

Real-Time Analyzers' extremely rugged **Military Grade 1064 Raman** spectrometer identifies any unknown liquid or solid in just seconds. It has been designed specifically for operation in the field to support the US Military, Department of Homeland Security, Federal Drug Administration, Drug Enforcement Administration, Forensic & Crime Labs, as well as State and Local Hazardous Materials Response Teams. It is capable of withstanding 4 foot drops, loose cargo vibrations, blowing rain and sand, and operation at extreme temperatures (-4 to 110 F).

Exceptionally Rugged Hand-Held Raman Analyzer (Full MIL-STD 810G, including computer)

Sample Compartment with Laser Interlock

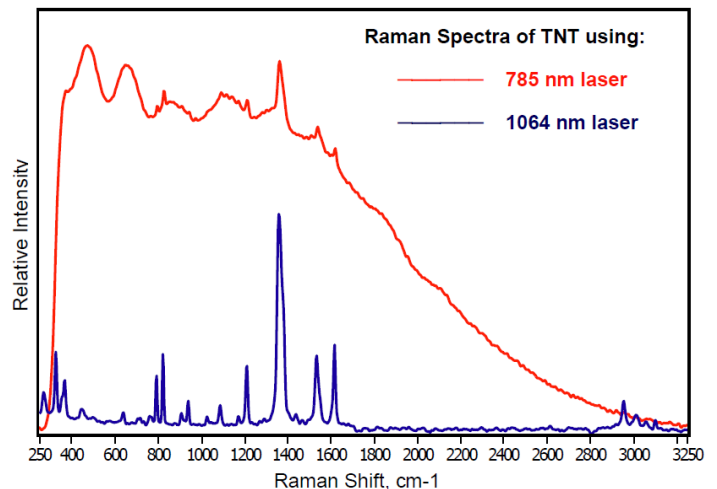
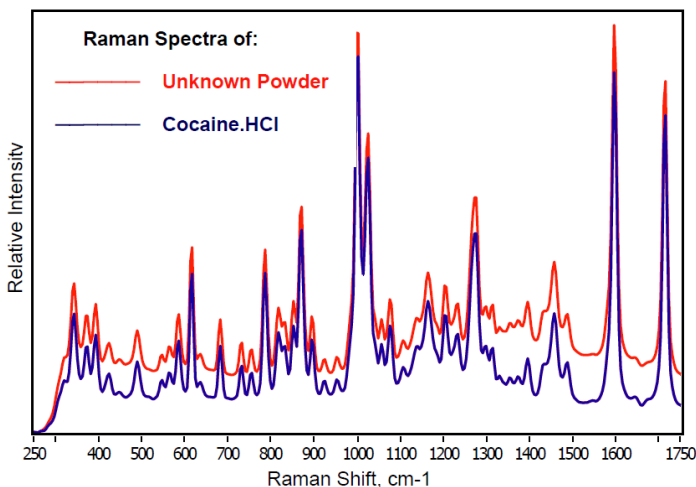
Removable, Rechargeable 3-Hour Battery



High-End Computer with Intel Atom Processor with full Windows/Linux Capability

120/220 VAC or 24 VDC Port

The **Military Grade 1064 Raman** is the only portable and rugged Raman analyzer that employs 1064 nm laser excitation to avoid fluorescence interference. Virtually all other portable Raman analyzers use shorter wavelength lasers to generate Raman spectra (e.g. 785 nm), which very often generate fluorescence in the sample (as shown for TNT below). This is especially true for natural substances (biological materials, petroleum products, etc.), as well as most home-made explosives, common street drugs, and food products that are sometimes used as anthrax hoax powders. When a competitor's product generates fluorescence in a sample, the Raman spectrum is completely lost, which makes identification impossible.



<i>Specification</i>	<i>Military Grade 1064 Raman</i>
<b>Operation</b>	
Warm-up Time	30 seconds
Measurement Time	1-10 seconds
Sampling	Light-tight compartment for 2 or 20 mL glass vials, or 5 m FO probe
Calibration	Factory set using NIST standard
<b>Analyzer</b>	
Measurement Principle	Raman Spectroscopy
Light Source	1064 nm, 350 mW, 0.1 nm line width (Class 1 Laser Product)
Detector	256 pixel InGaAs (thermo-electrically cooled)
Spectral Resolution	8 cm <sup>-1</sup>
Spectral Range	200 - 1900 cm <sup>-1</sup>
<b>Data System</b>	
Computer	Amrel – Rocky DB6, 5” screen
Operation System	Intel Atom microprocessor – Windows7
Software	RamanID, DrugID, Fuel Analysis, R&D
Data Export	Ethernet/USB/RS232
<b>Environment</b>	
Dimensions	4.5 x 5 x 13” (11.4 x 12.7 x 33 cm)
Weight	15 lbs (6.8kg)
Power	Battery (3 hrs - rechargeable) / Electric (120/240 VAC 50/60Hz or 24 VDC)
Operating Temperature Range	-4 to 110 °F (-20 to 45 °C)
Dust, Sand & Rain Proof	MIL-STD 810G 506.5 & 510.5 (sealed system, CBN decontamination)
Vibration & Drop Proof	MIL-STD 810G 514.6 & 516.6 (loose cargo, 4 ft drop)

Customized User Interfaces are also available:

Unknown:  
**Phenacyl Chloride**

Category: **Riot Control Agent**

Confidence: **96.4 %**

CAS No: **532-27-4**

Alternative Names:  
**Mace®; Chloroacetophenone**

**More (click)**

Laser Emission	<b>OFF</b>	Measure Sample	Transmit Results	<b>EXIT System</b>
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RamanID v 1.0.2 | 192.168.1.207 | READY: place sample in holder to begin | Power: 0 mW Current: 0.00 Amps | 5:34:47 PM

Hit

Hit	Quality	File Name	Compound Name	CAS #
1	0.075	chloroacetophenone.LAB	Phenacyl Chloride	532-27-4
2	0.524	benzoic acid.LAB	Benzoic acid	65-85-0
3	0.538	benzoic anhydride.LAB	Benzoic anhydride	93-97-0
4	0.564	phenyl alanine.LAB	L-Phenylalanine	63-91-2
5	0.576	chlorobenzene.LAB	Chlorobenzene	108-90-7

Chemical Formula:  
**C8H7ClO**

**Back (click)**

Laser Emission	<b>OFF</b>	Measure Sample	Transmit Results	<b>EXIT System</b>
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RamanID v 1.0.2 | 192.168.1.207 | READY: place sample in holder to begin | Power: 0 mW Current: 0.00 Amps | 6:19:02 PM