Surface Characterization of an Ultra-Soft Contact Lens Material Using an Atomic Force Microscopy Nanoindentation Method

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Supplementary Information

Nanoindentations with the 140 nm diameter probe at ~50 pN maximum force were generated at three different locations on the hydrogel's surface, and the cone-sphere data fit model was used to calculate the modulus values. Supplementary Table S1 displays the calculated elastic moduli for the 1 kPa PAAm hydrogel sample, their average, standard deviation, percent relative standard deviation (% RSD) and the percent (%) deviation from the given modulus value provided by the manufacturer.

Supplementary Table S1. Elastic modulus data for the 1 kPa PAAm hydrogel standard using the cone sphere model.

Given Modulus (kPa)	AFM Nanoindentation at ~50 pN: Calculated Modulus (kPa)			Average Modulus (kPa)	SD	% RSD	% Deviation from Given Modulus
	1	2	3				
1	1.02	0.88	0.85	0.92	0.09	9.94	8.33