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Appendix A Case 1: Fixed the value of A = 0.44, let the model find the best fit of MW only.

Table A.1 Case 1 for Unfractionated NM1.

vm-heptane	146.5	vm-toluene	106.2	A	0.44
dm-heptane	15.3	dm-toluene	18.25		
Mw	851.8057157	R	8.314		
vil	778	T	298K		
di	21.9				
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol

Toluene (vol%)	Heptane (vol%)	vm	dm	mol_T	mol_H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.5	15.3	0.00	6.84	75556.50	0.08	0.0000	6.1.E-03
10	90	142.5	15.6	0.94	6.16	20049.02	0.30	0.6000	8.7.E-02
20	80	138.4	15.9	1.88	5.47	5574.58	1.13	1.6018	2.2.E-01
30	70	134.4	16.2	2.82	4.79	1622.96	4.03	4.5060	2.2.E-01
35	65	132.4	16.3	3.29	4.45	890.71	7.48	8.4681	9.8.E-01
40	60	130.4	16.5	3.76	4.10	494.34	13.71	13.9549	6.1.E-02
42	58	129.6	16.5	3.95	3.97	391.82	17.42	15.9540	2.1.E+00
44	56	128.8	16.6	4.14	3.83	311.11	22.09	21.3933	1.6.E+00
46	54	128.0	16.7	4.33	3.69	247.46	27.98	24.0697	3.7.E+00
48	52	127.2	16.7	4.52	3.56	197.17	35.37	29.0696	5.2.E+00
50	50	126.4	16.8	4.70	3.42	157.38	44.66	36.3465	8.7.E+00
									2.3.E+01

Table A.2 Case 1 for Unfractionated NM5.

vm-heptane	146.5	vm-toluene	106.2	A	0.44
dm-heptane	15.3	dm-toluene	18.25		
Mw	757.0712248	R	8.314		
vil	693	T	298K		
di	21.9				
den_T	867	g/l	Mw_T	92.14g/mol	
den_H	684	g/l	Mw_H	100g/mol	

Toluene (vol%)	Heptane (vol%)	vm	dm	mol_T	mol_H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.5	15.3	0.00	6.84	24593.21	0.21	0.0000	4.4.E-02
10	90	142.5	15.6	0.94	6.16	7595.31	0.71	0.5101	3.9.E-02
20	80	138.4	15.9	1.88	5.47	2445.57	2.28	1.3888	7.9.E-01
30	70	134.4	16.2	2.82	4.79	820.42	7.03	3.4344	1.3.E+01
35	65	132.4	16.3	3.29	4.45	482.45	12.17	11.1648	1.0.E+00
40	60	130.4	16.5	3.76	4.10	286.55	20.86	23.2595	5.8.E+00
42	58	129.6	16.5	3.95	3.97	233.29	25.81	25.7269	6.3.E-03
44	56	128.8	16.6	4.14	3.83	190.23	31.88	31.6465	2.1.E+01
46	54	128.0	16.7	4.33	3.69	155.36	39.34	39.1452	2.1.E+01
48	52	127.2	16.7	4.52	3.56	127.08	48.47	52.0330	4.1.E+01
50	50	126.4	16.8	4.70	3.42	104.11	59.65	61.4516	6.1.E+01
									1.6.E+02

Table A.3 Case 1 for F60/40 NM1.

vm-heptane	146.5	vm-toluene	106.2	A	0.44
dm-heptane	15.5	dm-toluene	18.25		
Mw	3064.638615	R	8.314		
vil	2707	T	298K		
di	22.0				
den_T	867	g/l	Mw_T	92.14g/mol	
den_H	684	g/l	Mw_H	100g/mol	

Toluene (vol%)	Heptane (vol%)	vm	dm	mol_T	mol_H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.5	15.5	0.00	6.84	30373164955722	0.00	0	4.5.E-20
10	90	142.5	15.8	0.94	6.16	414486283185	0.00	0.053185	2.8.E-03
20	80	138.4	16.1	1.88	5.47	6478162010	0.00	0.112658	1.3.E-02
30	70	134.4	16.3	2.82	4.79	115650996	0.00	0.224548	5.0.E-02
40	60	130.4	16.6	3.76	4.10	2351216	0.00	0.586691	3.4.E-01
50	50	126.4	16.9	4.70	3.42	54250	0.14	1.018543	7.7.E-01
60	40	122.3	17.2	5.65	2.74	1415	5.60	5.560025	1.8.E-03
									1.2.E+00

Table A.4 Case 1 for F70/30 NM1.

vm-heptane	146.5	vm-toluene	106.2	A	0.44
dm-heptane	15.5	dm-toluene	18.25		
Mw	2522.470849	R	8.314		
vil	2246	T	298K		
di	22.0				
den_T	867	g/l	Mw_T	92.14g/mol	
den_H	684	g/l	Mw_H	100g/mol	

Toluene (vol%)	Heptane (vol%)	vm	dm	mol_T	mol_H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.5	15.5	0.00	6.84	249346087710.8	0.00	0.00	6.7.E-16
10	90	142.5	15.8	0.94	6.16	7099334853.5	0.00	0.072195015	5.2.E-03
20	80	138.4	16.1	1.88	5.47	226249475.0	0.00	0.143110643	2.0.E-02
30	70	134.4	16.3	2.82	4.79	8052830.1	0.00	0.33601176	1.1.E-01
40	60	130.4	16.6	3.76	4.10	319313.3	0.02	0.953369048	8.7.E-01
50	50	126.4	16.9	4.70	3.42	14066.0	0.55	3.037218975	6.2.E+00
60	40	122.3	17.2	5.65	2.74	686.2	11.56	11.34227021	4.9.E-02
									7.3.E+00

Table A.5 Case 1 for F80/20 NM1.

vm-heptane	146.4	vm-toluene	104.5	A	0.44
dm-heptane	15.41408047	dm-toluene	18.506		
Mw	1778.987673	R	8.314		
vil	1602	T	298K		
di	22.0				
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol

Toluene (vol%)	Heptane (vol%)	vm	dm	mol_T	mol_H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.4	15.4	0.00	6.84	4525298149.62	0.00	0.00	2.0.E-12
10	90	142.2	15.7	0.94	6.16	216435664.48	0.00	0.10725258	1.1.E-02
20	80	138.0	16.0	1.88	5.47	11603773.43	0.00	0.237564653	5.6.E-02
30	70	133.9	16.3	2.82	4.79	696120.29	0.01	0.596647643	3.4.E-01
40	60	129.7	16.7	3.76	4.10	46634.68	0.16	1.785344175	2.6.E+00
50	50	125.5	17.0	4.70	3.42	3480.81	2.21	3.085823963	7.7.E-01
60	40	121.3	17.3	5.65	2.74	288.71	27.54	27.38476125	2.4.E-02
									3.9.E+00

Table A.6 Case 1 for F90/10 NM1.

vm-heptane	146.5	vm-toluene	106.2	A	0.44
dm-heptane	15.5	dm-toluene	18.25		
Mw	819.5423135	R	8.314		
vil	749	T	298		
di	22.0				
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol

Toluene (vol%)	Heptane (vol%)	vm	dm	mol T	mol H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.5	15.5	0.00	6.84	25326.00	0.26	0.00	6.5.E-02
10	90	142.5	15.8	0.94	6.16	7873.92	0.85	0.353613315	2.5.E-01
20	80	138.4	16.1	1.88	5.47	2543.15	2.73	2.438261393	8.8.E-02
30	70	134.4	16.3	2.82	4.79	852.71	8.45	9.403744613	9.2.E-01
40	60	130.4	16.6	3.76	4.10	296.58	25.16	38.94610955	1.9.E+02
50	50	126.4	16.9	4.70	3.42	106.90	72.52	56.63429434	2.5.E+02
60	40	122.3	17.2	5.65	2.74	39.89	203.72	208.718826	2.5.E+01
									4.7.E+02

Appendix B Case 2: Let the model find the best fit of both A and MW

Table B.1 Case 2 for Unfractionated NM1

vm-heptane	146.5	vm-toluene	106.2	A	0.4540408
dm-heptane	15.3	dm-toluene	18.25		
Mw	670.0354746	R	8.314		
vil	614	T	298	K	
di	22.3				
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol

Toluene (vol%)	Heptane (vol%)	vm	dm	mol_T	mol_H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.5	15.3	0.00	6.84	31617.69	0.19	0.0000	3.5.E-02
10	90	142.5	15.6	0.94	6.16	10614.99	0.57	0.6000	6.4.E-04
20	80	138.4	15.9	1.88	5.47	3698.23	1.71	1.6018	1.2.E-02
30	70	134.4	16.2	2.82	4.79	1336.30	4.90	4.5060	1.5.E-01
35	65	132.4	16.3	3.29	4.45	814.16	8.18	8.4681	8.3.E-02
40	60	130.4	16.5	3.76	4.10	500.46	13.54	13.9549	1.7.E-01
42	58	129.6	16.5	3.95	3.97	412.96	16.52	15.9540	3.2.E-01
44	56	128.8	16.6	4.14	3.83	341.23	20.14	21.3933	4.6.E-01
46	54	128.0	16.7	4.33	3.69	282.35	24.51	24.0697	7.5.E-01
48	52	127.2	16.7	4.52	3.56	233.96	29.79	29.0696	1.2.E+00
50	50	126.4	16.8	4.70	3.42	194.12	36.16	36.3465	1.9.E+00
									5.1.E+00

Table B.2 Case 2 for Unfractionated NM5

vm-heptane	146.5	vm-toluene	106.2	A	0.4265752
dm-heptane	15.3	dm-toluene	18.25		
Mw	1020.345175	R	8.314		
vil	930	T	298	K	
di	21.6				
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol

Toluene (vol%)	Heptane (vol%)	vm	dm	mol_T	mol_H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.5	15.3	0.00	6.84	85494.53	0.06	0.0000	3.7.E-03
10	90	142.5	15.6	0.94	6.16	18849.57	0.29	0.5101	5.1.E-02
20	80	138.4	15.9	1.88	5.47	4393.87	1.27	1.3888	1.5.E-02
30	70	134.4	16.2	2.82	4.79	1081.91	5.33	3.4344	3.6.E+00
35	65	132.4	16.3	3.29	4.45	547.84	10.71	11.1648	2.0.E-01
40	60	130.4	16.5	3.76	4.10	281.12	21.26	23.2595	4.0.E+00
42	58	129.6	16.5	3.95	3.97	216.07	27.87	25.7269	4.6.E+00
44	56	128.8	16.6	4.14	3.83	166.42	36.47	31.6465	7.9.E+00
46	54	128.0	16.7	4.33	3.69	128.45	47.65	39.1452	1.2.E+01
48	52	127.2	16.7	4.52	3.56	99.34	62.14	52.0330	2.0.E+01
50	50	126.4	16.8	4.70	3.42	77.00	80.93	61.4516	3.3.E+01
									8.6.E+01

Table B.3 Case 2 for F60/40 NM1

vm-heptane	146.5	vm-toluene	106.2	A	0.46841
dm-heptane	15.5	dm-toluene	18.25		
Mw	1118.923087	R	8.314		
vil	1018	T	298	K	
di	22.7				
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol

Toluene (vol%)	Heptane (vol%)	vm	dm	mol_T	mol_H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.5	15.5	0.00	6.84	25321148.72	0.00	0	6.5.E-08
10	90	142.5	15.8	0.94	6.16	4376459.51	0.00	0.053185	2.7.E-03
20	80	138.4	16.1	1.88	5.47	796414.52	0.01	0.112658	1.1.E-02
30	70	134.4	16.3	2.82	4.79	152442.68	0.05	0.224548	3.1.E-02
40	60	130.4	16.6	3.76	4.10	30658.18	0.24	0.586691	1.2.E-01
50	50	126.4	16.9	4.70	3.42	6470.20	1.19	1.018543	2.8.E-02
60	40	122.3	17.2	5.65	2.74	1430.90	5.54	5.560025	3.6.E-04
									1.9.E-01

Table B.4 Case 2 for F70/30 NM1

vm-heptane	146.5	vm-toluene	106.2	A	0.47051
dm-heptane	15.5	dm-toluene	18.25		
Mw	922.9879357	R	8.314		
vil	842	T	298	K	
di	22.7				
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol

Toluene (vol%)	Heptane (vol%)	vm	dm	mol_T	mol_H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.5	15.5	0.00	6.84	2351137.29	0.00	0.00	7.6.E-06
10	90	142.5	15.8	0.94	6.16	547610.00	0.01	0.072195015	3.6.E-03
20	80	138.4	16.1	1.88	5.47	133118.72	0.05	0.143110643	8.3.E-03
30	70	134.4	16.3	2.82	4.79	33746.80	0.21	0.33601176	1.5.E-02
40	60	130.4	16.6	3.76	4.10	8913.73	0.83	0.953369048	1.4.E-02
50	50	126.4	16.9	4.70	3.42	2450.63	3.14	3.037218975	9.6.E-03
60	40	122.3	17.2	5.65	2.74	700.46	11.33	11.34227021	2.2.E-04
									5.1.E-02

Table B.5 Case 2 for F80/20 NM1

vm-heptane	146.4	vm-toluene	104.5	A	0.44469
dm-heptane	15.41408047	dm-toluene	18.506		
Mw	1428.22912	R	7.73733		
vil	1293	T	298	K	
di	22.1				
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol

Toluene (vol%)	Heptane (vol%)	vm	dm	mol T	mol H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.4	15.4	0.00	6.84	229493240.69	0.00	0.00	7.9.E-10
10	90	142.2	15.7	0.94	6.16	19049485.79	0.00	0.10725258	1.1.E-02
20	80	138.0	16.0	1.88	5.47	1734186.26	0.00	0.237564653	5.5.E-02
30	70	133.9	16.3	2.82	4.79	172896.80	0.04	0.596647643	3.1.E-01
40	60	129.7	16.7	3.76	4.10	18847.58	0.39	1.785344175	1.9.E+00
50	50	125.5	17.0	4.70	3.42	2242.36	3.43	3.085823963	1.2.E-01
60	40	121.3	17.3	5.65	2.74	290.56	27.36	27.38476125	4.7.E-04
									2.4.E+00

Table B.6 Case 2 for F90/10 NM1

vm-heptane	146.5	vm-toluene	106.2	A	0.43795
dm-heptane	15.5	dm-toluene	18.25		
Mw	885.3490766	R	8.314		
vil	809	T	298	K	
di	21.9				
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol

Toluene (vol%)	Heptane (vol%)	vm	dm	mol_T	mol_H	Ki	Solubility (g/l)	exp. Solubility(g/L)	error^2
0	100	146.5	15.5	0.00	6.84	39959.71	0.16	0.00	2.6.E-02
10	90	142.5	15.8	0.94	6.16	11404.92	0.59	0.353613315	5.5.E-02
20	80	138.4	16.1	1.88	5.47	3391.59	2.05	2.438261393	1.5.E-01
30	70	134.4	16.3	2.82	4.79	1050.08	6.86	9.403744613	6.5.E+00
40	60	130.4	16.6	3.76	4.10	338.20	22.06	38.94610955	2.9.E+02
50	50	126.4	16.9	4.70	3.42	113.20	68.45	56.63429434	1.4.E+02
60	40	122.3	17.2	5.65	2.74	39.33	206.71	208.718826	4.0.E+00
									4.4.E+02

Appendix C Case 3: Fixed y2 = 4.0, input y1 = 0.011 and Ad = 0.44 as initial guess and let the model find the best fit of MW.

Table C.1 Case 3 for Unfractionated NM1

vm-heptane	146.5	vm-toluene	106.2	den_T	867	g/l	Mw_T	92.14	g/mol
d(dm)-heptane	15.3	d(dm)-toluene	18	den_H	684	g/l	Mw_H	100	g/mol
d(pm)-heptane	0	d(pm)-toluene	1.4	R	8.314		T	298	K
d(hm)-heptane	0	d(hm)-toluene	2	Mw	832.4483995	g/mol			
vil	761	Phi1	8.246E-07						
d(di)	21.86133915	Ad	0.4367933						
d(pi)	0.019840649	Ap	3.602E-07						
d(hi)	0.039445804	Ah	1.441E-06						
dt	21.86138374	At	0.4367933						

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	4.32E+04	0	6.84	0.13	0.0000	1.73E-02
10	90	142.4728374	15.57	0.14	0.2	1.33E+04	0.9409594	6.156	0.45	0.6000	2.39E-02
20	80	138.4456747	15.84	0.28	0.4	4.26E+03	1.8819188	5.472	1.44	1.6018	2.72E-02
30	70	134.4185121	16.11	0.42	0.6	1.43E+03	2.8228782	4.788	4.42	4.5060	6.58E-03
35	65	132.4049308	16.245	0.49	0.7	8.45E+02	3.2933579	4.446	7.63	8.4681	6.95E-01
40	60	130.3913495	16.38	0.56	0.8	5.04E+02	3.7638376	4.104	13.03	13.9549	8.60E-01
42	58	129.585917	16.434	0.588	0.84	4.11E+02	3.9520295	3.9672	16.08	15.9540	1.68E-02
44	56	128.7804844	16.488	0.616	0.88	3.36E+02	4.1402214	3.8304	19.82	21.3933	2.46E+00
46	54	127.9750519	16.542	0.644	0.92	2.75E+02	4.3284133	3.6936	24.39	24.0697	1.04E-01
48	52	127.1696194	16.596	0.672	0.96	2.25E+02	4.5166052	3.5568	29.97	29.0696	8.02E-01
50	50	126.3641869	16.65	0.7	1	1.85E+02	4.704797	3.42	36.75	36.3465	1.65E-01
											5.18E+00

Table C.2 Case 3 for Unfractionated NM5

vm-heptane	146.5	vm-toluene	106.2						
d(dm)-heptane	15.3	d(dm)-toluene	18						
d(pm)-heptane	0	d(pm)-toluene	1.4						
d(hm)-heptane	0	d(hm)-toluene	2			vil	797		
den_T	867	g/l	Mw_T	92.14	g/mol	R	8.314	T	298K
den_H	684	g/l	Mw_H	100	g/mol	Mw	872.08	g/mol	
			Phi1	9.31E-04					
d(di)	21.6983066		Ad	0.430038					
d(pi)	0.661658269		Ap	0.0004					
d(hi)	1.315097673		Ah	0.001601					
dt	21.74819033		At	0.430041					

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	3.98E+04	0	6.84	0.15	0.0000	2.24E-02
10	90	142.47	15.57	0.14	0.2	1.12E+04	0.94096	6.156	0.55	0.5101	1.68E-03
20	80	138.45	15.84	0.28	0.4	3.33E+03	1.88192	5.472	1.93	1.3888	2.92E-01
30	70	134.42	16.11	0.42	0.6	1.03E+03	2.82288	4.788	6.44	3.4344	9.01E+00
35	65	132.40	16.24	0.49	0.7	5.85E+02	3.29336	4.446	11.55	11.1648	1.48E-01
40	60	130.39	16.38	0.56	0.8	3.36E+02	3.76384	4.104	20.49	23.2595	7.65E+00
42	58	129.59	16.43	0.588	0.84	2.70E+02	3.95203	3.9672	25.70	25.7269	8.14E-04
44	56	128.78	16.48	0.616	0.88	2.17E+02	4.14022	3.8304	32.17	31.6465	2.75E-01
46	54	127.98	16.54	0.644	0.92	1.75E+02	4.32841	3.6936	40.21	39.1452	1.13E+00
48	52	127.17	16.596	0.672	0.96	1.41E+02	4.51661	3.5568	50.17	52.0330	3.47E+00
50	50	126.36	16.65	0.7	1	1.14E+02	4.7048	3.42	62.51	61.4516	1.12E+00
											2.31E+01

Table C.3 Case 3 for F60/40 NM1

vm-heptane	146.5	vm-toluene	106.2		
d(dm)-heptane	15.3	d(dm)-toluene	18		
d(pm)-heptane	0	d(pm)-toluene	1.4		
d(hm)-heptane	0	d(hm)-toluene	2		
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol
R	8.314		T	298	K
Mw	1113.744262	g/mol			
vil	1013				
			Phi1	1.17E-03	
d(di)	22.46773295		Ad	0.459354	
d(pi)	0.766958224		Ap	0.000536	
d(hi)	1.521825724		Ah	0.002144	
dt	22.53227025		At	0.459359	

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	3.36E+07	0	6.84	0.00	0	5.15E-08
10	90	142.4728374	15.57	0.14	0.2	5.55E+06	0.94096	6.156	0.00	0.053185	2.68E-03
20	80	138.4456747	15.84	0.28	0.4	9.77E+05	1.88192	5.472	0.01	0.112658	1.09E-02
30	70	134.4185121	16.11	0.42	0.6	1.82E+05	2.82288	4.788	0.05	0.224548	3.17E-02
40	60	130.3913495	16.38	0.56	0.8	3.62E+04	3.76384	4.104	0.24	0.586691	1.19E-01
50	50	126.3641869	16.65	0.7	1	7.59E+03	4.7048	3.42	1.19	1.018543	3.00E-02
60	40	122.3370242	16.92	0.84	1.2	1.69E+03	5.64576	2.736	5.54	5.560025	6.13E-04
											1.94E-01

Table C.4 Case 3 for F70/30 NM1

vm-heptane	146.5	vm-toluene	106.2	
d(dm)-heptane	15.3	d(dm)-toluene	18	
d(pm)-heptane	0	d(pm)-toluene	1.4	
d(hm)-heptane	0	d(hm)-toluene	2	
den_T	867	g/l	Mw_T	92.14 g/mol
den_H	684	g/l	Mw_H	100 g/mol
R	8.314		T	298 K
Mw	995.5207488	g/mol		
vil	908			
			Phi1	2.60E-05
d(di)	22.37071785		Ad	0.4562295
d(pi)	0.114047569		Ap	1.187E-05
d(hi)	0.22648315		Ah	4.75E-05
dt	22.37215498		At	0.4562295

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	3.10E+06	0	6.84	0.00	0.00	4.81E-06
10	90	142.47	15.57	0.14	0.2	6.76E+05	0.94	6.156	0.01	0.072195015	3.81E-03
20	80	138.45	15.84	0.28	0.4	1.55E+05	1.88	5.472	0.05	0.143110643	9.21E-03
30	70	134.41	16.11	0.42	0.6	3.77E+04	2.82	4.788	0.20	0.33601176	1.82E-02
40	60	130.39	16.38	0.56	0.8	9.65E+03	3.76	4.104	0.81	0.953369048	2.00E-02
50	50	126.36	16.65	0.7	1	2.60E+03	4.70	3.42	3.11	3.037218975	5.36E-03
60	40	122.33	16.92	0.84	1.2	7.38E+02	5.64	2.736	11.32	11.34227021	3.08E-04
											5.70E-02

Table C.5 Case 3 for F80/20 NM1

vm-heptane	146.5	vm-toluene	106.2	
d(dm)-heptane	15.3	d(dm)-toluene	18	
d(pm)-heptane	0	d(pm)-toluene	1.4	
d(hm)-heptane	0	d(hm)-toluene	2	
den_T	867	g/l	Mw_T	92.14 g/mol
den_H	684	g/l	Mw_H	100 g/mol
R	8.314		T	298 K
Mw	690.2108695	g/mol		
vil	632			
			Phi1	1.16E-01
d(di)	17.75044327		Ad	0.2886
d(pi)	6.040516607		Ap	0.03345
d(hi)	12.02136574		Ah	0.13381
dt	22.27283798		At	0.31987

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	7.50E+04	0	6.84	0.06	0.00	3.96E-03
10	90	142.4728374	15.57	0.14	0.2	3.29E+04	0.94	6.156	0.15	0.10725258	1.73E-03
20	80	138.4456747	15.84	0.28	0.4	1.50E+04	1.88	5.472	0.34	0.237564653	1.01E-02
30	70	134.4185121	16.11	0.42	0.6	7.11E+03	2.82	4.788	0.74	0.596647643	2.04E-02
40	60	130.3913495	16.38	0.56	0.8	3.49E+03	3.76	4.104	1.56	1.785344175	5.29E-02
50	50	126.3641869	16.65	0.7	1	1.78E+03	4.70	3.42	3.15	3.085823963	4.36E-03
60	40	122.3370242	16.92	0.84	1.2	9.40E+02	5.64	2.736	6.16	27.38476125	4.51E+02
											9.34E-02

Table C.6 Case 3 for F90/10 NM1

vm-heptane	146.5	vm-toluene	106.2	
d(dm)-heptane	15.3	d(dm)-toluene	18	
d(pm)-heptane	0	d(pm)-toluene	1.4	
d(hm)-heptane	0	d(hm)-toluene	2	
den_T	867	g/l	Mw_T	92.14 g/mol
den_H	684	g/l	Mw_H	100 g/mol
R	8.314		T	298 K
Mw	541.501975	g/mol		
vil	497			
			Phi1	1.00E-07
d(di)	22.0303159		Ad	0.44559
d(pi)	0.00696419		Ap	4.5E-08
d(hi)	0.01387419		Ah	1.8E-07
dt	22.0303214		At	0.44559

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	2.75E+03	0	6.84	1.35	0.00	1.82E+00
10	90	142.4728374	15.57	0.14	0.2	1.26E+03	0.94	6.156	3.06	0.353613315	7.30E+00
20	80	138.4456747	15.84	0.28	0.4	5.95E+02	1.88	5.472	6.71	2.438261393	1.82E+01
30	70	134.4185121	16.11	0.42	0.6	2.90E+02	2.82	4.788	14.28	9.403744613	2.38E+01
40	60	130.3913495	16.38	0.56	0.8	1.45E+02	3.76	4.104	29.54	38.94610955	8.85E+01
50	50	126.3641869	16.65	0.7	1	7.50E+01	4.70	3.42	59.48	56.63429434	8.11E+00
60	40	122.3370242	16.92	0.84	1.2	3.98E+01	5.64	2.736	116.96	208.718826	8.42E+03
											1.48E+02

Appendix D Case 4: Fixed y1 = 0.011 and y2 = 4.0, let the model find the best fit of MW

Table D.1 Case 4 for Unfractionated NM1

vm-heptane	146.5	vm-toluene	106.2	den_T	867	g/l	Mw_T	92.14	g/mol
d(dm)-heptane	15.3	d(dm)-toluene	18	den_H	684	g/l	Mw_H	100	g/mol
d(pm)-heptane	0	d(pm)-toluene	1.4	R	8.314		T	298	K
d(hm)-heptane	0	d(hm)-toluene	2	vil	616		Mw	672.39	g/mol

		Phi1	0.011
d(di)	21.71909994	Ad	0.4322
d(pi)	2.276918941	Ap	0.00475
d(hi)	4.531917231	Ah	0.01902
dt	22.30340638	At	0.43265

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol T	mol H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	2.38E+04	0	6.84	0.19	0.0000	3.75E-02
10	90	142.4728374	15.57	0.14	0.2	8.04E+03	0.940959	6.156	0.59	0.6000	4.40E-05
20	80	138.4456747	15.84	0.28	0.4	2.83E+03	1.881919	5.472	1.75	1.6018	2.20E-02
30	70	134.4185121	16.11	0.42	0.6	1.03E+03	2.822878	4.788	4.97	4.5060	2.16E-01
35	65	132.4049308	16.245	0.49	0.7	6.31E+02	3.293358	4.446	8.26	8.4681	4.24E-02
40	60	130.3913495	16.38	0.56	0.8	3.90E+02	3.763838	4.104	13.61	13.9549	1.18E-01
42	58	129.585917	16.434	0.588	0.84	3.22E+02	3.95203	3.9672	16.58	15.9540	3.91E-01
44	56	128.7804844	16.488	0.616	0.88	2.67E+02	4.140221	3.8304	20.17	21.3933	1.50E+00
46	54	127.9750519	16.542	0.644	0.92	2.21E+02	4.328413	3.6936	24.50	24.0697	1.85E-01
48	52	127.1696194	16.596	0.672	0.96	1.84E+02	4.516605	3.5568	29.72	29.0696	4.28E-01
50	50	126.3641869	16.65	0.7	1	1.53E+02	4.704797	3.42	36.02	36.3465	1.08E-01
											3.05E+00

Table D.2 Case 4 for Unfractionated NM5

vm-heptane	146.5	vm-toluene	106.2	den_T	867	g/l	Mw_T	92.14	g/mol
d(dm)-heptane	15.3	d(dm)-toluene	18	den_H	684	g/l	Mw_H	100	g/mol
d(pm)-heptane	0	d(pm)-toluene	1.4	R	8.314		T	298	K
d(hm)-heptane	0	d(hm)-toluene	2	Mw	812.8169	g/mol	vil	743	
			Phi1	1.10E-02					
d(di)	21.377		Ad	0.417815					
d(pi)	2.240		Ap	0.004596					
d(hi)	4.455		Ah	0.018384					
dt	21.951		At	0.418245					

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	3.62E+04	0	6.84	0.15	0.0000	2.36E-02
10	90	142.472837	15.57	0.14	0.2	1.03E+04	0.94	6.156	0.56	0.5101	2.38E-03
20	80	138.445675	15.84	0.28	0.4	3.08E+03	1.88	5.472	1.94	1.3888	3.05E-01
30	70	134.418512	16.11	0.42	0.6	9.61E+02	2.82	4.788	6.44	3.4344	9.05E+00
35	65	132.404931	16.245	0.49	0.7	5.46E+02	3.29	4.446	11.55	11.1648	1.45E-01
40	60	130.391349	16.38	0.56	0.8	3.13E+02	3.76	4.104	20.48	23.2595	7.75E+00
42	58	129.585917	16.434	0.588	0.84	2.52E+02	3.95	3.9672	25.68	25.7269	2.46E-03
44	56	128.780484	16.488	0.616	0.88	2.03E+02	4.14	3.8304	32.15	31.6465	2.53E-01
46	54	127.975052	16.542	0.644	0.92	1.63E+02	4.32	3.6936	40.19	39.1452	1.10E+00
48	52	127.169619	16.596	0.672	0.96	1.32E+02	4.51	3.5568	50.17	52.0330	3.45E+00
50	50	126.364187	16.65	0.7	1	1.07E+02	4.70	3.42	62.55	61.4516	1.21E+00
											2.33E+01

Table D.3 Case 4 for F60/40 NM1

vm-heptane	146.5	vm-toluene	106.2	
d(dm)-heptane	15.3	d(dm)-toluene	18	
d(pm)-heptane	0	d(pm)-toluene	1.4	
d(hm)-heptane	0	d(hm)-toluene	2	
den_T	867	g/l	Mw_T	92.14 g/mol
den_H	684	g/l	Mw_H	100 g/mol
R	8.314		T	298 K
Mw	1037.76105	g/mol		
vil	945			
			Phi1	1.10E-02
d(di)	22.21862988		Ad	0.449753
d(pi)	2.328643081		Ap	0.004947
d(hi)	4.623013319		Ah	0.019789
dt	22.81364383		At	0.450215

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	3.05E+07	0	6.84	0.00	0	5.41E-08
10	90	142.4728374	15.57	0.14	0.2	5.12E+06	0.94	6.156	0.00	0.053185	2.68E-03
20	80	138.4456747	15.84	0.28	0.4	9.09E+05	1.88	5.472	0.01	0.112658	1.09E-02
30	70	134.4185121	16.11	0.42	0.6	1.71E+05	2.82	4.788	0.05	0.224548	3.18E-02
40	60	130.3913495	16.38	0.56	0.8	3.39E+04	3.76	4.104	0.24	0.586691	1.20E-01
50	50	126.3641869	16.65	0.7	1	7.11E+03	4.70	3.42	1.19	1.018543	2.81E-02
60	40	122.3370242	16.92	0.84	1.2	1.57E+03	5.64	2.736	5.54	5.560025	4.06E-04
											1.94E-01

Table D.4 Case 4 for F70/30 NM1

vm-heptane	146.5	vm-toluene	106.2		
d(dm)-heptane	15.3	d(dm)-toluene	18		
d(pm)-heptane	0	d(pm)-toluene	1.4		
d(hm)-heptane	0	d(hm)-toluene	2		
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol
R	8.314		T	298	K
Mw	861.628597	g/mol			
vil	787				
			Phi1	1.10E-02	
d(di)	22.21917408		Ad	0.4510051	
d(pi)	2.32901814		Ap	0.0049611	
d(hi)	4.629445181		Ah	0.0198442	
dt	22.81551632		At	0.4514687	

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	2.31E+06	0	6.84	0.00	0.00	6.53E-06
10	90	142.4728374	15.57	0.14	0.2	5.24E+05	0.94	6.156	0.01	0.072195015	3.66E-03
20	80	138.4456747	15.84	0.28	0.4	1.25E+05	1.88	5.472	0.05	0.143110643	8.53E-03
30	70	134.4185121	16.11	0.42	0.6	3.12E+04	2.82	4.788	0.21	0.33601176	1.58E-02
40	60	130.3913495	16.38	0.56	0.8	8.16E+03	3.76	4.104	0.83	0.953369048	1.50E-02
50	50	126.3641869	16.65	0.7	1	2.23E+03	4.70	3.42	3.14	3.037218975	9.94E-03
60	40	122.3370242	16.92	0.84	1.2	6.39E+02	5.64	2.736	11.33	11.34227021	2.13E-04
											5.31E-02

Table D.5 Case 4 for F80/20 NM1

vm-heptane	146.5	vm-toluene	106.2	
d(dm)-heptane	15.3	d(dm)-toluene	18	
d(pm)-heptane	0	d(pm)-toluene	1.4	
d(hm)-heptane	0	d(hm)-toluene	2	
den_T	867	g/l	Mw_T	92.14 g/mol
den_H	684	g/l	Mw_H	100 g/mol
R	8.314		T	298 K
Mw	1541.018568	g/mol		
vil	1393			
			Phi1	1.10E-02
d(di)	21.60086663		Ad	0.421803
d(pi)	2.262941152		Ap	0.00464
d(hi)	4.477061821		Ah	0.018559
dt	22.175717		At	0.422237

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	3.26E+08	0	6.84	0.00	0.00	1.04E-09
10	90	142.4728374	15.57	0.14	0.2	2.83E+07	0.94	6.156	0.00	0.10725258	1.14E-02
20	80	138.4456747	15.84	0.28	0.4	2.67E+06	1.88	5.472	0.00	0.237564653	5.44E-02
30	70	134.4185121	16.11	0.42	0.6	2.73E+05	2.82	4.788	0.04	0.596647643	3.07E-01
40	60	130.3913495	16.38	0.56	0.8	3.03E+04	3.76	4.104	0.40	1.785344175	1.92E+00
50	50	126.3641869	16.65	0.7	1	3.64E+03	4.70	3.42	3.44	3.085823963	1.24E-01
60	40	122.3370242	16.92	0.84	1.2	4.73E+02	5.64	2.736	27.36	27.38476125	5.28E-04
											2.42E+00

Table D.6 Case 4 for F90/10 NM1

vm-heptane	146.5	vm-toluene	106.2		
d(dm)-heptane	15.3	d(dm)-toluene	18		
d(pm)-heptane	0	d(pm)-toluene	1.4		
d(hm)-heptane	0	d(hm)-toluene	2		
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol
R	8.314		T	298	K
Mw	472.0900649	g/mol			
vil	434				
			Phi1	1.10E-02	
d(di)	21.83867361		Ad	0.4383423	
d(pi)	2.289775875		Ap	0.0048218	
d(hi)	4.563992587		Ah	0.0192871	
dt	22.42767859		At	0.438793	

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	2.33E+03	0	6.84	1.39	0.00	1.92E+00
10	90	142.472837	15.57	0.14	0.2	1.08E+03	0.94	6.156	3.10	0.353613315	7.54E+00
20	80	138.445675	15.84	0.28	0.4	5.16E+02	1.88	5.472	6.74	2.438261393	1.85E+01
30	70	134.418512	16.11	0.42	0.6	2.53E+02	2.82	4.788	14.27	9.403744613	2.37E+01
40	60	130.391349	16.38	0.56	0.8	1.27E+02	3.76	4.104	29.48	38.94610955	8.97E+01
50	50	126.364187	16.65	0.7	1	6.55E+01	4.70	3.42	59.49	56.63429434	8.17E+00
60	40	122.337024	16.92	0.84	1.2	3.46E+01	5.64	2.736	117.78	208.718826	8.27E+03
											1.50E+02

Appendix E Case 5: Fixed y1 = 0.011, y2 = 4.0 and Ad = 0.44, let the model find the best fit of MW.

Table E.1 Case 5 for Unfractionated NM1

vm-heptane	146.5	vm-toluene	106.2	den_T	867	g/l	Mw_T	92.14	g/mol
d(dm)-heptane	15.3	d(dm)-toluene	18	den_H	684	g/l	Mw_H	100	g/mol
d(pm)-heptane	0	d(pm)-toluene	1.4	R	8.314		T	298	K
d(hm)-heptane	0	d(hm)-toluene	2	Mw	572.4308757	g/mol	vil	525	
			Phi1	0.011					
d(di)	21.89707247		Ad	0.44					
d(pi)	2.295739817		Ap	0.0048					
d(hi)	4.572614132		Ah	0.0194					
dt	22.4869074		At	0.4405					

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	1.10E+04	0	6.84	0.36	0.0000	1.27E-01
10	90	142.472837	15.57	0.14	0.2	4.29E+03	0.94	6.156	0.95	0.6000	1.20E-01
20	80	138.445675	15.84	0.28	0.4	1.73E+03	1.88	5.472	2.43	1.6018	6.93E-01
30	70	134.418512	16.11	0.42	0.6	7.20E+02	2.82	4.788	6.06	4.5060	2.42E+00
35	65	132.404931	16.24	0.49	0.7	4.70E+02	3.29	4.446	9.46	8.4681	9.76E-01
40	60	130.391349	16.38	0.56	0.8	3.09E+02	3.76	4.104	14.64	13.9549	4.65E-01
42	58	129.585917	16.43	0.588	0.84	2.62E+02	3.95	3.9672	17.40	15.9540	2.08E+00
44	56	128.780484	16.48	0.616	0.88	2.22E+02	4.14	3.8304	20.65	21.3933	5.53E-01
46	54	127.975052	16.54	0.644	0.92	1.89E+02	4.32	3.6936	24.49	24.0697	1.73E-01
48	52	127.169619	16.59	0.672	0.96	1.60E+02	4.51	3.5568	29.00	29.0696	4.53E-03
50	50	126.364187	16.65	0.7	1	1.37E+02	4.70	3.42	34.31	36.3465	4.13E+00
											1.17E+01

Table E.2 Case 5 for Unfractionated NM5

vm-heptane	146.5	vm-toluene	106.2	den_T	867	g/l	Mw_T	92.14	g/mol
d(dm)-heptane	15.3	d(dm)-toluene	18	den_H	684	g/l	Mw_H	100	g/mol
d(pm)-heptane	0	d(pm)-toluene	1.4	R	8.314		T	298	K
d(hm)-heptane	0	d(hm)-toluene	2	Mw	481.0858	g/mol	vil	442	
			Phi1	1.10E-02					
d(di)	21.88146526		Ad	0.44					
d(pi)	2.294248493		Ap	0.00484					
d(hi)	4.572614132		Ah	0.01936					
dt	22.47155754		At	0.440452					

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	2.93E+03	0	6.84	1.12	0.0000	1.26E+00
10	90	142.4728374	15.57	0.14	0.2	1.34E+03	0.94	6.156	2.56	0.5101	4.19E+00
20	80	138.4456747	15.84	0.28	0.4	6.25E+02	1.88	5.472	5.67	1.3888	1.83E+01
30	70	134.4185121	16.11	0.42	0.6	3.01E+02	2.82	4.788	12.22	3.4344	7.71E+01
35	65	132.4049308	16.245	0.49	0.7	2.11E+02	3.29	4.446	17.76	11.1648	4.35E+01
40	60	130.3913495	16.38	0.56	0.8	1.48E+02	3.76	4.104	25.67	23.2595	5.81E+00
42	58	129.585917	16.434	0.588	0.84	1.29E+02	3.95	3.9672	29.69	25.7269	1.57E+01
44	56	128.7804844	16.488	0.616	0.88	1.13E+02	4.14	3.8304	34.31	31.6465	7.12E+00
46	54	127.9750519	16.542	0.644	0.92	9.84E+01	4.32	3.6936	39.62	39.1452	2.25E-01
48	52	127.1696194	16.596	0.672	0.96	8.60E+01	4.51	3.5568	45.70	52.0330	4.01E+01
50	50	126.3641869	16.65	0.7	1	7.52E+01	4.70	3.42	52.68	61.4516	7.70E+01
											2.90E+02

Table E.3 Case 5 for F60/40 NM1

vm-heptane	146.5	vm-toluene	106.2	
d(dm)-heptane	15.3	d(dm)-toluene	18	
d(pm)-heptane	0	d(pm)-toluene	1.4	
d(hm)-heptane	0	d(hm)-toluene	2	
den_T	867	g/l	Mw_T	92.14 g/mol
den_H	684	g/l	Mw_H	100 g/mol
R	8.314		T	298 K
Mw	1246.00546	g/mol		
vil	1132			
			Phi1	1.10E-02
d(di)	22.01181775		Ad	0.44
d(pi)	2.306577803		Ap	0.00484
d(hi)	4.572614132		Ah	0.01936
dt	22.59976155		At	0.440452

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	1.60E+08	0	6.84	0.00	0	2.85E-09
10	90	142.4728374	15.57	0.14	0.2	1.98E+07	0.94	6.156	0.00	0.053185	2.78E-03
20	80	138.4456747	15.84	0.28	0.4	2.63E+06	1.88	5.472	0.00	0.112658	1.19E-02
30	70	134.4185121	16.11	0.42	0.6	3.73E+05	2.82	4.788	0.03	0.224548	3.96E-02
40	60	130.3913495	16.38	0.56	0.8	5.65E+04	3.76	4.104	0.17	0.586691	1.71E-01
50	50	126.3641869	16.65	0.7	1	9.13E+03	4.70	3.42	1.11	1.018543	8.13E-03
											2.33E-01

Table E.4 Case 5 for F70/30 NM1

vm-heptane	146.5	vm-toluene	106.2		
d(dm)-heptane	15.3	d(dm)-toluene	18		
d(pm)-heptane	0	d(pm)-toluene	1.4		
d(hm)-heptane	0	d(hm)-toluene	2		
den_T	867	g/l	Mw_T	92.14	g/mol
den_H	684	g/l	Mw_H	100	g/mol
R	8.314		T	298	K
Mw	1052.715659	g/mol			
vil	959				
			Phi1	1.10E-02	
d(di)	21.97895159		Ad	0.44	
d(pi)	2.303496043		Ap	0.00484	
d(hi)	4.572614132		Ah	0.01936	
Dt	22.56743688		At	0.4404523	

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol T	mol H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	1.02E+07	0	6.84	0.00	0.00	5.02E-07
10	90	142.4728374	15.57	0.14	0.2	1.75E+06	0.94	6.156	0.00	0.072195015	4.61E-03
20	80	138.4456747	15.84	0.28	0.4	3.20E+05	1.88	5.472	0.02	0.143110643	1.41E-02
30	70	134.4185121	16.11	0.42	0.6	6.18E+04	2.82	4.788	0.13	0.33601176	4.26E-02
40	60	130.3913495	16.38	0.56	0.8	1.26E+04	3.76	4.104	0.66	0.953369048	8.89E-02
50	50	126.3641869	16.65	0.7	1	2.73E+03	4.70	3.42	3.13	3.037218975	9.12E-03
											1.59E-01

Table E.5 Case 5 for F80/20 NM1

vm-heptane	146.5	vm-toluene	106.2	
d(dm)-heptane	15.3	d(dm)-toluene	18	
d(pm)-heptane	0	d(pm)-toluene	1.4	
d(hm)-heptane	0	d(hm)-toluene	2	
den_T	867	g/l	Mw_T	92.14 g/mol
den_H	684	g/l	Mw_H	100 g/mol
R	8.314		T	298 K
Mw	1036.523652	g/mol		
vil	944			
			Phi1	1.10E-02
d(di)	21.97619614		Ad	0.44
d(pi)	2.303236857		Ap	0.00484
d(hi)	4.572614132		Ah	0.01936
dt	22.56472683		At	0.440452

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	8.07E+06	0	6.84	0.00	0.00	7.71E-07
10	90	142.4728374	15.57	0.14	0.2	1.43E+06	0.94	6.156	0.01	0.10725258	1.04E-02
20	80	138.4456747	15.84	0.28	0.4	2.68E+05	1.88	5.472	0.03	0.237564653	4.37E-02
30	70	134.4185121	16.11	0.42	0.6	5.32E+04	2.82	4.788	0.15	0.596647643	2.01E-01
40	60	130.3913495	16.38	0.56	0.8	1.12E+04	3.76	4.104	0.73	1.785344175	1.11E+00
50	50	126.3641869	16.65	0.7	1	2.47E+03	4.70	3.42	3.41	3.085823963	1.06E-01
60	40	122.3370242	16.92	0.84	1.2	5.76E+02	5.64	2.736	15.10	27.38476125	1.51E+02
											1.47E+00

Table E.6 Case 5 for F90/10 NM1

vm-heptane	146.5	vm-toluene	106.2	
d(dm)-heptane	15.3	d(dm)-toluene	18	
d(pm)-heptane	0	d(pm)-toluene	1.4	
d(hm)-heptane	0	d(hm)-toluene	2	
den_T	867	g/l	Mw_T	92.14 g/mol
den_H	684	g/l	Mw_H	100 g/mol
R	8.314		T	298
Mw	456.8669973	g/mol		
vil	420			
			Phi1	1.10E-02
d(di)	21.87732537		Ad	0.44
d(pi)	2.293852213		Ap	0.00484
d(hi)	4.572614132		Ah	0.01936
dt	22.46748591		At	0.4404523

Toluene (vol%)	Heptane (vol%)	vm	d(dm)	d(pm)	d(hm)	Ki	mol_T	mol_H	Solubility (g/l)	exp. Solubility(g/L)	Error^2
0	100	146.5	15.3	0	0	2.06E+03	0	6.84	1.52	0.00	2.31E+00
10	90	142.4728374	15.57	0.14	0.2	9.77E+02	0.94	6.156	3.32	0.353613315	8.82E+00
20	80	138.4456747	15.84	0.28	0.4	4.76E+02	1.88	5.472	7.08	2.438261393	2.15E+01
30	70	134.4185121	16.11	0.42	0.6	2.38E+02	2.82	4.788	14.69	9.403744613	2.79E+01
40	60	130.3913495	16.38	0.56	0.8	1.22E+02	3.76	4.104	29.76	38.94610955	8.44E+01
50	50	126.3641869	16.65	0.7	1	6.40E+01	4.70	3.42	58.97	56.63429434	5.43E+00
											1.50E+02

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