

Supporting Information

Liquid–Liquid Equilibrium Data for Cyclohexane–Ethanol–Solvent Ternary Systems and Their Correlation with the Nonrandom Two-Liquid Model

Chong Yang^{1, 2}, Huakang Wu^{1, 2}, Yepeng Xiao^{1, 2}, Yiqiang Deng^{1, 2},

Lihua Cheng^{1, 2}, Xinping Ouyang^{1, 2, 3 *}

¹ College of Chemical Engineering, Guangdong Provincial Engineering Technology

Research Center of Petrochemical Corrosion and Safety, Guangdong University of

Petrochemical Technology, Maoming, Guangdong, 525000, China

² Key Laboratory of Inferior Crude Oil Processing of Guangdong Provincial Higher

Education Institutes, Maoming, Guangdong, 525000, China

³ School of Chemistry & Chemical Engineering, South China University of

Technology, Guangzhou, Guangdong, 510640, China

* Corresponding author: Xinping Ouyang, E-mail: ceouyang@scut.edu.cn

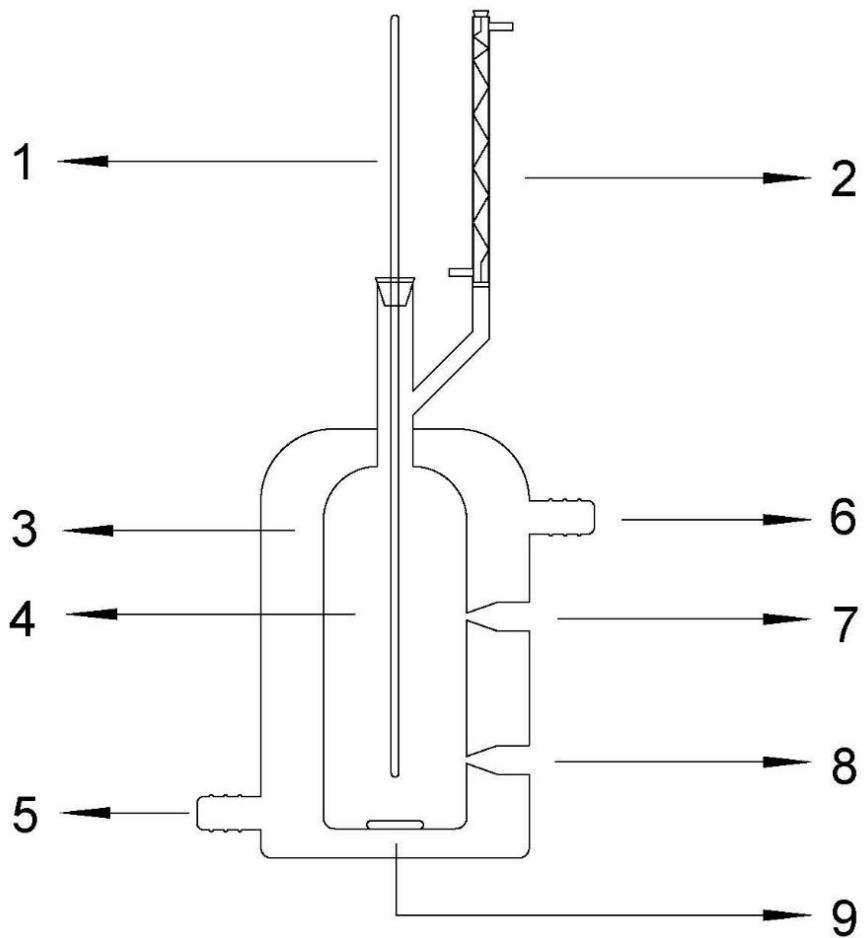


Figure S1. Experimental set-up of the vessel for obtaining the LLE data: 1. Thermometer, 2. condenser tube, 3. circulating water chamber, 4. equilibrium cell chamber, 5. circulating water inlet, 6. circulating water outlet, 7. super-stratum sampling port, 8. substratum sampling port, 9. magnetic stirrer.

Table S1. Mole Fractions (x) Corresponding to the Calculated LLE Values using the NRTL Model for the Cy (1)–EtOH (2)–Solvent (3) Ternary System at $T = 303.15$ K and $P = 100.3$ kPa

solvent	solvent-rich phase			Cy-rich phase		
	x_1^β	x_2^β	x_3^β	x_1^α	x_2^α	x_3^α
BDO	0.0491	0.1017	0.8492	0.9911	0.0043	0.0046
	0.0574	0.1894	0.7532	0.9893	0.0062	0.0045
	0.0663	0.2705	0.6632	0.9867	0.0091	0.0042
	0.0759	0.3352	0.5889	0.9837	0.0123	0.0040
	0.0883	0.3985	0.5132	0.9800	0.0164	0.0036
	0.1057	0.4633	0.4310	0.9751	0.0216	0.0033
	0.1237	0.5132	0.3631	0.9705	0.0266	0.0029
DMSO	0.0642	0.0910	0.8448	0.9771	0.0038	0.0191
	0.0726	0.1759	0.7515	0.9770	0.0061	0.0169
	0.0920	0.2446	0.6634	0.9702	0.0113	0.0185
	0.1206	0.2914	0.5880	0.9570	0.0196	0.0234
	0.1451	0.3464	0.5085	0.9463	0.0290	0.0247
	0.1769	0.3847	0.4384	0.9306	0.0415	0.0279
	0.2271	0.3835	0.3894	0.8992	0.0609	0.0399
DMF	0.2494	0.0580	0.6926	0.8891	0.0078	0.1031
	0.2765	0.0866	0.6369	0.8855	0.0140	0.1005
	0.3009	0.1105	0.5886	0.8797	0.0210	0.0993
	0.3249	0.1318	0.5433	0.8718	0.0291	0.0991
	0.3412	0.1451	0.5137	0.8650	0.0354	0.0996
	0.3629	0.1604	0.4767	0.8546	0.0443	0.1011