

# Sample Collection & Shipping

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*See our website for Chain-of-Custody/Analytical Service Request documentation and a list of containers, amount of sample required, preservatives and holding times for various analyses and sample types. If you have any questions, call 307-742-7995 for our Laramie facility, or 307-362-3176 for our Rock Springs facility, and we will be happy to assist you.*

## How to Collect Samples

This is a general overview of common sample collection methods. More in-depth instructions can be provided as needed on a project by project basis.

## Potability / Well Water Samples

Contact Wyoming Analytical Labs for a Potability Sampling Kit free of charge. Sampling instructions and documentation, as well as a sterilized coliform bottle, are included in the kit.

## Water Samples

Contact WAL for a list of bottles and preservatives needed for the analysis you are requesting, or bottles and preservatives can be provided by requesting a sample kit. Each sample may require several bottles, depending on the analysis requested. Make sure that the sample water is well mixed just prior to filling the bottles, so that any oily or solid material in the water has not separated or settled. Label each bottle as it is filled with the sample ID, date and time.

- Pre-preserved bottles: If the bottle has a colored dot on the lid and/or side, it contains an acid preservative (usually hydrochloric, nitric or sulfuric acid). Do not allow the acid to touch your skin. If it does, rinse the area immediately with copious amounts of clean water. When pre-preserved bottles are requested, WAL provides gloves for you protection.
- Glass bottles (other than VOA vials): Fill to the neck and cap tightly.
- Plastic bottles (other than coliform bottles): Fill to the neck and cap tightly.
- Coliform bottles: Because the bottle is sterile, wash hands thoroughly before handling. Do not touch the inside of the bottle, inside of the lid or the rim of either. Do not rinse out the tablet or powder inside the bottle. Fill only to the "E.P.A. 100ML Line." Close tightly, fold down the tab on the lid and lock by feeding the long tab through the keyhole until it clicks into place.
- VOA vials: Pouring gently and without causing bubbles to form, fill the vial completely until there is a dome of water atop the opening, just on the verge of over-flowing. Without jostling the vial, cap tightly. Turn the vial upside down and tap with your finger. If no airspace or bubbles rise, the vial is filled correctly. If there are bubbles, uncap and add a bit more sample. Recap and check again for bubbles. A few pin-head size bubbles can be ignored, but airspace inside the vial can affect your results.

### **Small Area Soil Samples**

Contact WAL for a list of jars needed for the analysis you are requesting, or jars can be provided by requesting a sample kit. Fill each jar completely, compressing the soil inside so that there is as little airspace as possible. Clean debris and dirt from the threads and cap tightly. Label each jar with the site location, sample ID, depth, date and time.

### **Large Area Soil Sample**

Contact WAL for a list of jars needed for the analysis you are requesting, or jars can be provided by requesting a sample kit. Once you have jars, you will need a five gallon bucket and a shovel. Sketch a map of the site where the sample is to be collected. Mark 5 to 10 spots in the site that are approximately equidistant from each other. Collect a small shovel-full of material in the bucket from each spot at varying depths. Note the approximate depth of contamination on the map if collecting for spill clean-up. Mix the soil well in the bucket, breaking clumps and removing large pieces of plant material or rocks. Fill each jar completely, compressing the soil inside so that there is as little airspace as possible. Clean debris and dirt from the threads and cap tightly. Label each jar with the site, date and time. Submit a copy of the sketched map with the sample and keep a copy for your own records.

### **Sludge and Sump Samples**

The method of analysis and the containers needed often depend on the amount of solid material, oil and water in the sample (phases). Contact WAL for a list of jars or bottles and preservatives needed for the analysis you are requesting, or containers can be provided by requesting a sample kit. Please tell us if the sample is mostly solid, mostly liquid or combinations thereof. Each sample may require several containers, depending on the analysis requested, and occasionally will need to be separated into their phases at the lab for individual analysis. Make sure that the sample material is well mixed just prior to filling the containers, so that the amount of oil, water and solid in each container represents how much of each is in the original material. Label each container as it is filled with the sample ID, date and time.

### **Ash, Coal, Biomass, Petroleum and Construction Material Samples**

All samples should be double bagged prior to shipping to prevent leaks and spills and to preserve the moisture content of the sample. Label each sample clearly. See our website "Holding Times" document for how much material is required for your desired analysis. Remember, if you are unsure how much sample is required, it is better to send too much rather than too little. Feel free to contact us for confirmation on sample weight or volume required.

## **How to Ship Samples**

Not all samples are time or temperature sensitive, but it is best to assume that your required analysis is affected by both. Keep samples cool but not frozen and ship them to the lab as soon after collection as possible. We suggest using UPS or FedEx, rather than the US Postal Service. For temperature control, newspaper or brown paper is much better insulation than bubble wrap.

### **Water Samples**

Water samples should be shipped in a cooler with ice or frozen gel packs. Pack the cooler with enough packing material to ensure that the bottles stay upright, and that each one is well protected and will not shift about during shipping. Fill out a Chain-of-Custody/Analytical Service Request and enclose it in a Ziploc bag, then place it in the cooler with the samples. Ship the cooler immediately, ensuring that it will arrive at the lab within 24 hours of sampling.

### **Soil, Sludge and Sump Samples**

These samples should be shipped in a cooler with frozen gel packs, not ice. Pack the cooler with enough packing material to ensure that the bottles or jars stay upright, and that each one is well protected and will not shift about during shipping. Fill out a Chain-of-Custody/Analytical Service Request and enclose it in a Ziploc bag, then place it in the cooler with the samples. Ship the cooler immediately, ensuring that it will arrive at the lab within 48 hours of sampling.

### **Petroleum and Waste Oil Samples**

These samples should be shipped in a cooler or box. Use ice or frozen gel packs if your required analysis tests for volatiles or is a measure of temperature (i.e. Hydrocarbon Fingerprint, Simulated Distillation, Flash Point, Freeze Point, Cloud Point, Pour Point, etc.). Double bag each bottle in Ziploc bags. Pack the container with enough packing material to ensure that the bottles stay upright, and that each one is well protected and will not shift about during shipping. Fill out a Chain-of-Custody/Analytical Service Request and enclose it in a Ziploc bag, then place it in the container with the samples. Ship the container immediately, ensuring that it will arrive at the lab within 48 hours of sampling.

### **Ash, Coal, Biomass, Cogeneration and Construction Materials**

These samples should be shipped in a box. Pack the box with enough packing material to ensure that each sample is well protected and will not shift about during shipping. Fill out a Chain-of-Custody/Analytical Service Request and enclose it in a Ziploc bag, then place it in the box with the samples. If possible, ship the box immediately, ensuring that it will arrive at the lab within two weeks of sampling.