Press release

May 23rd, 2018

Malvern Panalytical has unveiled its new Zetasizer® Pro and Ultra systems, designed to increase confidence in decision-making within key analytical workflows associated with product development and quality control. Built on the heritage of the market-leading Zetasizer Nano range, and already the proud recipients of a Red Dot 2018 design award, these new flagship instruments deliver significant improvements in the quality and speed of particle size, molecule size and zeta potential measurements, using the techniques of dynamic and electrophoretic light scattering.

Darrell Bancarz, Nanomaterials Product Manager at Malvern Panalytical, said, "The Zetasizer Pro and Zetasizer Ultra are the result of extensive customer understanding, research and testing, which has enabled us to develop a more intelligent and intuitive way of making light scattering measurements. We've introduced capabilities that halve sample preparation and measurement times, while providing more stable and reliable results. The application of revolutionary new measurement approaches delivers extended materials insight, enabling true product and process optimization."

Pavel Abdulkin, Head of Particle Works, Blacktrace Holdings Ltd., which develops and manufactures high performance nanoparticles and microparticles, was clear about the impact of the new technology on his work: "The Zetasizer Ultra has dramatically increased our sample throughput, enabling us to accelerate our particle development cycle from 12 months to around a month."

The Zetasizer Pro and Ultra systems are controlled by groundbreaking ZS Xplorer software, introducing new sample-centric workflows which make method design and data analysis more straightforward for new users, while preserving full accessibility for users experienced in the application of light scattering methods. New analysis capabilities answer, for the first time, key issues associated with the presence of dust or aggregates when applying dynamic light scattering for particle and molecular characterization, filtering these from the results to give a truer overall picture of the sample. This is supported by integrated, deep-learning empowered data quality guidance, offering the user instant feedback on their results and providing actionable advice on how to improve poor quality data.

A key differentiator of the Zetasizer Ultra is its patented Multi-Angle Dynamic Light Scattering

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(MADLS®) technology, which automates multiple-angle size measurements, providing higher resolution and more complete particle size distributions. MADLS also enables calibration-free particle concentration analysis for a wide range of materials, resolving the individual concentrations of different size populations. The new disposable capillary sizing cell provides the ultimate in non-destructive, low volume (3 µL) analysis, extending the upper range to 10 µm and delivering high quality data whilst reducing cost. The Zetasizer Ultra's speed and ease-of-use are uncompromised by these unique and powerful capabilities, making it the most advanced light scattering system available.

Zetasizer systems are used across many industry sectors worldwide, delivering value in the control and optimization of processes, and the improvement of product quality, stability and performance. They are ubiquitous in academic settings, indispensable in a wealth of application spaces and referenced in tens of thousands of peer-reviewed publications.

For more information about the Zetasizer Pro and Zetasizer Ultra please contact Malvern Panalytical, or visit www.malvernpanalytical.com/zetasizer .

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Caption: The new **Zetasizer Pro and Ultra light-scattering solutions for revolutionary nanoparticle and molecule analysis.**

Note to the editor

Malvern Panalytical technologies are used by scientists and engineers in a wide range of industries and organizations to solve the challenges associated with maximizing productivity, developing better quality products and getting them to market faster. Our mission is to create superior, customer-focused solutions and services to deliver tangible economic impact through chemical, physical and structural analysis of materials.

Underpinned by extensive industry knowledge and technical and applications expertise, Malvern Panalytical instruments help users better understand a wide variety of materials, from proteins and polymers to metals and building materials. Our technologies enable the measurement of parameters such as particle size, shape and zeta potential, biomolecular interactions and stability, rheological properties, elemental concentrations and crystallographic structure. Highly reliable and robust characterization of these properties is fundamental to predicting how a product will behave during use, to optimizing its performance and achieving manufacturing excellence.

Malvern Panalytical was formed by the merger of the businesses Malvern Instruments and PANalytical, including the companies ASD and Claisse, on 1st January 2017, and employs over 2,000 people worldwide. With R&D and manufacturing sites in North America, Europe and China and a global sales and service presence, we provide unrivalled levels of customer support. Malvern Panalytical is a strong player and innovator in the materials characterization market, providing expert solutions for superior actionable insight.

Malvern Panalytical is part of Spectris plc, the productivity-enhancing instruments and controls company.

For press information, please contact:

Malvern Panalytical
Corporate Marketing & Communications
T +31546 534444
F +31546 534598
info@malvernpanalytical.com
www.malvernpanalytical.com