



Chlordane — OSHA 67

Early NIOSH methods sampled chlordane using MCE filters attached to Chromosorb® 106 sorbent tubes to collect both chlordane vapors and aerosols. Since OSHA had already developed pesticide methods using the OVS-2 tubes, OSHA Method 67 for chlordane using the OVS-tube was developed.

Required Equipment:

1. An **air sampling pump** capable of sampling at the recommended flow rate with the sampling medium in line, such as:
 - SKC **Universal Sampler** with OVS Tube Holder
Cat. No. 224-29V
 - SKC **AirChek® 2000 Sampler** with OVS Tube Holder
Cat. No. 224-29V
 - SKC **AirChek XR5000 Series Sampler** with OVS Tube Holder
Cat. No. 224-29V
 - SKC **AirChek 52 Sampler** with OVS Tube Holder
Cat. No. 224-29V
2. An **air flow calibrator**, such as:
 - Defender Primary Standard Calibrator Cat. No. 717 Series
3. SKC **Sorbent Tube** Cat. No. 226-30-16

SKC Application Guides:

1. Sampling Train—Sorbent Sample Tubes, #1168
2. Calibrating a Pump Using an Electronic Calibrator, #1366

	TWA
Flow Rate	1000 ml/min
Sample Time	8 hours
Air Volume	480 L
OSHA PEL <i>(per 29 CFR 1910.1000)</i>	0.5 mg/m ³

Sampling and Analysis:

1. To set up a sorbent tube sampling train, remove the end caps of a sorbent tube. Insert the small end of the sorbent tube into the rubber sleeve of the OVS tube holder. Connect the loose end of the flexible tubing to the pump inlet. *Request SKC Application Guide #1168 for more information on preparing sorbent tube sampling trains.*

2. For calibrating the pump, use the sampling train described above except connect the sorbent tube inlet to the calibrator with a piece of flexible tubing. Calibrate the pump flow rate to the rate specified in the method. When calibration has been completed, remove the sorbent tube, cap it with the end caps provided, and save it for recalibration at the end of sampling. *Request SKC Application Guide #1366 for more information on calibrating a pump.*

3. For sampling, set up a sampling train as above except use a new sorbent tube and do not remove the end caps until ready to sample. Attach the clip on the protective cover to a worker's clothing near the breathing zone and the pump to the worker's belt. The sorbent tube should remain in a vertical position during sampling. Turn on the pump.

4. Sample at an accurately known flow rate for the recommended period of time.

5. At the end of the sampling period, turn off the pump and note the ending time. Remove the sorbent tube, seal the ends of the tube with the caps provided, and record any pertinent sampling information.

6. Calibrate the pump with the representative sampling media in line to verify that the flow has not changed by more than 5%.

7. Submit field blanks from the same lot number as the sample tubes. Field blanks should be subjected to exactly the same handling as the samples (open, seal, and transport) except that no air is drawn through them.

8. Package sample sorbent tubes, field blanks, and all pertinent information securely for shipment to a laboratory for analysis.

Storage:

Store samples at room or refrigerated temperature. Analyze within 14 days of collecting the sample.

Analyzing Method:

Gas chromatography - Electron capture detector (GC-ECD)

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