

# Agilent Technologies, Inc. - Agilent 5975C Triple-Axis Detector GC/MSD System



## GENERAL DESCRIPTION:

The Agilent 5975C TAD Series GC/MSD System uses Gas Chromatography and Mass Spectrometry to deliver high confidence results. The Triple-Axis HED EM Detector provides the flexibility, capabilities, and performance demanded by modern applications in all industries. The mass selective detector (MSD) is configured for electron ionization. The auto sampler systems can be selected to meet different requirements. Injection systems can range from an injector tower to a flexible CTC-PAL auto-sampling system. Other sampling devices are available from Agilent and third parties.



## TECHNICAL DESCRIPTION:

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Gold quartz quadrupole with proprietary design enhances both performance and reliability up to 1050 u, covering all applications from routine EI to 1050 u mass range extends system performance for all models, and delivers superior performance for even the most demanding high mass applications; industry's lowest mass deviation ensures longer-lasting tuning and calibration demanding CI analyses.

350 °C inert ion sources now programmable up to 350 °C, delivers enhanced response for active compounds and late eluters.

Trace Ion Detection technology Lowers detection limits in complex matrices; together with the high temperature inert ion source, this new technology gives your lab powerful new analytical capabilities.

Synchronous SIM/Scan mode lets you selectively monitor for ions of interest at high sensitivity while simultaneously acquiring library-searchable scan data.

All ionization modes in one automated sequence Electron impact (EI) ionization with standard CI ion source; Auto CI feature makes CI as easy as EI.

New hydrogen EI signal-to-noise specification permits faster analysis under safe conditions with no compromise on analytical quality.

## 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
<b>FIELD USE System</b>	N/A	●	N/A
<b>MOBILE Laboratory</b>	N/A	◐	N/A
<b>DIAGNOSTIC Laboratory</b>	N/A	◑	N/A
<b>ANALYTICAL Laboratory</b>	N/A	●	N/A

## Survey Source

Vendor Supplied Information

## CONTACT INFORMATION

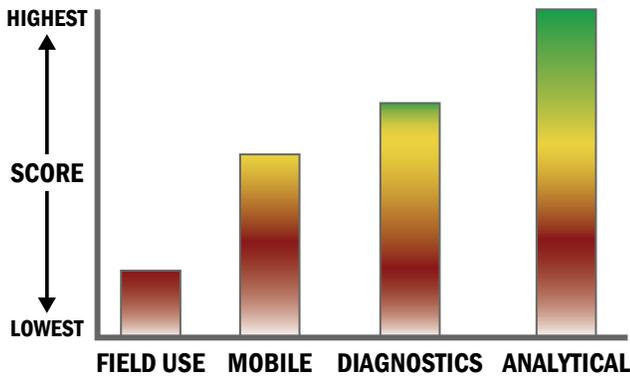
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## COST

N/A

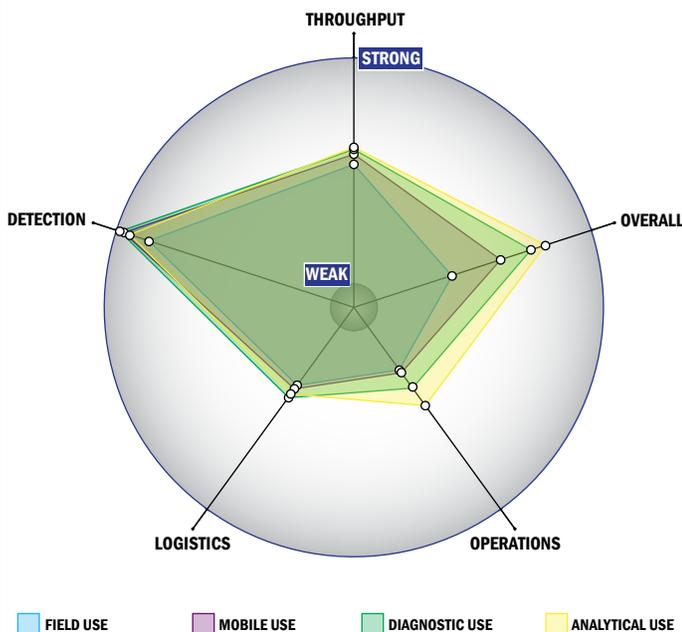
## Scoring Analysis

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.



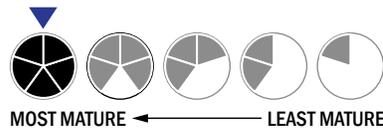
## Evaluation Criteria

### 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
- 0-1 solutions, buffer, eluents, and/or reagents
- 10-20 minutes is required for setup
- 1-2 steps are required for 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 4 °C to 41 °C
- Greater than 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 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
- Superior specificity. System has a false alarm rate approaching zero (~0%)
- $<1 \times 10^{-6}$  mg/m<sup>3</sup>
- $< 1$  ppb
- System currently can identify aerosolized chemical agent
- System currently can identify liquid chemical agent