

Supplementary Information for Thermoresponsive behavior of cyclodextrin inclusion complexes with weakly anionic alkyl ethoxy carboxylates

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S1 Degree of ionization of the surfactants

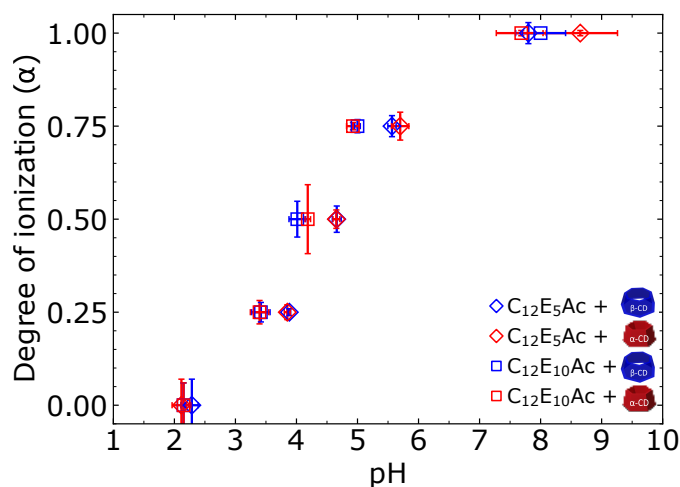


Figure S1: Degree of ionization of the surfactants in the inclusion complexes systems as a function of the measured pH. C₁₂E₅Ac (◇) and C₁₂E₁₀Ac (□) systems corresponding to the assembled systems containing 5%_w surfactant with αCD (red) and βCD (blue).

S2 Small-angle Neutron Scattering (SANS)

S2.1 Characterization of alkyl ethoxy carboxylates and cyclodextrins pure solutions

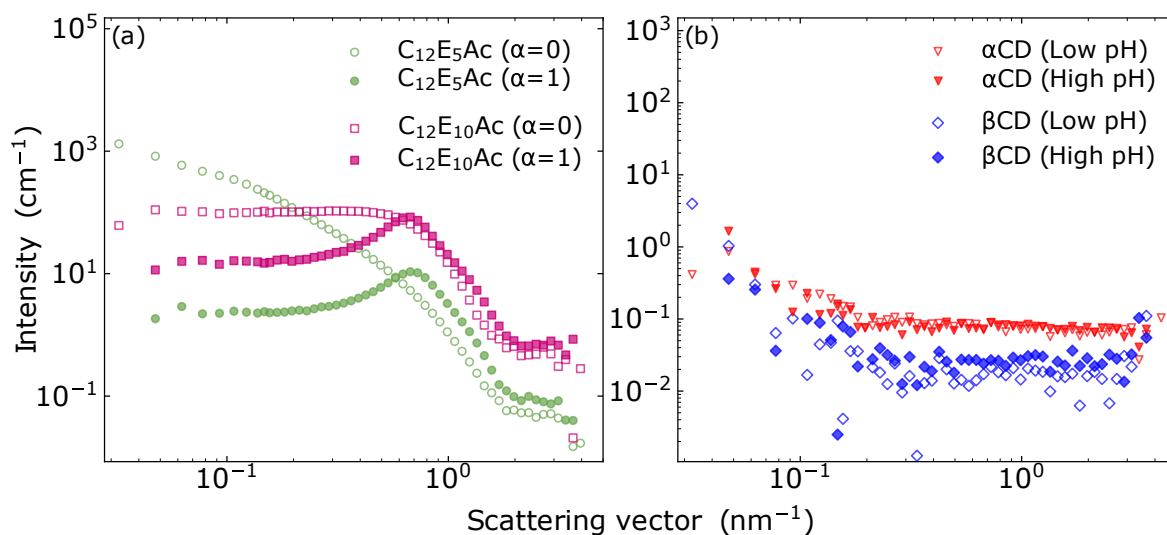


Figure S2: SANS curves of (a) $C_{12}E_5Ac$ and $C_{12}E_{10}Ac$ at 5%wt. and (b) α -cyclodextrin and β -cyclodextrin (saturated solutions) at $\alpha=0$ (open symbols) and $\alpha=1$ (closed symbols). Data measured at ZOOM@ISIS.

S2.2 Structural characteristics of inclusion complexes assemblies

Table S1: Spacing distances of the inclusion complexes supramolecular assemblies obtained by SANS (nm)

2* Temperature (°C)	System	$C_{12}E_5Ac$ - α CD		$C_{12}E_5Ac$ - β CD		$C_{12}E_{10}Ac$ - α CD		$C_{12}E_{10}Ac$ - β CD	
		$\alpha=0$	$\alpha=1$	$\alpha=0$	$\alpha=1$	$\alpha=0$	$\alpha=1$	$\alpha=0$	$\alpha=1$
15		-	13.04	-	14.65	-	17.31	-	14.28
25		-	13.23	-	14.65	-	17.31	-	14.28
45		-	13.72	-	14.65	-	17.31	-	14.28
70		6.48	17.45	-	14.27	-	15.32	-	23.19

S2.3 Iq^2 vs q plots of the SANS data

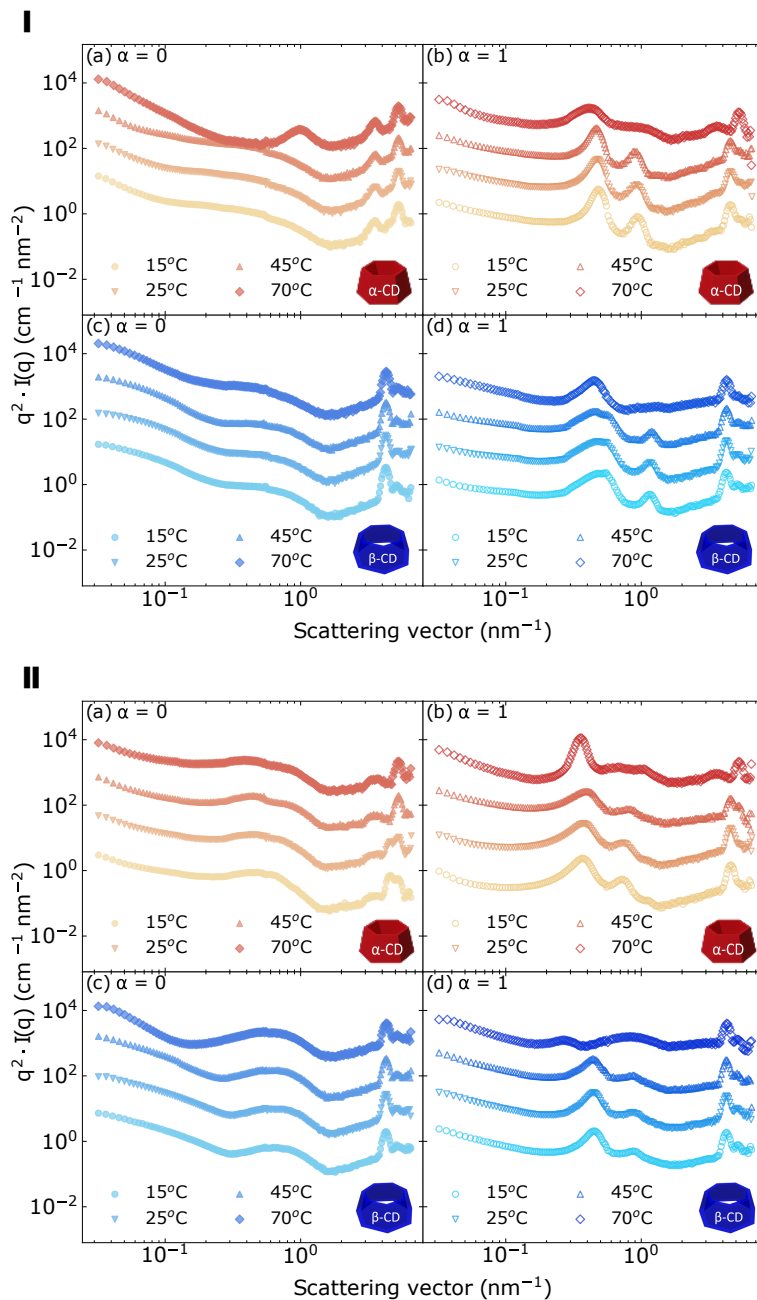


Figure S3: At Ratio CD/Surfactant = 2, Iq^2 vs q plots of (I) $C_{12}E_5Ac$ systems and (II) $C_{12}E_{10}Ac$ systems at low and high pH with α CD (a and b) and β CD (c and d) (Surfactant = 5%wt). Curves are scaled by successive factors of 10 to improve readability.