

## **Environmental and Chemical Research Services**

## ANALYTICAL SAMPLING PROCEDURE TEDLAR GAS SAMPLE BAGS

1. Prepare to attach the Tedlar bag securely to the sampling line using appropriate connections. Silicone tubing with an internal diameter of not greater than 0.125" (one-eighth inch) must be used to connect to the valve on the Tedlar bag to insure a tight connection. If sampling high pressure and/or flow, a stainless steel needle-type metering valve can be connected to the sampling line to accurately control the sampling flow. For sampling at low pressures a metering valve may not be necessary.

*Note:* Keep all bags at a normal indoor air temperature until just before sampling in cold weather. Any sampling lines or control devices should be constructed from materials that are inert and non-sorbing. Teflon or 316 stainless steel (if not testing for sulfur) is to be preferred. Plastic or rubber tubing should never be used when sampling for trace level components. All bags supplied for sampling are empty, and shipped with closed valves.

- 2. Ensure that all components of the sampling line have been well purged and flushed with sample gas. Close down the metering valve (if used) and open the sample line valve. Attach the outlet from the metering valve (if used) to the valve on the Tedlar bag using a short piece of 0.125" I.D. silicone tubing. A hose clamp may also be necessary. Open the valve on the Tedlar bag by turning one half to one turn.
- 3. Using the metering valve or sample line valve for control, adjust the sample flow until the bag slowly inflates. Fill the bag to approximately 75% capacity.

*Note:* Do not attempt to fill a bag completely; it is best to leave room for expansion.

- 4. Empty the bag by gently pushing on it with the valve still open, and refill two more times to thoroughly passivate the interior surfaces.
- 5. Close the tedlar bag valve until it is snug and remove the silicone tubing.
- 6. Securely attach a label to the filled bag, indicating the date, time and any other relevant descriptive information for later identification.
- 7. Repack the bag in an appropriate shipping container, and return it to GTI for analysis.

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**NOTES:** This sampling procedure is provided only as a guide to sampling gas from a sampling port. It assumes a representative sample flow of the source gas can be obtained. It is the sampler's responsibility to ensure a representative sample. Any historical information regarding the sample would aid us in better analyzing your sample. This would include previous results of laboratory or field screening analyses.

It is the sampler's responsibility to ensure sampling is performed in a safe manner. Neither GTI nor any person acting on behalf of GTI assumes any liability with respect to the use of, or for damages resulting from the use of, any information presented in this procedure.