

Exceptionally Uniform Highly Spherical Silica Nanospheres

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Company overview

NanoGIANT LLC is a wholly U.S.-based, privately owned Research, Development & Production Company. Founded in 2008, NanoGIANT grew from over 20 years of scientific research, and specializes in exceptionally uniform and spherically superior silicon dioxide (SiO₂) nanoparticles. NanoGIANT's silica spheres are the most narrowly dispersed, cost-effective, most scalable silica available. These qualities define NanoGIANT as one of the leaders in this rapidly expanding area of science.

NanoGIANT particles

Historically, it has proven difficult to produce very narrow silica spheres in quantities suitable for commercial applications. NanoGIANT delivers highly monodisperse and spherical silica particles in kilogram or larger batches with each batch diameter having a polydispersity of 0.005 or better using Brookhaven 90Plus equipment.

Applications

Particles of this quality and uniformity enable a number of cost and scale restrictive projects to move ahead. NanoGIANT is committed to facilitating areas of research and development by providing the utmost in exceptional nanoparticles to various industries in the US and across the globe.

Research and Development Projects

NanoGIANT LLC collaborates with a number of partners in the Academic, Public and Private sectors in the field of R&D. We have a skilled set of scientists who can be applied to specific problems with a tightly focused remit of delivering solutions.

Production

Based on the success of our R&D project team, we have been able to build production to solve specific problems for our partners and for a number of global industries. Using the techniques that deliver solutions, we have been able to build manufacturing and production processes that can be applied to various fields and disciplines.

One example of this is the ability to decrease the curing time of a certain epoxy by a factor of 20%. This is just one example of NanoGIANT's expertise and problem solving skills being put to use where our customers can decrease production turnaround time and increase the revenue to employee ratio.

Sample details and requirements

Samples of NanoGIANT's spheres are available upon request. The sample is an 8% suspension in 10ml of distilled water and is accompanied by an MSDS. We will supply 8% dispersion solutions that you can dilute to your requirements. Dry form is also available.

We will provide the particle size with each sample.

Previous tests, utilizing the Brookhaven Instruments 90Plus Particle Size Analyzer have shown a polydispersity of only 0.005 on NanoGIANT's 368 nm spheres. (See Table 1 below) We invite you to perform any tests you feel are appropriate. **The only proviso to this is that NanoGIANT receives a copy of all test results.** If you require further samples, either suspended or in dry form, please contact Tony Whelan directly at 614 270-2644.

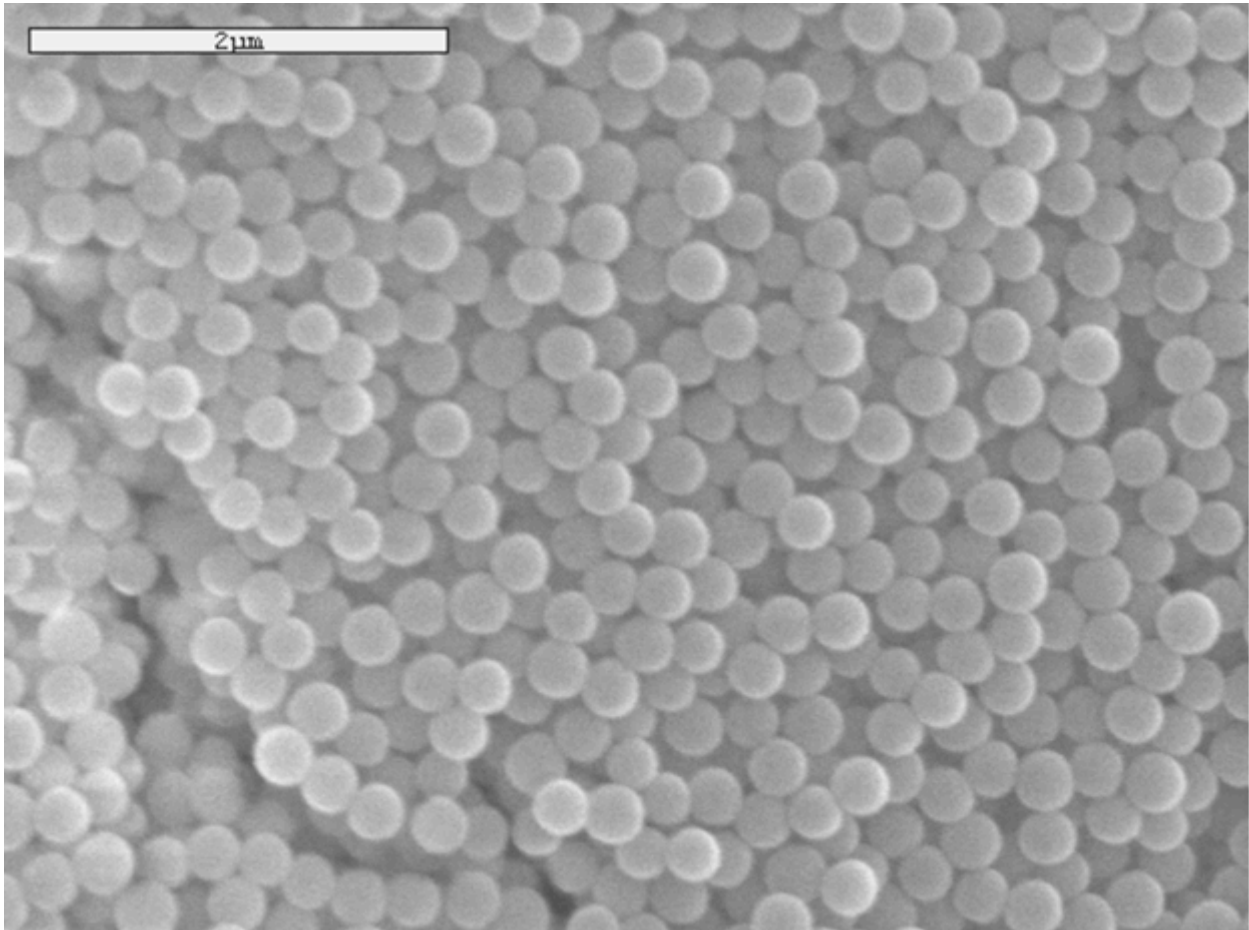
Please note: we do not suspend our particles into hazardous fluids.

Table 1 – Example size comparison

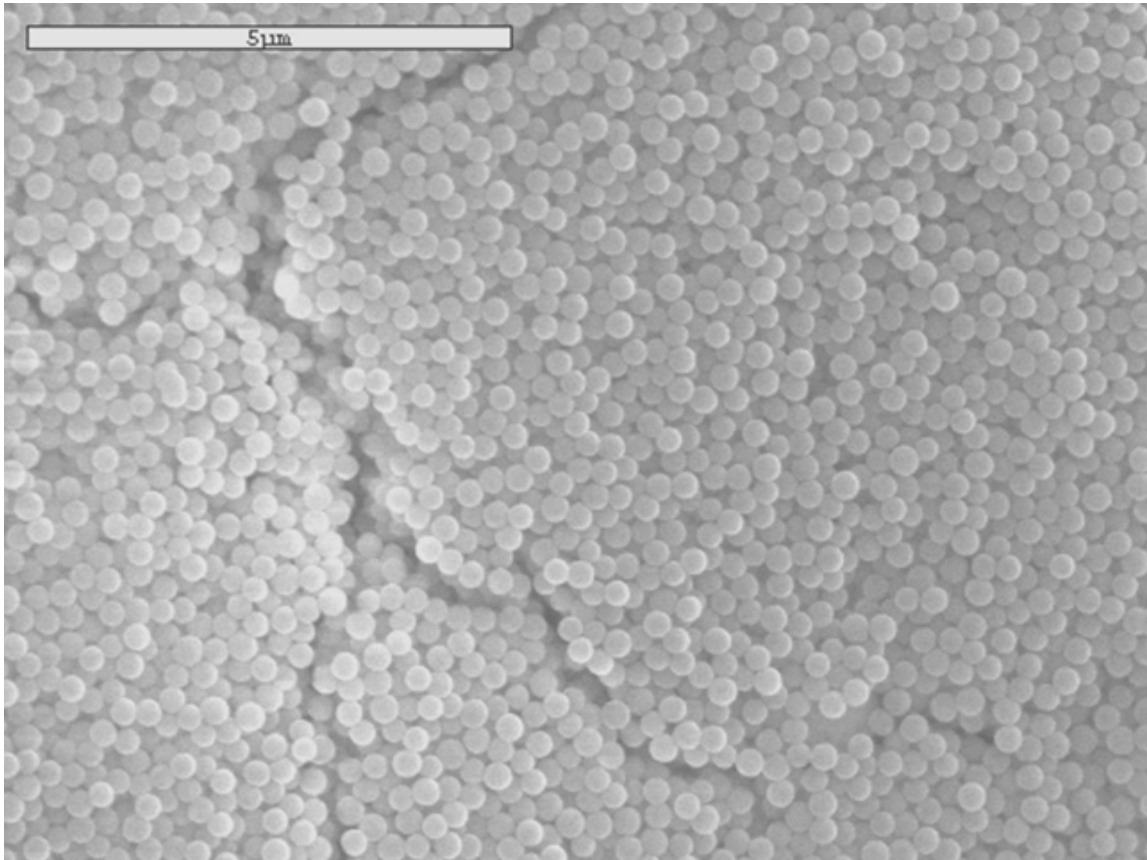
Sample ID	Effective Diameter (nm)	Polydispersity
Competitor sample in 0.02 um filt. DI H2O	519.9	0.046
NanoGIANT sample in 0.02 um filt. DI H2O	368.2	0.005

An Independent Certificate of Analysis is available at the end of this document.

SEM Image 1



SEM Image 2



Certificate of Analysis

Certificate of Analysis

Issued By
Particle Characterization Laboratories, Inc.
845 Olive Avenue, Novato, CA 94945
Phone (415) 893-1113
Fax (415) 893-0132
www.particleanalysis.com

Product Manufacturer:	nanoGIANT	Date of Analysis:	August 19 th , 2008
Product Designation:	VLV080512-1	Analysis Type:	Photon Correlation Spectroscopy
Product Lot or Batch Number:	VLV080512-1	Instrument:	Brookhaven Instruments 90Plus
Product Production Date:	February, 2009	Serial Number:	11163
Certified Mean Diameter (nm):	267.1	Suspending Medium:	Aqueous
Standard Error (nm):	1.1	Temperature (C):	25.0

INSTRUMENT VALIDATION INFORMATION	
NIST Traceable Manufacturer:	Thermo Scientific Corp.
NIST Traceable Standard:	33 nm +/- 1.4 nm Polystyrene Latex
NIST Traceable Lot#:	#30679
Catalog Number	#3030A

Particle Characterization Laboratories, Inc. certifies that the information contained in this document is true and accurate.
Electronic copies of this data are stored at Particle Characterization Laboratories, Inc. and are available upon request.

Signed By: 
William Bernt, Director of Analytical Services
Date: August 7th, 2009

Press Release

US NANOPARTICLE MANUFACTURER OPENS ITS DOOR FOR NEW TECHNOLOGIES **NanoGIANT LLC announces new standard in monodisperse silica nanospheres – in bulk**

Phoenix, Arizona - Breaking into the nanoparticle manufacturing market, NanoGIANT LLC is now producing extremely uniform silicon dioxide (SiO₂) spheres. Independent characterization laboratory Particle Characterization Laboratories, Inc. utilizing the Brookhaven Instruments 90Plus Particle Size Analyzer shows a Polydispersity of only 0.005 on NanoGIANT's 368 nm spheres.

Unlike other narrow particle announcements, the clear differentiators for NanoGIANT are its ability to produce virtually uniform, affordable nanospheres quickly and in kilogram (kg) increments.

“Our ability to rapidly mass produce our spheres cost effectively while maintaining the polydispersity will prove to be a key advantage for our customers,” said Tony Whelan, VP of Business Development at NanoGIANT.

“Nanotechnology is still just scratching the surface of its true potential. Our spheres will allow the transition from research to development for technologies where narrow spheres had previously been inaccessible due to manufacturing limitations. Our technology will open the floodgates for manufacturing using highly specialized materials. We believe that the cost savings our customers can achieve with our material will revolutionize manufacturing in dozens of sectors.” says Whelan

Sample spheres are available for sale online - <http://www.nanogiant.org>

Based in Phoenix, Arizona, NanoGIANT LLC is a privately owned research and development company, specializing in the proprietary manufacture of highly uniform silicon dioxide (SiO₂) nanoparticles. The company focuses on producing very narrow particles for mass production in the nanotechnology industry.

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