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## APPENDIX

### Experimental Data of Solubilization Parameters (SP)

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

Oil-in-water microemulsion (a Winsor Type I microemulsion):

$$SP_w = \frac{0.5 * 10}{M_s}$$
$$SP_o = \frac{(0.5 - V_o) * 10}{M_s}$$

Middle phase microemulsion (a Winsor Type III microemulsion):

$$SP_w = \frac{(0.5 - V_w) * 10}{M_s}$$
$$SP_o = \frac{(0.5 - V_o) * 10}{M_s}$$

Water-in-oil microemulsion (a Winsor type II microemulsion):

$$SP_w = \frac{(0.5 - V_w) * 10}{M_s}$$
$$SP_o = \frac{0.5 * 10}{M_s}$$

where

$SP_w$  = solubilization parameter of water

$SP_o$  = solubilization parameter of oil

$V_w$  = volume of water solubilized in the micellar solution

$V_o$  = volume of oil solubilized in the micellar solution

$M_s$  = total mass of surfactant in the micellar solution

**Table A1** Solubilization parameters (SP) of AE3/*n*-butanol/motor oil/water system at 20 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -butanol		water	middle	oil						
5	10	0.2506	26.01	0.00	41.00	W/O	67.01	0.3882	0.6118	4.4632	19.9521
10	10	0.5007	19.99	0.00	47.18	W/O	67.17	0.2976	0.7024	4.0423	9.9860
15	10	0.7504	13.75	22.79	30.80	M	67.34	0.2042	0.4574	3.9421	0.5680
20	10	1.0003	7.96	35.07	24.22	M	67.25	0.1184	0.3601	3.8152	1.3981
25	10	1.2509	4.47	47.46	15.48	M	67.41	0.0663	0.2296	3.4670	2.1613
30	10	1.5009	56.3200	0.0000	11.0400	O/W	67.3600	0.8361	0.1639	3.3313	2.2394
35	10	1.7515	60.3400	0.0000	6.4400	O/W	66.7800	0.9036	0.0964	2.8547	2.3041
40	10	2.0015	61.4300	0.0000	5.3400	O/W	66.7700	0.9200	0.0800	2.4981	2.0985

**Table A2** Solubilization parameters (SP) of AE3/*n*-butanol/motor oil/water system at 30 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -butanol		water	middle	oil						
5	10	0.2502	27.66	0.00	39.73	W/O	67.39	0.4104	0.5896	3.5793	19.9840
10	10	0.5001	22.83	0.00	45.46	W/O	68.29	0.3343	0.6657	3.3131	9.9980
15	10	0.7505	16.77	23.21	28.25	M	68.23	0.2458	0.4140	3.3873	1.1454
20	10	1.0008	13.03	32.49	22.20	M	67.72	0.1924	0.3278	3.0734	1.7204
25	10	1.2511	9.58	47.76	10.09	M	67.43	0.1421	0.1496	2.8609	2.8004
30	10	1.5009	6.7400	54.8600	6.5600	M	68.1600	0.0989	0.0962	2.6725	2.6901
35	10	1.7510	4.0900	59.2300	4.2800	M	67.6000	0.0605	0.0633	2.5100	2.4939
40	10	2.0015	8.0000	0.0000	3.2400	O/W	11.2400	0.7117	0.2883	2.4981	1.0579

**Table A3** Solubilization parameters (SP) of AE3/*n*-butanol/motor oil/water system at 40 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -butanol		water	middle	oil						
5	10	0.2505	27.00	0.00	39.84	W/O	66.84	0.4039	0.5961	3.8343	19.9601
10	10	0.5002	22.62	0.00	44.56	W/O	67.18	0.3367	0.6633	3.2645	9.9960
15	10	0.7509	19.07	19.14	29.29	M	67.50	0.2825	0.4339	2.8963	0.8799
20	10	1.0007	17.64	37.50	13.58	M	68.72	0.2567	0.1976	2.4314	3.0217
25	10	1.2508	14.44	48.54	6.50	M	69.48	0.2078	0.0936	2.3359	3.2495
30	10	1.5010	10.5000	50.9800	7.0700	M	68.5500	0.1532	0.1031	2.3106	2.6440
35	10	1.7509	8.3800	53.2000	6.4000	M	67.9800	0.1233	0.0941	2.1516	2.3180
40	10	2.0012	65.4200	0.0000	2.9800	O/W	68.4000	0.9564	0.0436	2.4985	2.2808

**Table A4** Solubilization parameters (SP) of AE3/*n*-butanol/motor oil/water system at 50 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -butanol		water	middle	oil						
5	10	0.2496	25.56	0.00	42.77	W/O	68.33	0.3741	0.6259	5.0454	20.0321
10	10	0.4999	23.77	0.00	45.10	W/O	68.87	0.3451	0.6549	3.0978	10.0020
15	10	0.7507	20.99	21.19	25.93	W/O	68.11	0.3082	0.3807	2.5552	6.6605
20	10	1.0000	19.11	40.26	8.75	M	68.12	0.2805	0.1284	2.1947	3.7155
25	10	1.2500	15.46	47.14	6.60	M	69.20	0.2234	0.0954	2.2127	3.2370
30	10	1.5008	14.0000	51.0000	4.3000	M	69.3000	0.2020	0.0620	1.9855	2.9181
35	10	1.7513	13.6000	52.0000	3.1000	M	68.7000	0.1980	0.0451	1.7246	2.5974
40	10	2.0008	66.3000	0.0000	3.1000	M	69.4000	0.9553	0.0447	2.4990	2.2757

**Table A5** Solubilization parameters (SP) of AE3/*n*-hexanol/motor oil/water system at 20 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2002	26.75	0.00	41.90	W/O	68.65	0.3897	0.6103	5.5116	24.9750
8	10	0.3990	24.10	0.00	44.77	W/O	68.87	0.3499	0.6501	3.7610	12.5313
12	10	0.6035	21.74	38.65	8.95	M	69.34	0.3135	0.1291	3.0899	6.1462
16	10	0.8001	18.26	42.76	7.28	M	68.30	0.2673	0.1066	2.9078	4.9170
20	10	1.0002	15.44	46.22	6.66	M	68.32	0.2260	0.0975	2.7395	4.0244
24	10	1.2009	13.75	48.94	5.27	M	67.96	0.2023	0.0775	2.4788	3.5178
28	10	1.4003	11.65	51.85	4.64	M	68.14	0.1710	0.0681	2.3497	3.0844
32	10	1.6012	7.62	55.20	4.39	M	67.21	0.1134	0.0653	2.4146	2.7147
36	10	1.8010	5.34	56.34	4.15	M	65.83	0.0811	0.0630	2.3258	2.4262
40	10	2.0005	3.08	55.66	2.89	M	61.63	0.0500	0.0469	2.2496	2.2650



**Table A6** Solubilization parameters (SP) of AE3/*n*-hexanol/motor oil/water system at 30 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2005	28.36	0.00	40.85	W/O	69.21	0.4098	0.5902	4.5004	24.9377
8	10	0.4021	25.94	0.00	42.44	W/O	68.38	0.3794	0.6206	3.0005	12.4347
12	10	0.6017	23.75	38.12	7.48	M	69.35	0.3425	0.1079	2.6182	6.5172
16	10	0.8002	19.76	41.36	6.87	M	67.99	0.2906	0.1010	2.6165	4.9857
20	10	1.0000	16.93	45.28	6.19	M	68.40	0.2475	0.0905	2.5249	4.0950
24	10	1.1998	15.18	50.11	5.96	M	71.25	0.2131	0.0836	2.3916	3.4702
28	10	1.4007	11.59	53.82	3.82	M	69.23	0.1674	0.0552	2.3744	3.1757
32	10	1.6006	8.75	56.22	3.25	M	68.22	0.1283	0.0476	2.3225	2.8262
36	10	1.8005	5.13	60.81	2.51	M	68.45	0.0749	0.0367	2.3608	2.5733
40	10	2.0002	3.76	64.01	2.66	M	70.43	0.0534	0.0378	2.2328	2.3109

**Table A7** Solubilization parameters (SP) of AE3/*n*-hexanol/motor oil/water system at 40 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2001	28.19	0.00	40.53	W/O	68.72	0.4102	0.5898	4.4865	24.9850
8	10	0.4002	22.24	0.00	43.43	W/O	65.67	0.3387	0.6613	4.0314	12.4938
12	10	0.6003	24.80	0.00	44.49	W/O	69.29	0.3579	0.6421	2.3669	8.3292
16	10	0.8004	21.74	36.75	9.18	M	67.67	0.3213	0.1357	2.2331	4.5520
20	10	1.0006	18.31	44.42	5.28	M	68.01	0.2692	0.0776	2.3064	4.2211
24	10	1.2004	14.92	49.10	4.83	M	68.85	0.2167	0.0702	2.3600	3.5809
28	10	1.4010	15.51	50.68	4.61	M	70.80	0.2191	0.0651	2.0052	3.1041
32	10	1.6007	12.67	52.71	3.25	M	68.63	0.1846	0.0474	1.9703	2.8278
36	10	1.8020	11.20	52.69	3.07	M	66.96	0.1673	0.0458	1.8465	2.5203
40	10	2.0004	9.32	50.51	3.02	M	62.85	0.1483	0.0481	1.7582	2.2593

**Table A8** Solubilization parameters (SP) of AE3/*n*-hexanol/motor oil/water system at 50 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2001	27.93	0.00	41.21	W/O	69.14	0.4040	0.5960	4.7995	24.9875
8	10	0.4007	26.79	0.00	43.54	W/O	70.33	0.3809	0.6191	2.9718	12.4782
12	10	0.6001	25.77	0.00	44.47	W/O	70.24	0.3669	0.6331	2.2182	8.3319
16	10	0.8000	22.87	0.00	45.31	W/O	68.18	0.3354	0.6646	2.0571	6.2500
20	10	1.0016	19.25	44.03	5.13	M	68.41	0.2814	0.0750	2.1826	4.2433
24	10	1.2012	17.90	44.88	4.61	M	67.39	0.2656	0.0684	1.9512	3.5930
28	10	1.4013	15.90	48.00	4.56	M	68.46	0.2323	0.0666	1.9107	3.0928
32	10	1.6007	13.86	51.61	4.02	M	69.49	0.1995	0.0579	1.8776	2.7622
36	10	1.8020	13.41	50.78	3.50	M	67.69	0.1981	0.0517	1.6753	2.4878
40	10	2.0004	11.19	49.48	3.08	M	63.75	0.1755	0.0483	1.6220	2.2580

**Table A9** Solubilization parameters (SP) of AE5/*n*-hexanol/motor oil/water system at 20 °C

Concentration (%w/v)		Weight of AE5 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	Vw	Vo	SPw	SPo
AE5	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2005	24.16	0.00	44.25	W/O	68.41	0.3532	0.6468	7.3235	24.9377
8	10	0.4033	16.70	31.93	19.69	M	68.32	0.2444	0.2882	6.3368	5.2516
12	10	0.6040	7.59	44.24	16.72	M	68.55	0.1107	0.2439	6.4450	4.2399
16	10	0.7999	51.95	0.00	16.16	O/W	68.11	0.7627	0.2373	6.2508	3.2846
20	10	1.0008	52.06	0.00	15.88	O/W	67.94	0.7663	0.2337	4.9960	2.6605
24	10	1.2001	53.47	0.00	15.47	O/W	68.94	0.7756	0.2244	4.1663	2.2965
28	10	1.4010	56.14	0.00	12.06	O/W	68.20	0.8232	0.1768	3.5689	2.3067
32	10	1.6001	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
36	10	1.8009	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
40	10	2.0005	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A

**Table A10** Solubilization parameters (SP) of AE5/*n*-hexanol/motor oil/water system at 30 °C

Concentration (%w/v)		Weight of AE5 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE5	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2004	25.94	0.00	41.86	W/O	67.80	0.3826	0.6174	5.8585	24.9501
8	10	0.4036	18.30	44.72	6.71	M	69.73	0.2624	0.0962	5.8860	10.0043
12	10	0.6074	16.24	38.48	13.71	M	68.43	0.2373	0.2004	4.3246	4.9333
16	10	0.8011	5.56	48.40	15.43	M	69.39	0.0801	0.2224	5.2412	3.4657
20	10	1.0007	53.56	0.00	15.47	O/W	69.03	0.7759	0.2241	4.9965	2.7570
24	10	1.2004	55.21	0.00	13.79	O/W	69.00	0.8001	0.1999	4.1653	2.5004
28	10	1.4006	56.94	0.00	11.29	O/W	68.23	0.8345	0.1655	3.5699	2.3885
32	10	1.6002	58.55	0.00	9.84	O/W	68.3900	0.8561	0.1439	3.1246	2.2255
36	10	1.8011	59.08	0.00	8.95	O/W	68.0300	0.8684	0.1316	2.7761	2.0456
40	10	2.0004	59.84	0.00	7.24	O/W	67.0800	0.8921	0.1079	2.4995	1.9600

**Table A11** Solubilization parameters (SP) of AE5/*n*-hexanol/motor oil/water system at 40 °C

Concentration (%w/v)		Weight of AE5 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE5	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2003	27.38	0.00	40.50	W/O	67.88	0.4034	0.5966	4.8248	24.9626
8	10	0.4013	24.27	33.05	11.94	M	69.26	0.3504	0.1724	3.7274	8.1636
12	10	0.6000	19.93	38.26	10.11	M	68.30	0.2918	0.1480	3.4700	5.8663
16	10	0.7998	17.04	41.87	8.46	M	67.37	0.2529	0.1256	3.0891	4.6815
20	10	1.0029	9.80	47.69	8.69	M	66.18	0.1481	0.1313	3.5090	3.6763
24	10	1.2000	5.34	55.07	7.50	M	67.91	0.0786	0.1104	3.5114	3.2463
28	10	1.4011	60.57	0.00	7.97	O/W	68.54	0.8837	0.1163	3.5686	2.7387
32	10	1.6004	60.37	0.00	7.71	O/W	68.0800	0.8868	0.1132	3.1242	2.4166
36	10	1.8007	60.62	0.00	7.03	O/W	67.6500	0.8961	0.1039	2.7767	2.1996
40	10	2.0009	59.96	0.00	7.60	O/W	67.5600	0.8875	0.1125	2.4989	1.9367

**Table A12** Solubilization parameters (SP) of AE5/*n*-hexanol/motor oil/water system at 50 °C

Concentration (%w/v)		Weight of AE5 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE5	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2004	26.16	0.00	44.21	W/O	70.37	0.3717	0.6283	6.3997	24.9501
8	10	0.4013	25.86	0.00	43.77	W/O	69.63	0.3714	0.6286	3.2048	12.4595
12	10	0.6000	22.76	36.94	8.78	M	68.48	0.3324	0.1282	2.7940	6.1965
16	10	0.7998	21.37	39.92	7.41	M	68.70	0.3111	0.1079	2.3623	4.9030
20	10	1.0029	17.29	46.47	5.64	M	69.40	0.2491	0.0813	2.5014	4.1752
24	10	1.2000	12.37	50.55	5.07	M	67.99	0.1819	0.0746	2.6505	3.5453
28	10	1.4009	6.66	55.67	5.57	M	67.90	0.0981	0.0820	2.8690	2.9836
32	10	1.6006	61.42	0.00	7.96	O/W	69.3800	0.8853	0.1147	3.1238	2.4070
36	10	1.8004	61.73	0.00	6.99	O/W	68.7200	0.8983	0.1017	2.7772	2.2122
40	10	2.0002	64.38	0.00	4.74	O/W	69.1200	0.9314	0.0686	2.4998	2.1569

**Table A13** Solubilization parameters (SP) of AE7/*n*-hexanol/motor oil/water system at 20 °C

Concentration (%w/v)		Weight of AE7 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE7	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2026	35.61	0.00	33.85	O/W	69.46	0.5127	0.4873	24.6792	0.6253
8	10	0.3998	36.78	0.00	30.87	O/W	67.65	0.5437	0.4563	12.5063	1.0926
12	10	0.6008	39.77	0.00	27.85	O/W	67.62	0.5881	0.4119	8.3222	1.4670
16	10	0.8010	41.27	0.00	26.18	O/W	67.45	0.6119	0.3881	6.2422	1.3965
20	10	0.9997	40.61	0.00	25.65	O/W	66.26	0.6129	0.3871	5.0015	1.1292
24	10	1.2006	42.35	0.00	25.52	O/W	67.87	0.6240	0.3760	4.1646	1.0327
28	10	1.4003	42.89	0.00	25.24	O/W	68.13	0.6295	0.3705	3.5707	0.9250
32	10	1.6008	44.75	0.00	23.17	O/W	67.92	0.6589	0.3411	3.1234	0.9924
36	10	1.8015	48.75	0.00	18.14	O/W	66.89	0.7288	0.2712	2.7755	1.2701
40	10	2.0004	57.93	0.00	9.26	O/W	67.19	0.8622	0.1378	2.4995	1.8105



**Table A14** Solubilization parameters (SP) of AE7/*n*-hexanol/motor oil/water system at 30 °C

Concentration (%w/v)		Weight of AE7 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE7	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2014	21.15	16.92	30.24	M	68.31	0.3096	0.4427	9.4529	2.8457
8	10	0.4001	38.29	0.00	30.18	O/W	68.47	0.5592	0.4408	12.4969	1.4802
12	10	0.6010	38.46	0.00	29.94	O/W	68.40	0.5623	0.4377	8.3195	1.0363
16	10	0.8005	40.79	0.00	27.24	O/W	68.03	0.5996	0.4004	6.2461	1.2441
20	10	0.9997	41.95	0.00	27.24	O/W	69.19	0.6063	0.3937	5.0015	1.0633
24	10	1.1998	42.89	0.00	25.63	O/W	68.52	0.6259	0.3741	4.1674	1.0497
28	10	1.4018	44.44	0.00	21.88	O/W	66.32	0.6701	0.3299	3.5668	1.2133
32	10	1.6007	46.62	0.00	22.31	O/W	68.93	0.6763	0.3237	3.1236	1.1016
36	10	1.8005	47.20	0.00	21.71	O/W	68.91	0.6850	0.3150	2.7770	1.0272
40	10	2.0020	56.39	0.00	10.82	O/W	67.21	0.8390	0.1610	2.4975	1.6934

**Table A15** Solubilization parameters (SP) of AE7/*n*-hexanol/motor oil/water system at 40 °C

Concentration (%w/v)		Weight of AE7 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE7	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2001	20.71	17.52	28.72	M	66.95	0.3093	0.4290	9.5285	3.5494
8	10	0.4000	9.94	30.67	27.73	M	68.34	0.1454	0.4058	8.8638	2.3559
12	10	0.6017	41.60	0.00	28.04	O/W	69.64	0.5974	0.4026	8.3098	1.6180
16	10	0.8009	40.81	0.00	27.02	O/W	67.83	0.6017	0.3983	6.2430	1.2692
20	10	1.0030	43.35	0.00	24.48	O/W	67.83	0.6391	0.3609	4.9850	1.3868
24	10	1.2002	44.55	0.00	24.05	O/W	68.60	0.6494	0.3506	4.1660	1.2449
28	10	1.3998	45.68	0.00	21.96	O/W	67.64	0.6753	0.3247	3.5719	1.2526
32	10	1.6011	47.51	0.00	21.34	O/W	68.85	0.6901	0.3099	3.1229	1.1870
36	10	1.8018	48.58	0.00	20.25	O/W	68.83	0.7058	0.2942	2.7750	1.1422
40	10	2.0005	52.78	0.00	14.24	O/W	67.02	0.7875	0.2125	2.4994	1.4373

**Table A16** Solubilization parameters (SP) of AE7/*n*-hexanol/motor oil/water system at 50 °C

Concentration (%w/v)		Weight of AE7 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE7	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2001	25.06	0.00	43.51	W/O	68.57	0.3655	0.6345	6.7233	24.9875
8	10	0.4000	21.77	22.37	24.24	M	68.38	0.3184	0.3545	4.5408	3.6378
12	10	0.6017	16.42	27.56	23.64	M	67.62	0.2428	0.3496	4.2741	2.4996
16	10	0.8009	8.47	35.83	23.18	M	67.48	0.1255	0.3435	4.6758	1.9539
20	10	1.0030	4.71	42.57	21.00	M	68.28	0.0690	0.3076	4.2973	1.9187
24	10	1.2011	48.68	0.00	21.58	O/W	70.26	0.6929	0.3071	4.1629	1.6057
28	10	1.4018	48.67	0.00	20.39	O/W	69.06	0.7047	0.2953	3.5668	1.4606
32	10	1.6007	49.91	0.00	19.50	O/W	69.41	0.7191	0.2809	3.1236	1.3685
36	10	1.8010	50.00	0.00	18.00	O/W	68.00	0.7353	0.2647	2.7762	1.3065
40	10	2.0005	52.10	0.00	16.74	O/W	68.84	0.7568	0.2432	2.4994	1.2838



**Table A17** Solubilization parameters (SP) of AE9/*n*-hexanol/motor oil/water system at 20 °C

Concentration (%w/v)		Weight of AE9 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE9	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2003	34.90	0.00	33.93	O/W	68.83	0.5070	0.4930	24.9626	0.3518
8	10	0.3999	35.20	0.00	33.69	O/W	68.89	0.5110	0.4890	12.5031	0.2741
12	10	0.6007	34.92	0.00	33.23	O/W	68.15	0.5124	0.4876	8.3236	0.2064
16	10	0.8001	35.31	0.00	32.85	O/W	68.16	0.5180	0.4820	6.2492	0.2255
20	10	1.0001	36.63	0.00	32.09	O/W	68.72	0.5330	0.4670	4.9995	0.3303
24	10	1.2000	37.11	0.00	31.65	O/W	68.76	0.5397	0.4603	4.1667	0.3309
28	10	1.4002	37.46	0.00	29.90	O/W	67.36	0.5561	0.4439	3.5709	0.4008
32	10	1.6010	38.98	0.00	30.07	O/W	69.05	0.5645	0.4355	3.1230	0.4030
36	10	1.8000	39.92	0.00	27.28	O/W	67.20	0.5940	0.4060	2.7778	0.5225
40	10	2.0004	42.05	0.00	27.02	O/W	69.07	0.6088	0.3912	2.4995	0.5439

**Table A18** Solubilization parameters (SP) of AE9/*n*-hexanol/motor oil/water system at 30 °C

Concentration (%w/v)		Weight of AE9 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE9	<i>n</i> -hexanol		water	middle	oil						
4	10	0.2005	34.80	0.00	33.90	O/W	68.70	0.5066	0.4934	24.9377	0.3267
8	10	0.4010	35.25	0.00	34.08	O/W	69.33	0.5084	0.4916	12.4688	0.2104
12	10	0.6009	35.99	0.00	33.45	O/W	69.44	0.5183	0.4817	8.3209	0.3044
16	10	0.8003	36.45	0.00	32.44	O/W	68.89	0.5291	0.4709	6.2477	0.3637
20	10	1.0000	37.32	0.00	31.12	O/W	68.44	0.5453	0.4547	5.0000	0.4530
24	10	1.2003	37.76	0.00	30.84	O/W	68.60	0.5504	0.4496	4.1656	0.4202
28	10	1.3999	38.11	0.00	30.62	O/W	68.73	0.5545	0.4455	3.5717	0.3892
32	10	1.6008	39.75	0.00	28.31	O/W	68.06	0.5840	0.4160	3.1234	0.5250
36	10	1.8003	39.89	0.00	27.35	O/W	67.24	0.5932	0.4068	2.7773	0.5180
40	10	2.0010	41.10	0.00	26.79	O/W	67.89	0.6054	0.3946	2.4988	0.5267

**Table A19** Solubilization parameters (SP) of AE9/*n*-hexanol/motor oil/water system at 40 °C

Concentration (%w/v)		Weight of AE9 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE9	<i>n</i> -hexanol		water	middle	oil						
4	10	0.1997	33.57	0.00	33.49	O/W	67.06	0.5006	0.4994	25.0376	0.0299
8	10	0.4006	34.58	0.00	34.45	O/W	69.03	0.5009	0.4991	12.4813	0.0235
12	10	0.6005	34.28	0.00	33.83	O/W	68.11	0.5033	0.4967	8.3264	0.0550
16	10	0.8010	34.86	0.00	32.11	O/W	66.97	0.5205	0.4795	6.2422	0.2563
20	10	0.9996	36.03	0.00	30.40	O/W	66.43	0.5424	0.4576	5.0020	0.4239
24	10	1.2000	38.27	0.00	31.81	O/W	70.08	0.5461	0.4539	4.1667	0.3841
28	10	1.4010	39.99	0.00	28.56	O/W	68.55	0.5834	0.4166	3.5689	0.5951
32	10	1.6014	41.15	0.00	28.26	O/W	69.41	0.5929	0.4071	3.1223	0.5798
36	10	1.8008	41.88	0.00	25.71	O/W	67.59	0.6196	0.3804	2.7765	0.6643
40	10	2.0001	44.15	0.00	24.43	O/W	68.58	0.6438	0.3562	2.4999	0.7188

**Table A20** Solubilization parameters (SP) of AE9/*n*-hexanol/motor oil/water system at 50 °C

Concentration (%w/v)		Weight of AE9 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE9	<i>n</i> -hexanol		water	middle	oil						
4	10	0.1997	22.08	11.31	34.15	M	67.54	0.3269	0.5056	8.6671	0.2817
8	10	0.4006	35.05	0.00	34.39	O/W	69.44	0.5048	0.4952	12.4813	0.1186
12	10	0.6005	37.23	0.00	32.13	O/W	69.36	0.5368	0.4632	8.3264	0.6122
16	10	0.8010	37.04	0.00	31.11	O/W	68.15	0.5435	0.4565	6.2422	0.5432
20	10	0.9996	37.73	0.00	29.37	O/W	67.10	0.5623	0.4377	5.0020	0.6232
24	10	1.2006	39.63	0.00	30.81	O/W	70.44	0.5626	0.4374	4.1646	0.5215
28	10	1.4003	41.09	0.00	27.78	O/W	68.87	0.5966	0.4034	3.5707	0.6901
32	10	1.6014	42.38	0.00	25.02	O/W	67.40	0.6288	0.3712	3.1223	0.8042
36	10	1.8010	43.08	0.00	24.58	O/W	67.66	0.6367	0.3633	2.7762	0.7591
40	10	2.0001	43.51	0.00	25.85	O/W	69.36	0.6273	0.3727	2.4999	0.6365

**Table A21** Solubilization parameters (SP) of AE3/*n*-octanol/motor oil/water system at 20 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -octanol		water	middle	oil						
4	10	0.1997	27.14	0.00	41.65	W/O	68.79	0.3945	0.6055	5.2812	25.0376
8	10	0.3996	23.45	0.00	44.03	W/O	67.48	0.3475	0.6525	3.8161	12.5125
12	10	0.6000	23.16	36.77	8.58	M	68.51	0.3381	0.1252	2.6991	6.2460
16	10	0.8013	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
20	10	0.9997	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
24	10	1.2008	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
28	10	1.4012	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
32	10	1.5999	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
36	10	1.8010	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
40	10	2.0055	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A



**Table A22** Solubilization parameters (SP) of AE3/*n*-octanol/motor oil/water system at 30 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -octanol		water	middle	oil						
4	10	0.1995	27.02	0.00	42.08	W/O	69.10	0.3910	0.6090	5.4623	25.0627
8	10	0.4009	24.15	0.00	44.60	W/O	68.75	0.3513	0.6487	3.7098	12.4719
12	10	0.5996	21.80	0.00	46.26	W/O	68.06	0.3203	0.6797	2.9969	8.3389
16	10	0.8004	20.53	41.51	7.28	M	69.32	0.2962	0.1050	2.5467	4.9348
20	10	0.9991	19.00	43.92	6.17	M	69.09	0.2750	0.0893	2.2520	4.1107
24	10	1.2000	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
28	10	1.4003	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
32	10	1.6011	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
36	10	1.8008	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
40	10	1.9996	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A

**Table A23** Solubilization parameters (SP) of AE3/*n*-octanol/motor oil/water system at 40 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -octanol		water	middle	oil						
4	10	0.1997	29.51	0.00	42.82	W/O	72.33	0.4080	0.5920	4.6074	25.0376
8	10	0.4008	26.76	0.00	42.25	W/O	69.01	0.3878	0.6122	2.8002	12.4750
12	10	0.6011	22.90	0.00	46.35	W/O	69.25	0.3307	0.6693	2.8167	8.3181
16	10	0.8000	21.66	0.00	47.14	W/O	68.80	0.3148	0.6852	2.3147	6.2500
20	10	0.9994	18.71	43.95	5.78	M	68.44	0.2734	0.0845	2.2676	4.1580
24	10	1.2000	16.53	46.93	5.29	M	68.75	0.2404	0.0769	2.1630	3.5255
28	10	1.4010	13.75	48.44	4.65	M	66.84	0.2057	0.0696	2.1005	3.0723
32	10	1.6000	12.01	48.61	3.32	M	63.94	0.1878	0.0519	1.9510	2.8005
36	10	1.7998	11.08	54.86	2.79	M	68.73	0.1612	0.0406	1.8824	2.5525
40	10	2.0012	11.20	54.44	2.99	M	68.63	0.1632	0.0436	1.6830	2.2808

**Table A24** Solubilization parameters (SP) of AE3/*n*-octanol/motor oil/water system at 50 °C

Concentration (%w/v)		Weight of AE3 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE3	<i>n</i> -octanol		water	middle	oil						
4	10	0.2002	26.86	0.00	42.53	W/O	69.39	0.3871	0.6129	5.6400	24.9750
8	10	0.4006	25.72	0.00	44.45	W/O	70.17	0.3665	0.6335	3.3315	12.4813
12	10	0.6011	24.53	0.00	44.79	W/O	69.32	0.3539	0.6461	2.4311	8.3181
16	10	0.8003	21.74	0.00	46.61	W/O	68.35	0.3181	0.6819	2.2733	6.2477
20	10	0.9994	17.73	0.00	50.72	W/O	68.45	0.2590	0.7410	2.4112	5.0030
24	10	1.1994	17.33	43.63	8.37	M	69.33	0.2500	0.1207	2.0847	3.1622
28	10	1.3999	15.86	49.21	5.07	M	70.14	0.2261	0.0723	1.9564	3.0553
32	10	1.6000	13.93	49.78	4.11	M	67.82	0.2054	0.0606	1.8413	2.7462
36	10	1.8012	12.78	51.01	3.46	M	67.25	0.1900	0.0514	1.7209	2.4903
40	10	2.0017	11.57	52.17	3.07	M	66.81	0.1732	0.0460	1.6327	2.2683

**Table A25** Solubilization parameters (SP) of AE5/*n*-octanol/motor oil/water system at 20 °C

Concentration (%w/v)		Weight of AE5 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE5	<i>n</i> -octanol		water	middle	oil						
4	10	0.2016	25.46	0.00	43.33	W/O	68.79	0.3701	0.6299	6.4429	24.8016
8	10	0.3998	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
12	10	0.6001	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
16	10	0.8001	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
20	10	0.9997	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
24	10	1.2001	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
28	10	1.4009	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
32	10	1.6011	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
36	10	1.9002	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
40	10	2.2002	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A

**Table A26** Solubilization parameters (SP) of AE5/*n*-octanol/motor oil/water system at 30 °C

Concentration (%w/v)		Weight of AE5 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE5	<i>n</i> -octanol		water	middle	oil						
4	10	0.2016	25.46	0.00	43.33	W/O	68.79	0.3701	0.6299	6.4429	24.8016
8	10	0.3998	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
12	10	0.6001	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
16	10	0.8001	N/A	N/A	N/A	M,x	N/A	N/A	N/A	N/A	N/A
20	10	0.9997	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
24	10	1.2001	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
28	10	1.4009	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
32	10	1.6011	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
36	10	1.9002	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
40	10	2.2002	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A

**Table A27** Solubilization parameters (SP) of AE5/*n*-octanol/motor oil/water system at 40 °C

Concentration (%w/v)		Weight of AE5 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE5	<i>n</i> -octanol		water	middle	oil						
4	10	0.2001	26.70	0.00	41.20	W/O	67.90	0.3932	0.6068	5.3361	24.9875
8	10	0.4013	22.67	39.37	7.32	M	69.36	0.3268	0.1055	4.3148	9.8296
12	10	0.5996	17.97	40.06	10.40	M	68.43	0.2626	0.1520	3.9592	5.8042
16	10	0.8010	11.66	48.41	10.24	M	70.31	0.1658	0.1456	4.1718	4.4240
20	10	1.0009	5.66	54.54	9.59	M	69.79	0.0811	0.1374	4.1852	3.6226
24	10	1.2010	2.11	57.76	8.26	M	68.13	0.0310	0.1212	3.9053	3.1537
28	10	1.4001	64.12	0.00	9.41	O/W	73.53	0.8720	0.1280	3.5712	2.6571
32	10	1.6010	63.63	0.00	5.62	O/W	69.25	0.9188	0.0812	3.1230	2.6161
36	10	1.8017	63.46	0.00	5.02	O/W	68.48	0.9267	0.0733	2.7752	2.3683
40	10	1.9998	64.07	0.00	4.47	O/W	68.54	0.9348	0.0652	2.5003	2.1741

**Table A28** Solubilization parameters (SP) of AE5/*n*-octanol/motor oil/water system at 50 °C

Concentration (%w/v)		Weight of AE5 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE5	<i>n</i> -octanol		water	middle	oil						
4	10	0.1994	31.28	0.00	42.78	W/O	74.06	0.4224	0.5776	3.8937	25.0752
8	10	0.3995	24.27	0.00	44.40	W/O	68.67	0.3534	0.6466	3.6688	12.5156
12	10	0.5996	21.08	39.57	8.33	M	68.98	0.3056	0.1208	3.2422	6.3249
16	10	0.7998	17.53	43.31	7.66	M	68.50	0.2559	0.1118	3.0519	4.8534
20	10	1.0012	14.26	46.72	6.84	M	67.82	0.2103	0.1009	2.8939	3.9867
24	10	1.2009	9.00	53.41	7.26	M	69.67	0.1292	0.1042	3.0878	3.2958
28	10	1.4006	7.25	55.28	5.93	M	68.46	0.1059	0.0866	2.8138	2.9514
32	10	1.5998	4.03	60.55	4.51	M	69.09	0.0583	0.0653	2.7608	2.7174
36	10	1.8007	50.00	0.00	6.07	O/W	56.07	0.8917	0.1083	2.7767	2.1755
40	10	2.0014	63.99	0.00	3.99	O/W	67.98	0.9413	0.0587	2.4983	2.2050

**Table A29** Solubilization parameters (SP) of AE7/*n*-octanol/motor oil/water system at 20 °C

Concentration (%w/v)		Weight of AE7 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE7	<i>n</i> -octanol		water	middle	oil						
4	10	0.2010	37.11	0.00	33.52	O/W	70.63	0.5254	0.4746	24.8756	1.2644
8	10	0.4006	38.53	0.00	30.52	O/W	69.05	0.5580	0.4420	12.4813	1.4479
12	10	0.5999	40.77	0.00	28.84	O/W	69.61	0.5857	0.4143	8.3347	1.4284
16	10	0.8015	41.76	0.00	27.40	O/W	69.16	0.6038	0.3962	6.2383	1.2953
20	10	1.0015	46.06	0.00	23.23	O/W	69.29	0.6647	0.3353	4.9925	1.6450
24	10	1.1998	49.16	0.00	19.86	O/W	69.02	0.7123	0.2877	4.1674	1.7691
28	10	1.3999	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
32	10	1.6018	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
36	10	1.8018	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
40	10	2.0028	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A



**Table A30** Solubilization parameters (SP) of AE7/*n*-octanol/motor oil/water system at 30 °C

Concentration (%w/v)		Weight of AE7 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE7	<i>n</i> -octanol		water	middle	oil						
4	10	0.1996	13.15	29.12	27.10	M	69.37	0.1896	0.3907	15.5529	5.4780
8	10	0.4003	40.16	0.00	27.67	O/W	67.83	0.5921	0.4079	12.4906	2.3000
12	10	0.6008	43.66	0.00	26.03	O/W	69.69	0.6265	0.3735	8.3222	2.1053
16	10	0.8003	46.40	0.00	22.11	O/W	68.51	0.6773	0.3227	6.2477	2.2151
20	10	1.0008	48.67	0.00	20.24	O/W	68.91	0.7063	0.2937	4.9960	2.0612
24	10	1.2013	54.11	0.00	14.34	O/W	68.45	0.7905	0.2095	4.1622	2.4182
28	10	1.3998	56.47	0.00	11.53	O/W	68.00	0.8304	0.1696	3.5719	2.3606
32	10	1.6002	59.61	0.00	9.43	O/W	69.04	0.8634	0.1366	3.1246	2.2710
36	10	1.8003	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
40	10	2.0015	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A

**Table A31** Solubilization parameters (SP) of AE7/*n*-octanol/motor oil/water system at 40 °C

Concentration (%w/v)		Weight of AE7 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE7	<i>n</i> -octanol		water	middle	oil						
4	10	2.0080	21.92	39.63	6.88	M	68.43	0.3203	0.1005	0.8948	1.9893
8	10	0.4009	46.84	0.00	20.64	O/W	67.48	0.6941	0.3059	12.4719	4.8424
12	10	0.5999	47.83	0.00	20.36	O/W	68.19	0.7014	0.2986	8.3347	3.3576
16	10	0.7996	50.41	0.00	17.92	O/W	68.33	0.7377	0.2623	6.2531	2.9733
20	10	0.9998	54.55	0.00	12.94	O/W	67.49	0.8083	0.1917	5.0010	3.0833
24	10	1.1999	55.61	0.00	13.43	O/W	69.04	0.8055	0.1945	4.1670	2.5458
28	10	1.4002	55.58	0.00	12.41	O/W	67.99	0.8175	0.1825	3.5709	2.2673
32	10	1.6002	63.67	0.00	5.27	O/W	68.94	0.9236	0.0764	3.1246	2.6469
36	10	1.8004	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
40	10	2.0023	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A

**Table A32** Solubilization parameters (SP) of AE7/*n*-octanol/motor oil/water system at 50 °C

Concentration (%w/v)		Weight of AE7 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE7	<i>n</i> -octanol		water	middle	oil						
4	10	0.2004	25.08	0.00	43.74	W/O	68.82	0.3644	0.6356	6.7650	24.9501
8	10	0.4006	17.01	31.82	15.49	M	64.32	0.2645	0.2408	5.8797	6.4696
12	10	0.6004	7.33	42.93	14.36	M	64.62	0.1134	0.2222	6.4385	4.6265
16	10	0.8001	55.38	0.00	14.14	O/W	69.52	0.7966	0.2034	6.2492	3.7071
20	10	1.0012	54.37	0.00	11.74	O/W	66.11	0.8224	0.1776	4.9940	3.2203
24	10	1.2004	60.23	0.00	12.91	O/W	73.14	0.8235	0.1765	4.1653	2.6948
28	10	1.4004	57.39	0.00	10.68	O/W	68.07	0.8431	0.1569	3.5704	2.4500
32	10	1.6001	57.64	0.00	10.39	O/W	68.03	0.8473	0.1527	3.1248	2.1703
36	10	1.8005	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
40	10	2.0028	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A

**Table A33** Solubilization parameters (SP) of AE9/*n*-octanol/motor oil/water system at 20 °C

Concentration (%w/v)		Weight of AE9 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE9	<i>n</i> -octanol		water	middle	oil						
4	10	0.2003	36.98	0.00	35.69	O/W	72.67	0.5089	0.4911	24.9626	0.4431
8	10	0.4001	36.60	0.00	35.06	O/W	71.66	0.5107	0.4893	12.4969	0.2686
12	10	0.6005	35.52	0.00	33.99	O/W	69.51	0.5110	0.4890	8.3264	0.1833
16	10	0.8005	35.98	0.00	32.67	O/W	68.65	0.5241	0.4759	6.2461	0.3012
20	10	0.9999	39.54	0.00	30.47	O/W	70.01	0.5648	0.4352	5.0005	0.6478
24	10	1.2008	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
28	10	1.4010	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
32	10	1.6007	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
36	10	1.7999	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
40	10	2.0010	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A

**Table A34** Solubilization parameters (SP) of AE9/*n*-octanol/motor oil/water system at 30 °C

Concentration (%w/v)		Weight of AE9 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE9	<i>n</i> -octanol		water	middle	oil						
4	10	0.1998	35.42	0.00	35.15	O/W	70.57	0.5019	0.4981	25.0250	0.0957
8	10	0.3995	36.69	0.00	35.59	O/W	72.28	0.5076	0.4924	12.5156	0.1905
12	10	0.5999	35.74	0.00	33.01	O/W	68.75	0.5199	0.4801	8.3347	0.3310
16	10	0.7999	37.68	0.00	32.65	O/W	70.33	0.5358	0.4642	6.2508	0.4471
20	10	1.0010	39.70	0.00	29.84	O/W	69.54	0.5709	0.4291	4.9950	0.7082
24	10	1.2001	42.50	0.00	25.73	O/W	68.23	0.6229	0.3771	4.1663	1.0240
28	10	1.4010	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
32	10	1.6000	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
36	10	1.8001	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A
40	10	1.9997	N/A	N/A	N/A	O/W,x	N/A	N/A	N/A	N/A	N/A

**Table A35** Solubilization parameters (SP) of AE9/*n*-octanol/motor oil/water system at 40 °C

Concentration (%w/v)		Weight of AE9 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE9	<i>n</i> -octanol		water	middle	oil						
4	10	0.1999	36.74	0.00	35.89	O/W	72.63	0.5059	0.4941	25.0125	0.2927
8	10	0.4009	35.19	0.00	33.86	O/W	69.05	0.5096	0.4904	12.4719	0.2402
12	10	0.6003	37.68	0.00	31.93	O/W	69.61	0.5413	0.4587	8.3292	0.6880
16	10	0.7999	39.19	0.00	29.97	O/W	69.16	0.5667	0.4333	6.2508	0.8333
20	10	1.0004	41.18	0.00	28.11	O/W	69.29	0.5943	0.4057	4.9980	0.9428
24	10	1.2012	41.56	0.00	27.46	O/W	69.02	0.6021	0.3979	4.1625	0.8504
28	10	1.4007	43.94	0.00	24.57	O/W	68.51	0.6414	0.3586	3.5696	1.0093
32	10	1.6005	47.87	0.00	22.28	O/W	70.15	0.6824	0.3176	3.1240	1.1396
36	10	1.8016	48.22	0.00	21.72	O/W	69.94	0.6894	0.3106	2.7753	1.0516
40	10	2.0007	53.15	0.00	13.87	O/W	67.02	0.7930	0.2070	2.4991	1.4647

**Table A36** Solubilization parameters (SP) of AE9/*n*-octanol/motor oil/water system at 50 °C

Concentration (%w/v)		Weight of AE9 (g)	Phase height (mm)			Winsor Type	Total 3 phases height (mm)	V <sub>w</sub>	V <sub>o</sub>	SP <sub>w</sub>	SP <sub>o</sub>
AE9	<i>n</i> -octanol		water	middle	oil						
4	10	0.2002	17.68	18.97	30.86	M	67.51	0.2619	0.4571	11.8937	2.1420
8	10	0.3994	39.66	0.00	28.64	O/W	68.30	0.5807	0.4193	12.5188	2.0199
12	10	0.6005	40.23	0.00	28.86	O/W	69.09	0.5823	0.4177	8.3264	1.3703
16	10	0.8010	42.25	0.00	27.22	O/W	69.47	0.6082	0.3918	6.2422	1.3505
20	10	1.0008	42.99	0.00	27.12	O/W	70.11	0.6132	0.3868	4.9960	1.1309
24	10	1.2000	42.86	0.00	26.64	O/W	69.50	0.6167	0.3833	4.1667	0.9724
28	10	1.3999	45.48	0.00	24.84	O/W	70.32	0.6468	0.3532	3.5717	1.0483
32	10	1.6000	46.72	0.00	20.84	O/W	67.56	0.6915	0.3085	3.1250	1.1971
36	10	1.7998	56.07	0.00	12.96	O/W	69.03	0.8123	0.1877	2.7781	1.7349
40	10	2.0009	56.11	0.00	12.63	O/W	68.74	0.8163	0.1837	2.4989	1.5806

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