

Table 4.1: Experimental data of rubber seeds oil solubility in SC-CO₂ at constant flow rate of 3 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	2.4	6.7429	0.8755	0.8880	-1.4331	1.4331
	313.15	25	886	3.0	6.7867	1.0986	0.9073	17.4111	17.4111
	313.15	30	919	2.9	6.8233	1.0647	0.9234	13.2680	13.2680
	333.15	20	730	2.7	6.5930	0.9933	1.0383	-4.5396	4.5396
	333.15	25	792	3.3	6.6746	1.1939	1.0743	10.0226	10.0226
	333.15	30	837	3.0	6.7298	1.0986	1.0986	0.0001	0.0001
	353.15	20	587	3.1	6.3750	1.1314	1.1341	-0.2400	0.2400
	353.15	25	682	3.5	6.5250	1.2528	1.2002	4.1945	4.1945
	353.15	30	747	3.3	6.6161	1.1939	1.2403	-3.8869	3.8869
del Valle and Aguilera	313.15	20	848	2.4	6.7429	0.8755	1.0307	-17.7271	17.7271
	313.15	25	886	3.0	6.7867	1.0986	1.0436	5.1008	5.1008
	313.15	30	919	2.9	6.8233	1.0647	1.0543	0.9774	0.9774
	333.15	20	730	2.7	6.5930	0.9933	1.0680	-7.5253	7.5253
	333.15	25	792	3.3	6.6746	1.1939	1.0920	8.5398	8.5398
	333.15	30	837	3.0	6.7298	1.0986	1.1082	-0.8738	0.8738
	353.15	20	587	3.1	6.3750	1.1314	1.1314	2.493E-05	2.493E-05
	353.15	25	682	3.5	6.5250	1.2528	1.1755	6.1670	6.1670
	353.15	30	747	3.3	6.6161	1.1939	1.2023	-0.6992	0.6992
Adachi- Lu	313.15	20	848	2.4	6.7429	0.8755	0.5190	40.7153	40.7153
	313.15	25	886	3.0	6.7867	1.0986	0.7936	27.7645	27.7645
	313.15	30	919	2.9	6.8233	1.0647	1.0604	0.4054	0.4054
	333.15	20	730	2.7	6.5930	0.9933	0.8791	11.4906	11.4906
	333.15	25	792	3.3	6.6746	1.1939	1.1423	4.3211	4.3211
	333.15	30	837	3.0	6.7298	1.0986	1.4050	-27.8849	27.8849
	353.15	20	587	3.1	6.3750	1.1314	1.6580	-46.5440	46.5440
	353.15	25	682	3.5	6.5250	1.2528	1.6139	-28.8245	28.8245
	353.15	30	747	3.3	6.6161	1.1939	1.7891	-49.8498	49.8498