Agilent Technologies, Inc. - Agilent Atomic Absorption Spectrometers

GENERAL DESCRIPTION:

The Agilent AA Atomic Absorption Spectrometers are compact, bench mounted elemental analyzers for use in the laboratory. They are used for the determination of trace to % levels of elements in a wide range of matrix types. Agilent's AA range is productive, user-friendly and utterly reliable. The instruments deliver the high performance that analysts require, while being equally at home in routine laboratories where reliability and simple operation are vital.

- Agilent's 55 and 240 AA combine flexibility with reliable hardware, providing budget-sensitive users with a high performance AA for routine flame/furnace/vapor analyses.
- Agilent's 240FS/280FS AA are the world's fastest, and most productive flame AA systems, with Fast Sequential operation doubling sample throughout and dramatically reducing running costs. Able to handle multi-element suites with ease, they are ideal for food and agriculture or any high throughput labs.
- Agilent's 240 and 280 AA Zeeman Graphite Furnace AA (GFAA) systems are productive and precise, providing superior furnace performance and accurate background correction.
- Double your productivity with Agilent's AA Duo, the world's only AA systems that provide true simultaneous operation of flame and graphite furnace without changeover delays.

TECHNICAL DESCRIPTION:

Element specific source lamps produce light which is passed through an atomization device and directed through an automated optical system to a selected wide range photomultiplier tube detector, allowing for fast detection of elemental concentrations. Atomization device is selectable – flame, furnace or vapor generation – depending on elemental detection limits required for the analysis. These instruments utilize 2, 4 or 8 source lamps, deuterium (flame, furnace or vapor generation operation) or Zeeman (furnace operation) background correction and include numerous interlocks for safe, reliable operation. Unique Fast Sequential operation can double sample throughput versus convention AA operation. Fully web-integrated SpectrAA software uses Agilent's worksheet concept for ease of use, rapid operator training, and commonality with other Agilent spectroscopy products.

CONTACT INFORMATION

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COST

N/A

Tier Selection

Final tier assignment is based on overall product score.

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

RANKINGS

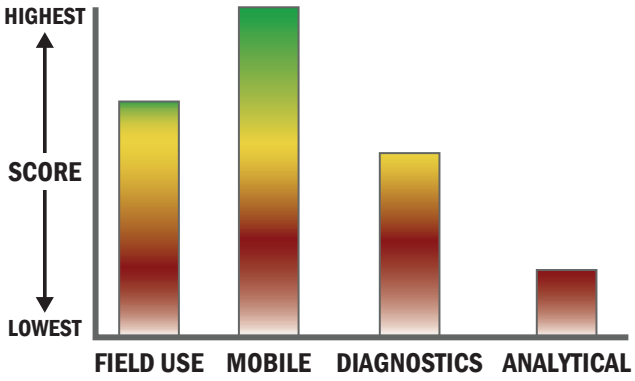
	Biological	Chemical	Radiological
FIELD USE System	N/A	●	N/A
MOBILE Laboratory	N/A	●	N/A
DIAGNOSTIC Laboratory	N/A	●	N/A
ANALYTICAL Laboratory	N/A	●	N/A

Survey Source

Vendor Supplied Information

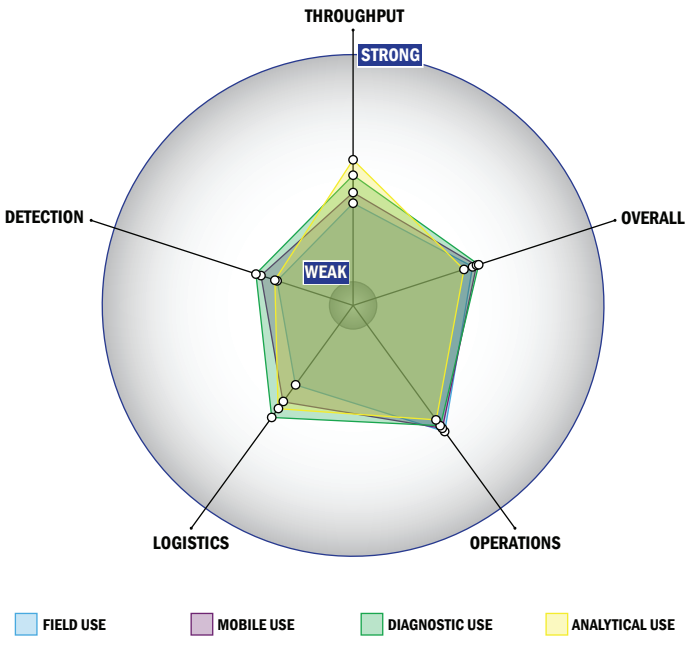
Scoring Analysis

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.



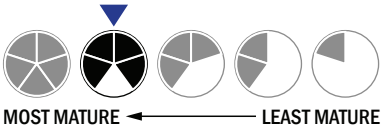
Evaluation Criteria

Throughput:

- Between 2 and 15 minutes for detection
- Multiple samples, multiple tests/sample per run
- 95-32 samples every 2 hours
- The system or device is currently fully automated
- Device or system is intended for multiple detection assays
- 2 solutions, buffer, eluents, and/or reagents
- 5 or more components
- Greater than 20 minutes is required for setup
- Almost instantaneous detection

Logistics:

- More than a day of training and significant technical skills are required
- Approximately the size of a home dishwasher
- More than 50 kg
- Wired connections are available
- System or device has 110V electrical requirement



Operations:

- Can be used from 25 °C to 37 °C
- Components must be stored at room temperature (27 °C)
- Performance is not influenced by relative humidity
- Between 1 to 3 years shelf life
- Greater than 10 years expected life
- Results can be viewed in real-time
- The system could be adapted to a fully autonomous system with some effort
- The system software is closed and not 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
- Less than 250 µL
- Excellent specificity. System has occasional false alarms under certain conditions (<2%)