

**LEAD FORENSIC SCIENTIST (MATERIALS ANALYST)**  
**CS-401-14**

**INTRODUCTION**

This position is located in the Office of the Deputy Mayor for Public Safety and Justice (ODMPSJ) 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.

**MAJOR DUTIES**

*As a leader the incumbent is responsible for performing the following:*

Assists with ensuring that the strategic plans, mission and valuation of the organization is communicated to the employees and integrated into the goal, objects and work plan(s);

Coaches the employees in best practices to use in selecting and applying appropriate problem solving methods and techniques, provides advice on work methods, practices and procedures, and assists the team and/or individual members in identifying the parameters of a viable solution;

Leads the team in identifying, distributing and balancing the workload and tasks among employees in accordance with established work flow, skill level and/or occupational specialization; making adjustments to accomplish the workload in accordance with established priorities to ensure timely accomplishments and ensuring that each employee has an integral role in developing the final product;

Assists with training employees in the methods and techniques of team building and working in teams to accomplish tasks or projects, and provides or identifies necessary training for accomplishing individual and team tasks;

Monitors and reports on the status and progress of work, checking on work in progress and reviewing completed work to ensure that the supervisor's instructions, priorities, methods, deadlines and quality are being met or have been met;

Serves as coach, facilitator and/or negotiator in coordinating team initiatives and in consensus building activities among team members;

Maintains program and administrative reference materials, project files and relevant background documents and make available policies, procedures and written instructions from the supervisor; maintain current knowledge to answer questions from team members on procedures, policies, directives, etc.;

Prepares reports and maintains records of work accomplishments and administrative information, as required, and coordinates the preparation, presentation and communication of work related information to the supervisor;

Represents the team in dealings with the supervisor or manager for the purpose of obtaining resources (e.g., computer hardware and software, use of overtime or compensatory time, etc.),

and securing needed information or decisions from the supervisor on major work problems and issues that arise;

Reports to the unit manager periodically on team and individual work accomplishments, problems, progress in mastering tasks, work processes, and individual and team training needs;

Represents team consensus and conveys the team's findings and recommendations in meeting and dealing with other team leaders, program officials, the public and other customers on issues related to or that have an impact on the teams' objectives, work products and/or tasks;

Estimates and reports to the team on progress in meeting established milestones and deadlines for completion of assignments, projects and tasks, and ensures that all team members are aware of and participates in planning for achievement of team goals and objectives;

Researches, learns and applies a wide range of qualitative and/or quantitative methods to identify, assess, analyze and improve team effectiveness, efficiency and work products;

Leads the team in assessing its strengths and weaknesses and provides leadership to the team in exploring alternatives and determines what improvements can be made (e.g., in work methods, processes and procedures);

Approves emergency leave for up to three days; eight hours or less for medical appointments; and/or other types of leave as delegated by management;

Resolves simple, informal complaints of employees and refer others, such as formal grievances and appeals, to the supervisor or an appropriate management official;

Communicates team consensus and recommendations to the supervisor on team and individual awards, rewards and recognition;

Informs employees of available employee benefits, services and work related activities; and Intercedes on behalf of the team to inform the supervisor of performance management issues/problems and to recommend/request related actions, such as, assignments, reassignments, promotions, tour of duty changes, peer reviews and performance appraisals.

*Materials Analysis Responsibilities are as follows:*

Identifies, analyzes, compares, and interprets evidence from crime scenes in the laboratory; prepares administrative reports; assists with training Analysts in all aspects of their duties and responsibilities.

Works in conjunction with supervisor and occasionally with the Deputy Director of Quality Assurance, Quality Assurance Specialist, and other management personnel to ensure accreditation standards are met.

Ensures that the Analysts identify, analyze, compare, and interpret evidence in criminal investigations; and the work is performed in a laboratory. The types of crimes include person crimes, such as homicides, sexual assaults, and robberies, as well as property crimes and traffic accidents.

Assists with training staff in how to effectively testify in court and personally testifies in court as an expert witness in connection to the evidence analyzed; studies new techniques and procedures in scientific analysis, collection, and processing; participates in a structured training program; demonstrates continuous effort to improve operations, decrease turnaround times, streamline work processes, and work cooperatively and jointly to provide quality seamless customer service.

Assists with identifying training, competency, and proficiency tests to improve the unit's proficiency.

Acts as initial point of contact in the absence of the supervisor for case inquiries from investigators and attorneys and screens examination requests.

Communicates proactively with management and department officials regarding progress, issues and plans for resolution.

Reviews and documents validations and methods utilized for approval.

Utilizes computer software to analyze results of tests in order to perform tests and keep up-to-date on current studies, pamphlet, journals, and books for use in devising new methods and tests. Devises charts, graphs, and tables as aids to conduct tests; evaluates laboratory test results in the area of concern; prepares technical reports on findings and project results.

Performs other related duties as assigned.

#### **KNOWLEDGE REQUIRED BY THE POSITION**

Mastery knowledge of and skill in applying material analysis principles, techniques, methods, theories, concepts, practices, and standards.

Mastery of material analysis forensic laboratory accreditation, standards, and guidelines; and of the tools necessary to evaluate the evidence.

Ability to establish new standards and assists with identifying training needs and resource requirements for the agency; and ability to initiate, formulate, and plan, as well as execute material analysis.

Mastery of new analytical developments, and ability to modify processes to resolve novel, obscure, or highly controversial problems that affect the analysis.

Mastery knowledge of, and skill in applying analytical and evaluative methods and techniques to conduct in-depth research of operational/program issues; to review and analyze complex reports; to develop necessary plans; and to prepare clear, in-depth reports of studies and recommendations.

Mastery research skills, interpretation, and application of a broad range of qualitative and quantitative data using a variety of diverse methods.

Ability to make recommendations that significantly supports important internal office policies on digital forensic science.

Ability to lead and provide guidance and internal training to employees; and support to the supervisor.

Expert knowledge of quality assurance and quality improvement methods and techniques; and knowledge of accreditation standards and quality processing methods that are crucial as well as beneficial to the quality assurance program.

Ability to keep up-to-date of current literature and sources of information in the field of forensics, chemical and material analytical methods, including but not limited to spectroscopy (such as infrared, Raman, visible, and ultraviolet), chromatography (gas, liquid, and mass), spectrometry (energy-dispersive, wavelength-dispersive, and others) and all forms of microscopy.

Experience in operational chemical or materials laboratories; quality assurance and control; statistics; and basic rules of evidence; and in assessing and evaluating a variety of situations, problems, conditions, etc.

Mastery of and skill sufficient to establish and monitor quality control in the laboratory section as well as an in-depth knowledge of the principles, techniques, and instruments to determine quality control measures needed to control samples, to respond to proficiency testing programs and to establish and maintain copious record keeping systems.

Ability to work well both independently and as part of a professional team in a multi-cultural workplace and interpersonal skills is required to work effectively with a diverse staff, external agencies, and the public.

Expertise in modifying or adapting standard processes and procedures, assesses, selects, and applies remedies suited to the assigned problem or situation; and assesses the environmental impact of various practices.

Excellent oral and written communications skills sufficient to prepare and present pertinent information and research involving complex workforce development policies and initiatives, and represent the agency; and knowledge of and skill in communication and public relations techniques sufficient to effectively represent the agency at conferences, meetings and consultations with agency managers, employee groups, and special interest groups concerning program objectives and issues.

Demonstrated skill and ability to use a PC and software packages (e.g., Microsoft Word, Excel, Access and Power Point, etc.) and software applicable to various reporting systems, particularly laboratory information management systems (LIMS), inventory control, and spectral analysis software.

### **SUPERVISORY CONTROLS**

Works under the Unit Manager (Materials Analysis), who provides administrative direction in terms of broadly stated objectives and available resources, new and unusual techniques, desired results, changes in regulatory constraints and, or methods and procedures that may apply to complex situations. The incumbent independently plans and carries out assignments, and interprets policies and procedures in terms of established objectives, and plans and carries out assignments; and determines the validity of methods and results and recommends acceptance or rejection. Exercises independent responsibility and is held accountable for actions and findings; and consults with the supervisor, other unit managers and/or laboratory directors on unusual

technical problems and best practices and keeps the supervisor apprised of any controversial issues.

The work is reviewed for potential impact on agency's accreditation, mission, objectives and program goals are normally accepted and being technically authoritative and accepted without significant change.

### **GUIDELINES**

Guidelines include policies and procedures of DFS, including but not limited to the standard operating procedures developed by the Materials Analysis Unit through the validation of analytical procedures; governing laws and regulations of the District and Federal government, Mayor's Orders, instructions, and the Deputy Mayor's policy and priorities. Incumbent exercises sound judgment in choosing, interpreting, or adapting available standards and guidelines to specific issues or subject. Many situations are not covered by the guidelines, and therefore, require interpretation and adaptation.

Sound judgment is exercised when selecting, interpreting, or adapting available standards and guidelines to specific work situations and/or cases, however, many situations are not covered by the guidelines, and therefore, requires extensive interpretation and adaptation or research.

### **COMPLEXITY**

Adaptability and flexibility is required in order to adhere to protocols is essential; develops and validates criteria for testing parameters with new methods and equipment as well as training team members to perform the same. Maintains quality control measures and prepares detailed documentation of test results. Provides appropriate leadership in the application of procedures; and identifies problems and anticipates discrepancies in the results. The work requires assessing, evaluating, modifying and adapting various methods to satisfy requirements and to arrive at sound conclusions.

Decisions regarding what needs to be done include major areas of uncertainty in approach, methodology, or interpretation and evaluation processes that result from such elements as continuing changes in program, technological developments, unknown phenomena, or conflicting requirements.

### **SCOPE AND EFFECT**

The work involves performing and leading a team in isolating and defining unknown conditions, resolving critical problems, or developing new theories, technical adequacy, and effectiveness of submitted evidence. Conducts and assists team members when required to perform analysis including collecting appropriate exhibits to prepare for examination/testing; and prepares documentation regarding findings and analysis that are instrumental in preparing results of the tests; and identifying problems that may alter the materials; and ensures that all documentation is in the appropriate order for court cases and/or final discovery.

The result of the work may affect other experts and/or the department's credibility adequacy, accuracy and effectiveness of the field investigations, and laboratory tests, and ensures its relevancy to each to assist with closure. The results are also binding and affect judicial proceedings.

### **PERSONAL CONTACTS**

Contacts are with DFS officials, employees, laboratory personnel, consultants, Federal and District regulatory agencies, the general public, law enforcement, and investigators, and other stakeholders.

### **PURPOSE OF CONTACTS**

Contacts are for the purpose of influencing and motivating persons or groups in order to obtain the desired effect, such as gaining compliance with established policies and regulations by persuasion or exchanging and gathering information, ensuring the orderly flow of work as it pertains to maintaining the chain-of-custody of collected evidence, and storage, and to prepare detailed reports.

### **PHYSICAL DEMANDS**

Work is sedentary, however, some work requires periods of walking, standing, bending, stretching etc. Also, some work requires sufficient personal agility to collect and process evidence at a variety of crime scenes. Occasionally carry items weighing up to 50 pounds, such as bags and/or boxes of evidence, 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 an office, a laboratory and in the field. The office setting is when preparing documentation, the laboratory setting is during the testing and analysis phase, and the field when identifying and collecting evidence.

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 wrist straps, facial masks, safety glasses, gloves, etc.

### **OTHER SIGNIFICANT FACTS**

Employees are tasked to this position after several years of relevant experience in Materials Analysis at the Forensic Science II Class or equivalent. Employees at this level are distinguished from the Forensic Scientist II by performance of the full range of duties in the Materials Analysis Unit including innovation through the development and implementation of new techniques and processes to meet anticipated and emerging challenges in Materials Examination.

Required to successfully complete competency testing prior to beginning casework in specialty discipline or sub-discipline; and successfully complete annual proficiency testing as required by accreditation standards.

Minimum of a Bachelor's degree from an accredited college or university in science; or higher degree; and two (2) years of experience.

May be required to work weekends and holidays.

**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 handling of primary evidence, 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.