**SAMPLING PROCEDURE FOR THE SORBENT TUBES**

**DNPH SORBENT TUBES (yellow): NOTE-These tubes must remain cold until used for sampling**

1) Calibrate personal sampling pump to flow at 1000 ml/min, with the gas pressure not to exceed 10 psig. Use the lowest possible pressure to achieve the desired flow. 
   a) Break ends of 2 DNPH sorbent sampling tubes and connect them in series to personal sampling pump and calibrator with arrows on the sorbent tube pointing towards the pump.
   b) Adjust small screw on front of sampling pump to achieve 1000 ml/min.
   c) Record flow.

2) Break the ends of 2 new (different) sorbent tubes and connect in series. Connections to the gas stream should be made with Silcosteel/Sulfinert or similar coated stainless tubing (preferred), Teflon tubing, silicone tubing, or stainless steel tubing. Do not use Tygon or other plastic tubing.

3) Attach tubes to the personal sampling pump with arrows pointing toward the pump.

4) Connect the pump inlet to the sampling port and the outlet of the tubes to an exhaust/vent line.

5) Open the sampling port or sampling valve.

6) Turn on pump.

7) Record sample ID, start time & date.
   a) DNyymmdd-xx a/b

8) After 4 hours, turn off pump, close the sampling port valve.
   a) Record stop time.
   b) Record temperature.

9) Cap sorbent tubes with caps provided and label each tube. Wrap in aluminum foil.

10) Take a blank (control) sample at each site by performing steps 2-5, and 7 above on a fresh sampling tube, but do not purge any gas through the tubes. The tube may be immediately disconnected and labeled.

11) Store and ship to lab all used tubes in cooler with ice pack.

**XAD SORBENT TUBES (white): NOTE-These tubes do not have to remain cold until used for sampling**

1) Calibrate personal sampling pump to flow at 2000 ml/min with the gas pressure not to exceed 10 psig.
   a) Break ends of 2 XAD sorbent sampling tubes and connect them in series to personal sampling pump and calibrator with arrows on the sorbent tube pointing toward the pump.
   b) Adjust small screw on front of sampling pump to achieve 2000 ml/min.
   c) Record flow.

2) Break the ends of 2 new (different) sorbent tubes and connect in series. Connections to the gas stream should be made with Silcosteel/Sulfinert or similar coated stainless tubing (preferred), Teflon tubing, silicone tubing, or stainless steel tubing. Do not use Tygon or other plastic tubing.

3) Attach tubes to the personal sampling pump with arrows pointing toward the pump.

4) Connect the pump inlet to the sampling port and the outlet of the tubes to an exhaust/vent line.

5) Open the sampling port or sampling valve.

6) Turn on pump.

7) Record sample ID, start time & date.
   a) XAyymmdd-xx a/b

8) After 4 hours, turn off pump, close the sampling port valve.
   a) Record stop time.
   b) Record temperature.

9) Cap sorbent tubes with caps provided and label each tube. Wrap in aluminum foil.

10) Take a blank (control) sample at each site by performing steps 2-5, and 7 above on a fresh sampling tube, but do not purge any gas through the tubes. The tube may be immediately disconnected and labeled.

11) Store and ship to lab all used tubes in cooler with ice pack.