

## EPA Method 1669

# Field Sampling Quick Reference

This method is designed to provide the level of protection necessary to prevent contamination in nearly all situations and requires that a two-member team participate in the collection of samples.

“Clean Hands” is responsible for all procedures involving direct contact with the sample and sample container.

“Dirty Hands” is responsible for preparing the sample containers for collection, operations of any machinery, and all other activities that could introduce contamination of the sample.

### Prior to Beginning to Collect Samples

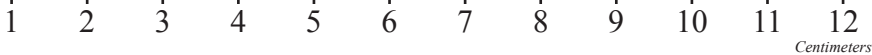
- select and prepare an appropriate location for a sampling station
- establish, and eliminate if possible, any sources of contamination
- organize all equipment and ensure adequate supplies
- remove jewelry, watches, metallic items, etc.
- thoroughly cleanse and dry hands
- determine roles and responsibilities (“Clean Hands”/“Dirty Hands”)
- wear clean gloves at all times and change them frequently
- allow site to stabilize prior to collecting samples

### “Dirty Hands”

- does not disturb sample source
- does not touch primary container bags
- does not touch sample containers
- does not touch “clean equipment”
- handles all “non-clean” materials
- arranges sampling materials
- opens/closes shipping containers
- opens/closes secondary container bags
- operates pump/metallic equipment
- fills out necessary documentation

### “Clean Hands”

- does not touch “non-clean” materials
- does not touch secondary container bags
- does not touch shipping containers
- handles all “clean” materials
- assembles clean sampling equipment
- assembles sample tubing & filters
- opens/closes primary container bags
- directly holds sample container
- submerges container/collects sample



## General Container & Preservation Recommendations for Aqueous Samples

Analyses	Container	Field Preserve	Temperature	Holding Time
Trace Metals ICP-MS	125-250 mL HDPE	no	ambient	Preserve - 14 days Analysis - 180 days
Trace Metals EPA 1640 (seawater)	125 mL-2 L HDPE	no	ambient	Preserve - 14 days Analysis - 180 days
Total Mercury EPA 1631	125-250 mL FLPE or glass	no	ambient	Preserve - 28 days Analysis - 90 days
Methylmercury EPA 1630	250 mL FLPE or glass	preferably	0-4 °C	Preserve - 48 hrs. HCl ▲ Analysis - 180 days
Arsenic Species EPA 1632	125-250 mL HDPE	yes	0-4 °C	Preserve - immediately HCl Analysis - 28 days
Arsenic Species ★ IC-ICP-MS	125 mL HDPE 6mL vacutainer	yes	0-4 °C	Preserve - immediately EDTA Analysis - 28 days
Cr(VI) ★ IC-ICP-MS	125 mL HDPE	yes	0-4 °C	Preserve - immediately NH <sub>4</sub> OH/(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> Analysis - 28 days (14 days for DW)
Selenium Species ★ IC-ICP-MS	125 mL HDPE	no	0-4 °C	1 year (cryofrozen at lab)

Samples that will be filtered in the laboratory *must not* be field preserved, *must* be kept cold, and *must* be rush shipped. There are matrix specific recommendations for the filtration and preservations of many sample types; therefore, it is always recommended to confirm sampling plan with a Brooks Applied Labs staff member prior to sample collection.

★ Field filtration is strongly recommended to avoid co-precipitation of metals.

▲ Saline waters preserve with H<sub>2</sub>SO<sub>4</sub>.



### Packing & Shipping Instructions

- all sample containers must be sealed in double-bags
- all sample containers must be clearly labeled with a unique ID
- all sample containers must be documented on the COC
- all COCs must be filled out completely and signed
- all shipping containers must be sealed with custody seals

#### Ambient Samples

Samples that can be maintained at an ambient temperature and unpreserved may be shipped in a cardboard box at standard shipping rates. However, the samples *must* arrive at the laboratory before the preservation holding time has expired.

#### Temperature-Sensitive Samples

Samples that must maintain a specific temperature (e.g. 0-4 °C) must be shipped in a cooler packed with ice to arrive at the laboratory the following day. Distribute the ice evenly to ensure that the temperature of the samples remains within criteria.

