

EST'S 4650 zNose®

Ultra fast.
Ultra flexible.

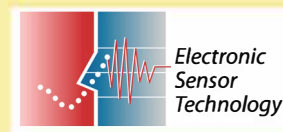


The new 4650 zNose® is the first and only analyzer with a fully integrated computer to do all your analysis in the field without the need for an external laptop computer. Couple that with the 4650's impressive speed and you've got the most flexible and accurate machine available.

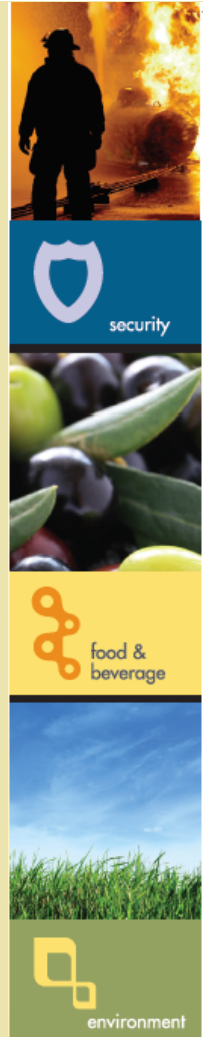
Because it's portable and can analyze in real time, it significantly reduces product changeover time to a fraction of what they are now.

Benefits

- Remarkable speed
- Small footprint
- Can detect and analyze accurately organic, biological & chemical compounds in real time
- Saves time on product line changeovers
- Requires minimal training
- Accurate and efficient analysis
- Compounds are automatically identified
- Computer runs Microsense software
- Fully integrated single unit mobility
- 100 fold multiplication
- Locking sensor ensures consistent sensor positioning



www.znose.com



4650

Mobile Ultra-Fast GC Analyzer

EST Part No. SYS4600C5 (DB-5 Column), SYS4600C6 (DB-624 Column)



Portable Gas Chromatography for Field Use

What is it?

The Model 4650 is a completely portable GC/SAW with an internal controller and simple operating steps for automated results.

The 4650 is designed with an internal helium cylinder (refillable), and can also use disposable helium cylinders. The lithium ion battery is rechargeable, typically lasting 5 hours.



How Does it Work?

Employing a trap and helium carrier gas, the Model 4650 injects samples into a heated column where separation is achieved. Materials sequentially exit the column and are deposited on the SAW detector. This deposition results in a change in the oscillating frequency of the resonator directly proportional to the mass.



Analysis Time/ Recycle Time

- 5 – 60 seconds / 30 seconds min.

Precision and Accuracy

- Standard Deviation <2%

Sensitivity

- Can analyze vapors in 10 seconds with sensitivity in parts-per-billion for many compounds
- Detects hydrocarbons in the range of C4 – C25. Sensitivity will vary by compound sampling time, matrix, interferences and detector temperature settings.

Sampling

- Internal Sample Pump
- Sample Introduction: ~.5 ml/second
- Time programmable: 1-300 seconds
Sample absorbed into internal tenax preconcentrator

Compound Identification

- Automatic with user calibration

Surface 3 Display

- Size 10.52" x 7.36" x 0.34"
(267 mm x 187 mm x 8.7 mm)
- Weight 1.41 lb. (641 g)
- Display 10.8" Clear Type Full HD Plus
Resolution: 1920 x 1280
10 point multi-touch Surface Pen

Dimensions

Head

- | | | |
|----------|---------|---------|
| • Weight | 5.7 lbs | 2.6 kg |
| • Length | 12.5 in | 31.8 cm |
| • Width | 4.3 in | 10.9 cm |
| • Height | 6.8 in | 17.3 cm |

Support

- | | | |
|----------|----------|---------|
| • Weight | 18.7 lbs | 8.5 kg |
| • Length | 15.0 in | 38.1 cm |
| • Width | 9.7 in | 26.4 cm |
| • Height | 5.8 in | 14.5 cm |

Charger

- | | | |
|----------|---------|-------|
| • Weight | 2.2 lbs | 1 kg |
| • Length | 7.1 in | 18 cm |
| • Width | 3.5 in | 9 cm |
| • Height | 1.9 in | 5 cm |

Environmental Conditions

- Operating Temperature Range: 32°F to 105°F (0°C to 40°C)
- Relative Humidity: 0 – 95% non-condensing

Power

- Battery Pack: 28VDC, 16 AHr - Lithium-Ion (4 hr use typical)

Detector

- Surface Acoustic Wave (SAW)
Quartz microbalance
- Dynamic Range: 10⁵
- Temperature: 0°C to 150°C, programmable

Column Limits

- 35°C to 225°C – depending on column

Column Ramping

- Ramped from 0 – 18°C/second

Carrier Gas

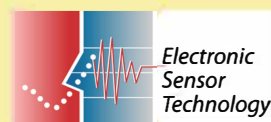
- Helium (Min. 99.999% Purity, #6) Typical usage is 300 tests per day on one helium charge
- Helium (Replaceable Cylinder), 95cc at 17.6 MPa (2560 psi). Typical usage: 200-300 tests

Inlet

- Connection: Stainless Steel LUER inlet port
- Temperature: 50°C to 200°C

Data Storage/Transfer

- USB port for external memory



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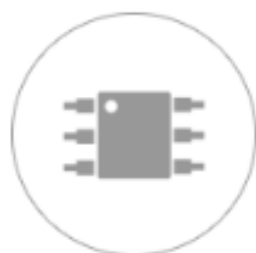
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KEY CAPABILITIES OF COMPUTER INTEGRATED zNose®

Model 4650 is the first and only analyzer with a fully integrated computer to do all your analysis in the field without the need for an external laptop computer. It has impressive speed and is a small footprint analyzer that uses a built-in processor to guide the user. As it is portable and can analyze in real time, it significantly reduces product changeover time to fraction of what they are now.



FULLY INTEGRATED



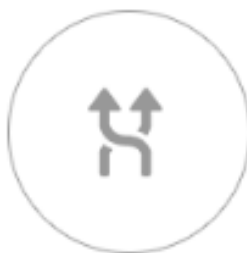
IDENTIFIES COMPOUNDS
AUTOMATICALLY



REMARKABLE SPEED



REQUIRES MINIMUM TRAINING



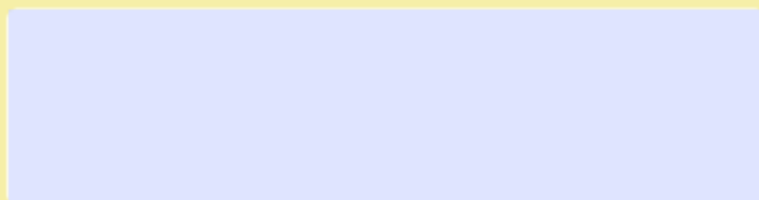
ULTRA FLEXIBLE



SMALL FOOTPRINT

▼ How is Model 4650 different from other models of zNose®?

Model 4650 is a complete portable GC analyzer with an internal controller and simple operating steps for automated results. It is the only fully integrated computer that does not need any external laptop or electronic screen in analyzing the odor samples. It has a remarkable speed and saves time on product line changeovers. It gives accurate and efficient analysis and identifies compounds automatically. The locking sensor of this model ensures consistent sensor positioning and is automatic with user calibration, unlike other models.



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OUR HOMELAND SECURITY SOLUTION

zNose® detects potential threat by monitoring ambient air chemistry within ships, cargos, buildings and airport premises using ultra-fast gas chromatography and surface acoustic wave (SAW) detector, rendering a complete security system.

KEY CAPABILITIES

zNose® renders a helping hand to keep homeland secure with its amazing capabilities. Take a sneak peek into some of them:



RECOGNIZES ANY VOLATILE
THREAT



INTEGRATED WIRELESS SYSTEM



SENSITIVE TO EXPLOSIVES AND
CWA's



DATABASE STORAGE FOR ODOR
PROFILES



ALLOWS ALLOCATION OF STORED
ODOR PROFILES



POSSESSES TUNABLE SPECIFICITY

Electronic Sensor Technology

1125-B Business Center Circle
Newbury Park, CA 91320 USA



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