

Nanoparticle Measurements in Motion News from TSI

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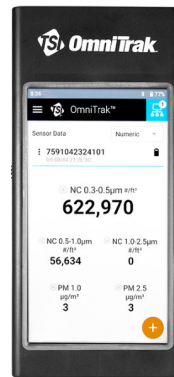
VERT FOCUS Day 2026, METAS, Bern (CH) – 20th March 2026

Portable instruments for PN and PM



OmniCount 3001 & 3002
Total UFP from 10-1000nm

+



OmniTrak CORE
5 channels 0.3 - 10 μm
PM₁, PM_{2.5}, PM₄, PM₁₀
CO₂, VOC, p, T, RH

+

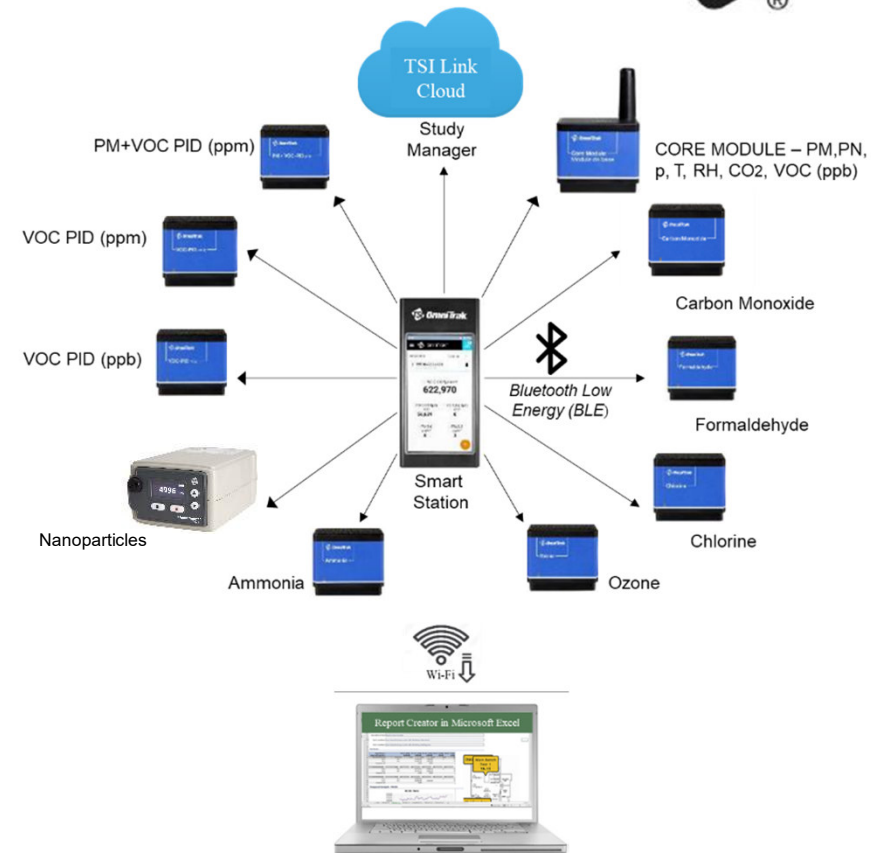


Mini Moudi 135-6B
6 stages 10, 5.6, 3.2, 1.8, 1.0, 0.56 μm

The “Omni Family”



- Literally measure anywhere
 - 11 modules for immediate, on-site visibility into indoor environmental conditions
 - E.g. PN, PM, VOC, Ozone, CO, CO₂, p, T, RH, and sound!
 - IAQ studies in shops and vehicle cabins are accessible to everyone!
 - Up to 10 modules can be connected to one smart station for synchronized measurements on the same time scale
 - A report generator helps to evaluate the data in minutes

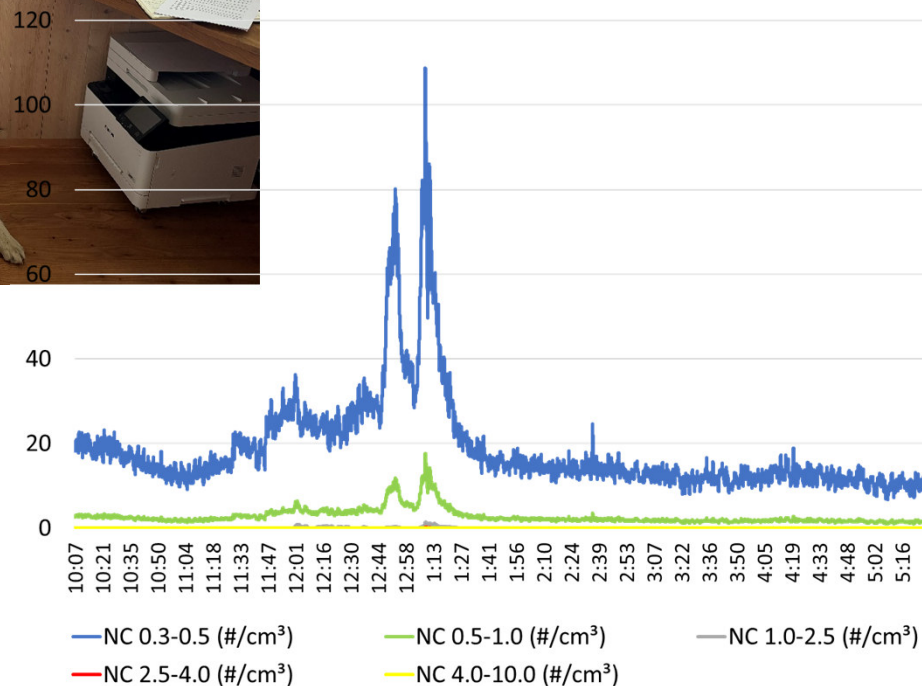
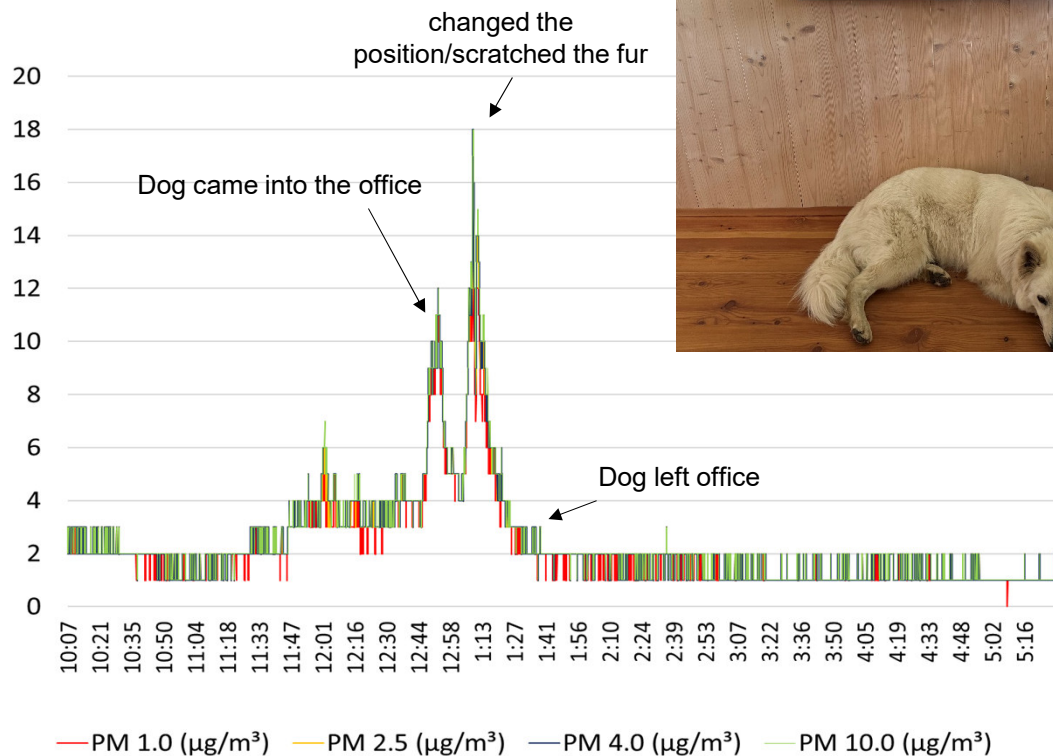


Omnitrak

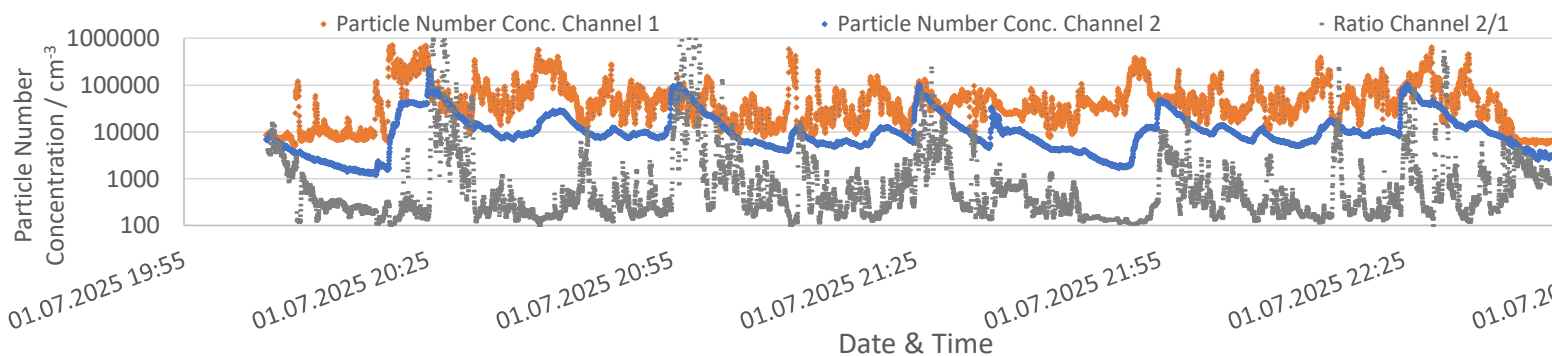
IAQ in the home office



→ Shows the increase of particles originating from animal's fur



Car ride Münster – Hamburg (Germany) 2025-07-01

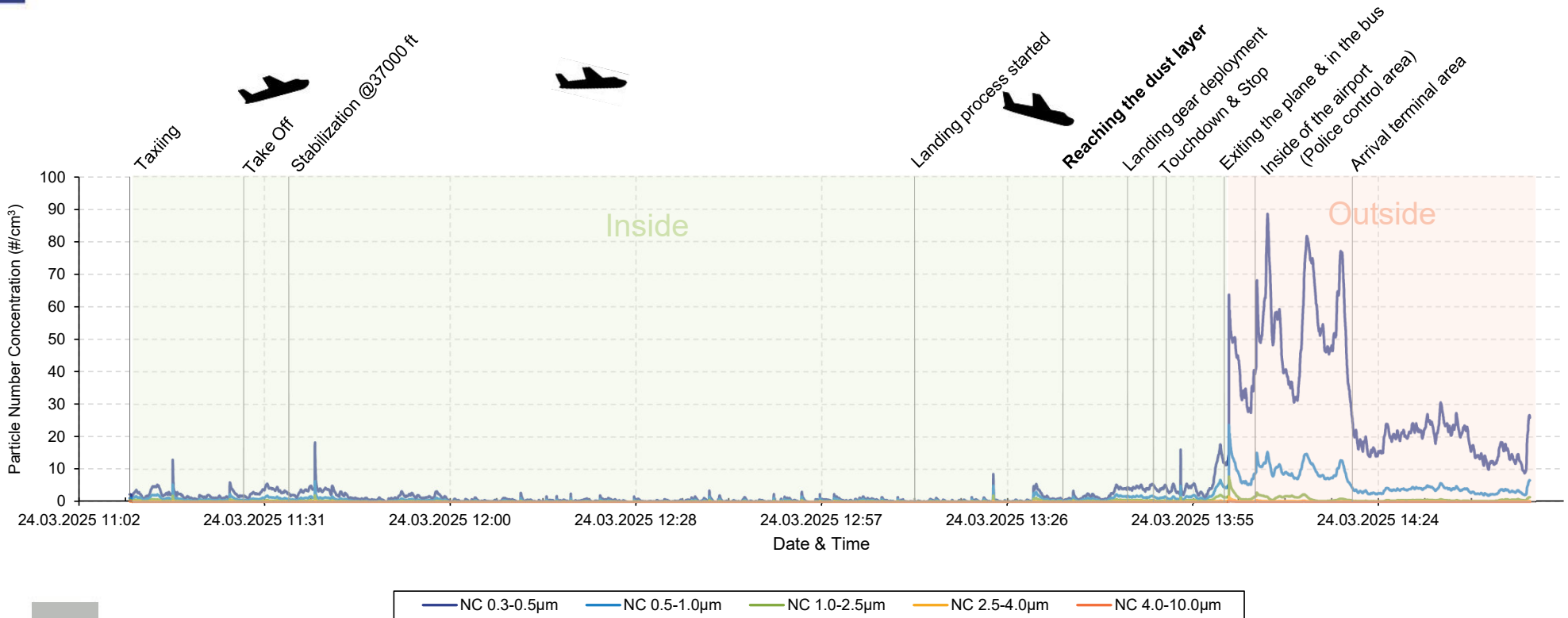


- Channel comparison cabin air
- Window open for 1 min during ride
- Fuel station



Results

Particle Number Concentration



Omnitrak Report Creator



Test Results

Air Quality Index (PM 2.5)



Average PM 2.5
Test 1



Average PM 2.5
Test 2

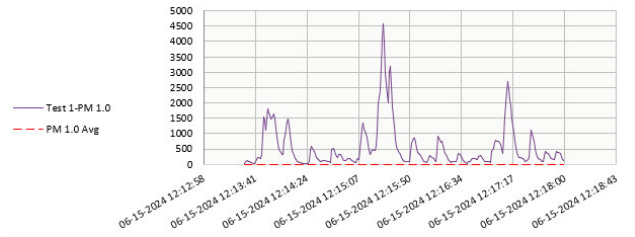
US AQI Scale - 24 hr Average	
PM2.5 (ug/m3)	Remark
0 to 12	Good
12 to 35	Moderate
35 to 55	healthy for Sensitive Individuals
55 to 150	Unhealthy
150 to 250	Very Unhealthy
> 250	Hazardous

Target Names	PM 1.0 Avg	PM 2.5 Avg	PM 4.0 Avg	PM 10 Avg	PM 1.0 Max	PM 2.5 Max	PM 4.0 Max	PM 10 Max	
Target Limits									
Test	Duration (min)	Avg PM1.0 (ug/m3)	Avg PM2.5 (ug/m3)	Avg PM4.0 (ug/m3)	Avg PM10 (ug/m3)	Max PM1.0 (ug/m3)	Max PM2.5 (ug/m3)	Max PM4.0 (ug/m3)	Max PM10 (ug/m3)
Test 1	4.5	554.79	598.41	608.17	612.90	4580.00	5181.00	5460.00	5597.00
Test 2	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Comparison (%)						-100.00%	-100.00%	-100.00%	-100.00%

Test	Duration (min)	Min PM1.0 (ug/m3)	Min PM2.5 (ug/m3)	Min PM4.0 (ug/m3)	Min PM10 (ug/m3)
Test 1	4.5	24.00	25.00	25.00	25.00
Test 2	0.0	0.00	0.00	0.00	0.00
Comparison (%)		-100.00%	-100.00%	-100.00%	-100.00%

Temporal Analysis - PM 1.0

PM 1.0 - Test 1



TSI Link Report Crea..

Workbook +

A-B Comparison Add

Worksheet

PM - Mass Concentration +

Add

Worksheets will be added as a new tab in the current workbook

Worksheet Layout

1 to 2 studies (minimum of 1) are needed to complete worksheet.

Data can also be added manually

STUDY MANAGER

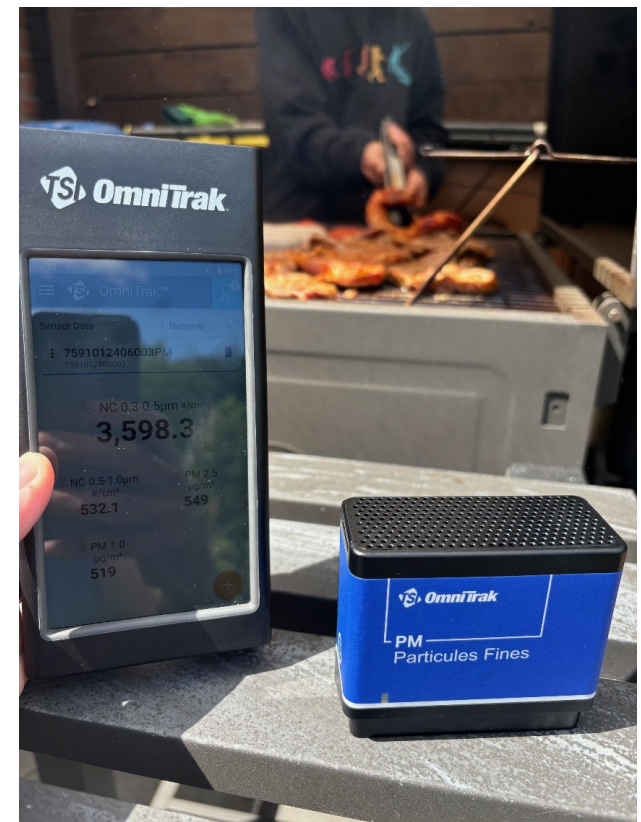
[File Import](#) ? **HELP**

Selected study

6/15/2024, 12:...

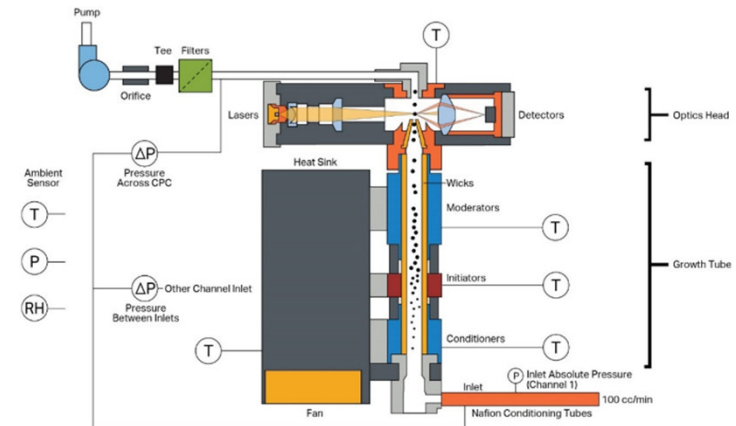
Test 1 v

ADD DATA



Indoor Air – Portable WCPC

- OmniCount™ Portable WCPC (TSI)
 - Newest model 3001, compact version of lab-grade V-WCPC 3789
 - Same core technology but miniaturized for mobile use
 - For time-resolved measurement of PNC from <math><10\text{ nm}</math>
- Made for mobile measurements
 - Small, low weight (850 g)
 - Reliable operation in any orientation (flood resistant)
 - Several hours of operation between water refills
 - Wireless connectivity
- Conducted extensive performance testing
 - Efficiency curve and lower detection efficiency (d_{50})
 - Concentration accuracy



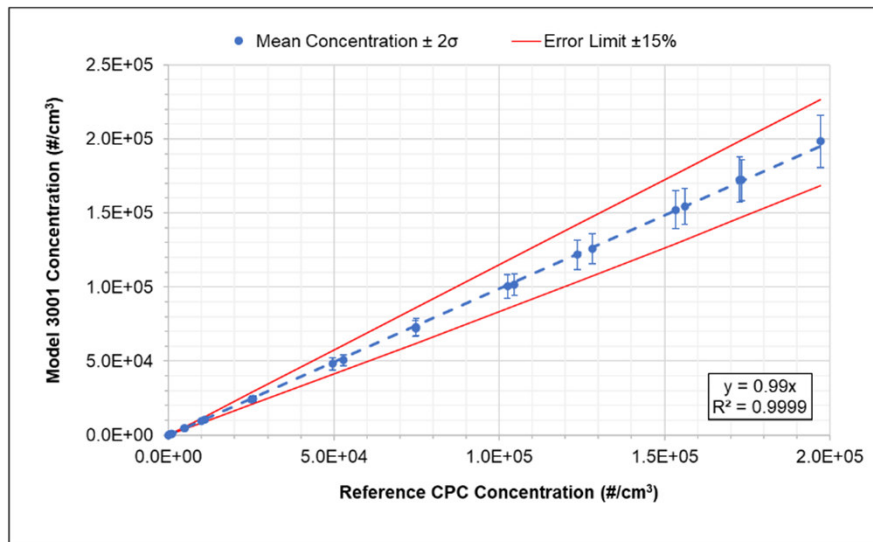
Schematic & Picture © TSI Incorporated

Portable WCPC Characterization

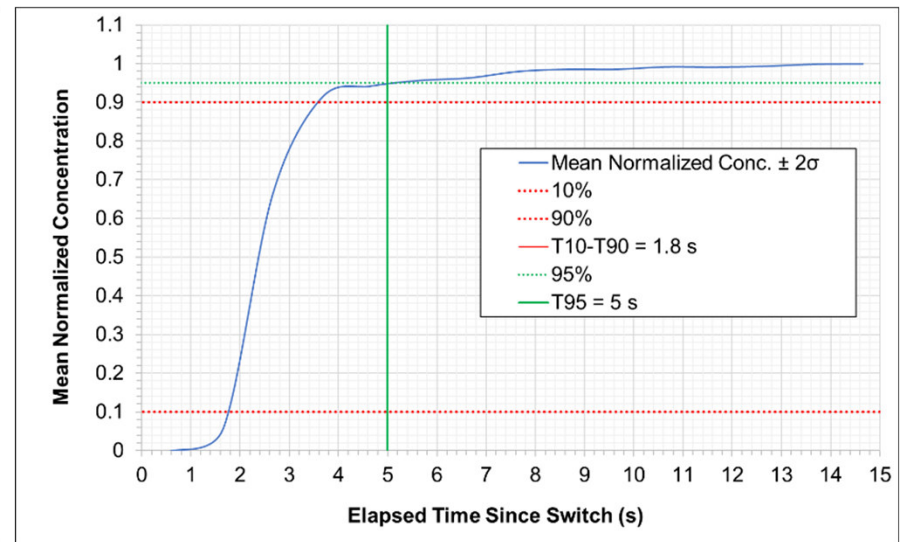


- Performance for atomized polydisperse NaCl aerosol from Atomizer (TSI 3076, GMD ~60 nm)

Agreement with reference CPC



Time response



Summary



Reliable tools to assess the air quality

- In vehicle cabins
- In offices next to manufacturing
- In workshops, garages
- Before and after filtration systems
- In motion or stationary
- By combining various parameters
- For accurate & fast results!

Indoor air quality



Thank you!



Drone Measurements w/
3002 Omnicount by AGH Krakow (PL)

Any Questions?

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