Product Specifications

Identification is a critical challenge in the evaluation and mitigation of potential explosives threats. With Thermo Scientific TruDefender analyzers, law enforcement, military and civilian explosives experts can obtain reliable identification of military-grade explosives as well as HMEs, IEDs and precursors in seconds.

Thermo Scientific TruDefender FTX

Handheld FTIR for Explosives Identification

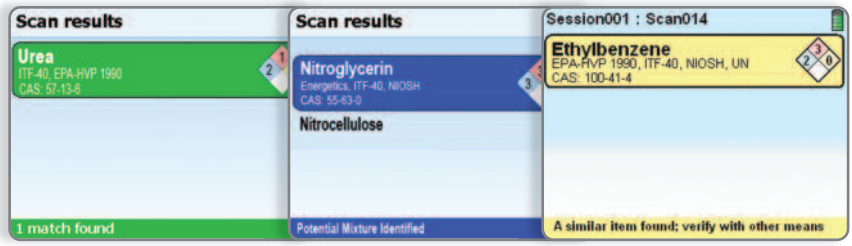
Thermo Scientific™ TruDefender™ analyzers are rugged, handheld FTIR systems for rapid identification of unknown chemicals including explosives, narcotics, toxic industrial chemicals and precursors. They bring the power of FTIR directly into the hazard zone, enabling the responder to analyze—and act—faster than ever before.

Lightweight and easy to use, TruDefender FTX analyzers include an anvil sampling head for easier sampling and decontamination. The self-contained anvil mechanism ensures there are no friction points or crevasses that may trap debris or explosive residue. The variable pressure anvil allows the user to apply appropriate pressure for a given substance to further minimize risk.

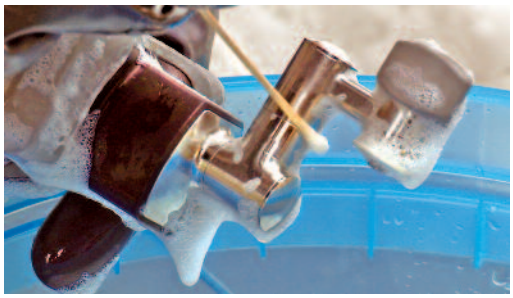
Key Benefits:

- **Fast, accurate identification.** Returns results in seconds, even for complex mixtures.
- **Easy to use.** Intuitive, menu-driven interface for fast training and proficiency.
- **Improved sampling.** Large sampling surface and fully rotational anvil for easy sample placement.
- **Built for field use.** Smallest, lightest military-rugged FTIR spectrometer on the market. Certified to MIL-STD 810G for ruggedness.
- **Easy to clean.** Contoured edges and self-contained anvil mechanism ensure easy decontamination.
- **Worry-free maintenance.** Requires no scheduled maintenance, calibration, warm up or mirror alignment.

Product Specifications



Clear analysis results require no user interpretation.



Self-Contained Mechanism

With the anvil mechanism fully contained within the contoured, highly-polished arm, there are no entrapment points that could make decontamination more difficult.

Variable Pressure, Safer Response

The TruDefender FTX anvil allows the responder to adjust how much pressure is applied to a given substance.

Field-Proven Complementary Technologies

FTIR spectroscopy and Raman spectroscopy, the underlying technologies in the TruDefender and FirstDefender™ product families, are highly precise and selective optical techniques, each offering distinct advantages in specific applications.

Thermo Scientific TruDefender FTX

Specifications	TruDefender FTX
Weight	3.12 lb (1.41kg)
Size	8.9 x 4.5 x 2.1 in (22.61 x 11.43 x 5.33cm)
Spectral Range	4,000cm^{-1} to 650cm^{-1}
Spectral Resolution	4cm^{-1}
Collection Optics	Solid Diamond Crystal ATR
Survivability	Independently tested for MIL-STD-810G and IP67 certification
Data Export Formats	SPC file (for use in standard spectroscopic software), text file, or JPEG report
Battery	Removable and rechargeable lithium ion battery or 123a (e.g. SureFire™) batteries; >4 hours operation
External Power Supply	Wall plug transformer 100-240 VAC 50/60 Hz
Operating Temperature	-4 °F to 104 °F (-20 °C to +40 °C)
Language Configurations (Optional)	English, Chinese, German, Russian

Complete MIL-STD-810G test results available upon request.

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