

SM100i



Scentroid SM100i Intelligent Personal Olfactometer

Scentroid SM100i represents the next evolution in personal olfactometry. This intelligent instrument can conduct full odour analysis including YES/No test mode in full accordance to the international EN13725 standard. The SM100i can analyze from a sample bag or be deployed in the field for direct olfactometry and ambient odour measurement. In addition to odour concentration (in OU) the SM100i with the use of the wearable OdoTracker can also automatically record Ammonia (NH_x) and Hydrogen Sulphide (H₂S) in real-time.

▶ CAPABILITIES

The SM100i can conduct odour measurements from:

- Ambient air without any additional sampling equipment
- Directly from smoke stacks or filter inlets
- Directly from flux chambers or wind tunnels
- Air samples stored in sampling bags
- Screen Panellist using N-butanol and YES/NO method in full accordance to EN13725.

▶ ACCURACY

The SM100i is an olfactometer with an unprecedented accuracy :

- Micro-computer controlled dilution range from 2 to 11,000 OU
- Meets EN13725 and ASTM E679 for olfactometer design
- Keep noses sensitive even in the harshest ambient odours
- Constant presentation air flow (not dependant on Sniff Rate)
- Odourless diluting air from compressed air tanks



▶ HOW IT WORKS

The SM100i draws a sample of ambient air via venturi pump and dilutes it using fresh odour less air from a compressed air tank. A micro-controller adjusts the dilution ratio and interacts with the panellist though a touch screen tablet to conduct YES/No test mode and automatically calculate the odour concentration.

▶ MEETING THE EN13725 STANDARD

The SM100i meets all criteria for the EN13725 odour standard including:

- YES/NO Test method
- N-butanol Screening
- 20 Liters/min presentation
- All stainless steel or PTFE wetted materials.

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SPECIFICATIONS

Manufacturer	SCENTROID
Model	SM100i
Air Supply Capacity	20 Min base / 40 Min with dual air tank option
Number of samples per tank refill	10-15
Dilution range	2 – 11,000
Dilution principle	Stainless Steel Eductor
Number of dilution steps	15 (adjustable range)
Selectable ranges	2-101; 4-678; 44-656; 2-3600; 2000-30,000
Interface with mobile device	Bluetooth
Battery	Rechargeable Lithium-ion with 36 hour capacity per charge
Presentation device for direct olfactometry (In-Field)	Half-face PTFE mask
Presentation device for delayed olfactometry (Laboratory)	PTFE coated sniffing port
Wetted Material	Stainless steel and PTFE
Weight Kg/(lb)	3.5 (8)

➤ DIRECT OLFACTOMETRY

A part of EN13725, Direct Olfactometry refers to the measurement of odours directly from the source to eliminate odour degradation caused by sample storage and transportation. Direct olfactometry provides immediate results making it ideal for testing and maintaining any odour abatement system. SM100i provides an ideal instrument for conducting direct olfactometry. The sample input port can be connected to: a stack, flux chamber, wind tunnel, static hood, or any other source sampler.



➤ AMBIENT ODOUR MONITORING

Ambient odour monitoring using the SM100i provides many benefits such as

- Verifying dispersion modeling
- Conducting odour assessment for Total Odour Management System
- Odour complaint follow up
- Measuring fugitive sources
- Indoor air quality

➤ COMPLETE AUTOMATION

The SM100i takes out the guess work from personal olfactometry. The instrument will automatically screen panellists and conduct Yes/No test mode to determine accurate odour concentration and hedonic tone.



➤ ODOTRACKER

The SM100i along with the OdoTracker can not only provide accurate odour concentration but can also provide ppb level reading of H2S and Ammonia, the most common odour causing chemicals. This information is automatically collected by the SM100i from the wearable sensor OdoTracker.

➤ COMPARISON TO FULL SCALE LABORATORY

Sample	Lab Results (OU)	SM100C Results (OU)
1	116	94
2	108	164
3	139	131
4	201	219

**Comparative study between SM100 and EN13725 odour laboratory*

➤ USE THE SM100i TO:

- Conduct daily odour emission assessment
- Determine odour mitigation effectiveness over time
- Monitor emission compliance and conduct N-butanol screening

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