

# MerPAS Configuration Options

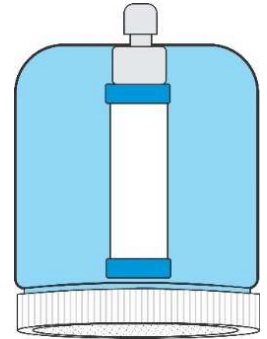
Rev: 101320

## Outdoor Ambient Air - White Body with Jar

The MerPAS sampler fitted with the white body diffusive barrier is best used for sampling outdoor ambient air of low to intermediate mercury concentrations (0-50 ng/m<sup>3</sup>). The sampler may be deployed for intervals of 1 week to 1 year. This sampler may also be used at concentrations of 50 to 1000 ng/m<sup>3</sup> for shorter time intervals. Mounting brackets available (*Part # 04-2HPAS-02*).

### Example Applications (*Part #: MerPAS-WJ, jar included*)

- Background Ambient Air
- Urban Air
- Heavy Industry Areas
- Site Survey Mapping

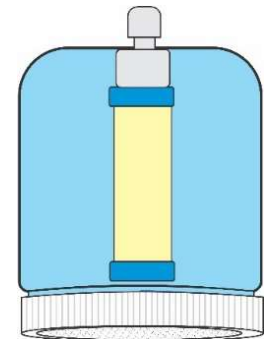


## Outdoor Contaminated Ambient Air -

The MerPAS sampler fitted with the yellow body diffusive barrier is best used for sampling outdoor ambient air with highly elevated mercury concentrations (50 ng/m<sup>3</sup> ~ 1 mg/m<sup>3</sup>). The sampling time is typically hours up to 7 days, depending on the expected Hg levels and project goals. Mounting brackets available (*Part # 04-2HPAS-02*).

### Example Applications (*Part #: MerPAS-YJ, jar included*)

- Mercury Remediation Sites
- Hg Hot Spot Mapping
- Artisanal Gold Mining Areas
- Hg Recycling Perimeter



## Indoor Air - Yellow Body (*Mount sold separately*)

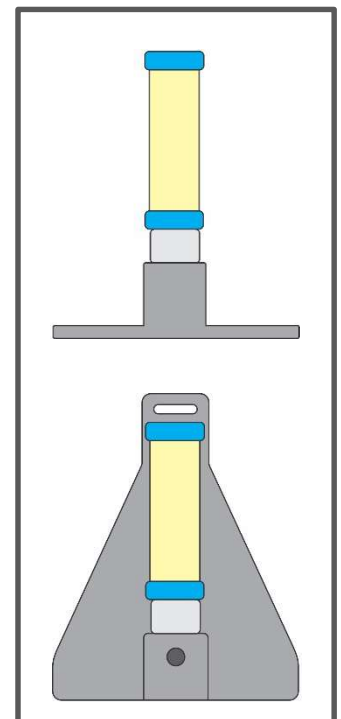
For indoor applications, the MerPAS sampler is deployed without the protective jar housing at any Hg concentration. Sample time is determined by monitoring goals and expected air Hg levels. The yellow body diffusive barrier samples at a slower rate and reduces the Hg loading onto the MerPAS sampler. Indoor mounting brackets available (*Part #: MerPAS-PEM*).

## Personal Exposure - Yellow Body (*Mount sold separately*)

The MerPAS sampler may also be configured as a personal sampler. For this configuration, the yellow body diffusive barrier is used without any protective housing. The sampler is attached to a plastic plate and then attached to the lapel or shirt pocket to keep the device near the worker breathing zone. Typical sample time is 8 hours. Personal exposure mounting brackets available (*Part #: MerPAS-PEM*).

### Example Applications (*Part #: MerPAS-Y*)

- Private Residence Testing
- Schools and Science Labs
- Real Estate Inspections
- Laboratory & Hospitals
- Dental Offices
- Hg Recycling Interior
- Industrial Hygiene Monitor



## ESTIMATED SAMPLING INTERVALS

The below table provides some general guidelines on MerPAS configuration and recommended deployment times for a variety of sampling applications. Note that the minimum and maximum deployment times take into consideration the target range of the instrument used for analysis. The sampling rates of the white-body and yellow-body sampler are listed below. Confirm the suggested ranges listed below are compatible with the instrument used for analysis.

**White-Bodied w/ Jar Sample Rate (outdoor air) = 0.111 m<sup>3</sup>/day**  
**Yellow-Bodied w/ Jar Sample Rate (outdoor air) = 0.06 m<sup>3</sup>/day\***  
**Yellow-Bodied - No Jar Sample Rate (indoor air) = 0.070 m<sup>3</sup>/day\***

Outside Ambient Air	Typical Hg Range (ng/m <sup>3</sup> )	Recommended Sampler Type	Deployment Time (Days)		
			Minimum	Recommend	Maximum
Remote	0.5-2.5	White-Jar	7	30	365
Urban Industrial	2-20	White-Jar	5	14	90
Hg Contaminated - Fenceline	10-5,000	Yellow-Jar	1	7	30
Hg Contaminated - Onsite	200-100,000	Yellow-Jar	1	1	7
Active Hg Use - Artisanal Mining > 100 meters distant	500-1,000,000	Yellow-Jar	0.25	1	7
Active Hg Use - Artisanal Mining <10 meters distant	50,000-10,000,000	Yellow-Jar	0.1	0.1	1

Indoor Air	Typical Hg Range (ng/m <sup>3</sup> )	Recommended Sampler Type	Deployment Time (Hours)		
			Minimum	Recommend	Maximum
Uncontaminated	2-30	Yellow: Fixed or Lapel	24	168	720
Low Contaminated	30-500	Yellow: Fixed or Lapel	8	24	168
High Contaminated	500-100,000	Yellow: Fixed or Lapel	2	8	24
Hg Spill Cleanup	200-100,000	Yellow: Fixed or Lapel	2	8	24
Industrial Hg Contamination	500-1,000,000	Yellow: Fixed or Lapel	2	8	24

\*Continued calibration work ongoing