Syft Technologies, Inc. - Voice200

GENERAL DESCRIPTION:

The Voice200 is a Selected Ion Flow Tube Mass Sprectrometer designed for both lab use and first responder use. It can measure TICs, TIMs, Explosives, CWAs, as whole air,breath and head space analysis down to parts per trillion ranges with little or no sample prep and in Real Time.

TECHNICAL DESCRIPTION:

Voice200 takes ionized air through upstream quadrupole and filters all ions (except H3O+, NO+ and O2+) which are sequentially routed to flow tube every 20 milliseconds where the ions react with the analyte in a soft chemical first order reaction. The reaction products enter a downstream quadrupole where they are filtered again before being detected by a particle counter. The results are quantified in Real Time. The system can differentiate all isobars and some isomers, based on the use of the three precursor ions. Both SIM and Scan modes are possible and system can be operated by non-scientific operator.

CONTACT INFORMATION

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COST

- $225,000/system
- $10-$20/analysis

Tier Selection

Final tier assignment is based on overall product score.

Top Tier | Second Tier | Third Tier | Fourth Tier | Bottom Tier

RANKINGS

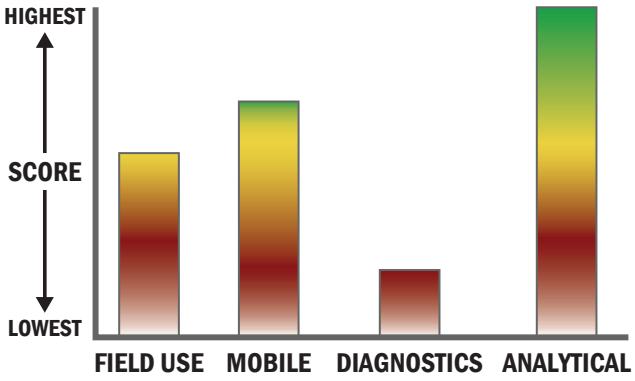
	Biological	Chemical	Radiological
FIELD USE System	N/A	Fourth Tier	N/A
MOBILE Laboratory	N/A	Third Tier	N/A
DIAGNOSTIC Laboratory	N/A	Second Tier	N/A
ANALYTICAL Laboratory	N/A	Top Tier	N/A

Survey Source

Vendor and Internet Supplied Information

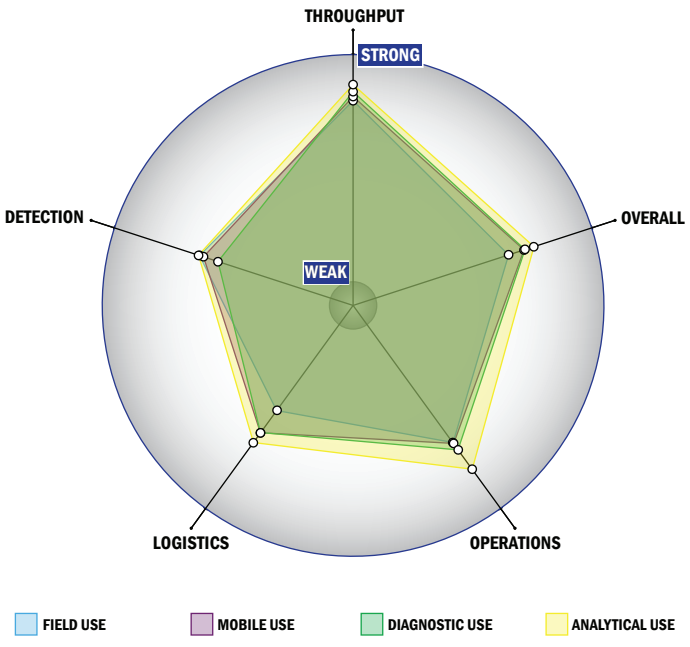
Scoring Analysis

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.



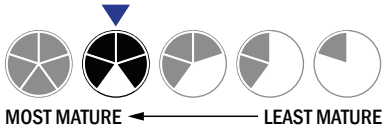
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- Multiple samples, multiple tests/sample per run
- 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
- 2 components
- 10-20 minutes is required for set-up
- 1-2 steps are required for detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a home dishwasher
- More than 50 kg
- Satellite, wireless and wired connections are available
- System or device has 220V electrical requirement



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 or device is currently fully autonomous
- The system software is open but modification requires licensing
- The system hardware is open but modification requires licensing

Detection:

- Less than 250 µL
- Superior specificity. System has a false alarm rate approaching zero (~0%)
- $1x10^{-6}$ - $3x10^{-5}$ mg/m^3
- <1 ppb
- Possible system could identify liquid chemical agent