

Electronic Sensor Technology, Inc. - zNose Portable, Explosive, Narcotics and Nerve Agent Detector



GENERAL DESCRIPTION:

The zNose is an Ultra Fast Gas Chromatograph, which uses the unique Surface Acoustic Wave detector (SAW). The instrument was designed as laboratory analysis instrument, and is used for environmental sampling, Food safety, Medical application (Early signs of breast, and lung cancer as well as diabetes) industrial etc.



TECHNICAL DESCRIPTION:

The instrument is based on proprietary Surface Acoustic Wave (SAW) detector system, which enables it to perform chemical detection and diagnostic determination.

CONTACT INFORMATION

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COST

- \$40,000/system
- <\$1.00/analysis

Tier Selection

Final tier assignment is based on overall product score.

- Top Tier
- ◐ Second Tier
- Third Tier
- ◑ Fourth Tier
- Bottom Tier

RANKINGS

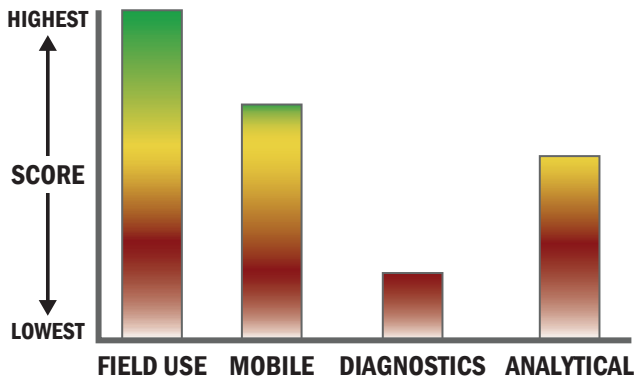
	Biological	Chemical	Radiological
FIELD USE System	N/A	◐	N/A
MOBILE Laboratory	N/A	●	N/A
DIAGNOSTIC Laboratory	N/A	●	N/A
ANALYTICAL Laboratory	N/A	●	N/A

Survey Source

Vendor Supplied Information

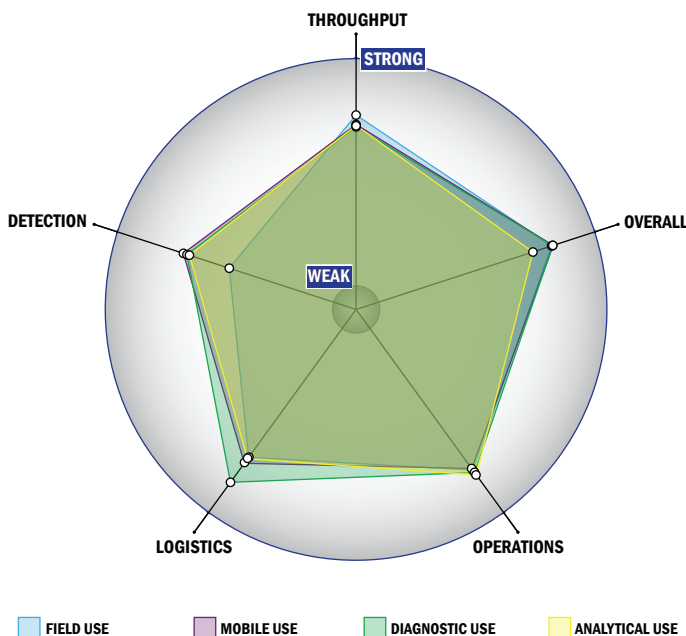
Scoring Analysis

System scores are compared across the four scenarios and ranked from highest to lowest.



Impact Chart

The Impact Chart is a spider graph representing specific categories and designed to give the reader a visual depiction of how a particular system is expected to operate across the four different scenarios. The score for each of the seven categories is presented as the percentage of the total possible score. Higher category scores extend the spokes of a graphic toward the outer edge of the chart. The area graphed for each of the four scenarios relates to how well the system performed in that scenario. Graphics for each of the four scenarios are super-imposed for ease of comparison.



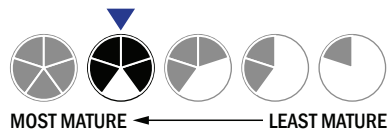
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- Multiple samples, multiple tests/sample per run
- 349-96 samples every 2 hours
- The system or device is currently semi-automated
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- 5-10 minutes is required for set-up
- 3-5 steps are required for detection

Logistics:

- More than a day of training and significant technical skills are required
- Approximately the size of a carry-on luggage suitcase
- Between 5 and 25 kg
- Wireless and wired connections are available
- System or device uses batteries
- 4-8 hours battery life



Operations:

- Can be used from 4 °C to 41 °C
- Components must be stored at room temperature (27 °C)
- Performance is not influenced by relative humidity
- Greater than 3 years shelf life
- Greater than 10 years expected life
- Results can be viewed in real-time
- The system or device is currently fully autonomous
- The system software is closed and not available for modification
- The system hardware is open but modification requires licensing

Detection:

- Less than 10 µL
- Excellent specificity. System has occasional false alarms under certain conditions (<2%)
- 1 ppb-1 ppm
- System currently can identify liquid chemical agent