



EnSpectr R532[®] Raman Analyzer

The **EnSpectr R532[®]** is a unique instrument that combines the advantage of a portable probe system with the performance of a highly specified laboratory instrument. It is the perfect choice for Raman analyses where high quality data is essential.



Real-time and accurate identification of an unknown substance occurs by comparing its unique Raman spectrum of molecular vibrations (molecular "fingerprint") to Raman spectra of reference substances stored in a spectral database. **EnSpectr R532[®]** identifies through walls of sealed bags, transparent

bottles, vials, and ampoules. The ease of use, single-hand operation, small size and weight of **EnSpectr-R532[®]** allows testing chemical substances at the point of receipt, use, or delivery. Results are displayed within seconds and can be accessed via an intuitive user interface. Data are retrieved remotely via USB port.

EnSpectr R532[®] utilizes a 20 (30 optional) μm entrance slit, 1200 g/mm holographic grating, cutting-edge low pass filter, as well as a 30 mW single mode laser emitting at 532 nm to provide high accuracy Raman and luminescent measurements in a broad spectral range from 140 to 6030 cm^{-1} . The spectrometer has no moving parts which yields excellent wavelength reproducibility.

EnSpectr R532[®] comes with a low-noise 3648-element linear-array CCD detector operating at room temperature and a state of the art system for suppressing the Rayleigh scattering signal and the straight laser light. **EnSpectr R532[®]** has an onboard programmable microcontroller that provides flexibility in controlling the spectrometer and accessories.

Features

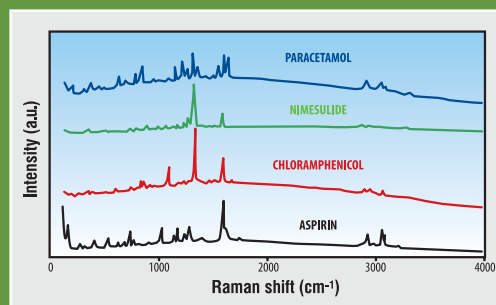
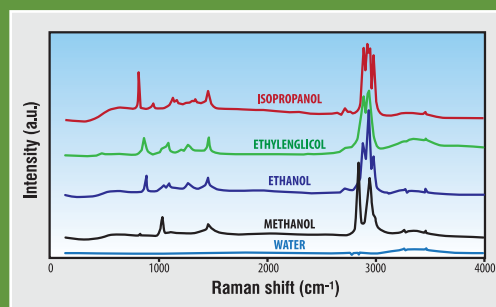
- > Superior sensitivity and low noise
- > Non-contact real-time identification
- > Analysis of ultra-low concentrations based on SERS proprietary technology

Benefits

- > Precisely tailored to customer's requirements
- > Fast and trustworthy results
- > Portable device
- > Easy to use

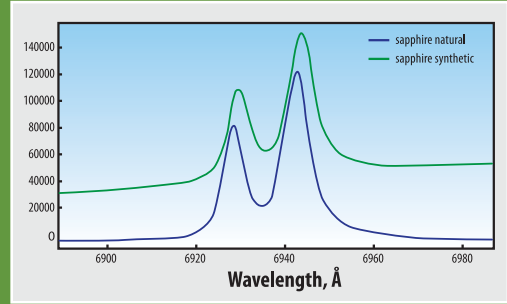
Applications

- > Semiconductor & Solar Industry
- > Food & Agriculture Industry
- > Pharmaceutical Industry
- > Geology and Mineralogy
- > Environmental Science
- > Chemical Processes
- > Medical Diagnosis
- > Forensic Analysis
- > Gemology



FEATURES

- **EnSpectr R532®** identifies substances and tags contactless through a transparent and colored glass or translucent plastic packaging that allows total quality inspection (instead of sample inspection)
- **EnSpectr R532®** detects substances and tags at least several times superior to the sensitivity available on the market samples and do not require any special skills for a user
- **EnSpectr R532®** delivered reliable results within seconds



EnSpectr R532® Raman Analyzer Specification

EnSpectr R532-50® Raman Analyzer Specification

| Laser | | |
|------------------------|--|--|
| Wavelength | 532 nm | 532 nm |
| Laser Power | 30 mW | 30 mW |
| Spectrometer | | |
| Spectral Range | 140 cm ⁻¹ – 6030 cm ⁻¹ | 140 cm ⁻¹ – 4700 cm ⁻¹ |
| Spectral Resolution | 6 cm ⁻¹ | 6 cm ⁻¹ |
| Detector | | |
| Detector Type | Linear CCD Array | Linear CCD Array |
| Pixel Number | 3648 | 3648 |
| Pixel Size | 8 μm x 200 μm | 8 μm x 200 μm |
| Dark Current | 630 e/pixel/s | 630 e/pixel/s |
| Readout Noise | 30 e rms | 30 e rms |
| Dynamic Range | 2100 | 2100 |
| Max Quantum Efficiency | 90% | 90% |
| Integration Time | 10 ms – 500000 ms | 10 ms – 500000 ms |
| Optical Bench | | |
| Focal Length | 75 mm | 50 mm |
| Entrance Aperture | 20 (30 optional) μm wide slit | 20 μm wide slit |
| Grating | 1200 g/mm holographic grating | 1800 g/mm holographic grating |
| Electronics | | |
| USB | 1 External Port 2.0 | 1 External Port 2.0 |
| Power Input | 100 – 240 VAC, 50 –60 Hz | 100 – 240 VAC, 50 –60 Hz |
| System Requirements | Windows XP/Vista/7 | Windows XP/Vista/7 |
| Physical | | |
| Dimensions | 222 mm x 145 mm x 55 mm | 180 mm x 122 mm x 60 mm |
| Weight | 1.5 kg | 0.9 kg |



Enhanced Spectrometry Inc.

delivers innovative portable Raman and luminescent spectrometry solutions, specialized software and services across a broad range of industries worldwide.

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