## Sampling Method

- Step 1 – Obtain a personal sampling pump and 37mm or 25-mm polystyrene cassettes containing PVC filters with Back-up pads (BUPs) (Figure 1).

Figure 1

- Step 2 – Calibrate the sampling pump using an approved primary calibration instrument to verity the flow rate is 2.0 liters/minute. Calibrate the sampling pump by first attaching the sample cassette outlet side (remove the red plug) to the sampling pump, then attaching the calibrator to the inlet side(remove the blue plug) of the sampling cassette (Figure 2). Turn on the pump and adjust the sampling pump flow rate to 2.0 liters per minute (2.0 L/min).

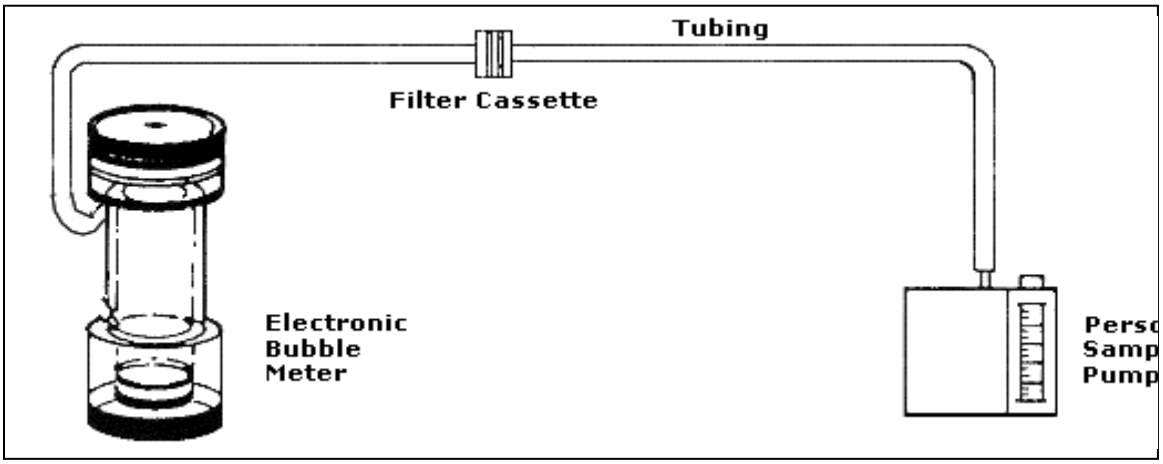


Figure 2

- Step 3 – Remove the calibrator and replace blue plug. Attach the pump to the employee so that the pump, tubing, and cassette do not impede work performance or safety. Place the sample cassette in a vertical position with the inlet facing down, near the employee or student's breathing zone or clipped to his or her collar.

- Step 4- Remove the blue plug and turn on the sampling pump. Use a permanent marker to place a sample number on the cassette. Record the start time next to the corresponding sample number on the chain-of-custody form provided by the analysis laboratory. Follow the numbering on the chain-of-custody form.

- Sample for eight (8) hours. Actual exposure to Cr(VI) may be for less than 8 hours; however, the sampling pump must run for 8 hours.

- Step 5 – After 8 hours of continuous sampling, turn off the pump. Replace the blue and red end plugs and record the time, sample volume, the type of operation, and any potential sample interference on the chain-of-custody form.

- Step 6 – After sampling has been completed, be sure to check that the information recorded on the sampling cassettes and the chain-of-custody is legible and complete.

- Step 7- Ship the samples to the analysis laboratory overnight. Include one blank (unused sampling cassette) for each set of six samples and the chain-of-custody form. Be sure to identify the blanks on the form. Note that due to the instability of samples taken during welding operations, the samples must be shipped to the lab overnight; analysis must be completed within eight (8) days.

For more details about of the required air sampling and laboratory analysis methods, see Attachment B, “OSHA Method 215”.