

THREAT ID



The first portable FTIR chemical identifier capable of analyzing:

- Solids (powders & pastes)
- Liquids & gels
- Vapors and gases

All from a single device.





Innovation that expands your response capabilities on the front line.

- Identifies more than 23,000 solids and liquids
- Identifies more than 5,000 gases and vapors as low as 25 ppm
- Swap from solids & liquids to gas analysis (and back) in less than 10 seconds
- Multi-tiered interrogation, variable investigative methods, & advanced tools for resolving mixtures (Automated Mixture analysis, Functional Group classification, Residual Search, removal of common interferants like water)





Sample collection & LOD limitations are no longer an issue

- Capable of identifying more than 5,000 gases and vapors
- Identification of gases as low as 25 ppm
- Dedicated 4-meter pathlength in 6 inch gas cell
- Various sample collection methods (Tedlar bags, PID w/ outlet, syringe, canister, pump, etc.)
- No downtime from over-saturation

The truly innovative gas cell has a 4.0 meter pathlength in a 6 inch body with an internal volume of only 0.16 L for fast filling and clearing. The cell is constructed from 316 stainless steel to handle corrosive gases and vapors. The cell can accommodate all filling options such as: Syringe, Tedlar bags, Direct from PID, Canisters, etc.

Any gas vapor introduced to the 4.0 meter gas cell is interrogated by IR energy and a unique spectrum/chemical fingerprint is acquired. In seconds, this "fingerprint" is automatically compared with over 5,000 vapor-phase library spectra.





Go beyond the spectrum with real identification data and results.

RedWave established a new standard in FTIR chemical analysis with the 'original' **THREATID**, now the **THREATID-LS** - with advanced hardware and software, and the largest spectra library and hazard database (23,000+) of any portable FTIR analyzer.

Any substance in contact with the diamond surface is interrogated by IR energy and a spectrum is acquired that is a characteristic pattern of the substance. In seconds, this IR "fingerprint" is automatically compared with libraries of digital reference spectra - Toxic Industrial Chemicals (TICs), Narcotics (including Fentanyl), Explosives, Pesticides, Weapons of Mass Destruction, Chemical Warfare Agents, and common household chemicals. All library spectra are matched to RedWave's proprietary onboard chemical information database, **THREATASSIST**. Web-based chemical informational databases such as NIOSH, PubChem and WISER can also be referenced with push-button links for all library files as well.



Because, you don't know when you'll get a call for the unknown.

Advanced Usability & Performance:

- Software automatically converts to proper identification method based on analysis accessory
- Real-time zoom and spectral manipulation on industry-leading 10" display
- 4+ hour battery life with in-field "hot-swap" capability
- 40% smaller than existing suitcase systems
- Designed for use anywhere on scene
- Fully decontaminable
- No secondary devices required - built-in WIFI and Hotspot functionality
- Pre-loaded with RedWave's **THREATASSIST** software
- Possible to upgrade and connect to **THREATINTEL** for additional insights

Expansive Deployment Cases:

- Drug labs
- Terrorism
- Sick buildings
- Fire/Arson investigations
- Active burns
- Unknown source spills
- Facility inventories
- Headspace analysis
- Mixed-load incidents
- Event security

Comprehensive Identification:

- Toxic Industrial Chemicals
- Narcotics (including Fentanyl & Fentanyl derivatives)
- Explosives
- Pesticides
- Weapons of Mass Destruction
- Chemical Warfare Agents
- Novichok Agents
- Common Household Chemicals
- Common Accelerants
- Directly connected to relevant databases (NIOSH, PubChem, WISER, NIST)

A modern, modular, approach to meet your preparedness needs.



THREAT ID GLS

- The only FTIR chemical analyzer with Interchangeable ATR and 4 meter gas cell
- 23,000+ solids and liquids spectra, and 5,000+ gases and vapors library on-board
- Pre-loaded with THREATASSIST software
- 24/7/365 Reachback



THREAT ID G

- Dedicated vapor and gas analyzer
- 5,000+ gases and vapors
- Pre-loaded with THREATASSIST Software
- 24/7/365 Reachback
- Future upgrade to GLS system possible



THREAT ID LS

- Advanced version of traditional FTIR solid and liquid analyzer
- 23,000+ solids and liquids spectra library
- Pre-loaded with THREATASSIST Software
- 24/7/365 Reachback
- Future upgrade to GLS system possible

Service and support that expands your ability to keep your community safe.

24/7/365 Reachback

- Direct-connect with Spectroscopist in less than 20 minutes for in-incident support and spectra interpretation assistance
- With the click of a button, send all information about the sample and spectrometer, including spectra, library hits, data manipulation, system health and date/time of sample acquisition to Reachback.
- Often-times Reachback is able to begin analysis support before even calling you back in the field.

Warranty Programs

- 1-year warranty comes standard with purchase of any THREATID configuration
- 1-year extended warranty (1 additional year) available at incremental cost
- 3-year extended warranty (2 additional years) available at incremental cost
- 5-year extended warranty (4 additional years) available at incremental cost

Updates, Maintenance & Repair

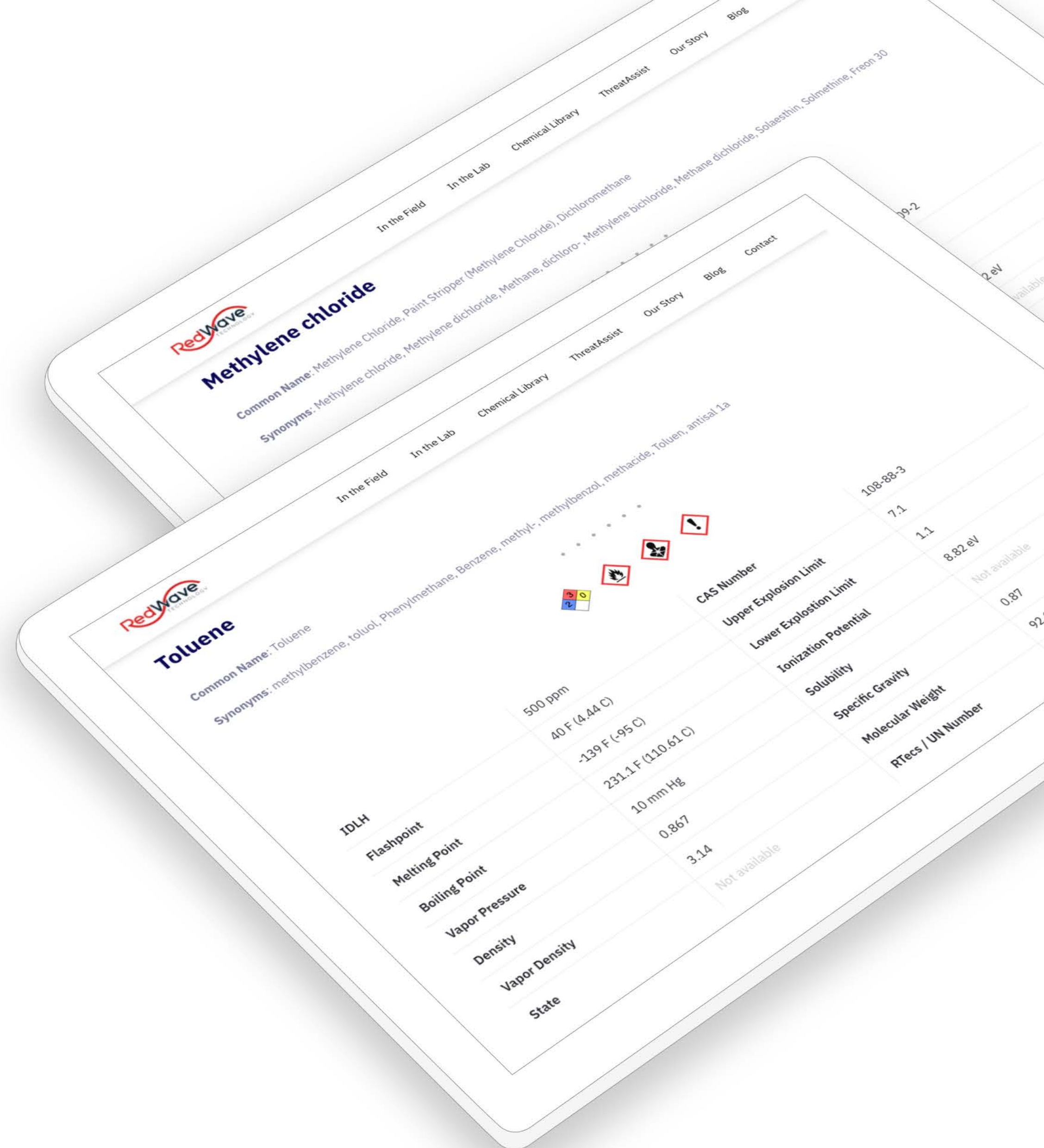
- RedWave offers loaner device in instances where THREATD must be sent back to us for service and repair
 - Covered warranty items
 - Routine software updates that cannot be done virtually
 - Device downtime from accessory upgrades (ATR or Gas Cell)



Standard on **THREATID**: Information to action.

Built-in hazard information at your fingertips. Upon reporting a spectral match, **THREATASSIST** runs results through a multi-layered interrogation against 23,000+ spectral libraries - across NIOSH, Pubchem, WISER and further match criteria from less available databases of narcotics, fentanyl & derivatives, Novichok agents, and WMDs to provide 33+ chemical property data points to aid and expedite assessment:

- Synonyms
- Description
- Uses
- Hazards
- LEL
- UEL
- IDLH
- Melting Point
- Boiling Point
- Flash Point
- Solubility
- Vapor Pressure
- Vapor Density
- Specific Gravity
- ... and more ...



THREAT

ID

GLS

SPECIFICATIONS

Diamond ATR

Analyses: Liquids and Solids

Solids & liquids sensor with lever-actuated pressure device

Innovative Sure-Contact™ pressure device for solids

Gas Cell

Analyses: Volatile Organic Compounds

4 meter gas cell in a 6 inch body

316 stainless steel body for corrosion resistance

Volume: 160 ml

Operability & Capability

Operable in PPE and Level A gear - responsive to nitrile, tyvex, butyl gloves - with finger, gloved finger or stylus

Quad-Core 64-bit CPU, 4GB RAM, 64GB SSD

Operating System: Android

Display: 10” - HDMI PCAP w/ chemical hardened glass

Weight: 15 pounds

Upgradeable libraries

Integrated video microscopy with digital image capture

Dimensions: 14” x 10.6” x 6.12”

USB 2.0 interface, data downloadable to memory stick

Internet connectivity via Wi-Fi, Hotspot or Ethernet

Visible threat alarms

4 hour battery life w/ additional Li-ion hotswappable batteries

IP67 power connector

802.11 g wireless, Bluetooth

Real-time zoom and spectral manipulation on display

Operability & Capability

Real-time zoom and spectral manipulation on display

Fully decontaminable system

In-depth tutorial videos, user manuals, etc. on-board

Designed for both hot and warm zone use

Fast, large diameter optics for better quality spectra

Improved mixture analysis and search algorithms

Advanced background check for cleanliness

Full spectra overlays, automated mixture search, subtractions, residual search

Functional group classification overlays on screen

One-button “auto-email” instantly to send your data

One-button water removal from spectra

One-touch look-up of chemical properties

One-touch reporting: export via email or USB download

24/7/365 Reachback Support



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