

Collection and Handling of Water Samples for Trace Metals Analysis

Instruction Course on Sampling for Trace Metals using the “Clean Hands/Dirty Hands” Method

This course is designed for anyone collecting ambient water samples for the analysis of low-level total and dissolved mercury and other trace metals, as well as various metals species (including methylmercury and inorganic arsenic species). This one-day course will include a half-day in a classroom with lectures covering the circumstances in which low-level detection limits would be desired or required, EPA analytical methods that must be used, proper handling and preservation of samples, necessary sampling supplies, considerations that should be made prior to and during sampling activities in order to collect samples correctly and avoid contamination, various sampling and field-filtration techniques, and field quality assurance sample collection requirements. The second half of the day, students will engage in hands-on field exercises, where they will be given the opportunity to practice several surface water sampling protocols using various sample collection methods and following the “Clean Hands/Dirty Hands” sampling techniques. Time permitting, sample collection techniques and recommendations for additional sample matrices may be discussed that are specific to the student’s needs and area of interest. Instructors will cover:

Why the Need for Low-Level Metals Detection?

Reasons why low-level metals detection and EPA Sample Collection Method 1669 is desired and becoming required. A brief discussion regarding the Clean Water Act, Total Maximum Daily Loads, and drivers for low-level detection.

EPA 1600 Series Methods

Various EPA Analytical Methods (1600-series) available for trace metals analysis. Instruction will also be provided for proper handling and preservation of samples prior to or immediately following laboratory receipt.

Sampling Supplies & Equipment

The correct equipment and supplies that **MUST** be used in order to successfully collect a water sample for trace-level metals analysis. Surface and subsurface sampling supplies will be discussed, including equipment needed for proper field filtration.

Considerations Before & During Sample Collection

In order to obtain credible and scientifically defensible data, considerations should be made before and during sample collection. The instructor will discuss what should be included in a sample analysis plan when collecting ambient water quality samples for low-level metals analysis. Participants will gain an understanding of different sources of contamination or interferences that can cause problems with trace metals analysis and ways to avoid contamination.

Clean Hands/Dirty Hands Sampling Technique

EPA Method 1669 “Clean Hands/Dirty Hands” for several different sampling methods and a practical demonstration.



September 13, 2013
9:00 AM to 4:00 PM

- Morning Session, 9 am -12 pm: classroom session at the Corinthian Yacht Club.
- Afternoon Session, 1 pm - 4 pm: we will be performing water sampling exercises on the boat dock next to yacht club.
- Lunch, coffee, tea, and breakfast muffins will be provided.
- Please bring pen/pencil, notepad, and a coffee mug or water bottle to reduce waste.
- We also suggest that you wear clothing that will be comfortable for field activities or rain.



*Corinthian Yacht Club of Seattle
7755 Seaview Ave NW, Seattle WA 98117*

REGISTRATION FORM

COST: \$400

Register before August 15th and pay only \$350!

Name: _____

Organization: _____ **Job Title:** _____

Street Address: _____

City: _____ **State:** _____ **Zip:** _____

Phone: _____ **Fax:** _____ **Email:** _____

Pay by check:

Please make checks payable to
Brooks Rand Labs, LLC and mail with
this completed form to:

Brooks Rand Labs
ATTN: Amanda Royal
3958 6th Ave NW
Seattle WA 98107

Pay by credit card:

Please send this completed form to
amanda@brooksrand.com or fax to 206-632-6017.

Visa Master Card

Card Number: _____

Expiration Date: _____ Billing Zip: _____

Total Charge: \$ _____

Signature: _____

Student Cancellation Policy: Registration fees are fully refundable up to 30 days prior to the class and 50% refundable (or 100% credit) thereafter, up to 1 week prior to the class. No refunds are issued for cancellations occurring less than 1 week before the day of the class.

Class Cancellation Policy: If more than 5 students are not registered prior to August 21st, then the class may be cancelled. Full refunds will be issued if the class is cancelled.