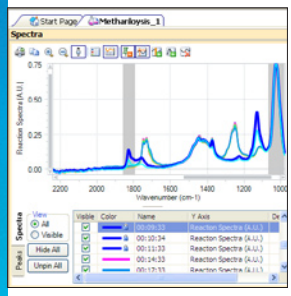
iC IR™

Seeing is Believing

Gain a Clear View of Your Chemistry

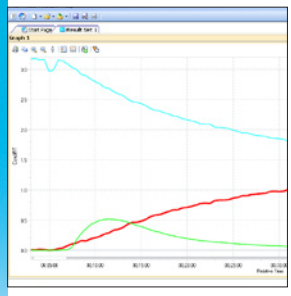
Quality Assured

The iC IR™ wizard guided software ensures that experimental data is only collected when the system is properly set up thereby improving the quality of experiments and reducing the possibility of errors.



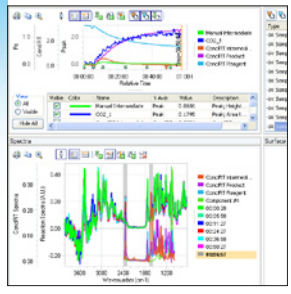
Simply Intelligent

The ConcIRT™ algorithm makes it easy to extract the maximum amount of information from each reaction by automatically generating accurate component profiles and calculated spectra. Using the advanced ConcIRT™ algorithm improves productivity as data rich information is generated in real time without specialized knowledge or prior information required.



Results at the Speed of Real Time

Dynamic result sets allow the scientist to combine and compare quantitative concentration profiles from different saved experiments in one view. Add to the result set profiles from the active experiment and watch it dynamically update in real-time.



Built-in Knowledge

Collect reference spectra and choose the functional group of interest from a menu. As data collection begins, the concentration profiles for the reaction species of interest are automatically trended for concentration changes with respect to the chosen functional groups.

iC IR™

iC IR™ allows scientists to obtain the maximum amount of information from reactions with the minimum amount of effort. Advanced, yet intuitive, features allow the non-specialist to extract critical information about key reaction species facilitating a thorough knowledge of their reactions resulting in the ability to take informed action to improve the quality and robustness of their chemical processes.

METTLER TOLEDO

Technical data

iC IR™ Software
Gain a Clear View of Your Chemistry

Technical Features

- **Wizard guided experiment setup.** The iC IR™ 3.0 configuration wizard ensures that the ReactIR™ system is properly optimized, and purge quality and probe cleanliness meet standards. The user is guided through all setup steps to ensure error free operation.
- **ConcIRT™ LIVE.** The ConcIRT™ algorithm automatically estimates the number of components in a chemical reaction, and generates accurate component profiles and calculated pure component spectra for each of the components without any user input or specialized knowledge required.
- **On-the-fly data treatments.** Solvent subtraction, first or second derivatives, baseline corrections, and many user defined trend mathematics can be invoked in real-time with the results immediately apparent. Changes can be made or the data treatment can be removed on-the-fly as well.
- **Event linked annotations.** Notes can be made in real-time from the experiment header as an event occurs, such as an action made (e.g. temperature change, addition of reagent), or simply to note an important event (e.g. color change, precipitation occurring, etc.). Links are automatically made in event and trend views.
- **User defined trends.** Choose from a wide variety of math treatments on concentration profile data including reaction rate, percent conversion and ratio of two profiles. Fit chromatography data automatically makes correlation between absorbance and concentration using any offline referee data providing a quick and easy way to obtain semi-quantitative results in real-time.
- **Dynamic result sets.** Combine and compare quantitative concentration profiles from different saved experiments in one view. Profiles from the active experiment can be added to any result set then the result set dynamically updates in real-time. Starting point for each trend set can be adjusted for a direct comparison of reaction performance.
- **Data sharing between technologies.** Shared software platforms among iC software and iControl™ make it possible to share data easily among different technologies. Drag and drop trends (concentration, chord length, temperature, stir speed, heat flow, etc.) between applications of iC IR™, iC FBRM™, iC Raman™ and iControl™ to quickly and easily compare the impact of the change in critical process parameters on process performance.

PC Specifications

- DELL or 100% compatible version
- Operating system: Windows XP™
- Processor: Intel Pentium IV™ 2.0GHz or higher
- RAM: 2GB or higher
- Hard Disk: 40GB or higher
- CD-ROM/RW
- USB Port (2 ports preferred)

- **Simple and convenient real time (and post-process) data export and import.** Export data in one click to Excel or other third party software. Export graphical files for incorporation into reports or articles for publication. Import data in X,Y format directly into trend viewer or spectra viewer. This can all be accomplished either post process or in real-time.
- **Linked views.** Four views – 3D Experiment Viewer, Spectra Viewer, Trend Viewer and Event Viewer are all linked. Make a change in one view and the appropriate change is made in all other views.
- **Auto component profiling.** Collect reference spectra for experiments and simply indicate the functional group of interest. When data collection starts the concentration profiles for the components of interest are automatically trended with respect to the functional group changes expected. A table of functional groups and absorption range is stored in the software and used as a reference.
- **Templates.** New experiments can use old experiments as templates where all of the data treatments have been defined. If you are running a series of experiments where iterative changes are made to improve process performance, the user only needs to work up the data one time.
- **21 CFR Part 11 compliant.** All user actions are recorded with the experiment file. All information about user, instrumentation, data collection, data treatments, errors and warnings are protected and stored with the data making the software 21 CFR Part 11 compliant.

Software Vision for Your Lab

Our software suite is a true evolution in data collection and analysis for reaction monitoring and engineering:

- **iControl™** for METTLER TOLEDO RC1 and Automated Laboratory Reactors
- **iC FBRM™** for METTLER TOLEDO particle system characterization products
- **iC Raman™** for Kaiser Raman systems

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