

Prior to sampling, please read this entire sheet of directions.
If you have any questions, please contact IAL immediately.

Considerations

Fittings do not need to be over tightened. All fittings on the sampling hardware are Swagelok®, which ensures an air-tight seal if installed correctly. Adequate tightening is finger tight plus *approximately* ¼” turn with a 9/16” wrench. **When assembled, hardware (the flow controller) should not be able to be rotated by hand.**

Time Integrated Sampling

Set-up

- 1. Remove brass cap from the canister.
- 2. Attach flow controller. The flow controller should be tightened at eye level on a flat surface with a 9/16” wrench. Tighten snugly but do not over tighten.
 - 1. Flow controllers for ambient or indoor air samples will have a filter on the end (figure 3), while flow controllers for soil gas, sub-slab, or near-slab will have hose barb on the end (figure 2). These fittings can be changed as per client request.
- 3. If rough edges in threads are encountered, gently use the 9/16” wrench for one-quarter turn to get over the rough patch. Applying too much pressure will strip the threads and compromise sample integrity.

NOTE: If the flow controller is not seated properly or if the controller is not tightened all the way (i.e. the controller continues to rotate after tightening), rapid loss of canister vacuum is possible and/or sample integrity will be compromised.

Sampling

- 1. Place canister in desired location and open canister valve fully.
 - 1. The flow controller should read approximately -30” Hg.
 - 2. Record the initial pressure, temperature, start time, and start date on the COC.
- 2. The pressure should be monitored near the end of the sampling period to ensure that the sampling is ended slightly before the canisters reach ambient pressure.
- 3. At the end of sampling period, record canister pressure, stop time, and stop date on the COC.
- 4. Close valve fully, remove flow controller with the 9/16” wrench, and replace brass cap.

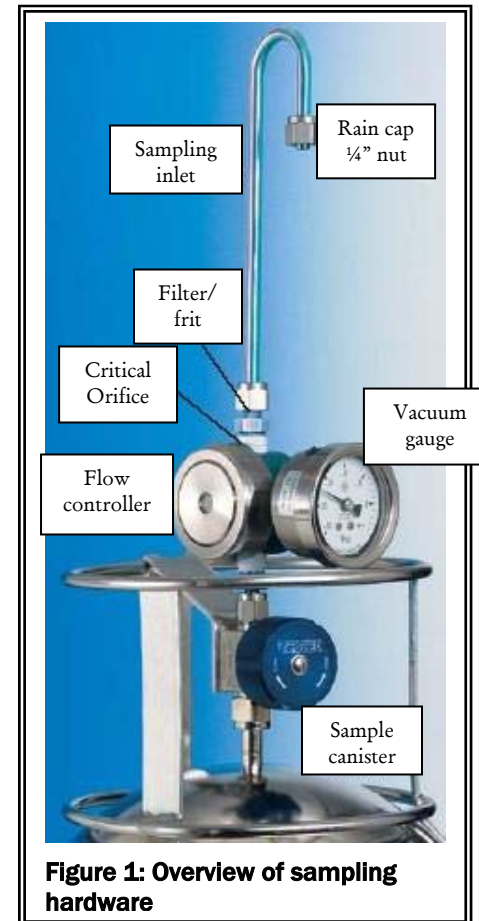


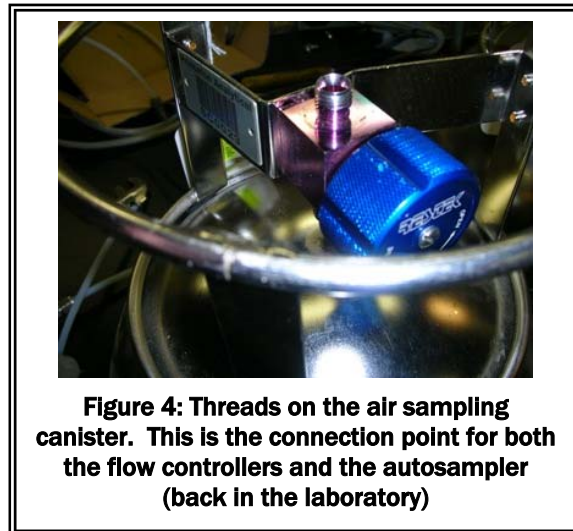
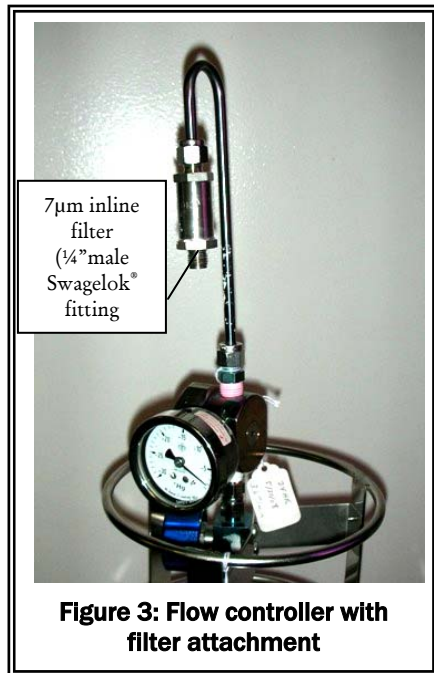
Figure 1: Overview of sampling hardware



Figure 2: Flow controller with hose barb attachment

Grab Sampling (less common)

- ☞ Remove the brass cap from the canister.
- ☞ Turn canister valve to the open position. The canister will hiss as air enters the canister.
- ☞ As soon as the hissing slows (before it stops completely), close the canister valve fully by tuning clockwise until hand tight.
- ☞ Replace brass cap.



After Sampling

- ☞ Always replace the brass cap to the air sampling canister
- ☞ Complete the chain of custody in its entirety. Do not cross out fields on the COC that may not apply to your sampling event.
- ☞ The project manager should sign the COC in the field marked "PM Signature"
- ☞ Barometric Pressure can be obtained online from <http://www.wunderground.com> *
*The station value for barometric pressure (which is the absolute barometric pressure) shall be requested and an adjustment for elevation differences between the weather station and sampling point shall be made at a rate of minus 2.5 mm Hg (0.1 in.) per 30 m (100 ft) elevation increase or plus 2.5 mm Hg (0.1 in) per 30 m (100 ft) elevation decrease

NOTE: Times should be recorded on the COC based on a 24-hour clock (AKA military time).
e.g. If it is 3:15PM, the time should be recorded as 15:15.

WARNING!

Please follow these directions carefully. Failure to follow these instructions may cause damage to canisters and/or flow controllers. If damage occurs, analysts will be unable to draw samples from canisters. The canister user will be held monetarily responsible for damages.

If you have any questions on use of canisters, please call (973) 361-4252 x273. We are happy to help!