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Supplementary material

Thermodynamic Consistency and Model Correlation of Isobaric Vapor–Liquid Equilibria in Binary and Ternary Systems of Chloroform, Methanol and Benzene

Consistencia termodinámica y correlación de modelos de los equilibrios isobáricos vapor-líquido en sistemas binarios y ternarios de cloroformo, metanol y benceno

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Table S1. Vapor-Liquid Equilibrium Data from DDB

System	Type	Data Set
Chloroform(1) + Benzene(2)	Binary	408
Chloroform(1) + Benzene(2)	Binary	410
Methanol(1) + Benzene(2)	Binary	39
Chloroform(1) + Methanol(2) + Benzene(3)	Ternary	2578
Chloroform(1) + Methanol(2) + Benzene(3)	Ternary	6481
Chloroform(1) + Methanol(2) + Benzene(3)	Ternary	18035

Table S2. Vapor-Liquid Equilibrium Data of KDB

System	Type	ID
Chloroform(1) + Benzene(2)	Binary	3565
Chloroform(1) + Benzene(2)	Binary	4500
Chloroform(1) + Methanol(2)	Binary	3114
Chloroform(1) + Methanol(2)	Binary	4121
Methanol(1) + Benzene(2)	Binary	2724
Methanol(1) + Benzene(2)	Binary	2749
Methanol(1) + Benzene(2)	Binary	3711

Table S3. Antoine Parameters for chloroform, benzene, and methanol

	Chloroform	Benzene	Methanol
A	7.4477	7.2009	8.08097
B	1488.99	1415.8	1582.27
C	264.915	248.028	239.7

Table S4. UNIQUAC structural parameters for chloroform, methanol and benzene (Poling et al., 2001)

Component	r_i	q_i
Chloroform	2.8700	2.4100
Methanol	1.4311	1.4320
Benzene	3.1878	2.4000

Table S5. Atomic and molecular properties of the pure solvents

Component	Dipole moment μ (D)	Polarizabilities α ($10^{-40} J^{-1} C^2 m^2$)
Chloroform	1.01	8.50
Methanol	1.71	3.23
Benzene	0	10.4