Supplementary Materials for

Designed Polyurethanes for Potential Biomedical and Pharmaceutical Applications: Novel Synthetic Strategy for Preparing Sucrose Containing Biocompatible and Biodegradable Polyurethane Networks

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Table S1. The A, k, and γ parameters obtained by fitting of the KEKAM model to the experimental data.

Sample		n-Hexane	Toluene	Acetone	DMSO	Methanol	Water
	A =	5.6(0.1)	286(4)	397(4)	1040(9)	78(1)	15(7)
SPUR-1	k=	0.80(0.03)	0.70(0.04)	0.39(0.01)	0.15(0.01)	1.65(0.17)	0.07(0.04)
	γ =	0.99(0.05)	0.61(0.03)	0.76(0.02)	0.87(0.01)	0.91(0.18)	0.44(0.1)
	A =	6.3(0.3)	310(5)	396(1)	963(12)	72(0.8)	-*
SPUR-2	k=	0.22(0.03)	0.36(0.03)	0.96(0.02)	0.16(0.01)	0.88(0.07)	-
	γ =	0.93(0.20)	0.47(0.03)	0.80(0.03)	0.99(0.06)	0.93(0.10)	-
	A =	-*	268(2)	251(7)	503(19)	50(1)	-*
SPUR-3	k=	-	0.28(0.01)	0.27(0.02)	0.10(0.01)	0.35(0.01)	-
	γ =	-	0.84(0.01)	0.74(0.04)	0.81(0.03)	0.81(0.01)	-
	A =	6(1)	254(1)	250(1)	344(2)	66(1)	3(1)
SPUR-4	k=	0.25(0.01)	0.65(0.01)	0.49(0.01)	0.18(0.01)	0.68(0.02)	0.33(0.06)
	γ =	0.72(0.03)	0.89(0.02)	0.84(0.01)	0.88(0.02)	0.88(0.40)	0.52(0.07)
	A =	4(1)	156(1)	140(1)	268(2)	46(1)	-*
SPUR-5	k=	0.16(0.01)	0.80(0.05)	0.80(0.06)	0.88(0.01)	0.52(0.01)	-
	γ =	1.03(0.07)	0.76(0.05)	0.63(0.04)	0.82(0.01)	0.82(0.02)	-

*The swelling ratio in these cases were so low that the model could not be fitted unambiguously.

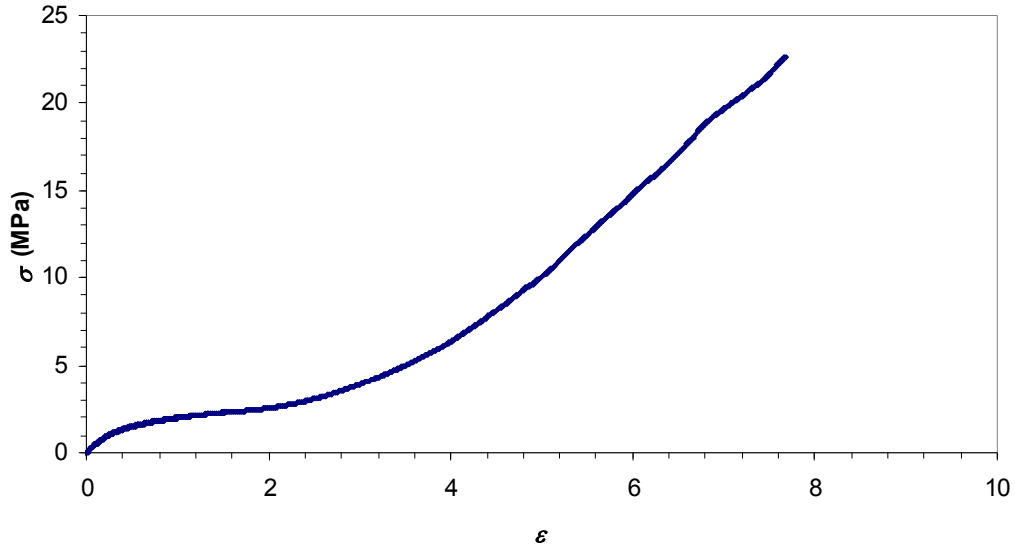

Figure S1: The stress-strain (σ–ε) curve for the SPUR-1 sample

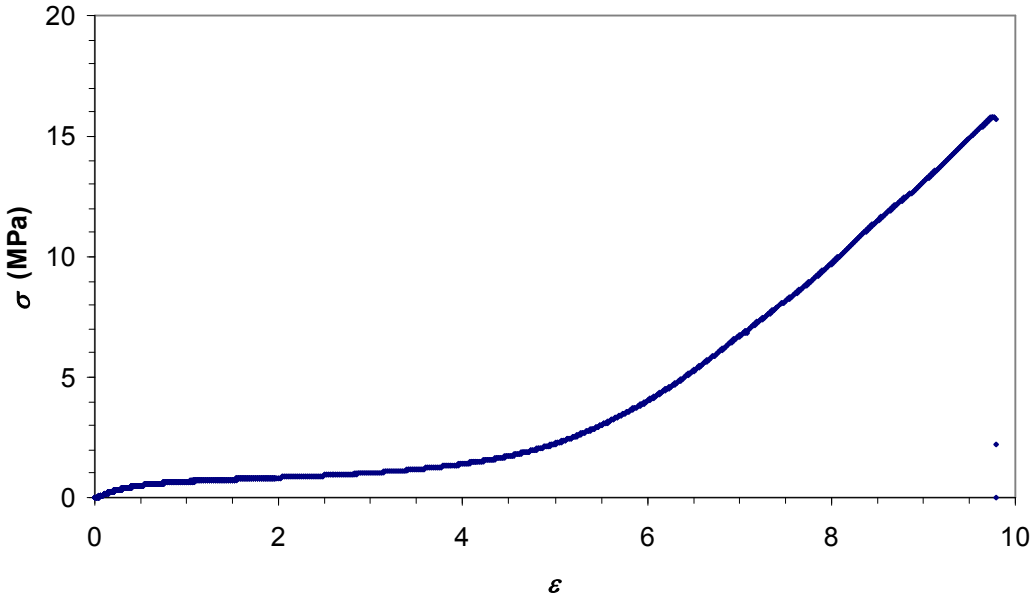

Figure S2: The stress-strain (σ–ε) curve for the SPUR-3 sample

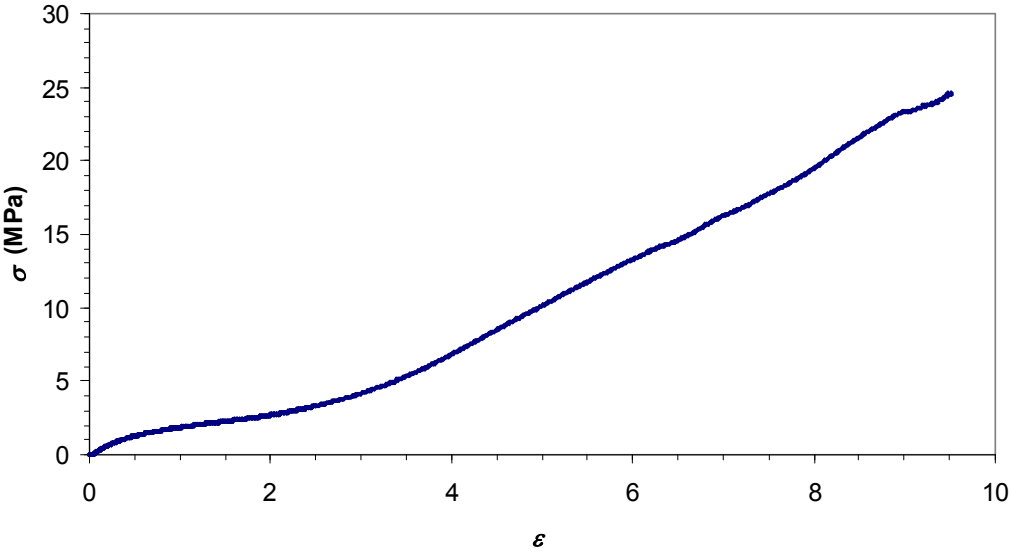

Figure S3: The stress-strain (σ–ε) curve for the SPUR-4 sample

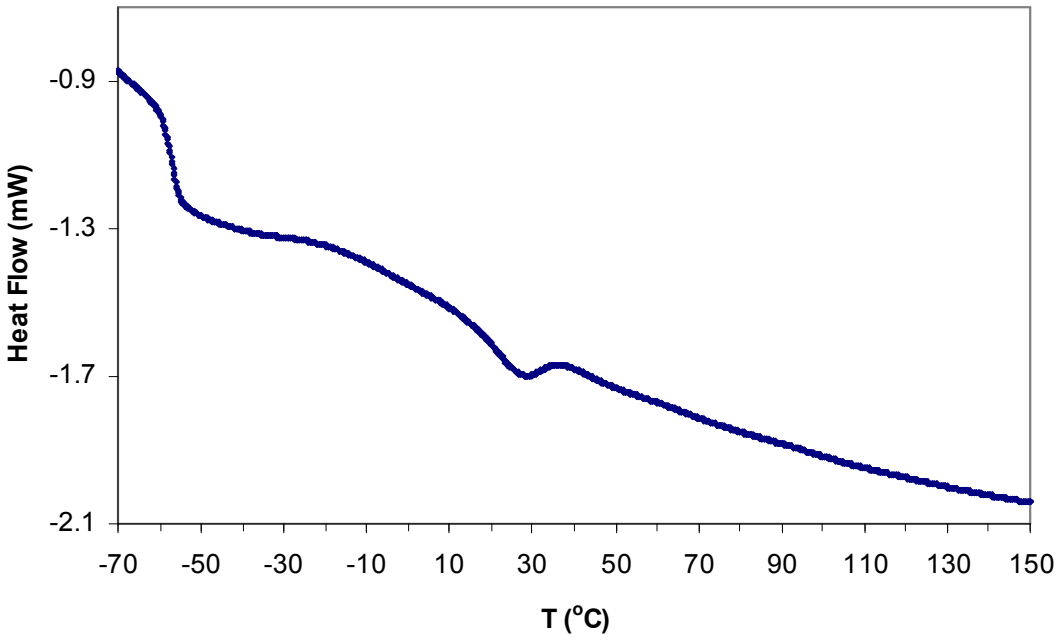

Figure S4: DSC trace for the SPUR-1 sample (T_g = -58 ^oC, and T_m = 27 ^oC)

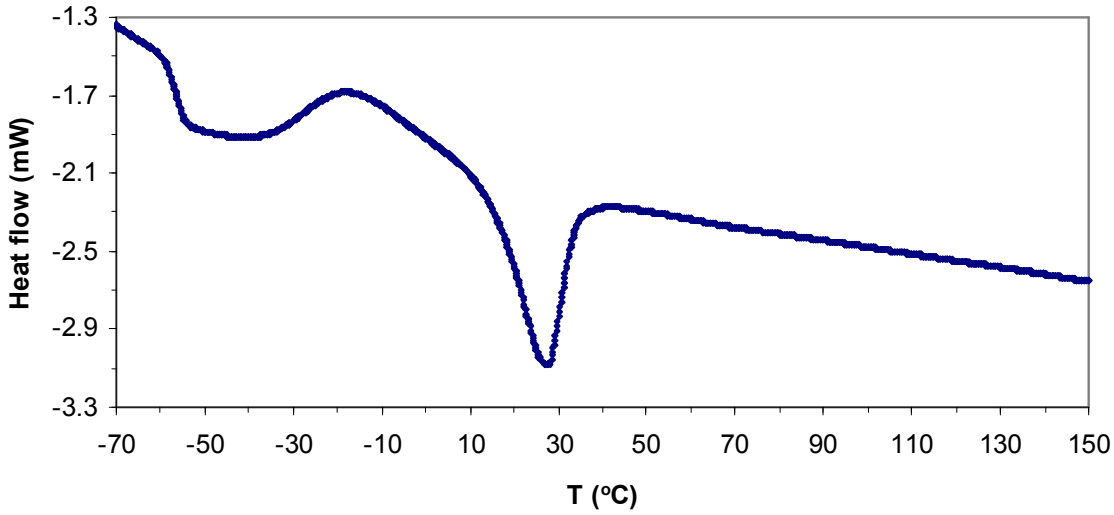

Figure S5: DSC trace for the SPUR-2 sample (T_g = -58 °C, and T_m = 27 °C)

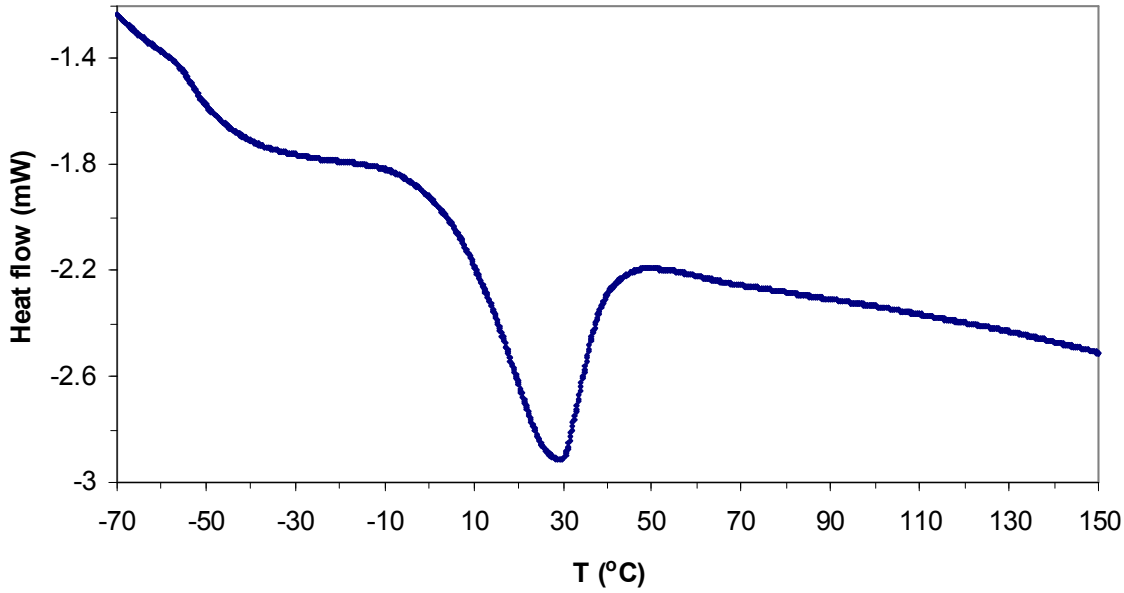

Figure S6: DSC trace for the SPUR-4 sample (T_g = -52 °C, and T_m = 30 °C)

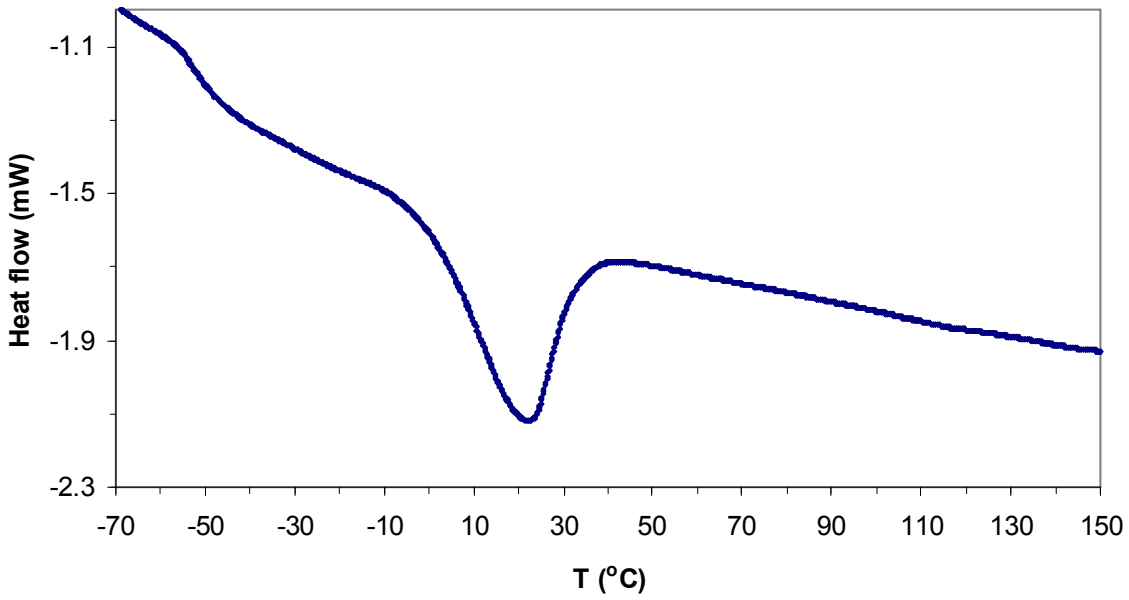

Figure S7: DSC trace for the SPUR-5 sample (T_g = -51 °C, and T_m = 23 °C)

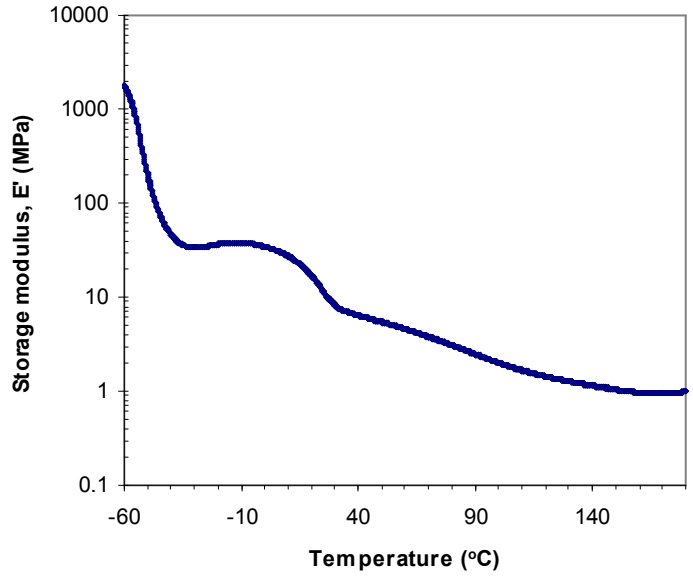

Figure S8: DMA trace (variation of the storage modulus (E`) with the temperature in the range of -60 - +180 °C) for the SPUR-1 sample

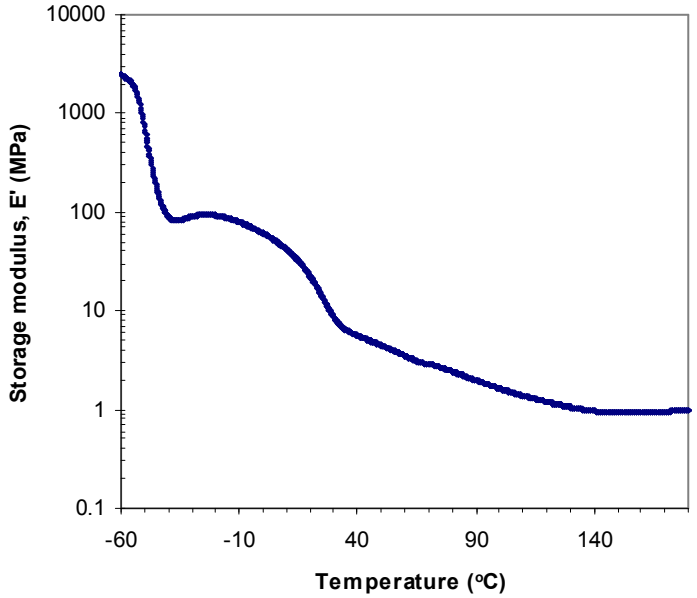

Figure S9: DMA trace (variation of the storage modulus (E`) with the temperature in the range of -60 - +180 ^{o}C) for the SPUR-2 sample