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Soil Gas Helium Shroud Guide

Merit's helium shroud contains the following:

- 1 interior helium detector, measuring in percent (%) helium
- 1 exterior helium detector
- 1 interior flow controller connection to the exterior flow pump
- 1 exterior flow pump, rated at 200cc/min 1 helium tank connection
- 1 access hole in the bottom of the shroud for the sampling line to connect to the flow controller
- 1 60mL syringe

Instructions for use:

- 1) Remove the helium shroud from its transport container.
- 2) Connect the threaded end of the yellow hose to the helium tank and connect the quick-connect end to the helium shroud by pushing against the connection tip (supporting the wall of the shroud on the inside will make this easier).
- 3) Place the sampling line from the well through the access hole in the bottom of the shroud and connect to the arm of the flow controller.
- 4) Connect the quick-connect end of the flow controller to the connection tip on the inside of the shroud.
- 5) Turn on the helium meters on the interior and the exterior of the shroud by clicking the power switch up twice.
- 6) Securely place the lid on the shroud.
- 7) Once the helium meters have reached 0.0% (or have stabilized at a value above zero for at least one minute), turn the valve on the helium tank to open.
- 8) Turn on the flow pump. *The flow controller must be connected to the inside of the shroud in order for the flow pump to operate.*
- 9) Lightly squeeze the handle on the quick-connect end of the hose 4 times to fill the shroud with helium. The helium meter on the inside of the shroud should read between 20-60%. *Filling excessively may cause the lid of the shroud to come off and will result in helium loss.*
- 10) Monitor the helium meter on the outside of the shroud for any deviations from its starting point. Any leak inside the shroud should be very easy to identify, as the helium meter should show a dramatic increase.
- 11) If the helium meter on the outside of the shroud detects a change in percent helium, open the shroud and ensure the sampling hose and flow controller are securely connected, making any necessary adjustments to fix the leak.
- 12) Once the helium test is completed, document that no leak was present; now you are ready to collect the sample. Disconnect the flow controller from the inside of the shroud and connect the sampling bottle for sample collection.
- 13) Before disconnecting the yellow hose from the helium tank, after turning off the valve on the helium tank, squeeze the handle to release the pressure remaining in the hose. Push the quick-connect connection towards the shroud, releasing the valve.
- 14) Turn off the flow pump and ensure both helium detectors are turned off by moving the switches into the lowest position.

If water is suspected to be present in the well, please use the provided 60mL syringe to test if water is present; this syringe can be used at multiple locations. Additionally, please observe the shroud while operating to prevent water from reaching the pump and helium detector; this equipment is for vapor only and water will damage the electronics.