



Gas Stripping Cell Instructions

Sampling Questions?

Call
800-659-2887
Mon. - Fri.
9 -5 EST

Installation and Operation

To place the gas stripping cell into service:

1. Remove one of the cell assemblies from the packing carton. Refer to Figure 1 (following pages) to become familiar with the parts of the cell.
2. Connect the inlet tube of the cell to the outlet of your pump. The inlet tube is designed to connect to ¼ inch O.D. hard tubing. Secure the connection (nylon wire ties are recommended).
3. Insert the drain tube of the cell into a waste container, keeping the end of the tube at the bottom of the container. Any waste container of suitable size may be used. A 2-liter soda pop bottle may be placed in the waste container to determine pumping flow rate.
4. Secure the cell assembly so that the housing cover is above the glass housing (i.e. upright). A ring stand and clamp are recommended for this purpose.
5. Turn the pump on and check for leaks. If any leaks are found seal them before proceeding. Measure, in ml per minute, the flow rate of the pump. If a 2-liter soda pop bottle was used, the flow rate can be determined by measuring how many minutes it takes to fill the bottle, then substituting the measured time into the following equation.

Flow = 2000 ml/time to fill in minutes

Consult table to determine the equilibrium time needed to gas strip at this flow rate.

Flow rate (ml/min)	Sampling time (min)
100-120	30
130-150	25
160-200	20
210-300	15
>300	10

NOTE: Use a flow rate between 100 ml/min and 350 ml/min. Do not turn off the pump.

6. Unclamp the cell assembly, invert it and re-secure the assembly in the inverted position. Make sure the drain tube is still in the waste container and the end of the drain tube is near the bottom of the bottle.
7. Connect the (supplied) stopcock to the syringe and the (supplied) needle to the stopcock. Place the stopcock in the open position (i.e. so that the stopcock handle is in-line with the syringe). Draw the plunger back on the syringe to the 20.0-mL mark. Keeping the cell in the inverted position, insert the needle into the needle guide. Pierce the septum and inject the air into the cell. Then remove the needle and syringe from the assembly and carefully cover the needle. Do not discard the syringe apparatus.
8. Start timing and let the ground water pump through the cell for the time specified in Table 1 for your particular pumping speed. Meanwhile, be sure that the sample vial is properly labeled and that the flow rate and any other relevant field data are recorded in the field log.

NOTE: Be sure to keep the end of the drain tube at the bottom of the waste container. This will insure that outside air is not drawn into the cell. Failure to do this will invalidate the sample.

9. When the equilibration time is up, turn off the pump, unclamp the cell and re-clamp it in its upright position. Verify that the plunger of the syringe is pushed all the way in and that the stopcock is in the open position, then insert the needle into the needle guide and pierce the septum. Withdraw 1-mL of gas by pulling back on the syringe plunger while holding the syringe body in place, remove the syringe from the cell and expel the sample. Immediately re-insert the needle into the needle guide and pierce the septum. Withdraw a 15-mL sample of gas and, with the needle still through the septum, close the stopcock. Rapidly withdraw the needle from the septum and place it through septum on the sample vial (see Figure 2, next page). Open the stopcock and completely depress the syringe barrel. With the syringe barrel completely depressed, separate the sample vial and the syringe with a quick pull. Discard the syringe apparatus according to Local, State and Federal regulations.





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Decontamination/Cleaning

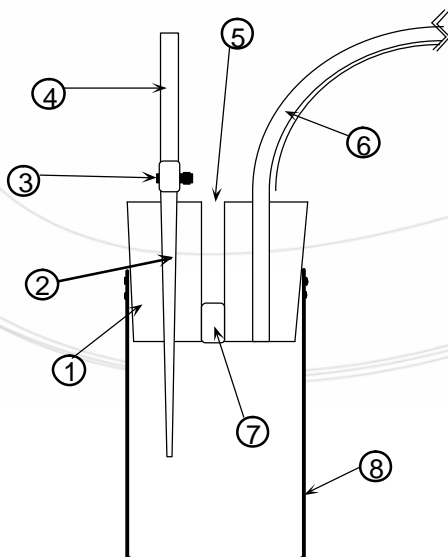
Pump at least 1 liter of potable water through the cell. The cell assembly is now ready for re-use.

The only expendable part of the cell is the sampling septum (part 7). Normally, each septum may be used for the collection of 5-10 samples. If bubbles are seen rising up from the septum when the cell is inverted the septum **MUST** be replaced.

Figure 1.

Cross section of Microseeps Gas Stripping Cell

- 1. Housing Cover
- 2. Jet Spray Nozzle
- 3. Nylon Tie
- 4. Inlet Tube
- 5. Needle Guide Port
- 6. Drain Tube
- 7. Replaceable Septum
- 8. Glass Housing



Replacing the Sampling Port Septum

All part numbers refer to Figure 1.

1. Remove the housing cover (part 1) from the glass housing (part 8).
2. Use a handy, blunt tipped object to push the replaceable septum (part 7) out of the housing cover. The cover to a needle works well for this purpose, but be sure that the needle is **NOT** in the cover. Discard the old septum.
3. Take a new septum and wet both the new septum and the housing cover with potable water.
4. Carefully using the same blunt instrument used in step three above, slide the new septum into the hole from which the old septum was removed. The bottom of the new septum must be flush with the narrow end of the housing cover.
5. If the housing cover is not still wet, wet it again with potable water. Place the bottom end of the housing cover into the glass housing and push it in until less than 3/8" are above the rim of the glass housing. This may require some force.
6. Follow the cleaning procedures described above to prepare the cell for a return to service.

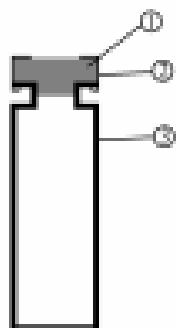


Figure 2.

Cross section of septum bottle

- 1. Septum
- 2. Metal Closure
- 3. Glass vial

