

A research opportunity is available at the National Institute of Standards and Technology (NIST) located in Gaithersburg, MD. The postdoctoral position is part of a collaboration with World Wildlife Fund, Inc. (WWF).

*Project Summary:* WWF and NIST are working together to advance the global seaweed farming industry by addressing key seaweed production barriers. There is a critical need to evaluate the comparability and accuracy of chemical analyses of farmed seaweed products performed across the industry, with follow-up interactions among industry analysts and measurement science specialists to facilitate knowledge transfer. Moreover, developments of certified reference materials and documented analysis methods are required to foster better alignment of measurement approaches and improved consistency and accuracy of measurement results.

*Position Summary:* To accomplish the project objectives, the Postdoctoral Researcher will work alongside NIST staff to lead and administer a series of interlaboratory intercomparisons through the NIST Dietary Supplement Laboratory Quality Assurance Program (DSQAP). This program typically engages many tens of participating laboratories in analytical studies to better understand analytical method and laboratory performance. The exercise in which the postdoctoral researcher will be involved comprises some of the collaborative work between NIST and WWF, including measurements of chemical elements, several classes of organic components, and proximates in farmed kelp.

The postdoctoral researcher's administration duties will include: (1) communication with QAP participants; (2) management, statistical analysis, and interpretation of data; and (3) dissemination of observations and technical recommendations.

Dissemination will include summarizing data and observations, preparing a final report for publication, providing certificates and results to participating laboratories, and organizing and chairing one or more workshops. The workshops are intended to provide meaningful connections between industry participants and between NIST and the industry. Topics are likely to include useful discussions of the QAP results, measurement challenges faced, and solutions found; knowledge transfer from NIST to the industry and vice versa; a bright focus on the need for analytical protocols and certified reference materials; and consensus on next steps.

If appropriate, the Postdoctoral Researcher will develop and apply analytical methods for kelp analysis in the NIST laboratories.

Through this position, the postdoctoral researcher will have the opportunity to develop their knowledge of and skills in analytical chemistry, statistical evaluation of data, and verbal and written communication. They will gain valuable experience in project leadership and administration and in organizing and interacting with a large and varied set of industry staff. Working alongside NIST staff will provide unique insights into world-class chemical measurement science.

*Minimum Qualifications:* Ph.D., with a focus in Analytical Chemistry. Degree must have been received within five years of the appointment start date.

*Preferred Skills:*

Experience with analytical techniques (inorganic, organic, or both).

LC-Abs/FLD, LC-MS, ICP, etc.

Experience with compiling, analyzing, and interpreting analytical data.

Strong written and oral communication skills in English.

*Other useful skills:*

Experience with analysis of botanicals, dietary supplements, and/or foods.

Experience with elemental speciation analysis.

Mentor: The mentor for this opportunity is Dr. Carolyn Burdette ([carolyn.burdette@nist.gov](mailto:carolyn.burdette@nist.gov)). If you have questions about the nature of the position, please contact the mentor.

Anticipated Appointment Start Date: Spring 2022.

Appointment Length: The appointment will initially be for 14 months, but may be extended, subject to availability of funding.

Level of Participation: The appointment is full-time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience.