

Thermo Electron has over 81,000 high-quality FT-IR and Raman spectra available for use with Thermo FT-IR products. These libraries aid in FT-IR spectral analysis by providing a reference spectra with which to compare a sample spectrum. This is useful for identification of unknowns and verification of materials. The collection includes spectral references of general materials such as organic chemicals as well as a variety of industry-specific libraries. A selection of reference publications of general interest to the infrared or Raman spectroscopist is also available.

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Reference Materials and Books

IR Correlation Chart

0022-003

The IR Correlation chart is easy to use and translates wavelength/wavenumber to functional group and converts functional group to wavelength/wavenumber. On one side, select an infrared region and the chart displays the chemical functional groups that produce IR absorption bands in that region. The other side converts chemical functional groups to wavelength/wavenumber. It automatically presents the wavelengths/wavenumbers and intensities of the main IR absorption bands of 61 classes of chemical functional groups. The chart is plastic coated and measures approximately 7" x 9". The IR Correlation Chart is a valuable educational tool.

The Aldrich Library of FTIR Spectra (Volumes 1 – 3)

0040-022

Charles J. Pouchert. The three-volume set contains over 18,000 spectra including vapor phase spectra. The spectra are categorized by chemical functionality and indexed alphabetically and by molecular formula.

Applied Infrared Spectroscopy

0040-020

A. Lee Smith. This practical text outlines IR fundamentals and includes a discussion of sampling techniques, problem solving, correlation charts, and characteristic absorption frequencies.

CIRcle Reference Spectra of Common Solvents

0040-018

Published jointly by Thermo and Sprouse Scientific, this volume contains over 400 spectra of the most commonly used solvents.

The Coblenz Society Desk Book of Gases and Vapors

0040-003

Contains spectra of 230 compounds and is a useful reference work for both environmental studies and GC-IR analyses.

The Coblenz Society Desk Book of Halogenated Hydrocarbons, 3rd Edition

0040-001

A compilation of 252 spectra of halogenated compounds.

The Coblenz Society Desk Book of Infrared Spectra, 2nd Edition

0040-000

Contains spectra, written discussions, and selected bibliography.

The Coblenz Society Desk Book of Plasticizers and Other Additives, 2nd Edition

0040-002

Contains 310 spectra of the most widely used plasticizers and additives.

The Coblenz Society Desk Book of Regulated and Major Industrial Chemicals

0040-004

Contains spectra of EPA priority pollutants as well as other regulated compounds.

Fourier Transform Infrared Spectroscopy

0040-021

Peter Griffiths and James de Haseth. This ideal reference book presents the theoretical and operational basics of FT-IR and its applications.

The Handbook of Infrared and Raman Characteristic Frequencies of Organic Molecules

0040-043

Daimay Lin-Vien, Norman Colthup, W. Fateley and J. Grasselli. Integrates knowledge about group frequencies in both infrared and Raman spectra. Particular attention is given to the correlation between Raman characteristic frequencies and molecular structure.

The Handbook of Organic Compounds

269-125000

Jerry Workman, Jr. This three-volume set has reviews of interpretive and chemometric techniques as well as organic spectra covering ultraviolet, visible, near infrared, Raman, and dielectric measurement techniques.

The Handbook of Vibrational Spectroscopy

269-129700

Peter Griffiths and John Chalmers. This five volume set covers all aspects of infrared, near-infrared, and Raman spectroscopy. There is even coverage of associated techniques, such as inelastic neutron scattering, electron energy loss, and cavity ringdown spectroscopy.

Volume 1: *Theory and Instrumentation*

Volume 2: *Sampling Techniques*

Volume 3: *Sample Characterization and Spectral Data Processing*

Volume 4: *Applications in Industry, Materials and the Physical Sciences*

Volume 5: *Applications in Life, Pharmaceutical and Natural Sciences*

Each volume is filled with extensive reference articles that provide introductory as well as in-depth coverage on each topic. The handbook is an excellent reference for those new to the field of vibrational spectroscopy, as well as experts.

Internal Reflection Spectroscopy – Theory and Applications

0040-047

Edited by Francis M. Mirbella, Jr. This practical resource presents the first comprehensive treatment of internal reflection spectroscopy (IRS) and its applications to polymer, semiconductor, biological, electrochemical, and membrane research. It describes the research, theory, and procedures and identifies the spectral regions, from materials characterization to process monitoring.

Introduction to Infrared and Raman Spectroscopy

0040-041

Norman Colthup, Lawrence Daly, and Stephen Wilberley. This spectral interpretation text provides group frequency correlation and example spectra.

Microscope – Basics and Beyond

0040-028

This booklet is an introduction to the techniques used in visible microscopy. It explains the functions of the microscope in a clear, simple language and is a good reference for the spectroscopist who is unfamiliar with visible microscopy.

Photomicrography – A Practical Guide

0040-029

This booklet provides an introduction to the fundamentals of photomicrography. Text and illustrations teach how to obtain quality photos. A useful reference for spectroscopists new to photomicrography.

Practical Guide to Infrared Microspectroscopy

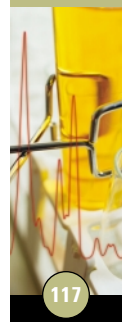
0040-030

Edited by H.J. Hamecki. Providing a sound introduction to the fundamental principles of infrared microspectroscopy (IMS), this state-of-the-art reference describes how IMS is used to solve specific microanalytical problems in a variety of disciplines, including forensic analysis, art conservation, pharmaceutical, geological, and electronics research. With an emphasis on sample preparation, this book describes when and how to use transmission, specular reflection, diffuse reflection, attenuated total reflection, grazing angle reflection, and IMS techniques. There are over 440 key literature citations and more than 340 useful equations, tables, drawings, and micrographs.

Practical Sampling Techniques for Infrared Analysis

0040-046

Patricia B. Coleman. Provides the background needed to consider and select the best sampling technique for your application. Heavily illustrated.



Thermo Electron Spectral Libraries

The Thermo FT-IR spectral library collection features over 60 unique databases covering the broad spectrum of mid-infrared, near-infrared, and Raman data. Spectra are available in condensed phase and vapor phase that cover a range of applications including polymer, pharmaceutical, Raman, and other industry-

specific categories. Thermo spectral libraries can help to provide the best spectral match. Data is presented in deresolved and high resolution formats to help identify unknown samples. The user can easily subtract a reference spectrum from the sample and search against the subtraction result to identify the impurity.

Library Format Descriptions

Deresolved Format

All deresolved libraries contain spectra at 16 cm⁻¹ resolution (8 cm⁻¹ data spacing) by 8-bit ordinate precision.

- Contains spectral data from 4000 – 450 cm⁻¹, unless otherwise noted.
- Best used when searching compounds with significant spectral differences.

High Resolution Format

All PC high-resolution libraries contain spectra at 4 cm⁻¹ resolution (2 cm⁻¹ data spacing) by 16-bit ordinate precision.

- Contains spectral data from 4000 – 450 cm⁻¹, unless otherwise noted.
- Useful when searching compounds with closely related spectra.
- Offer greatly improved results when using spectral subtractions.

IR Search/Thermo's GRAMS Format

All IR Search/Thermo's GRAMS format libraries contain spectra at 16 cm⁻¹ resolution (8 cm⁻¹ data spacing) by 8-bit ordinate precision.

- Contain spectral data existing from 4000 – 450 cm⁻¹, unless otherwise noted.
- Used in spectral searches.
- Available for use with Spectral ID, GRAMS/32 V4, GRAMS/386, Spectra-Calc and Lab-Calc software.

Computer Requirements

PC processor with 1 GHz clock speed; 256 Mbytes RAM; 10 Gbyte Hard Drive; 32X CD ROM; 16 Mbytes 4X AGB Video RAM; 15" SVGA monitor (800 x 600); Stereo sound and speakers; 3.5" floppy; Windows 2000 or XP Professional, Mouse and Keyboard.

Note: Check the computer requirements of your search package. Some libraries require more disk space than others. Contact Thermo for specific requirements. All databases are available for a 10-year license period only.

Aldrich Condensed Phase Libraries

Aldrich Condensed Phase Library Edition II (18,454 spectra)

- A collection of over 18,000 of the most common chemicals found in the Aldrich Chemical catalog
- Acquired by Sigma® Aldrich and examined and processed at Thermo
- Represent a wide range of functional groups
- Aldrich Edition II spectral libraries come complete with the Aldrich Library of FT-IR spectra: Edition II Reference books

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-016100
High Resolution	OMNIC	834-016200
Floppy Version		
Deresolved	GRAMS	835-006000

Aldrich Material Specific Sub-Libraries Edition II

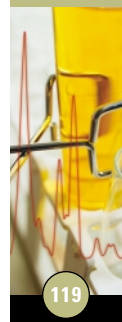
- Eight sub-libraries of related materials covering specific chemical classes of the Aldrich Condensed Phase Library are available
- These libraries are organized by chemical type
- High Resolution Format, OMNIC Format, CD-ROM Version

Description		Part Number
Aldrich Hydrocarbons	(1199 Spectra)	834-019500
Aldrich Alcohols and Phenols	(1200 Spectra)	834-019600
Aldrich Aldehydes and Ketones	(1311 Spectra)	834-019700
Aldrich Esters, Lactones, and Anhydrides	(1653 Spectra)	834-019800
Aldrich Dyes, Indicators, Alkynes, Nitro, and Azo Compounds	(1229 Spectra)	834-019900
Aldrich Phosphorus and Sulfur Containing Compounds	(822 Spectra)	834-020000
Aldrich Organometallic, Inorganic, Boron, and Deuterium Compounds	(1523 Spectra)	834-020100
Aldrich Polymers	(466 Spectra)	834-020200

Thermo Infrared Condensed Phase Academic Sampler Library (1,000 spectra)

- Includes spectra of common chemicals, representatives of major functional groups and combinations of functional groups, which are most likely to be observed in academic chemistry laboratories
- Suited to the needs of academic institutions and small QC labs
- Chosen by chemistry professors from many disciplines to include spectra of chemicals used in a wide range of common laboratory experiments from the 52 subdivisions of the Thermo/Aldrich Condensed Phase Library
- These chemicals are also important building blocks for common industrial applications

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-009700
High Resolution	OMNIC	834-009800
Floppy Version		
Deresolved	GRAMS	829-195400
CompactFlash® Version		
Deresolved	OMNIC	836-002300
High Resolution	OMNIC	836-001300



Forensic Libraries

Georgia State Crime Lab Drug Library (1,940 spectra)

- Contains spectra of legal and illegal drugs
- Acquired by the Georgia Bureau of Investigation
- Samples include drugs, diluents, drug precursors, and other drug-related compounds
- Samples were secured as pure drug standards from the Drug Enforcement Administration (DEA), Applied Sciences Laboratories, United States Pharmacopoeial Conventions, Inc., and various pharmaceutical companies
- The sample purity was usually greater than 95% and in many cases greater than 99%
- Unless otherwise stated, the components were prepared for spectral analysis using KBr pellets

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-007400
High Resolution	OMNIC	834-007500

Synthetic Fibers Library (376 spectra)

- Contains transmission spectra of synthetic fibers from the Collaborative Testing Services Reference Collection of Synthetic Fibers
- Thermo obtained these spectra in cooperation with Dr. Jay A. Siegel and his co-workers in the school of Criminal Justice at Michigan State University. Spectra were obtained using an FT-IR microscope

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-011100
Floppy Version		
Deresolved	GRAMS	829-095400

Toronto Forensic Library (3,549 spectra)

- Contains FT-IR spectra of legal and illegal drugs, drug precursors, and reagents used to prepare them, and other substances encountered in forensic analysis
- The spectra were measured at the Forensic Laboratories of the Canadian Department of Health and Welfare in Toronto and are distributed by Thermo, License from Canadian Patent and Development Limited
- The spectra are grouped with similar compounds in the library. The major divisions of substances are organic (3,247 spectra), inorganic (182 spectra), and natural and commercial products (127 spectra)

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-007700
High Resolution	OMNIC	834-007800

Industry Specific Libraries

Aldrich Solvents Library (246 spectra)

- Contains 127 spectra of liquid samples and 119 spectra of vapor phase samples.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-008800
High Resolution	OMNIC	834-008900
CompactFlash Version		
High Resolution	OMNIC	836-001600

Food Additives Library (519 spectra)

- Features condensed phase FT-IR spectra of compounds of interest to the food industry
- Spectra are on the GRAS (Generally Recognized as Safe) list of US government-approved food additives
- The Food Additives Library contains condensed phase spectra complementary to the vapor phase spectra in the Flavors and Fragrances Library, plus other nonvolatile GRAS-list compounds

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-010200
High Resolution	OMNIC	834-010300

Hazardous Chemicals Condensed Phase Library (411 spectra)

- A collection of condensed phase spectra of toxic chemicals, pollutants, and other contaminants
- Spectra are on the US Environmental Protection Agency's Office of Toxic Substances consolidated list of chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), also known as the Emergency Planning and Community Right-to-Know Act (EPCRA)

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-011300
High Resolution	OMNIC	834-011400
CompactFlash Version		
High Resolution	OMNIC	836-001900

Inorganics Library (1,805 spectra)

- This library was produced at 2 cm⁻¹ data spacing (4 cm⁻¹ resolution) and contains over 1800 total spectra
- This library contains four basic subgroups: Minerals (600 Spectra), Borons (296 spectra), Inorganic Compounds (698 Spectra), and Commercial Materials (211 Spectra)

Description		Part Number
CD-ROM Version		
High Resolution	OMNIC	834-025800

Kidney Stone Library and Analysis Kit Compatible with OMNIC v5 – 32 bit and greater

The Kidney Stone Library and Analysis Kit provides researchers and spectroscopists the ability to analyze kidney stones. It allows customers to prepare samples as a KBr pellet and measure by transmission with no special sampling accessories required.

The Kidney Stone Library and Analysis Kit consist of three parts: Kidney Stone Library, Kidney Stone Analysis and a Kidney Stone Guide. The Kidney Stone Library provides over 750 kidney stone reference spectra. The Kidney Stone Analysis provides a qualitative and semi-quantitative approach using a coded library of 18,000 spectra and special algorithms to identify the content of a kidney stone component. The Kidney Stone Guide provides additional information about the kidney stone components and provides interpreted infrared spectra, Raman spectra, a video picture of the stone, other methods of chemical analysis, causes and occurrence of the component, optical properties, table of peaks, structural formula, and other information.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	829-282500

Lubricants and Oils Library

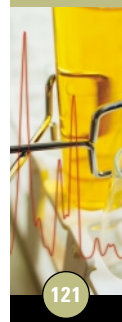
- An international collection of over 1,500 spectra of motor oils, gear oils, electroinsulating oils, machinery oils, turbine oils, compressor oils, hydraulic oils, anticorrosion oils, steam cylinder oils, metal-cutting oils, natural oils, silicone oils, fuels, greases, and solvents
- Contains over 1000 spectra measured by KBr transmittance
- Contains 550 spectra of ATR and ATR corrected data
- An electronic user's guide contains an overview of oil analysis, list of the most common motor oil additives, and a table of characteristic compounds and bands

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-010000
High Resolution	OMNIC	834-016000
CompactFlash Version		
High Resolution	OMNIC	836-002600

Minerals Library (600 spectra)

This is a subset of the Inorganics Library of FT-IR spectra. It contains 600 Minerals from all over the world. Included with the library is information on the mineralogical name, chemical formulas, occurrence, and color of the mineral.

Description		Part Number
CD-ROM Version		
High Resolution	OMNIC	834-025700



Industry Specific Libraries *continued*

Near Infrared Pharmaceutical Reference Database (385 spectra)

This reference database for near-infrared users is a collection of 385 pharmaceutical compounds and contains both active and inactive substances.

- Solid samples were collected in reflectance using a SabIR fiber optics probe
- Liquid samples were collected in transmittance using a 2 mm quartz cell

Description		Part Number
CD-ROM Version		
High Resolution	OMNIC	834-024300

Paper Materials Library (300 spectra)

The Paper Materials Library includes over 300 spectra of compounds and materials used in the production of paper products. The spectra were chosen to aid in the identification of impurities as well as to indicate the composition of completed paper products. The spectra were collected using a variety of techniques including transmission and ATR.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-013800
High Resolution	OMNIC	834-013900

Pharmaceutical Excipients Library (300 IR/300 Raman spectra)

This spectral library collection includes an FT-IR library and a Raman library each containing 300 spectra. Spectra were collected using Thermo FT-IR and FT-Raman spectrometers. Customers may purchase the infrared library, the Raman library, or a matched IR/Raman library. It includes a textbook with an explanation of spectroscopy techniques and the spectra of pharmaceutical excipients for reference use.

Pharmaceutical Excipients IR Library (300 Spectra)		Part Number
CD-ROM Version		
High Resolution	OMNIC	834-019200
CompactFlash Version		
High Resolution	OMNIC	836-002100

Pharmaceutical Excipients Raman Library (300 Spectra)

CD-ROM Version		
High Resolution	OMNIC	834-019300

Pharmaceutical Excipients Matched IR/Raman Library (300/300 Spectra)

CD-ROM Version		
High Resolution	OMNIC	834-020300

Surfactants Library (637 spectra)

A comprehensive collection of carefully characterized surfactant spectra organized by trade name and formula.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-009000
High Resolution	OMNIC	834-009100
CompactFlash Version		
High Resolution	OMNIC	836-001800

US Commercial Materials Library (213 spectra)

Contains four libraries with spectra of minerals, polypropylene additives, explosives, and epoxies:

- The Epoxy Resins Library contains 49 spectra identified by trade name
- The Painter Mineral Library contains 56 mineral spectra collected by Professor Paul Painter of the Pennsylvania State University
- The GSCL Explosives Library contains 14 explosive materials and 4 non-explosive references prepared and collected by the Georgia State Crime Lab
- The Polypropylene Additives Library contains 52 common polypropylene additives, solvents, and other materials identified by trade name

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-010100
CompactFlash Version		
Deresolved	OMNIC	836-002500

US Geological Survey Minerals Library (78 spectra)

- Features spectra of carefully characterized minerals
- Collected by the US Geological Survey. Most samples were from the Smithsonian National Museum of Natural History, the rest were from the Hunt and Salisbury collection in Denver and a variety of other sources
- Most of the minerals represented in the library are silicates

Description		Part Number
Floppy Version		
Deresolved	OMNIC	829-412400

Polymer Libraries

Coatings Technology Library (2,507 spectra)

- Contains spectra of common coatings materials, including polymers, resins, vehicles, pigments, extenders, acrylic monomers, radiation curable-monomers, fungicides, mildewcides, inhibitors/stabilizers, solvents, and other additives
- Collected by the Chicago Society for Coatings Technology
- Includes the revised edition of An Infrared Spectroscopy Atlas for the Coatings Industry, (1991). The atlas is the fourth major FSCT publication dealing with the use of FT-IR in coatings analysis
- Recommended by Federation of Societies for Coatings Technology. Members receive a 10% discount. The library is also available to members who do not use Thermo's OMNIC or GRAMS software programs. Call for information.

Description		Part Number Non-Member	Part Number FSCT Member
CD-ROM Version			
Deresolved	OMNIC	834-010800	834-010800M
High Resolution	OMNIC	834-010900	834-010900M
Deresolved	GRAMS	829-125400	829-125400M

Hummel Polymer & Additives Library (2,011 spectra)

- Includes spectra of polymers, solvents, monomers, and industrial organic compounds
- Benefits anyone who identifies polymers, particularly in labs involved in polymer production or analysis
- An aid in identification of impurities, including excesses of residual monomers and additives, and indicates the composition of completed products
- Collected by Professor Dieter Hummel of the Institute of Physical Chemistry at the University of Cologne (Koln), a recognized specialist in polymer chemistry
- Sequential index contains manufacturer, trade name, literature reference, and measurement conditions

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-008500
High Resolution	OMNIC	834-008600
Floppy Version		
Deresolved	GRAMS	829-045400
CompactFlash Version		
Deresolved	OMNIC	836-002400
High Resolution	OMNIC	836-001400

Industrial Coatings Library (1,961 spectra)

A wide-ranging, current collection of spectra of monomers, polymers, plasticizers, extenders, solvents, pigments and other additives that are of interest to commercial and industrial laboratories.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-010500
High Resolution	OMNIC	834-010600
Floppy Version		
Deresolved	GRAMS	829-065400

Polymers, Polymer Additives & Plasticizers Library (1,799 spectra)

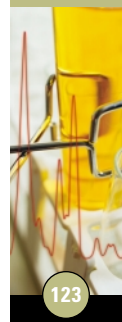
- Includes spectra of polymers, plastics, and additives for polymers, rubbers, cosmetics, adhesives, sealants, and plasticizers
- Collected by Chemir/Polytech Laboratories and Dr. John Kokosa
- Includes a sequential index with additional data such as manufacturer, chemical name, product name, chemical abstract number, and category name, if available

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-008200
High Resolution	OMNIC	834-008300
Floppy Version		
Deresolved	GRAMS	829-275400
CompactFlash Version		
High Resolution	OMNIC	836-001500

Rubber Compounding Materials Library (350 spectra)

- Contains spectra of materials used by the rubber and polymer industries, including accelerators, extenders, plasticizers, curing, and other processing aids
- Descriptive information includes chemical name, manufacturer name, and brand name

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-011900
High Resolution	OMNIC	834-012000
Floppy Version		
Deresolved	GRAMS	829-225400



Raman Libraries

Raman spectra are ideal for library searching because they are comprised of relatively sharp, distinct bands with very little interference from the broad features associated in the IR with water, highly polar bonds and additives such as Nujol. In addition, IR and Raman spectroscopies are complementary techniques, each looking at a different aspect of a sample's composition. Searching the Raman spectrum as well as the IR spectrum of an unknown sample gives a more complete picture of the molecular vibrations and increases the quality of the search results.

Aldrich Raman Condensed Phase Library (14,033 spectra)

The Aldrich Raman Library consists of 14,033 FT-Raman spectra of various substances, most of which are pure organic or inorganic compounds. To create this library, the compounds in the Thermo Aldrich FT-IR Condensed Phase library were excited with an Nd:YVO4 laser (1064 nm) using laser powers between 400 and 600 mW, measured at the sample. Thermo's Raman 950 spectrometer (with a Ge detector) was used to collect the Raman spectra. The spectra were then saved in Raman Shift format. All of the spectra were originally measured at a resolution of 2 cm⁻¹ and then mathematically deresolved during conversion to the Thermo library format.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-003900
High Resolution	OMNIC	834-004000
Floppy Version		
Deresolved	GRAMS	835-005100

Aldrich Raman/IR Linked Library and Search (3,901 spectra)

- Includes the Aldrich Raman Library of 3,901 spectra of common chemicals found in the Aldrich Chemical Catalog
- Includes the Aldrich IR Linked Library of 3,901 corresponding IR spectra
- All Raman spectra collected by the Aldrich Chemical Company using the Thermo's Raman 950 Spectrometer
- Includes Thermo's exclusive Raman/IR Linked Search package compatible with OMNIC software

Description	Part Number
Aldrich Raman/IR Linked Library and Search	833-009600
Aldrich Linked Raman (library only, 3,901 spectra, deresolved)	829-969400

Raman Forensics Library (175 spectra)

A collection of common drug compounds, excipients, precursors, and metabolites that are frequently encountered in the course of Forensic Science.

Description		Part Number
CD-ROM Version		
High Resolution	OMNIC	834-014200

Raman Organic Chemical Collection Library (1,000 spectra)

- Includes spectra of common organic chemicals
- All samples run by Thermo using the Raman 910 Spectrometer
- First commercially available collection of spectra run using an FT-Raman system

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-004400

Raman Polymer Library (99 spectra)

A convenient sample library for an introduction to the FT-Raman analytical technique for polymer application. The polymer reference samples were prepared by scientific polymer products.

Description		Part Number
CD-ROM Version		
High Resolution	OMNIC	834-014100

Sigma Biochemical Libraries

Sigma Biochemical Library (10,411 spectra)

- A spectral collection of the most common chemicals found in the Sigma Chemical catalog
- These spectra, acquired by Sigma-Aldrich Chemical Corporation examined and processed at Thermo, represent a wide range of chemical classes of particular interest to those engaged in biochemical research or QC
- Includes spectra of interest to the biochemical field

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-005400
High Resolution	OMNIC	834-005500

Sigma Material Specific Libraries – Deresolved Format Only

- Five sub-libraries of related materials covering specific chemical classes of the Sigma Condensed Phase Library are available
- Libraries are organized by chemical type

Sigma Proteins and Peptides (747 Spectra)		Part Number
CD-ROM Version		
Deresolved format only	OMNIC	834-005700

Sigma Enzymes, Coenzymes, and Enzyme Substrates (485 spectra)		Part Number
CD-ROM Version		
Deresolved format only	OMNIC	834-005800

Sigma Sugars and Carbohydrates (614 spectra)		Part Number
CD-ROM Version		
Deresolved format only	OMNIC	834-005900

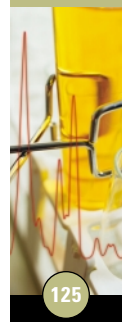
Sigma Dyes, Stains, and Natural Pigments (628 Spectra)		Part Number
CD-ROM Version		
Deresolved format only	OMNIC	834-006000

Sigma Fatty Acids, Glycerides, Oils, and Waxes (766 Spectra)		Part Number
CD-ROM Version		
Deresolved format only	OMNIC	834-006100

Sigma Steroids Library (3,011 spectra)

- Collection of spectra of a wide variety of natural and synthetic steroids
- The steroid samples and spectra were acquired by Sigma and the United Kingdom Medical Research Council
- Spectra are ordered within the library by skeletal type, and further by degree and type of substitution and unsaturation

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-008000
High Resolution	OMNIC	834-008100



Vapor Phase Libraries

Aldrich Vapor Phase Library (5,010 spectra)

Contains gas phase spectra collected by Aldrich using a GC interface to ensure chromatographically pure samples. The GC interface reduces the sample decomposition common when vapor phase spectra are obtained in a conventional gas cell.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-006200
High Resolution	OMNIC	834-006300
CompactFlash Version		
High Resolution	OMNIC	836-002700

EPA Vapor Phase Library (3,300 spectra)

This is a collection of 3,300 spectra acquired by the EPA in the late 1970s and early 1980s. The spectra were not run on a GC/FT-IR.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-006800
High Resolution	OMNIC	834-006900
CompactFlash Version		
High Resolution	OMNIC	836-002800

Flavors and Fragrances Library (667 spectra)

- Includes vapor phase spectra of commercial materials with fragrance or flavor-enhancing properties. Most spectra were collected by Aldrich using a GC interface to reduce contamination and decomposition.
- All spectra are on the GRAS (Generally Recognized as Safe) list of US government-approved foods.
- The Flavors and Fragrances Library contains 667 vapor phase spectra complementary to the condensed phase spectra in the Food Additives Library.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-009300
High Resolution	OMNIC	834-009400
Floppy Version		
Deresolved	GRAMS	829-105400

Hazardous Chemicals Vapor Phase Library (304 spectra)

- Contains vapor phase spectra of toxic chemicals, pollutants, and other contaminants.
- Spectra are on the US Environmental Protection Agency's Office of Toxic Substances consolidated list of chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986, a.k.a., the Emergency Planning and Community Right-to-Know Act.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-011600
High Resolution	OMNIC	834-011700
Floppy Version		
Deresolved	GRAMS	829-235400

TGA Vapor Phase Library (460 spectra)

- Contains spectra of compounds most likely to evolve during TGA/FT-IR experiments, and is valuable to R&D chemists studying both composition and decomposition properties of materials.
- Identifies most low molecular weight gases. Investigators searching for spectra of more exotic species or for combinations of functional groups should consider the Thermo Vapor Phase Library.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-007100
High Resolution	OMNIC	834-007200

Thermo Vapor Phase Library (8,654 spectra)

- Contains spectra of compounds measured in the gas phase.
- Most (6,543) spectra were acquired by the Aldrich Chemical Company using product samples and are available in printed form in The Aldrich Library of FT-IR Spectra: Edition 1, Volume 3.

Description		Part Number
CD-ROM Version		
Deresolved	OMNIC	834-006500
High Resolution	OMNIC	834-006600