P-TRAK™
Ultrafine Particle Counter

Track your IAQ problem to its source.

www.tsi.com

TSI®

THE PROBLEM You've been there before. An IAQ complaint is made. You make a few measurements—typically, temperature, humidity and maybe air flow and CO_2 levels. Sometimes you're lucky and that's all it takes to solve the problem. If not, you make more measurements—maybe VOCs, toxic gases, bioaerosols, or particulate mass concentration—and cross your fingers. With luck, you pinpoint the problem. If not, you may face a long, difficult, and maybe fruitless search. The really tough IAQ problems have always been elusive.

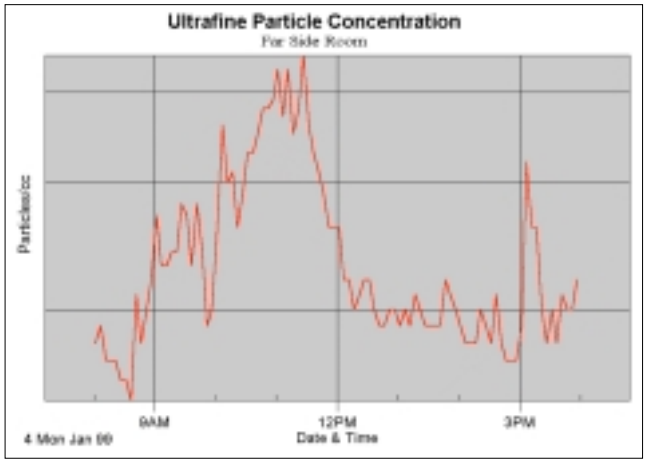
THE SOLUTION The toughest IAQ problems are where TSI's new P-TRAK™ Ultrafine Particle Counter (UPC) enters the picture. It detects and counts ultrafine particles (smaller than 0.1 micrometer diameter) that often accompany or signal the presence of a pollutant that is the root cause of the complaints. The P-TRAK UPC is a totally new approach to eliminating IAQ problems—and it works!

Whether a pollutant source is obvious—boilers, furnaces, vehicles—or not so obvious—photocopy machines and printers—the P-TRAK UPC is hard to fool. It is now being used to track down some of the most difficult IAQ problems imaginable. It has successfully identified the migration of toxic exhaust gases, malfunctioning office equipment, pinhole gasket leaks in a boiler, and a wide variety of other problems.

THE METHOD The P-TRAK UPC is easy to use, fast and reliable. Best of all, the concepts are readily understood by complainant and investigator alike. Begin by mapping the areas of concern and recording the relative levels of ultrafine particles in each area. Make sure to include areas with both acceptable and unacceptable indoor air quality along with outdoor reference levels. In areas of highest particle concentration, use the P-TRAK to locate the particle source and take corrective steps. Once remediation is complete, go on to areas with the next highest particle levels and repeat the process. Continue until the complaints end.

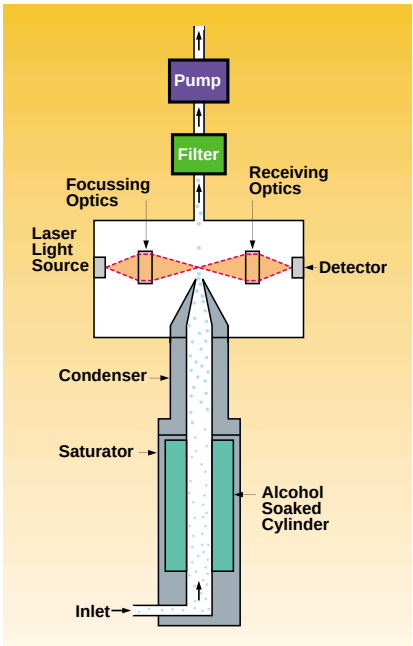
THE SOFTWARE

Industry leading TRAKPRO™ software is included with every instrument. This unique software helps you store and organize your test data, as well as generate the detailed graphs and reports needed to effectively communicate your measurement results.

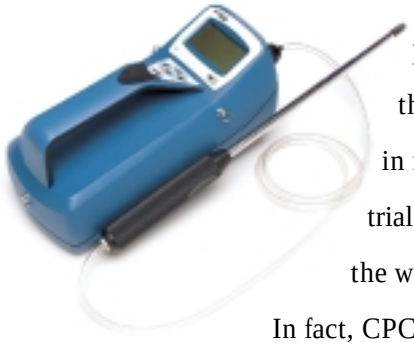


THE SENSOR

Particles are drawn through the P-TRAK Ultrafine Particle Counter using a built-in pump. Upon entering the instrument, particles pass through a saturator tube where they mix with an alcohol vapor. The particle/alcohol mixture is next drawn into a condenser tube where alcohol condenses on the particles causing them to grow into droplets that can be counted more easily. The droplets then pass through a focused laser beam, producing flashes of light. The light flashes are sensed by a photodetector and counted to determine particle concentration.

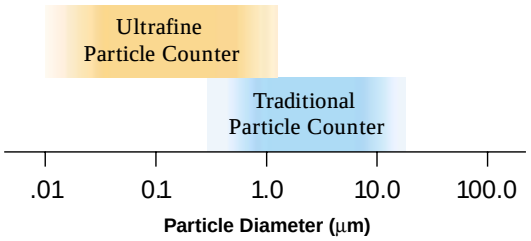


THE INSTRUMENT The P-TRAK Ultrafine Particle Counter uses the same fundamental technology behind TSI's condensation particle counters (CPCs), well-proven instruments that have been used in research and industrial applications around the world for many years. In fact, CPCs have been used for decades to track and record particle sources.



The P-TRAK UPC comes with everything you need to start solving tough IAQ problems. Battery operated, it goes wherever you need to go. With programmable data logging capability, you can take the measurements back to your office for further study. It's a simple matter to download data for inclusion in special reports, for permanent record keeping, or for comparison with measurements taken on a previous date.

Particle Counter Sensitivity



This technique provides far greater sensitivity to smaller particles than traditional instruments. Many particles that are below the range of traditional particle counters are easily seen by the P-TRAK Ultrafine Particle Counter.

P-TRAK Model 8525 Ultrafine Particle Counter

Specifications

Concentration Range	0 to 5×10^5 particles/cm^3
Particle Size Range	0.02 to greater than 1 micrometer
Temperature Range	
Operation	32 to 100°F (0 to 38°C)
Storage	-40 to 160°F (-40 to 70°C)
Flow Rate	
Sample	100 cm^3/min
Total	700 cm^3/min (nominal)
Power Requirement	
Battery type	6 AA alkaline
Battery life	6 hrs @ 70°F (21°C)
Alcohol Requirement	
Type	100% reagent grade isopropyl
Hours per charge	8 hours at 70°F (21°C)
RS232 Output	Baud rate 9600
Size	10.75 in. × 5.5 in. × 5.5 in. (27 cm × 14 cm × 14 cm)
Carrying Case	
Size	21 in. × 14 in. × 8.3 in. (53 cm × 36 cm × 21 cm)
Weight	
Instrument with batteries	3.8 lbs (1.7 kg)
Instrument with accessories in case	16.8 lbs (7.7 kg)
Shipping weight	23 lbs (10.5 kg)
Factory Recalibration Interval	One year
Warranty	Two years on parts and labor
Computer Requirements	PC with Microsoft Windows 95, 98 or NT; Windows-compatible printer; 5 MB hard disk space; and available RS232 serial port (for downloading)

Service Policies

- Typical turnaround time for P-TRAK UPC factory service is two business days in-house.
- Warranty repairs returned via overnight carrier at TSI expense.

How to Order

Model	Description
8525	P-TRAK Ultrafine Particle Counter and accessories includes: Telescoping Sample Probe, Sample Tube, Shoulder Strap, Inlet Screen, Spare Wicks (2), Battery Holder, Alkaline Batteries (6 AA), Alcohol Fill Capsule with Storage Cap, Alcohol Cartridge, 30 ml Bottles Reagent Grade Isopropyl Alcohol (16), Zero Filters (2), Carrying Case, TRAKPRO™ Software 3.5 inch Diskettes, Computer Cable, DB9/DB25 Cable Adapter, Operation and Service Manual, Calibration Certificate, and Two-year Warranty

Optional Accessories

Model	Description
2613033	AC Adapter
801626	Headphones
8925HS	Portable Printer (with AC adapter, paper, cable, manual)

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