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APPENDICES

Appendix A Experimental data of microemulsion formation.

1. Interfacial Tension (IFT)

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

$$IFT = e(Vd)^3 n^2 \Delta\rho \qquad (A1)$$

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 Single Surfactant System

Table A1 Interfacial tension of each phase in microemulsion formation with 0.05 wt% of Alfoterra at different NaCl concentrations and an initial oil to water ratio = 1:1

Alfoterra conc. (wt%)	NaCl conc. (wt%)	No.	Upper density (g/mL)	Lower density (g/mL)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
0.05	2	1	0.8160	0.9880	4.5900	2.6700	3834	3.87970
		2	0.8130	0.9870	4.6400	2.5500	3744	4.77201
		3			4.6900	2.5700	3665	4.77250
		ave	0.8145	0.9875	4.6400	2.5967		4.47474
	3	1	0.8/13	0.9990	4.5200	2.5700	3910	4.07400
		2	0.8090	0.9940	4.4700	2.6000	3878	3.53430
		3			4.5600	2.5800	3500	3.41739
		ave	0.8090	0.9965	4.5167	2.5833		3.80415
	4	1	0.8080	1.0060	4.5400	2.9900	3708	1.85098
		2	0.8040	1.0020	4.5500	2.8000	3566	2.46379
		3			4.4300	2.8500	3939	2.21243
		ave	0.8060	1.0040	4.5450	2.8800		2.17573
	5	1	0.8090	1.0020	4.7100	2.6100	2855	2.87050
			0.8140		4.7500	2.6300	2923	3.09566
					4.7200	2.7100	2906	2.60776
		ave	0.8115	1.0020	4.7267	2.6500		2.85797
	6	1	0.8180	1.0170	4.5300	2.9100	4116	2.56307
		2	0.8140	1.0120	4.4700	2.8900	4282	2.57353
		3			4.4000	2.9900	5100	2.59456
		ave	0.8160	1.0145	4.5000	2.9300		2.57705
	7	1	0.8190	1.0270	4.8400	2.5500	4833	11.06137
			0.8260	1.0280	4.9500	2.4100	4895	15.48372
					4.8800	2.4700	5327	15.66337
		ave	0.8225	1.0275	4.8900	2.4767		14.06948

Table A2 Interfacial tension of each phase in microemulsion formation with 0.1 wt% of Alfoterra at different NaCl concentrations and an initial oil to water ratio= 1:1

Alfoterra conc. (wt%)	NaCl conc. (wt%)	No.	Upper density (g/mL)	Lower density (g/mL)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
0.1	2	1	0.8000	0.9900	5.0400	2.2000	2223	0.2126
		2	0.8040	0.9820	4.9300	2.3200	2398	0.1921
		3			4.8700	2.4300	2724	0.2025
		ave	0.8020	0.9860	4.9467	2.3167		0.2024
	3	1	0.8320	1.0130	4.9000	2.2400	2085	0.1495
		2	0.8200	0.9970	4.8900	2.2600	2351	0.1837
		3			4.8300	2.2300	2367	0.1800
		ave	0.8260	1.0050	4.8733	2.2433		0.1666
	4	1	0.8110	1.0160	4.7000	2.5100	1784	0.0684
		2	0.8140	1.0100	4.6300	2.4800	2173	0.0961
		3			4.6100	2.5100	1988	0.0749
		ave	0.8125	1.0130	4.6650	2.5000		0.0798
	5	1	0.8030	1.0170	4.4600	2.6800	1710	0.0358
		2	0.8010	1.0120	4.3200	2.7800	1852	0.0272
		3			4.3100	2.7000	1752	0.0278
		ave	0.8020	1.0145	4.3633	2.7200		0.0302
	6	1	0.8000	1.0080	4.6800	2.9800	3742	0.1440
		2	0.8080	1.0100	4.6200	2.8100	3406	0.1440
		3			4.5000	2.9400	3841	0.1172
		ave	0.8040	1.0090	4.6500	2.9100		0.1351
	7	1	0.8030	1.0150	4.0700	2.5500	3265	0.0833
		2	0.8000	1.0240	4.9200	2.6700	3787	0.3636
		3			4.6900	2.9500	4253	0.2121
		ave	0.8015	1.0195	4.4950	2.7233		0.2197

Table A3 Interfacial tension of each phase in microemulsion formation with 0.1 wt% at different NaCl concentrations and an initial oil to water ratio = 1:1

Alfoterra conc. (wt%)	NaCl conc. (wt%)	No.	Upper density (g/mL)	Lower densi ty (g/mL)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
0.15	2	1	0.8020	0.9840	4.8300	2.5900	3643	0.2711
		2	0.8100	0.9840	4.6900	2.6800	4208	0.2613
		3			4.7900	2.6500	3454	0.2125
		ave	0.8060	0.9840	4.7700	2.6400		0.2483
	3	1	0.8110	0.9930	5.0600	2.3500	2181	0.1803
		2	0.8080	0.9990	5.0600	2.3500	2181	0.1803
		3			4.9000	2.5200	3371	0.2917
		ave	0.8095	0.9960	5.0067	2.4067		0.2174
	4	1	0.8010	0.9970	4.6600	2.8100	3650	0.1688
		2	0.8020	0.9980	4.6900	2.7900	4093	0.2299
		3			4.6000	2.8200	3641	0.1496
		ave	0.8015	0.9975	4.6500	2.8067		0.1828
	5	1	0.8070	1.0040	4.5700	2.8800	2024	0.0400
		2	0.7990	0.9980	4.6100	2.8200	2609	0.0789
		3			4.5900	2.8700	2134	0.0468
		ave	0.8030	1.0010	4.5900	2.8567		0.0594
	6	1	0.7870	1.0020	4.5800	2.7800	2580	0.0836
		2	0.7970	1.0040	4.3900	2.9100	2819	0.0555
		3			4.3600	2.8900	2856	0.0558
		ave	0.7920	1.0030	4.4433	2.8600		0.0696
	7	1	0.8170	1.0200	4.3300	2.9300	3860	0.0837
		2	0.8150	1.0130	4.3700	2.8900	3477	0.0802
		3			4.3400	2.9800	3653	0.0687
		ave	0.8160	1.0165	4.3500	2.9333		0.0775

Table A4 Interfacial tension of each phase in microemulsion formation with 0.5 wt% at different NaCl concentrations and initial oil to water ratio = 1:1

Alfoterra conc. (wt%)	NaCl conc. (wt%)	No.	Upper density (g/mL)	Lower densi ty (g/mL)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
0.5	2	1	0.8160	0.9940	4.9100	2.3200	1787	0.0994
		2	0.8150	0.9880	4.9300	2.3100	1831	0.1080
		3			4.8000	2.4200	2182	0.1150
		ave	0.8155	0.9910	4.8800	2.3500		0.1075
	3	1	0.8060	0.9890	4.7100	2.6400	1704	0.0490
		2	0.8080	0.9980	4.6700	2.6900	1770	0.0463
		3			4.7000	2.6300	1703	
		ave	0.8070	0.9935	4.6933	2.6533		0.0477
	4	1	0.8240	1.0030	4.3400	3.0000	2811	0.0348
		2	0.8220	1.0020	4.3100	3.1000	3078	0.0308
		3			4.3200	3.0000	2944	0.0365
		ave	0.8230	1.0025	4.3233	3.0333		0.0340
	5	1	0.8230	1.0160	4.7500	2.6800	1911	0.0643
		2	0.8240	1.0200	4.6600	2.7200	2502	0.0908
		3			4.6500	2.8200	2478	0.0747
		ave	0.8235	1.0180	4.6867	2.7400		0.0775
	6	1	0.8260	1.0170				0.0000
		2	0.8110	1.0220	4.8100	2.5600	1857	0.0806
		3			4.8000	2.5900	1906	0.0805
		ave	0.8185	1.0195	4.8100	2.5750		0.0805
	7	1	0.8140	1.0230	4.5500	2.9700	3380	0.0975
		2	0.8090	1.0240	4.5200	3.0600	3758	0.0951
		3			4.4600	3.0600	4356	0.1127
		ave	0.8115	1.0235	4.5350	3.0300		0.1018

Table A5 Interfacial tension of each phase in microemulsion formation with 0.1 wt% of Alfoterra and 5 wt% of NaCl at different oil : water ratio

oil: water ratio	No.	Upper density (g/mL)	Lower densi ty (g/mL)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
1 :1	1	0.8030	1.0170	4.4600	2.6800	1710	0.0358
	2	0.8010	1.0120	4.3200	2.7800	1852	0.0272
	3			4.3100	2.7000	1752	0.0278
	ave	0.8020	1.0145	4.3633	2.6400		0.0302
1 : 4	1	0.8190	0.9990	4.4600	2.7300	2048	0.0407
	2	0.8210	1.0080	4.4900	2.6400	1901	0.0429
	3			4.4800	2.7400	2216	0.0485
	ave	0.8200	1.0035	4.4767	2.7033		0.0440
1 : 9	1	0.8220	1.0080	4.7200	2.6900	1788	0.0505
	2	0.8260	1.0100	4.5900	2.8000	2050	0.0455
	3			4.5900	2.8000	2157	0.0504
	ave	0.8240	1.0090	4.6333	2.7633		0.0488
1 : 19	1	0.8690	1.0040	4.7500	2.5900	1885	0.0505
	2	0.8610	1.0020	4.7200	2.6400	2069	0.0543
	3			4.7700	2.7400	2147	0.0543
	ave	0.8650	1.0030	4.7467	2.6567		0.0524

2.2 Mixed Surfactant System

Table A6 Interfacial tension of each phase in microemulsion formation with 0.1 wt% of Alfoterra, 5 wt% of NaCl, and oil:water ratio = 1:19 at different SDS concentration

SDS conc. (wt%)	No.	Upper density (g/mL)	Lower densi ty (g/mL)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
0.1	1	0.8290	0.9880	5.2700	2.1500	2366	0.29074
	2	0.8190	0.9950	5.2600	2.2100	2357	0.26955
	3			5.1800	2.2200	2599	0.29957
	ave	0.8240	0.9915	5.2367	2.1933		0.28662
0.5	1	0.8280	1.0110	4.8600	2.3500	5762	1.01841
	2	0.8220	1.0180	4.8000	2.4700	6568	1.05849
	3			4.8700	2.4000	5901	1.01788
	ave	0.8250	1.0150	4.8433	2.4067		1.03845
0.7	1	0.8280	0.9970	4.7900	2.3800	7648	1.47952
	2	0.8210	1.0060	4.9900	2.3000	6431	1.45475
	3			5.0800	2.2100	6070	1.57397
	ave	0.8245	1.0015	4.9533	2.2967		1.50275
1	1	0.8080	0.9780	5.4600	1.8400	6724	3.66772
	2	0.8050	0.9700	5.3700	1.9900	7585	3.79906
	3			5.6100	1.7900	6077	3.52033
	ave	0.8065	0.9740	5.4800	1.8733		3.66237

Table A7 Interfacial tension of each phase in microemulsion formation with 0.1 wt% of Alfoterra, 0.5 wt% of SDS, and oil:water ratio = 1:19 at different NaCl concentration

NaCl conc. (wt%)	No.	Upper density (g/mL)	Lower densi ty (g/mL)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
2	1	0.8260	1.0100	4.7900	2.1900	5307	0.97538
	2	0.8180	1.0200	5.0000	2.3700	6536	1.53126
	3			5.0600	2.2800	5896	1.47166
	ave	0.8220	1.0150	4.9500	2.2800		1.32610
3	1	0.8280	1.0220	5.7500	1.6600	2901	1.12573
	2	0.8220	1.0110	5.8700	1.5700	2653	1.09408
	3			5.7800	1.6600	2877	1.13172
	ave	0.8250	1.0165	5.8000	1.6300		1.10990
4	1	0.8480	1.0160	5.4500	1.9000	3488	0.98636
	2	0.8300	1.0170	4.7100	2.6800	7458	0.84320
	3			5.2200	2.0900	4220	0.98959
	ave	0.8390	1.0165	5.0800	2.2233		0.93972

Table A8 Interfacial tension of each phase in microemulsion formation with 0.1 wt% of Alfoterra, 0.5 wt% of SDS, and 4 wt% of NaCl concentration at different oil:water ratio

oil: water ratio	No.	Upper density (g/mL)	Lower densi ty (g/mL)	Upper level	Lower level	Speed (rpm)	IFT (mN/m)
1: 1	1	0.8120	1.0040	5.7000	1.7300	2661	0.8979
	2	0.8000	1.0050	5.6900	1.7400	2634	0.8665
	3			5.5200	1.8300	3034	0.9373
	ave	0.8060	1.0045	5.6367	1.7667		0.9006
1: 4	1	0.7970	0.9850	5.2400	2.0200	3013	0.5833
	2	0.8090	0.9980	5.0400	2.2100	3710	0.6004
	3			5.2100	2.1200	3228	0.5916
	ave	0.8030	0.9915	5.2400	2.0700		0.5918
1: 9	1	0.8030	0.9880	4.8000	2.3400	4842	0.6521
	2	0.8170	0.9980	4.8200	2.3300	4755	0.6522
	3			4.7800	2.3900	5062	0.6536
	ave	0.8100	0.9930	4.8000	2.3533		0.6526
1: 19	1	0.8480	1.0160	5.4500	1.9000	3488	0.9864
	2	0.8300	1.0170	4.7100	2.6800	7458	0.8432
	3			5.2200	2.0900	4220	0.9896
	ave	0.8390	1.0165	5.0800	2.2233		0.9397

Appendix B Experimental data of froth flotation experiment.

1. Oil Removal

The oil removal was calculated by the following formulation:

$$\text{Oil removal (\%)} = \frac{C_iF_i - C_tF_t}{C_iF_i} \times 100 \qquad \text{(B1)}$$

where C_t = concentration of oil in an effluent (wt%)

C_i = concentration of oil in an influent (wt%)

F_t = volumetric flow rate of an effluent (mL/min)

F_i = volumetric flow rate of an influent (mL/min)

2. Surfactant Removal

The surfactant removal was interpreted by the following equations:

$$\text{Surfactant removal (\%)} = \frac{C_{s,i}F_{s,i} - C_{s,t}F_{s,t}}{C_{s,i}F_{s,i}} \times 100 \qquad \text{(B2)}$$

where $C_{s,t}$ = concentration of surfactant in an effluent (wt%)

$C_{s,i}$ = concentration of surfactant in an influent (wt%)

F_t = volumetric flow rate of an effluent (mL/min)

F_i = volumetric flow rate of an influent (mL/min)

3. Enrichment Ratio

The enrichment was calculated by the following equations:

$$\text{Enrichment ratio} = \frac{C_f}{C_i} \qquad \text{(B3)}$$

where C_f = concentration of oil in the collapsed foam solution

C_i = concentration of oil in an influent

4. Effective Parameter on Froth Flotation

Table B1 Summary results of froth flotation performance of all system in the surfactant concentration effect at Alfoterra concentration = 0.10 wt%, NaCl concentration = 3 wt%, oil:water ratio = 1:19, air flow rate = 0.30 L/min, HRT = 22 min, foam height = 26 cm

System	SDS concentration (wt%)	Oil removal (%)	Enrichment ratio of oil	Surfactant removal	Enrichment ratio of surfactant	Foam wetness (g/mL)	Foam production rate (mL/min)
1:19 Alf0.1 SDS0.10 N3	0.1	36.81	1.7	36.51	1.14	1.0002	18.77
1:19 Alf0.1 SDS0.50 N3	0.5	63.02	1.36	60.08	1.04	1.0013	49.14
1:19 Alf0.1 SDS0.70 N3	0.7	21.42	1.93	34.03	1.06	0.9956	15.01
1:19 Alf0.1 SDS1 N3	1	47.25	1.92	52.97	1.08	0.999	39.77

Table B2 Summary results of froth flotation performance of all system in the NaCl concentration effect at Alfoterra concentration = 0.10 wt%, SDS concentration = 0.50 wt%, oil:water ratio = 1:19, air flow rate = 0.30 L/min, HRT = 22 min, foam height = 26 cm

System	NaCl conc. (wt%)	Oil removal (%)	Enrichment ratio of oil	Surfactant removal	Enrichment ratio of surfactant	Foam wetness (g/mL)	Foam production rate (mL/min))
1:19 Alf0.1 SDS0.50 N2	2	50.7	1.12	55.57	0.92	1.0156	38.91
1:19 Alf0.1 SDS0.50 N3	3	63.02	1.34	60.08	1.04	1.0013	49.14
1:19 Alf0.1 SDS0.50 N4	4	72.91	1.66	30.29	1.02	0.9927	23.76

Table B3 Summary results of froth flotation performance of all system in the oil : water ratio effect at Alfoterra concentration = 0.10 wt%, SDS concentration = 0.50 wt%, NaCl concentration = 4 wt%, air flow rate = 0.30 L/min, HRT = 22 min, foam height = 26 cm

System	oil:water ratio	Oil removal (%)	Enrichment ratio of oil	Surfactant removal	Enrichment ratio of surfactant	Foam wetness (g/mL)	Foam production rate (mL/min))
1:199 Alf0.1 SDS0.50 N4	1 : 199	71.39	0.83	36.64	1.12	1.0136	25.59
1:99 Alf0.1 SDS0.50 N4	1 : 99	78.47	0.76	48.76	1.08	1.0151	33.24
1:19 Alf0.1 SDS0.50 N4	1 : 19	72.91	1.66	30.29	1.1	0.9927	23.76
1:9 Alf0.1 SDS0.50 N4	1 : 9	73.21	0.98	50.22	1.03	1.0035	28.95

Table B4 Summary results of froth flotation performance of all system in the air flow rate effect at Alfoterra concentration = 0.10 wt%, SDS concentration = 0.50 wt%, NaCl concentration = 4 wt%, oil:water ratio = 1:19, HRT = 22 min, foam height = 26 cm

System	Air flow rate (L/min)	Oil removal (%)	Enrichment ratio of oil	Surfactant removal	Enrichment ratio of surfactant	Foam wetness (g/mL)	Foam production rate (mL/min)
1:19 Alf0.1 SDS0.50 N4(0.15LPM)	0.15	83.59	4.7	34.62	0.81	0.984	7.28
1:19 Alf0.1 SDS0.50 N4(0.20LPM)	0.2	82.98	1.81	33.98	0.91	0.9875	16.26
1:19 Alf0.1 SDS0.50 N4(0.25LPM)	0.25	87.78	1.77	34.88	0.99	0.9907	22.58
1:19 Alf0.1 SDS0.50 N4(0.30LPM)	0.3	72.91	1.66	30.29	1.1	0.9927	23.53

Table B5 Summary results of froth flotation performance of all system in the HRT effect at Alfoterra concentration = 0.10 wt%, SDS concentration = 0.50 wt%, NaCl concentration = 4 wt%, oil:water ratio = 1:19, air flow rate = 0.30 L/min, foam height = 26 cm

System	HRT (min)	Oil removal (%)	Enrichment ratio of oil	Surfactant removal	Enrichment ratio of surfactant	Foam wetness (g/mL)	Foam production rate (mL/min)
1:19 Alf0.1 SDS0.50 N4(f=200mL/min)	9.9	33.93	1.46	21.76	0.95	1.0075	53.09
1:19 Alf0.1 SDS0.50 N4(f=150mL/min)	13.2	52.67	1.63	28.53	0.98	1.0069	24.6
1:19 Alf0.1 SDS0.50 N4(f=90mL/min)	22	72.91	1.66	30.29	1.1	1.0025	23.76
1:19 Alf0.1 SDS0.50 N4(f=40mL/min)	49	90.37	1.69	69.85	1.5	1.0015	53.09

Table B6 Summary results of froth flotation performance of all system in the foam height effect at Alfoterra concentration = 0.10 wt%, SDS concentration = 0.50 wt%, NaCl concentration = 4 wt%, oil:water ratio = 1:19, air flow rate = 0.15 L/min, HRT= 22 min

System	Foam height (cm)	Oil removal (%)	Enrichment ratio of oil	Surfactant removal (%)	Enrichment ratio of surfactant	Foam wetness (g/mL)	Foam production rate (mL/min)
1:19 Alf0.1 SDS0.50 N4(level 1)	26	83.86	4.7	34.62	1.31	0.984	7.28
1:19 Alf0.1 SDS0.50 N4(level 2)	35	82.96	4.86	29.89	1.37	0.9829	4.96
1:19 Alf0.1 SDS0.50 N4(level 3)	46	81.31	5.75	17.64	1.39	0.9573	2.84
1:19 Alf0.1 SDS0.50 N4(level 4)	56	80.25	6.85	8.30	1.41	0.9050	1.76

Appendix C Experimental data of foamability and foam stability experiment.

1. Foamability

The foamability was defined as the ratio of maximum foam height to initial solution height

$$\text{Foamability} = \frac{H_{max}}{H_i} \qquad \text{(C1)}$$

where H_{max} = Maximum foam height

H_i = Initial solution height

2. Foam Stability ($t_{1/2}$)

The foam stability was defined as the time that was required for the foam volume to collapse by half.

3. Effective parameter on foamability and foam stability

Table C1 Summary results of foamability and foam stability for the non-agitated single surfactant system at NaCl concentration = 3 wt%, oil:water ratio = 1:19, air flow rate = 0.1 L/min

System	Alfoterra concentration(wt%)	Foam ability	Foam stability(min)
1:19 Alf0.05 N3	0.05	0.85	10.03
1:19 Alf0.10 N3	0.1	0.64	3.08
1:19 Alf0.15 N3	0.15	0.93	9.18
1:19 Alf0.50 N3	0.5	0.63	12.35
1:19 Alf1 N3	1	0.95	8.33

Table C2 Summary results of foamability and foam stability for the agitated single surfactant system at NaCl concentration = 3 wt%, oil:water ratio = 1:19, air flow rate = 0.1 L/min, agitated time = 60 min

System	Alfoterra concentration(wt%)	Foam ability	Foam stability(min)
60 1:19 Alf0.05 N3	0.05	0.1	1.62
60 1:19 Alf0.10 N3	0.1	0.1	0.05
60 1:19 Alf0.15 N3	0.15	0.15	0.8
60 1:19 Alf0.50 N3	0.5	1.02	12.25
60 1:19 Alf1 N3	1	1	8.1

Table C3 Summary results of foamability and foam stability for the agitated mixed surfactant system at different surfactant concentration at Alfoterra concentration = 0.10 wt%, NaCl concentration = 3 wt%, oil:water ratio = 1:19, air flow rate = 0.1 L/min

System	SDS concentration(wt%)	Foam ability	Foam stability(min)
60 1:19 Alf0.10 SDS0.05 N3	0.05	1.27	7.90
60 1:19 Alf0.10 SDS0.10 N3	0.1	3.96	25.88
60 1:19 Alf0.10 SDS0.50 N3	0.5	4.60	168.68
60 1:19 Alf0.10 SDS0.70 N3	0.7	4.39	195.43
60 1:19 Alf0.10 SDS1 N3	1	4.75	287.85

Table C4 Summary results of foamability and foam stability for the agitated mixed surfactant system at different salinity at Alfoterra concentration = 0.10 wt%, SDS concentration = 0.50 wt%, oil:water ratio = 1:19, air flow rate = 0.1 L/min

System	salinity (wt%)	Foam ability	Foam stability(min)
60 1:19 Alf0.10 SDS0.50 N2	2	1.79	160.35
60 1:19 Alf0.10 SDS0.50 N3	3	3.70	168.68
60 1:19 Alf0.10 SDS0.50 N4	4	1.82	86.03
61 1:19 Alf0.10 SDS0.50 N5	5	1.50	29.84

Table C5 Summary results of foamability and foam stability for the agitated mixed surfactant system at different oil:water ratio at Alfoterra concentration = 0.10 wt%, SDS concentration = 0.50 wt%, NaCl concentration = 4 wt%, air flow rate = 0.1 L/min

System	oil to water ratio	Foam ability	Foam stability(min)
60 1:9 Alf0.10 SDS0.50 N4	1 : 9	4.44	144.87
60 1:19 Alf0.10 SDS0.50 N4	1 : 19	1.82	86.03
60 1:99 Alf0.10 SDS0.50 N4	1 : 99	4.68	116.05
60 1:199 Alf0.10 SDS0.50 N4	1 : 199	4.31	135.98

Table C6 Summary results of foamability and foam stability for the agitated mixed surfactant system at different air flow rate at Alfoterra concentration = 0.10 wt%, SDS concentration = 0.50 wt%, NaCl concentration = 4 wt%, oil:water = 1:19

System	Oil to water ratio	Foam ability	Foam stability(min)
60 1:9 Alf0.10 SDS0.50 N4	1 : 9	4.44	144.87
60 1:19 Alf0.10 SDS0.50 N4	1 : 19	1.82	86.03
60 1:99 Alf0.10 SDS0.50 N4	1 : 99	4.68	116.05
60 1:199 Alf0.10 SDS0.50 N4	1 : 199	4.31	135.98

CURRICULUM VITAE

Name: Ms. Sunisa Watcharasing

Date of Birth: July 31, 1981

Nationality: Thai

University Education:

1998-2002 Bachelor Degree of Science in Chemical Engineering, Faculty of Science, Chulalongkorn University, Bangkok, Thailand.