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APPENDICES

Appendix A Experimental Data of Solubilization Parameter (SP)

1. Solubilization Parameter (SP)

The Solubilization parameter (SP) of each phase of microemulsion is interpreted by the following formulation:

Oil-in-water microemulsion phase (Winsor type I):

$$SPw = \frac{0.5 * 10}{Ms}$$

$$SPo = \frac{(0.5 - Vo) * 10}{Ms}$$

Middle microemulsion phase (Winsor type III):

$$SPw = \frac{(0.5 - Vw) * 10}{Ms}$$

$$SPo = \frac{(0.5 - Vo) * 10}{Ms}$$

Water-in-oil (w/o) microemulsion phase (Winsor type II)

$$SPw = \frac{(0.5 - Vw) * 10}{Ms}$$

$$SPo = \frac{0.5 * 10}{Ms}$$

where

SPw = solubilization parameter of water

SPo = solubilization parameter of oil

Vw = volume of water solubilized in the micellar solution

Vo = volume of oil solubilized in the micellar solution

Ms = total mass of surfactant in the micellar soluton

Table A1 Solubilization parameter (SP) of AE3/n-butanol/motor oil/water system with α = 0.5 at 20 °C

%AE3 (wt.%)	wt.AE3 (g)	%but (%wt/vol)	wt.but (g)	wt.total Ms(g)	phase height (mm)			total 3 phase(mm)	Vw	Vo	SPw	Spo
					water	middle	oil					
5	0.2506	12	0.6027	0.8533	26.01	0	41	67.01	0.3881	0.6118	1.3107	5.8595
10	0.5007	12	0.6027	1.1034	19.99	0	47.18	67.17	0.2976	0.7023	1.8342	4.5314
15	0.7504	12	0.6027	1.3531	13.75	22.79	30.8	67.34	0.2041	0.4573	2.1861	0.3149
20	1.0003	12	0.6027	1.6030	7.96	35.07	24.22	67.25	0.1183	0.3601	2.3807	0.8724
25	1.2509	12	0.6027	1.8536	4.47	47.46	15.48	67.41	0.0663	0.2296	2.3397	1.4585
30	1.5009	12	0.6027	2.1036	56.32	0	11.04	67.36	0.8361	0.1638	2.3768	1.5977
35	1.7515	12	0.6027	2.3542	60.34	0	6.44	66.78	0.9035	0.0964	2.1238	1.7142
40	2.0015	12	0.6027	2.6042	61.43	0	5.34	66.77	0.9200	0.0799	1.9199	1.6128

Table A2 Solubilization parameter (SP) of AE3/n-butanol/motor oil/water system with α = 0.5 at 30 °C

%AE3 (wt.%)	wt.AE3 (g)	%but (%wt/vol)	wt.but (g)	wt.total Ms(g)	phase height (mm)			total 3 phase(mm)	Vw	Vo	SPw	Spo
					water	middle	oil					
5	0.2502	12	0.6027	0.8529	27.66	0	39.73	67.39	0.4104	0.5896	1.0500	5.8623
10	0.5001	12	0.6027	1.1028	22.83	0	45.46	68.29	0.3343	0.6657	1.5024	4.5339
15	0.7505	12	0.6027	1.3532	16.77	23.21	28.25	68.23	0.2458	0.4140	1.8786	0.6352
20	1.0008	12	0.6027	1.6035	13.03	32.49	22.2	67.72	0.1924	0.3278	1.9182	1.0738
25	1.2511	12	0.6027	1.8538	9.58	47.76	10.09	67.43	0.1421	0.1496	1.9308	1.8900
30	1.5009	12	0.6027	2.1036	6.74	54.86	6.56	68.16	0.0989	0.0962	1.9068	1.9194
35	1.7510	12	0.6027	2.3537	4.09	59.23	4.28	67.60	0.0605	0.0633	1.8673	1.8553
40	2.0015	12	0.6027	2.6042	65.25	0	3.24	68.49	0.9527	0.0473	1.9200	1.7383

Table A3 Solubilization parameter (SP) of AE3/n-butanol/motor oil/water system with α = 0.5 at 40 °C

%AE3 (wt.%)	wt.AE3 (g)	%but (%wt/vol)	wt.but (g)	wt.total Ms(g)	phase height (mm)			total 3 phase(mm)	Vw	Vo	SPw	Spo
					water	middle	oil					
5	0.2505	12	0.6027	0.8532	27	0	39.84	66.84	0.4039	0.5961	1.1257	5.8603
10	0.5002	12	0.6027	1.1029	22.62	0	44.56	67.18	0.3367	0.6633	1.4805	4.5335
15	0.7509	12	0.6027	1.3536	19.07	19.14	29.29	67.5	0.2825	0.4339	1.6066	0.4881
20	1.0007	12	0.6027	1.6034	17.64	37.5	13.58	68.72	0.2567	0.1976	1.5174	1.8859
25	1.2508	12	0.6027	1.8535	14.44	48.54	6.5	69.48	0.2078	0.0936	1.5763	2.1929
30	1.501	12	0.6027	2.1037	10.5	50.98	7.07	68.55	0.1532	0.1031	1.6486	1.8865
35	1.7509	12	0.6027	2.3536	8.38	53.2	6.40	67.98	0.1233	0.0941	1.6006	1.7244
40	2.0012	12	0.6027	2.6039	65.42	0	2.98	68.40	0.9564	0.0436	1.9201	1.7529

Table A4 Solubilization parameter (SP) of AE3/MES/n-butanol/motor oil/water system with 0%NaCl, α = 0.5 at 30 °C

%Mixed (wt.%)	wt.AE3 (g)	wt.MES (g)	%but (%wt/vol)	wt.but (g)	wt.total Ms (g)	phase height (mm)			total 3 phase (mm)	Vw	Vo	SPw	Spo
						water	middle	oil					
5	0.2455	0.0368	16	0.8041	1.0546	26.46	0	42.92	69.38	0.3814	0.6186	1.1248	4.7412
10	0.4906	0.0736	16	0.8041	1.3048	23.02	0	45.59	68.61	0.3355	0.6645	1.2606	3.8320
15	0.7362	0.1104	16	0.8041	1.5549	18.35	18.83	31.83	69.01	0.2659	0.4612	1.5055	0.2493
20	0.9808	0.1471	16	0.8041	1.8044	12.86	25.81	30.65	69.32	0.1855	0.4422	1.7428	0.3206
25	1.2268	0.1840	16	0.8041	2.0554	9.66	36.42	22.82	68.90	0.1402	0.3312	1.7505	0.8212

Table A5 Solubilization parameter (SP) of AE3/MES/n-butanol/motor oil/water system with 3%NaCl, α = 0.5 at 30 °C

%Mixed (wt.%)	wt.AE3 (g)	wt.MES (g)	%but (%wt/vol)	wt.but (g)	wt.total Ms (g)	phase height (mm)			total 3 phase (mm)	Vw	Vo	SPw	Spo
						water	middle	oil					
5	0.2454	0.0050	16	0.8041	1.0545	26.15	0	42.41	68.56	0.3814	0.6186	1.1245	4.7416
10	0.4901	0.0101	16	0.8041	1.3043	22.39	0	46.50	68.89	0.3250	0.6750	1.3416	3.8335
15	0.7359	0.0146	16	0.8041	1.5546	19.57	14.44	34.16	68.17	0.2871	0.5011	1.3696	-0.0071
20	0.9811	0.0195	16	0.8041	1.8047	16.80	21.04	30.03	67.87	0.2475	0.4425	1.3989	0.3188
25	1.2262	0.0245	16	0.8041	2.0548	14.46	35.03	19.19	68.68	0.2105	0.2794	1.4087	1.0735

Table A6 Solubilization parameter (SP) of AE3/MES/n-butanol/motor oil/water system with 5%NaCl, α = 0.5 at 30 °C

%Mixed (wt.%)	wt.AE3 (g)	wt.MES (g)	%but (%wt/vol)	wt.but (g)	wt.total Ms (g)	phase height (mm)			total 3 phase (mm)	Vw	Vo	SPw	Spo
						water	middle	oil					
5	0.2451	0.0050	16	0.8041	1.0542	25.76	0	42.57	68.33	0.3770	0.6230	1.1668	4.7430
10	0.4900	0.0101	16	0.8041	1.3042	23.72	0	44.62	68.34	0.3471	0.6529	1.1725	3.8338
15	0.7356	0.0146	16	0.8041	1.5543	20.74	14.04	33.45	68.23	0.3040	0.4903	1.2612	0.0627
20	0.9811	0.0195	16	0.8041	1.8047	18.00	20.53	29.59	68.12	0.2642	0.4344	1.3063	0.3636
25	1.2260	0.0245	16	0.8041	2.0546	16.81	44.35	7.25	68.41	0.2457	0.1060	1.2376	1.9178

Table A7 Solubilization parameter (SP) of AE3/MES/n-butanol/motor oil/water system with 7%NaCl, α = 0.5 at 30 °C

%Mixed (wt.%)	wt.AE3 (g)	wt.MES (g)	%but (%wt/vol)	wt.but (g)	wt.total Ms (g)	phase height (mm)			total 3 phase (mm)	Vw	Vo	SPw	Spo
						water	middle	oil					
5	0.2450	0.0050	16	0.8041	1.0541	26.77	0	41.44	68.21	0.3925	0.6075	1.0202	4.7434
10	0.4901	0.0101	16	0.8041	1.3043	22.83	0	45.34	68.17	0.3349	0.6651	1.2658	3.8335
15	0.7355	0.0146	16	0.8041	1.5542	21.52	13.32	34.68	69.52	0.3096	0.4988	1.2254	0.0074
20	0.9810	0.0195	16	0.8041	1.8046	18.68	21.94	28.12	68.74	0.2717	0.4091	1.2648	0.5038
25	1.2265	0.0245	16	0.8041	2.0551	17.00	47.46	3.85	68.31	0.2489	0.0564	1.2220	2.1587

APPENDICES

Appendix B Experimental Data of Equilibrium Interfacial Tension (IFT)

1. Interfacial Tension (IFT)

The interfacial tension of each phase of microemulsion is interpreted by the following formulation:

$$IFT = e(Vd)^3 n^2 \Delta\rho \qquad (B1)$$

where

σ = interfacial tension or IFT (mN/m, dyne/cm)

e = unity factor ($3.427*10^{-7}$ mN cm^3 min^2 /m g mm^3)

V = enlargement factor (0.31 mm/sdv)

d = measured drop diameter (sdv)

n = number of revolution (1/min)

$\Delta\rho$ = density difference of two liquids (g/cm^3)

2. Experimental Data of Interfacial Tension (IFT)

2.1 Interfacial Tension

Table B1 Interfacial tension of each phase in microemulsion formation of AE3/12%n-butanol/motor oil/water system with α = 0.5 at 30 °C

%AE3 (wt.%)	No.	Density light ph. (g/ml)	Density heavy ph. (g/ml)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
5	1	0.8748	1.0496	4.767	2.835	2707	0.0943
	2	0.8748	1.0496	4.832	2.855	2689	0.0997
	3	0.8748	1.0496	4.749	2.872	2692	0.0855
	ave						0.0932
10	1	0.8683	0.99885	4.736	2.875	2345	0.0472
	2	0.8683	0.99885	4.782	2.893	2361	0.0501
	3	0.8683	0.99885	4.698	2.905	2372	0.0432
	ave						0.0468
15	1	0.9234	0.99	4.639	2.932	2324	0.0183
	2	0.9234	0.99	4.718	2.972	2388	0.0206
	3	0.9234	0.99	4.643	2.994	2344	0.0168
	ave						0.0186
20	1	0.9402	1.0308	4.807	2.818	2249	0.0368
	2	0.9402	1.0308	4.698	2.804	2367	0.0352
	3	0.9402	1.0308	4.785	2.843	2354	0.0375
	ave						0.0365
25	1	0.9489	0.9923	4.842	2.509	3262	0.0598
	2	0.9489	0.9923	4.896	2.672	3378	0.0556
	3	0.9489	0.9923	4.873	2.614	3491	0.0622
	ave						0.0592

Table B2 Interfacial tension of each phase in microemulsion formation of AE3/12%n-butanol/motor oil/water system with α = 0.5 at 40 °C

%AE3 (wt.%)	No.	Density light ph. (g/ml)	Density heavy ph. (g/ml)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
5	1	0.8709	1.00105	4.749	2.838	3461	0.1111
	2	0.8709	1.00105	4.821	2.879	3421	0.1139
	3	0.8709	1.00105	4.748	2.821	3412	0.1107
	ave						0.1119
10	1	0.87245	0.9985	4.631	2.711	3227	0.0949
	2	0.87245	0.9985	4.706	2.759	3243	0.0999
	3	0.87245	0.9985	4.618	2.737	3216	0.0886
	ave						0.0944
15	1	0.9173	1.01095	4.848	2.829	2374	0.0443
	2	0.9173	1.01095	4.872	2.843	2365	0.0447
	3	0.9173	1.01095	4.813	2.808	2345	0.0424
	ave						0.0438
20	1	0.91145	0.99595	4.887	2.818	2590	0.0513
	2	0.91145	0.99595	4.892	2.814	2518	0.0491
	3	0.91145	0.99595	4.879	2.737	2495	0.0528
	ave						0.0510
25	1	0.91415	1.00525	4.835	2.744	2707	0.0623
	2	0.91415	1.00525	4.788	2.734	2685	0.0581
	3	0.91415	1.00525	4.866	2.752	2741	0.0660
	ave						0.0621

Table B3 Interfacial tension of each phase in microemulsion formation of AE3/MES/16%n-butanol/motor oil/water without NaCl at α = 0.5, δ = 0.02, and 30 °C

%AE3/MES (wt.%)	No.	Density light ph. (g/ml)	Density heavy ph. (g/ml)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
5	1	0.8569	0.9946	4.953	2.755	3817	0.2176
	2	0.8569	0.9946	4.967	2.813	3846	0.2079
	3	0.8569	0.9946	4.953	2.749	3877	0.2263
	ave						0.2173
10	1	0.8605	0.98065	4.894	2.758	2621	0.0822
	2	0.8605	0.98065	4.961	2.794	2645	0.0874
	3	0.8605	0.98065	4.764	2.654	2609	0.0785
	ave						0.0827
15	1	0.9410	0.9969	4.987	2.636	2537	0.0477
	2	0.9410	0.9969	5.151	2.735	2782	0.0623
	3	0.9410	0.9969	5.38	2.711	2254	0.0551
	ave						0.0550
20	1	0.9131	0.9923	4.997	2.794	3495	0.1057
	2	0.9131	0.9923	4.748	2.519	3556	0.1133
	3	0.9131	0.9923	4.994	2.769	3692	0.1215
	ave						0.1135
25	1	0.9214	0.9923	4.811	2.689	4411	0.1346
	2	0.9214	0.9923	4.739	2.784	4788	0.1240
	3	0.9214	0.9923	4.872	2.753	4566	0.1436
	ave						0.1341

Table B4 Interfacial tension of each phase in microemulsion formation of AE3/MES/16%n-butanol/motor oil/water with 3%NaCl at α = 0.5, δ = 0.02, and 30 °C

%AE3/MES (wt.%)	No.	Density light ph. (g/ml)	Density heavy ph. (g/ml)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
5	1	0.8795	1.0250	5.061	2.429	2791	0.2111
	2	0.8795	1.0250	4.961	2.654	3508	0.2245
	3	0.8795	1.0250	4.936	2.683	3426	0.1995
	ave						0.2117
10	1	0.8687	1.0323	4.959	2.731	3386	0.2119
	2	0.8687	1.0323	4.872	2.736	3292	0.1765
	3	0.8687	1.0323	4.987	2.775	3271	0.1935
	ave						0.1939
15	1	0.8938	1.0364	4.937	2.743	1537	0.0363
	2	0.8938	1.0364	4.785	2.922	2369	0.0529
	3	0.8938	1.0364	4.714	2.964	2403	0.0451
	ave						0.0448
20	1	0.9064	1.0341	4.799	2.852	2088	0.0420
	2	0.9064	1.0341	4.785	2.896	2198	0.0425
	3	0.9064	1.0341	4.752	2.893	2194	0.0403
	ave						0.0416
25	1	0.8886	1.0318	5.327	2.468	2459	0.2066
	2	0.8886	1.0318	4.781	2.868	3488	0.1245
	3	0.8886	1.0318	4.863	2.765	3492	0.1646
	ave						0.1652

Table B5 Interfacial tension of each phase in microemulsion formation of AE3/MES/16%n-butanol/motor oil/water with 5%NaCl at α = 0.5, δ = 0.02, and 30 °C

%AE3/MES (wt.%)	No.	Density light ph. (g/ml)	Density heavy ph. (g/ml)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
5	1	0.8656	1.0442	4.958	2.511	4159	0.4621
	2	0.8656	1.0442	4.923	2.598	4387	0.4410
	3	0.8656	1.0442	4.982	2.655	4587	0.4834
	ave						0.4622
10	1	0.8696	1.0664	4.918	2.739	4182	0.3636
	2	0.8696	1.0664	4.883	2.701	3991	0.3326
	3	0.8696	1.0664	4.963	2.682	4088	0.3986
	ave						0.3649
15	1	0.8989	1.0538	4.892	2.736	4557	0.3291
	2	0.8989	1.0538	4.895	2.733	4773	0.3641
	3	0.8989	1.0538	4.752	2.698	4633	0.2942
	ave						0.3291
20	1	0.8906	1.0590	4.657	3.011	1963	0.0295
	2	0.8906	1.0590	4.757	2.643	1772	0.0510
	3	0.8906	1.0590	4.703	2.794	1836	0.0403
	ave						0.0403
25	1	0.8882	1.0722	4.679	2.718	2411	0.0823
	2	0.8882	1.0722	4.714	2.794	2518	0.0843
	3	0.8882	1.0722	4.755	2.823	2436	0.0804
	ave						0.0823

Table B6 Interfacial tension of each phase in microemulsion formation of AE3/MES/16%n-butanol/motor oil/water with 7%NaCl at α = 0.5, δ = 0.02, and 30 °C

%AE3/MES (wt.%)	No.	Density light ph. (g/ml)	Density heavy ph. (g/ml)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
5	1	0.8802	1.0737	5.321	2.372	3503	0.6217
	2	0.8802	1.0737	5.283	2.412	3686	0.6352
	3	0.8802	1.0737	5.288	2.418	3611	0.6090
	ave						0.6219
10	1	0.8638	1.0616	4.921	2.686	4715	0.5013
	2	0.8638	1.0616	4.924	2.735	4562	0.4409
	3	0.8638	1.0616	4.988	2.731	4914	0.5608
	ave						0.5010
15	1	0.8925	1.0754	4.869	2.718	4973	0.4596
	2	0.8925	1.0754	4.923	2.815	4798	0.4027
	3	0.8925	1.0754	4.882	2.653	4991	0.5151
	ave						0.4591
20	1	0.8897	1.1010	4.787	2.923	4765	0.3172
	2	0.8897	1.1010	4.695	2.937	4998	0.2928
	3	0.8897	1.1010	4.779	2.922	4867	0.3272
	ave						0.3124
25	1	0.8867	1.1068	4.876	2.851	4595	0.3939
	2	0.8867	1.1068	4.972	2.839	4495	0.4405
	3	0.8867	1.1068	4.766	2.821	4576	0.3461
	ave						0.3935

Table B7 Interfacial tension of each phase in microemulsion formation of AE3/16%n-butanol/motor oil/water with α = 0.5 at 30 °C

%AE3 (wt.%)	No.	Density light ph. (g/ml)	Density heavy ph. (g/ml)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
5	1	0.8656	0.9874	4.949	2.703	3484	0.1710
	2	0.8656	0.9874	4.875	2.703	3584	0.1637
	3	0.8656	0.9874	4.998	2.721	3489	0.1787
	ave						0.1711
10	1	0.8767	0.9803	4.716	2.925	3026	0.0557
	2	0.8767	0.9803	4.705	2.988	2808	0.0422
	3	0.8767	0.9803	4.825	2.805	2825	0.0696
	ave						0.0558
15	1	0.9052	0.9912	4.698	2.922	2362	0.0274
	2	0.9052	0.9912	4.706	2.896	2185	0.0249
	3	0.9052	0.9912	4.815	2.899	2263	0.0316
	ave						0.0280
20	1	0.9326	1.0173	4.771	2.856	2305	0.0323
	2	0.9326	1.0173	4.827	2.721	1883	0.0287
	3	0.9326	1.0173	4.965	2.843	2218	0.0407
	ave						0.0339
25	1	0.9231	0.9585	4.971	2.756	4405	0.0762
	2	0.9231	0.9585	4.935	2.596	4330	0.0867
	3	0.9231	0.9585	4.847	2.768	4810	0.0751
	ave						0.0794

APPENDICES

Appendix C Experimental Data of Critical micelle concentration (CMC)

Table C1 Critical micelle concentration (CMC) of mixed AE3/MES at $\delta = 0.02$ and 30 °C

conc.(wt.%)	Surface tension (mN/m)			
	1	2	3	ave
0.001	69.21	69.83	69.76	69.60
0.002	64.21	64.76	65.09	64.69
0.003	59.4	59.03	59.85	59.43
0.004	52.98	53.67	54.17	53.61
0.005	49.94	51.03	51.77	50.91
0.006	49.7	47.22	48.11	48.34
0.007	42.04	41.32	41.77	41.71
0.008	40.6	39.93	40.03	40.19
0.009	34.68	32.15	30.91	32.58
0.010	27.36	26.52	26.39	26.76
0.012	27.46	26.8	26.28	26.85
0.014	26.76	26.25	26.03	26.35
0.016	25.62	25.37	24.97	25.32
0.018	25.52	25.25	25.6	25.46
0.020	25.16	25.08	24.8	25.01
0.030	25.34	25.28	25.18	25.27
0.040	25.25	25.36	25.34	25.32
0.050	25.41	25.19	25.22	25.27
0.060	25.19	25.31	25.26	25.25

Table C2 Critical micelle concentration (CMC) of single AE3 system at 30 °C

conc.(wt.%)	Surface tension (mN/m)			
	1	2	3	ave
0.001	69.77	69.85	69.45	69.69
0.002	59.21	59.27	59.42	59.30
0.003	52.32	51.88	52.9	52.37
0.004	48.31	49.19	48.53	48.68
0.005	42.30	42.51	42.33	42.38
0.006	39.00	39.32	39.58	39.30
0.007	37.78	37.14	37.31	37.41
0.008	35.75	35.46	35.47	35.56
0.009	35.07	35.19	34.77	35.01
0.010	34.93	34.31	34.58	34.61
0.015	33.64	34.17	33.54	33.78
0.020	33.17	33.68	33.49	33.45
0.025	33.01	33.18	32.94	33.04

Table C3 Critical micelle concentration (CMC) of single MES system at 30 °C

conc.(wt.%)	Surface tension (mN/m)			
	1	2	3	ave
0.001	42.78	42.75	42.74	42.76
0.002	41.59	41.62	41.64	42.11
0.004	40.79	40.74	40.81	40.78
0.006	39.85	39.90	39.87	39.87
0.008	38.39	38.36	38.40	38.38
0.01	37.80	37.77	37.75	37.77
0.02	37.52	37.55	37.61	37.56
0.04	37.20	37.19	37.15	37.18
0.06	37.01	37.04	37.05	37.03
0.08	36.89	36.91	36.88	36.89
0.10	36.71	36.79	36.75	36.75
0.20	36.45	36.51	36.55	36.50
0.40	36.15	36.19	36.21	36.18
0.60	35.97	36.01	35.95	35.98
0.80	35.79	35.82	35.74	35.78
1.00	35.51	35.6	35.52	35.54

APPENDICES

Appendix D Experimental Data of Conductivity

Table D1 Conductivity of the mixed surfactant system (AE3/MES) in Winsor Type II

%NaCl (wt.%)	Total surfactant concentration (wt.%)	%n-butanol (wt.%)	Conductivity (μs/cm)	Temp. (°C)	Winsor Type
3	30	12	40	26.9	II
		16	40	26.2	II
		20	40	26.2	II
	35	8	30	26.4	II
		12	40	26.5	II
		16	30	26.7	II
	40	12	20	27.4	II
		16	30	27.1	II
		20	20	27.9	II
5	24	4	10	27.0	II
		8	20	26.6	II
		12	30	26.5	II
	30	8	20	26.4	II
		12	20	26.6	II
		16	20	26.7	II
	35	20	20	26.6	II
		24	20	26.6	II
7	24	4	10	26.6	II
		8	10	26.5	II
		12	10	26.6	II
	35	20	10	26.5	II
		24	20	26.6	II

Table D1 Conductivity of the single surfactant system (AE3) in Winsor Type I and III

%AE3 (wt.%)	%n-butanol (wt.%)	Conductivity (μs/cm)	Temp. (°C)	Winsor Type
6	4	470	26.5	I
8	3	440	27.4	I
12	5	350	26.5	III
14	7	310	26.6	III

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