IDENTITY -F

Raman Reader

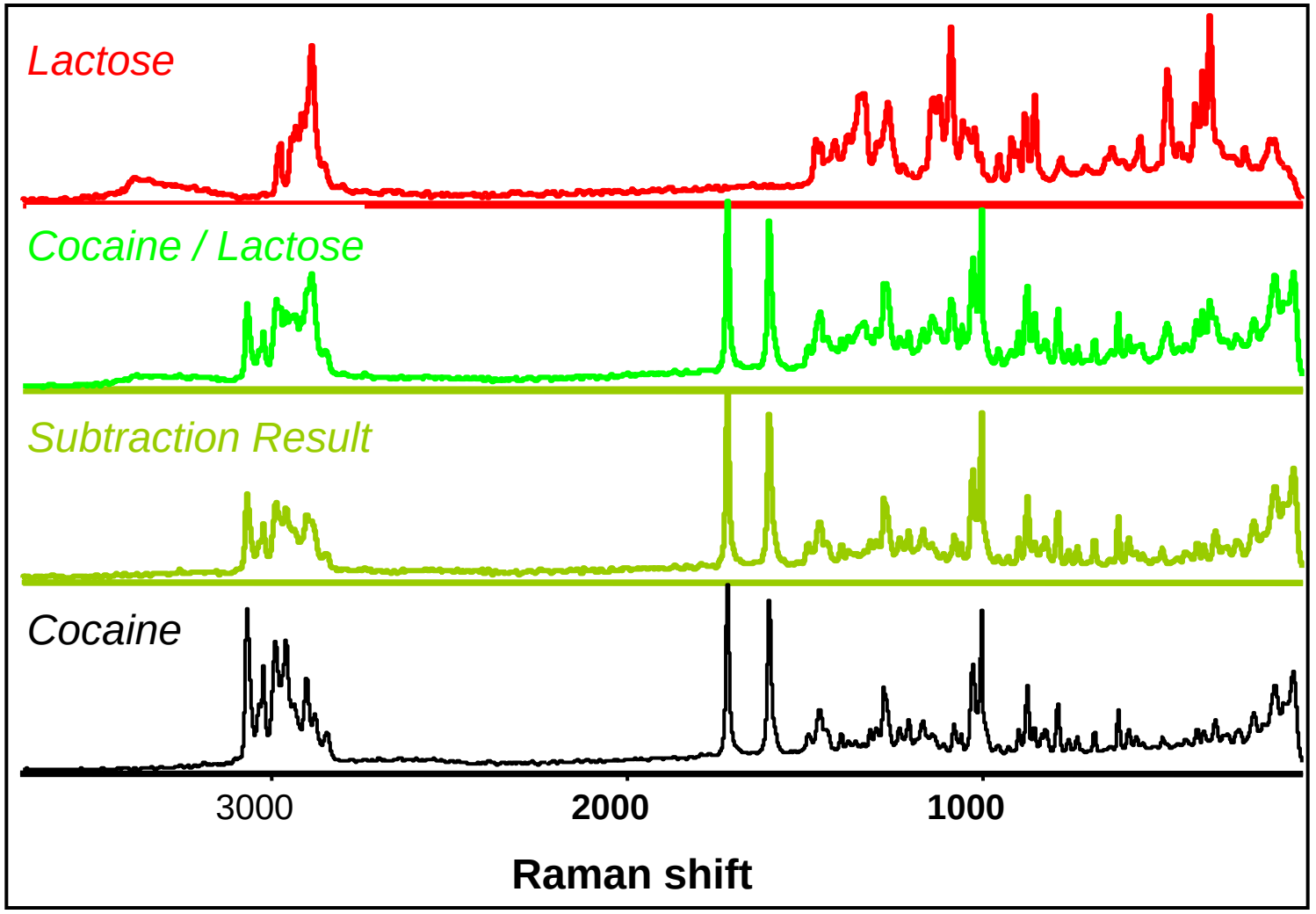
IDENTITY Raman Reader

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

Sample. Science. Solutions.

DIGILAB

Material Identification

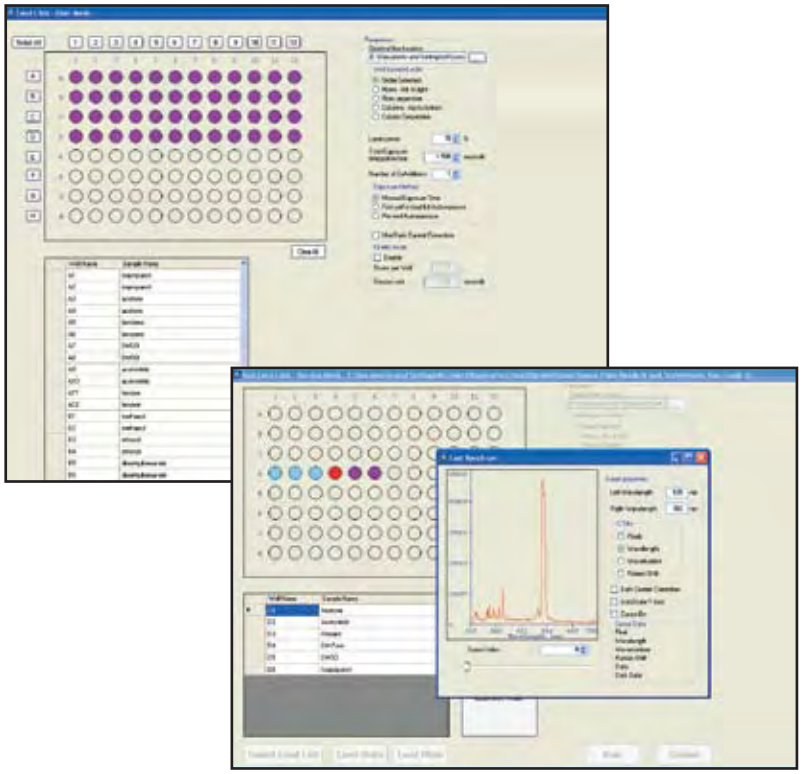


LEADERS IN SAMPLE IDENTIFICATION

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.

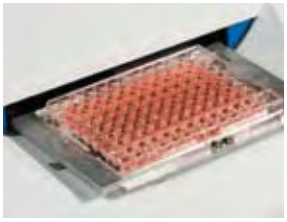
Digilab offers innovative tools for sample preparation and liquid handling, as well as imaging and spectroscopy products and technologies for sample identification. The IDENTITY Raman Reader is an innovative microplate reader based upon the power of Raman spectroscopy.

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.

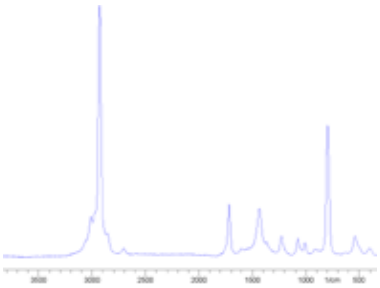


User-friendly software included with the IDENTITY Raman Reader helps improve workflow with accurate data analysis, detailed reporting and easy access to spectral data.

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.



Unique compounds produce chemical fingerprints.

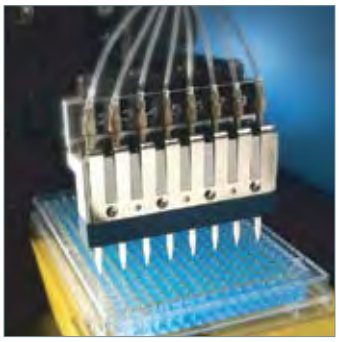
In Raman spectroscopy, a laser illuminates a sample, which scatters a proportion of the light. The majority of the laser light is scattered at the same frequency as the laser and is known as Rayleigh or inelastic scattering. A very small proportion of the scattered light ($\sim 10^{-6}$ of the incident 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.

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.

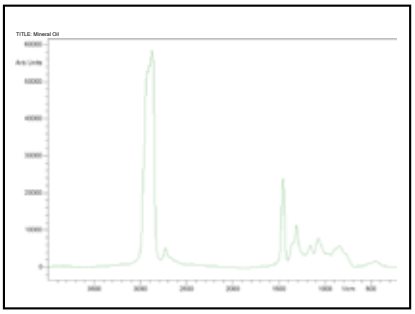


In addition to sample identification solutions, Digilab offers a variety of instrument platforms for your sample preparation needs. This includes products, like the MicroSys, with our ***patented synQUAD™ Technology****, ideal for small volume non-contact liquid handling applications. The MicroSys is 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.*

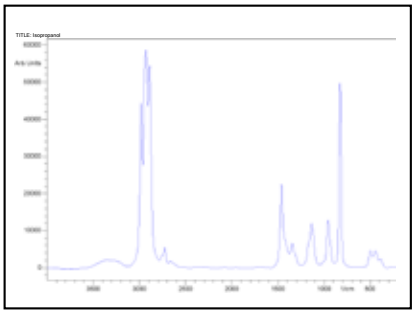
DIGILAB®

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

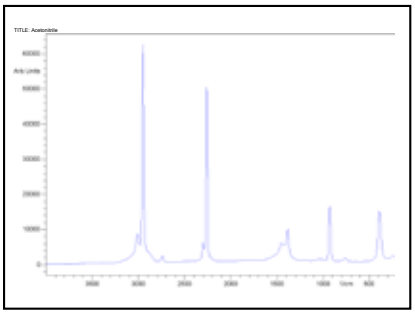
Gain access to a library or spectral data for rapid identification. Easily compare results and ensure accuracy.



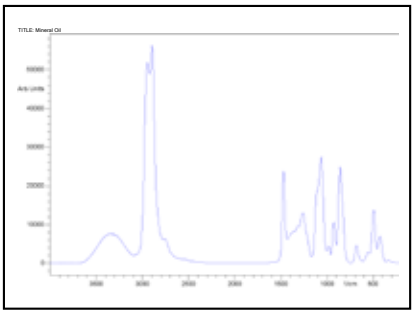
Mineral Oil



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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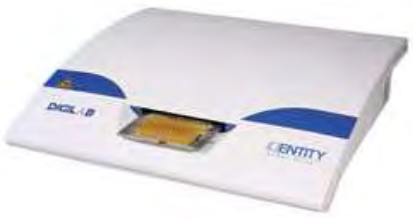
02/2010

IDENTITY - F
Raman Reader

RMI53200-1	Identity, 532nm laser, 110V
RMI53200-2	Identity, 532nm laser, 220V
RMI78500-1	Identity, 785nm laser, 100V
RMI78500-2	Identity, 785nm laser, 220V

Choose one of the following Computers (included in Identity price)

B01419LP	Laptop PC, with pre-loaded Identity Software
B01419UK	Desktop PC, with pre-loaded Identity Software



The Identity Raman Reader comes with choice of Laptop or Desktop PC with pre-loaded software, 1 each 96-well and 384-well microtiter plates in plastic, and 1 each 96-well and 384-well microtiter plate in glass, adaptor plate for powder samples, and line cord.

Identity Consumables and Accessories

RMI90001	Solid Adaptor Plate, for Tablets and Solid Samples
RMI90003	Slide Plate Adaptor
RMI90014	Raman Slides, qty. of 4
RMI90015	96 Well Microplates, Plastic, qty. of 10
RMI90016	384 well Microplates, Plastic, qty. of 10

Software **3rd Party Spectral Processing Software**

ThermoFisher Grams

RM700001	Grams software from Thermo, AI 8
	RM700001 is required to run the additional optional Grams modules
RM700002	Grams 3D, Visualization Software
RM700003	Grams, PLSplus/IQ Chemometrics Toolbox
RM700004	Grams, Spectral ID Library Search Application
RM700005	Quick Quant ActiveApp, Beer's Law Quantitation

LabCognition Panorama

RM700101	Panorama Pro from LabCognition, Basic software
	RM700101 is required to run the additional optional LabCognition modules
RM700102	Search Module, LabCognition
RM700103	Quantify Module, LabCognition
RM700104	RAMAN Interpretation module, LabCognition
RM700105	Scripting module, LabCognition
RM700106	Security Module, LabCognition
RM700107	User Manual (English), LabCognition
RM700108	USB Dongle Protection Device, LabCognition

Raman Library Software

RM700109	Complete Collection
RM700110	Aldehydes, Ketones
RM700111	Alcohols, Phenols
RM700112	Biochemicals
RM700113	Flavors, Fragrances
RM700114	Dies, Stains
RM700115	Esters, Lactone
RM700116	Food Additives

RM700117	Forensic
RM700118	Hazardous Chemicals
RM700119	High Volume Chemicals
RM700120	Hazardous Toxic Chemicals
RM700121	Hydrocarbons
RM700122	Pesticides
RM700123	Pharmaceuticals
RM700124	Polymers
RM700125	Semiconductor
RM700126	Solvents
RM700127	Sulphur
RM700128	Minerals, Organics
RM700129	Minerals
RM700130	Inorganics