

POD Sampler™

The POD Sampler is a lightweight air sampler for personal and environmental monitoring.

Diffusive sampling for VOCs

The POD Sampler (POcket Diffusive Sampler) is a compact and versatile radial diffusive sampler for VOCs, compatible with analysis by thermal desorption. Developed in partnership with pioneers in radial sampling at the European Commission's Joint Research Centre at Ispra, Italy (the European reference laboratory for air pollution), the POD Sampler's design results in exceptional performance.

Compared with conventional (axial) samplers, radial samplers have a larger diffusive surface area of adsorption and a shorter diffusive pathway. This results in faster uptake rates, enabling shorter sampling times or increased sensitivity.

Advanced design and performance

The POD Sampler introduces several performance improvements over existing radial samplers:

- The design of the sampler ensures integrity of data collected by minimising the effects of environmental factors, ensuring stable uptake rates throughout the monitoring period.
- The smaller amount of sorbent results in a lower level of sorbent artefacts, avoiding interference with trace-level analysis and allowing lower method detection limits to be reached.
- The porous diffusive body fits snugly over an adsorbent cartridge, leaving no air gaps. The resulting diffusion path improves reproducibility of results.
- Removing and replacing the cover acts as a convenient start/stop mechanism for sampling. The cover also prevents ingress of contaminants during short-term storage.
- After sampling, transfer of the cartridge to the shipment vessel is simple, and avoids the requirement for direct handling of the cartridge.



Product highlights

- Robust, easy to use and suitable for a wide range of common volatile organic air pollutants (C₄-C₉).
- Ideal for short-term diffusive sampling of low atmospheric concentrations.
- Reduced effect of environmental variables on sampling rates compared to other passive samplers.
- Can be re-conditioned and cleaned for use multiple times.
- Compatible with all commercial TD systems.



Compatible with quantitative sampling of low-level VOCs

Diffusive sampling is used when sampling for known compounds, with quantitation of these being possible by using validated uptake rates. The POD Sampler is compatible with quantitative sampling of VOCs (e.g. BTEX) in the range C₄-C₉.

Ambient and indoor air monitoring

Large-scale environmental air monitoring studies can benefit greatly from the low cost of using the POD Sampler and the ease of deployment.

Occupational hygiene and personal monitoring

The lightweight, compact design makes the POD Sampler convenient to use, and the rapid uptake rates mean the presence of chemicals harmful to health can be detected rapidly and easily. The removable cover enables start/stop monitoring of specific tasks.

Diffusive sampling in five easy steps

- 1 Deploy the POD Sampler in the desired location. Record time, temperature and pressure.
- 2 Remove the cover to begin sampling.
- 3 Replace the cover after sampling period. Record sample time, temperature and pressure.
- 4 Transfer the adsorbent cartridge to the designated shipping vessel.
- 5 Analyse by thermal desorption (TD)-GC using published sampling rates for radial sampling.

Exposure times for VOC sampling

Typical exposure times for sampling of VOCs are:

- Ambient and indoor air monitoring: up to 3 days
- Workplace monitoring: up to 8 hours
- Industrial hygiene/occupational health: typical permissible exposure limits (PELs) are 8 hours.

Ordering information

Part no.	Description
C-POD-KIT01	POD Starter Kit: Carbopack X <i>Includes 1 × POD sampler, 2 × cartridges and 1 × support plate with clip</i>
C-POD-1XX	POD Cartridge, Carbopack X, pk 10
C-POD-S010	POD Sampler, pk 10
C-POD-SP10	POD Support Plate, with clip, pk 10
C-POD-S1P0	POD Support Plate, with clip, pk 100
C-POD-B010	Spare Diffusive Body, for POD Sampler, pk 10
C-POD-H010	Spare Support Body, for POD Sampler, pk 10
C-POD-C010	Spare Cover, for POD Sampler, pk 10
U-COV1517	Spare O-Ring, brown, for POD Sampler (diffusive body), pk 20
U-COV1516	Spare O-Ring, black, for POD Sampler (support body), pk 10



Find out more about the POD Sampler today

Please contact one of our offices (details below).

Markes International

UK: 1000B Central Park, Western Avenue, Bridgend, CF31 3RT
USA: 2355 Gold Meadow Way, Gold River, Sacramento, California 95670
Germany: Bieberer Straße 1-7, 63065 Offenbach am Main
P.R. China: Unit 1002, Building 1, No. 418 Guilin Road, Shanghai 200233

T: +44 (0)1443 230935
T: +1 866-483-5684 (toll-free)
T: +49 (0)69 6681089-10
T: +86 21 5465 1216

E: enquiries@markes.com **W:** www.markes.com

