

ADVANCED TECHNOLOGY FOR A SAFER WORLD

traceXTM
explosives



Explosives remain the weapon of choice for terrorists around the world. Improvised Explosive Devices (IEDs) are a threat from international terrorist organizations and local, home-grown terrorists as well. Sadly, Home Made Explosives (HMEs) and IEDs have become a fact of modern life. Military, law enforcement and intelligence personnel have a dual-role: uncovering the bomb networks and systems before the bombers do harm, and investigating an incident after it occurs. In many cases, detecting just a trace of explosive material can make all the difference.

The TraceX explosives detection kit is designed to help identify bombers, bomb-makers and their bomb-making facilities. It detects the most common explosive materials and their precursors at trace levels in a single test. Traditional portable electronic explosive detection devices require a great deal of specialized training, a large budget and regular maintenance. While there is a need for these electronic portable trace explosive detectors and larger explosive trace detection systems, there is a growing demand for colorimetric explosive trace detection kits for use in the field. A number of these kits have existed for some time; however they often require the user to mix chemicals, perform serial analyses, conduct multiple swabs or tests, and then use a chart to interpret the results. Said plainly, existing explosive trace detection kits are difficult to use, especially in stressful situations. Even worse, many explosive trace detection kits can expose the user to dangerous chemicals, and expose the kit to contamination from the environment or the user, leading to unreliable results. Some colorimetric explosive detection kits can only be used for bulk detection; however explosive trace detection is critical in many real-world applications. Click here to see a comparison of the different types of field explosive trace detection kits.

The TraceX explosives detection kit is much more convenient. Simple to use and low cost, it is an explosive detector that can be used by every warfighter or law enforcement officer. With a single swab, the TraceX explosives trace detection kit detects all the major families of explosive materials and their precursors. Thanks to the TraceX's simple color-change alert system, a single color indicates the presence of a particular family of explosive material. No longer does the user have to conduct serial tests, and then try to interpret the results. The video to your right shows a TraceX explosives detection kit detecting ammonium nitrate. Explosives trace detection has never been easier.

The TraceX explosives detection kit was developed by Morphix Technologies under contract from the US Department of Defense, so you know it's tough. It is small enough to fit in a cargo pocket, lightweight and rugged. Each explosives trace detection kit comes in its own disposable protective plastic case, so it will be ready to use when needed. No more broken ampoules from rough handling, as can happen with other explosive detectors. And, the innovative collection system protects the sample from user contamination, so you can have confidence in the result. As the name implies, TraceX is sensitive enough to be used for explosives trace detection. It detects bulk explosives too.

The TraceX explosives detection kit is available in boxes of five kits. Just request part number MOR-510100-05.

The TraceXTM Explosives Kit detects all major HMEs with just one swab.

Home Made Explosive (HME) Family	Representative Chemicals
Nitroaromatics	TNT, DNT, Tetryl
Nitramines & Nitrate Esters	RDX, HMX, PETN, EGDN, NG, R-Salt, Semtex
Inorganic Nitrates	urea nitrate, ammonium nitrate, black powder
Chlorates & Bromates	potassium chlorate, potassium bromate
Peroxides	TATP, HMTD
Acids	nitric acid, sulfuric acid
Bases	potassium hydroxide, sodium hydroxide

TraceX™ Explosives Kit

COMPETITIVE COMPARISON

	TraceX™ Explosives Kit	Wipes	Pens
# of explosive families detected in one test cycle	9	1-4 ¹	1-3 ¹
Trace detection	Yes	Yes	Yes or No ¹
Bulk detection	Yes	Yes	Yes
Time for results	< 3 minutes total	2-12 minutes ²	2-12 minutes ²
Ease of use	Single swab and crush	Multiple swab and crush cycles, until a positive indication occurs	Multiple swab and crush cycles, until a positive indication occurs
Interpretation of results	Results clearly indicated	User interprets results based on color formed after serial analyses	User interprets patterns from multiple pens
User safety	All chemicals contained inside plastic case	Possible user exposure to chemicals	Possible user exposure to chemicals
Potential for sample contamination	Low ³	High ³	Medium ³
Ruggedness	Each kit encased in protective plastic case	Fragile ampoules are minimally protected	Fragile ampoules have limited protection provided by pen casing
Heat source required	No	Yes or No ¹	No

¹ Depends on specific product.

² Each test can take ~2 minutes; total time depends on number of tests run in series.

³ For TraceX Explosives kit, sampling site is protected by cover, and user swabs with handle.

For Wipes, user touches sampling site when swabbing. In some kits, reuse of dropper may introduce contamination.

For Pens, user must avoid touching tip of pen (which is sampling site).

SPECIFICATIONS

Operating Temperature Range	2°C to 50°C (35°F to 122°F)
Operating Humidity Range	20% to 95% RH
Sensitivity	Trace Level (can also detect bulk levels)
Time for Color Change	Less than 3 minutes
Kit Size	131 mm x 92 mm x 17 mm (5-1/4" X 3-3/4" X 3/4")
Shelf Life	12 months ¹



Contract # GS-07F-0147T

