

Supplementary Information

The data extracted from the literature [11,25] appear in Figure S1.

$G_c/\mu R$		R		
		0.0033	0.0150	0.0500
Gels Type	0.12	1,382.5758	304.1667	91.2500
	0.16	1,618.1818	356.0000	106.8000
	0.20	1,181.8182	260.0000	78.0000
	0.30	2,725.0927	599.5204	179.8561

$G_c/\mu R$		R		
		0.5000	1.0000	2.0000
Gels Type	Sili 8800	2.2963	1.1481	0.5741
	B452	19.0000	9.5000	4.7500

a/R		R		
		0.0033	0.0150	0.0500
Gels Type	0.12	0.6535	0.6780	0.7181
	0.16	0.6519	0.6745	0.7113
	0.20	0.6552	0.6819	0.7255
	0.30	0.6476	0.6646	0.6924

a/R		R		
		0.5000	1.0000	2.0000
Gels Type	Sili 8800	0.6660	0.8991	1.2565
	B452	0.3474	0.4108	0.5080

$P'/\mu R$		R		
		0.0033	0.0150	0.0500
Gels Type	0.12		20.83	19.53
	0.16		60.61	24.24
	0.20	55.10	40.40	
	0.30	106.87	46.63	12.79

$P'/\mu R$		R		
		0.5000	1.0000	2.0000
Gels Type	Sili 8800	0.70	0.46	0.60
	B452		1.34	0.76

Figure S1: On the left [25] and right [11] we report the data extrapolated and the corresponding dimensionless quantities $G_c/\mu R$, a/R , and $P'/\mu R$, for different materials and needle radii