

**INFORMATION SHEET**  
**RTI Calibration Standard No. 1**



**Composition of Standard**

Component	Weight%	Equivalent Volume%	Equivalent Area%*	
			Mean	Range
Chrysotile	0.3	0.1	0.29	0 - 2
Gypsum	60.0	24.7	n/a	n/a
Perlite	39.7	75.2	n/a	n/a

\*This standard is prepared using the weight percentages listed in the second column. The mean equivalent area % value is the mean of point counts obtained from counting 100 points from each of a minimum of four replicate samples. The range spans the values from lowest to highest individual point count values. The sample was not subjected to any sample treatment prior to analysis other than slight crushing with a mortar and pestle to reduce the particle size of matrix materials. The optical system used included crossed polarizers, inserted accessory plate, and a magnification of 400x.

**Optical Characteristics of Asbestos Phase**

Optical Property	Description
Morphology	Straight to wavy fibers and bundles, kink structures, splayed bundle ends
Aspect Ratio	>10:1, mean > 20:1
Color	colorless
Pleochroism	none
Extinction Type	parallel
Refractive Indices	$\alpha$ ( $n_{\perp}$ ) = 1.544 to 1.553 mean = 1.549 $\gamma$ ( $n_{\parallel}$ ) = 1.552 to 1.561 mean = 1.556
Birefringence	low (0.007)
Sign of Elongation	+ (length slow)

**For questions concerning this standard, please contact:**

Stacy S. Doorn  
 RTI  
 P.O. Box 12194  
 Research Triangle Park, NC 27709  
 Phone: (919) 485-2767 Fax: (919) 541-7386 E-mail: [ssd@rti.org](mailto:ssd@rti.org)