Supporting Information

Phase separation of alcohol (1-propanol, 2-propanol, or *tert*-butanol) from their aqueous solutions in the presence of biological buffer MOPS

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Table S1. Azeotrope Alcohols with Water[a]

Organic solvents	Azeotropic temperature/K	Azeotropic composition/w_1
1-Propanol	360.80	0.717
2-Propanol	353.25	0.88
tert-Butanol	353.05	0.8824

[a] taken from Horsley[1]

Table S2. The Average Absolute Deviation (AAD) of NRTL Model for Ternary Systems of Alcohol (1) + Water (2) + MOPS (3)

Phase	Δx_1 AAD	Δx_2 AAD	Δx_3 AAD	Grand AAD[a]
1-Propanol (1) + Water (2) + MOPS (3)				
Aqueous	0.0024	0.0048	0.0060	0.0069
Organic	0.0113	0.0112	0.0058	
2-Propanol (1) + Water (2) + MOPS (3)				
Aqueous	0.0057	0.0035	0.0048	0.0061
Organic	0.0104	0.0073	0.0051	
tert-Butanol (1) + Water (2) + MOPS (3)				
Aqueous	0.0076	0.0078	0.0034	0.0056
Organic	0.0057	0.0059	0.0033	

[a] grand AAD $= \left(\sum_{k=1}^{N} \sum_{j=1}^{2} \sum_{i=1}^{3} \left| x_{ijk}^{calc} - x_{ijk}^{expt} \right| \right) \Big/ 6N$; where N is the number of tie-lines.

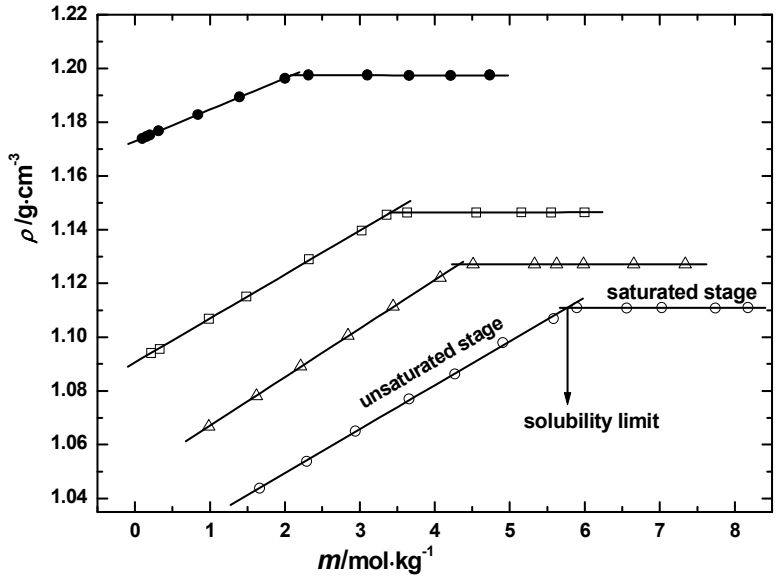

Figure S1. Plot of density against molality to determine the solid solubility[2]

References

(1) Horsley, L. H. *Tables of Azeotropes and nonazeotropes, in: Azeotropic data-III*; American Chemical Society: Washington DC, 1973.

(2) Taha, M.; Lee, M. J. Buffers and ionic salts: densities and solubilities of aqueous and electrolyte solutions of tris(hydroxymethyl)aminomethane and N-tris[hydroxymethyl]-4-amino-butanesulfonic acid. *J. Chem. Eng. Data* **2009**, *54*, 2501-2512.