**SUMMARY**

I have spent eighteen years of my career in the field of analytical chemistry, evaluating samples by radiochemistry, wet chemistry, microbiology, ion chromatography, atomic emission and mass spectrometry. I am highly competent in the safe handling and analysis of nuclear and biological materials, data entry in LIMS, procedure authoring, research, and troubleshooting of unknown conditions.

**EDUCATION**

Bachelor of Science, University of Florida, Major: Microbiology and Cytology

Central Florida Regional Microbiology Conference, Debary, FL

FSEA Regional Environmental Analyst Conference, Clearwater, FL

## EXPERIENCE

**Nuclear Analytical Chemist**, Oak Ridge National Laboratory, Oak Ridge, TN

January 2020 to Present

* Lead ion chromatography chemist, led procurement and installation of new IC system, analyzed HPIC samples using both a Dionex ICS-5000+ and Thermo Fisher Integrion.
* Spearheading addition of ICP-OES analysis to suite of lab methods, ordering iCAP Pro Duo XP and coordinating modification of infrastructure to accommodate installation, will be the OES technical lead once installation is finished.
* One of two chemists in the department certified to analyze and report client sample results via ICP-MS
* Analysis via ICP-MS, HPIC, radiochemistry, titration, and colorimetry of high level nuclear materials for process yields and impurities
* Authored standard operating procedures for HPIC and ICP-MS as well as research Co-authoring
* Chemical separation of nuclear products using Eichrom columns
* Remote titration, dilution, reflux, and transfer of samples in hot cells via manipulator arms
* Subject matter lead for hot and cold titrations
* Perform radiochemical analysis via alpha spectrometry, gamma spectrometry, liquid scintillation, and gross neutron counting
* Maintain a Department of Energy L clearance for unescorted access to special nuclear materials
* Presenting research into new hot cell dissolution titration technique at 65th annual RRMC conference in Atlanta, GA.

 **Laboratory Analyst**, Galbraith Laboratories, Knoxville, TN

 July 2018 to January 2020

* GMP/GLP Production analysis
* ICP-OES via Perkin-Elmer 4300 DV, 5300 DV and Avio 500
* Maintained/Calibrated/Troubleshooted Matrix interferences.
* Flame Atomic Absorption analysis on Perkin-Elmer AAnalyst 400
* Trained on sample preparation for associated methods

**Microbiologist**, Environmental Laboratory Services, Orlando, FL

November 2005 to June 2018

* Worked as both a chemical analyst and microbiology section supervisor.
* Microbiology QA/QC, including writing EPA compliant SOPs,
* Media preparation, microscopic sample assay and procedural documentation.
* Subject matter expert for vendor technicians and clients.
* Emergency maintenance.
* Significant experience with troubleshooting laboratory equipment.
* Performed analysis using continuous flow analyzers, spectrophotometers, microscopes, pH meters, conductivity meters, Phoenix TOC analyzer, turbidimeters, CBOD autoEasy, and many other instruments and techniques

**Experienced with the following Methods and Analyses:**

|  |  |  |  |
| --- | --- | --- | --- |
| Total Kjeldal Nitrogen | Total and Low Level Phosphorus  | ICP-OES | Flame AA |
| Ammonia | Oil&Grease | ICP-MS | Sulfate |
| STOC | CBOD/BOD | Alkalinity | pH |
| Chlorides | Conductivity | Residual Chlorine | Turbidity |
| Color | Total Solids | Orthophosphorus | MPN |
| Volatile Solids | Nitrate/Nitrite | Fecal Coliforms | E. coli (EPA1603) |
| Bactericidal Ratio | Inhibitory Ratio | Cyanides | Ion Chromatography  |
| Liquid Scintillation | Gamma Spectrometry | Enteropluri test | Student t-test |
| Microscopic assay of protozoans | Alpha Spectrometry | Heterotrophic Plate Count | Total Dissolved Solids |
| Fecal confirmations using multi-tube fermentation | In-house media preparation  | Total Soluble Solids | Volatile Organic acid distillation |

**Career Highlights**

* 17 years of experience in Analytical Chemistry
* Over 3 years experience working closely with highly irradiated materials
* Member of the American Chemical Society
* Experience in metals and nuclear analysis using HPIC, ICP-OES, ICP-MS and Flame AA
* Eleven years supervising microbiology section
* One year of experience in graduate level microbial genetics laboratory.
* Trained and compliant with all requirements for GMP, GLP, EPA, USP, and FCC regulated analysis.
* Proficient with technical Writing and professional correspondence.
* Extensive knowledge in general computer troubleshooting, software, instrumentation, and equipment installation.
* L level clearance through the Department of Energy