

ChemExpert

— handheld Raman spectrometer for rapid, accurate identification of unknown chemicals including drugs, explosives and toxic substances



ChemExpert is a handheld portable liquid and powder Raman spectrometer provides law enforcement, military and security agencies a powerful sensitive, low false-positive and low false-negative tool for detecting a wide-variety of explosive substances and suspicious drugs.

ChemExpert is a cost-effective, lightweight Bottled Liquid Scanner (BLS) that detects hazardous substances in liquids or powder forms contained in glass and transparent or translucent plastics bottles or containers.

ChemExpert can also provide emergency response personnel and forensic agencies with powerful, high sensitive detection of drugs and other illegal substances.

Main advantages:

- Detects improvised, homemade liquid explosives
- Real-time scanning
- Fully integrated portable Raman system
- Low False-Negative and False-Positive results
- Low fluorescence interference
- Full automatic processing
- Easily expandable substance database
- Large number of library materials of hazardous materials
- High reliability
- Easy Maintenance
- Short operator training period



ChemExpert Basic features

Identified Chemicals	<ul style="list-style-type: none">• Explosives in liquid and powder form• Drugs and Narcotics• Toxic solvents• Chemical warfare agents (CWAs)• Nitro compounds• Toxic industrial chemicals (TICs)• Plasticizers• Precursors, etc.
Analysis Method	Raman Spectroscopy
Analysis/ response time	≤ 1 min
Laser Wavelength	532 nm
Spectral Resolution	5 – 8 cm ⁻¹
Raman spectral range	100 – 6000 cm ⁻¹
Laser power	≤ 30 mW
I/O Interface	USB/Bluetooth
Operating Temperature	0°C – 45°C
Electrical Operation	Rechargeable battery ≥ 4.5 hr
Spectral Library	More than 10,000 Raman spectra
Dimensions (L×W×H)	220×90×290 mm
Weight	2 kg

