# EXPRAY/DROPEX PLUS/EXPEN



### **GENERAL DESCRIPTION:**

Expray, DropEx, and Expens utilize the same reagents in different delivery packages (aerosol, bottle, ampoule). Basic kits detect (bulk or trace) substances for nitro aromatics, nitro-esters and Nitramines, and nitrates. Users are military, EOD, perimeter/ infrastructure/checkpoint security including K-9, environmental analysis, labs.

### TECHNICAL DESCRIPTION:

Technology uses wet chemistry reagents that elicit color reactions when applied to targeted substances from chemical interactions.

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### **CONTACT INFORMATION**

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### COST

System: Varies by size of container or quantity of liquids:

- Expray: \$231 \$256
- DropEx Plus: \$156
- ExPen: \$255

#### Analysis:

- Expray (ave): \$2.50 (kit)
- DropEx: \$3.12 (kit)
- Expen: \$1.25 (per pen)

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

- Detection is instantaneous
- Multiple samples, multiple tests/ sample per run
- 95-32 samples every 2 hour
- The system could be adapted to a fully automated system with some effort
- Device or system is intended for multiple detection assays
- 3 solutions, buffer, eluents, and/or reagents
- 0 components
- No set-up of the system is required
- 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
- This system is not capable of transmitting data
- There is no electrical requirement



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- Operations:
- Can be used from 4°C to 41°C
- Components must be stored at room temperature (27 °C)
- Performance is not influenced by relative humidity
- Between 1 to 3 years shelf life
- 1-3 years expected life
- Results can be viewed in real-time
- The system is not capable of autonomy
- The system does not employ any software
- The system hardware is open but modification requires licensing

### **Detection:**

- Not possible to achieve 510K clearance
- Not possible to achieve FDA approval
- Excellent specificity. System has occasional false alarms under certain conditions (<2%)
- System can identify aerosolized chemical agent
- System can identify liquid chemical agent