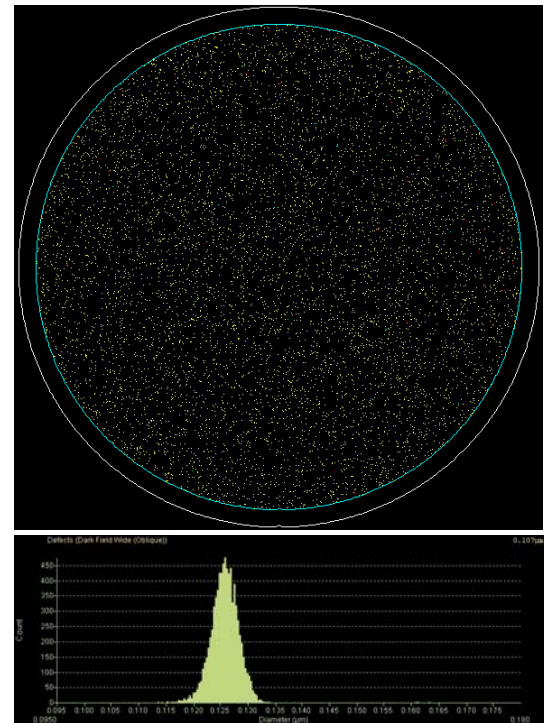
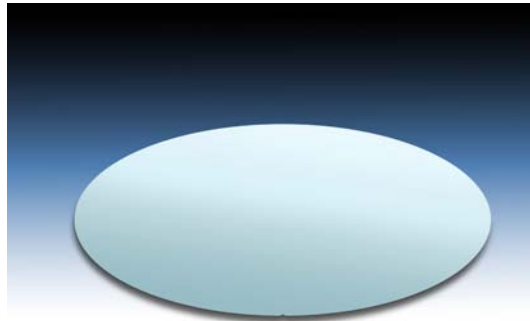


Absolute Contamination Standards

SMALL OR LARGE, FIND PARTICLES THAT COUNT. The Absolute Contamination Standard (ACS) is used to calibrate instruments which size and detect particles on the surface of bare silicon wafers. Use ACS to characterize particles, before particles characterize products.

Shown on the left is an Absolute Contamination Standard, appearing as a bare wafer to the naked eye. On the right is a particle map and histogram of the same wafer acquired with a Scanning Surface Inspection System.



PRODUCT DESCRIPTION

The Absolute Contamination Standard is built by depositing highly spherical polystyrene latex (PSL) spheres which have well-characterized optical properties and a very tight monodisperse size distribution. These parameters make PSL spheres a useful material for the calibration and monitoring of instruments that measure and count particles. VLSI Standards supplies Absolute Contamination Standards with a wide variety of NIST-traceable sphere sizes in the range between 0.040 μm and 4.0 μm . Standards with smaller or larger sphere sizes may be special ordered.

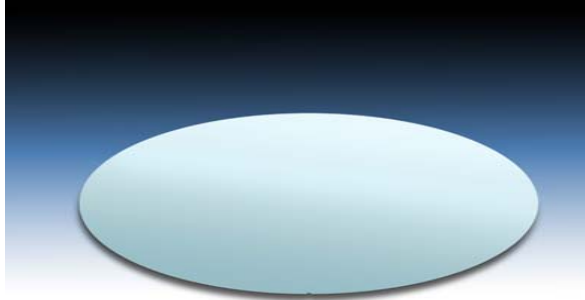
The calibration certificate includes the approximate number of particles deposited on the wafer. This is not a NIST-traceable value, as the Absolute Contamination Standard is designed to calibrate particle size, and not particle count. Background contamination is kept at an extremely low level and is defined on the measurement

certificate. These characteristics of the standard ensure a highly monodispersed population of spheres on the substrate.

PRODUCT SPECIFICATIONS

- **SEMI Specification Silicon Wafers**
100 mm, 125 mm, 150 mm, 200 mm, and 300 mm diameter silicon wafers
- **Polystyrene Latex Spheres**
From 40 nm up to 4 micron*
- **Traceability**
PSL diameter traceable to NIST

* Sizes in other ranges may be available. Please check with VLSI Standards.



ACS

Absolute Contamination Standard

Application: Defect Size Calibration
 Equipment: Defect Inspection
 Material: Polystyrene Latex Sphere (PSL) on Silicon
 Traceability: NIST
 Product Range: 40 nm to 4 µm*

*Other sizes and sphere counts available upon request

Wafer Diameter	100 mm	125 mm	150 mm	200 mm	300 mm	
Number of Spheres	500	500	7,500 or 16,000	7,500 or 16,000	7,500 or 16,000	
Particle Diameter (nm)						
40 (D)				ACS8-40D-16K	ACS12-40D-16K	
50 (D)				ACS8-50D-16K	ACS12-50D-16K	
60 (D)				ACS8-60D-16K	ACS12-60D-16K	
73 (D)				ACS8-73D-16K	ACS12-73D-16K	
83 (D)				ACS8-83D-16K	ACS12-83D-16K	
126 (D)				ACS8-126D-16K	ACS12-126D-16K	
155 (D)				ACS6-155D-16K	ACS8-155D-16K	ACS12-155D-16K
184 (D)				ACS6-184D-16K	ACS8-184D-16K	ACS12-184D-16K
204 (D)				ACS8-204D-16K	ACS12-204D-16K	
204 (S)	ACS4-204S-500	ACS5-204S-500	ACS6-204S-16K	ACS8-204S-16K		
304 (D)	ACS4-304D-500	ACS5-304D-500	ACS6-304D-16K	ACS8-304D-16K	ACS12-304D-16K	
360 (D)	ACS4-360D-500	ACS5-360D-500	ACS6-360D-16K	ACS8-360D-16K	ACS12-360D-16K	
494 (D)	ACS4-494D-500	ACS5-494D-500	ACS6-494D-16K	ACS8-494D-16K	ACS12-494D-16K	
802 (D)	ACS4-802D-500	ACS5-802D-500	ACS6-802D-16K	ACS8-802D-16K	ACS12-802D-16K	
1112 (D)	ACS4-1112D-500	ACS5-1112D-500	ACS6-1112D-7.5K	ACS8-1112D-7.5K	ACS12-1112D-7.5K	
3040 (D)	ACS4-3040D-500	ACS5-3040D-500	ACS6-3040D-7.5K	ACS8-3040D-7.5K	ACS12-3040D-7.5K	
4000 (D)	ACS4-4000D-500	ACS5-4000D-500	ACS6-4000D-7.5K	ACS8-4000D-7.5K	ACS12-4000D-7.5K	

(D) – Spheres supplied by Duke Scientific

(S) – Spheres supplied by Seradyn