Whitehouse Scientific
Setting the Standard since 1983

NIST Traceable

Polydisperse Standards

SAMPLE ANALYSIS:

This standard has been introduced by popular demand resulting from an increased interest in the properties and performance of Nanoparticles or sub-micron powders.

The soda-lime glass microspheres are supplied as an aqueous dispersion in a 5ml pipetting bottle.

To analyse, simply take the dropping bottle containing the aqueous dispersion and add deionised water. Remove the label and place in an ultra-sonic bath for 10 minutes and shake well.

Pipette the complete bottle into the particle size measurement instrument.

For instruments requiring a fraction of the sample, shake well and immediately add the requisite number of drops into the analysis chamber. Store any unused aqueous dispersions upright in a cool, dry place.

The standard has been characterised by scanning electron-microscopy, pipette centrifuge and some of the latest laser sizing methods.

0.1-1μm

Part Number: PS181
Nominal Weight: 0.02g x 10 bottles

Notes:
The small volume pipette centrifuge used in the analysis was recommended by The Community Bureau of Reference (BCR) as a primary method of sub-micron analysis. The instrument, developed by T Allen is described in his book 'Particle Size Measurement', Fourth edition, Chapman and Hall, NY., (1990). For the full prescriptive methodology, see: Rideal G R, Dodds J A & Pons M-N, Leschonski K, Lloyd P J, and Mercus H G, The Development of New Reference Standards for Particle Size Instrument Calibration, World Congress on Particle Technology 3 (IChemE) July 1998, UK.

Certificate of Analysis

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Whatever the particle sizing method...we have the perfect solution! www.WhitehouseScientific.com
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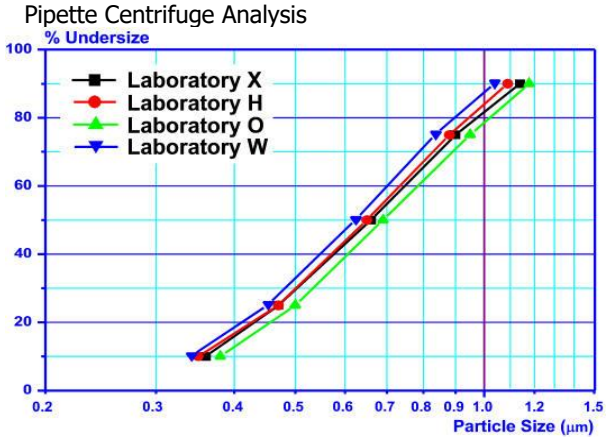
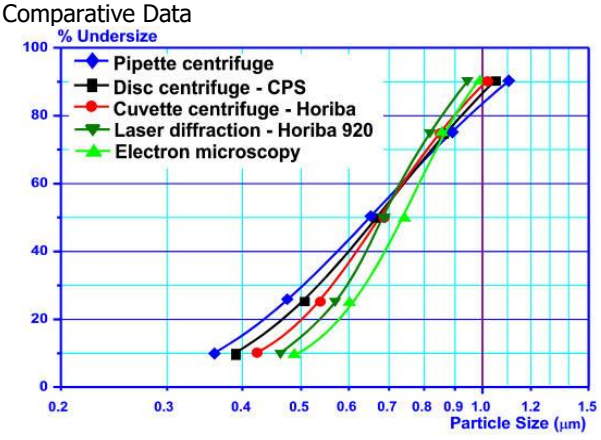
POLYDISPERSE PARTICLE STANDARDS

1. Graphical Review

Pipette Centrifuge Analysis



Comparative Data



2. Tabular Summary

% Undersize	10	25	50	75	90
Mean Size μm	0.36	0.47	0.65	0.89	1.11
Uncertainty μm	0.03	0.04	0.06	0.10	0.13

Participating Laboratories: Bradford University. UK, CNRS Nancy, France, Loughborough University, UK. Whitehouse Scientific, UK

% Undersize	10	25	50	75	90
Pipette Centrifuge	0.36	0.47	0.65	0.89	1.11
CPS Centrifuge	0.39	0.51	0.66	0.85	1.03
Horiba Centrifuge	0.42	0.54	0.69	0.84	1.01
Laser Diffraction	0.47	0.56	0.68	0.81	0.93
SEM	0.48	0.60	0.74	0.85	0.97

Issued by: Dr G R Rideal
Founder & Senior Analyst