Hitachi High-Tech

# News Release

FOR IMMEDIATE RELEASE

**Launch of the STA7200RV Thermogravimetry/ Differential Thermal Analyzer**
-A pioneering observing thermal analyzer capable of measurements up to 1,000°C-

TOKYO, June 26, 2014 — Hitachi High-Tech Science Corporation (Hitachi High-Tech Science, President: Toshiyuki Ikeda) announced the worldwide release of the STA7200RV, a pioneering thermogravimetry/differential thermal analyzer that can observe and measure samples at temperatures up to 1,000°C by using a sample observation option.

**STA7200RV with the sample observation option**

Thermal analyzers are instruments that measures fundamental material properties (thermal properties) of heat. For example, differential thermal analyzers (DTA) and differential scanning calorimeters (DSC) measure the heat flow to a material. Thermogravimetry (TG) measures the weight change. Thermo mechanical analyzers (TMA) measure the deformation of a material, while dynamic mechanical analyzers (DMA) measure elastic modulus. Thermal analyzers are used in various fields including the research and development of materials and in quality control. Hitachi High-Tech Science is a top maker of thermal analyzers in Japan.*

Since the results of thermal analysis are generally expressed as a graph, users obtain the thermal properties of the sample from tiny changes in the graph. By combining a CCD camera and special software with a thermal analyzer, Hitachi High-Tech Science began marketing models with a sample observation option** that allows users to observe visible changes of the sample during measurement. Together with continuous images taken by a CCD camera that shows the state change of the sample, users can now evaluate the measurement results while observing the sample, something that could not be done via usual thermal analysis methods, leading to higher reliability.

The STA7200RV Differential Thermal Analyzer is able to measure and observe samples at temperatures up to 1,000°C in contrast to conventional models that make measurements up to 500°C. The high temperature is achieved by a newly designed heating furnace with a sample observation window (view port). The STA7200RV lets you observe the entire decomposition process of a high molecular organic material, which conventional models are not capable.

* R&D Co., Ltd. "Kagaku-kiki Nenkan 2013"

** Sample observation option is composed of a CCD camera, a camera stand, and software.

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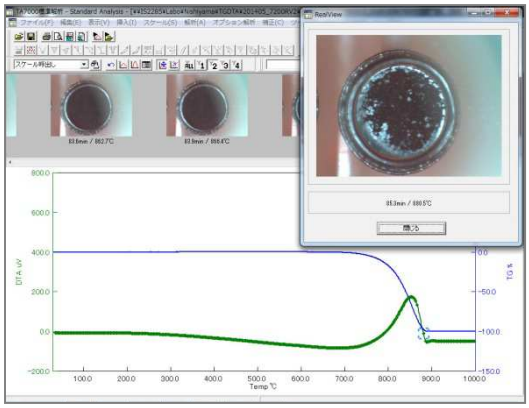
New heating furnace with view port



Observation example

**Main Features**

1) The new heating furnace with view port allows for sample observation at temperatures up to 1,000°C.

2) Simple operation. Users set the sample observation option, adjust the focus, and start measurement and observation.

3) Simultaneous observation and measurement can be performed by combining the STA7200RV with a thermogravimetric analysis-mass spectrometer (TG-MS) or thermogravimetric analysis-infrared spectrophotometer (TG-IR). With the addition of sample observation data, reliability of analysis is further increased.

4) The measurement and analysis software for sample observation can be shared with DSC, DMA, and other tools. The software displays and saves continuous images that show the state change of the sample during measurement. The images can be retrieved and linked with temperature and other signals for analysis.

**Main Specifications**

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| Balance type | Digital horizontal differential type |
| Temperature range | Room temperature up to 1,000°C |
| TG measurement range | ±400mg |
| DTA measurement range | ±1,000μV |

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