

CHEMIST II

Milwaukee Health Department - Laboratory

NOTE: The eligible list resulting from this examination may be used to fill similar City of Milwaukee positions.

PURPOSE: Under the direction of the Deputy Laboratory Director, the Chemist II performs routine analysis for lead in dust wipes, paints, and blood for the programs in Chemistry section, including the Childhood Lead Poisoning Prevention, Environmental Lead Chemistry, Environmental Chemistry, Food and Water Control, Asbestos Control, and Industrial Hygiene areas. The person in this position assists in the coordination of quality control and quality assurance efforts of the laboratory to ensure compliance with departmental, state, and federal guidelines as well as best laboratory practices, including writing standard operating procedures (SOPs), operating and maintaining instrumentation, performing data entry in the Laboratory Information System (LIS), and complying with safety and security standards. The Milwaukee Health Department is a leader in assuring that Milwaukee is the healthiest city in the nation.

ESSENTIAL TASKS:

Environmental Lead Chemistry:

- Test household dust wipes, paint chips, soil, and any other material related to lead abatement for lead content using Flame Atomic Absorption (AA) spectrophotometry.

Childhood Lead Poisoning Prevention:

- Analyze whole blood specimens for lead concentrations using the Graphite Furnace Atomic Absorption (AA) spectrometer.
- Measure the hematocrit and hemoglobin concentration in whole blood specimens.
- Test household water and other miscellaneous samples for lead content (e.g., toys and dishes).

Environmental Chemistry:

- Analyze unknown chemicals and powders using infra-red (IR) spectroscopy and microscopy.
- Identify various forms of asbestos in bulk solid samples using polarized light microscopy.
- Count the number of fibers in air samples using phase contrast microscopy.
- Analyze drinking water, wastewater, organic wastes, and other complex matrices and organic pollutants using gas chromatography-mass spectrometry (GC-MS) and liquid chromatography-mass spectrometry (LC-MS).

Food and Water Control:

- Measure the fat content of ground beef and the salt content in smoked fish samples by ion chromatography.
- Measure the conductivity and resistivity of laboratory water.

General duties:

- Maintain records to assure quality assurance (QA) and quality control (QC) for all analytical procedures.
- Assist in developing new chemistry analytical techniques.
- Perform data entry in the Laboratory Information System (LIS).
- Participate in laboratory safety programs.

CONDITIONS OF EMPLOYMENT: The person in this position must be willing and able to do the following:

- 1) Travel outside the City of Milwaukee, including occasional overnight travel.
- 2) Wear a respirator.
- 3) Carry a pager and/or cellular phone during business hours.
- 4) Participate on a 24-hour emergency on-call rotation schedule (*including weekends*).
- 5) Duties may require FBI background clearance.

Reasonable accommodations requested by qualified individuals with disabilities will be made in accordance with the Americans with Disabilities Act (ADA) of 1990.

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MINIMUM REQUIREMENTS:

1. Bachelor's degree in physical chemistry, analytical chemistry, organic chemistry, biochemistry, toxicology, forensic science, or a related field from an accredited college or university (*Master's degree preferred*), **and**
2. Two years of experience as a professional chemist, such as environmental chemistry laboratory experience, in an academic, public health, or commercial setting.
Equivalent combinations of education and experience may be considered.
3. Valid driver's license at time of appointment and throughout employment.
4. Residency in the City of Milwaukee within six months of appointment and throughout employment.

IMPORTANT NOTE: *College transcripts are required and must be received within three business days after the application period closes. College transcripts may be either attached to the application, sent to staffinginfo@milwaukee.gov, or sent to Box CHII, Department of Employee Relations, City of Milwaukee, 200 E Wells St, Room 706, Milwaukee, WI 53202. Only applications with transcripts will be considered; applications without transcripts will be rejected.*

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER CHARACTERISTICS:

- Knowledge of public health principles and practices.
- Commitment to public safety and disease prevention.
- Knowledge of chemistry (the chemical composition, structure, and properties of substances; chemical processes; and the uses, interactions, danger signs, production techniques, and disposal of chemicals).
- Knowledge of and ability to safely use the following methods for chemical analysis:
 - Flame AA
 - Graphite Furnace AA
 - Ion chromatography
 - GC-MS and LC-MS
 - Time-Resolved Fluorescence (TRF)
 - FTIR
 - Inductively coupled plasma mass spectrometry (ICP-MS)
- Knowledge of and ability to safely use the following types of equipment for chemical analysis:
 - Flame ionization detectors (FIDs)
 - Electron capture detectors (ECDs)
 - Microplate readers
 - Nucleic acid sequencers (optional)
 - Microscopes
 - Centrifuge machines
 - Scales
 - Chemical fume hoods
- Ability to interpret mass spectral data.
- Knowledge of mathematical and statistical concepts.
- Ability to read and interpret professional journals, technical documentation, and laws and regulations.
- Ability to write reports, correspondence, and procedures.
- Analytical, problem-solving, and research skills.
- Proficiency with Microsoft Access, Excel, Word, the Internet, and scientific software.
- Customer service and interpersonal skills.
- Ability to work well both independently and as part of a synergistic team.
- Planning, organizational, and time management skills.
- Ability to meet quality and productivity standards.
- Ability to follow safety and security procedures.

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- Ability to manage resources in a responsible way.
- Ability to maintain confidentiality and perform work in an ethical manner.
- Ability to remain calm during emergency situations.
- Willingness to pursue training and development opportunities to stay abreast of technical advances, regulatory standards, industry issues and public health trends.
- Ability to wear a respirator.

THE CURRENT PAY RANGE (2DN) IS: \$41,457.52 to \$58,036.94 annually with excellent benefits.

THE SELECTION PROCESS will be job related and will consist of one or more of the following: education and experience evaluation; written, oral, or performance tests; or other assessment methods. The Department of Employee Relations reserves the right to call only the most qualified candidates to oral and performance examinations. Oral examinations may include written exercises. Selection process component weights will be determined by further analysis of the job.

The examination will be held as soon as practical after **August 2, 2013**. Receipt of applications may be discontinued at any time after this date without prior notice, however, recruitment may continue until the needs of the City have been met. Qualified applicants will be notified of the date, time and place of the examination. Unless otherwise required by law, the City of Milwaukee will not provide alternative test administration. The applicant is responsible for attending all phases of the job selection process at the time and place designated by the City of Milwaukee.

APPLICATIONS and further information may be obtained in person or via mail from the City of Milwaukee Department of Employee Relations, Room 706, City Hall, 200 E Wells St, Milwaukee, WI 53202-3554, from www.milwaukee.gov/jobs, or by calling 414.286.3751.

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