

Infrared Spectroscopy

Spectrum 10 Spectroscopy Software

PerkinElmer® Spectrum™ 10 is the newly released 2010 software for the latest range of PerkinElmer FT-IR spectrometers. Designed for busy industrial or academic laboratories that require efficient operation combined with a wide-range of capabilities, this comprehensive package sets the standard in FT-IR software for simplicity and efficiency in data collection, processing and generating results. The software's newly designed interface combines single-click access to common functions with powerful data and results management. Its 'layered simplicity' is a breakthrough in spectroscopy software. Unlike other packages which often trade-off ease-of-use for advanced capability, Spectrum 10 provides both – making it the ideal software for novices and advanced spectroscopists alike.



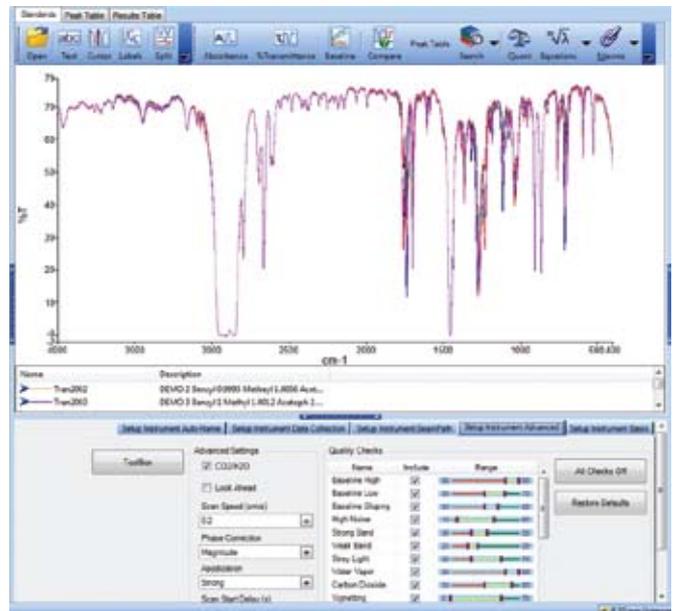
Spectrum 10

Make your everyday tasks faster and easier

• Focus on the results, not the tasks.
Clicking many times to perform frequent operations can be frustrating. To avoid this repetition, we've made some software enhancements to make your work easier:

1. Common operations including *fully automated procedures* can be placed on the toolbar and reduced to a single-click or keyboard shortcut.
2. *Setups* can be viewed and adjusted using a separate Setup panel in its own display area away from data.
3. Operations which generate multiple results are automatically set up to order the results in a logical 'layered' output avoiding the need to click through multiple windows.

No matter how you work, you'll find the Spectrum 10 desktop design provides the fastest access to spectral data and its associated results, including audit trail information.

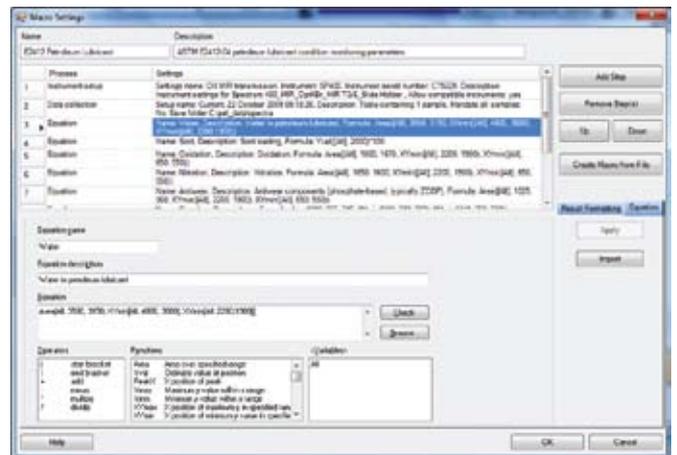


Simplified layout means you can easily manage data, associated results and setup information.

For Faster, Easier FT-IR Solutions

Whether you need to screen for minor impurities, identify unknown materials or verify your product's composition, Spectrum 10 provides the tools

you need – all fully integrated, setup and ready to go. Spectrum 10 not only gets results faster this way, but provides an easier route to derive information by its seamless interface with other applications. For example, you can easily display a set of quantitative predictions in a radar display using Excel® to highlight anomalous samples, or calculate statistical functions such as standard deviations from a set of results data.



You can reduce multiple operations to 1-click procedures using the simple macros facility.

- **Take control of your FT-IR.**

Our popular instrument software has been enhanced to provide instant access to both instrument commands **and** parameters you frequently adjust with a unique new Instrument Toolbar. For example, this can be helpful in the factory warehouse installation where you typically only need to define a sample scan time. The on-screen toolbar can be set up to include just a scan button, instrument status indicator and entry field for scan time. You will not have to navigate complex instrument setups, making operating your instrument more efficient and reproducible.



Configurable instrument toolbar lets you display just the operations and settings you need to change.

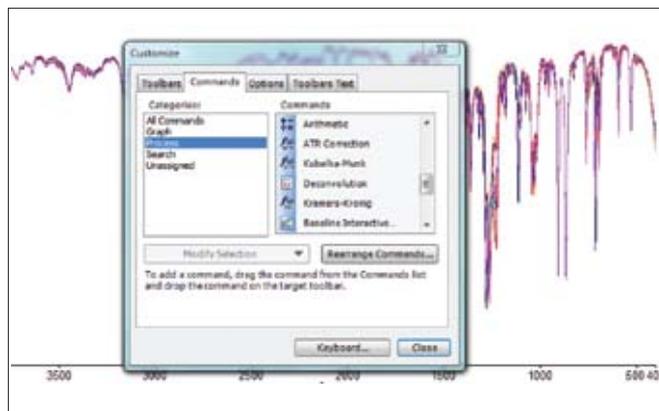
Need to occasionally check advanced instrument settings? No problem. The setup pane can be raised to reveal full parameter setups, subdivided logically into *basic* and *advanced* setups. More importantly, this advanced information can be retained on-screen if required while data is collected and manipulated. Thanks to the intelligent layered screen arrangement, advanced settings can be viewed without obscuring the live data window.

- **Automatically configure accessories.**

The plug and play feature of our software allows for smart sampling accessory recognition. When an accessory is changed or added to your FT-IR, the software automatically re-configures the FT-IR to accommodate the new accessory. Numerous intelligent, live graphics status indicators such as accessory type provide instant confirmation of the correct settings allowing you to quickly continue with your measurements.

- **Customize your workbench.**

As you've come to enjoy with all our state of the art software platforms, Spectrum 10 is fully customizable in both operator functions and software appearance. You can ensure the commands you need are at your fingertips. Enhanced configurability is added to the spectrum graph area, allowing setup of all aspects of the drawing area so you can get your presentation or report just right.



Fully customizable interface allows you to choose the settings that are best for your workplace.

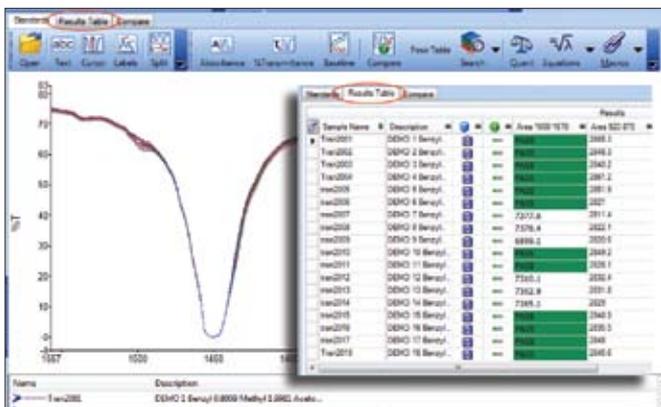
For Better Laboratory Practice

The sophisticated Sample Table layer enables multiple sample information to be entered prior to scanning and is especially convenient when used with the instrument 'Go' button. Custom data entry fields can be included to mandate input of additional information before scanning is allowed and supplementary data can be text, numeric (e.g. concentration information) or even graphical data enabling the spectral data to be permanently tagged with information such as chemical structures and other relevant images.



Spectroscopy Software

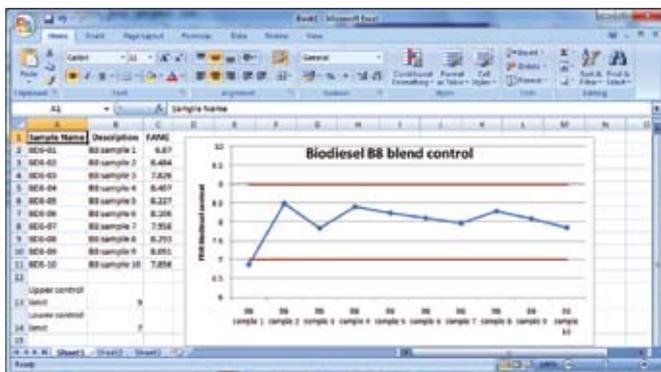
Workbench Layers help you manage your work



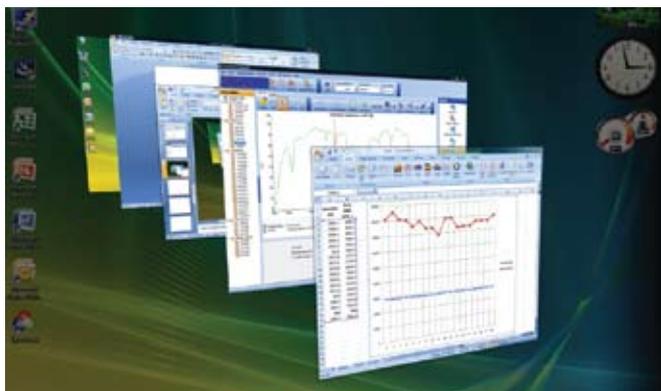
Multiple results are laid out logically simplifying interpretation.

Spectrum 10's new design is a result from your extensive feedback requesting a software that can provide comprehensive functionality *without* losing its simplicity of operation. One outstanding feature we know you'll enjoy is how simple it is to interpret data and results with our workbench layers. These allow you to easily:

- **Work with multiple spectra** and see multiple results in a single table without navigating numerous results pages. For example, you can perform peak height calculations to determine contamination levels on 50 spectra with a single-click, then select the results and transfer them into Excel® for trending and statistical analysis with 1 additional click.
- **Navigate multiple spectra** and associated results using the Data Explorer tree – much simpler than using multiple windows. Data Tree structures can be retained for the next time you log on so you can quickly return to your workbench arranged as you left it.
- **Activate other applications** for further manipulation. The 'Send To' function places selected spectra and reports directly into new Word®, Wordpad documents or other software. Results tables can also be easily transferred to spreadsheet packages. Other spectroscopic software packages tend to place single results in locations which prohibit easy manipulation of multiple results. With Spectrum 10 you can more easily present and communicate your data the way you want.
- **View** the Instrument toolbar, numeric results and their setups at the same level, or push aside the setups and navigators just as you would tools on a normal workbench to minimize clutter and focus on live data or results.



Easy transfer of results to other applications for further analysis.



Seamless operation with other applications helps you get more from your data.

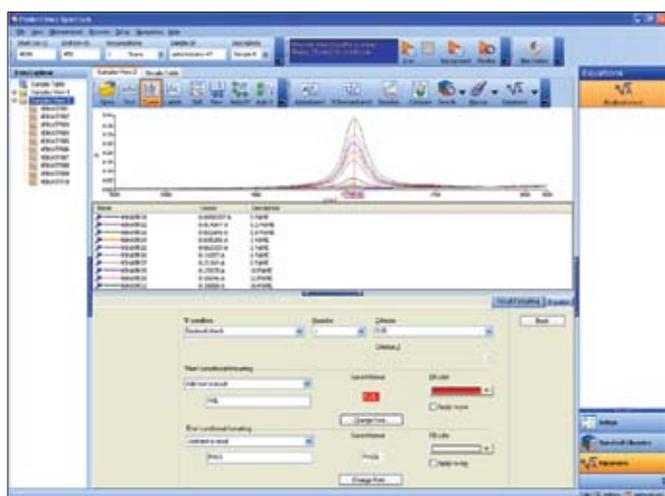


Spectrum 10

Comprehensive data processing to meet all your application needs

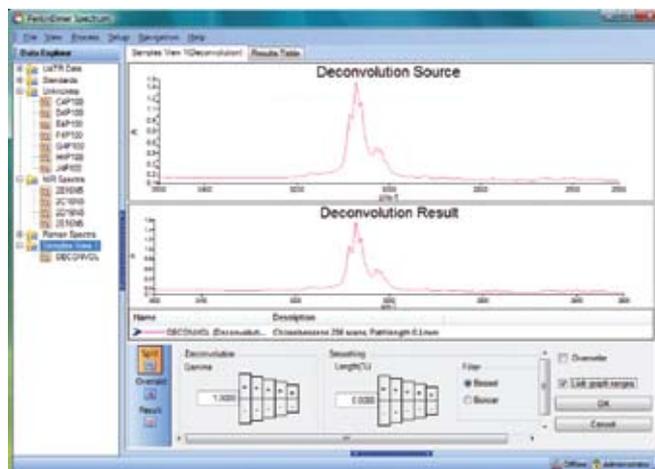
Spectrum 10 includes a full suite of standard data processing commands designed specifically for spectroscopic processing. In addition, a unique Equations Editor enables you to quickly define non-standard process commands and make them single-click buttons on the toolbar or components in macro programs. No programming knowledge is required to use the smart equations or macro editors – customizing data commands is fast and intuitive.

- **Sample verification** of known materials is performed using the highly popular and acclaimed COMPARE™ software which includes specialized data filters to minimize effects of sampling variations and FT-IR noise distribution to improve accuracy and robustness of results.



Conditional formatting of results lets you easily define PASS/FAIL flags for all data commands.

- **Identification of unknown compounds** and mixtures is accomplished with the standard *Search* function. This performs rapid comparison with commercial databases and user-generated spectral databases with the ability to interrogate the libraries with additional sample data such as physical properties. As with the other integrated data handling functions, *Search* parameters and reporting is easily configured from the Spectrum 10 setup sidebar, or combined with spectrum processing commands in macros. Alternatively, the *Send To KnowItAll®* function places data directly into the KnowItAll® software, allowing access to the most comprehensive collection of spectral databases available.
- **High performance quantitative analysis** of mixtures is a key advantage of our FT-IR spectrometers due to their high performance source and electronics design. Spectrum 10 provides a range of quantitative algorithm options to suit the application, from simple peak height or area threshold measurement to full spectrum partial least squares predictions. In addition, multiple-file, multi-model prediction has never been easier. A separate workbench layer is generated for all results, allowing both single-click multiple predictions with easy transfer of results to spreadsheets for trending and statistical analysis.



Comprehensive toolkit of data commands which allow you to adjust calculation parameters and see results instantly.



For More Confidence in Analysis

Validation of instrument performance and data integrity is standard with Spectrum 10 and performed at multiple levels. Low level interferogram integrity checking and other checks are applied automatically throughout the data processing chain through to final spectrum Quality Checks. These can be supplemented with the Spectrum 10 Instrument Verification suite which performs predefined instrument Operational Qualification tests and ASTM® tests. To verify system fitness for purpose for a given application, the configurable Ready Checks can include accessory contamination, throughput and even chemometric quantitative prediction control checks using a control sample. Only such multiple level validation checking ensures the highest confidence in analysis.

Local language selection and Microsoft® support

Spectrum 10 is available via Windows® XP and Vista® and tested with Windows 7. Local language support is automatically selected from the Windows® locale setting, including English, Spanish, Chinese, Japanese, German and French and Portuguese versions. Local language support includes software interface, on-line Help and built-in tutorial programs.

Microsoft® Gold Certified Partner

The Spectrum 10 Development site is a Microsoft® Gold certified partner. Spectrum 10 team members have demonstrated the highest levels of technological excellence, marketplace impact and satisfaction of customers using Microsoft products and services.



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