

# Air Monitoring with Sorbent Traps

## Ambient Air, Fenceline, Community

Air quality plays a vital role in protecting public health and the environment, and accurate monitoring is essential for informed decision-making. Sorbent trap technology offers a reliable and cost-effective solution for detecting and measuring hazardous air pollutants (HAPs). These compact, easy-to-use devices collect air samples over a defined period and are then sent to a laboratory for analysis. Whether used for community monitoring, workplace safety assessments, environmental research, or regulatory compliance, sorbent traps provide a powerful tool for measuring airborne pollutants in a wide range of applications.

## Advantages

- ▶ Capable of measuring analytes not possible with any other methodology
- ▶ Simple, reliable, and cost effective
- ▶ Extremely sensitive
- ▶ No hazardous chemicals
- ▶ Easy sample shipping

## Available Analytes

- ▶ Ammonia
- ▶ Benzene
- ▶ Dioxins and furans
- ▶ Ethylene oxide
- ▶ Formaldehyde
- ▶ Hydrogen bromide
- ▶ Hydrogen chloride
- ▶ Hydrogen cyanide
- ▶ Hydrogen sulfide
- ▶ Mercury
- ▶ **Metal HAPS**
  - Examples: As, Be, Cd, Co, Cr, Mn, Ni, Pb, Sb, Se
- ▶ PCBs & pesticides
- ▶ VOCs
- ▶ Others...



## Sorbent Traps

Sorbent traps are glass tubes filled with specially designed sorbent materials that are optimized to capture the analyte of interest. Air is pulled through the tube using a sampling device that measures and records the sample volume. The tube is then removed from the sampling device and shipped to a laboratory that analyzes the sorbent to determine the mass of the target pollutant. The concentration is then calculated based on the sample volume and mass.



## Sorbent Trap Sampler

Sorbent trap samplers are simple to operate devices comprised of a vacuum pump, a flow controller, a mass flow meter, a volume totalizer, and a user interface. A sorbent trap is inserted into the sampler, the sampling volume or duration is set, and the sampling is started. The sampler will automatically stop when it reaches its target duration or volume and the user can then remove the sorbent trap for shipment to a laboratory.

