

CHEMIST - 114

DEFINITION OF WORK

Under regular supervision, performs routine professional work involving the chemical, physical and bacteriological analysis of water, sewage, industrial wastes and by-products of water or sewage treatment process; does related work as required.

EXAMPLES OF WORK

Conducts difficult regular and special chemical analysis of samples of sewage, industrial wastes and by-products of the treatment process to determine the efficiency of treatment and chemical constituents; determines sampling methods and makes recommendations on types of tests to be used; makes regular bacteriological identification; personally performs, supervises and reviews laboratory tests to determine dissolved oxygen, toxicity, nutrients, chemical oxygen demand, turbidity, chlorophyll, bio-chemical oxygen demand, chlorine residual, grease, detergents, sulfides, coliform, settleable and suspended solids and alkalinity, atomic absorption analysis, TOC analysis, gas chromatography and performs other routine and specialized tests; prepares reports; collects random water and wastewater samples and samples taken from various stages of treatment; performs chemical and bacteriological tests, including bacteria count, coliform check, turbidity, color, alkalinity, PH, CO₂, chlorine residual, temperature and fluoride; periodically runs odor, hardness and chloride tests; checks logs of water purification operators and directs usage of chemicals for proper treatment; supervises Lab Technician in the course of assignments; prepares and maintains records and reports; responds to complaints by water customers.

EMPLOYMENT STANDARDS

Education and Experience: Any combination of education and experience equivalent to a bachelor's degree with major course work in chemistry or biology and some laboratory experience.

Knowledge, Skills and Abilities: Some knowledge of the principles of organic and inorganic chemistry including qualitative and quantitative analysis; general knowledge of modern chemical laboratory procedures, techniques and equipment and skill in their use; some knowledge of elementary physics, physical chemistry and biochemistry; ability to prepare clear and accurate scientific reports including suitable graphic representations; ability to work effectively with others on a professional level.

