



# Thermo Scientific Gemini handheld analyzer

Integrated Raman and FTIR  
for chemical and explosives ID

# Because every second counts

The rugged, compact Thermo Scientific™ Gemini™ analyzer meets the demanding requirements of elite military forces and first responders, helping operators execute their mission quickly, safely, and confidently.

## User profiles

Users can customize scan parameters based on situational awareness and their own knowledge and experience — before entering the hazard zone. This ensures the operator can collect data efficiently as soon as they are downrange.

## Flexible input

Operators can easily navigate features using either the tactile keypad or resistive touch screen, even when wearing protective gloves.



## Safer operation

In addition to the Raman scan delay, adjustable laser power, and other built-in safety features, Gemini introduces the industry's first FTIR scan delay, enabled by the motorized anvil. Optional software enables users to virtually mix chemical substances, protecting themselves and the public from dangerous chemical combinations.



# Increased confidence with complementary and confirmatory results

## Dual technologies: complementary and confirmatory

Raman and FTIR are highly specific and reliable identification methods, each with strengths and limitations. By integrating both into a single analyzer, operators harness the power of each technology while enabling a broader range of chemical identification.



*The Gemini analyzer allows you to quickly switch between analysis techniques. Get robust analysis information quicker than ever, without the need to sacrifice capability for weight.*

### FTIR

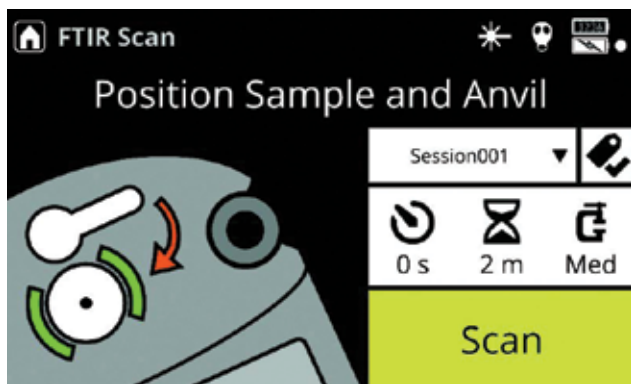
- Colored samples
- Fluorescent samples

### FTIR and RAMAN

- Identify light colored samples
- Complimentary and confirmatory analysis for many samples.
- 70% overlap for confirmatory results.

### RAMAN

- Aqueous solutions
- Point-and-shoot through semi-translucent containers



## Intuitive operation

The graphical interface ensures that minimal training is required for proficiency. For new users, the Scan Assist feature guides technology selection with a series of easy questions. The consistent interface and workflow across technologies ensure that experienced operators can easily proceed with sampling.



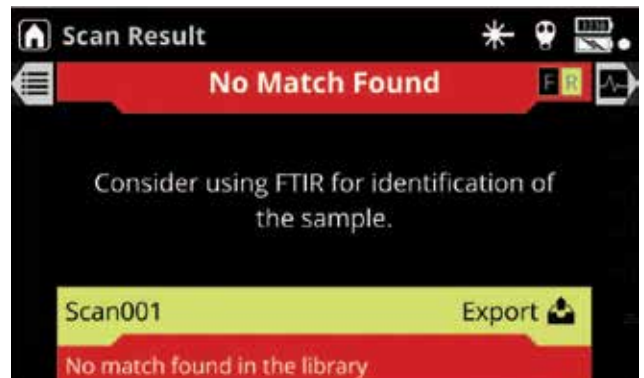
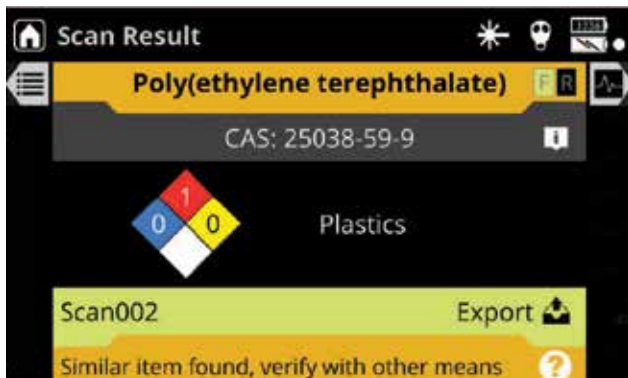
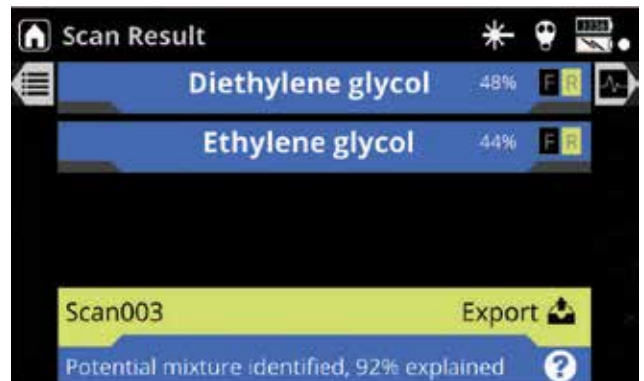
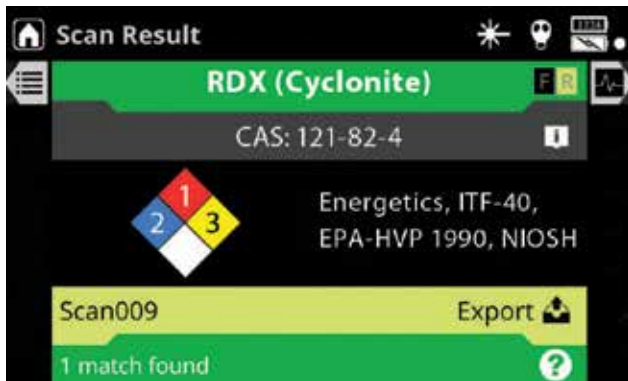
## Designed for survivability

From extreme climates to aggressive handling, Gemini has been certified to the latest military standards for ruggedness—drop, shock, vibration, temperature, immersion and much more.



## Clear results

Built on the performance and reliability of the Thermo Scientific™ FirstDefender™ and TruDefender™ product lines, Gemini analyzers deliver accurate, color-coded results which require minimal user interpretation and provide a quick overview of the hazard at hand. Based on these results, operators can quickly and confidently proceed with their mission.



## Specifications

Size	10.1 in x 5.7 in x 2.4 in (25.6 cm x 14.6 cm x 6.1 cm)
Weight	4.2 lbs (1.9 kg)
Spectral Range	FTIR: 4,000 cm <sup>-1</sup> to 650 cm <sup>-1</sup> Raman: (785nm) 250 cm <sup>-1</sup> to 2875 cm <sup>-1</sup>
Spectral Resolution	FTIR: 4 cm <sup>-1</sup> Raman: 7 to 10.5 cm <sup>-1</sup> (FWHM) across range
Collection Optics	FTIR: ATR diamond crystal, single bounce Raman: Fiber optic probe
Power Supply	Internal 3.7V lithium polymer (QTY 1) battery pack Internal CR123A (QTY 3) batteries DC wall adapter, 12 V DC 1.25 A
Operating Temperature	-4°F to 122°F (-20°C to +50°C)
Data Export	SPC (for use in standard spectroscopic software), reachback (.rbk), text, or PDF
Ruggedness	MIL-STD-810G and IP67
Languages	English, German, Turkish, Spanish, Chinese, Japanese, Arabic, French, Russian
Add On Capability	Optional HazMasterG3® decision support software (English GUI only); requires Gemini v1.6 or later software
Onboard Mixture Analysis	Identification of up to 4 components in a mixture

- Intuitive interface including customizable profiles and Scan Assist, to guide the operator through technology selection and sampling;
- Motorized anvil adjusts sample pressure based on user settings and enables Scan Delay for safer FTIR analysis

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