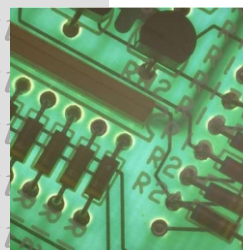
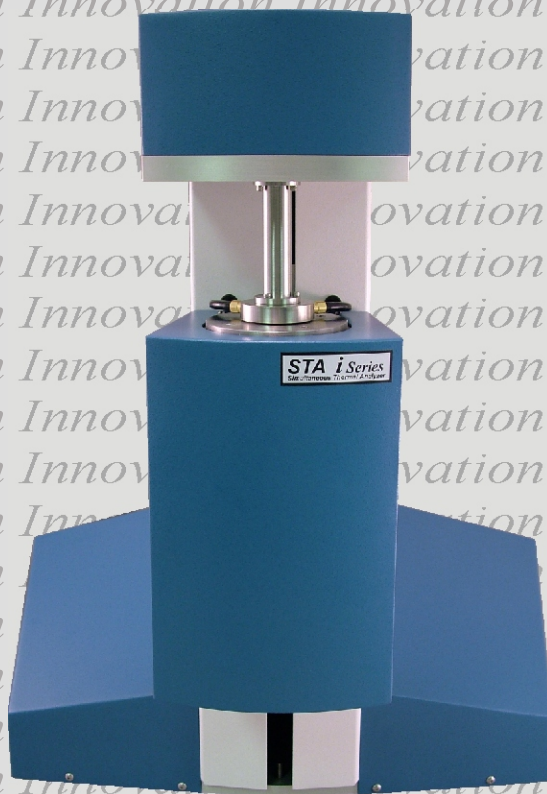




STA i Series

Simultaneous Thermal Analyzer



Solutions for Thermal Analysis

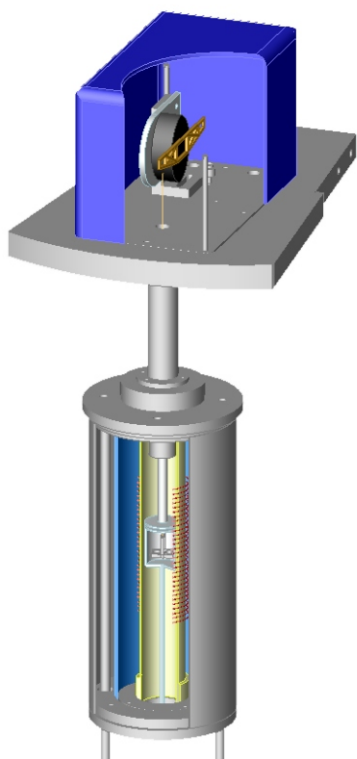
STA *i Series*

Description

ISI is proud to introduce our next generation high performance Simultaneous Thermal Analyzer, the *i Series STA*. With a 0.1 microgram balance resolution, advanced control algorithms and cutting edge design, the *i Series* offers previously unavailable value in a high performance instrument. Our highly sensitive heat flux plate provides accurate and reproducible heat flow data along with simultaneous weight measurement during the entire experiment. The instrument is ideally suited for evolved gas analysis, with its low purge gas flow and excellent sample environment. The *i Series STA* can be configured to meet all your specific thermal analysis testing needs.

The *i Series STA* is controlled by the *Infinity Pro* Thermal Analysis software. This unique Windows based software offers a very simple interface with all of the features you need to analyze your thermal data. The *Infinity Pro* software is available for Windows 98, ME, Windows 2000 and Windows XP.

Features



Simultaneous measurement of DSC and TGA

Direct sample temperature measurement

High sensitivity heat flux plate

Ultra sensitive weight measurement

Small sample volume for atmosphere control

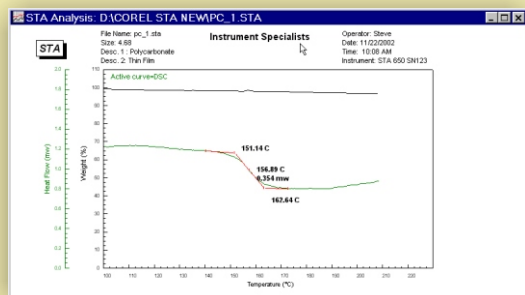
Stable and reproducible baselines

Windows Analysis Software

Ten temperature programmer segments

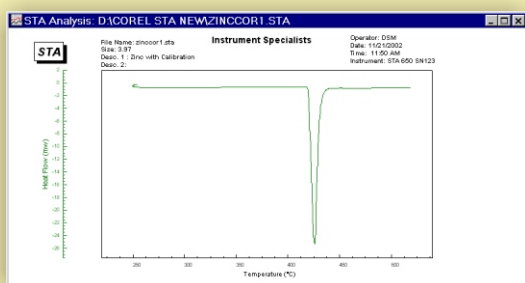
Optional automatic gas switching

Applications



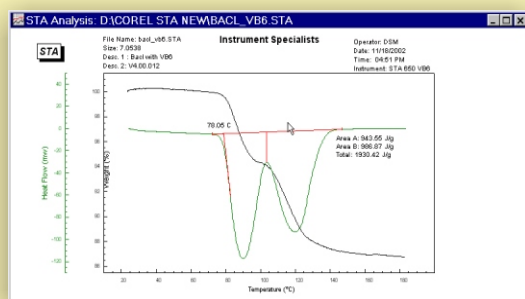
Polycarbonate Film

This sample is a modified Polycarbonate film that shows a slightly higher Tg than typical Polycarbonate. Examination of the TGA signal shows no weight loss over the measured temperature range. The DSC and TGA signals together show that this is an enthalpy change only.



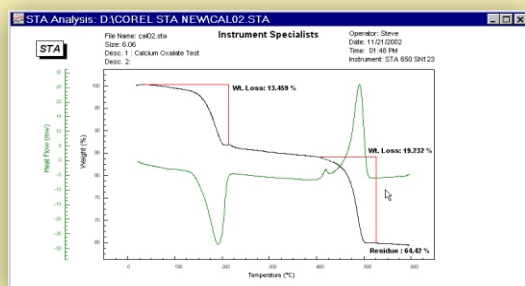
Zinc Standard

This zinc standard shows a stable baseline for the DSC signal. Temperature accuracy and reproducibility are exceptionally high in the Infinity STA series.



Barium Chloride

This is an example of a reference material that shows temperature and enthalpy accuracy. In addition this represents a good example of a fused peak analysis.



Calcium Oxalate

Calcium Oxalate is an excellent demonstration material for both DSC and TGA. This sample was run in the presence of Oxygen. The first DSC peak has an associated weight loss and represents bound water.

Model	i Series 650	i Series 1200	i Series 1500
Temperature	-125C to 650C	Ambient to 1200C	Ambient to 1500C
Programmed Rate	0.1-100C/min	0.1-40C/min	0.1-40C/min
DSC Sensitivity	<1uW	<4uW	<4uW
TGA Range	400mg	400mg	400mg
TGA readability	.1ug	.1ug	.1ug
Thermocouple	Type K	Type R	Type R
DSC/DTA mode	Yes	Yes	Yes

Applications

- polymers
- chemicals
- petrochemicals
- polymorphs
- ceramics
- glasses
- composites
- metals including advanced engineering alloys
- pharmaceuticals
- building materials
- cements and silicates
- propellants
- explosive research
- high temperature superconductors
- electronic components
- coals and other fuels
- catalyst research
- nuclear research
- foodstuffs

Hardware Features

- USB Interface
- 24 bit resolution on temperature, delta T and weight
- Vertical hangdown system.
- True simultaneous measurement of DSC and TGA
- Option to measure TGA only in a high capacity mode
- 3 furnace options 650C, 1200C, 1500C
- DSC and DTA, K or R type Hangdowns
- Small swept volume 7.5 ml (Furnace Cup)
- Dual purge system
- Motor driven furnace
- Evolved gas compatible
- Optional 4 gas selector system
- Direct sample measurement
- Multiple calibrations
- Water cooled furnace
- LN2 option for low temperature furnace
- Instrument Temperature range -125 to 1500 with optional furnaces.
- Infinity Pro software with advanced analysis features
- Multiple module operation
- Ability to run other manufacturers instruments on the same system.

Software

- Real time color display of data collection
- Auto and manual Scaling
- Time versus temperature profiles
- First and second derivative plots
- Analysis save features
- Background data collection
- Built in help manual
- Individual segment display
- Copy to clipboard
- Multiple curve overlay
- ASCII export
- Data smoothing
- Baseline file subtraction
- Y-axis shift operation
- Subfile operations
- Custom display configuration
- User selectable units
- Label data points
- Replot versus time or temperature
- Multiple point calibrations
- DSC /DTA**
 - Peak integration
 - Fused peak analysis
 - Onset and peak temperature determination
 - 2 or 6 point Glass transition analysis
 - DSC crystallinity
 - Baseline slope correction
- TGA**
 - 2 or 6 point Weight loss analysis
 - Step Weight loss analysis
 - Weight loss onset
 - Residue calculation

Specifications subject to technical change
 STA i series v1

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