

Opportunity Title: Analytical Chemistry Lab Support

Opportunity Reference Code: EPA-NSSC-0007-60-7-9-24

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply Click [HERE](#) to Apply

Description The EPA National Student Services Contract has an immediate opening for a full time Analytical Chemistry Laboratory Support position with the Office of Research and Development at the EPA facility in Research Triangle Park, NC.

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

What the EPA project is about

Within ORD, the Center for Environmental Measurement and Modeling's (CEMM) Air Measurement and Characterization Division (AMCD) conducts research relating to air pollution issues including high quality measurements of volatile organic compounds (VOCs) in source emissions from a wide range of pollution sources and in ambient air near pollution source-impacted communities. ORD CEMM utilizes both standard EPA measurement methods and develops novel measurement methods to quantify VOCs in emissions and in ambient air.

What experience and skills will you gain?

As a team member, you will be part of a team working on measuring volatile organic compounds from combustion and industrial sources and in ambient air. Additionally, you will assist in the testing of innovative measurement technologies for characterizing VOCs in source emissions and near-source ambient air.

This work will support numerous research projects to characterize VOC emissions from major pollution sources in laboratory emissions testing efforts and will aid in agency efforts to improve measurement methods to quantify fugitive VOC emissions near pollution source impacted communities. Several VOC measurement technologies that are in development include optimized air sampling, lower-cost VOC sensors, field gas chromatographs, and real-time optical spectroscopic techniques.

The team member will support other team members in conducting VOC sample analyses including cleaning and preparing sampling media, extracting samples, operating laboratory analytical instrumentation, and data processing. The team member will also assist in testing novel measurement technologies that include operating gas dilution systems and collecting and processing measurement data. Sample analyses include a range of EPA Methods, such as EPA Methods 25C, TO-11A, TO-14A, TO-15A, that utilize gas chromatography/mass spectrometry (GC/MS), gas chromatography with flame ionization detection (GC-FID), and high-



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performance liquid chromatography (HPLC). The team member will assist with laboratory experiments by preparing and collecting air samples, analyzing samples on laboratory analytical systems and processing data and summarizing results. The team member will also assist in conducting laboratory testing to evaluate the performance of novel measurement technologies.

The team member will assist the mentor in:

- General laboratory work, including sample preparation, extraction, and cleaning;
- Calibrating and operating analytical instrumentation including GC/MS, HPLC, IC systems;
- Data processing of GC/MS and HPLC chromatographic data;
- Operating gas dilution system to test new measurement technologies;
- Analyzing, summarizing and reporting sampling data; and
- Participating as a member of a multi-disciplinary research team.

Required Knowledge, Skills, Work Experience, and Education

- Experience with field air sampling techniques and/or general laboratory procedures;
- Experience performing scientific data analysis and visualizing results;
- Demonstrated written and oral scientific communication skills;
- Experience with Microsoft Office products;
- Education and/or experience with GC/MS, GC/FID, HPLC, and spectroscopic instrument operation and data analysis; and
- Demonstrated education and/or experience in gas flow systems including experience with gas phase measurements and measurement systems, pump systems, gas cylinder operation, and instrument calibration.

Desired Knowledge, Skills, Work Experience, and Education

- Experience with data analysis software packages R, Matlab or equivalent.

Location: This job will be located EPA's facility in Research Triangle Park, NC.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of \$23.84 for hours worked.

Hours: Full-time.

Travel: Occasional overnight travel may be required.

Expected start date: The position is full time and expected to begin August

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2024. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA.

For more information, contact EPANSSC@orau.org. Do not contact EPA directly.

- Qualifications**
- Be at least 18 years of age **and**
 - Have earned at least a Bachelor's degree in environmental science, engineering, chemistry, physics, or other closely related field of study from an accredited university or college within the last 24 months **and**
 - Be a citizen of the United States of America or a Legal Permanent Resident **and**

EPA ORD employees, their spouses, and children are not eligible to participate in this program.

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
 - **Degree:** Bachelor's Degree received within the last 24 month(s).
 - **Overall GPA:** 2.00
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#) )
 - **Earth and Geosciences** ([1](#) )
 - **Engineering** ([27](#) )
 - **Environmental and Marine Sciences** ([14](#) )
 - **Physics** ([16](#) )

Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Bachelor's degree in environmental science, engineering, chemistry, physics, or other closely related field from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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