Hitachi High-Tech Science Corporation

Hitachi High-Tech
HITACHI

Simultaneous Differential Thermogravimetric Analyzer STA 7000 Series

The New Standard in Horizontal Differential STA
The new Bench Mark in STA

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

New temperature control electronics

- Highly accurate heating and cooling profiles
- Precise temperature readings

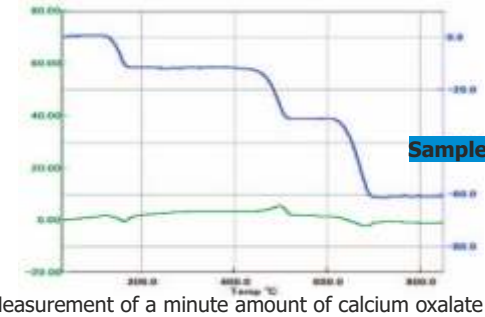
Low mass - low heat capacity furnace

- Fast heating and cooling rates
- Front stream cooling gas flow
- High throughput measurements

Optimized reaction gas control*

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

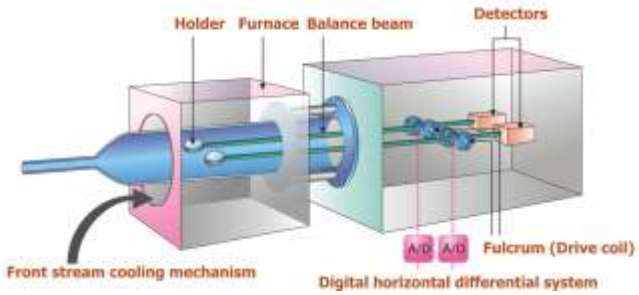
TA 7000 SERIES
STA 7200/7300



Measurement of a minute amount of calcium oxalate

New Balance Control Technology - The Horizontal Digital Dual Beam System

The newly developed „Digital Horizontal Differential System" guarantees the highest baseline stability and the lowest noise levels ever seen in STA Analysis. The highly sophisticated digital analysis of the weight and DTA difference of the dual beam balance allows it to compensate any environmental influences such as furnace and detector positions and the thermal expansion of the beams. Even minor weight changes of low mass samples 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 accuaracy further improves the quality of the TG and DTA signal and guarantees high precision temperature readings.

Reduced inner dimensions

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

The New Cooling Method - Front Stream cooling gas flow

The gas flows around the furnace has been optimised to increase the cooling efficiency. This drastically reduces cooling time and therefore the overall measurement time which leads to higher sample thoughput.

Modelname	STA7200 | STA7300
Balance system:	Horizontal differential type
Temperature range:	Ambient to 1000°C | Ambient to 1500°C
TG range:	±400 mg
TGRMS noise/sensitivity:	0.1 µg/0.2 µg
DTA range:	±1000 µV
DTARMS noise/sensitivity:	0.03 µV/0.06 µV
Scanning rates>	0.01to150°C/min | 0.01 to 100°C/min
Maximum sample weight>	200 mg
Atmosphere:	Air, inertgas flow; decompression (to 1.3Pa)
Purge gas flow rate:	0 to 100 ml/min
Cooling time:	From 1000°C to 50°C within 12minutes
Gas purge control (option):	Gas Controller, MassFlowController
Auto sampler(option):	50 samples; mechanical finger transport
Dimensions:	420(W)x600(D)x315(H)mm.Withauto-samplerattached:420(W)x600(D)x640(H)mm

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