

Opportunity Title: ORNL Laboratory Technology Program-Chemical Sciences

Opportunity Reference Code: ORNL18-LabTech-CSD

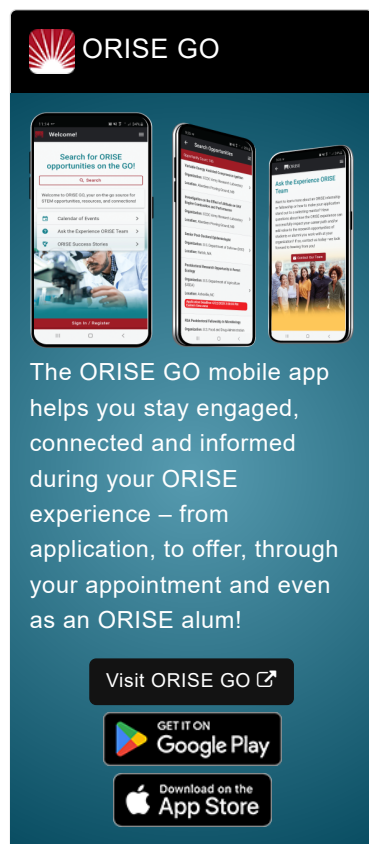
Organization Oak Ridge National Laboratory (ORNL)

Reference Code ORNL18-LabTech-CSD

Description The Nuclear Analytical Chemistry Isotopics Laboratories Group of the Chemical Sciences Division at Oak Ridge National Laboratory invites applications for a Chemical Laboratory Technician at the Transuranium Analytical Laboratory in the Radiochemical Engineering Development Center. The successful candidate must possess the skills and technical capabilities to perform a broad range of inorganic analyses with emphasis on demonstrated expertise in advanced ICPMS operations and analyses. Excellent communication and interpersonal skills, the ability to work and communicate effectively in a team environment, working knowledge of ESH&Q requirements applicable to chemical research, and experience interfacing with operations managers, facility engineers, research scientists, and radiological control technicians are additional attributes which will be considered. The position supports ORNL's research programs and chemical operations focused on the nuclear fuel cycle and the production and purification of trans-plutonium radioisotopes.

Major Duties and Responsibilities:

- Be proficient and knowledgeable of elemental ICPMS quadrupole maintenance, setup, and operations. Conduct fully-quantitative, semi-quantitative, and high precision isotope ratio measurements for quantification of radiological isotopes in highly radioactive sample streams.
- Maintain the ICPMS by performing day to day, preventative, and corrective maintenance.
- Perform laboratory tests as needed to assist in developing, modifying, and refining operational and/or experimental procedures.
- Collaborate in the development of new analytical methodologies and analytical instrumentation. Presentation of developed work at appropriate professional conferences or in peer reviewed journals.
- Maintain a working inventory of parts and consumables dedicated to ICMS.
- Participate in planning workflow for the laboratory, including establishing priorities within and between projects, and determining the best direction of the laboratory efforts for various experiments, tests, and analysis.
- Be familiar with laboratory analytical instrumentation, including NMC and Protean gas flow proportional counters, Canberra 4000/4200 gas flow proportional counters, Perkin Elmer 5110R liquid scintillation counter, BF3 neutron detector, and Windows based alpha and gamma ray spectrometry system (Canberra Genie-2K) utilizing HPGe and Silicon Surface Barrier detectors.
- Obtain and maintain all ORNL training requirements for a radiation worker performing analytical work in designated non-reactor radiological facilities (Category II or III) and radiological facilities to include being qualified as a



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respirator wearer.

- Utilize Windows based personal computers instrumentation operation, data reporting, analytical calculations, and sample management.

Qualifications • A Bachelor of Science degree in chemistry is required.

- Familiarity with the use of IC and ICPMS for the measurement and quantification of radioisotopes and non-natural abundant elements is required.
- Experience performing sample preparations including separation techniques for analytical radiochemistry and inorganic determinations is preferred.
- Professional experience working shift work in a production facility is preferred.
- Experience in the handling and safety practices associated with handling radioactive materials is required.
- Familiarity with gamma detectors, gross alpha/beta detectors, liquid scintillation detectors, and gas flow proportional counters is preferred.
- Professional experience working directly in C-zone laboratories, glove boxes, and shielded hot cells in a Category II, non-reactor nuclear facility such as the REDC is required.

The ORNL Laboratory Technology Program is administered by Oak Ridge Associated Universities through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education (ORISE).

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Any degree .
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#) )

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