Soft Matter

Supplementary Information

Super-cooled and Amorphous Lipid-based Colloidal Dispersions for Delivery of Phytosterols

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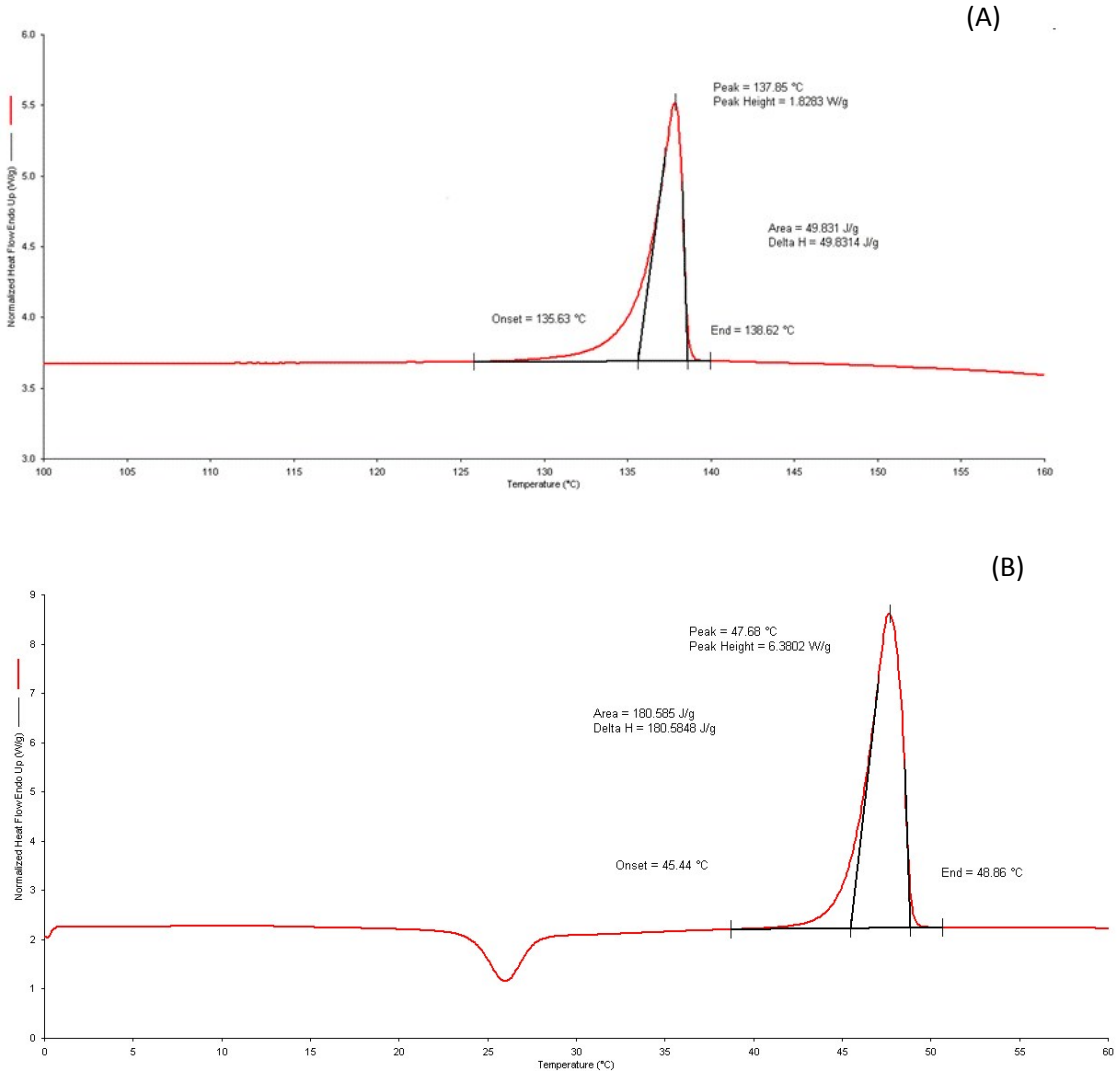
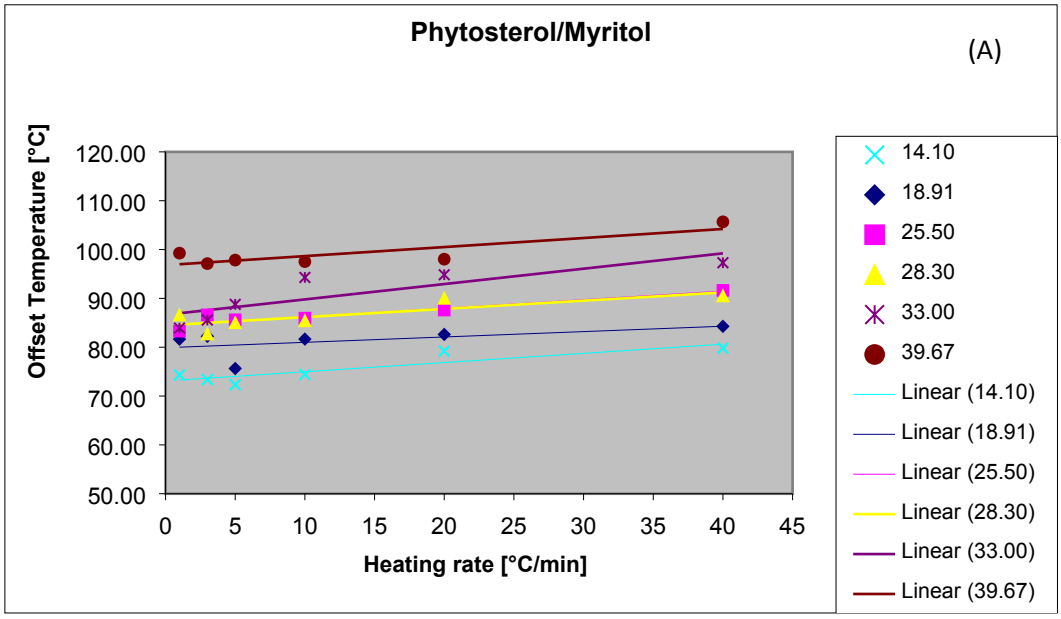
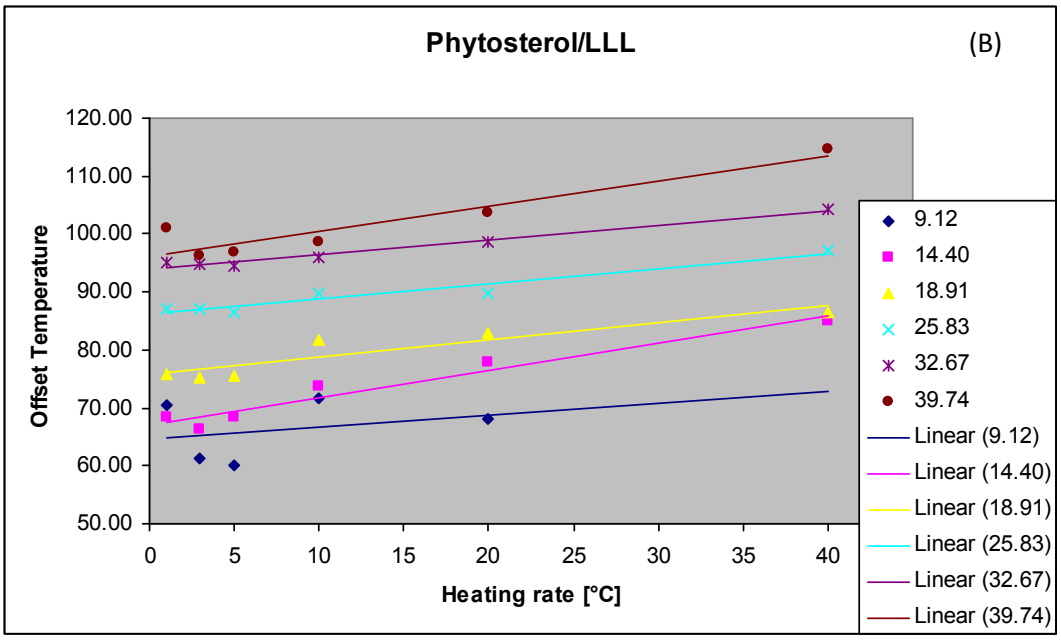


Supplemental Figure 1 DSC Melting of (A) pure PS and (B) trilaurin.

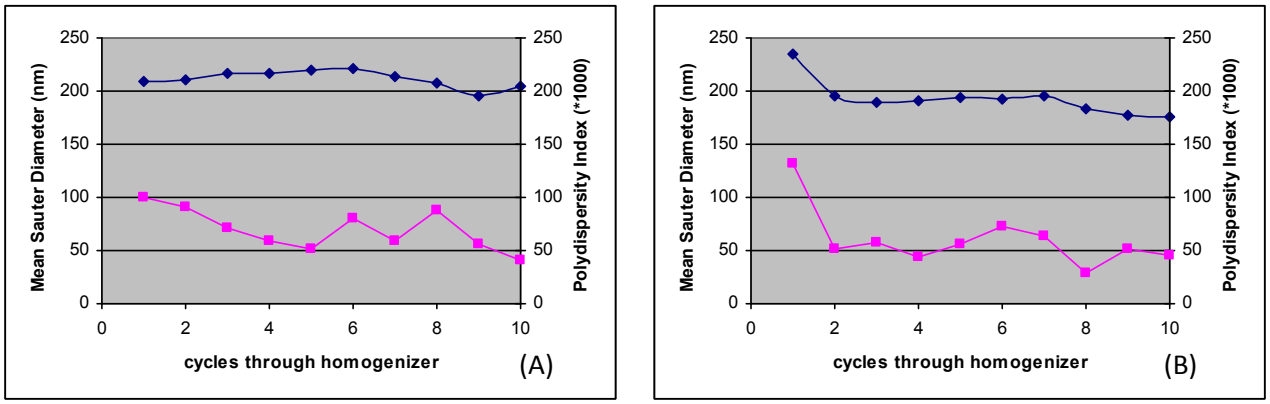




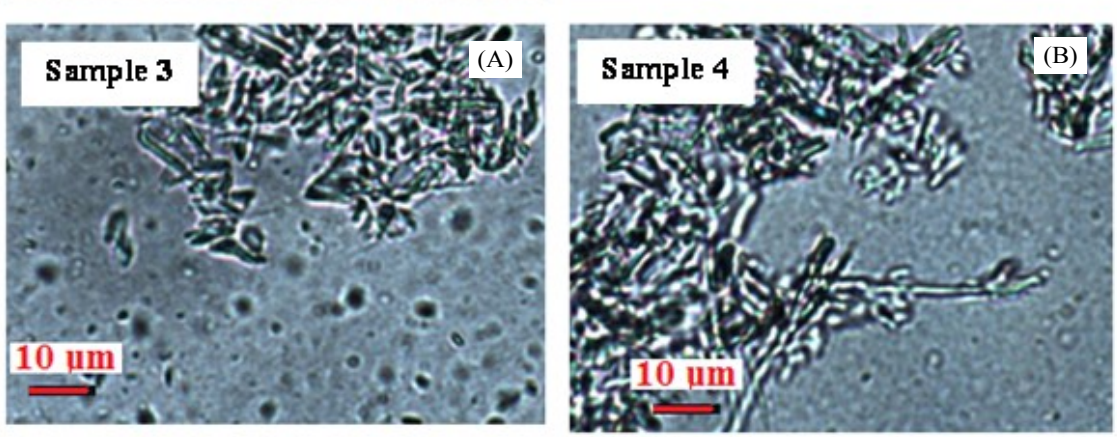
Supplemental Figure 2 Melting offsets of (A) PS-myritol and PS-trilaurin mixtures at various concentrations as a function of heating rate.

Supplemental Table 1 Overview of the long and short spacings of the PS samples

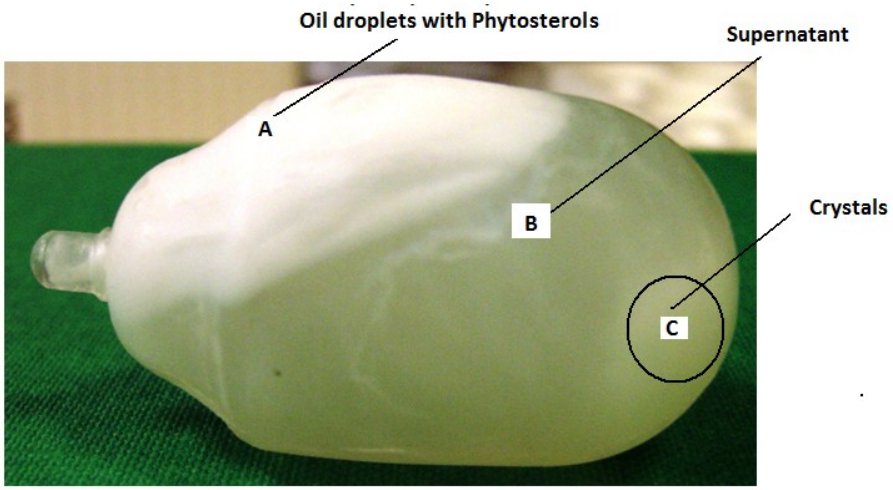
Sample	PS in blend (wt. %)	Bulk Dispersion	Trilaurin	Myritol	Long Spacing (Å)	Short Spacing (Å)	Tween (wt. %)
	100	B			34.5	5.67,5.06,(4.98), 4.69,3.96	-
	40	B	60		33.8,29.2	5.6, 5.09, 4.71, 4.43, 4.00, 3.8, 3.7	
	40	B		60	35.2	5.67, 5.06, (4.98) (4.69) (3.9)	
	10	D		90	None	None	1
	10	D		90	None	None	4
	10	D	90		None	None	1
	10	D	90		None	None	4
	20	D		80	None	4.8, 4.3, (3.9)	2
	30	D		70	34.2	5.5, 4.7, 4.3, (3.5)	4
	30	D	70		33.7	4.5, 4.2, 3.5	4
	40	D		60	33.2	5.6, 4.7, 4.3, 3.9, 3.4	4
	40	D	60		32.7	4.4, 3.4	4



Supplemental Figure 3 Variation in mean Sauter diameter (top, blue) and polydispersity index (bottom, pink) with increasing number of cycles for (A) myritol and (B) trilaurin as the lipid matrix system loaded with 1 wt. % PS.`



Supplemental Figure 4 Optical microscopy images of myritol dispersion containing PS. (A) Samples 3 with 40 wt. % PS and (B) Sample 4 with 40 wt. % PS.



Supplemental Figure 5 Three phases (A – creamed droplets containing dissolved PSs, B – supernatant, C – crystals from sedimented PS particles) obtained after centrifugation for Sample 1.