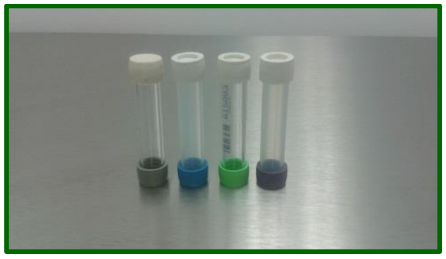
Diffusion Tubes

Diffusion tubes offer an easy and reliable method of measuring air chemicals. Our diffusion tubes can measure an array of different contaminants created from printing inks, wood protection, polymers, chemical coatings, varnishes, flooring (plastics/wood), furniture coverings and paints, amongst other items. Consumer goods, new office interiors, household furniture, toys etc. that may emit harmful gases can be monitored using equipment from Ormantine. Our diffusion tubes can measure down to ppb and are an accepted EPA method of monitoring.



Rapid Air Monitors (RAMs)

Like our diffusion tubes rapid air monitors use passive diffusion for monitoring, however with passive sampling times from as little as 1 hour, the RAM solves the requirement for fast results without the need for a pump, allowing you to identify hazardous air pollutants quickly, even if you only have limited site access.

Rapid Air Monitors are designed for short-term monitoring.. Once the sampling period is over, the monitors are sealed and returned to the laboratory for analysis. The lab determines the concentration of compounds on the disc. This is then used in a calculation with the uptake rate to calculate the average concentration that were present during the monitoring period.

The results are reported ppb and micrograms per meter cubed (ugm-3) to allow comparison with guideline levels. Reports are emailed to the customer within 10 working days of receipt of the samples.

Product	Color	Potential Interference	Detection Limit	Exposure Time*	Shelf Life	Product Code	Analysis Method
NO_2	● ●	Nitrous Acid, Peroxy Acetyl Nitrate	0.8 ppb	2 - 4 weeks	12 weeks	DIF100-20WA	UV/ Visible Spectrophotometry
NO/NO_2 combo pack	● ●	Nitrous Acid, Peroxy Acetyl Nitrate	0.11 ppb	2 - 4 weeks	12 weeks	DIF150RTU-RA	UV/ Visible Spectrophotometry
H_2S	●	Ozone	0.16 ppb	2 - 4 weeks	6 weeks	DIF200RTU-RA	UV/ Visible Spectrophotometry
Ozone	●	Nitrate	1.42 ppb	2 - 4 weeks	12 Weeks	DIF300RTU-RA	Ion Chromatography
Ammonia	●		1.34 ppb	2 - 4 weeks	8 weeks	DIF400RTU-RA	Ion Chromatography
NO_2/SO_2	●	Nitrous Acid, Peroxy Acetyl Nitrate	NO2: 0.1 ppb/ SO2: 0.9 ppb	2 - 4 weeks	12 weeks	DIF500RTU-RA	Ion Chromatography
SO_2	●		0.76 ppb	2 - 4 weeks	12 weeks	DIF600RTU-RA	Ion Chromatography
Formaldehyde	○	Ozone, Ketones	1.2 ppb	2 - 4 weeks	On Package	DIF700RTU-RA	HPLC
Hydrogen fluoride	●		1.37 ppb	2 - 4 weeks	12 Weeks	DIF900RTU-RA	Ion Chromatography
Hydrogen chloride	●		2.08 ppb	2 - 4 weeks	12 Weeks	DIF900RTU-RA	Ion Chromatography
Nitric acid	●		0.65 ppb	2 - 4 weeks	12 Weeks	DIF900RTU-RA	Ion Chromatography
Hydrogen bromide	●		0.08 ppb	2 - 4 weeks	12 Weeks	DIF900RTU-RA	Ion Chromatography
Phosphoric acid	●		0.34 ppb	2 - 4 weeks	12 Weeks	DIF900RTU-RA	Ion Chromatography
Sulfuric acid	●		0.97 ppb	2 - 4 weeks	12 Weeks	DIF900RTU-RA	Ion Chromatography
VOCs	●		Varies	1 - 4 weeks	Varies	Varies	GC/MS
Nitrous Oxide	●		0.03 ppb	8 - 24 hours	6 weeks	DIFMLS5A	GC/MS

© Ormantine USA Ltd, Inc. • 1740 Convair Street. Palm Bay, FL 32909. USA • +1 (321) 676 7003
diffusion@ormantineusa.com • www.ormantineusa.com

VOC Monitoring

Volatile organic compounds (VOCs) in the range C2-C28 can be measured using a variety of sorbents to meet the specific applications required by the customer. Polyaromatic hydrocarbons (PAHs) can also be measured using a specific sorbent.

VOC emissions into ambient air originate from a variety of sources. These hazardous gases can present health problems and are therefore widely monitored for compliance with air quality guidelines.

VOCs can be measured from low parts per billion (ppb) to parts per million (ppm) levels using these thermal desorption sorbent tubes. Sampling times start from 1 hour for pumped sampling up to 4 weeks for passive sampling. Need shorter monitoring periods by passive sampling? Try our New Rapid Air Monitor.

VOCs in soil can also be monitored with these tubes in conjunction with soil probes. Soil contamination can occur in proximity to oil refineries, chemical plants, landfill, petrol stations and industrial sites.

Benzene Monitoring

Ormantine USA offers reliable and reasonably priced benzene monitoring. We offer our monitoring in two different price ranges and with two different methods. Our benzene monitors can be pumped or work through diffusion. We can assist our customers in choosing the method that is the most appropriate for their needs.

Because Ormantine USA specializes in fence line monitoring, we have constructed our tubes from stainless steel to hold up in all weather conditions to prevent your samples from being compromised.

 • 1740 Convair Street. Palm Bay, FL 32909. USA • +1 (321) 676 7003
diffusion@ormantineusa.com • www.ormantineusa.com

Soil Contamination Diffusion Tubes

Previous land uses or accidental spills can result in Volatile Organic Compound (VOC) contamination of soils. Volatile and semi-volatile compounds can then permeate through the soil and may persist for several years.

This contamination can be traced and measured using our Soil Probes in conjunction with our VOC sorbent tubes. Soil probes are also useful in checking the effectiveness of remediation actions. This monitoring technique provides a cost-effective identification of hazardous gases.

- Potential areas of soil pollution include:
- Industrial sites and derelict land.
- Landfill sites.
- Oil refineries.
- Petrol stations.
- Spills of petrol or other chemicals.

During soil contamination monitoring, soil probes are positioned in a grid pattern over the site of interest to build up a map of pollution. Alternatively they may be positioned along the length of an underground pipe or around the perimeter of the site, depending on the application required. Boundary sampling can be used to monitor the migration of pollutants away from the original spill.

Our soil probes can be used for long-term monitoring to assess changes in pollution levels or for short-term monitoring to identify areas of interest for further investigation (passive or pumped sampling). The use of air sampling pumps in conjunction with the soil probes enables the user to quickly and easily monitor the migration of gas plumes.

The majority of our VOC sorbent tubes can be used with Soil Probes, allowing a broad range of compounds to be measured. Please visit the VOC product pages for more information about the VOC monitoring options.

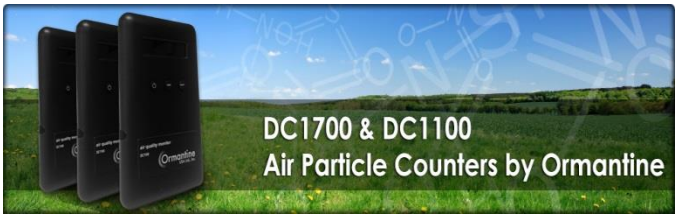
Air Particle Counters

Scientific studies have found an association between exposure to particulate matter emissions and significant health problems. The Air Particle Counters are affordable instruments which can monitor indoor air quality in homes and workplaces.

The DC1700 is a premium model with the following benefits: Internal battery operation for up to 6 hours of continuous use, generous storage capacity (approximately 10,000 samples), PC interface for data transfer, internal clock to date-time stamp readings, main or battery operated.

Dust, mold, pollen, bacteria, tobacco smoke, pet dander, dust mite debris and more fall in to the particle size categories below – levels of particulates are reported according to two standard calibration ranges:
DC1700:
PM0.5 and PM2.5
PM2.5 and PM10

Ambient air quality varies greatly even within a period of 24 hours, windows and doors are opened or closed, the air conditioning comes on, building or other work activity commences or any number of other factors. The air particle counter will show variation in the levels of particulate pollution throughout the day.



© Ormantine USA Ltd, Inc. • 1740 Convair Street. Palm Bay, FL 32909. USA • +1 (321) 676 7003
diffusion@ormantineusa.com • www.ormantineusa.com

Ormantine Environmental is a market leader in the supply and analysis of ambient air pollution monitoring products. We serve environmental consultants, government agencies, universities and engineering firms worldwide. We specialize in providing low cost and easy to use products for air sampling, covering a wide range of applications. Our success has been built on providing a flexible and cost effective service that tailors the application capabilities of the monitors to exact customer requirements, with an added service of accurate and timely analysis - the ultimate solution for environmental monitoring. Passive monitoring technology provides inexpensive, long-term air sampling over a large area without the need for capital investment, infrastructure or a power supply. Its simplicity aids its versatility.

Passive sampling is commonly used for dispersion modelling, model validation, indoor air surveys, emissions monitoring, air quality control, general air pollution modeling and fenceline monitoring. It's also used for personal air sampling, soil analysis and workplace monitoring for occupational health and safety.

© Ormantine USA Ltd, Inc. • 1740 Convair Street. Palm Bay, FL 32909. USA • +1 (321) 676 7003
diffusion@ormantineusa.com • www.ormantineusa.com