

Tennessee Department of Agriculture

Technical Services Laboratory – Chemistry Internship

The Tennessee Department of Agriculture, Technical Services Laboratory is seeking a graduate level intern for the Summer of 2023 (May 20, 2024 – August 09, 2024). The chosen candidate will receive hands-on experience in an ISO/IEC 17025:2017 accredited laboratory. Customers for the laboratory include the department's Ag Inputs, Plant Certification, Food Safety, Cannabis and Pesticide regulatory programs, offering a unique opportunity to learn about and assist with a wide range of regulatory sampling and analysis.

Location:

Ellington Agricultural Center
Porter Building
436 Hogan Road, Nashville TN 37220

Major Duties:

Sample Receipt and Preparation:

- All laboratory samples are tracked using the laboratory information management system (LIMS). The chosen candidate will evaluate the condition of samples upon arrival and assist with the accessioning process.
- Prior to instrumental analysis, all samples must be comminuted, digested with acid, or otherwise prepared. The chosen candidate may operate grinding mills, microwave digestion systems, automated extractors, or similar equipment.

Instrumental Analysis:

- The chosen candidate will receive hands-on training on one or more modern analytical instruments. Following the training period, the chosen candidate must demonstrate proficiency under direct supervision prior to independent instrument usage.
- Several instrumental techniques may be assigned depending on the laboratory experience level of the selected candidate. Those include, but are not limited to, combustion, LC-MS/MS, ICP-OES, and ICP-MS.
- Highly experienced candidates may be trained on high resolution GC and LC mass spectrometers.

Quality Assurance:

- The regulatory nature of the laboratory's activities requires a robust quality management system. The selected candidate must adhere to all elements of the quality system and may assist with the assembly of analytical data packages.
- At the conclusion of the internship, the chosen candidate will have completed a small-scale method development or matrix extension project. This work product will take the form of a draft standard operating procedure and validation package.

Other duties may be assigned as needed.

Education:

- Undergraduate degree in the physical or life sciences
- Currently enrolled full-time in an advanced degree program Analytical Chemistry or a closely related field in the physical or life sciences.

Essential Knowledge and Required Skills:

- Knowledge of chemistry and physics
- Critical thinking
- Problem solving
- Mathematical reasoning
- Laboratory safety, etiquette, and ethics
- Quick technical learner
- Drive for results

Comments:

- This is a paid internship.
- All participants in the Tennessee Department of Agriculture's Internship program are required to create a presentation to executive staff detailing their experience with the internship. This presentation shall be given to executive leadership at the end of the internship term.
- For more information on the Department of Agriculture, Technical Services Laboratory please visit [Technical Services Laboratory \(tn.gov\)](http://TechnicalServicesLaboratory.tn.gov)

Working Conditions:

- The primary job assignment will be in an analytical laboratory, requiring adherence to institutional chemical hygiene and biosafety practices. Personal protective equipment is provided and must be worn as instructed to address the risks inherent to a laboratory environment.
- There is the possibility of some travel (shadowing regulatory inspectors) along with the opportunity to work remotely on an infrequent basis.
- This internship is designed to fit within the current CDC and State of Tennessee Covid-19 guidelines.

How to Apply:

To apply for this internship opportunity, please send the following documents to jamyefreeman@tn.gov :

- Resume
- Letter of intent
- Most recent transcript
- 2 professional letters of recommendations
- DD214 (Veteran Candidates only)

ALL APPLICATIONS MUST BE SUBMITTED BY Friday, April 26, 2024

Other Information:

- The State of Tennessee and the Tennessee Department of Agriculture is an Equal Opportunity Employer. Pursuant to the State of Tennessee's Workplace Discrimination and Harassment policy. The State is firmly committed to the principle of fair and equal employment opportunities for its citizens and strives to protect the rights and opportunities of all people to seek, obtain, and hold employment without being subjected to illegal discrimination and harassment in the workplace. It is the State's policy to provide an environment free of discrimination and harassment of an individual because of that person's race, color, national origin, age (40 and over), sex, pregnancy, religion, creed, disability, veterans status, or any other category protected by state of and/or federal civil rights laws.