

**FORENSIC SCIENCE TECHNICIAN (CSS)
CS-401-09**

INTRODUCTION

This position is located in the Department of Forensic Sciences (DFS). The mission of the DFS is to provide high-quality, timely, accurate, and reliable forensic science services using best practices and best available technology, focusing on unbiased science and transparency, to enhance public safety and health.

The technician position is responsible for assisting with technical laboratory work, which includes aspects of casework, accreditation, quality assurance and control programs within the Crime Scene Sciences Division (CSS).

MAJOR DUTIES

As a technician, performs a variety of operations in various settings, e.g., basic testing and troubleshooting for casework, and accreditation; responds to requests from the various Crime Scene Sciences Units to support quality assurance and quality control programs; prepares and maintains detailed records in accordance with laboratory, accreditation and statutory requirements; assists with audit preparation and administration; demonstrates continuous efforts to improve operations; and works cooperatively and jointly to provide seamless customer service.

Applies non-routine or specialized and challenging procedures as instructed, and takes corrective action; accepts and resolves referrals of abnormal or unusual cases; establishes and monitors quality control procedures and coordinates the programs with the overall quality control program.

Utilizes experience and/or training to assist with the day-to-day processes within CSS; and receives comprehensive training in reagent preparation, laboratory decontamination, instrument setup and troubleshooting, equipment maintenance, temperature monitoring, materials and evidence handling and storage, documentation, and report writing. Performs maintenance on equipment, supplies and vehicles that support the day-to-day functions.

Troubleshoots casework, quality assurance, and accreditation; responds to requests from other DFS entities to support the casework and quality assurance programs; prepares and maintains detailed records in accordance with laboratory, accreditation and statutory requirements; assists with audit preparation and administration; demonstrates continuous effort to improve operations; and works cooperatively and jointly to provide quality seamless customer service.

Utilizes verbal and written instructions to perform various techniques that aids and assists the functions of the Forensic Science Laboratory; and to document and maintain detailed logs and records of materials, reagents, equipment, and instruments.

Works with supervisor or team leader and other personnel to ensure laboratory and accreditation standards are met.

Conducts a variety of assignments by determining what tests, procedures and methods to use; and may be required to conduct quantitative and qualitative procedures by using specific techniques, including but not limited to physical testing, visual analysis, identification and classification, comparisons, scanning electron, and other microscopes; etc.

May maintain, calibrate, and modify complex equipment used for a variety of test and evaluation procedures.

Utilizes computer software to analyze results of quality and performance checks in order to perform quality control measures and keeps up-to-date on current studies, pamphlets, journals, and books for use in assisting in devising new methods and tests.

Projects a professional image while representing the FLS and DFS; and exemplifies Department values, both on and off duty.

Performs other related duties as assigned.

KNOWLEDGE REQUIRED BY THE POSITION

Knowledge of and skill and ability gained through work experience or training in applying theories, principles, concepts, methodology and practices of analytical chemistry, physical science, or biology or related field to the work that is sufficient to perform mathematical and statistical analyses that relate to analytical laboratory work; and knowledge of and ability to apply D.C. and Federal laws, codes and regulations pertaining to forensic science; and the ability to follow training on how to apply ISO 17025 accreditation standards.

Knowledge of or experience in quality control procedures and accreditation standards; proper procedures and standard laboratory rules and safety precautions regarding chemicals, toxins and biohazards; and evidence collection and preservation procedures.

Knowledge of and hands-on experience or classroom training related to equipment and supplies used in a forensic laboratory including specialized scientific equipment, instrumentation and software; current developments, literature and other sources of information related to the assignment; and the ability to solve problems or respond to technical issues in regards to quality control measures.

Experience with or the ability to apply theoretical and analytical principles of natural and physical sciences, including organic, inorganic, biochemistry, physical chemistry, and other applicable fields; apply quality methods and techniques used in the forensic laboratory, including laboratory testing procedures.

Experience or ability to work extensively with chemicals and biohazards in a safe manner; and the ability to perform a variety of quality and performance checks and analyses; and ability to recognize anomalies, prepare hypotheses, and take appropriate action; prepare and maintain accurate records/data and prepare clear and concise summaries and memoranda.

Participates in a structured training program that pertains to the quality control/quality assurance programs, proficiency testing program, and safety program. Attends relevant seminars, lectures and other training and development activities.

Demonstrates the ability to communicate effectively, both orally and in writing; maintain effective working relationships. Skill and ability to use a personal computer to apply software applications; and prepare, store, and retrieve data and knowledge of software affiliated with the laboratory.

Exercises discretion and sound judgment to determine proper courses of action and assesses and evaluates a variety of situations, problems, conditions or questions.

Ability to work safely without presenting a threat to self or others is essential.

SUPERVISORY CONTROLS

Works under the supervision of the supervisor (CSS), who initially provides direction on the objectives, priorities, objectives, and/or deadline related to work previously performed and therefore covered by precedent. New or unusual assignments may be performed by utilizing general background information, including advice on the location of reference material to use or receive technical guidance and assistance from the supervisor and/or first (1st) line supervisors, Quality Assurance Specialist or higher level employees.

Plans and carries out procedural and technical processes as required, seeks assistance as needed, and independently coordinates work efforts with others when necessary. Exercises initiative while developing solutions to common technical and procedural problems such as changes in priorities, minor need for additional equipment or other such comparable issues. May receive administrative direction or decision from higher authority on the course of action to follow when encountering significant technical or procedural problems with the work.

The work is normally reviewed in the form of an assessment as to how to resolve technical and related administrative problems encountered, e.g., success in meeting deadlines, developing solutions to problems encountered, executing the work in accordance with agency policy and accepted scientific practices, and administering operations which are both technically sound and complete in terms of such criteria as project objectives, and established requirements of CSS. The review may also have emphasizes on the quality of judgment used by the incumbent to resolve technical and administrative issues.

Works under the guidance of the Crime Scene Sciences Unit Manager, who makes assignments by defining objectives, setting priorities and deadlines, and assisting with new and unusual techniques that do not have clear precedents or instructions. Also, receives technical guidance and assistance from the Crime Scene Sciences Quality Assurance Specialist and Crime Scene Sciences supervisors. The incumbent plans and carries out the assignments; and handles problems and/or deviations in accordance with instructions, policies or previous training/experience.

The work is reviewed for conformance to guidelines, instructions, conformity to department policy and requirements.

GUIDELINES

Guidelines include policies and procedures of DFS, including but not limited to the standard operating procedures developed by the Crime Scene Sciences Division through the validation of analytical procedures; governing laws and regulations of the District and Federal government, testing regulations manuals, quality assurance and accreditation standards, and scientific literature, precedent cases, technical references, forensic techniques and literature, catalogs and handbooks, internal protocols, Mayor's Orders, instructions, etc.

The guidelines are usually applicable, however, the incumbent may be required to seek guidance/direction when applying them to specific work situations/cases that may or may not be

directly related to the core problems of the assignments, have gaps in specificity or not completely applicable.

Judgment is exercised independently when interpreting or adapting available standards and guidelines, such as agency policies, regulations, precedents, and work directions for application. The incumbent is encouraged to analyze results and recommend changes. Utilizes guidelines as the basis for making procedural deviations from established administrative and/or technical methods; or adapt guidelines when judgment is exercised based on an understanding of the intent of the guidelines and reacting accordingly.

COMPLEXITY

Based on work experience or training the work requires the performing various technical duties which involve different and sometimes unrelated processes and methods that are also associated with quality assurance and quality control. May be required to switch frequently from one type of responsible technical assignment to other types which may be substantially different in terms of equipment, techniques, and methods used, specific data produced, and/or uses to which the data will be put; or ongoing or long term responsibility and/or independently executes or assists with defining portions of more comprehensive long range projects/assignments. The incumbent is given responsibility to execute the work or is expected to utilize/exercise discretion in selecting the most advantageous methods to accomplish the work.

Judgment is required in applying a wide range of conventional, established approaches, methods, techniques and solutions to new situations. Identifies and recommends resolution of discrepancies in data based; adjusts work methods to accommodate unusual conditions; and/or recommends or determines what data to use, record or report.

SCOPE AND EFFECT

Conducts processes and assists team members when required; prepares documentation regarding the quality processes for reagents, materials, equipment, and instruments; identifies problems that may alter analytical results; and ensures that all documentation is in the appropriate order for laboratory and accreditation requirements. Performs work that is closely involved in almost all phases of the scientists study and has responsibility for selected phases or conducts test applications of scientific and technical theories when the methods, techniques, and procedures are clearly outlined.

Work products directly affect the design and execution of experiments; the operation of systems, programs, or equipment systems; or the adequacy of such activities as long range work plans, field investigations, testing operations, or research conclusions. The results of the work may also affect other experts and/or the department's credibility, adequacy, accuracy and effectiveness of laboratory tests.

PERSONAL CONTACTS

Contacts are with DFS employees, CSS personnel, equipment maintenance representatives, consultants, Federal, District and accreditation regulatory agencies, investigators, and contacts are usually on a routine basis.

PURPOSE OF CONTACTS

Purpose of contacts is for exchanging, coordinating or resolving operational problems. Persons contacted are usually working toward a common goal and generally are reasonably cooperative. At this level, some technicians may be required to deliver information, such as how data was obtained and their opinion as to the accuracy of the data.

PHYSICAL DEMANDS

Work is sedentary, however, some work requires periods of walking, standing, bending, stretching etc. The incumbent will occasionally carry items weighing up to 50 pounds, such as bags and/or boxes of chemicals, portable computers, peripherals, and other similar materials. Incumbent must possess sufficient manual dexterity to manipulate and operate laboratory equipment; must be able to visually distinguish color, shape, size, number and picture resolution quality; must be able to withstand exposure to disagreeable elements such as malodorous and/or decomposing samples/bodies, blood, bodily fluids, etc., that may pose a health risk.

WORK ENVIRONMENT

The work is performed in varying environments including, but not limited to an office and laboratory and field sites. The office setting is when preparing documentation, and the laboratory setting is during the testing and analysis phase, and field sites when collecting evidence, etc.

The incumbent may be exposed to hazardous materials, toxic substances, blood borne pathogens, and electric current and electrostatic discharge and is required to follow safe laboratory practices and wear protective clothing, including facial masks, safety glasses, gloves, ear protection, etc.

OTHER SIGNIFICANT FACTS

Required to successfully complete competency testing prior to beginning technical work on any equipment or instrument in a specialty discipline or sub-discipline.

The nature of the work in the CSS Division requires the safe handling and processing of chemicals and reagents within the laboratory, and standard health and safety processes must be constantly demonstrated and reinforced.

Bachelor's degree from an accredited college or university in science is required; or a higher degree and/or industry certification may be considered.

SPECIAL REQUIREMENTS

This position's duty station will be housed within the Consolidated Forensic Laboratory (CFL) which is a protection-sensitive facility. As such, incumbents of this position shall be subject to criminal background checks, background investigations, and mandatory drug and alcohol testing, as applicable. Due to the technician's presence in forensic casework laboratories, the applicant will be required to submit a buccal swab for the purposes of the DNA Quality Control database for the DFS.

The nature of the DFS mission necessarily involves the potential risks associated with biological or chemical hazards, including morgue functions. Although contact with these functions is

intended to be minimal, the risks are nevertheless possible; training to recognize, address, and mitigate these risks is required as is dealing with potentially personally difficult topics, such as crime, death, and disease.