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Guidelines For Air Sampling Using Evacuated Canisters

Each canister you receive for sampling is clean and has a vacuum of approximately -30# Hg (negative 30 inches of mercury). Each canister has been checked for leaks and the pre-sampling pressure has been recorded.

For a time-integrated sample, a regulator (critical orifice) is used to control the air flow into the evacuated canister. Regulators are calibrated to allow air to enter over a fixed period of time (typically 1-24 hrs). It is important to note that regulators are calibrated to leave a slight vacuum present in the canister at the end of the sampling period. For this reason, it is imperative to close canister valve as close to the end of the sampling period as possible.

Grab Sampling

1. Place canister in the appropriate location and open the canister valve fully (2-3 turns counterclockwise). With certain canisters, you will not be able to turn the valve more than 2 turns.
2. Listen for the sound of air quickly entering the canister until the sound stops (less than 1 minute).
3. Close valve fully (2-3 turns clockwise until tight).

Time Integrated Sampling

1. Place canister in the appropriate location and open canister valve fully (2-3 turns counterclockwise). With certain canisters, you will not be able to turn the valve more than 2 turns.
2. The vacuum gauge should read approximately -30# Hg.
3. Record initial pressure and start time on tag attached to the canister.
4. At the end of the sampling period record canister pressure and stop time on tag attached to the canister. The vacuum gauge should read between -1.0# Hg to -10# Hg. If the pressure is outside of this range, it may be necessary to re-sample. Please call the laboratory for further instructions.
5. Close valve fully (2-3 turns clockwise until tight).