

When faced with unknown chemicals in the field, rapid, accurate identification is critical. With Thermo Scientific TruDefender analyzers, chemical battalions, hazmat teams and other first responders obtain the reliable identification they need to protect themselves, mitigate the scene and safely execute their mission.

Thermo Scientific TruDefender FTX

Handheld FTIR for Chemical Identification



Thermo Scientific™ TruDefender™ analyzers are rugged, handheld FTIR systems for rapid identification of unknown chemicals including toxic industrial chemicals, explosives, narcotics, 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 prevents chemical entrapment which could contaminate operators or subsequent samples. The anvil rotates to provide clear visibility and to ensure easy sampling when faced with limited dexterity.

The variable pressure anvil allows the user to apply appropriate pressure for a given substance, whether less pressure for substances with high Raman signal or more pressure for hard crystals.

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.



Session001 : Scan007	Scan results	Session001 : Scan014
Cyclosarin (GF) AKA: Cyclosin, CMFF CAS: 329-99-7	Name: Acetone Weight: 1.3 ITF-40, EPA HVP, Household/Commercial CAS: 67-64-1 Pseudoephedrine	Ethylbenzene EPA-HVP 1990, ITF-40, NIOSH, UN CAS: 100-41-4
1 match found	Potential Mixture Identified	A similar item found; verify with other means

Clear analysis results require no user interpretation.



Designed for Decon

The TruDefender FTX instrument is easily cleaned by submerging in decon solution, or using standard cleaning tools—no disassembly required.



Flexible Sampling

The reversible sampling accessory provides environmental protection for volatile liquids and enables easy sampling of pills.

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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