

# Thermo Scientific OMNIC Spectra Software

Innovative identification and interpretation tools  
made for today's materials analyst



## Spectroscopic Identification as Never Before

You choose FT-IR and Raman spectroscopy because it's often the easiest way to a quick answer – no sample preparation, rapid analysis, non-destructive. Now with Thermo Scientific™ OMNIC™ Spectra™ we make getting answers from your spectrometer easier than ever before. Your tasks flow naturally without giving up power where you need it. This allows you to focus your efforts on getting the answers you need and taking the required actions.

## Effortless Analysis – Problem In, Answer Out

When failures, contamination, or defects occur in your manufacturing process, when staying in business requires you to stay ahead of the competition, or when identifying evidence obtained from a crime scene is needed to convict a criminal – vibrational spectroscopy should be your first choice. Until now, the analyst required a high level of technical expertise to get answers and patience to use software designed for doing research. Introducing OMNIC Spectra, the spectroscopic software designed to work the way you do, to get you better answers faster.

## Tough Questions...

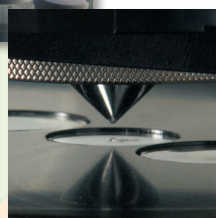
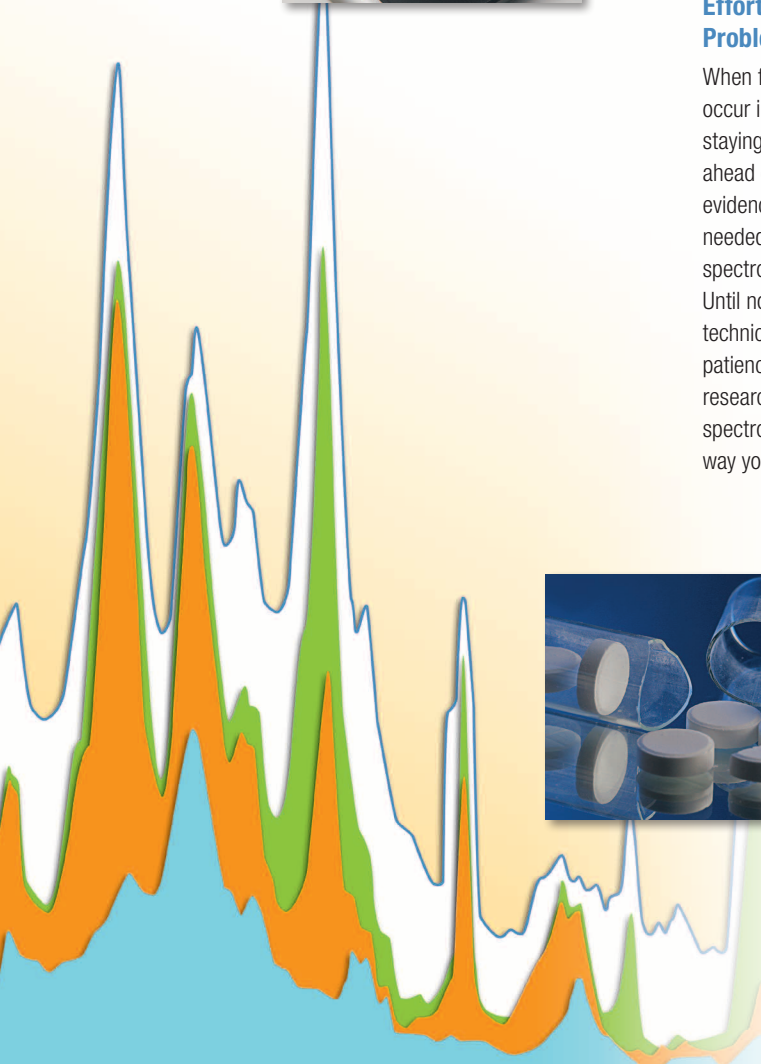
- Why was the material rejected?
- Why did the failure occur?
- What are the components of this material?
- What chemicals are in this mixture?
- Are there illegal substances in this sample?
- Can I get a definitive answer?

To get answers to these questions, just having a good quality spectrum is not enough.

It requires the ability to work with and interpret spectra, the use of spectral libraries and raw data, and a justification of your results. OMNIC Spectra software is a revolution in FT-IR and Raman analysis that shapes the software to your task, rather than the other way around.

## Definitive Answers... Fast

OMNIC Spectra is a unique combination of spectral identification tools, interpretation algorithms, and a knowledge-base of scientific documentation all in a unique and innovative software design that guides you in identifying materials and verifying assumptions. It removes the overhead of typical analytical tasks to get you on the road to answers quickly and confidently.



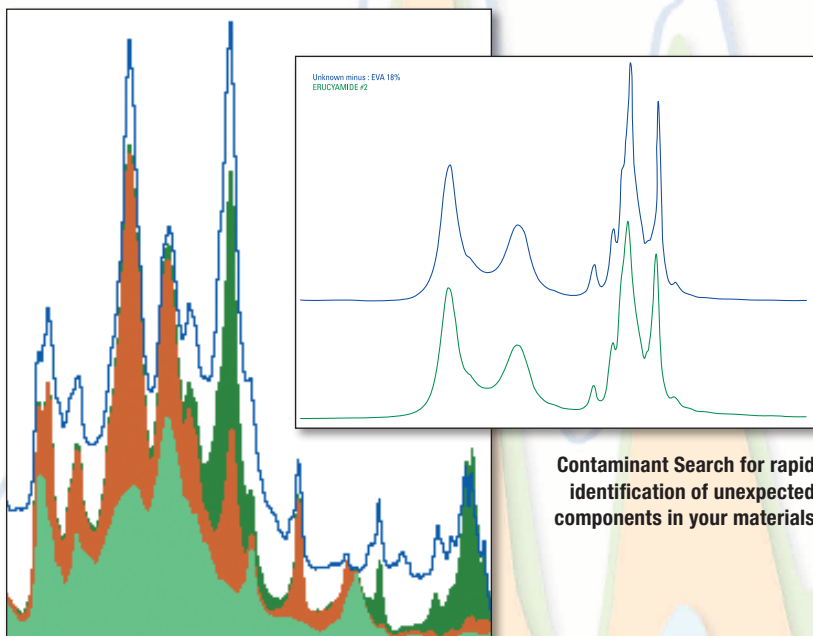
**Thermo**  
SCIENTIFIC

# Making Spectroscopy Simple for Analytical Investigation

OMNIC Spectra provides innovative identification and interpretation tools, expert knowledge bases and a user-interface made for today's materials analyst. OMNIC Spectra quickly and clearly conveys information visually as you work, thanks to years of experience in spectroscopy we put under the hood. The software indexes all of the data on your hard disk, creating a database of all your existing spectral data. And we include a large set of reference spectra to get you started properly.

## Breakthrough Features

**Multi-Component Search** and **Contaminant Search** allow you to identify constituents in mixture samples without the tedious manipulations required by the traditional search and subtract processing. These unique features set OMNIC Spectra apart from other spectroscopy software by providing compelling visual confirmation, giving you confidence in your results and making your job easier.



**Mixtures are separated quickly and easily, with the proof of the constituent materials presented in a clearly understood visual format**

**Contaminant Search for rapid identification of unexpected components in your materials**

### Specialized Software Packages

OMNIC Spectra is available in several packages combining software and spectral libraries designed for specific applications for either FT-IR or Raman. Capitalize on the complementary nature of these two techniques with one "Spectroscopy Simplified" software platform. Select either a general chemical collection or choose a specialized package designed for your industry or sample type, such as polymer analysis or forensic science. Consult with your local Thermo Scientific representative for more details.

### Compatibility

OMNIC Spectra is compatible with Windows® Vista™ and XP (Service Pack 2 minimum).

### Hassle-Free Data Management



- Ready access to all your data using modern indexing technology
- Eliminate need to build libraries since all spectra are searchable
- Maintain historical data access to save time and prevent information loss

### Intelligent Data Processing



- Smart tasks take spectral processing to a new level
- Simple one click processing saves time and effort
- Immediate visual feedback for confidence in your results

## Confident Data Collection



- Status monitor lets you know your instrument is working
- Live displays allow active data viewing to ensure quality results
- Keep working during data collection for maximum productivity

Data collection only available for certain instruments. Consult your sales representative for availability.



**OMNIC Spectra**

**My Data**

**Folders on Disk**

- bill's good stuff (34)
- drug standards - raman (23)
- qcheck for eva (2)
- spectra (79)
- webinar (13)

**Libraries on Disk**

**Home**

- My Data
- Process
- Identify
- Knowledge Base
- Report

**Raman VDPS Tablet Measurement**

**Composite for Match 1**

X = 3210.39 Y = 128.0433

**4-ACETAMIDOPHENOL, 98%**

**ACETYLSALICYLIC ACID, 99+%**

**CAFFEINE, 99%**

Match	Title	Composite%	Folder	Index
1	85.31	4-ACETAMIDOPHENOL, 98%	Raman	9195
		ACETYLSALICYLIC ACID, 99+%	Raman	8959
		CAFFEINE, 99%	Raman	111...

**Thermo Scientific Sample Analysis Report**

Multi-Component Search Results

Raman VDPS Tablet Measurement

Composite for Match 1

Raman VDPS Tablet Measurement

Contribution from: CAFFEINE, 99%

Contribution from: ACETYLSALICYLIC ACID, 99+%

Contribution from: 4-ACETAMIDOPHENOL, 98%

Match	Title	Composite%	Folder	Index
1	85.31	4-ACETAMIDOPHENOL, 98%	HR_Alabch_Raman	9195
		ACETYLSALICYLIC ACID, 99+%	HR_Alabch_Raman	8959
		CAFFEINE, 99%	HR_Alabch_Raman	11115

DIR Smart Raman with VDPS Full Tablet  
Contents Identity Verified

## Powerful Spectral Identification

- Advanced identification tools help get the answers you need
- One-step mixture identification for ultimate speed and confidence
- Find and identify contaminants without subtractions or manipulation

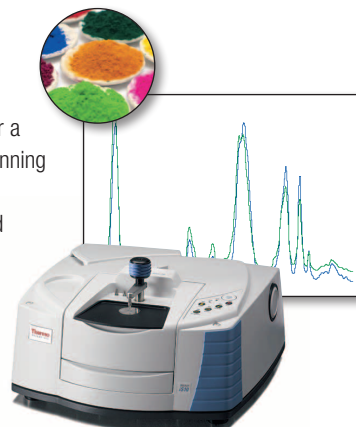
## Flexible Result Reporting

- The control you need to confidently report your findings
- Communicate efficiently with modern PDF reports
- Directly copy into word processing programs

# OMNIC Spectra – The Perfect Answer to Real World Problems

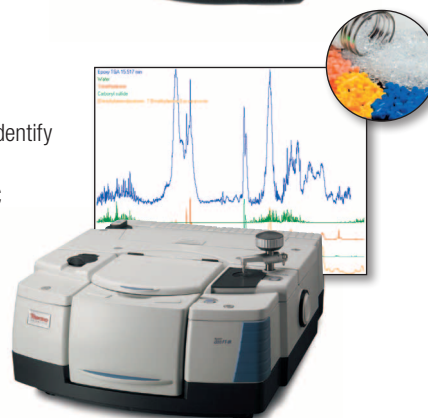
## Verification

A manufacturing problem was indicated when a routine QC test began to fail for a blended product. The Thermo Scientific™ Nicolet™ iS™10 FT-IR spectrometer running OMNIC Spectra Contaminant Search quickly pinpointed a contaminant material without the need for spectral subtractions. Because OMNIC Spectra had indexed all historic data, the contaminant was quickly identified as a material from a formulation that was several years old. The expert system integral to OMNIC Spectra allowed the manufacturing process to be corrected quickly without a lengthy investigation.



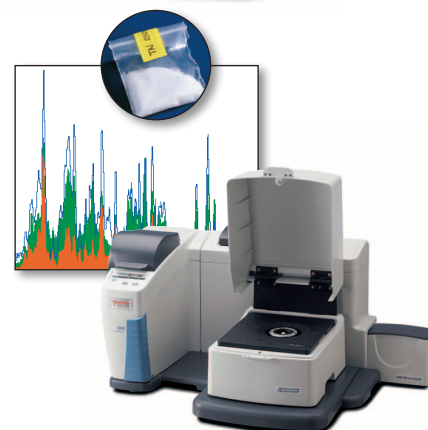
## Characterization

An R&D team working on a deformation problem looked to FT-IR to identify components and their approximate ratios in a new competitive product. Using a Thermo Scientific Nicolet iS50 FT-IR spectrometer with OMNIC Spectra, the team pulled apart the spectrum of a complicated mixture quickly and easily. This avoided manual subtract and search iterations that distort spectra and reduce the reliability of the identification. Years of historic data were used automatically to determine the constituents in the material in minutes.



## Identification

A crime lab had what appeared to be an atypical mixture of drugs and cutting agents. A Thermo Scientific™ DXR™ SmartRaman spectrometer using OMNIC Spectra Multi-Component Search for one-step identification, allowed the investigator to get convincing results faster. OMNIC Spectra provided visual confirmation and confidence in the identification of the individual components, saving considerable time in the investigation.



[www.thermoscientific.com](http://www.thermoscientific.com)

©2013 Thermo Fisher Scientific Inc. All rights reserved. Windows is a registered trademark and Vista is a trademark of Microsoft Corporation. ISO is a trademark of the International Standards Organization. All other trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.



Thermo Electron Scientific Instruments LLC,  
Madison, WI USA is ISO Certified.

<b>Africa</b> +27 11 822 4120	<b>Denmark</b> +45 70 23 62 60	<b>India</b> +91 22 6742 9434	<b>New Zealand</b> +64 9 980 6700
<b>Australia</b> +61 3 9757 4300	<b>Europe-Other</b> +43 1 333 50 34 0	<b>Italy</b> +39 02 950 591	<b>Russia/CIS</b> +43 1 333 50 34 0
<b>Austria</b> +43 1 333 50 34 0	<b>Finland/Norway/Sweden</b> +46 8 556 468 00	<b>Japan</b> +81 45 453 9100	<b>Spain</b> +34 914 845 965
<b>Belgium</b> +32 53 73 42 41	<b>France</b> +33 1 60 92 48 00	<b>Latin America</b> +1 561 688 8700	<b>Switzerland</b> +41 61 716 77 00
<b>Canada</b> +1 800 530 8447	<b>Germany</b> +49 6103 408 1014	<b>Middle East</b> +43 1 333 50 34 0	<b>UK</b> +44 1442 233555
<b>China</b> +86 10 8419 3588		<b>Netherlands</b> +31 76 579 55 55	<b>USA</b> +1 800 532 4752

**Thermo**  
SCIENTIFIC

Part of Thermo Fisher Scientific