IDENTITY
Raman Reader

IDENTITY Raman Reader

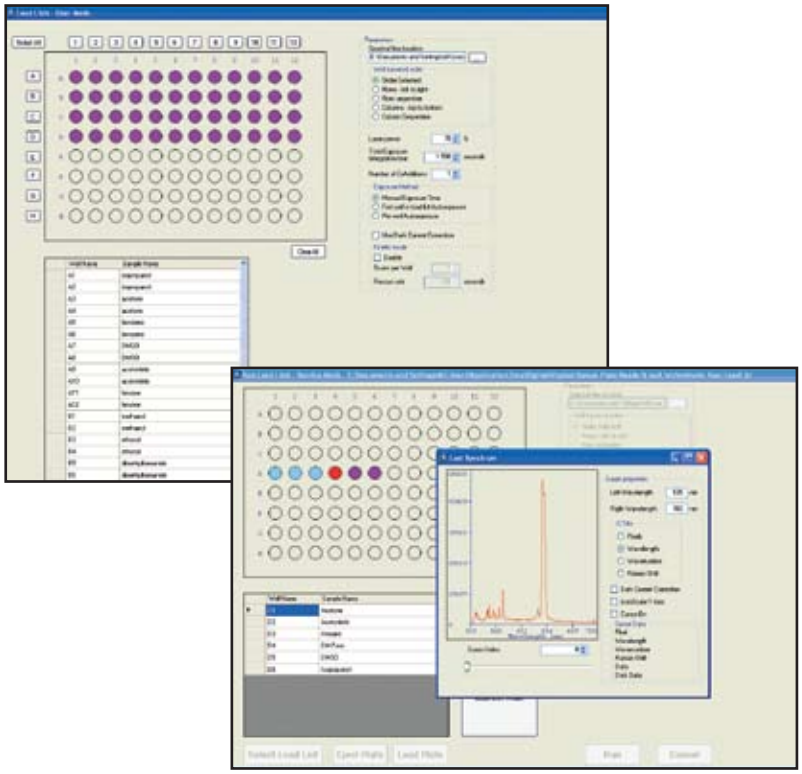
Discover the ease and efficiency of Raman Spectroscopy with the IDENTITY Raman Plate Reader.

LEADERS IN SAMPLE IDENTIFICATION

Digilab has a rich history of technology and market leadership in spectrometry and photonics spanning over the past 40 years. Building upon Digilab's global brand loyalty, reliable products and customer service reputation, the company focuses on advanced systems and solutions in the high growth life sciences research markets.

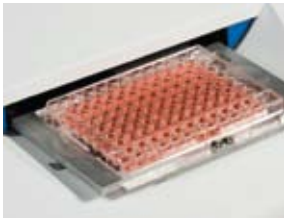
Digilab offers innovative tools for sample preparation and liquid handling, as well as imaging and spectroscopy products and technologies for sample identification. The IDENTITY Raman Reader is an innovative microplate reader based upon the power of Raman spectroscopy.

There have been substantial technology advancements in recent years in the miniaturization of spectrometers, data storage, laser technology, robotics and automation. Digilab combined these advancements in the IDENTITY Raman Reader, enabling the high throughput measurement of multiple samples in microtiter plates or slides.



IDENTITY FEATURES

- Can be used with 96 or 384 well microtiter plates, glass slides or optional tablet holder.
- Fast and accurate, measuring and analyzing samples in a 96-well plate in under 5 minutes.
- Configurable with either 532nm or 785nm laser (*inquire about other laser wavelengths*).
- Plate adaptors available for measuring liquids, powders and solid samples.
- Easy to use IDENTITY software with data files stored in compatible formats for many spectral analysis and library search-and-build software packages.



User-friendly software included with the IDENTITY Raman Reader helps improve workflow with accurate data analysis, detailed reporting and easy access to spectral data.

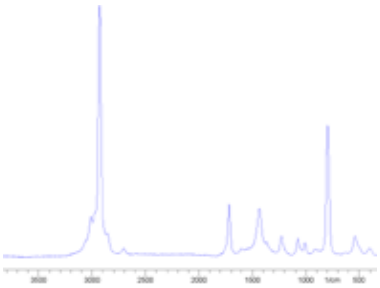
SPECTROSCOPY HAS NEVER BEEN EASIER

WHAT IS RAMAN SPECTROSCOPY?

Raman spectroscopy has become an important analytical and research tool used in pharmaceutical, biotechnology, chemical, petrochemical, forensic science, polymers and thin films, and clinical and diagnostic applications.

In Raman spectroscopy, a laser illuminates a sample, which scatters a proportion of the light. The majority of the laser light is scattered at the same frequency as the laser and is known as Rayleigh or inelastic scattering. A very small proportion of the scattered light ($\sim 10^{-6}$ of the incident light intensity) is shifted in energy from the laser frequency, with the shifted scattered light corresponding to molecular vibrations of the sample. This is known as Raman scattering.

Plotting the intensity of the shifted scattered light versus frequency results in the Raman spectrum, which is unique to each sample based on its molecular structure. This extremely information-rich radiation is then collected by a spectrometer and sent to a detector. The end result produces a chemical "fingerprint" useful for identifying compounds and characterizing molecular structures and bonding effects.

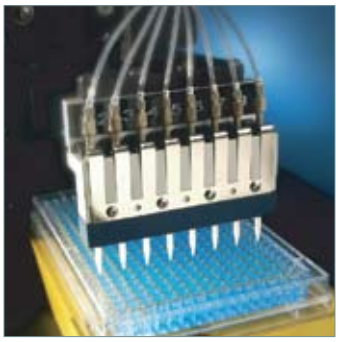


Unique compounds produce chemical fingerprints.

ADVANTAGES

Raman spectroscopy offers many advantages over other spectroscopy and analytical techniques. With the "fingerprint" nature of the data produced, libraries of spectral data can be created, stored and easily retrieved, allowing users to rapidly and accurately perform sample identification.

- Requires minimal or no sample preparation.
- Permits non-contact, non-destructive sampling, minimizing sample handling.
- Allows samples to be measured directly or remotely through glass or translucent containers, or through vessels in a production environment.
- Works with liquid, solid or complex solutions.
- Produces fast, accurate measurements, generally within a few seconds.
- Minimizes the interference of water, making it ideal for the analysis of aqueous solutions.

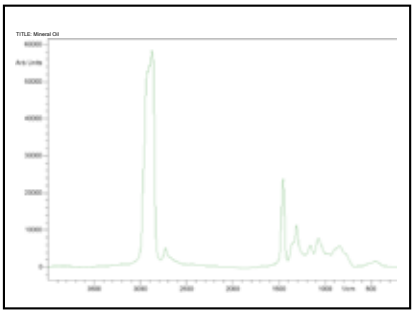


In addition to sample identification solutions, Digilab offers a variety of instrument platforms for your sample preparation needs. This includes products, like the MicroSys, with our ***patented synQUAD™ Technology****, ideal for small volume non-contact liquid handling applications. The MicroSys is one example of a synergistic Digilab product that could be incorporated into the workflow with the IDENTITY Raman Reader to automatically fill plates for measurement.*

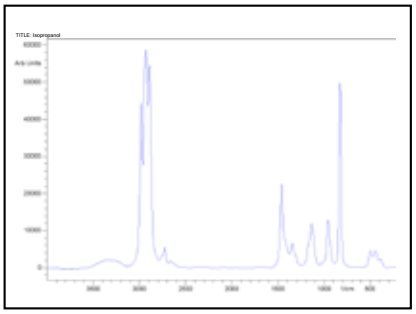
DIGILAB®

IMPROVE THE SPEED AND ACCURACY OF SAMPLE IDENTIFICATION WITH THE IDENTITY RAMAN READER

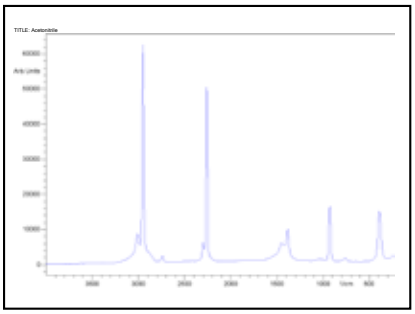
Gain access to a library or spectral data for rapid identification. Easily compare results and ensure accuracy.



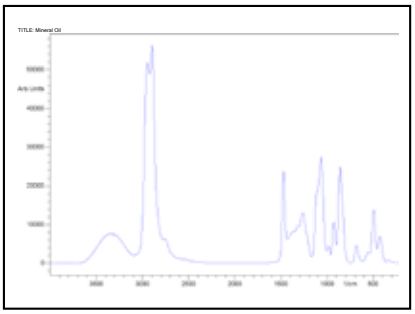
Mineral Oil



Isopropanol



Acetonitrile



Glycerol

Raman Spectroscopy Applications

- Identification of unknown materials
- Quality control of incoming materials
- Determination of molecular structure
- Measurement of reaction kinetics
- Quantitative analysis of complex mixtures
- Determination of crystalline phase

IDENTITY SPECIFICATIONS	
Laser Source:	Choice of either 532nm or 785nm (inquire about other laser options)
Laser Power:	70mW for 532nm, 300mW for 785nm
Computer Interface:	USB 2.0
Laser Interlock:	Compliant with North American / European Safety Standards
Spectral Resolution:	10cm^{-1}
Spectral Range (Raman Shift):	200 to 4600 cm^{-1}
Sample Loading:	Front loading, 96 and 384 well clear, flat bottomed microtiter plates; microscope slides; and custom 192 well glass plates
Dimensions:	24.5" W x 23.0" D x 6.3" H
Weight:	36 lbs.
Control Interface:	External PC and software are included

ORDERING INFORMATION	
RMI53200-1	IDENTITY Raman Reader, 532nm laser, 110V
RMI53200-2	IDENTITY Raman Reader, 532nm laser, 220V
RMI78500-1	IDENTITY Raman Reader, 785nm laser, 110V
RMI78500-2	IDENTITY Raman Reader, 785nm laser, 220V

ABOUT DIGILAB

Digilab designs, develops, manufactures and markets sample preparation and liquid handling tools, as well as imaging and spectroscopy products and technologies for sample identification. The company's wide array of sample preparation and identification tools serve the global life science, analytical chemistry and diagnostics markets. Its differentiated products produced from a rich technology base provide the foundation for a portfolio of applications. Digilab is proud and pleased to serve thousands of customers globally.

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