



TRIOS Software Overview

TRIOS is TA Instruments' state-of-the-art software package that uses cutting-edge technology for instrument control, data collection, and data analysis for thermal analysis and rheology instruments. The intuitive user interface allows you to simply and effectively program experiments and move easily between processing experiments and viewing and analyzing data. TRIOS software delivers a whole new experiment experience.

- Easy organization and data file management
 - A unique file-naming system allows for effortless organization of data files
 - The History View and File Manager offer simple data file location
- Compatibility with the latest Windows Operating System platforms
- Maximum flexibility
 - Instrument control and data analysis via any networked computer
 - Configurable for multiple monitors
 - Ability to control multiple instruments at once
 - Remote data analysis
- Seamless integration between instrument control and data analysis
- Easy data export in a variety of output formats, including XML, Word, Excel, and PDF
- Simple graph formatting using The Ribbon
- Customization of the display

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What's New in TRIOS Software



What's New in TRIOS Software V4.0

TRIOS software is now better than ever with increased stabilization and key fixes and enhancements, including User Interface changes that will make your TRIOS experience exceptional. The next generation of instrument control and data collection and analysis, TRIOS V4.0 is more efficient and intuitive, allowing you to work faster and easier.

General TRIOS Enhancements

Improved Printing

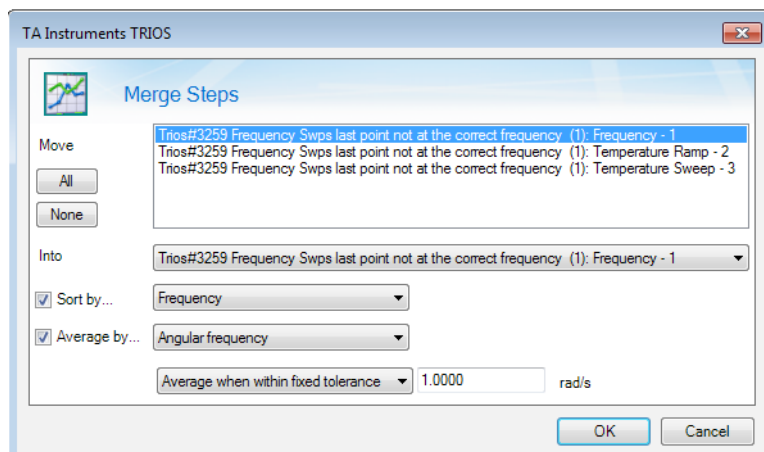
From the Options menu, you can now choose to print the graph to match the aspect ratio of the currently displayed graph window – the graph will print exactly as shown on screen. A **Print PDF All Views** option was also added; this selection prints all currently open documents to a single PDF file.

Authoring in TRIOS Guardian

Data can now be digitally signed by using the Claim Authorship button in the Results Log.

Merge Steps

Steps can be merged within a data file or across multiple data files. Merging steps should be done only on data sets of the same type. Data can be merged so that a new file is created that has all the data points from each merged step or the data points from each step are averaged.



Merge Steps dialog box

THERMAL

Discovery DSC2500, DSC250, and DSC25

TRIOS 4.0 provides support for the launch of the world's finest line of Differential Scanning Calorimeters, the Discovery DSC2500, DSC250, and DSC25. TA Instruments has once again set the bar in the science of DSC. TA remains the only DSC supplier to ensure the utmost in data integrity through thoughtful and innovative design. The new Discovery DSC provides both novice and advanced DSC users the highest confidence in generating superior data, while enhancing laboratory workflows and productivity.

TRIOS support also includes the following additional TRIOS features exclusive to Discovery DSC2500, DSC250, and DSC25:

- **Variable Precision:** The default units of measurement set via TRIOS Options can now be precisely specified down to the decimal places.
- **Resume:** When TRIOS is disconnected from an instrument, data files are automatically updated from the instrument and then displayed in TRIOS. This feature also saves data when TRIOS unexpectedly shuts down during a run and relaunches after the run finishes and the instrument has gone into an Idle state. When using more than one computer, TRIOS automatically saves the data file to the computer connected to the instrument if the data file is not already located on that computer.
- **History View:** The History view for Discovery DSC2500, DSC250, and DSC25 allows you to view information about any data files that are currently saved on the PC. This information can be queried to find historical data, used to recreate experiments, or used to open recent data files in the Results Manager for analysis. The History View table contains a record of all the data files on the PC. This table can be queried based on any of the available experimental parameters such as; records within a certain date range, or experiments made with a particular sample name, etc. Once the records have been located, the data can be sent directly to the Results Manager for data analysis or sent to the Design view or Running Queue where they can be modified or rerun.



Discovery DSC2500, DSC250, and DSC25

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What's New in TRIOS Software

- **Experiment Print:** Allows you to print the run/experiment parameters of a file via the right-click menu.

Data Tables

The Data Table feature allows you to create a spreadsheet on a select range of data using either all data points or only chosen increments.

New Analysis Options

- **Linear Transform:** The Linear Transform feature allows you to transform your graph data using a linear equation.
- **Baseline:** The Baseline feature allows you to transform one open graph by adding y-coordinate values from another open graph.
- **Desmear:** The Desmear Curve feature allows you to improve the resolution of sharp melting peaks. The desmearing routine is an offline approach and requires you to adjust a value until the desired curve shape is obtained.
- **Special area analysis for DSC Peak Integration:** Allows you to perform a calculation based on Percent Crystallinity, Percent Cure, or Heat per Mole.

RHEOLOGY

Electrically Heated Cylinder Accessory

The Electrically Heated Cylinder (EHC) is a Smart Swap™ temperature control system for concentric cylinder geometries over the temperature range ambient to 300°C. It is designed for use with the Discovery Series and AR-G2, AR2000ex, and AR1500ex rheometers.

Discovery DHR Enhancements and Bug Fixes

- **Experiment Print:** Allows you to print the run/experiment parameters of a file via the right-click menu.
- New procedure steps:
 - **Arbitrary wave:** Allows the definition of the strain/stress history used to deform the sample by supplying one or more equations for strain/stress as a function of time. Up to four individual equations (defining a zone), each with a specified duration can be used in one step.
 - **IsoForce:** Is to follow the deformation of the sample over a selected time period under constant load (in tension or compression) and changing or constant environmental conditions
 - **IsoStrain:** Is to follow the changes in stress or force under changing or constant environmental conditions over a selected period of time after applying a constant deformation
 - **Axial:** Add log sampling and Hencky strain rate as a measured variable
- Updated firmware v9.42:
 - Support for the Electrically Heated Cylinder accessory
 - Fixed multiwave oscillation that was broken in a previous release

INSTALLING TRIOS SOFTWARE

For instructions on installing TRIOS software, refer to the [Installing TRIOS Software](#) instructions.

	A	B	C
	Time (s)	Temperature (°C)	Heat Flow (Normalized) (W/g)
1	3596.60	0.08	0.008
2	3597.10	0.08	0.008
3	3597.60	0.08	0.008
4	3598.10	0.08	0.008
5	3598.60	0.09	0.010
6	3599.10	0.10	0.019
7	3599.60	0.12	0.036
8	3600.10	0.15	0.046
9	3600.60	0.18	0.052
10	3601.10	0.23	0.052
11	3601.60	0.29	0.048
12	3602.10	0.36	0.043
13	3602.60	0.45	0.011
14	3603.10	0.54	-0.021
15	3603.60	0.64	-0.048
16	3604.10	0.75	-0.079
17	3604.60	0.87	-0.107
18	3605.10	1.00	-0.133
19	3605.60	1.13	-0.161

Data table results

Peak Integration (enthalpy)

Cursors Parameters Appearance Labels

Baseline type: Linear

Linear type: Double point

Show running integral

Special area calculation Percent Crystallinity Standard Heat (J/g) 5.0000

Set As Defaults Add To Library...

Special area analysis option



Electrically Heated Cylinder

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What's New in TRIOS Software



ADDITIONAL RESOURCES

A number of additional resources are available to you. For assistance with the TRIOS software, first consult the Online Help.

For immediate assistance contact the TA Instruments Hotline at +1 302-427-4000 from 8:00 am to 4:30 pm EST.

For email support, please send your question to one of the following:
thermalsupport@tainstruments.com
rheologysupport@tainstruments.com

PREVIOUS WHAT'S NEW DOCUMENTS

For Previous What's New in TRIOS Software documents, [click here](#).

TA INSTRUMENTS OFFICES

For information on our latest products, contact information, and more, see our web site at: <http://www.tainstruments.com>

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