

FORENSIC CHEMIST

POSITION DESCRIPTION

Classification Responsibilities: A Forensic Chemist is responsible for applying the physical sciences to the investigation of crimes by learning to perform laboratory examinations of physical evidence submitted to the Police Department Forensic Services Section. An employee in this class receives extensive training under direct supervision. This training may include how to utilize chemical, microscopic, chromatographic and comparative techniques and instrumentation to examine, identify and evaluate physical evidence which may include: hair, fibers, fabrics, firearms, bullets, cartridge cases, suspected drug-containing substances, fire debris, paint, glass, soil, blood, urine, other biological substances, and crime scene processing. An incumbent may perform serological examinations in order to identify bloodstains according to origin; compare silicone casts and photographs of impressions and marks from shoes, tires, instruments, and other objects; interpret comparative data from highly technical DNA examinations to determine the source of submitted specimens; review GC/MS data to identify various substances; perform immunoassay techniques for screening of blood or urine samples for presence of drugs; or enter data into the Combined DNA Index System (CODIS) or the National Integrated Ballistics Information Network (NIBIN). A Forensic Chemist prepares technical reports, prepares findings for court presentation, and testifies concerning scientific facts. Duties also include meeting with officers, City prosecutors, attorneys, and the County Attorney's Office to discuss laboratory test results. This class performs related duties as required.

Distinguishing Features: This is a professional entry-level class. A Forensic Chemist is distinguished from the Criminalist class by the latter's competence/expertise in more areas of criminalistics and recognition as an expert witness in court. All work is performed in accordance with established departmental policies and procedures, federal/state guidelines, and accreditation standards. Employees in this class work with chemicals and other hazardous materials. As training progresses, incumbents are expected to exercise independence and good judgment. A Forensic Chemist may progress by noncompetitive promotion to the classification of Criminalist after successful completion of all requirements stipulated in the criteria-based promotion plan, which include four years of criminalistics experience. This class is supervised by a Supervisory Criminalist who reviews work in progress and through reports, meetings, and results achieved. This class is FLSA exempt-professional.

QUALIFICATIONS

Education and Experience: Requires a Bachelor's Degree from an accredited college or university in biology/biochemistry, chemistry, forensic science, or a closely related physical or natural science. Experience as a Criminalist in a recognized laboratory actively engaged in the forensic sciences and testifying in court as an expert witness is desirable. Experience as a Criminalist in an ASCLD/LAB accredited laboratory actively engaged in the forensic sciences and testifying in court as an expert witness is desirable. In addition, the following disciplines have specific minimum educational requirements: **Blood Alcohol/ Toxicology:** 24 semester hours of chemistry is required, and **DNA:** College course work covering biochemistry, genetics, and molecular biology (molecular genetics, recombinant DNA technology) is required.

The following is preferred: **Controlled Substances:** 24 semester hours of chemistry is preferred.

Special Requirements: Because of the confidential, sensitive nature of information handled, successful

completion of a background investigation and polygraph examination is required. Must possess a valid Arizona Driver's License by hire date.

ESSENTIAL FUNCTIONS

Communication: Communicates with supervisors, sworn personnel, other City employees, attorneys, and the general public in order to answer citizen's inquiries, assist with the evaluation of evidence for the investigation of crimes, and prepare for court. Receives instructions and on-the-job training from other Forensic Services Section personnel. Communicates with other experts in the field to exchange information on the analyses of evidence. Consults and coordinates with latent print examiners, police officers, attorneys, private experts, and others on plans for the solution of problems involving the analysis, comparison, and identification of physical evidence. Prepares scientific examination reports with clearly organized thoughts using scientific nomenclature, proper sentence structure, punctuation, and grammar in order to present laboratory examination results.

Manual/Physical: Inspects and evaluates equipment, objects, information, and work-related conditions to determine compliance with prescribed operating and safety standards, regulations, and guidelines including manufacturer's specifications on computerized scientific equipment. Distinguishes colors to determine results of drug test/analyses. Uses common hand tools such as a screwdriver and various maintenance tools to maintain, set up, and clean laboratory instruments. Enters data into a personal or laboratory computer in order to analyze various items of evidence. Operates a motor vehicle requiring a valid Arizona Driver's License in order to assist other Forensic Chemists, Criminalists, or Senior Criminalists in conducting investigations at crime scenes and other pertinent locations to search for, collect, and preserve evidence for laboratory analysis and reconstruct situations and physical evidence of a crime. Prepares graphs resulting from scientific examinations. Works with chemicals using specialized non-routine, protective equipment to perform laboratory analyses.

Mental: Conducts research and analyzes data to perform scientific examinations. Performs mathematical and statistical computations in order to complete scientific examinations. Interprets graphs, charts, and mathematical formulas to check scientific reports. Comprehends and makes inferences from written material such as scientific literature and laboratory reference files to acquire expertise in the criminalistics field. Learns job-related material through on-the-job training and in a classroom setting regarding forensic laboratory techniques.

Knowledge/Skill/Abilities:

Knowledge of:

the principles, methods, materials, equipment and techniques of criminalistics;
the principles of chemistry, physics, biology, physiology, botany, and mathematics/statistics as related to criminalistics;
recent developments, current literature and sources of information in the field of criminalistics;
state and federal statutes and case law covering contraband, drugs and the use of physical evidence in court, criminal procedures concerning time limits, discovery evidence and expert witnesses; and
crime scenes procedures.

Skill in the use of forensic laboratory equipment.

Ability to:

carefully follow verbal and written instructions;
perform assigned tasks according to prescribed procedures;
make accurate observations and records of test results;
readily learn and apply the various methods and techniques involved in the scientific analysis of evidence;
withstand cross-examination in court; and
establish and maintain effective working relationships with department personnel and outside agencies.

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EEO-Prof

NIDA-None

RESP-None

PAY RANGE: 44

SH-08

CDL-None