



**State Hygienic Laboratory  
Environmental Health Division  
Environmental Laboratory Scientist**

University Classification: **Environmental Laboratory Scientist**

Job Code: **PHB4** Pay Level: **6A**

Position #: **00148087** Org/Dept/Sub-dept #: **90-9060**

Position Reports to: **Dustin May** **00016628**

Name Position #

**Position Specific Summary:**

This Professional and Scientific position will be filled as either an Environmental Laboratory Specialist (PHB2-4A) or Environmental Laboratory Scientist (PHB4-6A) based on candidate qualifications of the successful candidate. Please indicate in your cover letter the position you wish to be considered for, or indicate both.

The State Hygienic Laboratory is seeking an experienced chemist to fill the Environmental Lab Specialist, or Environmental Lab Scientist position for the Chemical Threat, Environmental Testing, and Food Testing Programs. This position will perform analysis samples for chemical threat agents and contaminants in a wide variety of matrices. This position will be responsible for sample preparation, sample analysis, data processing and reporting of results from a variety of forms, including clinical, environmental, and food matrices. This position will be responsible for operating and maintaining instruments, including LC-MS/MS, HPLC, GC-MS and associated equipment to ensure prompt analytical response and minimal turnaround times back to external partners and customers. Additional duties include method development and outreach/training to first responder organizations.

**Location:** Coralville, IA

**Schedule:** Normal working hours are 8am to 5pm, Monday through Friday. However, this position must be willing to be available to respond to emergency response analyses at potentially unconventional business hours or on the weekend in emergency situations.

**Modality:** In-Person, on-site.

**Key Areas of Responsibilities and Specific Job Tasks**

Classification Key Areas of Responsibility	Specific Job Duties and Tasks
<b>Sample/Specimen Preparation and Analysis</b>	<ul style="list-style-type: none"> <li>• Must be able to extractions of clinical samples, controlled substances, and other samples for the detection of various chemicals, including pesticides, toxins, and metabolites.</li> <li>• Must be able to handle forensic evidence and handle chemical threat and hazardous materials safely using established chain of custody protocols.</li> <li>• Should routinely seek out new and better ways to analyze samples for all-hazards threats in environmental matrices, food, and clinical specimens</li> <li>• Training will be provided onsite or offsite for analyses, if needed, including training at the Centers for Disease Control and Prevention if accommodations can be arranged.</li> </ul>
<b>Instrumentation and Technology</b>	<ul style="list-style-type: none"> <li>• Perform daily operation and direct routine maintenance, training, troubleshooting and calibration of laboratory instruments and equipment.</li> <li>• Hands-on training at instrument vendors (e.g. Sciex and Agilent) may be provided if funds are available.</li> <li>• Coordinating with service engineers to ensure that instrumentation is kept in ready status.</li> <li>• Must be familiar with and be able to learn new data acquisition systems. Must understand and demonstrate analytical proficiency with the use of liquid and gas chromatography, mass spectrometry (both single and tandem quadrupole).</li> <li>• Must understand data acquisition; the use, and installation, of software needed to allow instrumentation to operate normally.</li> <li>• Must be able to troubleshoot, diagnose and repair problems with non-functioning</li> </ul>

	<ul style="list-style-type: none"> <li>• instrumentation.</li> </ul>
<b>Data Analysis, Reporting and Documentation</b>	<ul style="list-style-type: none"> <li>• Document and review routine data analysis, procedures, and results.</li> <li>• Release routine data and reports after review of results and analysis of quality control.</li> <li>• Must be familiar with, and be able to learn new, data analysis systems - including SHL's OpenELIS LIMS.</li> <li>• Assist in writing new and annual review of existing standard operating procedures.</li> <li>• May prepare documentation and plans for test validation reports.</li> </ul>
<b>Quality Control, Quality Assurance and Quality Systems</b>	<ul style="list-style-type: none"> <li>• Perform, review, trend and report quality control data and assure quality assurance procedures are in accordance with established policies.</li> <li>• Identify and implement corrective and process improvement actions.</li> <li>• Document and review data analysis, procedures, and results.</li> <li>• Release data and reports after review of results and analysis of quality control.</li> </ul>
<b>Outreach and Communication</b>	<ul style="list-style-type: none"> <li>• Engage in routine interaction with the LRN-C, FSIS FERN, and state/local emergency response agencies.</li> <li>• Position requires travel for training in chemical threat fields.</li> <li>• Must attend and provide technical assistance for State of Iowa Hazardous Materials teams.</li> <li>• Explain test results to clients and regulators and recommend further testing when indicated.</li> <li>• Work with Food Emergency Response Network</li> </ul>
<b>Compliance/Administration</b>	<ul style="list-style-type: none"> <li>• Adhere to rules, regulations and standards necessary to maintain compliance with regulatory agencies.</li> </ul>
<b>Leadership</b>	<ul style="list-style-type: none"> <li>• Act as lead for SHL's Food Chemistry program, coordinating with analysts and manager to ensure contract deliverables are met.</li> <li>• Provide direction, assignments, feedback, coaching and counseling to assure outcomes are achieved.</li> <li>• Will work with laboratory analysts to ensure program samples are received, processed, and reported in a timely manner.</li> <li>• Will coordinate with laboratory analysts to ensure all program documentation for CLIA is completed properly and provided to the program coordinator as needed.</li> </ul>
<b>Human Resources</b>	<ul style="list-style-type: none"> <li>• Provide input on HR activities such as recruitment and promotion.</li> </ul>
<b>Financial Responsibility</b>	<ul style="list-style-type: none"> <li>• Initiate purchasing requests for supplies, equipment, etc.</li> <li>• Assist supervisor in estimating an accurate budget by providing feedback on projected needs of the program, particularly in regard to service contracts for high-priority analytical instrumentation.</li> </ul>

## Universal Competencies

<b>Collaboration/Positive Impact</b> (Expert/Leader)	<ul style="list-style-type: none"> <li>• Creates and champions initiatives that foster respectful communication, learning and a spirit of cooperation.</li> <li>• Regularly shares information and effectively influences to gain common commitment in achieving objectives.</li> <li>• Shapes unit/department, college/division, or university governance so as to reinforce collaboration, accountability, and responsibility.</li> <li>• Promotes a climate that recognizes, celebrates, and rewards collaboration.</li> <li>• Works to create a climate that values and rewards initiative, excellence, continual learning, and achievement of results.</li> <li>• Deals effectively with ambiguity and change; coaches others in behaviors and prepares others through development for ongoing effectiveness.</li> </ul>
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<p><b>Service Excellence/Customer Focus</b> (Expert/Leader)</p>	<ul style="list-style-type: none"> <li>Effectively uses a broad range of methods in communicating complex ideas to diverse populations.</li> <li>Monitors profession/field/discipline for trends and implements innovative solutions to enhance service.</li> <li>Builds successful track record of superior personal and organizational service delivery in diverse environments.</li> <li>Promotes excellence achieved through reports or other media for distribution to internal and/or external constituents and the professional community.</li> </ul>
<p><b>Welcoming and Respectful Environment</b> (Extensive)</p>	<ul style="list-style-type: none"> <li>Promotes a workplace environment where people of all backgrounds and perspectives feel welcomed and appreciated, where every individual is empowered to make a positive impact, and in which workplace concerns are addressed effectively.</li> <li>Identifies unit policies and practices that could have a disparate impact based on protected classifications as defined by federal and/or state law.</li> <li>Recommends policies and practices to advance a welcoming and respectful workplace environment as described above.</li> <li>Forms respectful relationships with individuals and organizations representing various constituencies, and seeks regular input to better understand potential issues and to enhance recruitment and retention efforts.</li> <li>Supports implementation of unit strategic plans related to a welcoming and respectful workplace environment.</li> <li>Engages in on-going self-reflection and continues to advance one's own knowledge and skills related to fostering a welcoming and respectful workplace environment.</li> <li>Recognizes and addresses disrespectful or non-welcoming behavior in one's unit/department.</li> </ul>

### Technical Competencies

<p><b>Interpersonal Relationships</b> (Expert/Leader)</p>	<ul style="list-style-type: none"> <li>Encourages others to build partnerships with other functions or departments.</li> <li>Coaches others in developing and maintaining cooperative and satisfying relationships.</li> <li>Sets the tone for interacting with other business functions or units.</li> <li>Creates initiatives that foster communication, directness and spirit of cooperation.</li> <li>Intervenes with highly difficult people and situations.</li> <li>Arbitrates difficult situations with high stakes.</li> </ul>
<p><b>Laboratory Equipment Operation</b> (Expert/Leader)</p>	<ul style="list-style-type: none"> <li>Designs laboratory equipment to better conduct quantitative and qualitative analyses.</li> <li>Contributes to laboratory equipment performance improvement standards.</li> <li>Leads in developing strategies for safe, reliable, and effective laboratory equipment operation.</li> <li>Constructs improved policies and procedures for near-miss reporting.</li> <li>Prepares reports that champion the value and use of more effective laboratory equipment to financial decision-makers.</li> <li>Monitors laboratory equipment trends and developments in diverse environments.</li> </ul>
<p><b>Laboratory Practice Quality Assurance (LPQA)</b> (Expert/Leader)</p>	<ul style="list-style-type: none"> <li>Designs LPQA processes in line with laboratory practice strategies.</li> <li>Champions the use of new technologies to improve the quality of lab practices and reduce organizational costs.</li> <li>Establishes industry norms, standards and guidelines for LPQA.</li> <li>Discusses future developments in LPQA qualification protocols, assessment and specifications.</li> </ul>

	<ul style="list-style-type: none"> <li>• Stays abreast of LPQA trends and makes recommendations to the organization accordingly.</li> <li>• Develops a theoretical understanding of LPQA and mentors on issues and considerations.</li> </ul>
<b>Laboratory Results Analysis and Reporting</b> (Working)	<ul style="list-style-type: none"> <li>• Makes a systematic comparison of actual test results against expected results.</li> <li>• Analyzes the accuracy of laboratory data and test results; assesses common problems and/or errors that can occur.</li> <li>• Detects and summarizes test results and findings by producing reports.</li> <li>• Interprets and explains results of data and test results.</li> <li>• Reviews the results to ensure the quality and accuracy of data gathering and analysis.</li> </ul>
<b>Laboratory Testing</b> (Expert/Leader)	<ul style="list-style-type: none"> <li>• Designs standard procedures to ensure the accuracy and timeliness of laboratory testing.</li> <li>• Advocates the design of advanced equipment and methodologies for laboratory testing.</li> <li>• Elaborates on prior experiences with legal and safety issues for effective laboratory testing.</li> <li>• Leads in the establishment of best practices for laboratory testing.</li> <li>• Monitors industry trends and direction for laboratory testing.</li> <li>• Generalizes on past and future innovations of laboratory testing.</li> </ul>
<b>Effective Communications</b> (Extensive)	<ul style="list-style-type: none"> <li>• Communicates well downward, upward, and outward.</li> <li>• Employs appropriate methods of persuasion when soliciting agreement.</li> <li>• Maintains focus on the topic at hand.</li> <li>• Adapts documents and presentations for the intended audience.</li> <li>• Reviews others' writing or presentations and provides feedback and coaching.</li> <li>• Demonstrates both empathy and assertiveness when communicating a need or defending a position.</li> </ul>
<b>Decision Making and Critical Thinking</b> (Expert/Leader)	<ul style="list-style-type: none"> <li>• Analyzes and discusses alternatives with multiple stakeholders.</li> <li>• Discusses optimal timing and circumstances for either refraining from or making a decision.</li> <li>• Coaches others in decision-making models, processes, and practices.</li> <li>• Differentiates between content and context of a decision.</li> <li>• Focuses on special issues and considerations for effective decision-making during a crisis.</li> <li>• Monitors industry for examples/models of critical thinking or decision-making.</li> </ul>
<b>Sample Management</b> (Expert/Leader)	<ul style="list-style-type: none"> <li>• Elaborates on the applications and domains of sample collection to innovate better approaches.</li> <li>• Foresees changes in legal requirements and their implications for sample transport.</li> <li>• Establishes a sample handling system that can support a wide range of laboratory tests.</li> <li>• Develops a sample referral tracking system to improve the efficiency of the referral process.</li> <li>• Directly influences sample maintenance and disposal policies in the industry.</li> <li>• Develops a theoretical background and understanding of the mechanisms for sample management.</li> </ul>

This description is intended to indicate the kinds of tasks and levels of work difficulty that will be required of positions that will be given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of any supervisor to assign, direct, and control the work of employees under his or her supervision. The use of a particular expression or illustration describing duties shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.

As part of performing the key areas of responsibility and competencies described above, staff members are expected to meet reasonable standards of work quality and quantity, as well as expectations for attendance established by their supervisor. Staff members are also expected to comply with policies governing employee responsibilities and conduct, including those contained in the [University Policy Manual](#).

**Proficiency levels are defined as:**

**Basic Application** - Uses basic understanding of the field to perform job duties; may need some guidance on job duties; applies learning to recommend options to address unusual situations.

**Working Experience** - Successfully completes diverse tasks of the job; applies and enhances knowledge and skill in both usual and unusual issues; needs minimal guidance in addressing unusual situations.

**Extensive Experience** - Performs without assistance; recognized as a resource to others; able to translate complex nuances to others; able to improve processes; focus on broad issues.

**Expert/Leader** - Seen as an expert and/or leader; guides, troubleshoots; has strategic focus; applies knowledge and skill across or in leading multiple projects/orgs; demonstrates knowledge of trends in field; leads in developing new processes.

**Position Qualifications**

Education or Equivalency Required	A Master's degree in chemistry, or closely related field, or an equivalent combination of education and experience is required.
Required Qualification	<ul style="list-style-type: none"> <li>● Extensive direct experience (typically 5 years) in appropriate laboratory techniques is required, including extensive knowledge of analytical instrumentation and method development/validation.</li> <li>● Considerable experience with specific instrumentation including LC-MS/MS and GC-MS.</li> <li>● Demonstrates effective communication, using varied tools and techniques to transmit, receive, and interpret information, both written and verbally.</li> <li>● Extensive proficiency with Windows based systems, computer and digital operations.</li> <li>● Extensive critical thinking skills.</li> <li>● Demonstrate the ability to work with a variety of individuals and groups in a constructive and civil manner and utilize existing resources and learning to achieve or exceed desired outcomes of current and future organizational goals and needs.</li> <li>● Possession of a valid state or commercial driver's license, and the ability to meet University Fleet Safety Standards.</li> </ul>
Highly Desirable Qualification	<ul style="list-style-type: none"> <li>● PhD in chemistry with extensive knowledge of analytical instrumentation and method development/validation.</li> <li>● Previous work in or understanding of CLIA accredited labs and regulations.</li> <li>● Identification of unknown chemical samples.</li> <li>● Clinical laboratory analysis - working with urine and blood borne pathogens.</li> <li>● Method validation and/or method verification.</li> <li>● Knowledge of- and work with forensic sample handling procedures.</li> <li>● Demonstrates working knowledge and experience with Laboratory Information Systems (LIMS).</li> <li>● Work with first responders and other emergency response organizations.</li> <li>● Knowledge of CBRNe threats with an emphasis on Chemical Agents of Opportunity for Terrorism.</li> <li>● Previous experience analyzing food for chemical contaminants.</li> </ul>
Desirable Qualification	<ul style="list-style-type: none"> <li>● Previous training and work with potentially infectious materials and hazardous materials is desirable.</li> </ul>

See requisition # 24004908 at <https://jobs.uiowa.edu>  
Applicable background checks will be conducted.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy (including childbirth and related conditions), disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, or associational preferences. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact the Senior Director, [Office of Civil Rights Compliance](#), the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, [daod-ocrc@uiowa.edu](mailto:daod-ocrc@uiowa.edu).