Technical Information

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SABRE™ 5000

HANDHELD TRACE DETECTOR FOR EXPLOSIVES, CHEMICAL AGENTS AND TOXIC INDUSTRIAL CHEMICALS OR NARCOTICS

Feature Highlights

- **Smallest, lightest tri-mode (Explosives, Narcotics, CWA/TICs) detector available**
- **Optimized detection of peroxides (used in home-made explosive devices and Improvised Explosives Devices) in vapor mode**
- **Continuous automatic vapor sampling in both positive and negative modes for CWA/TIC detection**
- **Self-diagnostics with maintenance alerts and onboard troubleshooting**
- **Faster clear down with truncated alarm**

The SABRE 5000 is the smallest, lightest tri-mode handheld system available for detecting trace amounts of explosives, chemical warfare agents, toxic industrial chemicals or narcotics. With its ability to detect a wide range of threats, it is a cost effective instrument for security professionals and military agencies that require portability and flexibility to perform their duties.

Using Smiths Detection's proven Ion Mobility Spectrometry (IMS) technology the SABRE 5000 is programmed to detect and identify over 40 threat substances in approximately 20 seconds. Threats such as common peroxide-based, volatile and unstable chemicals often used to construct Improvised Explosive Devices (IED), and ammonium nitrate commonly used in home-made explosives.

Additional features include automatic self-calibration with no calibration consumables or related procedures required to save time and money, onboard diagnostics for simple troubleshooting assistance, a truncated alarm feature for faster clear down, and an onboard library that is user-expandable to program new substances as new threats emerge.

With a start time of 15 minutes and weighing approximately 7lbs. (including the four hour battery), the SABRE 5000 is a small, powerful ally in the war on terror and drug trafficking.

Ion Mobility Spectrometry (IMS) Technology

The SABRE 5000 uses Smiths Detection's IMS technology—known for its sensitivity and reliability for both the detection and identification of an extensive library of military and commercial explosives and

SABRE 5000

narcotics. This technology has been proven at military bases, border crossings, airports and other critical security checkpoints around the world.

Particle and Vapor Trace Detection
The versatile SABRE 5000 is capable of analyzing either trace particle or vapor samples, expanding the range of threats the system can detect. The operator can select the best analysis method for the suspected threat to yield the most accurate analysis results. Switching between sampling modes takes only seconds.

Auto-Switching Vapor (ASV) Modes
The ASV-Explosives mode offers an optimized detection in both negative and positive mode for an increased range of explosives detection from single sample. To detect CWA/TIC substances, the ASV-CWA/TIC mode

offers Emergency Responders flexibility to continuously sample vapor without the need for switching between positive and negative modes. When the system is used in a fixed location the display screen can easily be rotated 180° for easy viewing.

Automatic Self-calibration
The SABRE 5000 monitors its environment, senses changes that would affect its accuracy and re-calibrates accordingly. There are no calibration consumables or related maintenance procedures for calibration, saving time and money.

Onboard Diagnostics
The SABRE 5000 features onboard diagnostics to assist the operator with maintenance procedures and simple system troubleshooting for error resolution.

USB Port
The USB port allows for convenient downloading of alarm data for further detailed analysis, programming the instrument or printing alarm results with the included Instrument Manager Software.

NRC Exemption
No periodic radiation leak tests are required in the United States. Operators outside the United States should check with their radiation safety agency for local requirements.

Technical Data

General Specifications

Technology	Ion Mobility Spectrometry (IMS)
Radiation source	^{63}Ni, sealed 15 mCi
Sample collection	Trace particle and vapor
Operating modes	Explosives, Narcotics, Chemical warfare agents/Toxic industrial chemicals
Explosives detected	RDX, PETN, TNT, Semtex, TATP, NG, Ammonium Nitrate, H_2O_2 and others
Drugs detected	Cocaine, Heroin, THC, Methamphetamine and others
Chemical warfare agents detected	Nerve and blister agents such as Tabun, Sarin, Soman, Cyclosarin, Agent VX and Vx
Toxic industrial chemicals detected	Hydrogen Cyanide (HCN), Phosgene, SO, NH and others
Sensitivity	Particle: low nanogram range; Vapor: low parts per million range
False alarm rate	Less than 1%
Input voltage	12VDC, 110 VAC / 220 VAC, 50-60 Hz
Alarm type	Audio and visual, with substance identification
Display	8.89cm (3.5in) TFT color display
Language	English, French, German and Spanish
Ready time	Under 15 minutes
Analysis time	Detection in 10 seconds, complete analysis in 20 seconds
Battery operating time	4 hours
Weight	3.2kg (7lbs.) with the 4 hour battery
Size	36,3 x 11 x 13cm (14.5 x 4 x 4.5in)
Operating temperature range	0° to +40°C (32° to 104°F)
Operating humidity	0 to 95% non-condensing
Options	Protective cover with shoulder strap 2 hour battery

For product information, sales or service, please go to www.smithsdetection.com/locations

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