

Gasmet Technologies, Inc. - DX4000/DX4015



GENERAL DESCRIPTION:

The DX4000 and DX4015 gas analyzers utilize Fourier Transform Infrared Spectroscopy (FTIR) technology for detection of chemical compounds of interest. The DX4000 and DX4015 analyzers provide multiple component gas analysis in a wide variety of matrices.



Intended uses: First Responders, Field Testing and Analysis, Field Portable, Military Field and Lab Testing. The DX4000 and DX4015 are capable of analyzing up to 50 different compounds in a gas stream on a continuous-real time basis and provide analysis in the field or lab for a very wide range of gas matrices and applications. The analyzers are designed for use as field portable, continuous monitoring and testing instruments. DX4000 and DX4015 analyzers are used in laboratory and field settings for industry, DoD, US government and University applications.

The DX4015 provides FTIR based analysis for ambient and/or indoor conditions.

The DX4000 provides FTIR based analysis in hot and wet conditions including temperatures up to 180°C.

TECHNICAL DESCRIPTION:

Air Quality Analytical, Inc. d/b/a Gasmet-USA offers analyzers that can detect low-level chemical warfare agents, toxic industrial chemicals and toxic industrial materials. The instruments we offer for these and other applications are the DX-4015 and DX-4000 analyzers. Both utilize Fourier Transform Infrared Spectroscopy (FTIR) for detection of chemical compounds. The included Calcmet™ software library is used to locate, classify and identify CWAs and/or other agents or chemicals in multiple gas streams and environments.

The Gasmet-based equipment we offer is capable of operating in a mobile environment for sustained periods of at least 72 hours without outside technical support.

The analyzers proposed require only nitrogen or zero grade air for periodic baseline measurements. The analyzers can perform real time measurements of multiple compounds (up to 50 per measurement) with a high degree of accuracy without added expense in a fraction of the time.

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

CONTACT INFORMATION

Gasmet Technologies, Inc.
 P.O. Box 204084
 Austin, TX USA 78720-4084
 POC: Mark Nelson
 512-331-0073

COST

- \$57,522-\$59,262/system
- <\$1/analysis

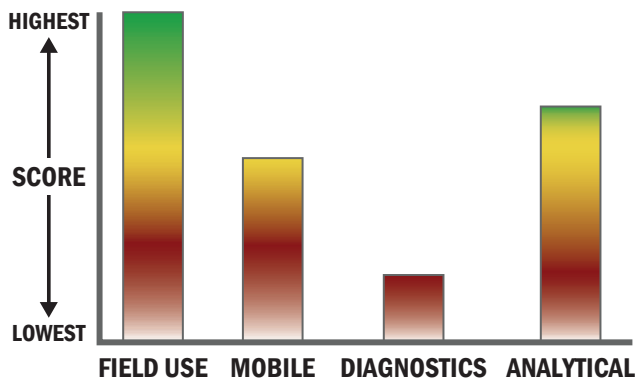
Survey Source

Vendor Supplied Information



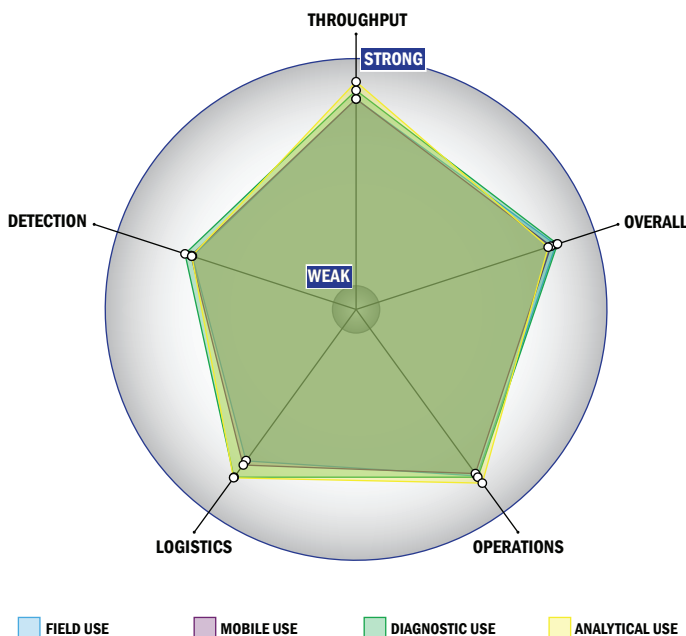
Scoring Analysis

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.



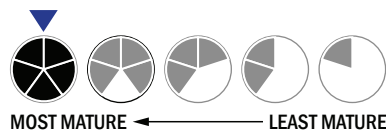
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- Continuous operation with no defined runs
- System is continuous and provides real time analysis with no defined tests/samples
- The system or device is currently fully automated
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- Greater than 20 minutes is required for set-up
- Automatic detection

Logistics:

- An afternoon of training and some technical skills required
- Approximately the size of a carry-on luggage suitcase
- Between 5 and 25 kg
- Satellite, wireless and wired connections are available
- System or device has 110V electrical requirement
- 4-8 hours battery life



Operations:

- Can be used from 4 °C to 37 °C
- Performance is not influenced by relative humidity
- 5-10 years expected life
- Results can be viewed in real-time
- The system could easily be adapted into a fully autonomous system
- The system software is open and available for modification
- The system hardware is closed and not available for modification

Detection:

- Possible the system could receive 510K clearance, no current efforts at this time
- Possible the system could receive FDA approval, no current efforts at this time
- This system does not test liquids
- Excellent specificity. System has occasional false alarms under certain conditions (<2%)
- 1×10^{-4} - 1×10^{-3} mg/m³
- 1 ppm-100 ppm
- System currently can identify aerosolized chemical agent
- System currently can identify liquid chemical agent