

A. MAJOR DUTIES

Typical, but not all-inclusive, duties are illustrated by performance of any combination of the following:

Performs a range of experiments which are designed to provide answers for the specific research problem areas.

Plans and carries out individual experiments within prescribed approaches.

Devises and recommends alternative methods of standardized analysis to solve problems.

Performs tests and analyses by applying established analytical methods and procedures or by operating an automated analytical system according to established operating procedures.

Devises, recommends and, with the supervisor's approval, modifies methods that are needed to obtain the information requested.

Reviews pertinent scientific literature and selects methods and procedures most appropriate for the research goals, including modifying protocols when necessary to optimize the collection of usable data.

Maintains equipment and instrumentation in top working condition, performing routine preventative maintenance and minor repairs, and promptly reporting signs of malfunction or need for major repairs.

Maintains official laboratory notebooks recording the methods and procedures used, any modifications of methodology applied, and the results.

Prepares results of findings from experiments conducted, including initial interpretation of significance to the overall project, for inclusion in manuscripts, technical reports, oral presentations, and progress reports.

B. EVALUATION FACTORS

1. Knowledge Required by the Position (FLD 1-6: 950 points)

A professional knowledge of microbiological and chemical principles, theories, and practices.

Knowledge of biological and physical sciences including microbiology to independently perform recurring tests and analyses, evaluate methodologies, and make minor modifications of procedures and protocols related to the assigned duties.

Knowledge of the theories and principles of statistics to choose appropriate statistical analyses and interpret data.

Skill in calibrating and operating specialized microbiological and chemical laboratory equipment.

Ability to recognize the significance of unexpected results, and make minor modifications to insure validity of testing and data.

Ability to use a high degree of judgment.

2. Supervisory Controls (FLD 2-3: 275 points)

Work is assigned indicating the general objectives of the experiment, the nature of the analyses or measurements to be made, and priorities.

Incumbent plans and carries out experiments independently to obtain the required data and solves problems according to instructions, previous training and accepted principles.

Work methods involved in implementing new procedures are discussed and completed work is reviewed periodically to see that it generally conforms to established policies and procedures and ascertain that it is technically accurate.

3. Guidelines (FLD 3-3: 275 points)

Guidelines include methodologies, manuals, technical references and precedent investigations that are not always directly applicable to the work.

The employee uses a high degree of judgment in selecting the most appropriate guides and references to apply to each problem. The employee evaluates results and recommends changes to specific problems.

4. Complexity (FLD 4-3: 150 points)

Assignments involve a variety of limited, unrelated research tasks. Judgment and initiative are required in planning details of work, deciding how to collect and present results, determining methods and techniques to use, and making minor modifications.

The incumbent must consider various factors such as the biological, chemical and physical properties of the sample, the information sought, and the expected composition and properties of the substances in order to select from established alternatives the appropriate procedures to be adapted and applied.

5. Scope and Effect (FLD 5-3: 150 points)

Work involves investigating, analyzing, or advising on a variety of conventional biological problems.

The work effects the scientific adequacy, accuracy, and effectiveness of further laboratory procedures.

6. Personal Contacts and (FLD 2b: 75 points)
7. Purpose of Contacts

Personal contacts are principally with scientists within the immediate work unit or other laboratories within the location. Occasionally, contacts with scientists outside the location may be needed.

Contacts are for the purpose of obtaining, clarifying, or exchanging information regarding theoretical and problematic solutions to the experimental designs and methods, plan and coordinate the work, receive instructions, and report progress and results of work.

8. Physical Demands (FLD 8-2: 20 points)

The work sometimes requires standing for prolonged periods of time.

9. Work Environment (FLD 9-2: 20 points)

Work is performed primarily in a laboratory. Incumbent is exposed to irritant chemicals on an irregular basis; on such occasions, special safety precautions are required and the microbiologist uses protective clothing and gear such as laboratory coat, safety glasses and gloves.

C. OTHER CONSIDERATIONS (Check if applicable)

- Supervisory Responsibilities (EEO Statement)
- Training Activities - Career Intern, Student Career Experience Program
- Motor Vehicle or Commercial Driver's License Required
- Pesticide Applicators License Required
- Safety/Radiological Safety Collateral Duties
- EEO Collateral Duties
- Drug Test Required
- Vaccine(s) Required
- Financial Disclosure Required
- Special Physical Requirements/Demands
- Other:

TOTAL POINTS: 1,915 points
(GS-9 Range: 1,755 - 2,100 points)

September 1996