

Professional Associate – Scientific
Chemist I Fellow
Division of Public Health

This is the most advanced level of professional chemistry work requiring an application and in-depth understanding of chemical methods, chemical theory and the principles of related sciences, to evaluate, develop, conduct and interpret the results of the most complex qualitative and quantitative chemical analyses on a wide variety of substances. Employees usually operate under very limited or no technical direction with broadly defined objectives and functions. Employees may often determine their own projects, priorities and deadlines and function as a technical expert or master in a specialty area. Employees evaluate, select, arrange, modify and develop complex laboratory equipment and elaborate instrumentation to implement the most complex testing operations.

Project Description:

This Chemist I position will assist in a project to implement microwave digestion of food products following FDA methods for the detection of lead and other heavy metals. This individual will perform complex ICP-MS analysis and will assist in the design and optimization of an effective digestion procedure that conforms with accepted methods. Considering the complexity of this testing and the expected independent sample digestion and analysis, the individual should have one years of related experience.

Management Preferences:

- Working knowledge of the state and federal laws and regulations pertinent to environmental testing.
- Ability to establish and maintain effective working relationships.
- Solid background in wet chemistry, and acid digestions.
- ICP-MS experience.
- Previous supervisory experience or proven leadership skills in a laboratory setting
- Ability to train lower-level chemists and technicians in performing complex procedures and techniques, and to prepare technical reports from analytical results obtained.
- Ability to express technical information clearly, both orally and in writing, when reporting results and explaining procedures to others.
- Ability to adapt and modify techniques to enhance accuracy, reliability, and timeliness.
- Ability to analyze results, interpret and evaluate methodologies, understand, and solve complex theoretical problems.
- Ability to perform advanced mathematics and statistical analysis to understand and follow moderately complex oral and written instructions, to perceive colors normally and to make olfactory distinctions.

Knowledge, Skills, and Abilities

- Experience reviewing laboratory data for quality assurance purposes including QC review, kit verifications, instrument comparisons, developing Standard Operating Procedures (SOPs) and verifications/validations.
- Experience using Microsoft computer applications, including a LIMS system.
- Two or more years of experience working with potentially infectious materials.
- Experience understanding and interpreting large data sets and reporting results.
- Experience with ICP or ICP-MS techniques.
- Thorough knowledge of theoretical principles of analytical chemistry and instrumental procedures.
- Knowledge of scientific methodology and of the hazards involved in laboratory procedures along with related safety practices.
- Ability to independently perform and record standardized, non-standardized and fairly complex laboratory tests and procedures with a high degree of precision and accuracy.
- Ability to understand and perform basic mathematical calculations, problem solve and troubleshoot problems with a method of analysis and communicate method and procedures to others.
- Ability to understand and solve simple theoretical problems, and to provide work direction and instruction to other technicians concerning a variety of chemical procedures.

Minimum Education and Experience

Bachelor's degree in chemistry from an appropriately accredited institution