C03-4

Thermo SCIENTIFIC

Part of Thermo Fisher Scientific

NANOSPHERE™ SIZE STANDARDS
NIST Traceable Mean Diameter

1. DESCRIPTION. These particle size standards provide accurate and traceable size calibration for particle size analysis. They are part of a series of polymer microspheres with calibrated mean diameters traceable to the Standard Meter through the National Institute of Standards and Technology (NIST). Diameters from 20 nanometers (nm) to 160 micrometers (µm) are available as aqueous suspensions in dropper-tipped vials, calibrated by photon correlation spectroscopy (PCS), transmission electron microscopy (TEM) or optical microscopy. The aqueous medium has been prepared to promote dispersion and reduce clumping of the particles. The approximate particle concentration in percent solids is given to facilitate dilution for the calibration and validation of particle analyzers. Diameters from 200 µm to 1000 µm are available as dry spheres, calibrated by optical microscopy. The certified mean diameter is traceable to NIST. Other values are for information only and should not be used as calibration values.

2. PHYSICAL DATA.

	Catalog Number: 3700 and 3700A, Nominal 700 nm
Certified Mean Diameter:	707 nm ± 9 nm, k=2
Standard Deviation:	8.3 nm
Coefficient of Variation:	1.2%
Microsphere Composition:	Polystyrene
Microsphere Density:	1.05 g/cm^3
Index of Refraction:	1.59 @ 589 nm
Approximate Concentration:	1% solids

- Continued on page 2

CERTIFICATE OF CALIBRATION AND TRACEABILITY

This certifies that the calibrated mean diameter was transferred by transmission electron microscopy (TEM) from the National Institute of Standards and Technology (NIST) certified microspheres (Standard Reference Material 1963, 1691 or 1690).

Catalog Number:	3700 and 3700A, Nanosphere™ Size Standards
Certification Date:	August 24, 2009
Certified Batch:	3700-003
Production Batch:	3700-022
Certified Mean Diameter:	707 nm
Expanded Uncertainty:	± 9 nm, k=2

10·29·12

Joe Vasiliou, Metrologist
Thermo Fisher Scientific Particle Technology

Packaging Lot # 41548

Expiration Date: DEC'15

Specialty Diagnostics Group | 46360 Fremont Blvd. | Fremont, CA 94538 | (510) 979-5000 | (510) 979-5002 fax | www.thermo.com/particletechnology

Cert004.06