USDA-ARS Sweetpotato Chemistry Laboratory Assistant

DESCRIPTION: The USDA-ARS Food Science, Market Quality, and Handling Research Unit located in the Department of Food, Bioprocessing, and Nutrition Sciences at NC State University, Raleigh, NC is seeking a laboratory assistant to independently conduct sweetpotato chemical analyses, including but not limited to β-carotene and starch measurements. The work would support our ongoing collaboration with the NCSU sweetpotato breeding program to perform compositional analyses of their sweetpotato germplasm. This position would start during summer break (starting date is negotiable) and can continue throughout the 2022-23 academic year. We are seeking an individual who has chemistry lab experience with an interest in food chemistry. The laboratory assistant will report to Dr. Suzanne Johanningsmeier, USDA-ARS Research Food Technologist and FBNS Associate Professor, and Dr. Matthew Allan, USDA-ARS Research Associate Food Technologist.

QUALIFICATIONS (Required):

- Majoring in Food Science, Chemistry, Biochemistry, or closely related field
- Passed at least 1 semester of Organic Chemistry, Food Chemistry, or Food Analysis lab course
- Able to calculate and prepare chemical solutions and produce accurate, reliable data
- Strong verbal and written communication skills
- Self-motivated and able to work independently
- Able to work under orange light conditions for up to 4 hours during carotenoid extractions

QUALIFICATIONS (Desirable):

- Able to work part-time during the academic year
- Work experience in a laboratory setting
- Experience using organic solvents and a UV-Vis Spectrophotometer
- Passionate about food chemistry and sweetpotatoes

OUTLINE OF DUTIES:

1. Perform standardized chemical or biochemical tests and analyses.
2. Prepare all needed calibration standards, stock solutions, and store properly to ensure accuracy of results.
3. Set up, perform routine care and maintenance, and calibrate standard chemistry equipment and instrumentation (such as pH meter, balances, pipettes, UV-VIS Spectrophotometer).
4. Record observations in laboratory notebooks, accurately record and organize data in spreadsheets, and write laboratory reports of experimental procedures and results.
5. Follow all laboratory safety regulations & assist in maintaining a safe working environment.
6. Identify the hazards associated with chemicals used in a laboratory setting and apply appropriate storage, containment, and disposal protocols.
7. Record the receipt, handling, and analysis of samples and store materials appropriately such that the integrity is maintained for the component(s) of interest.
8. Order & maintain laboratory supplies and materials necessary for analyses.
9. Troubleshoot challenges met in setting up or conducting analysis of samples.
10. Maintain clean and tidy work areas.
11. Contribute to the documentation of laboratory standard operating procedures (SOP).
12. Complete analyses within projected timeframes and communicate progress regularly to Drs. Johanningsmeier and Allan.

For more information, contact Dr. Suzanne Johanningsmeier at suzanne.johanningsmeier@usda.gov
or Dr. Matthew Allan at matthew.allan@usda.gov