Waters

NEWS RELEASE

Waters Extends Capabilities of Flagship TA Instruments Rheometer for Efficient and Repeatable Powder Analysis

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News Summary:

- New powder rheology capabilities expand TA Instruments' HR Rheometer as an all-in-one platform for characterizing the material properties of liquids, solids, and powders.
- With SmartSwap™ tooling, scientists can switch from liquid to powder rheology within 10 seconds and prepare powder samples 3X faster than competitive productsi.
- Innovative technology and unique software ensure repeatable measurements that deliver insights into the performance and processing of powders for lithium-ion batteries, drugs and other products.

MILFORD, Mass.--(BUSINESS WIRE)-- Waters Corporation (NYSE:WAT) today introduced new, innovative powder rheology **tooling and software** for its TA Instruments™ HR Rheometers allowing scientists to make preciseii, repeatable powder rheology measurements simpler and faster. Such measurements enable materials scientists to optimize the processing and end-use performance of powders used in batteries, pharmaceuticals, additive manufacturing, food, personal care products, and coatings.

The TA Instruments' HR Rheometer is an all-in-one platform for characterizing the material properties of liquids, solids, and now powders. (Photo: Business Wire)

"Powder materials present their own challenges, and a lot depends on the ability to detect minor variations that relate to how they perform," said Jianqing Bennett, Senior Vice President, TA Instruments Division, Waters Corporation. "For our customers agility is key because they could be doing routine viscosity testing on a polymer one day and then troubleshooting an urgent powder processing problem for lithium-ion battery electrodes the next. The HR Rheometer has the flexibility to accommodate a variety of sample formats - be it liquids, solids, or powders - helping labs stay agile and productive."

Rheology is key to the understanding of materials in liquid, solid or powder form and how to turn them into high performance products. The TA Instruments HR Powder rheology accessory measures properties such as cohesion, stability, flowability energy and compressibility under industrially relevant processing conditions and to help laboratories:

- Screen battery electrode coatings, both solvent-based slurries and solvent-free dry coatings, to prevent defects and reduce cell failure rates
- Mix, granulate and compress solid-dose pharmaceutical tablets to prevent instabilities of API/excipient blends
- Optimize storage and transport of industrial powder materials and avoid supply chain disruptions

With innovative SmartSwap tooling, it takes seconds to convert the HR Rheometer from a solids or liquids set-up to a powder rheology set-up. A new powder rheology application for TA Instruments' TRIOS software handles the data gathering duties and reports key performance indicators, enabling scientists to seamlessly switch between measuring critical material attributes of liquids, pastes, gels, solids and – now - powders.

The new Powder Rheology Accessory is available immediately for new or existing TA Instruments HR Rheometers.

Additional Resources

- Learn more about **TA Instruments HR Rheometers**
- Download a copy of the **HR Rheometer Powder Rheology Accessory brochure**
- Follow and connect with Waters via **LinkedIn**, **Twitter**, and **Facebook**

About Waters Corporation (**www.waters.com**)

Waters Corporation (NYSE:WAT), a global leader in analytical instruments and software, has pioneered chromatography, mass spectrometry, and thermal analysis innovations serving the life, materials, and food sciences for more than 60 years. With more than 7,800 employees worldwide, Waters operates directly in more than 35 countries, including 14 manufacturing facilities, and with products available in more than 100 countries.

i Internal estimate based on 40 seconds to prepare a powder shear sample for the TA Instruments HR Rheometer as compared to two minutes to prepare a sample for the same test on a competitive rheometry system.
ii To within 0.02% relative standard deviation

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