

CITY OF HAMILTON

PUBLIC WORKS DEPARTMENT
(ENVIRONMENT AND SUSTAINABLE INFRASTRUCTURE DIVISION – COMPLIANCE & REGULATIONS -
LOCATION - 700 WOODWARD AVE.)

INORGANIC TECHNICIAN - CUPE 5167

SUMMARY OF DUTIES

Reporting to the Supervisor, Environmental Laboratory Services performs analysis on environmental samples, including water, wastewater, sludges, biosolids and soil samples. This position requires working with numerous pure chemicals, pure solvents and samples containing unknown odours and compounds. Proper engineering controls and personal protective equipment are provided.

GENERAL DUTIES

Carries out chemical analysis on water, sewage, industrial waste, landfill ponds and leachates, sludge, biosolids and soils as per standard operational procedures.

Performs chemical analysis for sewage process control at the Hamilton and Dundas Sewage Treatment Plants.

Updates or sets up new analytical methods under the direction of the Chemists.

Prepares reagent solutions and standard reagents for the purpose of testing.

Enters analytical data in computer database (LIMS).

Evaluates quality control data for tests performed. Detects matrix interference, search for alternative methods.

Performs quality control activities for analytical testing such as method validation, accuracy, precision, detection limits, control charts. Applies standard laboratory statistical concepts.

Evaluates data used for the purpose of monitoring and compliance. Advises supervisor of abnormal situations.

Trains new staff and students on method analysis and procedures.

Writes reports, summarizes results, compiles statistics and generates computer graphs.

Performs analysis on evidentiary samples. Testifies in court.

Maintains updated documentation and follows all technical, administrative and operational protocols to comply with requirements of accredited laboratories.

Operates, calibrates and maintains laboratory equipment such as balances, pH/ISE meters, spectrophotometer, automated chemistry; sample digesters.

Maintains updated records of instrument performance.

Back-up for instrumental analysis operated by the Chemist/Technologist, Laboratory Technologist, Chemists.

Performs sample preparation for the purpose of organic testing (volatile, extractable and PCBs).

Back-up for supplies reception and storage.

Reviews inventory of chemical and laboratory supplies, identifies needs and request purpose of the items.

Receives and answers technical enquiries from other departments and public.

Reports pre-authorized results to clients who request immediate information.

Performs other duties as assigned which are directly related to the major responsibilities of the job.

Works in accordance with the provisions of applicable Health and Safety legislation and all city of Hamilton corporate and departmental policies and procedures related to Occupational Health and Safety.

QUALIFICATIONS

1. Demonstrated knowledge of the theories and practices of laboratory analysis normally acquired by attaining a diploma in Chemistry or related Science or an equivalent combination of education and work related experience.
2. Previous demonstrated experience and proficiency in performing inorganic laboratory analysis i.e. Biochemical Oxygen Demand, Total Suspended Solids, automated chemistries etc.
3. Previous demonstrated experience in analyzing and documenting test results, operating laboratory equipment and being able to follow all protocols required for accredited laboratories.
4. Must have knowledge of Word, excellent knowledge of Excel spreadsheet, including ability to use statistical tools and generate graphs. Ability to work with other laboratory instrumental software an asset.