

**SUPERVISORY CHEMIST  
MS-1320-13**

**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 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.

This work involves supervising the analysis and interpretation of the composition of molecules, physical and chemical properties, molecular structure and chemical reactions; the prediction of transformation they undergo; and the amount of matter and energy included in these analytical transformations.

**POSITION CONTROL**

The incumbent works under the direct supervision of the Director of Public Health Laboratory, who defines overall objectives to be achieved, coordinates resources, and relies on the incumbent's expertise when coordinating, and accomplishing program objectives; and in consultation, develop the deadlines, projects, and work to be done.

Work is performed independently, within the latitude of established policies; resolves most conflicts; occasionally coordinates work with other chemist, scientist, or managers as necessary; and interprets agency and activity test and evaluation policy on own initiative in relation to established objectives. Work is reviewed for conformance to standards, guidelines, feasibility, and effectiveness in meeting the objectives, deadlines, and expected results.

Guidelines are available, but are often inadequate, very general, or contain critical gaps; or are of only limited use for major test segments, complex problems in the assignment, and/or minor differences from past tests. Some assignments may require executing novel testing procedures or resolve problems where precedents are not applicable; or obtain needed information within tight time frames and/or cost constraints; or to develop new technical methods or criteria; or to develop proposed new policies for a major test; or supplement, explain, or adapt agency guidelines or protocol.

Many work situations are not covered by the guidelines, therefore, sound judgment is exercised when selecting, interpreting, or adapting available standards and guidelines to specific issues or subjects. Recommendations made by the incumbent are accepted as professional, scientific and technically authoritative in analytical chemistry.

**DUTIES AND RESPONSIBILITIES**

Performs and supervises a full range of chemical tests and toxicological analyses of biological and environmental samples in a laboratory which includes, but not limited to analyses of lead, arsenic, cyanide, mercury and other substances of importance to the Chemical Terrorism Laboratory Program.

Develops, adapts and implements new testing and analytical methodologies in a laboratory.

Responsible for quality control and quality assurance for the chemistry laboratory, which involves participation in the Centers for Disease Control (CDC) Proficiency Testing Program, the Laboratory Response Network of the Association of Public Health Laboratories, and Environmental Protection Agency (EPA) Program for Study.

Participates in the evaluation of new methodologies for the detection of Chem-T agents in blood and body fluids and the environment and foods; and maintains current and accurate results by providing personal opinions and/or recommends in regards to proposing new methods, techniques, and instrumentation that will eliminate inaccuracies.

Calibrates and operates gas chromatography, absorption spectrophotometer, enzyme activation and absorption spectrophotometry, and immune assay; and analyzes organic and inorganic compounds to determine chemical and physical properties, composition, structure, relationships, and reactions. These analyses, resolutions or treatment of chemical/scientific problems extends beyond routine application.

Develops, improves, and customizes products, equipment, formulas, processes, and analytical methods; and compiles and analyzes test information to determine the process or whether the equipment is operating efficiently and to diagnose malfunctions or inconsistencies.

Directs, coordinates, and advises personnel in test procedures for analyzing components and physical properties of materials; and confers with other scientists and chemists, etc. to conduct analyses of research projects, interpret test results, or develop nonstandard tests.

Provide

Induces change(s) in composition of substances by introducing chemical catalysts for quantitative and qualitative analysis.

Writes technical papers and detailed monthly reports and enter relevant data into scientific computer programs; and prepares standards and specifications for procedures, products, and tests; and analyses and interprets the results or computer data.

Makes necessary recommendations to improve techniques in the laboratory; and keeps up-to-date with chemical literature and the latest developments, techniques and methods.

Provides technical guidance to other analytical chemists and lower level chemists on a continuing basis to ensure quality control.

May be required to testify in courtrooms exclusively as expert witnesses.

Provides the full range of supervisory services, as required to manage and direct the work efforts of subordinate staff and activities of assigned operations. Develops quantitative and qualitative measures for evaluating the work performance of staff. Supervises and assigns duties and responsibilities; formulates overall plans for resources; approves and disapproves leave requests; recommends job selections, promotions, incentive recognition and corrective or adverse actions; establishes work standards; and identifies developmental and training needs.

Performs other related duties as assigned.

### **OTHER SIGNIFICANT FACTS**

Professional knowledge of a wide range of theories, principles and concepts in physical and organic chemistry, biochemistry and mathematics, e.g., gained through extended professional experience in current methods of chemical research as demonstrated in publications in scientific journals, in order to perform the full range of duties involved in researching, developing, adapting and evaluating analytical methodologies used in chemistry.

Professional knowledge of instrumental analysis, such as gas and thin layer chromatography, spectrophotometry, electrophoresis, etc., in order to effectively evaluate sensitivity of procedures and precision and accuracy of the results obtained and to engage in investigative developmental work toward implementing improved analytical methods.

Ability to communicate facts and ideas to a variety of persons and audiences both within and outside the laboratory; and the ability to write memorandums, prepare reports and/or position papers on significant analytical results and submit papers for publication and circulation among other governmental agencies or other interested scientists in the discipline.

Ability to clearly and concisely answer challenges to findings.

Ability to supervise a subordinate staff.

### **SPECIAL REQUIREMENT**

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.

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.

Although there is not much risk if proper procedures are followed, some chemists could face safety or health dangers.