

MerPAS

Air Mercury Monitoring Made Simple

Rev. 071118

Description

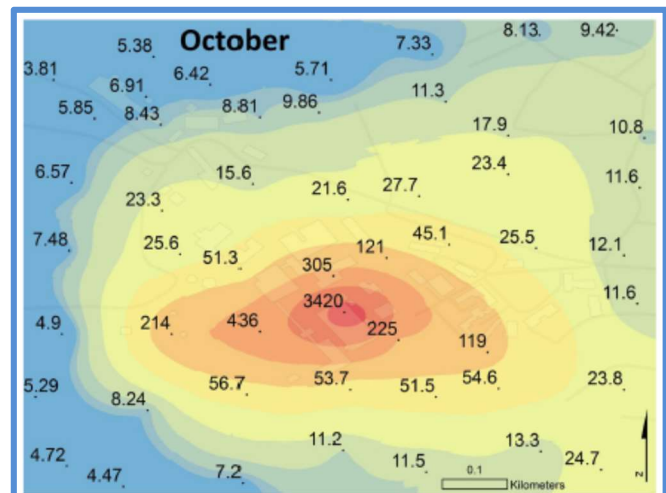
MerPAS (Mercury Passive Air Sampler) is a major breakthrough for low cost mercury air monitoring. *MerPAS* is much more sensitive, precise, and accurate compared to any other passive mercury air sampler. The quality of *MerPAS* has been repeatedly documented by scientists at the University of Toronto[#] who designed, developed, and tested the sampling technology and analysis method. *MerPAS* is complementary to high resolution, electronic continuous air mercury monitoring by extending the spatial coverage at a reasonable cost. The *MerPAS* device functions using a carbon-based trapping media housed inside a diffusive sleeve. The sampler is integrated into a container for easy deployment, collection, and shipping.



Deployed MerPAS sampler

Select Applications

- Remote locations (no power)
- Urban networks
- Identifying and mapping hot spots
- Artisanal gold mining exposure
- Community exposure monitoring
- Remediation site investigations
- Indoor spill cleanup and monitoring
- Personal exposure for industry, schools, workplace & homes
- Area source emission estimates



MerPAS samplers deployed for 1-week exposure at remediation site to characterize the footprint of Hg contamination.

Features



- No power or infrastructure required
- No technical skill needed for deployment & retrieval
- Multiple mounting options
- Low cost long-term integrated sampling
- Exceptionally wide application range (0.5 ng/m³ to 1 mg/m³)
- Wide range of exposures intervals: hours to one year deployment time
- Immune to wind and temperature effects
- Use of well-known and patented radial diffusive barrier
- Highly tested and characterized

Analysis

Tekran is able to offer both the sampler and analysis as a complete package. The *MerPAS* carbon-based sorbent has a well-defined particle size that makes it well suited for direct thermal analysis using EPA Method 7473. Alternatively, the carbon may be analyzed by traditional wet chemical techniques such as EPA Method 1631. If analytical services are needed, contact Tekran or your Tekran representative for analysis options.

Sample Deployment

The *MerPAS* sample kit includes the sample media and jar sealed tightly with a plastic lid. A second screened lid is included for use during deployment. Each sample jar is labeled with a weather-proof sticker for recording site and sample collection information, and a barcode for reliable sample tracking. The sample kit contains additional items needed for handling, mounting and return shipping. It is highly recommended to mount the *MerPAS* on the reusable mounting brackets shown above.

MERPAS-WJ	
PROJECT/SITE ID _____	
START DATE (YYYY-MM-DD HH:MM) _____	
STOP DATE (YYYY-MM-DD HH:MM) _____	
	
SN - WJ00001	

MerPAS sample label

Frank Wania, David McLagan, and Carl Mitchell at the University of Toronto