

Simultaneous Thermal Analyzer

**STA7000 SERIES**

**HITACHI**  
Inspire the Next

# STA7000 SERIES

The New Standard in Horizontal Differential TG/DTA/DSC

## The Horizontal Digital Dual Beam System

*Drift Free Baseline, Unrivalled Stability and Low Noise Level*

### New Balance Control Electronics

- Drift free baseline
- Wide measurement range
- Low noise, highly sensitive TG-Signal

### Optimized Reaction Gas Control

- Mass flow controller for reaction gases
- High precision flow rate control
- Rapid atmosphere exchange

### New Temperature Control Electronics

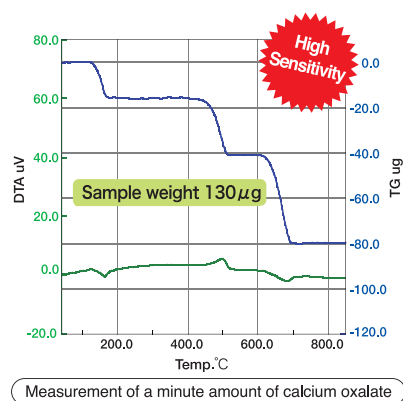
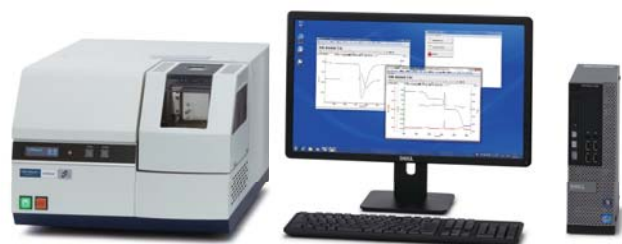
- Highly accurate heating and cooling profiles
- Precise temperature readings

### Low Mass – Low Heat Capacity Furnace

- Fast heating and cooling rates
- Automatic cooling functions
- High throughput measurements



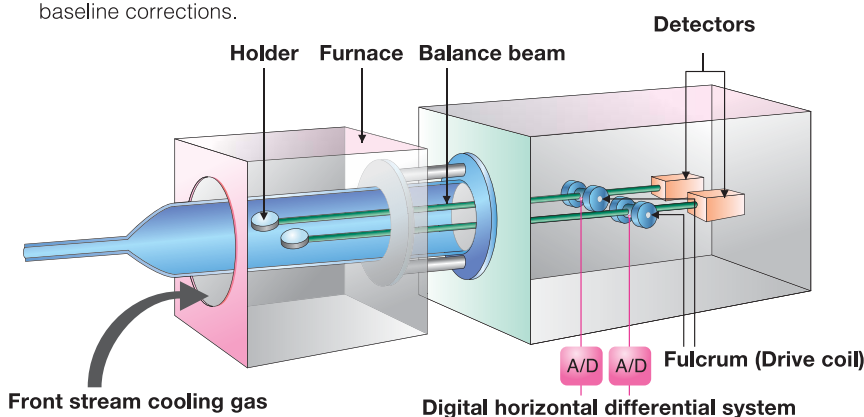
## Simultaneous Thermal Analyzer



Measurement of a minute amount of calcium oxalate

### New Balance Control Technology - Horizontal Digital Dual Beam System -

The newly-developed "Horizontal Digital Dual Beam System" guarantees the highest baseline stability and the lowest noise levels ever seen in TG/DTA/DSC Analysis. The highly sophisticated digital analysis of the weight and DTA/DSC difference of the dual beam system allows it to correct any environmental influences such as furnace and detector positions and thermal expansion of the beams. Even minor weight changes of low sample masses can be measured and analyzed without any time consuming baseline corrections.



### New Temperature Control Functions

This revolutionary temperature control circuit minimises the temperature difference between program and sample temperature. The heating and cooling rate accuracy further improve the quality of the DTA/DSC and TG signal and guarantee high precision temperature readings.

### Reduced Inner Dimensions

The technological improvements have made it possible to reduce the volume of the balance housing by 2/3 compared to the previous models. The benefits are the possibility of achieving an inert atmosphere without evacuation and a rapid atmosphere exchange after gas switching.

### The New Cooling Method "Front Stream Cooling Gas Flow"

The compressed air flows around the furnace were optimized to increase the cooling efficiency. This drastically reduces cooling time and therefore enlarges the sample throughput.

Model name	STA7200	STA7300
Balance system	Horizontal differential type	
Temperature range	Ambient to 1100°C	Ambient to 1500°C
TG range	±400mg	
TG RMS noise / sensitivity	0.1 μg / 0.2 μg	
DTA range	±1000 μV	
DTA RMS noise / sensitivity	0.03 μV / 0.06 μV	
Scanning rates	0.01 to 150°C/min	0.01 to 100°C/min
Maximum sample weight	200mg	
Atmosphere	Air; inert gas flow; Vacuum (to 1.3Pa)	
Purge gas flow rate	0 to 1000ml/min	
Cooling time	From 1000°C to 50°C within 12minutes	
Gas purge control (option)	Flow Meter, Gas Controller, Mass Flow Controller	
Auto sampler (option)	50 samples; mechanical arm transport	
Dimensions	420(W) × 600(D) × 315(H)mm. With auto-sampler attached: 420(W) × 600(D) × 640(H)mm	

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