, open flame, glass, intense light, pressurized gas cylinders, syringes/needles, handling poisonous/dangerous materials. Cleanliness - washing of glassware, must keep work areas free from contaminants.