

GENERAL DESCRIPTION OF CLASS

The MICROBIOLOGIST 1 provides accurate and timely detection and identification of microbial populations, contaminants, microbial infections, or genetic abnormalities through the microscopic examination and analysis of environmental agricultural and biological samples. Employees in this class perform standard tests and procedures whose results may require standard interpretations or correlations with other tests.

DISTINGUISHING FEATURES

This is the first level of a three-level series. The emphasis of this class is on performing standard microbiological tests and procedures on a production basis. It is distinguished from the higher level by the absence or performing technically complex tests and procedures whose results require more than routine interpretation and correlation with other tests. At this level, employees generally do not exercise independent scientific judgment in the interpretation of data nor make recommendations on the application of the findings. Employees in this class may, under close supervision of a higher level microbiologist, perform analyses requiring complex analytical techniques.

DUTIES AND RESPONSIBILITIES

Allocation of positions to this class will depend on the total work performed which may include one or a combination of the duties or tasks listed below.

- 1.**Benchwork.** Typical tasks: logs in sample or specimen noting date, time, and tests to be performed; prepares necessary equipment and organizes supplies, media, and reagents; prepares sample or specimen for testing by diluting, filtrating, staining, or centrifuging; performs standard microbiological tests such as: aerobic plate count, coliform, antibiotic residue, serum neutralization, and agglutination; runs quality control samples with known values to determine if procedure and results are within acceptable limits; calculates numerical results based on quantitative growth patterns.
- 2.**Reports.** Typical tasks: enters results of test in log book or computer; completes test result form to be sent to person or agency that submitted specimen or sample and notifies supervisor immediately in cases of significant positive test results; completes daily and monthly reports including number and types of tests performed and number of positive findings; maintains accurate and up-to-date records detailing quality control procedures used in all tests.
- 3.**Miscellaneous.** Typical tasks: calibrates, troubleshoots, and performs minor maintenance to laboratory equipment; takes inventory and requisitions supplies with supervisor's approval; testifies on methodology and results of tests when those results are evidence in cases of litigation; keeps current in field by reading literature and attending symposia and workshops; maintains knowledge of all areas of laboratory by rotating duties with microbiologists in other sections.

RELATIONSHIPS WITH OTHERS

Employees in this class have daily in-person or telephone contact with agency staff to exchange information or discuss test results. They have occasional contact by phone with county health departments, physicians,

industrial and business representatives, and other agencies to discuss issues pertaining to a sample or specimen.

SUPERVISION RECEIVED

Employees in this class work under general supervision of a laboratory supervisor or other administrative superior. Test data, results, and any standard interpretation are reviewed routinely for accuracy and precision. Reports are reviewed for completeness and accuracy. Records are reviewed routinely for quality control. Guidelines used in performance of duties include standardized testing procedures, accepted aseptic and sterilization procedures, established laboratory procedures, and applicable State and Federal regulations.

KNOWLEDGE, SKILLS, AND ABILITIES (KSA)

General knowledge of inorganic and organic chemistry.
Basic knowledge of laboratory and microbiological principles, terminology, materials, equipment, procedures, and techniques.
Basic knowledge of various fields of microbiology such as bacteriology, virology, serology, mycology, immunology, and parasitology.
Basic knowledge of standard laboratory testing procedures.
Basic knowledge of the operation and maintenance of various standard laboratory instruments and equipment.
Basic knowledge of the techniques required for general laboratory safety and the proper handling of hazardous materials.

Skill in preparing laboratory specimens and samples, reagents, solutions, and stains for testing.

Skill in the care and handling of laboratory specimens and samples.

Skill in operating standard laboratory equipment and instruments.

Skill in applying written laboratory methods and procedures.

Skill in calibrating and maintaining standard laboratory equipment.

Ability to interpret standard test results.

Ability to determine appropriate test equipment or instruments to be used.

Ability to perform highly repetitive tasks while maintaining accuracy and speed.

Ability to organize and prioritize work.

Ability to communicate orally and in writing to gather and exchange information.

Ability to work with potentially hazardous chemicals and microorganisms.

Some positions in this class may require the following:

Basic knowledge of a specialized area such as food processing, ecology, or medical microbiology.

NOTE: The KNOWLEDGE and SKILLS are required for initial consideration. ABILITIES may be required for initial consideration, at any time during the selection process, or during a trial service period as a final stage of the selection process. Some duties performed by positions in this class may require different KSA's. No attempt is made to describe every KSA required for **all** positions in this class. Additional KSA requirements will be explained on the recruiting announcement.

Adopted 1/90

Revised

Examples of work are typical of duties assigned to this class. No attempt is made to describe every duty performed by all positions in this class.