Supporting Information Document

Mole Fraction vs Refractive Index (nD) data for various binary pairs of dimethyl carbonate with xylene isomers.

Table 1: Measured Refractive Indices at 293.15 K and 93.13 kPa for various *p*-xylene mole fractions in p-xylene + dimethyl carbonate system[a]

sr. no.	*p*-xylene mole fraction (x_1)	n_D
1	0	1.3687
2	0.0368	1.3752
3	0.0866	1.3835
4	0.1570	1.3946
5	0.2639	1.4106
6	0.3598	1.4241
7	0.4244	1.4326
8	0.5293	1.4457
9	0.6397	1.4586
10	0.7655	1.4724
11	0.8832	1.4848
12	0.9380	1.4898
13	1	1.4956

[a]Standard uncertainties u are u(T) = 0.1 K, u(P) = 0.1 kPa, u(x) = 0.001, u(n_D) = 0.0001.

Table 2: Measured Refractive Indices at 293.15 K and 93.13 kPa for various m-xylene mole fractions in m-xylene + dimethyl carbonate system[a]

sr. no.	*m*-xylene mole fraction (x_1)	n_D
1	0	1.3688
2	0.0467	1.3769
3	0.0871	1.3836
4	0.1737	1.3973
5	0.2042	1.4021
6	0.2593	1.4101
7	0.3033	1.4167
8	0.3719	1.4262
9	0.4455	1.4359
10	0.4709	1.4390
11	0.5421	1.4481
12	0.6549	1.4612
13	0.7672	1.4738
14	0.8662	1.4839
15	0.9400	1.4913
16	1	1.4970

[a]Standard uncertainties u are u(T) = 0.1 K, u(P) = 0.1 kPa, u(x) = 0.001, u(n_D) = 0.0001.

Table 3: Measured Refractive Indices at 293.15 K and 93.13 kPa for various o-xylene mole fractions in o-xylene + dimethyl carbonate system[a]

sr. no.	*o*-xylene mole fraction (x_1)	n_D
1	0	1.3688
2	0.0450	1.3770
3	0.1564	1.3961
4	0.1622	1.3969
5	0.2752	1.4149
6	0.3600	1.4272
7	0.4516	1.4397
8	0.5655	1.4556
9	0.6030	1.4601
10	0.7134	1.4734
11	0.7602	1.4795
12	0.8813	1.4930
13	0.9276	1.4973
14	1	1.5048

[a]Standard uncertainties u are u(T) = 0.1 K, u(P) = 0.1 kPa, u(x) = 0.001, u(n_D) = 0.0001.

Table 4: Measured Refractive Indices at 293.15 K and 93.13 kPa for various ethylbenzene mole fractions in ethylbenzene + dimethyl carbonate system[a]

sr. no.	ethylbenzene mole fraction (x_1)	n_D
1	0	1.3688
2	0.0462	1.3767
3	0.0890	1.3836
4	0.1753	1.3970
5	0.2701	1.4109
6	0.3564	1.4232
7	0.4359	1.4335
8	0.4448	1.4352
9	0.4680	1.4382
10	0.5157	1.4441
11	0.5825	1.4527
12	0.6639	1.4617
13	0.7377	1.4702
14	0.8520	1.4815
15	0.8827	1.4847
16	0.9124	1.4873
17	0.9395	1.4900
18	1.0000	1.4956

[a]Standard uncertainties u are u(T) = 0.1 K, u(P) = 0.1 kPa, u(x) = 0.001, u(n_D) = 0.0001.