

Collecting Wellhead Samples in Single-Use IsoTubes[®]

CAUTION: The IsoTube[®] wellhead sampling device includes a pressure regulator that is rated for use up to a maximum of 3000 p.s.i.g. (200 bars). If pressures higher than this could be encountered, additional pressure control will be required.

1. Locate a suitable, vertical port for collecting a sample. A 'suitable port' will supply a dry, liquid free gas sample and should consist of both a 1/4" female NPT port, and a control valve that can be used to turn the gas on and off.
2. Make sure that the threads on the Wellhead Sampler are clean and wrap 2 or 3 layers of Teflon[®] tape, clockwise onto the male threads of the filter.
3. Screw the Wellhead Sampler into the sampling port and then tighten by using a wrench on the body of the filter.
4. With the Wellhead Sampler valve in the "shut" position, slowly open the *control valve on the sampling port*. Line pressure will be indicated on the **inlet** pressure gauge.
5. Insert the bottom IsoTube[®] valve into the Wellhead Sampler by simply pushing it firmly into the chuck (there are cogs in the chuck which grip the threads on the IsoTube[®] valve and hold it in place). To further tighten the IsoTube[®] in place, lightly rotate it with your fingers, screwing it into the chuck.
6. Turn the handle on the 3-way valve to the "open" position (vertical). The IsoTube[®] will fill with gas. Note the pressure on the outlet gauge. The pressure should be less than 100 p.s.i.g.
7. With the 3-way valve still in "open" position, the Wellhead Sampler and the IsoTube[®] can be purged by depressing the spring valve in the tip of the top IsoTube[®] valve (like letting the air out of a tire). Hold the spring valve open for a few seconds. This shortcut should be minimized if you are sampling very wet gases or under very cold conditions as it can result in condensing liquids in the IsoTube[®].
8. Final purging and filling of the IsoTube[®] is accomplished by rotating the handle on the 3-way valve "open" and "shut" to alternately pressurize and vent the IsoTube[®]. **NOTE:** If the gas you are sampling contains hydrogen sulfide or other toxic components, a length of tubing can be attached to the vent port to direct the gas safely away from you.
9. The IsoTube[®] should be filled to the output pressure of the regulator and then vented to atmospheric pressure by watching the outlet pressure gauge and listening to the flow of gas out the vent. The more times this process is repeated, the less the chance of atmospheric contamination of the sample. A minimum of 10 cycles is recommended.
10. After the IsoTube[®] is filled for the last time, leave the 3-way valve in the "open" position.
11. The IsoTube[®] may now be removed from the chuck by sliding the knurled sleeve on the outside of the chuck down, away from the IsoTube[®]. This process should be done quickly so as to minimize the amount of gas lost. If the IsoTube[®] is held very lightly, it will generally pop up out of the chuck from the spring action of the valve and the gas pressure. Be ready to catch it.
12. Replace the end caps on the IsoTube[®] valves and fill out one of the adhesive-backed labels with the sample identification information using the ball point pen provided (press hard as three copies are made). Attach the label to the IsoTube[®] in the location marked and return the IsoTube[®] to the shipping carton. When an entire sheet of sample tags has been used, one of the copies should be placed in the box with the IsoTubes[®] and the other can be retained for your records.
13. Seal the box, attach the appropriate hazardous material labels, and ship the samples as described on the enclosed shipping instructions.**

