



NEWS RELEASE

Zetasizer APS delivers, automated protein aggregate detection

27 May 2009: Malvern, UK: The new Zetasizer APS (Auto Plate Sampler) from Malvern Instruments delivers fully automated measurement of protein size, with no compromise in data accuracy or quality. An ideal solution to improve productivity, this dynamic light scattering (DLS) system handles 96- or 384-well microplates, transferring the sample to a closely controlled environment for robust size characterization. Measurements within this defined environment provide the accuracy and temperature stability needed to deliver consistent, reliable results. The resulting data precision gives access to more applications, particularly those requiring the detection of small amounts of aggregates or the early onset of aggregation.

In dynamic light scattering measurements, temperature is a critical parameter. A one degree uncertainty in the temperature can mean a 5% range of uncertainty in the result. The Zetasizer APS automatically extracts a sample directly from its well and then measures it within an enclosed measurement area that operates in the range 2 to 90°C, controlled to 0.1 degree Celsius. Dual temperature controls maintain optimal conditions within the wellplate to preserve sample integrity, and separately within the measurement chamber. Each sample on a plate can be measured using a different protocol and each is preserved for further investigation. Melting point measurements can be carried out on individual samples, each using a different range of temperatures, without affecting the other samples in the plate.

Since the Zetasizer APS can handle virtually all commercially available microwell plates, no special materials are needed. This avoids the use of expensive plates with special optical properties, where re-use can be tempting but then introduces the risk of cross-contamination. A programmable system of rinsing the extraction needle and tubes before and after measurement also ensures no sample cross-contamination. Two fluid inputs provide two separately controlled rinses: a solvent and a wash. A background measurement between every sample means that results are thoroughly tested for extra confidence.

Automation of size measurements using the Zetasizer APS enables unattended measurement of a large number of samples without sacrificing data quality. The temperature controlled measurement chamber allows measurement in the range of 2 to 90°C with a 0.1°C precision. Easy-to-use software provides a range of result reports, as well as the ability to customise data output.

<http://www.malvern.com/malvern/ondemand.nsf/id/SREL-7S9KAM>

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Image, notes and contact details to follow...

High resolution image attached or available from Trish Appleton,
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CAPTION: Zetasizer APS



About Malvern Instruments

Malvern Instruments provides a range of complementary materials characterization tools that deliver inter-related measurements reflecting the complexities of particulates and disperse systems, nanomaterials and macromolecules. Analytical instruments from Malvern are used in the characterization of a wide variety of materials, from industrial bulk powders to nanomaterials and delicate macromolecules. A broad portfolio of innovative technologies is combined with intelligent, user-friendly software. These systems deliver industrially relevant data enabling our customers to make the connection between micro (such as particle size) and macro (bulk) material properties (rheology) and chemical composition (chemical imaging).

Particle size, particle shape, zeta potential, molecular weight, chemical composition and rheological properties measurements are now joined by advanced chromatography solutions (GPC/SEC), extending Malvern's technologies for protein molecular weight, size and aggregation measurements, and synthetic polymer molecular weight and distribution. The company's laboratory, at-line, on-line and in-line solutions are proven in sectors as diverse as cement production and pharmaceutical drug discovery.

Headquartered in Malvern, UK, Malvern Instruments has subsidiary organizations in all major European markets, North America, China, Korea and Japan, a joint venture in India, a global distributor network and applications laboratories around the world. www.malvern.com

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