VipIR

Smart Spectral Processing combined with FTIR and Raman analysis for a single, confident result

A Single, Confident Result

Smart Spectral Processing (SSP) is a proprietary algorithm that actively integrates Raman and FTIR spectral data, using the results from one to refine, challenge, or confirm the interpretation of the other. This interaction between the two techniques enhances the accuracy and reliability of chemical identification from a single sample. SSP allows hazmat technicians to collect and analyze two separate spectra from the exact same sample without re-positioning the sample or taking an additional sample. The result is a single, high-confidence identification of unknown solids, or liquids, including toxic industrial chemicals, narcotics, explosives, and everyday chemicals. With this SmartID workflow, VipIR™ accelerates decision-making on scene, enhancing operational efficiency and ensuring more accurate field identifications during hazmat response scenarios.

Confidence on Every Call

VipIR does not just combine FTIR and Raman technologies into a single device, it amplifies their capabilities and offers hazmat teams a dramatic improvement in unknown substance identification.VipIR was built with flexibility in mind. While a simplified workflow eliminates the guesswork in unknown chemical identification, experienced hazmat technicians can also select which technology to employ as needed. VipIR allows users to identify unknown substances with the following methods in a single device:

- Smart Spectral Processing through a single sampling interface
- Flexible, integrated Raman probe for non-invasive identification through containers

- Integrated vial holder for easy analysis within standard vials
- Surface-enhanced Raman spectroscopy (SERS) for low concentrations (such as synthetic opioids/fentanyl)

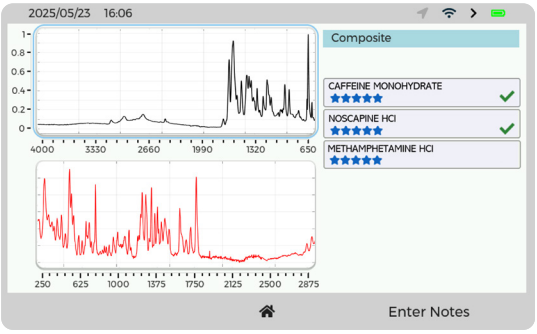
Features:

- 3-in-1 device with FTIR, Raman, and SSP
- SmartID workflow - FTIR, Raman, and SSP analysis to refine and confirm results
- Extensive library of drugs, TICs/TIMs, consumer products, chemical warfare agents and explosives
  - 39,000+ chemical spectra
- Singular workflow, two analytical technologies (FTIR and Raman), with one, confident result
- Flexible Raman probe and integrated vial holder for versatile sampling options
- Support of SERS technique for low concentration applications
- Sophisticated mixture analysis which can report all observable components in a mixture
- Rugged, lightweight design for use in any conditions
- Team Leader app for fleet management. View results, sample data, review spectra, and more after samples are analyzed on scene.

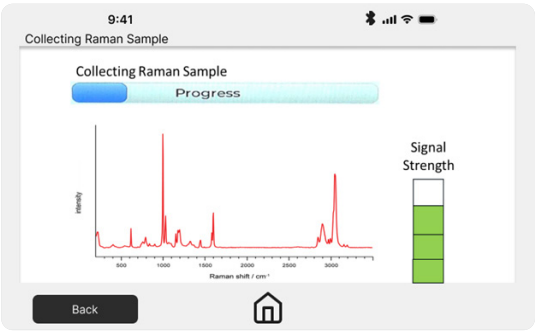
Specifications

Size	14.6" × 8.6" × 5.8" (37.1 cm × 21.8 cm × 14.7 cm)
Weight	9.5 lbs (4.3 kgs)
Sample Type	Solids/Liquids, Containers with Raman probe, Vials
FTIR	4000 – 650 cm^{-1}, 4 cm^{-1} res
Raman	250 – 2875 cm^{-1}, 7 – 10.5 cm^{-1} res
Laser	785 nm; up to 450 mW
Raman Sampling Options	Flexible sampling probe; SERS accessory; Integrated vial holder
Ruggedness	IP 67, MIL-STD-810G
Display	5” Touchscreen
Power	Rechargeable Li-ion battery and wall power adapter
Communications	Wi-Fi, LTE, Team Leader App
Library	39,000+ chemical spectra TICs, Narcotics, CWA, Explosives, Consumer Products, Chemicals
Decontamination	Spray, wipe-down or dunk with bleach or detergent

The VipIR is a lightweight, handheld device that utilizes SSP, FTIR, and Raman technologies to identify thousands of chemicals.



SmartID uses SSP to provide a singular, confidence-based result. Check marks indicate the result was confirmed by both Raman and FTIR.



Users can see analysis progress in real time and see results instantly on screen. Wireless communication options and the Team Leader app allow for data to be quickly shared with team members.

VipIR is subject to export controls including those of the Export Administration Regulations of the U.S. Department of Commerce, which may restrict or require licenses for the export of product from the United States and their reexport to and from other countries. Patented technology www.908devices/patents © 2025 908 Devices 6-2025