H_2S Scrubbing IsoFlask® with Silver Nitrate – Gas Transfer Instructions

Included: Fully assembled transfer device with 100 cc syringe and check valves – DO NOT DISASSEMBLE THE DEVICE

WARNING: Hydrogen sulfide (H_2S) is a highly toxic gas even at low concentrations. All necessary precautions associated with the handling of samples containing H_2S must be taken prior to using this product.

1. Fill the IsoFlask with source gas.

- The reagent in the IsoFlask can scrub up to **100 cc of pure H_2S at atmospheric pressure**. Take care not to overload the flask. **If all reagent is consumed, the gas will not be fully scrubbed.**
- We recommend using a syringe and septum (included with the kit) to measure the gas injected into the IsoFlask. You may also use a pressure-regulated source with a male Luer output fitting.
- The IsoFlask in the pictures to the right contains 300 cc of gas. This amount of gas makes the bottom of the flask about an inch across at its widest point when standing upright.
- Do not overfill or pressurize the IsoFlask. **It will burst if it is overfilled.**

2. Shake and allow the reaction to progress for **at least 30 seconds.**

- The reaction will produce a black precipitate.
- The gas may remain in the flask for up to 8 hours.
- Try to keep the flask upright so the liquid reagent stays at the bottom of the container.

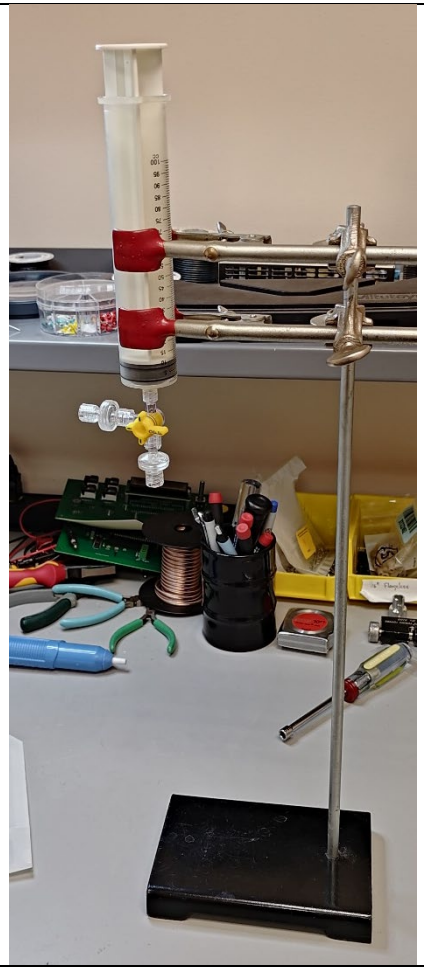
ISOTECH
a Stratum Reservoir brand

1308 Parkland Court
Champaign, IL 61821

(217) 398-3490
isotechlabs.com

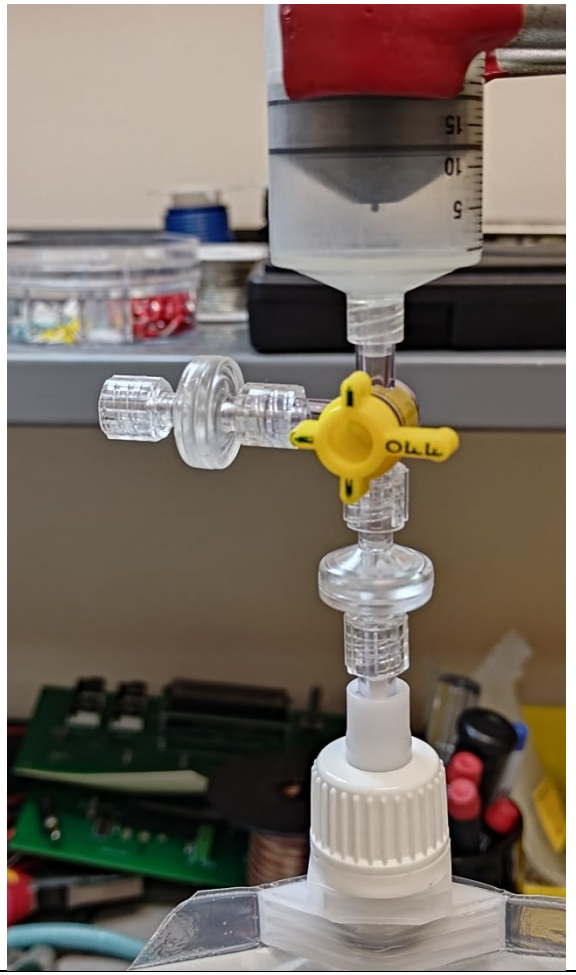
3. Set up the transfer device vertically with a lab clamp or similar if you have one available.

- Try to tighten any clamps enough that the device is secure, but not so much that the syringe is deformed by the pressure.
- The device is equipped with a redundant 3-way valve as a backup for the case of check valve failure. Point the 3-way valve such that the 'OFF' tab is pointed as pictured (i.e. all flow paths are open).



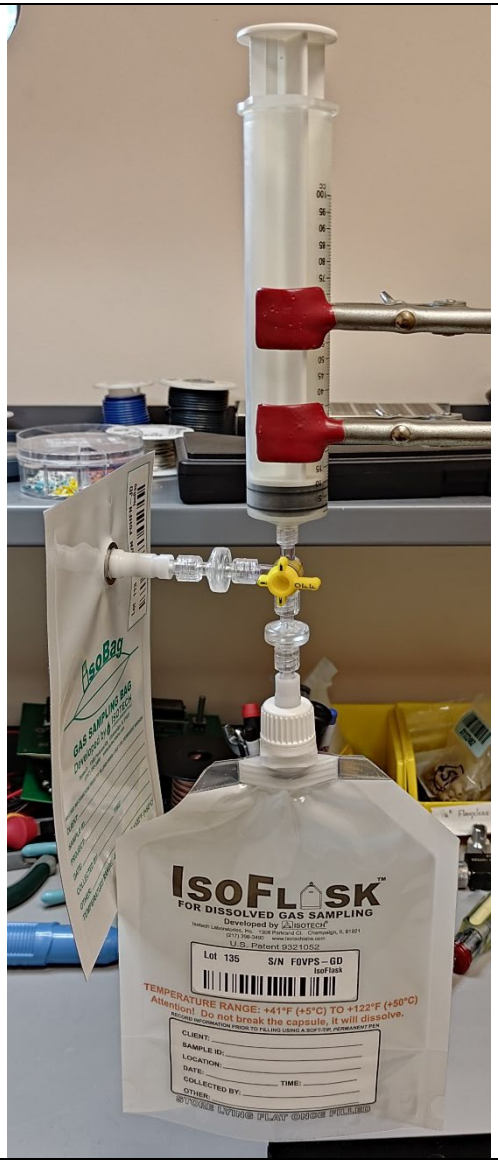
4. Purge the device with air by alternately lifting and lowering the syringe plunger. This will also test the function of the check valves. The gas should inlet through the bottom port, and expel through the side port.

5. Press the IsoFlask valve into the inlet (bottom) port of the device.	 

6. Draw up about 10 cc of scrubbed sample and purge through the open side port to remove air from the dead volume. Do this at least twice unless you have extremely limited sample volume.	

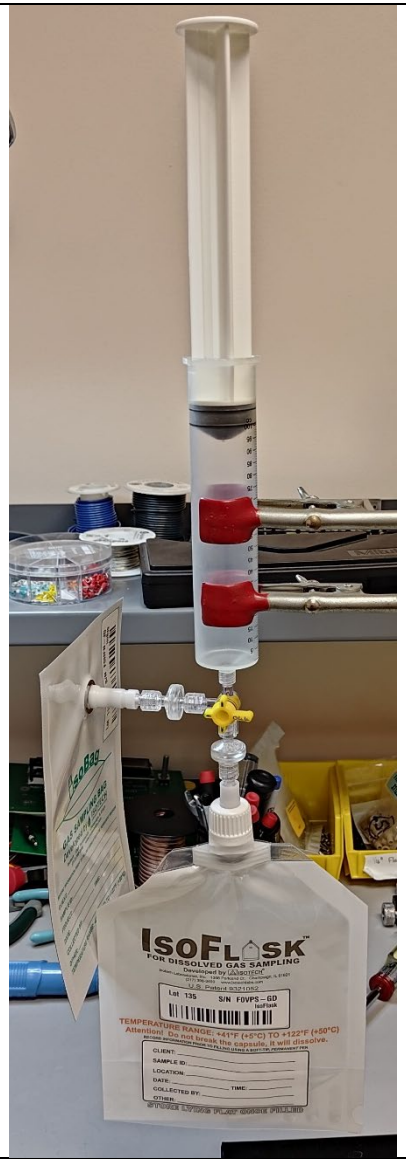
7. Once the device is purged, press the valve of an evacuated IsoBag® into the output (side) port.

- Label the IsoBag with all relevant sample information with a soft-tip permanent marker BEFORE sampling. It is much easier to write on the bag when it is flat!



8. Alternately raise and lower the plunger to transfer the gas from the IsoFlask into the IsoBag.

- Carefully monitor the amount of gas remaining in the IsoFlask. Leave a small volume of gas in the IsoFlask to avoid pulling the liquid scrubbing solution into the transfer device.
- Only transfer a maximum of 300 cc into the IsoBag to avoid overfilling. Any gas remaining may stay in the IsoFlask.



9. Detach the IsoBag and IsoFlask. **Purge the device with air several times before moving on to the next sample.**