The Spectrum One FT-IR Spectrometer
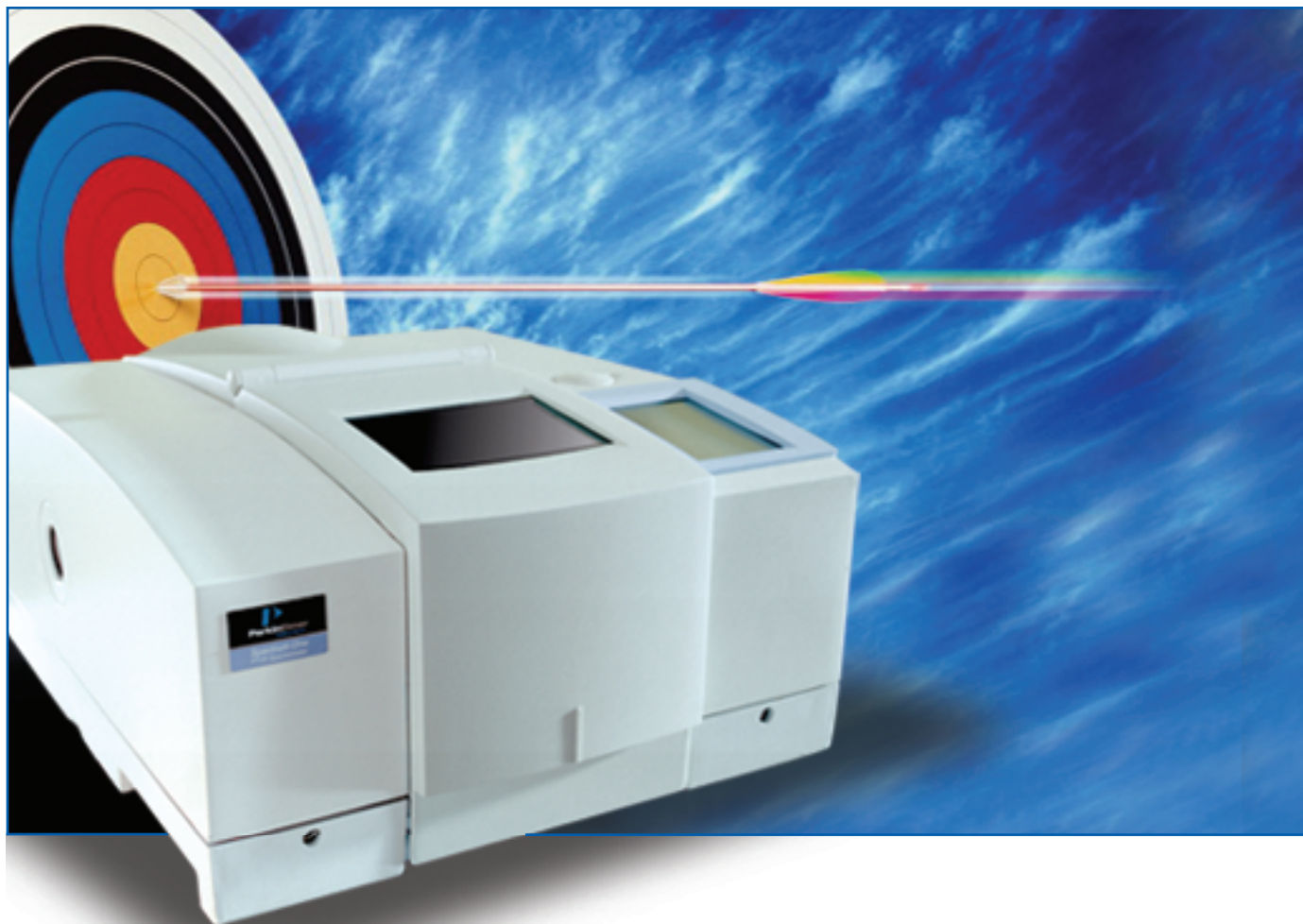
Experience the quality of
Spectrum One –
best in class.

PerkinElmer®
precisely.

A history of innovation…
a vision for the future.

From the introduction of the industry's first IR model in 1944 through the pioneering of modular sampling systems, PerkinElmer® has continually advanced the technology of FT-IR spectroscopy. Our history of innovation continues with the Spectrum™ One FT-IR system. Featuring self-aligning, easy-to-interchange accessories and integrated self-test routines, the Spectrum One system offers quick, predictable and reproducible results – sample after sample.
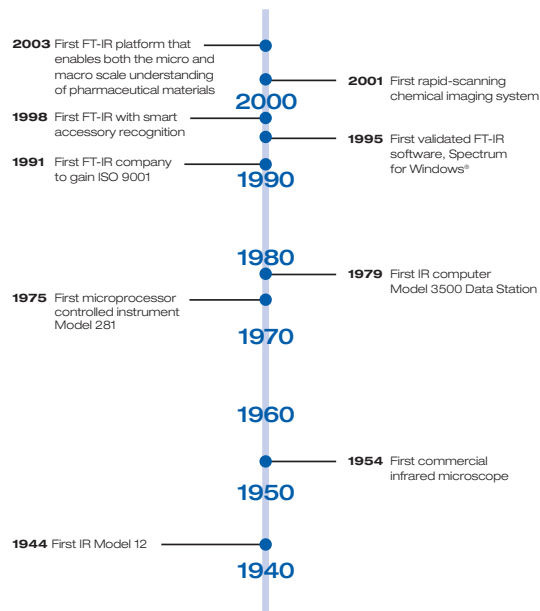
2003 First FT-IR platform that enables both the micro and macro scale understanding of pharmaceutical materials

2001 First rapid-scanning chemical imaging system

2000

1998 First FT-IR with smart accessory recognition

1995 First validated FT-IR software, Spectrum for Windows®

1991 First FT-IR company to gain ISO 9001

1990

1980

1979 First IR computer Model 3500 Data Station

1975 First microprocessor controlled instrument Model 281

1970

1960

1954 First commercial infrared microscope

1950

1944 First IR Model 12

1940

Contents

For quality, consistency and growth,
choose Spectrum One.

Designed to meet the requirements of even the most demanding lab environments, the Spectrum One FT-IR system is built to the highest quality specifications to ensure quick, consistently superior results. With its broad array of accessories and upgrades, the Spectrum One system is the perfect foundation for a growing, multi-application platform to keep pace with the changing needs of your lab.

The Spectrum One FT-IR system offers:

- High-performance optical bench for accurate results
- Patented Dynascan™ interferometer for unequaled stability and sensitivity
- Simple, yet powerful, software to minimize training and increase accuracy
- Smart, self-aligning plug-and-play modular accessories with integrated self-test routines for quick, predictable and reproducible sampling
- Built-in intelligence to control and monitor measurements, alerting the user to potential errors to ensure consistent results

PerkinElmer Spectrum One spectrometer with UATR

Call 1-866-250-6070, ext. 271, for a FREE CONSULTATION with a PerkinElmer Spectrum One specialist

e-mail us: *spectrumone@perkinelmer.com* or go to *www.perkinelmer.com/spectrumone*

Consistent, reproducible results –
right the first time,

every time.

PerkinElmer knows that quality begins with attention to detail. That's why the Spectrum One FT-IR system is designed and built by scientists who understand the rigors of FT-IR analysis within the lab environment. From avoiding variations in temperature to providing immunity against tilt, shear and vibration, Spectrum One systems ensure confidence in your results – time after time.

The Spectrum One FT-IR system was designed with quality in mind and includes these features:

Dynascan interferometers – patented by PerkinElmer
• Designed to minimize variability and increase sensitivity
• Provide immunity to tilt, shear and vibration

Temperature-stabilized detectors
• Temperature stabilization ensures that the detector is kept at optimal performance temperature

Source switching
• Enables highest energy output from the source
• Ensures testing sensitivity and permanent instrument optimization

And, only Spectrum One spectrometers feature built-in intelligence to ensure the system is performing optimally – before and throughout the measurement process.

Ready for Work
• Performs pre-measurement diagnostics and system standardization prior to instrument operation

Sure Scan
• Rejects the scans if the instrument is knocked or disrupted during the data collection

Quality checks
• Tests collected data for common operator or sampling errors and enables elimination of inconsistent results

Spectrum Quality Checks: Alerts operators to potential problems with analyses.

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Data without AVI   Same Data with AVI
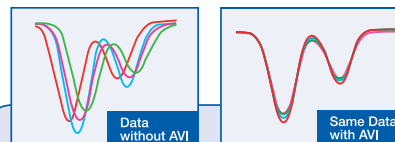
An industry first

Atmospheric Vapor Correction™ (AVC) and Absolute Virtual Instrument™ (AVI)
Only from PerkinElmer

Atmospheric Vapor Correction (AVC)
Atmospheric Vapor Correction features an advanced filtration system designed to eliminate CO_2 and H_2O vapor in real-time. AVC eliminates errors, allowing your lab to achieve accurate results in less time.

Absolute Virtual Instrument (AVI)
Absolute Virtual Instrument allows the same standardization used on individual measurements to be applied to measurements collected over time. AVI's internal, traceable protocol allows data to be transferred quickly and accurately between instruments.

PerkinElmer Spectrum One spectrometer

Sampling options for the
Spectrum One system.

Spectrum One accessories reduce the time-consuming complexity of even the most challenging analyses. Our snap-in pods are self-aligning and self-testing, and are automatically recognized and verified when simply clicked into place. Users are able to interchange the smart, modular accessories easily, eliminating unproductive downtime when changing applications.

Spectrum One Diffuse Reflectance Accessory

• Simplifies analysis of powders and difficult solid materials

• Range of sampling tools available to enable the easiest sample preparation

• Sample position is automatically optimized for all samples to improve measurement sensitivity

Spectrum One HATR Accessory

• A wide range of optional top-plate materials and angles of incidence is available

• Automatic recognition of top-plate crystal material, crystal angle and serial number

• Displays on-screen the force applied to a sample to ensure sampling reproducibility

Spectrum One Liquid Sipper Accessory

• Automated sampling removes the need for manual filling of cells

• Contamination check is built into the software to help reduce errors in analysis

Spectrum One Reflectance Accessory

• Best used for reflectance measurements on solids and gel materials

• Horizontal sample platform with a wide collection angle for reproducible results

• Designed so no sample preparation is required

The Universal ATR (UATR) Accessory
Only from PerkinElmer

PerkinElmer exclusive Universal ATR Accessory (UATR) allows speedy analysis of a wide range of samples, from liquids to hard solids. With the UATR, you won't waste valuable time changing accessories to accommodate different sample types.

• Provides automatic recognition of top-plate crystal material, crystal angle and serial number

• Displays on-screen the force applied to a sample, ensuring sampling reproducibility

• Recommended for liquids, pastes, powders and solids

Analyze different sample types as your needs demand with a modular accessory system.

These self-aligning, easy-to-interchange pods feature smart, integrated self-test routines for quick, predictable and reproducible sampling.

Choose a plug-and-play accessory that supports your sample type, such as the UATR shown here, and click it into place in seconds.

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FT-IR Spectrum software –
works the way you do.

Simple yet powerful, Spectrum FT-IR software works the way you work. From basic troubleshooting to the most challenging analysis, our broad portfolio of software offerings guarantees you'll have the solutions to meet your lab's needs, including supporting regulatory and compliance reporting. With its interactive tutorials, sample data and comprehensive, context-sensitive help files, Spectrum software is both intuitive and easy to use.

PerkinElmer FT-IR Spectrum software

- **IR Assistant™:** Wizard-based software that allows infrequent or inexperienced users to obtain quality results through a simple Q&A routine
- **LEARN software:** Allows faster, more accurate results with the ability to record and play back common routines with a single mouse click
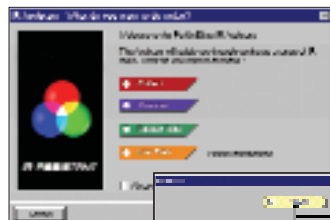

IR Assistant

In addition to Spectrum software's base features, PerkinElmer offers optional software products to enhance your lab's performance.

Spectrum Procedures

- Allows simple creation of customized programs to control instruments, process data, test results and create reports

AssureID™

- Workflow software enables simple and quick method development
- Developed methods can be locked to eliminate user error
- Database software allows users to analyze results and make informed decisions
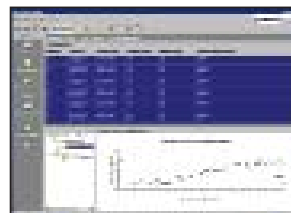
Ask your PerkinElmer Spectrum One specialist about our large suite of additional software offerings to enhance your Spectrum One FT-IR system.

Spectrum Procedures

AssureID

A simple, efficient
growth path.

The PerkinElmer Spectrum One FT-IR system provides a cost-effective, predictable path for expansion into sophisticated FT-IR microscopy, imaging systems and hybrid techniques. When it's time to upgrade, you can rest assured that your Spectrum One system will be supported by the right upgrades to ensure a smooth transition.

Additional in-lab add-ons include:

Spectrum One Microscopes

AutoIMAGE and MultiScope™ – the perfect FT-IR microscopes for QA labs

- Combine state-of-the-art microscopy and full automation, with low cost
- Simplified setup and measurement increase productivity, reduce errors
- Built-in data processing routines automate data analysis
- Offer three modes of FT-IR sampling – Transmission, Reflectance and Micro-ATR

TG-IR Interface

- Used for decomposition and combustion analysis
- Uniquely designed to increase gas transfer efficiency
- Reduces contamination and carryover between samples

An industry first

Spectrum™ Spotlight™ FT-IR Imaging System

Only from PerkinElmer

- Gives rapid, reliable information on molecular composition
- Generates high-quality spectral information
- Fast, easy results, produced in real-time

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Choose quality.
Choose Spectrum One.

The Spectrum One FT-IR system is the result of the PerkinElmer focus – for more than half a century – on innovation and quality. With its unique combination of easy-to-use software, smart modular sampling accessories and built-in intelligence, the Spectrum One system delivers consistent, reproducible results – sample after sample. And, because the Spectrum One system is designed for growth, it will support your spectroscopy needs both today and in the future.

PerkinElmer Spectrum One spectrometer with UATR

Exclusive PerkinElmer features designed to benefit your laboratory.

FEATURE	BENEFIT	PERKINELMER EXCLUSIVE
AVI	Reduces variability due to sampling and environmental factors	YES
AVC	Eliminates CO_2 and H_2O vapor in real-time: Reduces the number of scans required; helps increase accuracy	YES
UATR	Helps speed analyses by eliminating the need to change accessories to handle different sample types	YES
Source Switching	Provides consistent throughput, allowing system to remain permanently optimized	YES
Dynascan	Minimizes variability and increases sensitivity by making scanning mirror pair immune to tilt	YES
In-lab Growth Path	On-site service and validation ensure your Spectrum One never needs to return to PerkinElmer for upgrades	YES

OneSource service and support –
assures ongoing performance and productivity.
We'll be there when your lab changes – or whenever else you need us.
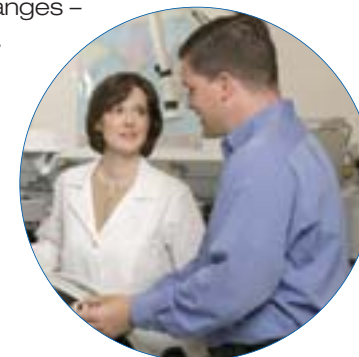
Once your Spectrum One instrument is set up, it never has to leave your lab for service or upgrades.

We'll come to your site if you need service or are ready to upgrade your instrument. Whether you require service, hardware or software upgrades, training and consulting, or validation services, you'll never have to worry about packing and shipping your Spectrum One system back to us – we'll come to you, wherever you are, getting it working correctly in your lab environment.

Your Spectrum One system is backed by the leading service organization in the industry.

Global service capabilities
- Industry's largest staff of fully trained technicians (more than 1,000), operating in 125 countries
- Global resource network allows shipping of critical parts within 24 hours in most cases

Preventive maintenance
- Routine cleaning and inspection services
- Extends the lifetime of the instrument and prevents problems before they occur

On-site, on-demand repair
- Immediate service dispatches at your laboratory
- PerkinElmer-certified parts and factory-trained service engineers to increase productivity and minimize downtime

Software and hardware upgrades
- PerkinElmer service engineers are available to perform upgrades and repairs anytime the need arises
- Upgrades professionally installed in your laboratory

Validation services
- Eliminates need for multiple vendors
- PerkinElmer reps service all instrument manufacturers

Training and consulting
- On-site user seminars
- Specialized classes, including applications instruction and instrument maintenance
- Development of standard or customized operating procedures

Through the OneSource℠ partnership with PerkinElmer, you have access to a complete package of offerings, including maintenance, upgrades, validation services and training.

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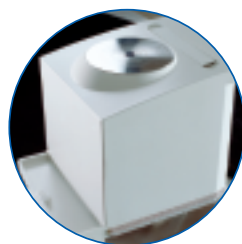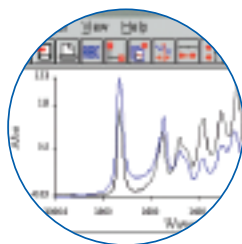
Spectrum One spectrometers:

powered by PerkinElmer

PerkinElmer, Inc., is a global technology leader focused in the following businesses – Life and Analytical Sciences, Optoelectronics, and Fluid Sciences. A $1 billion market leader, the Life and Analytical Sciences division serves a large number of industries, including the academic research, biotechnology, clinical screening, pharmaceutical, environmental, forensic, petrochemical and semiconductor segments.

Our instruments and related software and customer support programs, including our OneSource team of over 1,000 factory-trained service professionals

deployed in over 125 countries, help our customers to enhance research productivity, meet strict regulatory requirements, improve time-to-market, and increase manufacturing efficiencies.

Preferred for years by laboratories worldwide, the Spectrum One FT-IR system is the premier model of mid-range FT-IR instruments. Unmatched flexibility, upgradeability, ease-of-use and superior data quality, as well as PerkinElmer OneSource service and support, make the PerkinElmer Spectrum One FT-IR the top choice in spectroscopy instruments.

The PerkinElmer Spectrum One Advantage

QUALITY RESULTS IN LESS TIME	EASY TO LEARN, EASY TO USE	FLEXIBLE, UPGRADEABLE	RENOWNED SERVICE AND SUPPORT
Fully automated ongoing validation and verification assure that you get the right results the first time, every time. Standardized workflows produce consistent results, user to user, day to day.	Intuitive, self-guided operation means that even novice users can quickly and effectively produce quality results, with minimal training.	The system can integrate a full range of smart accessories, providing a multi-application platform designed to grow along with your lab.	Backed by the largest service network in the industry – more than 1,000 fully trained service representatives in 125 countries worldwide – delivering what you need, when and where you need it.