Supplementary Information for

Tuning micelle dimensions and properties with binary surfactant mixtures

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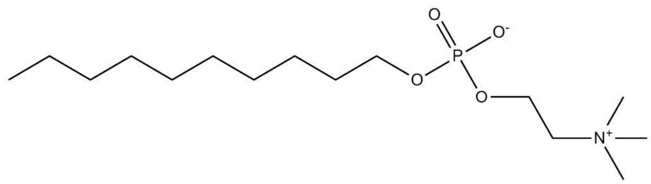
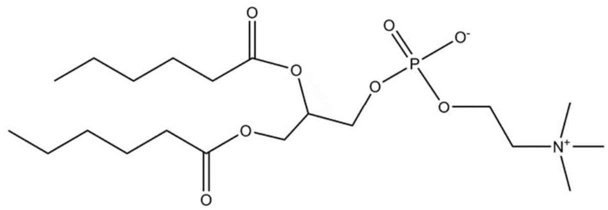


***n*-decyl-phosphocholine**

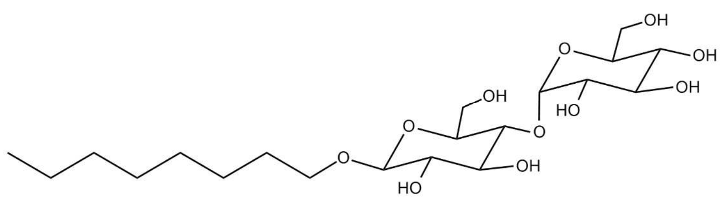
(fos-choline 10, FC10)



1,2-dihexanoyl-*sn*-glycero-

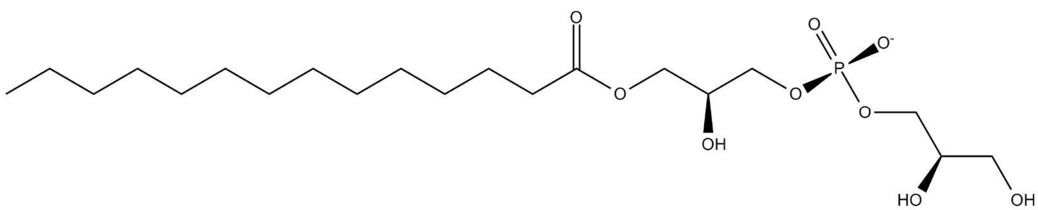
3-phosphocholine

(06:0 PC, DHPC)



***n*-octyl-*β*-D-maltopyranoside**

(octyl maltoside, OM)



1-myristoyl-2-hydroxy-*sn*-glycero-3-phospho-(1'-*rac*-glycerol)

(14:0 lyso PG, LMPG)

Figure S1. Chemical structures of detergent types investigated in this study. A total of twelve micelle-forming detergents were components of binary mixtures: phosphocholines with 10, 12, and 14 carbons in the alkyl chain (FC10/FC12/FC14), a phosphocholine with 2 6-carbon alkyl chains (DHPC), maltosides with 8, 9, 10, 12, 13, and 14 carbons in the alkyl chain (OM/NM/DM/DDM/13M/14M), and lyso-phosphatidyl glycerols with 14 and 16 carbons in the alkyl chain (LMPG/LPPG). Each head groups chemical structure is depicted with the shortest alkyl chain variant investigated.

Table S1. Model-independent geometric properties for detergent mixtures of maltoside and phosphocholine detergents.

Detergents	[A] (mM)	[B] (mM)	X_A	Rg_{expt}	L_{expt}	N_{Aexpt}	N_{Bexpt}
DDM	0	57	0.000	32.0	40.6	0	118
DM/DDM-1	25	50	0.333	29.9	37.7	25	49
DM/DDM-2	50	50	0.500	28.5	37.0	33	33
DM/DDM-3	50	25	0.667	27.6	36.1	45	22
DM	58	0	1.000	26.7	34.3	74	0
13M	0	40	0.000	43.5	42.4	0	77
NM/13M-1	10	30	0.250	32.2	40.9	12	35
NM/13M-2	20	20	0.500	28.9	37.3	18	18
NM/13M-3	30	10	0.749	28.6	34.9	26	9
NM	46	0	1.000	24.8	30.9	24	0
14M	0	40	0.000	49.4	45.0	0	129
OM/14M-1	10	30	0.250	33.0	42.0	14	41
OM/14M-2	20	20	0.500	30.7	40.2	31	31
OM/14M-3	30	10	0.750	25.3	34.2	20	7
OM	60	0	1.000	21.5	28.0	44	0
OM	0	56	0.000	21.5	28.0	0	44
FC10/OM-1	19	38	0.333	21.6	28.2	14	28
FC10/OM-2	19	16	0.543	22.3	27.5	25	21
FC10/OM-3	25	12	0.676	21.9	27.6	29	14
FC10	59	0	1.000	25.0	28.2	33	0
DM	0	58	0.000	26.7	34.3	0	74
FC10/DM-1	7	47	0.130	25.8	33.2	9	58
FC10/DM-2	20	21	0.488	25.0	31.3	34	36
FC10/DM-3	39	21	0.650	23.9	30.4	40	21
FC10	59	0	1.000	25.0	28.2	33	0
DDM	0	57	0.000	32.0	40.6	0	118
FC10/DDM-1	18	39	0.316	28.4	37.5	30	65
FC10/DDM-2	30	29	0.508	27.3	35.2	43	42
FC10/DDM-3	39	19	0.672	26.2	33.4	50	25

FC10	59	0	1.000	25.0	28.2	33	0
OM	0	56	0.000	22.0	28.0	0	44
FC12/OM-1	19	39	0.328	23.9	31.3	12	24
FC12/OM-2	27	29	0.482	24.6	31.9	19	20
FC12/OM-3	38	3	0.927	29.2	34.0	45	4
FC12	58	0	1.000	31.8	34.4	47	0
DM	0	58	0.000	26.0	34.3	0	74
FC12/DM-1	16	46	0.258	26.3	33.5	14	40
FC12/DM-2	30	30	0.500	26.8	33.7	34	34
FC12/DM-3	38	18	0.679	27.0	33.5	35	17
FC12	59	0	1.000	31.8	34.4	47	0
DDM	0	57	0.000	32.8	40.3	0	118
FC12/DDM-1	24	59	0.289	29.3	38.1	20	50
FC12/DDM-2	31	37	0.456	28.3	37.2	31	37
FC12/DDM-3	35	28	0.556	28.6	36.5	35	28
FC12	58	0	1.000	31.8	34.4	47	0
OM	0	56	0.000	21.5	28.0	0	44
FC14/OM-1	20	39	0.339	26.1	34.1	14	27
FC14/OM-2	28	29	0.491	27.8	36.0	22	23
FC14/OM-3	18	4	0.818	45.3	39.3	56	12
FC14	58	0	1.000	46.5	42.0	78	0
DM	0	58	0.000	26.7	34.3	0	74
FC14/DM-1	28	46	0.378	28.4	36.3	20	33
FC14/DM-2	44	35	0.557	29.9	37.9	29	23
FC14/DM-3	57	23	0.713	31.6	38.5	35	14
FC14	58	0	1.000	46.5	42.0	78	0
DDM	0	57	0.000	32.0	41.0	0	118
FC14/DDM-1	26	78	0.250	31.2	39.7	17	52
FC14/DDM-2	43	59	0.422	31.9	40.0	30	42
FC14/DDM-3	65	30	0.684	33.3	40.7	41	19
FC14	58	0	1.000	46.5	42.0	75	0

[A] and [B] represent total detergent concentrations in solution. The mole fraction of detergent A comprising mixed micelles, X_A, assumes complete detergent mixing and was calculated using the total detergent concentration adjusted by the cmc for the mixed micelle. Rg was determined from Guinier analysis, L_{expt} from the position of the second peak maximum, aggregation numbers for each component according to eq 4.

Table S2. Model-independent geometric properties for detergent mixtures with LPGs.

Detergents	[A] (mM)	[B] (mM)	X_A	Rg_{expt} *(Å)*	L_{expt} *(Å)*	N_{Aexpt}	N_{Bexpt}
DM	0	58	0.000	26.8	34.3	0	74
LMPG/DM-1	30	54	0.357	24.8	36.3	14	25
LMPG/DM-2	39	46	0.459	24.5	37.7	17	20
LMPG/DM-3	61	34	0.642	23.7	37.7	19	11
LMPG	54	0	1.000	27.7	39.4	42	0
DDM	0	58	0.000	33.1	41.0	0	118
LMPG/DDM-1	29	87	0.250	27.3	40.4	13	39
LMPG/DDM-2	60	58	0.508	24.8	40.0	18	17
LMPG/DDM-3	90	29	0.756	24.1	39.1	20	7
LMPG	54	0	1.000	27.7	39.4	42	0
FC10	0	59	0.000	25.0	28.2	0	33
LMPG/FC10-1	20	38	0.345	25.8	34.8	15	28
LMPG/FC10-2	28	31	0.475	25.7	36.7	21	23
LMPG/FC10-3	38	20	0.655	25.7	37.7	29	16
LMPG	54	0	1.000	27.7	39.4	42	0
FC12	0	58	0.000	31.8	34.4	0	47
LMPG/FC12-1	20	40	0.333	30.7	38.2	14	28
LMPG/FC12-2	39	35	0.527	28.3	37.9	17	16
LMPG/FC12-3	61	26	0.701	25.1	38.6	19	8
LMPG	54	0	1.000	27.7	39.4	42	0
FC10	0	50	0.000	27.2	27.4	0	34
LPPG/FC10-1	10	50	0.167	21.6	33.8	6	31
LPPG/FC10-2	20	50	0.286	25.7	35.9	11	26
LPPG/FC10-3	30	50	0.375	27.5	37.6	14	23
LPPG/FC10-4	40	50	0.444	26.7	38.5	14	18
LPPG/FC10-5	50	50	0.500	27.0	39.3	18	16
LPPG	50	0	1.000	31.5	44.9	46	0
DM	0	50	0.000	25.8	34.0	0	67
LPPG/DM-1	10	50	0.167	26.6	36.5	10	52

LPPG/DM-2	20	50	0.286	24.5	37.9	18	45
LPPG/DM-3	30	50	0.375	25.4	38.8	23	39
LPPG/DM-4	40	50	0.444	20.2	39.5	23	29
LPPG/DM-5	50	50	0.500	17.6	40.0	23	23
LPPG	50	0	1.000	28.8	43.9	56	0
DHPC	0	50	0.000	16.9	24.0	0	39
LPPG/DHPC-1	10	40	0.200	22.9	33.2	9	37
LPPG/DHPC-2	25	25	0.500	21.7	40.0	26	26
LPPG/DHPC-3	40	10	0.800	25.8	43.9	43	11
LPPG	50	0	1.000	29.3	45.9	56	0

[A] and [B] represent total detergent concentrations in solution. The mole fraction of detergent A comprising mixed micelles, X_A, assumes complete detergent mixing and was calculated using the total detergent concentration adjusted by the cmc for the mixed micelle. Rg was determined from Guinier analysis, L_{expt} from the position of the second peak maximum, and aggregation numbers for each component according to eq 4.

Table S3. Model-dependent geometric properties for detergent mixtures of maltoside and phosphocholine detergents.

Detergents	ρ_1 (e/Å^3)	ρ_2 (e/Å^3)	shape	a (Å)	b (Å)	t (Å)	N_{Amodel}	N_{Bmodel}	Rg_{model} (Å)	L_{model} (Å)
DDM	0.277	0.520	oblate	15.9	28.1	5.5	0	142	30.4	36.3
DM/DDM-1	0.276	0.520	oblate	15.0	26.3	5.5	44	87	29.0	35.5
DM/DDM-2	0.275	0.520	oblate	14.4	25.7	5.5	62	62	28.2	34.3
DM/DDM-3	0.274	0.520	oblate	13.9	25.2	5.5	78	39	27.6	33.3
DM	0.273	0.520	oblate	13.2	23.1	5.5	100	0	25.5	31.9
13M	0.278	0.520	oblate	16.0	31.7	5.5	0	179	34.0	37.5
NM/13M-1	0.277	0.520	oblate	15.5	28.5	5.5	38	113	31.1	36.5
NM/13M-2	0.274	0.520	oblate	14.5	26.1	5.5	64	64	28.7	34.5
NM/13M-3	0.271	0.520	oblate	13.1	24.0	5.5	80	27	26.3	31.7
NM	0.270	0.520	oblate	11.8	21.5	5.5	85	0	23.7	29.1
14M	0.280	0.520	oblate	17.5	33.4	5.5	0	202	36.3	40.5
OM/14M-1	0.277	0.520	oblate	17.0	28.6	5.7	40	120	31.9	39.7
OM/14M-2	0.274	0.520	oblate	16.1	26.9	5.5	75	75	30.3	37.7
OM/14M-3	0.271	0.520	oblate	14.0	22.2	6.0	77	26	25.3	34
OM	0.268	0.520	oblate	11.2	18.5	5.5	66	0	21.0	27.9
OM	0.268	0.520	oblate	11.2	18.5	5.5	0	68	21.0	27.9
FC10/OM-1	0.268	0.518	oblate	10.9	19.3	4.5	22	44	21.6	26.3
FC10/OM-2	0.269	0.513	oblate	11.0	18.8	3.5	31	26	21.9	25.5
FC10/OM-3	0.270	0.505	prolate	21.7	13.1	3.3	36	17	22.1	29.5
FC10	0.273	0.490	prolate	21.0	13.4	2.9	54	0	24.3	29.7
DM	0.273	0.520	oblate	13.2	23.1	5.5	0	99	25.5	31.9
FC10/DM-1	0.273	0.517	oblate	13.1	22.3	5.1	12	80	24.9	31.3
FC10/DM-2	0.273	0.507	oblate	12.8	20.6	4.2	37	39	24.0	29.8

FC10/DM-3	0.273	0.501	oblate	12.4	20.1	3.9	47	25	23.8	28.7
FC10	0.273	0.490	prolate	21.0	13.4	2.9	54	0	24.3	29.7
DDM	0.277	0.520	oblate	15.9	28.1	5.5	0	145	31.0	37.3
FC10/DDM-1	0.276	0.511	oblate	14.8	24.6	4.6	35	75	28.3	34.2
FC10/DDM-2	0.275	0.505	oblate	14.0	23.4	4.0	48	47	27.8	32.0
FC10/DDM-3	0.274	0.500	oblate	13.5	21.5	3.8	56	27	26.1	30.8
FC10	0.273	0.490	prolate	21.0	13.4	2.9	54	0	24.3	29.7
OM	0.268	0.520	oblate	11.2	18.5	5.5	0	68	21.0	27.9
FC12/OM-1	0.271	0.511	oblate	12.6	21.1	4.9	28	58	24.0	30.1
FC12/OM-2	0.272	0.506	oblate	13.5	21.3	4.7	44	47	24.8	31.7
FC12/OM-3	0.276	0.492	prolate	23.5	16.4	3.1	71	6	29.9	35.9
FC12	0.277	0.490	prolate	24.3	16.2	2.9	76	0	32.1	35.3
DM	0.273	0.520	oblate	13.2	23.1	5.5	0	99	25.5	31.9
FC12/DM-1	0.274	0.512	oblate	13.9	22.6	4.9	25	71	25.8	32.7
FC12/DM-2	0.275	0.505	oblate	14.0	22.5	4.2	46	46	26.5	32.2
FC12/DM-3	0.276	0.500	prolate	25.7	16.4	3.7	58	28	27.5	36.5
FC12	0.277	0.490	prolate	24.3	16.2	2.9	76	0	32.1	35.3
DDM	0.277	0.520	oblate	15.4	27.8	5.5	0	139	30.4	36.3
FC12/DDM-1	0.277	0.511	oblate	15.4	25.6	4.7	34	84	29.3	35.5
FC12/DDM-2	0.277	0.506	oblate	15.0	24.9	4.3	50	60	29.1	34.3
FC12/DDM-3	0.277	0.503	oblate	15.5	23.3	4.0	55	44	28.6	35.0
FC12	0.277	0.490	prolate	24.3	16.2	2.9	76	0	32.1	35.3
OM	0.268	0.520	oblate	11.2	18.5	5.5	0	68	21.0	27.9
FC14/OM-1	0.272	0.510	oblate	15.0	22.0	4.7	34	65	26.2	34.7
FC14/OM-2	0.274	0.505	oblate	15.1	23.3	4.2	50	52	28.2	34.4
FC14/OM-3	0.278	0.495	prolate	30.3	18.2	3.3	89	20	36.2	39.7

FC14	0.280	0.490	prolate	29.3	18.7	2.9	105	0	46.2	40.3
DM	0.273	0.520	oblate	13.2	23.1	5.5	0	99	25.5	31.9
FC14/DM-1	0.276	0.509	oblate	15.4	23.9	4.3	40	65	28.4	35.1
FC14/DM-2	0.277	0.503	oblate	15.7	24.5	3.9	59	47	30.4	35.3
FC14/DM-3	0.278	0.499	oblate	15.9	24.5	3.5	74	30	32.6	35.3
FC14	0.280	0.490	prolate	29.3	18.7	2.9	105	0	46.2	40.3
DDM	0.277	0.520	oblate	15.4	27.8	5.5	0	139	30.4	36.3
FC14/DDM-1	0.278	0.513	oblate	15.2	28.1	4.8	34	101	31.3	35.2
FC14/DDM-2	0.278	0.507	oblate	16.0	27.2	4.4	55	75	31.8	36.4
FC14/DDM-3	0.279	0.499	prolate	28.5	18.0	3.5	67	31	31.7	39.5
FC14	0.280	0.490	prolate	29.3	18.7	2.9	105	0	46.2	40.3

ρ_1 and ρ_2 are calculated electron densities for head group and tail portions of the detergent using the Tanford formula to adjust for alkyl chain length, the shape is determined by the best-fit comparison of oblate, prolate, and sphere core-shell models, *a* and *b* are dimensions of the ellipsoid having thickness *t*, N_A and N_B are calculated according to eq 6, *Rg* , and *L* from eq 8.

Table S4. Model-dependent geometric properties for detergent mixtures with LPGs as determined from core-shell ellipsoid model fits to the mixed micelle SAXS profiles.

Detergents	σ_1	σ_2	shape	a (Å)	b (Å)	t (Å)	N_{Amodel}	N_{Bmodel}	Rg_{model} (Å)	L_{model} (Å)
DM	0.273	0.520	oblate	13.2	23.1	5.5	100	0	25.5	31.9
LMPG/DM-1	0.275	0.502	oblate	15.9	23.8	5.7	79	44	27.9	37.5
LMPG/DM-2	0.276	0.497	oblate	15.5	24.2	5.7	67	57	28.1	36.7
LMPG/DM-3	0.277	0.488	oblate	15.9	24.4	5.8	46	83	28.7	37.6
LMPG	0.280	0.470	oblate	15.9	24.7	6.0	0	135	29.4	37.8
DDM	0.277	0.520	oblate	15.4	27.8	5.5	139	0	30.4	36.3
LMPG/DDM-1	0.278	0.507	oblate	16.5	26.8	5.6	107	36	30.5	38.6
LMPG/DDM-2	0.279	0.495	oblate	16.6	26.5	5.8	72	75	30.5	39.0
LMPG/DDM-3	0.279	0.482	oblate	16.5	25.7	5.9	35	108	30.3	38.9
LMPG	0.280	0.470	oblate	15.9	24.7	6.0	0	135	29.4	37.8
FC10	0.273	0.490	prolate	21.0	13.4	2.9	54	0	24.3	29.7
LMPG/FC10-1	0.275	0.483	oblate	15.1	21.5	4.0	63	33	28.1	34.2
LMPG/FC10-2	0.276	0.480	oblate	14.8	23.5	4.4	58	53	29.2	34.0
LMPG/FC10-3	0.278	0.477	oblate	16.3	23.9	4.9	43	82	29.9	37.5
LMPG	0.280	0.470	oblate	15.9	24.7	6.0	0	135	29.4	37.8
FC12	0.277	0.490	prolate	24.3	16.2	2.9	76	0	32.1	35.3
LMPG/FC12-1	0.278	0.483	oblate	16.4	24.1	4.0	78	39	32.1	36.8
LMPG/FC12-2	0.279	0.479	oblate	16.3	24.3	4.5	57	64	30.7	37.1
LMPG/FC12-3	0.279	0.476	oblate	16.9	24.4	5.0	39	91	30.5	38.8
LMPG	0.280	0.470	oblate	15.9	24.7	6.0	0	135	29.4	37.8
FC10	0.273	0.490	prolate	20.2	13.2	2.7	49	0	24.6	29.1
LPPG/FC10-1	0.274	0.487	oblate	14.2	23.0	3.1	78	16	36.0	31.5
LPPG/FC10-2	0.275	0.484	oblate	15.2	21.5	3.8	66	26	28.7	34.2
LPPG/FC10-3	0.276	0.483	oblate	15.7	22.0	4.0	61	37	29.2	35.4

LPPG/FC10-4	0.277	0.481	oblate	16.1	22.7	4.0	57	46	30.5	36.2
LPPG/FC10-5	0.277	0.480	oblate	16.7	23.9	4.5	60	60	30.9	37.9
LPPG	0.281	0.470	oblate	19.8	28.8	7.0	0	208	34.9	46.6
DM	0.273	0.520	oblate	12.2	24.7	4.7	95	0	26.5	29.1
LPPG/DM-1	0.274	0.512	oblate	14.7	23.4	5.0	85	17	26.9	34.4
LPPG/DM-2	0.275	0.506	oblate	13.5	24.0	4.5	66	27	27.2	31.5
LPPG/DM-3	0.276	0.501	oblate	14.3	24.0	4.5	60	36	27.8	33.1
LPPG/DM-4	0.277	0.498	oblate	18.1	25.2	5.6	79	63	30.5	41.8
LPPG/DM-5	0.277	0.495	oblate	18.5	25.0	5.8	72	72	30.4	42.8
LPPG	0.281	0.470	oblate	18.5	28.0	6.0	0	171	34.2	43.0
DHPC	0.253	0.464	oblate	8.5	16.8	4.9	39	0	20.0	21.9
LPPG/DHPC-1	0.259	0.465	oblate	13.0	20.0	5.5	59	15	25.8	31.5
LPPG/DHPC-2	0.267	0.467	oblate	13.5	23.2	5.0	45	45	29.3	32.0
LPPG/DHPC-3	0.275	0.469	oblate	18.0	26.0	5.5	28	113	33.6	41.5
LPPG	0.281	0.470	oblate	18.8	37.0	6.2	0	282	43.6	43.8

ρ_1 and ρ_2 are calculated electron densities for head group and tail portions of the detergent using the Tanford formula to adjust for alkyl chain length, the shape is determined by the best-fit comparison of oblate, prolate, and sphere core-shell models, a and b are dimensions of the ellipsoid having thickness t, N_A and N_B are calculated according to eq 6, Rg , and L from eq 8.

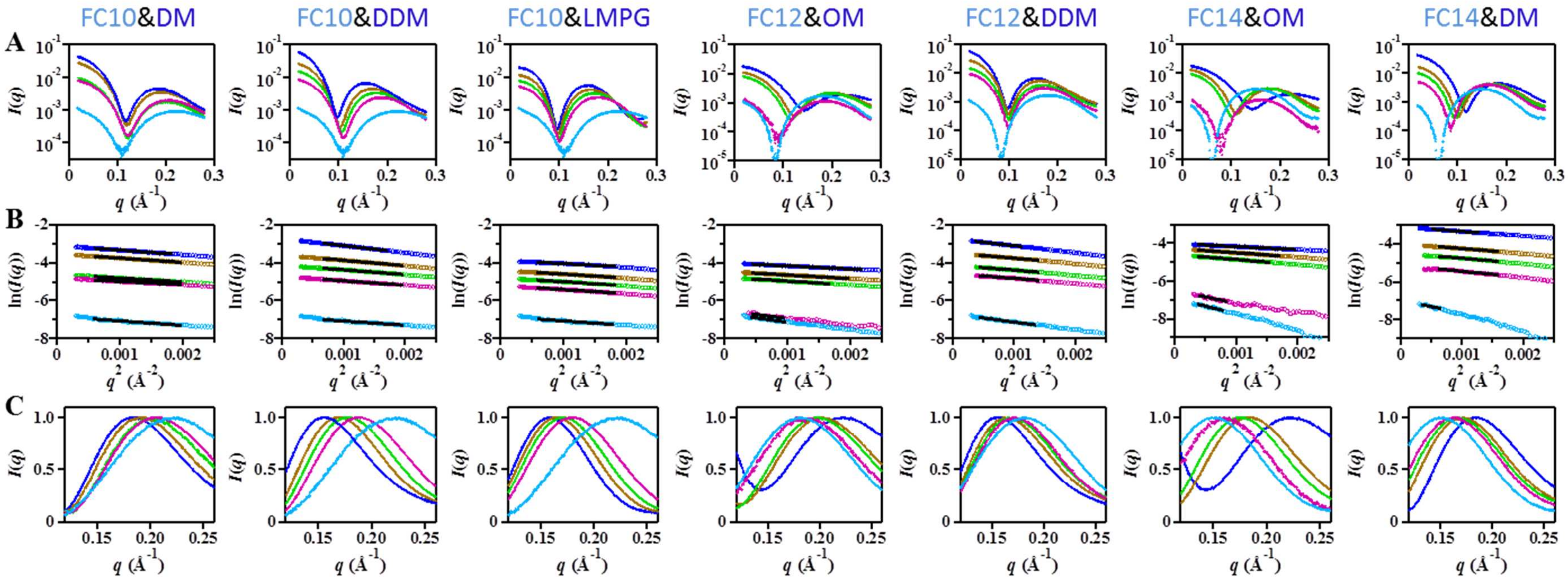


Figure S2. Small-angle X-ray scattering profiles, Guinier plots (ln(*I*) vs q^2) of low angle scattering, and second maxima normalized by peak height for binary detergent mixtures. A) SAXS scattering profiles of binary mixtures comprised of the two detergents listed above the plot. B) Guinier plots of the low angle scattering data shown in panel A. Linear fits are shown (black lines), and the slope of these lines was used to determine Rg. C) Normalized plots of the second maximum observed at intermediate scattering angles the maximum is used to calculate L_{expt}.

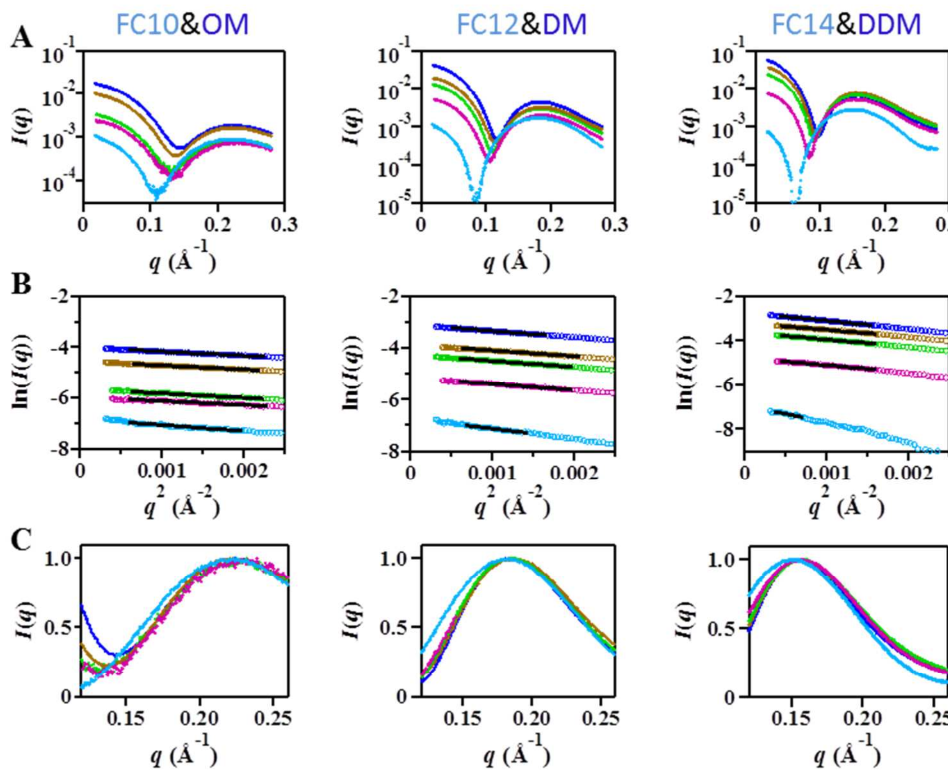


Figure S3. Small-angle X-ray scattering profiles, Guinier plots (ln(*I*) vs q^2) of low angle scattering, and second maxima normalized by peak height for binary mixtures. A) SAXS scattering profiles of binary mixtures comprised of the two detergents listed above the plot. B) Guinier plots of the low angle scattering data shown in panel A. Linear fits are shown (black lines), and the slope of these lines was used to determine Rg. C) Normalized plots of the second maximum observed at intermediate scattering angles the maximum is used to calculate L_{expt}.

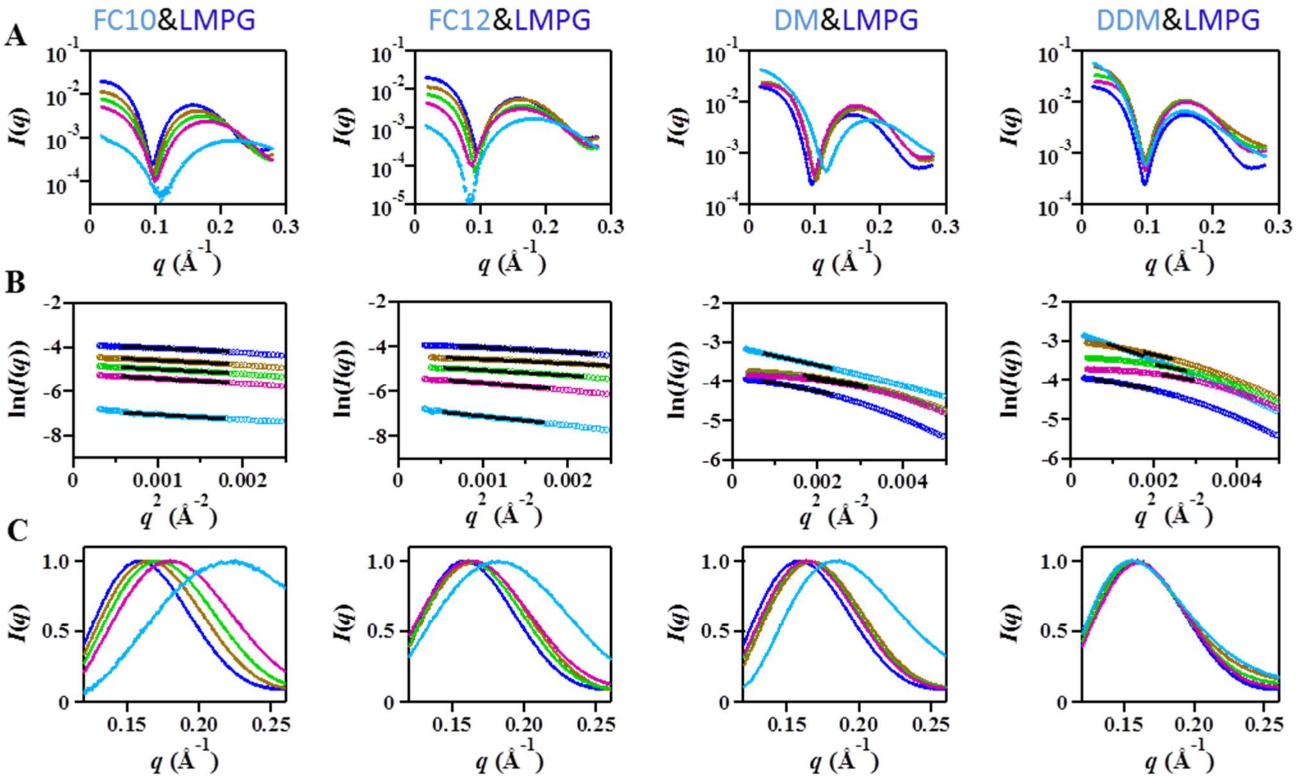


Figure S4. Small-angle X-ray scattering profiles, Guinier plots (ln(I) vs q^2) of low angle scattering, and second maxima normalized by peak height for binary mixtures with LMPG. A) SAXS scattering profiles of binary mixtures comprised of the two detergents listed above the plot. B) Guinier plots of the low angle scattering data shown in panel A. Linear fits are shown (black lines), and the slope of these lines was used to determine Rg. C) Normalized plots of the second maximum observed at intermediate scattering angles the maximum is used to calculate L_{expt}.

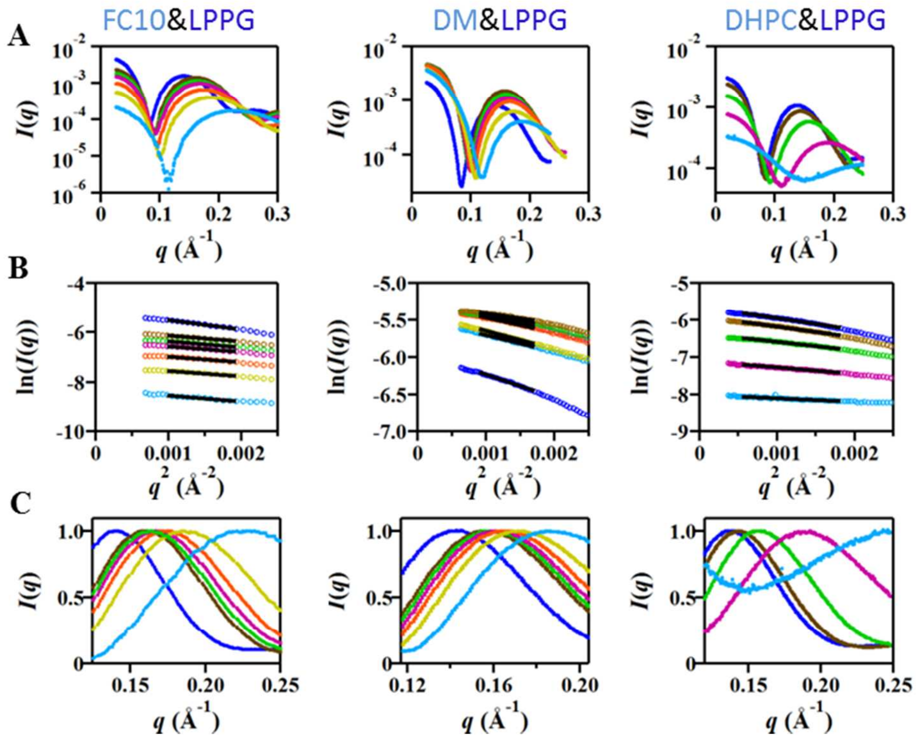


Figure S5. Small-angle X-ray scattering profiles, Guinier plots (ln(*I*) vs q^2) of low angle scattering, and second maxima normalized by peak height for binary mixtures with LPPG. A) SAXS scattering profiles of binary mixtures comprised of the two detergents listed above the plot. B) Guinier plots of the low angle scattering data shown in panel A. Linear fits are shown (black lines), and the slope of these lines was used to determine Rg. C) Normalized plots of the second maximum observed at intermediate scattering angles the maximum is used to calculate L_{expt}.

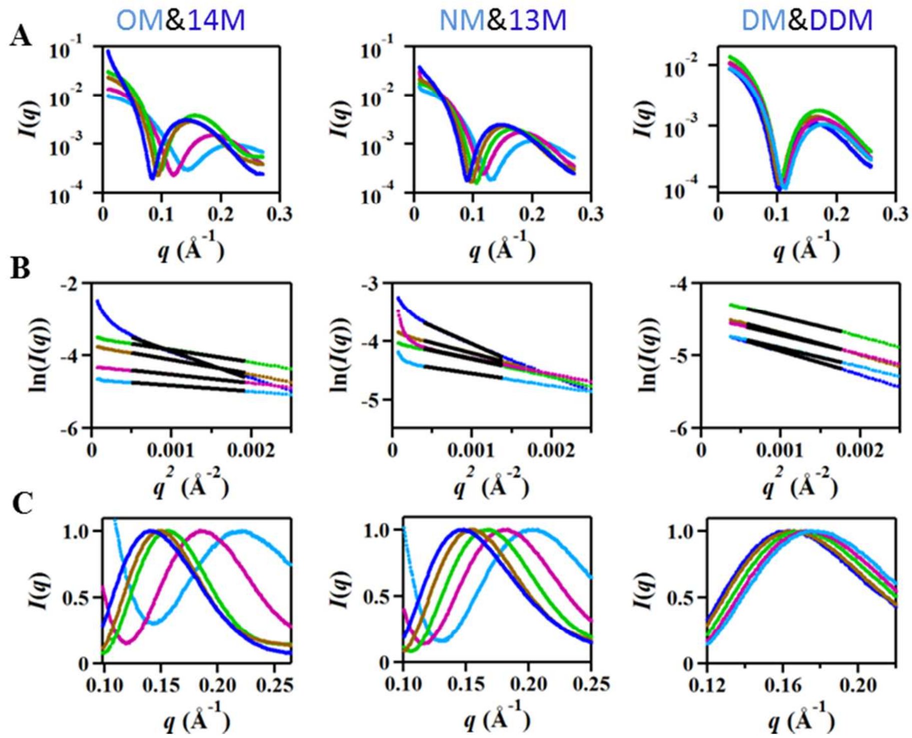


Figure S6. Small-angle X-ray scattering profiles, Guinier plots (ln(*I*) vs q^2) of low angle scattering, and second maxima normalized by peak height for binary mixtures of maltoside detergents. A) SAXS scattering profiles of binary mixtures comprised of the two detergents listed above the plot. B) Guinier plots of the low angle scattering data shown in panel A. Linear fits are shown (black lines), and the slope of these lines was used to determine Rg. C) Normalized plots of the second maximum observed at intermediate scattering angles the maximum is used to calculate L_{expt}.

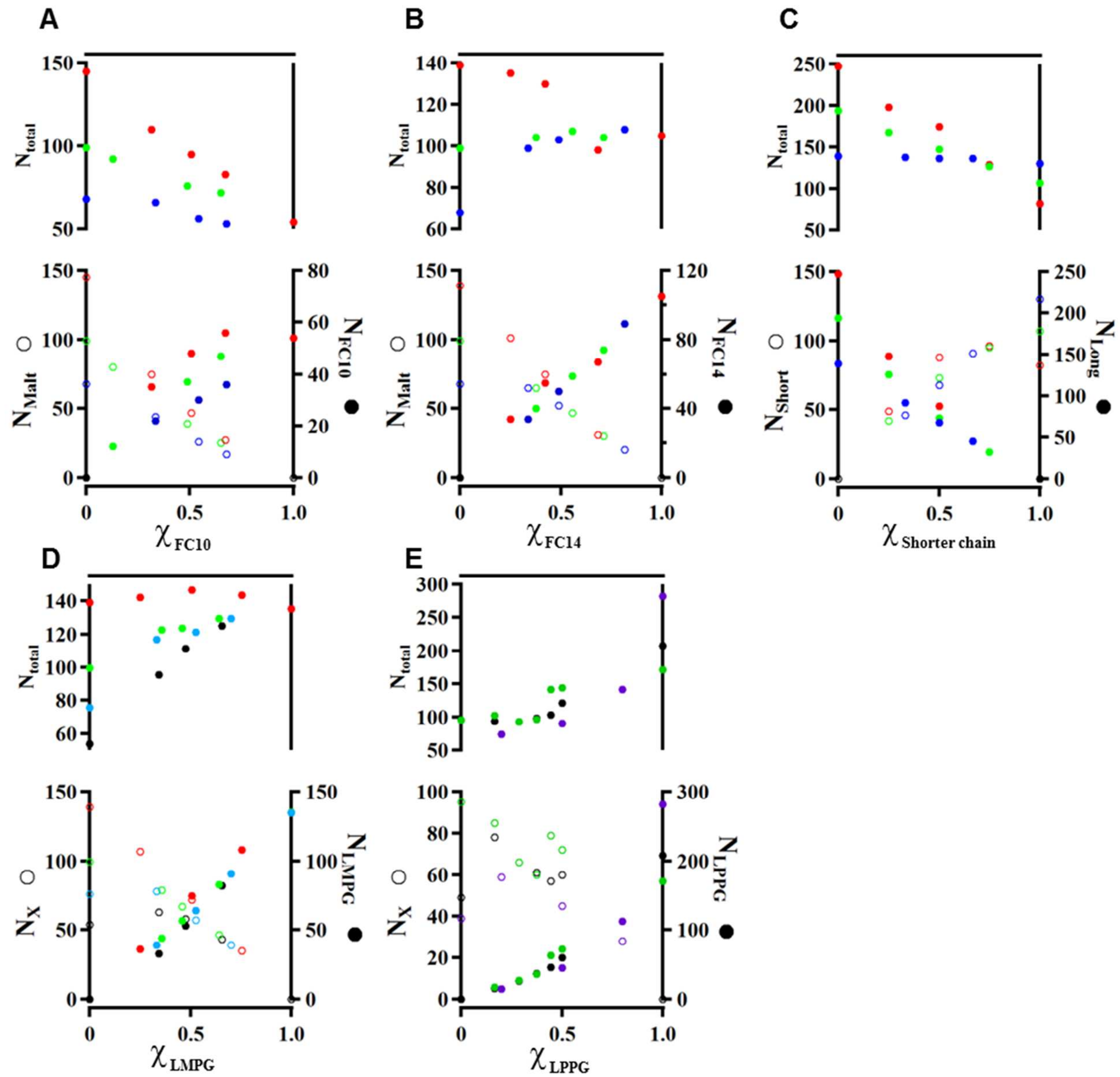


Figure S7. Dependence of aggregation number on micelle mole fraction of binary mixtures. Aggregation number (N_{model}) is plotted as a function of FC10 (A), FC14 (B), short chain detergents (C) and LMPG (D) micellar mole fraction. FC10 (A) and FC14 (B) were mixed with DDM (red), DM (green), and OM (blue). Short and long chain maltoside mixtures of OM and 14M (red), NM and 13M (green) and DM and DDM (blue) (C) and LMPG mixed with FC10 (black), FC12 (lt. blue), DM (green), and DDM (red) (D). The total micelle aggregation number

(N_{total}; top) and the aggregation number of each component is plotted (open circles and filled circles indicate aggregation numbers for component indicated by axes).

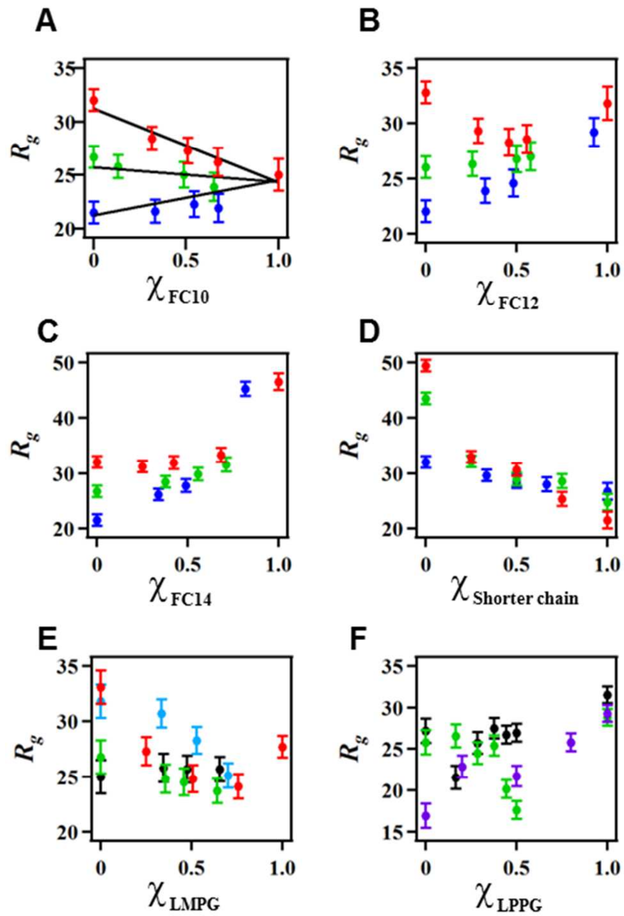


Figure S8. Dependence of mixed micelle R_g on mole fraction of detergent in a binary mixed micelle. R_g calculated from the Guinier analysis are plotted as a function of FC10 (A), FC12 (B), FC14 (C), LMPG (E), and LPPG (F) micellar mole fraction for mixtures with DDM (red), DM (green), and OM (blue) (A – C) or with FC10 (black), FC12 (cyan), DM (green), and DDM (red) (E) and DHPC (purple), FC10 (black), and DM (green) (F). In addition, R_g for maltoside mixtures are plotted for OM and 14M (red), NM and 13M (green) and DM and DDM (blue) as a function of micellar mole fraction of the shorter chain detergent (E).