



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

The TRIOS software is supported by a full range of services, including onsite training, customer service that is only a phone call away, and easy-to-use, easy-to-understand online help. All of these items reflect TA Instruments' commitment to providing thermal analysis and rheology products and related services that deliver maximum value for your investment.

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What's New in TRIOS Software



What's New in TRIOS Software V3.2

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 V3.2 is more efficient and intuitive, allowing you to work faster and easier.

General TRIOS Enhancements

Analysis User Interface

Use the **Edit Analysis** function, which becomes available once the analysis has been performed, to adjust the associated settings (such as cursor position, parameters, appearance, labels, etc.) in a single dialog.

Analysis Library

The Analysis Library allows you to save your analysis parameters, storing your settings in the Function toolbar of the ribbon so that you can easily select and apply your saved analysis parameters to your graph.

Graph Enhancements

Cutting and Pasting Annotations

Added ability to cut and paste annotations from graph to graph.

Adjust Drops Option for Peak Integration Analysis

Once the perpendicular (vertical) dividing lines are in place on the graph, you can adjust their position by clicking Adjust Drops in the Parameters tab of the Peak Integration dialog box.

Text Importing and Exporting

TRIOS now supports text importing with the ability to import *.txt, *.csv, and *.prn files via the Text Import Wizard. This feature includes the ability to import a data file even when the instrument is offline; it is available only to the currently connected instrument and is limited to one step tests.

The Export feature now allows you to export the parameters of the active document to a text file.

RHEOLOGY

New Fasttrack Software for Asphalt Testing

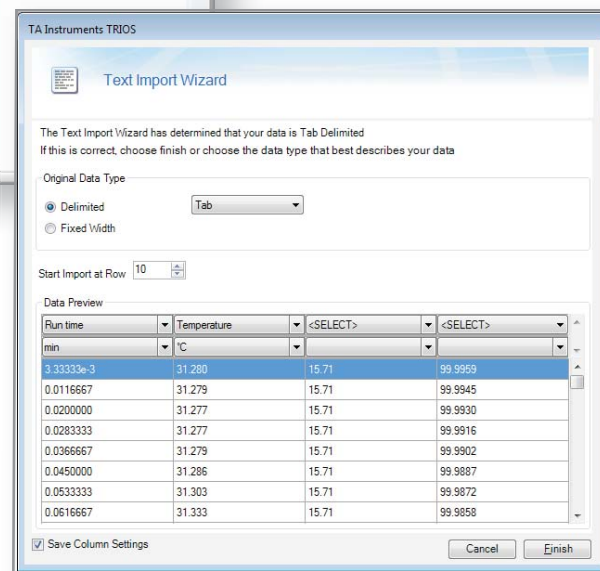
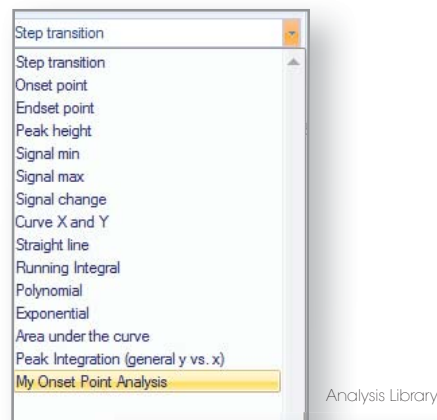
Fasttrack is a dedicated software package optimized for the performance of asphalt tests using the DHR and AR series rheometers. Fasttrack can be configured to the specific testing required in each location to minimize the amount of operator involvement. For example the tests shown can be limited to just those of interest; the number of test temperatures can be fixed or locked to a single temperature, and other test parameters can be modified and then locked.

Fasttrack includes password protected levels of access and once configured the Basic user is limited to just running the specified tests with no access to calibrations or method modification.

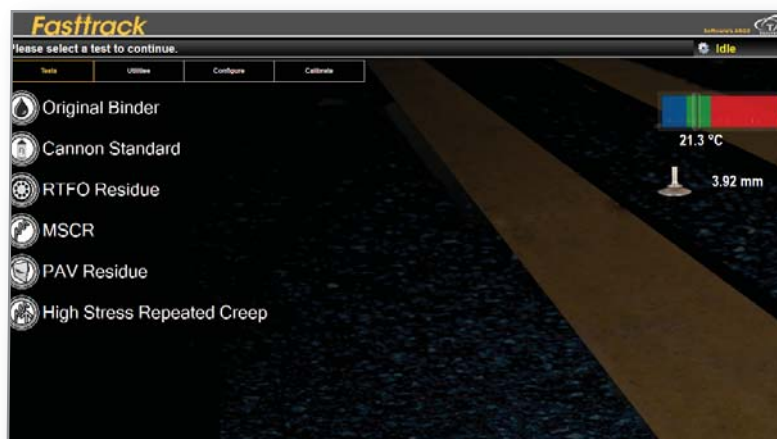
Fasttrack also includes all the necessary calibration procedures, and checks required for asphalt binder testing.

Air Chiller System (ACS-3) and Chiller Panel Accessory for ARES-G2/RSA-G2/DHR

The ACS-3 is a unique three-stage air chiller system for subambient temperature control and general cooling of select instrumentation from TA Instruments. Supported instruments and environmental systems



Text import Wizard



Fasttrack Software

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What's New in TRIOS Software

include Discovery Hybrid Rheometer models with Environmental Test Chamber (-85°C), and ARES-G2/ RSA-G2 with Forced Convection Oven (-100°C).

The ACS-3 features low-noise durable compressors (approx. 55 dB), small footprint, uninterrupted operation, CFC-free, and for specified temperature ranges, eliminates the recurring cost and safety concerns associated with handling and use of liquid nitrogen. The ACS-3 requires an air supply at pressure of 6.2–6.9 bar (90–100 psi), flow rate of 200 l/min, and appropriate instrument-specific Chiller Panel.

See the ACS-3 Getting Started Guide in TRIOS for more information.

TTS at Explicit Frequency

Steps can be transformed between temperature ramp and frequency ramp using the File manager context menu or the Analysis ribbon, and TTS master curves can now be generated at explicit frequency.

Discovery DHR/AR Enhancements

Auto strain Adjustment Added to Conditioning Options

Auto strain adjustment can now be activated/deactivated by inserting a conditioning step at the desired position in a procedure.

Discovery DHR Enhancements

- **Support for DMA**

The DHR DMA feature is designed to allow geometries such as tension/compression and bending to be used with the instrument. DMA testing uses the standard oscillation test modes; when one of these geometries (**Three point bending, Mixed bending, Clamped bending, or Linear tension/compression**) is selected, the mode of deformation is changed from shear to linear, with the appropriate set of variables. This feature is limited to oscillation tests only.

- **Support for AASHTO TP 101-12 Asphalt LAS Test**

- **Support added for Immobilization Cell**

- **Tare Gap:** Sets the current head position as the zero reference

- **Compliance correction for Interfacial Geometry**

- **DHR Instrument Event Log saved every time TRIOS is closed**

THERMAL ANALYSIS

Discovery TGA Enhancements

Additional Analysis Options

- **Reset Sample Size** - Use the Reset sample size option to modify the sample size used for the calculations. This allows you to compensate for changes in sample size due to sample conditioning (e.g., volatilization, adsorption, relaxation, curing, etc.).

- **Weight Change** - Use the Weight Change option to determine the amount of change in the weight between two points on a curve.

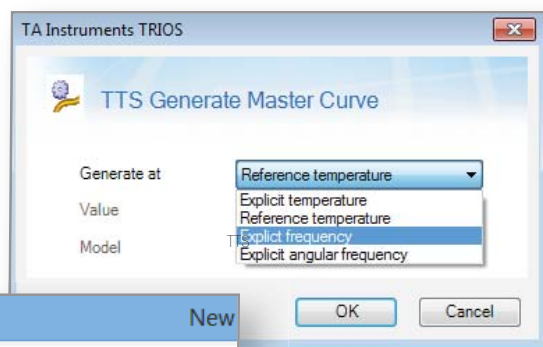
- **Weight at Time/Temperature** - Use the Weight at time/temperature



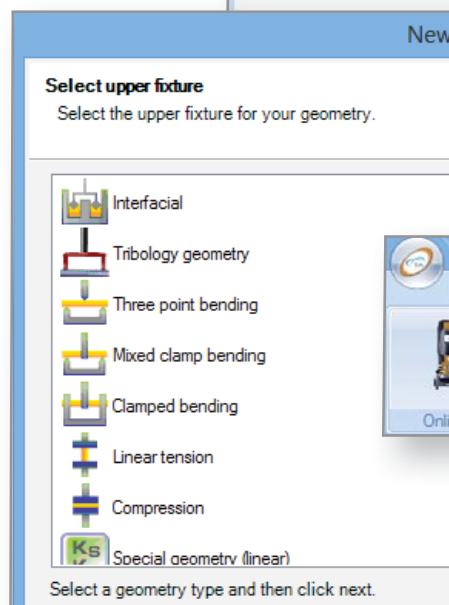
ACS-3 Chiller



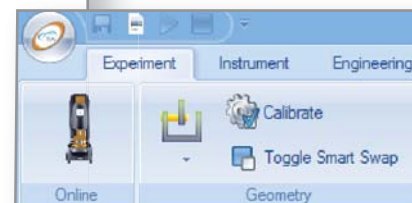
FCO Chiller Panel



TTS Generate Master Curve dialog



DHR DMA "Create New Geometry" menu



Canilever symbol shown

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option to locate the X-axis value on a curve that corresponds to a selected Y-axis value, and label the graph with the weight percent.

- **Weight Loss at Time/Temperature** - Use the Weight loss at time/temperature option to locate the X-axis value on a curve that corresponds to a selected Y-axis value, and label the graph with the weight lost (μg , mg , or $\%$) from the sample (from the original or 100% weight).
- **Residue** - Use the Residue option to report the difference between any selected point on the curve and the final weight.

Discovery DSC Enhancements

Additional Analysis Options

- **Classic 3 Run Heat Capacity** - Use the Classic 3 Run Heat Capacity analysis to determine the specific heat of an unknown material using any of the three heat flow types (T1, T4, or T4P) by comparing the difference between the sample's heat flow signal and the heat flow signal of a known heat capacity standard (typically sapphire) relative to a common heat flow baseline.
- **Purity Analysis** - Purity Analysis can be used to calculate the absolute purity of a sample based on data obtained from the DSC according to ASTM procedure E0928.

Discovery TGA/DSC Enhancements

Running Integral Analysis - Use the Running Integral option when you want to determine the area under a peak or the ratio of different materials within a sample.

Autocalibration and Scheduling Runs

Calibrations can be scheduled to run automatically by accessing Calibration Setup. Calibrations can be run immediately, sent to a queue, or scheduled to be run at a later date. TRIOS must be connected to the instrument, open, and running, for the scheduled experiments to run. If TRIOS is opened after the time a run was scheduled for, then the next calibration in the queue would run at the scheduled time. Once a new schedule is added, access the Experiments tab in the File Manager to view and make changes to scheduled runs. A log of scheduled run actions displays at the bottom of the page.

INSTALLING TRIOS SOFTWARE

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

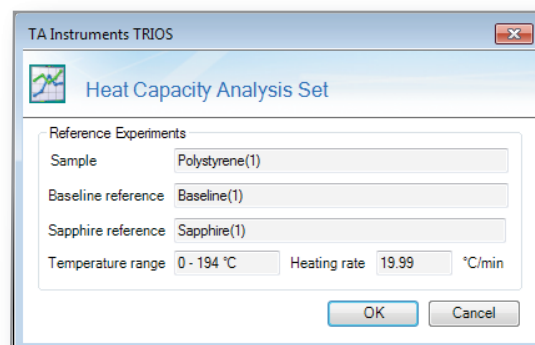
ADDITIONAL RESOURCES

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

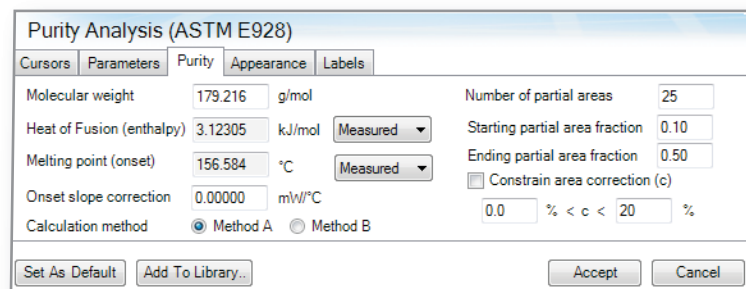
For immediate assistance contact the TA Instruments Hotline at +1 302-427-4000 from 8:00 am to 4:30 pm EST.

For email support, please send your question to one of the following:

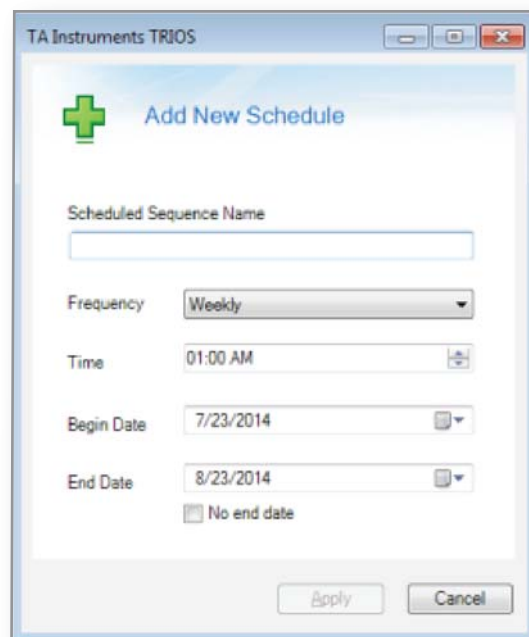
thermalsupport@tainstruments.com
rheologysupport@tainstruments.com
microcalorimetersupport@tainstruments.com



Heat Capacity Analysis Settings



Purity Analysis dialog



Scheduling Dialog

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What's New in TRIOS Software



PREVIOUS WHAT'S NEW DOCUMENTS

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

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

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