



Formaldehyde Sampling Instructions



PRODUCTS Available at EMSL!!

Sampling Instructions

Formaldehyde pump and tube sampling using Buck Libra L-4 Pump with Universal Low-Flow Adapter Low-Flow Sampling (<1 lpm)

1. Review the NIOSH Method:
<http://www.cdc.gov/niosh/nmam/pdfs/2016.pdf>

The OSHA Technical Manual is helpful too:
http://www.osha.gov/dts/osta/otm/otm_ji/otm_ji_1.html

2. Review the operating instructions for the Buck pump, in your kit
3. Charge and check out the pumps the day before sampling to ensure that it is in good working order after shipment. Formaldehyde media is shipped cold and should be kept that way except while sampling—only takes 10 to 15 minutes to come to room temp. Put the cooler and ice pack in the freezer so it is ready to ship back.
4. DO NOT alter the charging apparatus – you could damage the pump battery.
5. Assemble the equipment as shown:
6. Assemble the sample train. The tubing attaches to the pump inlet, the low-flow adaptor attaches to the tubing, the clear tube shield is unscrewed to access the tube fitting. The sorbent tube will be inserted into soft rubber tube fitting.
7. Immediately before sampling, break off the end of the flame-sealed tube so as to provide an opening approximately half the internal diameter of the tube. Wear eye protection when breaking ends. Do not use the charging inlet or the exhaust outlet of the pump to break the ends of the tube;





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8. Insert the tube into the black rubber fitting on the low-flow adapter as shown, with the arrow pointing toward the tubing. The sorbent is close to one end of the tube, this is the end that should go toward the sampling pump. The tube shall be held or attached in approximately vertical position with the inlet either up or down during sampling;



9. Turn the pump on. The LED should light and you should hear a motor sound – if it sounds really revvy or frantic you may have kinked the sample line or forgotten to break the ends off of the sorbent tube, see step #7.

10. Insert the open end of the tube into the tubing connected to the top fitting of the rotameter;



...and read the flow rate. It should be between 0.05 and 0.5 Liters per minute (lpm), the **OPTIMAL** flow rate is **0.3 lpm**.

If it is not, carefully use a small screwdriver to adjust the flow using the screw on the low-flow adapter **FIRST**;

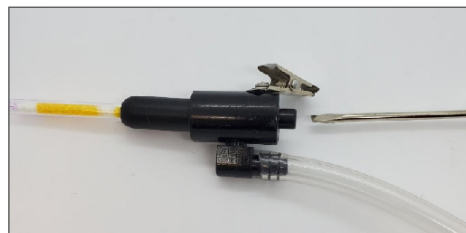
Only use the adjustment arrows on the front of the pump after you have tried this. The pump flow is adjusted by holding down the “SET” button and pressing the up or down arrow.



11. Place the pump in the area, or on the person being sampled, and write down the time you started sampling. For a personal sample, place the open end of the tube as close as feasible to the worker’s breathing zone. When taking area samples, note the position of the sampling inlet on your notes. Don’t let it drop onto the ground or into liquids.

12. Periodically check to ensure that the pump is running. A sample whose pump dies unattended is a sample that is collected in vain!

13. When the sample period is finished, stop the pump by pressing the On/Off switch.





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14. Write down the time.
15. Take the tube out of the low-flow adapter and place the red plastic caps on both ends, label the tube using a folder label or piece of tape on the end cap ONLY;
16. Fill out the chain of custody. Indicated the compounds desired (formaldehyde), flow rate, sampling time in minutes, regular or expedited turnaround, etc. Put the tubes back into the cooler with the ice pack for shipment. If not shipping immediately, put the tubes, cooler, and ice pack in the freezer until you are ready to ship it overnight to EMSL.
17. Send the pumps and tubes back to EMSL for Laboratory Analysis.

