

MICROBIOLOGY LABORATORY TECHNICIAN III

This is advanced technical and limited supervisory work in a microbiology laboratory. Employees assist the supervisor in the administration and technical direction of the laboratory including directly supervising laboratory technicians; assisting in developing, establishing, revising and monitoring unit work standards, schedules and priorities; and maintaining and developing laboratory procedures and quality control manuals. The primary emphasis of the work however involves the technical administration of a significant portion of the laboratory program including performing both routine and non-standard complex procedures and analyses in water and dairy microbiology, reviewing the work of laboratory technicians, and acting as a technical consultant in all areas of laboratory responsibility. Employees will also train laboratory technicians, conduct formal training sessions for outside public and private personnel, prepare special reports and studies, conduct research and interpret reference materials. Employees generally work independently and consult with their supervisor on unusual results or when recommending changes in methods or procedures. Work may include other duties as assigned.

I. DIFFICULTY OF WORK:

Complexity - Employees perform a full range of routine and non-standard complex procedures and analyses on drinking water, non-potable water and milk from both public and private sources. Work includes interpreting the information received with a sample to discern trends and to determine which tests or analyses to perform, conducting tests and performing related research, determining likely causes of contamination and possible health hazards involved, and deciding on relevant elimination procedures. Employees assist in the development of training materials and conduct formalized training programs for milk analysts, water plant operators, engineers, health sanitarians, new employees, and senior technicians in the more complex and non-routine procedures. Work also includes reporting and explaining results on both milk and water tests by telephone and written report, reviewing and monitoring quality control reports for trends and unusual results, and providing technical review and consultation for lower level technicians. Tasks performed are of moderate variety and include considerable intricacy and detail.

Guidelines - Test procedures and other guidelines are detailed and specific and applicable to most tests and analyses performed. Employees frequently research and interpret information from reference works to aid in the selection of analyses, the identification of bacteria and other organisms, and in the evaluation and interpretation of results. They consult with their supervisor when findings are unusual, when improper trends are discovered, or when major changes in procedures or protocol are indicated.

II. RESPONSIBILITY:

Accountability - Employees have a considerable opportunity to impact on the public by reporting and explaining the results of tests and analyses, by technically reviewing work performed by other technicians, and by acting as a consultant for in-house and public laboratory personnel. Employees also conduct certification testing programs, and train and influence others in the proper use of laboratory equipment, procedures, methods and techniques. Accountability is limited by occasional supervisory review and consultation on any unusual result or interpretation.

Consequence of Action - The results of an error in conducting, reviewing or reporting a water or milk test could lead to sickness in susceptible individuals, the unnecessary collection of further samples, or implementation of costly and unnecessary elimination procedures. An error in preparing, conducting or evaluating a certification testing program could result in the improper certification or unnecessary loss of certification for public or private analysts or laboratories.

Review - Employees independently schedule and perform their daily work assignments and special projects. Supervisory review is limited to occasional spot checking of work in progress and by consulting with employees on very unusual or non-routine results of tests or analyses. Employees assist in the review process by evaluating the work of lower level technicians.

III. INTERPERSONAL COMMUNICATIONS:

Subject Matter - Methods, techniques, procedures and laboratory equipment used in the testing and analysis of water and milk samples are usually commonly accepted and readily understood by other laboratory personnel and by public and private water plant operators or milk processors. Employees must keep abreast of increasing and changing test procedures and of mutating undesirable substances in water supplies and milk products.

Purpose - Employees report positive results to system owners and milk processors and explain tests conducted, why the tests were performed, what the results mean, what was the likely cause of contamination, the possible health hazards involved, and possible elimination procedures. When training others, employees must explain techniques and methods, and the proper use of laboratory equipment. Employees also occasionally critique, evaluate and influence the work of lower level technicians.

IV. WORK ENVIRONMENT:

Nature of Working Conditions - Employees spend all of their time in a laboratory setting under basically agreeable conditions. Employees would be subject to overtime and weekend work that could include working alone.

Nature and Potential of Personal Hazards - Employees are exposed to accident risks and health hazards while handling samples and cultures, inoculating samples, or using Bunsen burners, ultraviolet sterilizers, centrifuges and other equipment.

V. RECRUITMENT STANDARDS:

Knowledges, Skills, and Abilities - Considerable knowledge of the basic principles, reference sources, and of biology, limnology, and microbiology. Working knowledge of scientific methodology and the hazards involved in laboratory procedures along with related safety practices. General knowledge of federal and state laws and regulations concerning water and milk quality. Ability to independently perform and record routine and complex special laboratory tests and procedures. Ability to express technical information clearly, both orally and in writing, when reporting results or teaching others. Ability to perform basic mathematical calculations. Ability to understand and follow oral and written technical instructions. Ability to perceive colors normally and to make olfactory distinctions. Ability to direct and evaluate the work of others and to establish and maintain effective working relationships.

Training and Experience Requirements - Bachelor's degree in biological science or medical technology from an appropriately accredited institution; or an equivalent combination of education and experience.

Necessary Special Qualifications - Certification by the FDA as a certified milk analyst.