

# Envionics USA - ChemPro 100i



**GENERAL DESCRIPTION:**  
 The CP100i is an Ion Mobility Spectrometer capable of classifying gas for the first responder community and war fighter.

**TECHNICAL DESCRIPTION:**  
 The CP100i uses Ion Mobility Spectrometer in conjunction with electrochemical cells to classify chemicals.



**CONTACT INFORMATION**  
 Envionics USA  
 1308 Continental Drive Suite J  
 Abingdon, MD 21009

**COST**  
 • \$14,000/system  
 • >\$.10/analysis

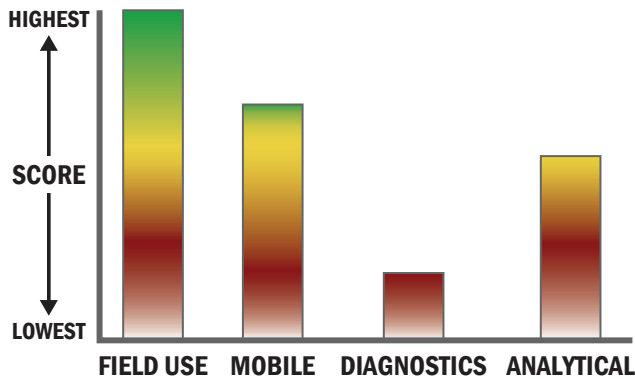
Tier Selection			
Final tier assignment is based on overall product score.			
● Top Tier   ● Second Tier   ○ Third Tier ◐ Fourth Tier   ● Bottom Tier			
RANKINGS			
	Biological	Chemical	Radiological
<b>FIELD USE System</b>	○ N/A	●	●
<b>MOBILE Laboratory</b>	○ N/A	●	◐
<b>DIAGNOSTIC Laboratory</b>	○ N/A	◐	○
<b>ANALYTICAL Laboratory</b>	○ N/A	◐	○

**Survey Source**  
 Vendor Supplied Information



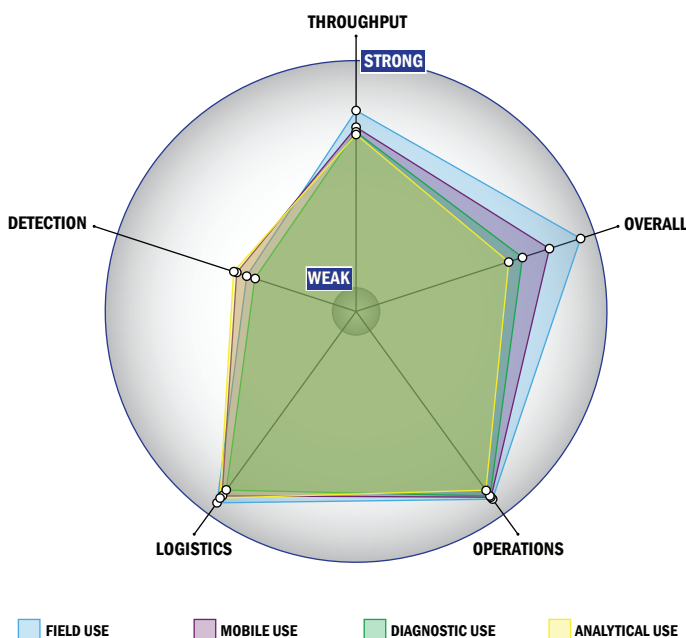
## Scoring Analysis

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.



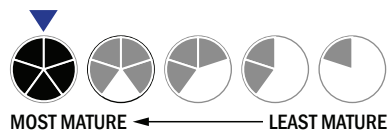
## Evaluation Criteria

### Throughput:

- 2 minutes or less for detection
- 1 sample, single test/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
- 1 component
- Less than 5 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 soda can
- Between 1 and 5 kg
- Satellite, wireless and wired connections are available
- System or device uses batteries
- 4-8 hours battery life



### Operations:

- Can be used from  $-21^{\circ}\text{C}$  to  $42^{\circ}\text{C}$  (All temperatures)
- This system does not require consumable components
- Performance is not influenced by relative humidity
- Greater than 3 years shelf life
- 3-5 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 closed and not available for modification

### Detection:

- Not possible for the system to achieve 510K clearance
- Not possible for the system to achieve FDA approval
- Less than  $10\ \mu\text{L}$
- Good specificity. System has a consistently low level of false alarms (2-5%)
- $> 1 \times 10^{-3}\ \text{mg}/\text{m}^3$
- 1 ppb – 1 ppm
- Total dose and dose rate
- Down to background level radiation for dose rate
- System is used for personnel detection