

Supporting Information

Nature of Saccharide-Induced F127 Micellar Dehydration: An Insight with FDAPT (2-Formyl-5-(4'-*N,N*- dimethylaminophenyl)thiophene), a Multiparametric Fluorescent Probe

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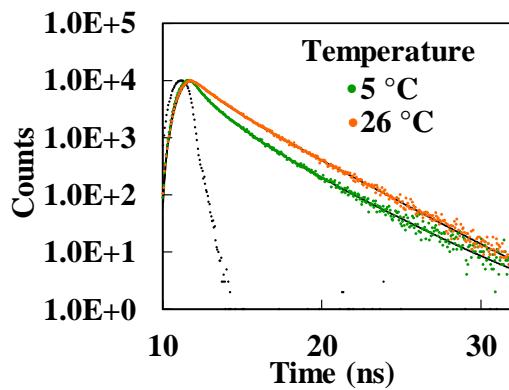


Figure S1. FDAPT emission decay in 10% (w/w) F127 at 5 and 26 °C. $\lambda_{\text{ex}} = 390 \text{ nm}$.

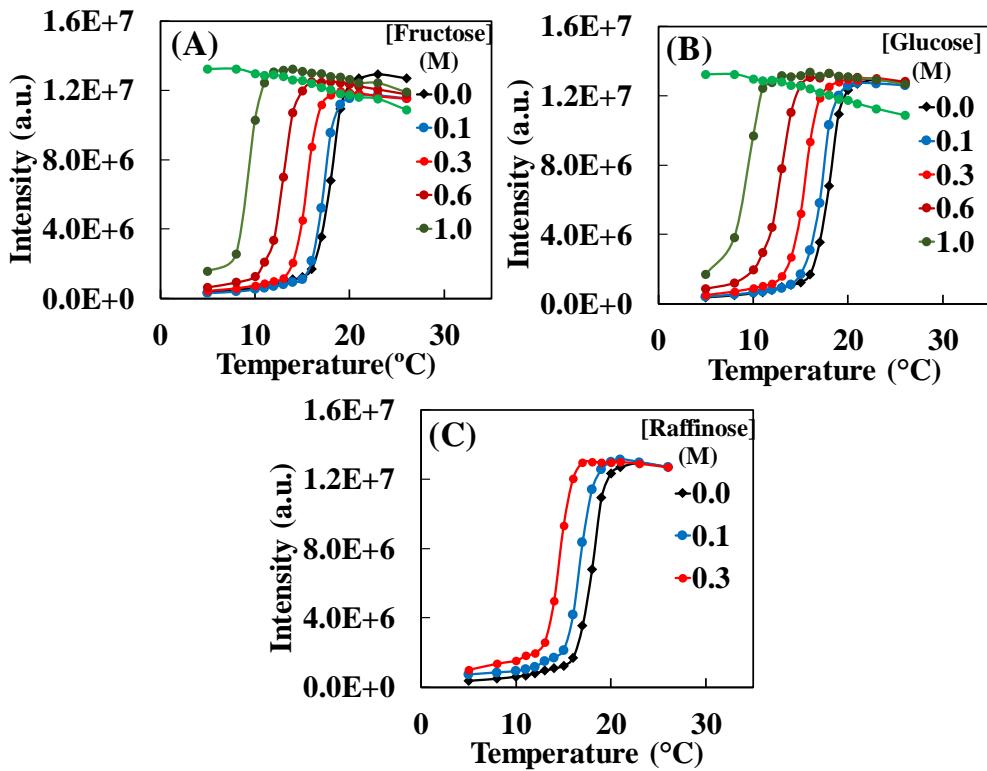


Figure S2. FDAPT emission intensity at 510 nm in 10% (w/w) F127 solution with increasing temperatures at various concentration of A) Fructose, B) Glucose and C) Raffinose. $T = 5 \text{ °C}$. $\lambda_{\text{ex}} = 390 \text{ nm}$.

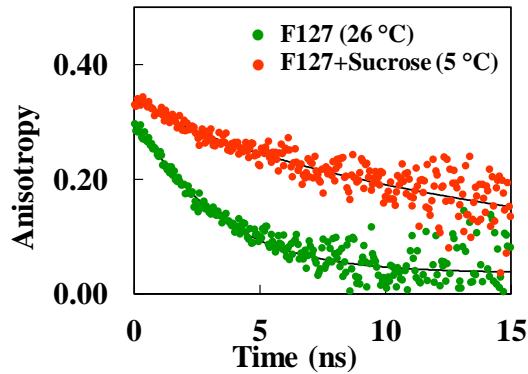


Figure S3. Fluorescence anisotropy decay of FDAPT in F127 (10% w/w) micelle (26 °C) and F127 (10% w/w) micelle with 2 M of sucrose (5 °C). $\lambda_{\text{ex}} = 390$ nm. Decay recorded at 510 nm.

Table S1. FDAPT emission lifetime (τ) and average lifetime (τ_{avg}) in 10 % (w/w) F127 in presence of different saccharides. $T = 5$ °C. $\lambda_{\text{ex}} = 390$ nm. χ^2 represents the goodness of fitting. Error in measurements is $\pm 2\%$.

Sugar (0.3 M)	Lifetime		τ_{avg} (ns)	χ^2
	τ_1 (ns)	τ_2 (ns)		
Fructose	1.09 (0.49)	2.70 (0.51)	1.44	1.3
Glucose	1.18 (0.49)	3.13 (0.51)	1.73	1.3
Sucrose	1.30 (0.52)	3.19 (0.48)	1.81	1.3
Raffinose	1.67 (0.67)	3.68 (0.32)	2.00	1.3

Table S2. The weight fraction of Pluronic (χ_P), water (χ_W) and saccharides (χ_S) are calculated for different concentrations of saccharides in Pluronic-saccharide-water ternary system.

	Weight Fraction	0.0 M	0.1 M	0.3 M	0.6 M	1.0 M	2.0 M
Fructose	χ_P	0.100	0.098	0.095	0.090	0.085	0.074
	χ_W	0.900	0.884	0.854	0.812	0.763	0.662
	χ_S	0.000	0.018	0.051	0.097	0.153	0.265
Glucose	χ_P	0.100	0.098	0.095	0.090	0.085	0.074
	χ_W	0.900	0.884	0.854	0.812	0.763	0.662
	χ_S	0.000	0.018	0.051	0.097	0.153	0.265
Sucrose	χ_P	0.100	0.097	0.091	0.083	0.075	0.059
	χ_W	0.900	0.870	0.816	0.747	0.671	0.534
	χ_S	0.000	0.033	0.093	0.170	0.255	0.406
Raffinose	χ_P	0.100	0.094	0.085			
	χ_W	0.900	0.849	0.764			
	χ_S	0.000	0.056	0.151			