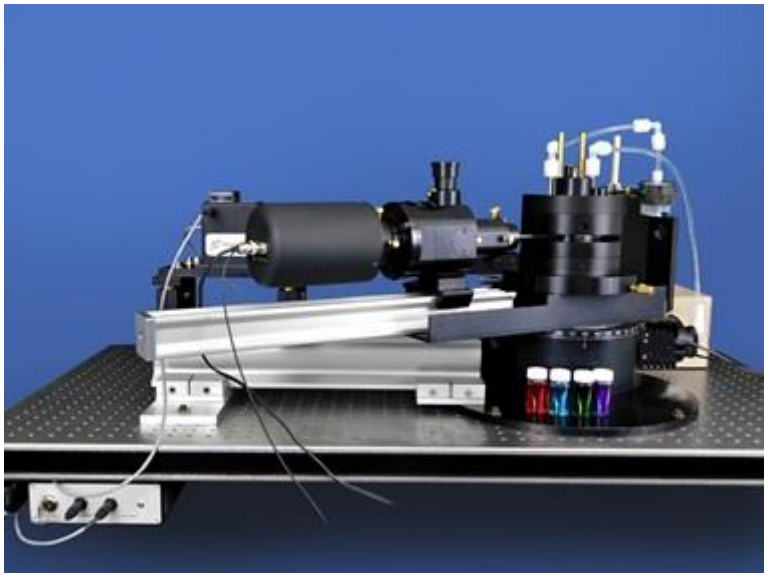
June 2019

Assessing Nanoparticle Antimicrobial Properties

Testa Analytical Solutions e.K. reports on how a BI-200SM light scattering goniometer has been used to help assess the antimicrobial properties of silver and copper nanoparticles.

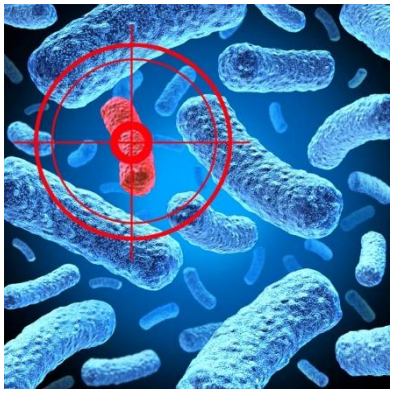
In the study,
various strains of *Escherichia coli, Bacillus subtilis* and *Staphylococcus Aureus* were treated with suspensions of suspended silver and copper nanoparticles. To assess the effectiveness of the nanoparticles, a BI-200SM goniometer was used to measure the size of the suspended nanoparticles by obtaining particle size distribution data via dynamic light scattering (DLS).



Carlo Dessy,
Managing Director of Testa Analytical commented "Silver and copper ions have been known to have antimicrobial properties and are used as superior disinfectants for wastewater generated from hospitals containing infectious microorganisms. Learning how to manipulate these silver and copper nanoparticles can lead to discoveries that may greatly impact applications in the fields of medical devices, food processing, and water treatment". He added " I am very pleased to see that the BI-200SM goniometer has helped the researchers that undertook this study to conclude “silver and copper nanoparticles show great promise as antimicrobial agents against *Escherichia coli, Bacillus subtilis* and *Staphylococcus Aureus*.”

The BI-200SM goniometer system
is a precision research grade instrument designed for exacting light scattering measurements. Based on a special turntable with precision ball bearings and stepping motor, the BI-200SM's modular, automated design and quality construction guarantee precise measurements due to the wobble-free movement of the detector. As you would expect from a research grade system the BI-

200SM can measure
light scattering over a wide angular range (8° to 155° with 25 mm cells) and offers fine adjustment of



measurement angles to 0.01° directly using a large, fine-control knob. Fine-screw vertical adjustment makes centre of rotation measurement easier when aligning cells. Precise repeatable data is ensured by automated heating and cooling of the sample cell using and standard external recirculating system. Field proven in hundreds of labs around the world the BI-200SM light scattering goniometer system is ideal for even the most demanding macromolecular studies and submicron particle sizing applications.

For a full copy of this study please visit www.testa-analytical.com/index.html?dc=Knowledge&sn=17. For further information on the BI-200SM research goniometer system please visit www.testa-analytical.com/index.html?dc=Scattering&sn=1 or contact Testa Analytical Solutions on +49-30-864-24076 / info@testa-analytical.com.

Testa Analytical Solutions e.K. is a company dedicated to supplying the best possible instrumental solutions for characterization of polymers, particles, nanomaterials and proteins. Drawing upon over 30 years' experience of technologies serving these markets, the staff at Testa Analytical are happy to share their knowledge with researchers worldwide to help provide them with a working solution for even the most demanding applications.

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