City of Rapid City
Job Description

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<thead>
<tr>
<th>Job Title</th>
<th>Forensic Chemist I and II</th>
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<tr>
<td>Job Code:</td>
<td>FXCH,</td>
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<td>Job Family:</td>
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<tr>
<td>Pay Grade:</td>
<td>NU19, NU22</td>
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<td>Date Revised:</td>
<td>1/20/2021</td>
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<td>FLSA Status:</td>
<td>Exempt</td>
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**General Summary:** This position is responsible for performing a variety of highly specialized and complex laboratory analyses of physical and biological evidence for the Evidence Lab that focuses on the testing of blood alcohol samples and controlled substances. This role interprets test results, forms appropriate opinions and/or conclusions, prepares reports, and provides expert witness testimony.

**Essential Duties and Responsibilities:**

The intent of this job description is to provide a representative summary of the major duties and responsibilities performed by incumbents of this job. Incumbents may be requested to perform job-related tasks other than those specifically presented in this description.

**Level I:**

- Performs qualitative and quantitative testing on evidentiary items with analytical instrumentation and techniques that includes but is not limited to Headspace-Gas Chromatography (HSGC), Gas Chromatography-Mass Spectrometry (GCMS), and UV-Visible spectroscopy (UV-vis).
- Performs basic maintenance on all analytical instrumentation.
- Operates standard laboratory equipment including (but not limited to) analytical pipettes, balances, and auto dilutors.
- Performs technical reviews on data packets prepared by other Forensic Chemists.
- Performs all tests according to established Standard Operating Procedures, including all necessary quality control.
- Updates as necessary quality control charts and uncertainty calculations.
- Interprets test results, forms conclusions and prepares reports according to established procedures. Interact with law enforcement personnel, attorneys, and others to provide information or consultation about test results and other relative scientific topics.
- Testifies as an expert witness with respect to the qualitative and quantitative instrumental analysis of evidentiary samples including controlled substances and blood alcohol samples.

**Level II:**

- All essential duties listed under Level I.
- Helps to develop and then implements and oversees laboratory quality control and quality assurance programs in forensic analyses to ensure accuracy of results.
- Ensures all necessary equipment maintenance is performed on the analytical instrumentation and updating all necessary equipment maintenance logs and procedures.
- Ensures adequate supplies for testing are on hand at all times; this includes updating the chemical inventory.
- Directs or participates in the development of new laboratory methods; make changes which impact existing guidelines or laboratory policies, and may serve as a lead worker over other laboratory staff.
- Takes on additional laboratory responsibilities such as Safety Officer or Quality Manager when needed.
- Assists the Laboratory director in ensuring all ANAB accreditation requirements are being met and participating in inspections/audits.
- Provides testimony on ethanol pharmacokinetics/extrapolations with respect to blood alcohol testing.
• Trains new Forensic Chemists to competency.
• Provides training to outside agencies, including local States Attorney Offices, Grand Juries, and other local law enforcement agencies.
• Speaks to public organizations on Forensic Chemistry, evidence or other forensic related topics.

This position requires flexibility to work limited occasional evening and weekend hours, and may require limited out of town travel for providing testimony and/or attending training seminars, conferences or department business. This role includes a variety of responsibilities and requires a high degree of sensitivity with confidential matters, including forensic evidence.

Qualifications:

Education and/or Experience:

Level I:

Bachelors, Master’s, or Ph.D. degree in Chemistry or a closely related field with specific course work in analytical and instrumental chemistry or a relevant combination of education and experience deemed acceptable by the hiring authority.

Level II: Must meet Level I requirements and

2-5 years’ experience working in an accredited forensic testing laboratory doing HSGC testing of BAC samples, or GCMS testing of controlled substances. Must be able to demonstrate an expert understanding of analytical chemistry, quality assurance and control, and should have testimony experience. Experience in other accredited non-forensic testing laboratories will also be considered.

Preferred experience for both levels: Experience in Headspace Gas Chromatography as well as an understanding of pharmacokinetics of ethanol as it relates to BAC extrapolations, experience as an expert witness with respect to blood alcohol analysis and ethanol extrapolations, or experience in the use of analytical instrumentation, including Gas Chromatography Mass Spectrometry, in the identification of unknown drug samples, and experience as an expert witness with respect to unknown drug analysis.

Certificates, Licenses, Registrations:

Must possess a valid driver’s license or ability to obtain within 30 days from date of hire.

Working Conditions:

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly exposed to fumes or airborne particles. The employee is frequently exposed to toxic or caustic chemicals. The employee is occasionally exposed to moving mechanical parts; outside weather conditions; risk of electrical shock and explosives. The noise level in the work environment is usually moderate.
Physical Demands:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, or feel and talk or hear. The employee is frequently required to stand for long periods and walk. The employee is routinely required to sit and reach with hands. The employee must occasionally lift and/or move up to 50 pounds.