

Supporting Information

Physicochemical observation of the impact of various additives on the clouding nature of triton X-100 solution

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Table S1. Values of cloud point (CP) for pure TX-100 in water.

| $c_{\text{TX-100}}$ mmolkg^{-1} | CP (K) |
|---|-----------|
| 8.26 | 339.53 |
| 15.44 | 337.65 |
| 46.35 | 336.10 |
| 71.04 | 335.57 |
| 108.84 | 335.03 |
| 154.96 | 335.99 |
| 232.26 | 336.78 |
| 309.55 | 338.31 |
| 386.68 | 340.46 |

Table S2. Values of CP of $15.63 \text{ mmolkg}^{-1}$ TX-100 solution having different concentrations of PEG-400.

| $c_{\text{PEG-400}}$ mmolkg^{-1} | CP (K) |
|--|-----------|
| 0.00 | 337.93 |
| 0.06 | 339.31 |
| 0.51 | 339.39 |
| 1.05 | 339.43 |
| 3.10 | 339.46 |
| 5.20 | 339.50 |
| 10.05 | 339.61 |

Table S3. Values of cloud point (CP) of surfactant TX-100 in alcohol+ H₂O systems.

| $c_{\text{TX-100}}$ mmolkg ⁻¹ | $c_{\text{alcohols}} \times 10^{-3}$ mmolkg ⁻¹ | CP (K) |
|---|--|-----------|
| TX-100+ Ethanol+ H ₂ O System | | |
| 16.07 | 1.09 | 348.20 |
| 15.64 | 2.17 | 354.35 |
| 15.90 | 3.26 | 356.65 |
| 16.05 | 4.35 | 359.48 |
| 15.75 | 5.43 | 363.20 |
| TX-100+ Propanol+ H ₂ O System | | |
| 15.98 | 0.83 | 347.36 |
| 15.54 | 1.66 | 348.51 |
| 16.07 | 2.50 | 350.83 |
| 15.81 | 3.33 | 356.73 |
| 15.60 | 4.16 | 359.76 |
| TX-100+ Butanol-2+ H ₂ O System | | |
| 15.40 | 0.67 | 338.15 |
| 15.85 | 1.35 | 322.45 |
| 15.84 | 2.02 | 307.10 |

Table S4. Values of cloud point (CP) of TX-100 solution having different concentrations of diols and particular concentration of PEG-400.

| $c_{\text{TX-100}}$ mmolkg ⁻¹ | $c_{\text{PEG-400}}$ mmolkg ⁻¹ | c_{diols} mmolkg ⁻¹ | CP (K) |
|---|--|--|-----------|
| TX-100+ PEG-400+ 1, 2-Ethanediol system | | | |
| 15.62 | 1.02 | 0.17 | 335.90 |
| 15.65 | 1.02 | 0.81 | 337.60 |
| 15.61 | 1.01 | 1.61 | 340.00 |
| 15.62 | 1.03 | 2.42 | 342.20 |
| 15.62 | 1.01 | 3.22 | 344.10 |
| TX-100+ PEG-400+ 1, 2-Propanediol system | | | |
| 15.62 | 1.02 | 0.14 | 336.60 |
| 15.65 | 1.02 | 0.66 | 341.70 |
| 15.61 | 1.01 | 1.32 | 348.50 |
| 15.62 | 1.03 | 1.97 | 360.10 |
| 15.62 | 1.01 | 2.63 | 367.50 |

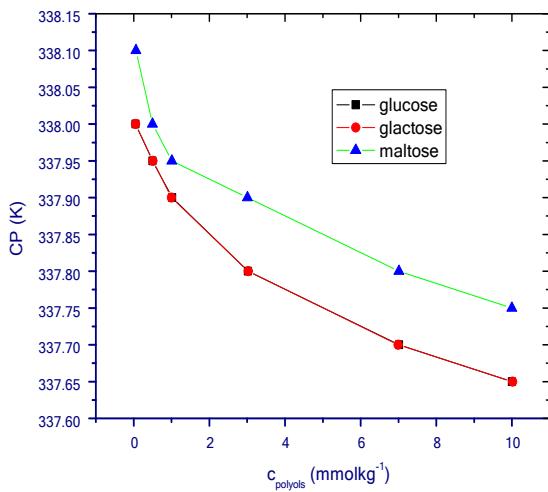


Fig. S1. Plot of CP vs. concentration of polyols for PEG-400+ TX-100 solutions containing 15 mmolkg⁻¹ TX-100 and 1.0 mmolkg⁻¹ PEG-400.

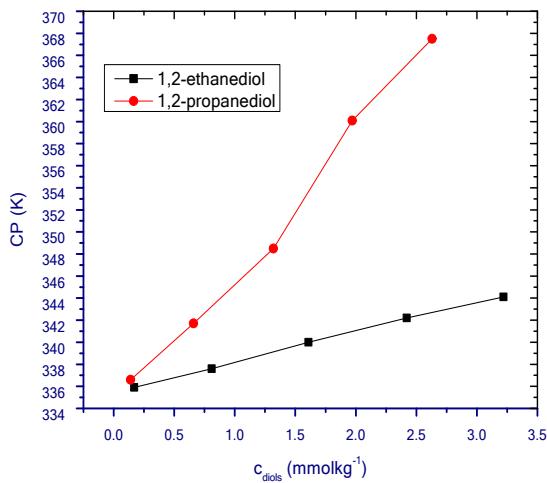


Fig. S2. Plot of CP vs. concentration of diols for PEG-400+ TX-100 solutions containing 15 mmolkg⁻¹ TX-100 and 1.0 mmolkg⁻¹ PEG-400.