

World-First, Real-Time Inorganic Explosive Detection

➤ Portable, immediate analysis for security and law enforcement



Security agencies globally have until now struggled with rapid, real-time detection of home made explosive devices.

The **GreyScan® ETD-100™** is a world first; enabling more efficient detection of inorganic explosives and their compositions in many different environments, with simplicity and speed.

The technology has been developed by Australian trace detection technology company, GreyScan, in response to a growing need globally, to better protect the world by detecting inorganic explosives, faster than ever before.



ETD-100™ - The Solution

Inorganic compositions are increasingly being used to create home-made explosive devices due to the fact that they are readily available.

Governments, globally, are searching for forward-looking solutions to provide laboratory grade results in mobile and easy to operate formats

GreyScan® ETD-100™ is the next generation in explosive trace detection targeting inorganic explosives, whilst extending and complementing current security capabilities.

Able to detect homemade inorganic explosives compositions containing (nitrate, chlorate, perchlorate) with a high degree of sensitivity, the **GreyScan® ETD-100™** is a highly portable system that provides accurate, sensitive and rapid detection of Home Made Explosives (HME) in a variety of detection scenarios. Designed for continuous throughput of samples, the device has widespread applications for use in the military, security, passenger screening and public safety applications



GreyScan® ETD-100™ - How it works

The GreyScan ETD-100 operates by using a conventional IMS ETD swab and sampling a surface technique (i.e. Bags, personal effects etc), in exactly the same manner as currently deployed ETD systems. The swab is inserted into the GreyScan ETD-100 where it is flushed with eluent and then analysed for the presence of inorganic explosives. The presence (or absence) of an inorganic Home Made Explosive (HME) triggers as a FAIL (or PASS) display and audible alarm, exactly the same Concept Of Operations (CONOP) as the IMS based Explosive Trace Detectors (ETD's). Therefore, the operator training requirements for an end user are minimised as the entire CONOP is designed to offer the same experience as the existing ETDs in operation. Swab collection can be obtained by a mixture of wand versus no wand, using gloves and no glove scenarios.

- > Capillary Zone electrophoresis technology addresses need for sensitive detection of inorganic explosives (chlorates, perchlorates, nitrates)
- > The only technology with this capability, using forensic grade fieldable Capillary Zone Electrophoresis (CZE)
- > Mobile and robust system – suitable for multiple fields of operations
- > Consumables are low cost sample traps, reagents, filters, verification samples
- > Battery/mains operation
- > High sample throughput rate
- > Limit of detection in the range of 50-100 ng
- > Easy to use – minimum training required

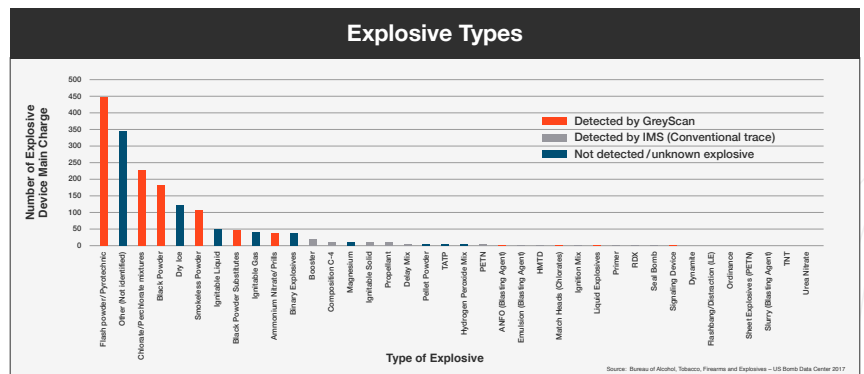


GREYSCAN

Dimensions	(W x D x H) 19.20" x 15.20" x 9.00" (48.8 x 38.6 x 22.9 cm)
Weight	28.9 lbs (13.1kg)*
Operating temperature	40°F to 130°F (+5°C to +45°C)
Operating altitude	-1600 ft. to 15,000 ft. (-500 m to +4600 m) above mean sea level
Operating humidity	5% to 95% non-condensing
Power	100-240V AC, 50-60 Hz, battery 1hr or 12V adaptor
Method of operation	Sample collected on sample trap and inserted into device. Liquid phase CZE, non-radioactive.
Connectivity	Serial port, Ethernet, Wi-Fi and USB2.0
* excludes reagent cartridge	

The **GreyScan® ETD-100™** extends existing security capabilities by complementing commercially available Ion Mobility Spectrometry (IMS) explosive trace detectors.

A detailed Electropherogram report showing compounds detected with their level of concentrations is generated with 'Pass/Fail' results for Entry Point applications.



The figure above is produced by the US Department Alcohol, Tobacco and Firearm (ATF) - US Bomb Data Centre, and illustrates the emerging threat as indicated by the number of device main charges by type, highlighting where the **GreyScan® ETD-100™** capability stands against other conventional trace technology.



About GreyScan

Established in 2015, GreyScan is an Australian technology company focussed on the detection of inorganic material. Formed from the Grey Innovation group of companies, a leading Australian technology commercialisation company active in Healthcare, Environmental Tech, and Safety and Security sectors, GreyScan works with a global network of partners focussed on the real-world opportunity to better protect our way of life.