



NEWS RELEASE

Smart characterization for smart polymer science - Malvern's Zetasizer Nano emerges as the system of choice

07-August 2009: Malvern, UK: As researchers discover new and widespread applications for stimulus-responsive microgels, known as 'smart polymers', the Zetasizer Nano system from Malvern Instruments is fast emerging as their system of choice for particle characterization. As the first commercial instrument to include the hardware and software for combined dynamic, static, and electrophoretic light scattering measurements, the Zetasizer Nano satisfies a unique mix of requirements associated with this rapidly expanding field.

Microgels are particles of cross-linked polymer networks dispersed in a medium, such as water. These polymers, which range from 100 nm to 1 µm in diameter, can undergo rapid, reversible and dramatic phase transitions when triggered by slight environmental variations in temperature, pH or ionic strength. Medical applications for smart polymers range from diagnosis to intelligent distribution of drugs and actuators (such as artificial muscles and valves), while other sectors are benefiting from new technologies for microelectronic sensors and environmentally adaptive clothing.

The Zetasizer Nano series enables the study of very small, weakly scattering particles such as polymers at low concentrations. Its novel arrangement of optics maximises detection of scattered light while maintaining signal quality. The wide range of sample properties available for measurement with the Zetasizer Nano system include, particle size, molecular weight, and zeta potential.

A unique cell chamber means the Zetasizer Nano specifications for sample size and concentration exceed those for any other commercially available dynamic light scattering instrument. The system offers measurement in the size range of 0.6 nm to 6 µm, and a concentration range of 0.1 mg/mL lysozyme to 40% w/v. For further information about the complete Zetasizer range, visit

www.malvern.com/zetasizer

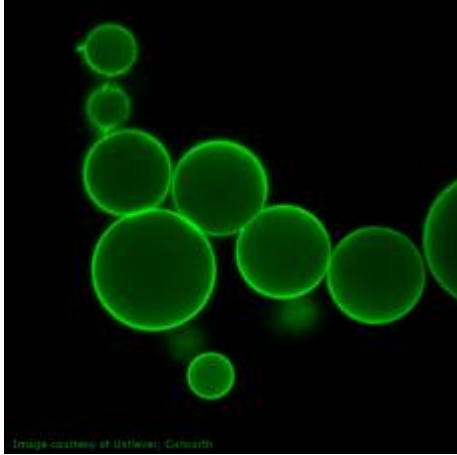
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Text Ends

Image, notes and contact details to follow...

High resolution image attached or available from Trish Appleton,
Kapler Communications trish@kapleronline.com Ref: MAL/JOB/1741

CAPTION: Agar microgels coated with a bi-layer of chitosan and fluorescein labelled alginate imaged by confocal microscopy



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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