

SafeAir Detection Badges



GENERAL DESCRIPTION:

The SafeAir badges are designed to detect specific vapors and gases at exposure doses well below hazardous levels, often at ppb levels. Morphix offers SafeAir badges for fourteen different chemicals. The SafeAir badge provides an immediate indication when a specific chemical hazard is present. The color chemistry sensor in the SafeAir badge will change color in the presence of the targeted chemical. The SafeAir badges were designed for industrial hygiene and safety applications but may also be useful for first responders. There is no calibration, extra equipment, power or laboratory analysis. SafeAir badges are available for the detection of ammonia, aromatic isocyanates (TDI and MDI), carbon monoxide, chlorine, chlorine/chlorine dioxide, formaldehyde, hydrazine, hydrogen chloride, hydrogen sulfide, mercury, ozone, phosgene, and sulfur dioxide.



TECHNICAL DESCRIPTION:

The SafeAir badges employ colorimetric chemistry on a dry flat sensor that is sensitive and highly selective to the target chemical. The unique design minimizes the effects of humidity and velocity and most sensors are completely water proof. SafeAir badges are available for the detection of ammonia, aromatic isocyanates (TDI and MDI), carbon monoxide, chlorine, chlorine/chlorine dioxide, formaldehyde, hydrazine, hydrogen chloride, hydrogen sulfide, mercury, ozone, phosgene, and sulfur dioxide.

CONTACT INFORMATION

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COST

- \$160.55 - \$244.00 (box of 50)/system
- N/A/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		N/A
MOBILE Laboratory	N/A		N/A
DIAGNOSTIC Laboratory	N/A		N/A
ANALYTICAL Laboratory	N/A		N/A

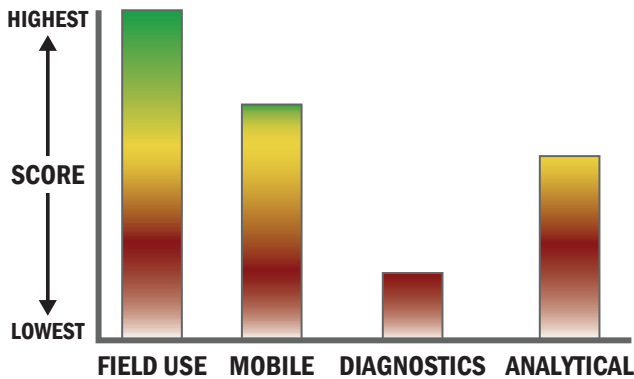
Survey Source

Vendor Supplied Information



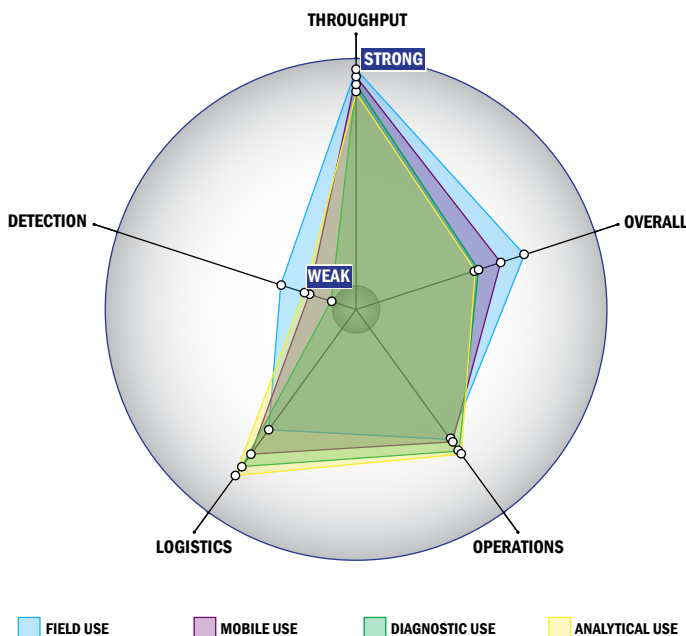
Scoring Analysis

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.



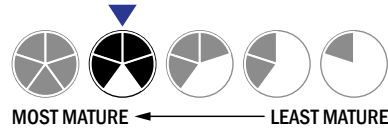
Evaluation Criteria

Throughput:

- Between 2 and 15 minutes for detection
- Multiple samples, multiple tests/ sample per run
- Greater than 750 samples every 2 hour
- The system or device is currently semi-automated
- Device or system is designed for a single use
- 0-1 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
- Less than 1 kg
- This system is not capable of transmitting data
- There is no electrical requirement



Operations:

- Can be used from 4 °C to 37 °C
- Components must be stored at 4 °C
- Performance is not influenced by relative humidity
- Between 1 to 3 years shelf life
- This system or device is single use and does not have an expected life
- Results can be viewed in real-time
- The system could be adapted to a fully autonomous system with some effort
- The system does not employ any software
- The system is single use or this question does not apply to this device

Detection:

- Not possible to achieve 510K clearance
- Not possible for the system to achieve approval
- This system does not test liquids and this question does not apply
- Superior specificity. System has a false alarm rate approaching zero (~0%)
- Possible the system could identify aerosolized chemical agent
- Possible the system could identify liquid chemical agent