

Table 4.2: Experimental data of rubber seeds oil solubility in SC-CO₂ at constant flow rate of 2 mL/min using different density based models

Models	Temp, K	Press, MPa	ρ CO ₂ (g/L)	Y _s (g oil/L CO ₂)	ln ρ	ln Y _s (exp)	ln Y _s (Cal)	Residual (AAPD %)	ABS Residual
Chrastil	313.15	20	848	1.3	6.7429	0.2624	0.1421	45.8357	45.8357
	313.15	25	886	1.7	6.7867	0.5306	0.2097	60.4719	60.4719
	313.15	30	919	1.3	6.8233	0.2624	0.2662	-1.4520	1.4520
	333.15	20	730	0.9	6.5930	-0.1054	0.0643	160.9987	160.9987
	333.15	25	792	1.6	6.6746	0.4700	0.1900	59.5643	59.5643
	333.15	30	837	1.2	6.7298	0.1823	0.2753	-51.0079	51.0079
	353.15	20	587	0.2	6.3750	-1.6094	-0.1361	91.5406	91.5406
	353.15	25	682	1.1	6.5250	0.0953	0.0953	0.0006	0.0006
	353.15	30	747	0.5	6.6161	-0.6931	0.2358	134.0155	134.0155
del Valle and Aguilera	313.15	20	848	1.3	6.7429	0.2624	0.2046	22.0262	22.0262
	313.15	25	886	1.7	6.7867	0.5306	0.2388	54.9943	54.9943
	313.15	30	919	1.3	6.8233	0.2624	0.2674	-1.9096	1.9096
	333.15	20	730	0.9	6.5930	-0.1054	0.0774	173.400	173.400
	333.15	25	792	1.6	6.6746	0.4700	0.1411	69.9797	69.9797
	333.15	30	837	1.2	6.7298	0.1823	0.143	-1.0624	1.0624
	353.15	20	587	0.2	6.3750	-1.6094	-0.021	98.6398	98.6398
	353.15	25	682	1.1	6.5250	0.0953	0.0953	0.0451	0.0451
	353.15	30	747	0.5	6.6161	-0.6931	0.1664	124.0019	124.0019
Adachi-Lu	313.15	20	848	1.3	6.7429	0.2624	-0.4387	267.1995	267.1995
	313.15	25	886	1.7	6.7867	0.5306	-0.0735	113.8442	113.8442
	313.15	30	919	1.3	6.8233	0.2624	0.2622	0.0790	0.0790
	333.15	20	730	0.9	6.5930	-0.1054	-0.4707	-346.7045	346.7045
	333.15	25	792	1.6	6.6746	0.4700	0.0227	95.1684	95.1684
	333.15	30	837	1.2	6.7298	0.1823	0.4182	-129.3714	129.3714
	353.15	20	587	0.2	6.3750	-1.6094	-0.5342	66.8077	66.8077
	353.15	25	682	1.1	6.5250	0.0953	0.0379	60.2664	60.2664
	353.15	30	747	0.5	6.6161	-0.6931	0.5085	173.3633	173.3633