Supporting Information

Investigation of solid-liquid phase diagrams of the Sulfamethazine-Salicylic acid Co-crystal

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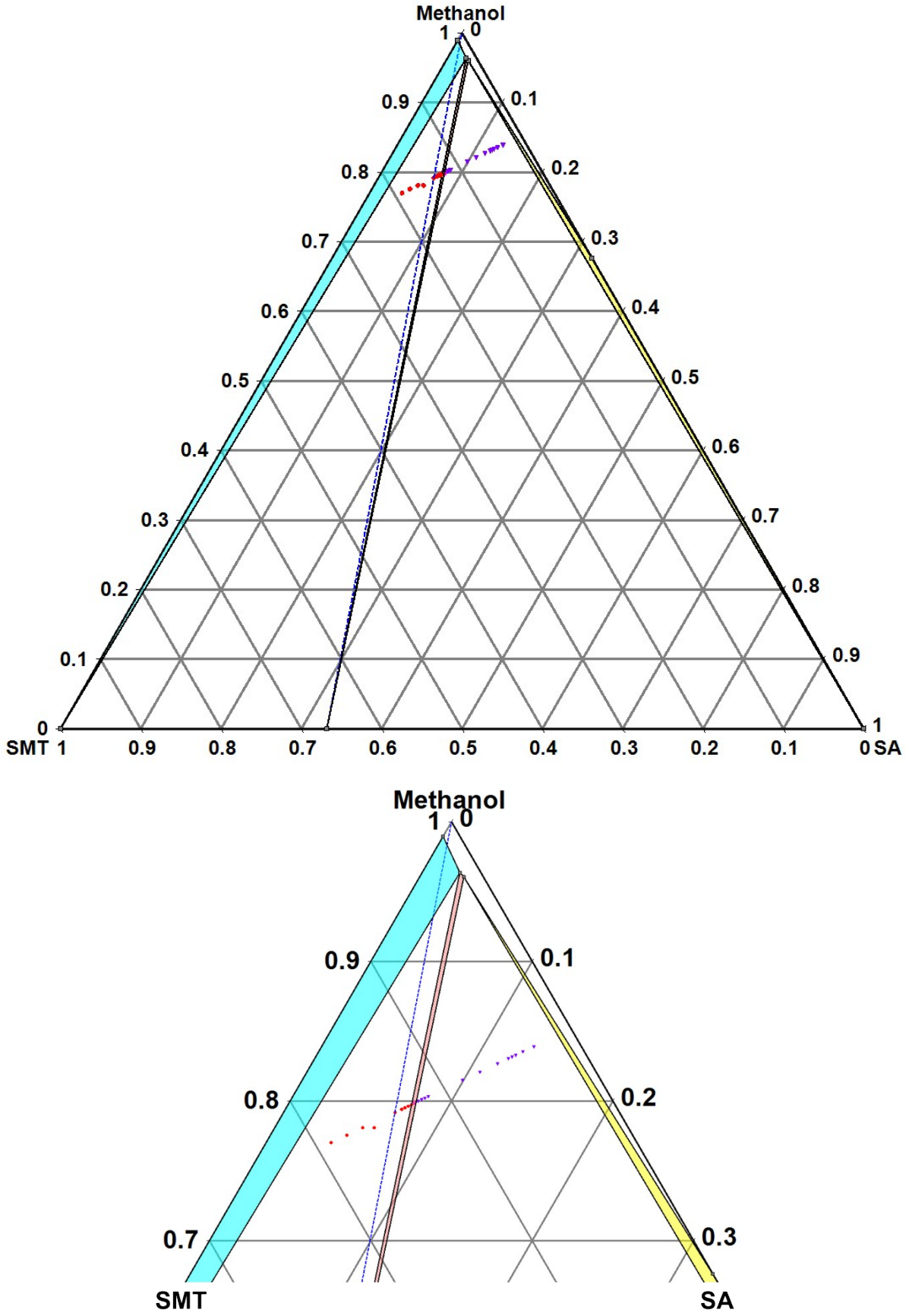

Figure S1. Full (top) and zoom-in view (bottom) of ternary phase diagram of SMT-SA co-crystal system in methanol at 10°C. The points, regions and line explained in Figure 4 of article.

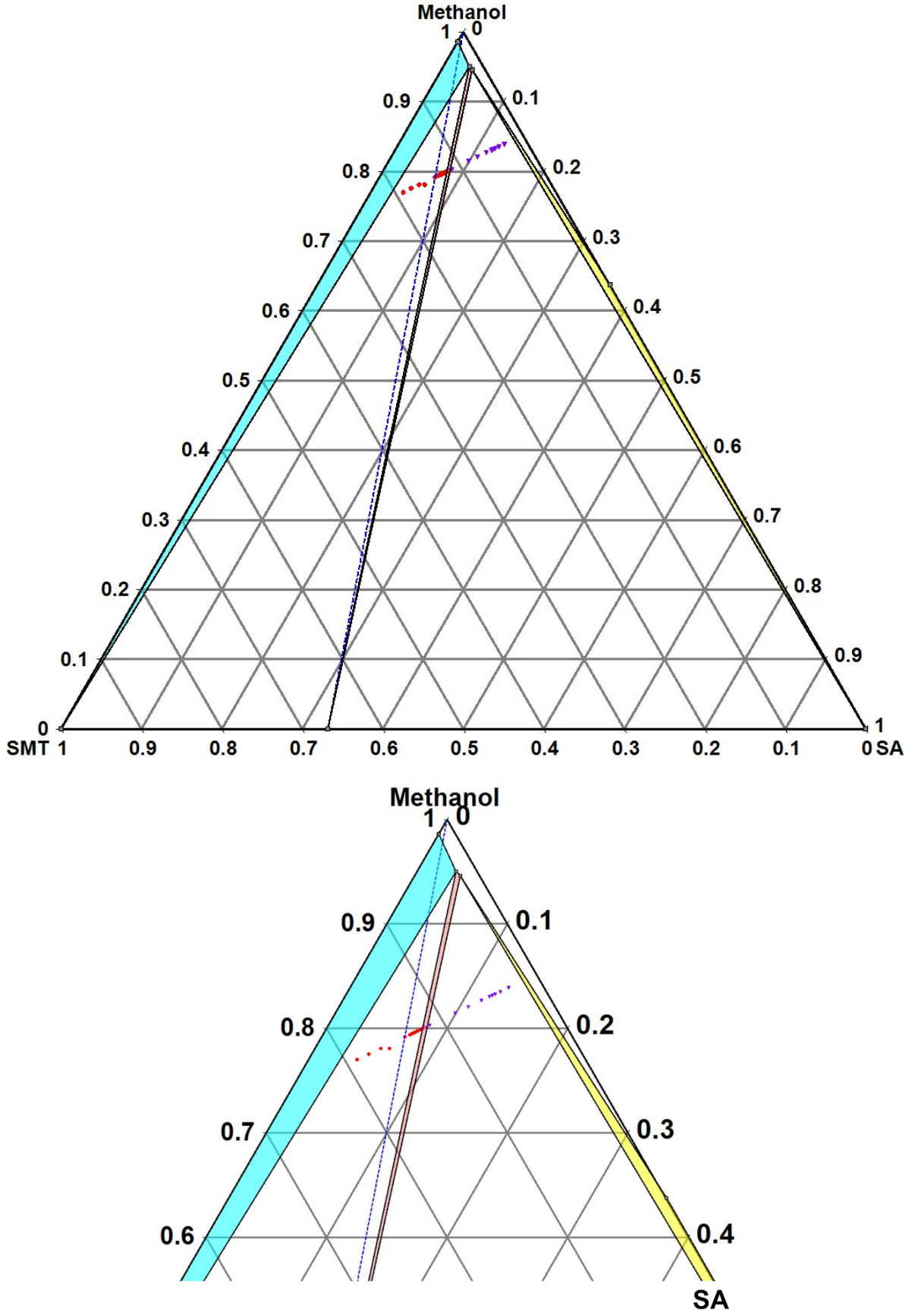

Figure S2. Full (top) and zoom-in view (bottom) of ternary phase diagram of SMT-SA co-crystal system in methanol at 20°C. The points, regions and line explained in Figure 4 of article.

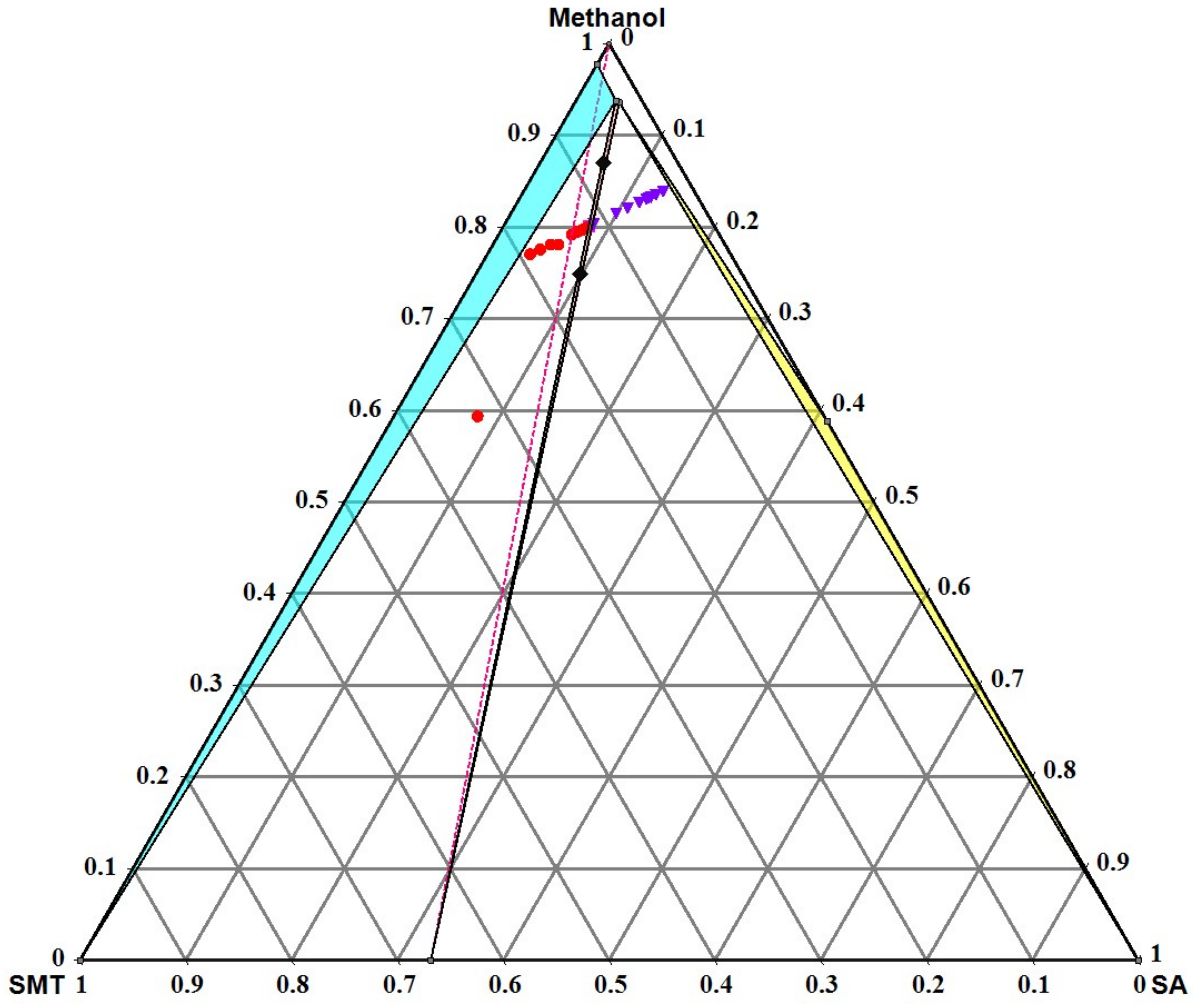

Figure S3. Ternary phase diagram of SMT-SA co-crystal system in methanol at 30°C. The points, regions and line explained in Figure 4 of article.

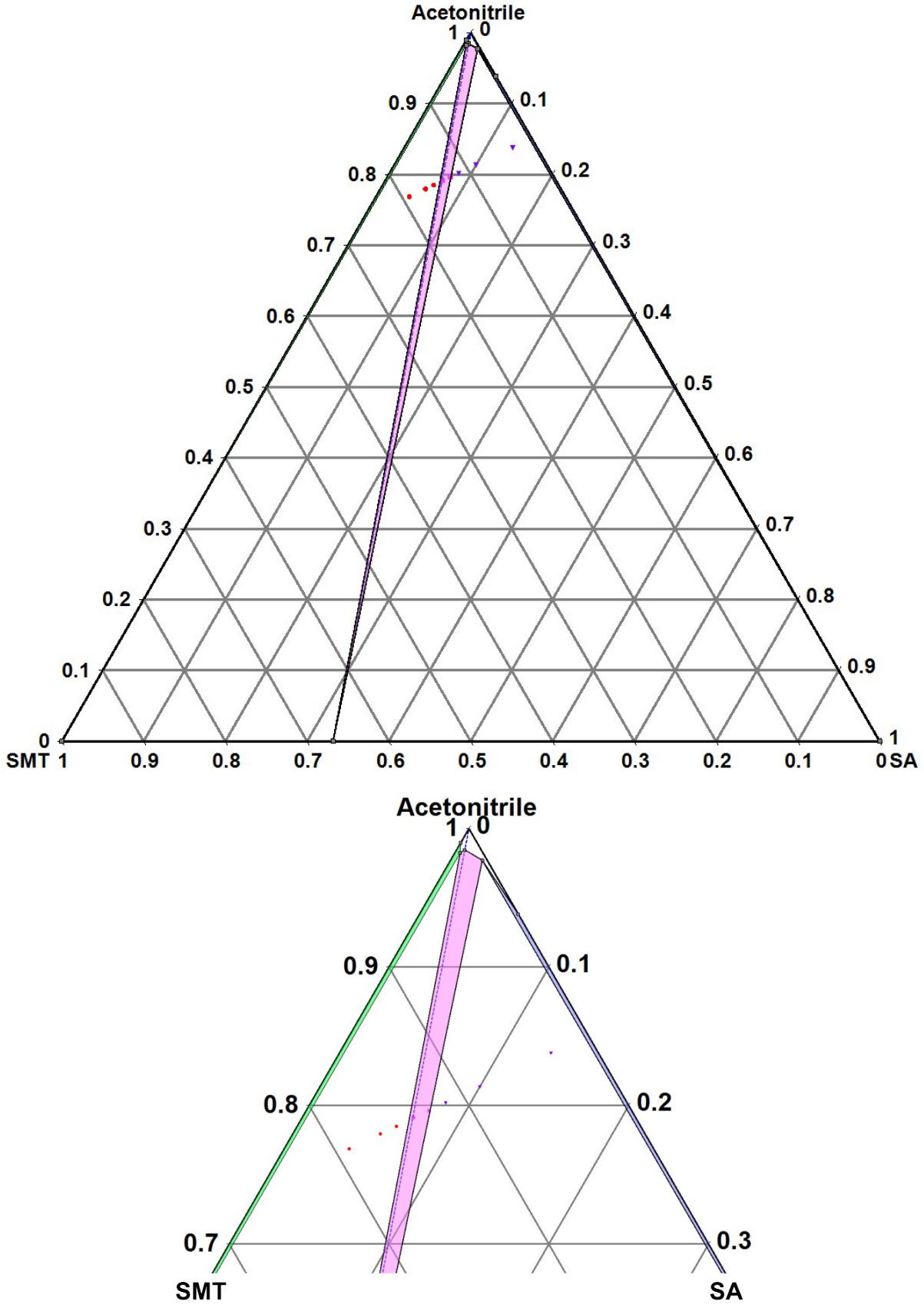

Figure S4. Full (top) and zoom-in view (bottom) of ternary phase diagram of SMT-SA co-crystal system in acetonitrile at 10°C. The points, regions and line explained in Figure 4 of article.

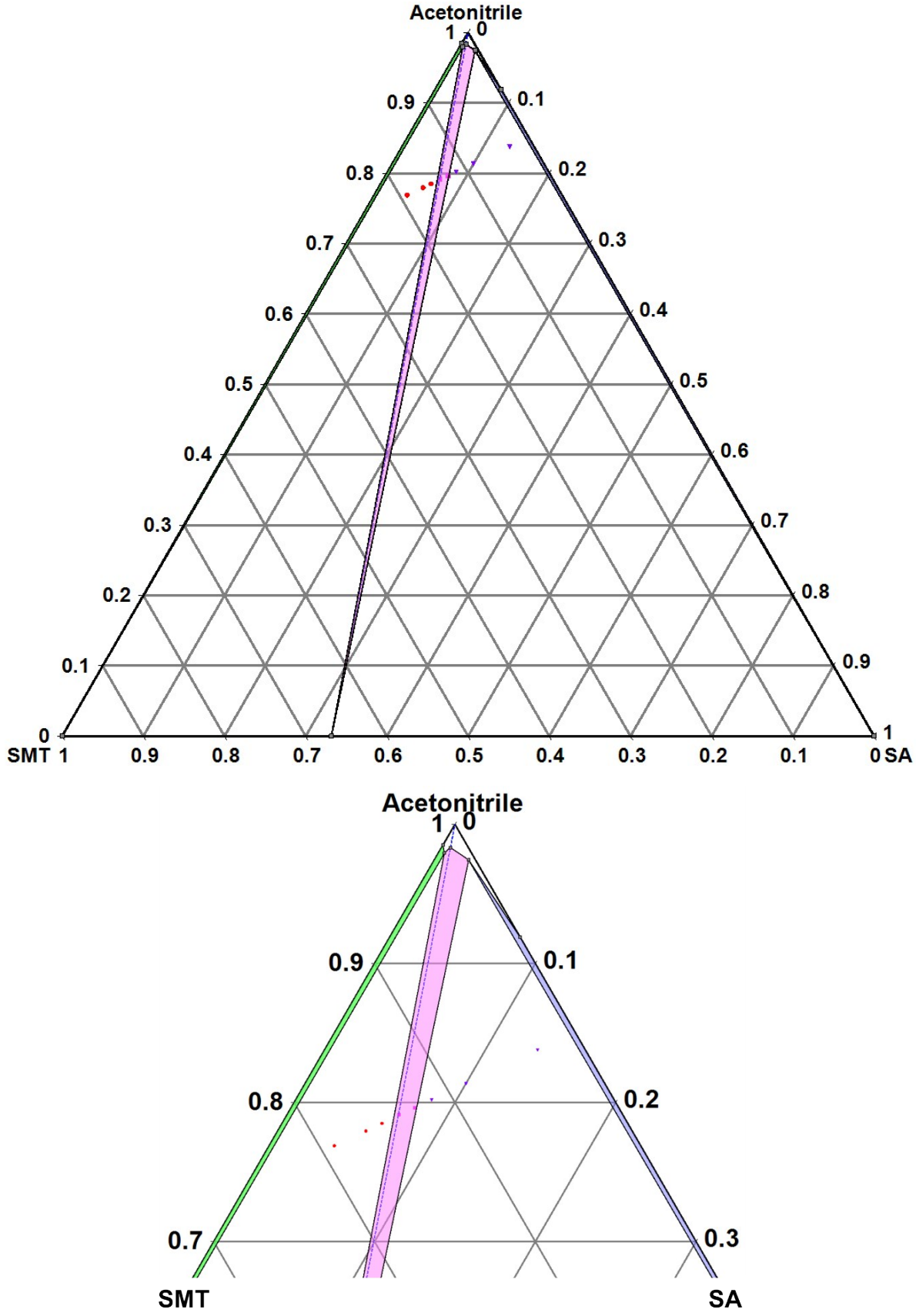

Figure S5. Full (top) and zoom-in view (bottom) of ternary phase diagram of SMT-SA co-crystal system in acetonitrile at 10°C. The points, regions and line explained in Figure 4 of article.

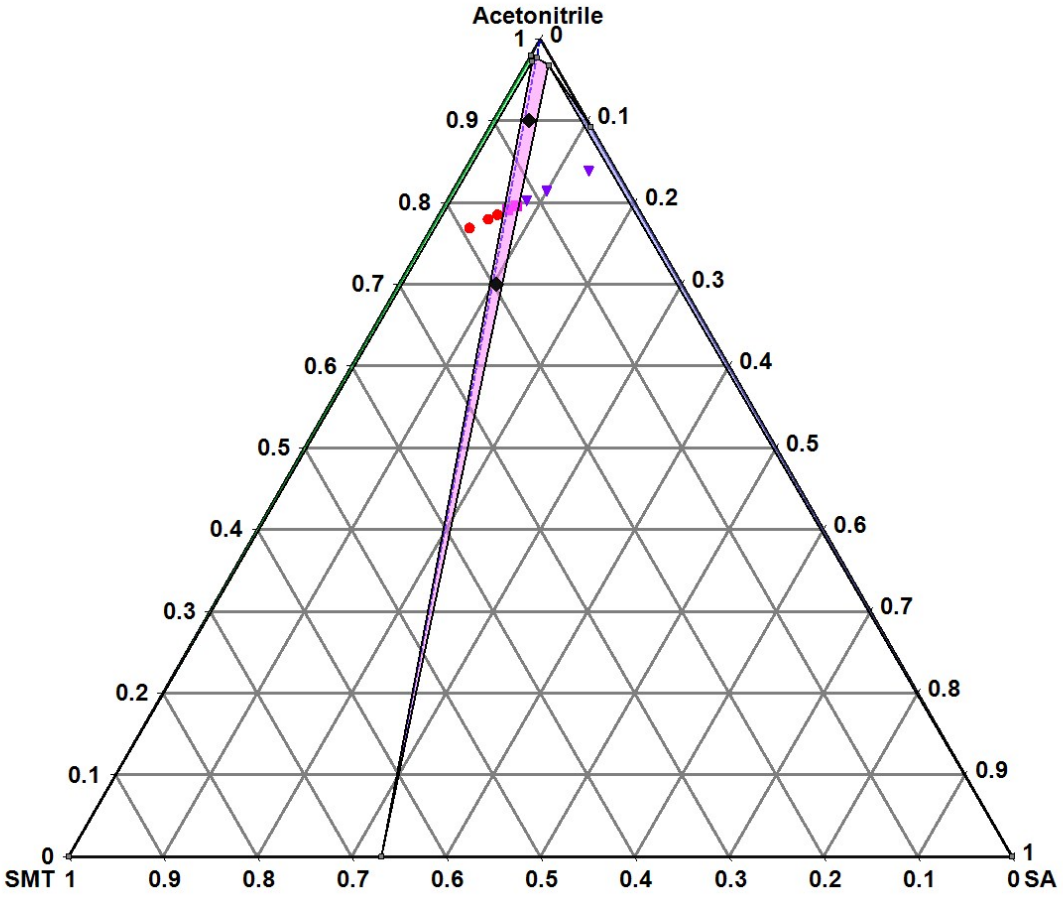

Figure S6. Ternary phase diagram of SMT-SA co-crystal system in acetonitrile at 30°C. The points, regions and line explained in Figure 4 of article.

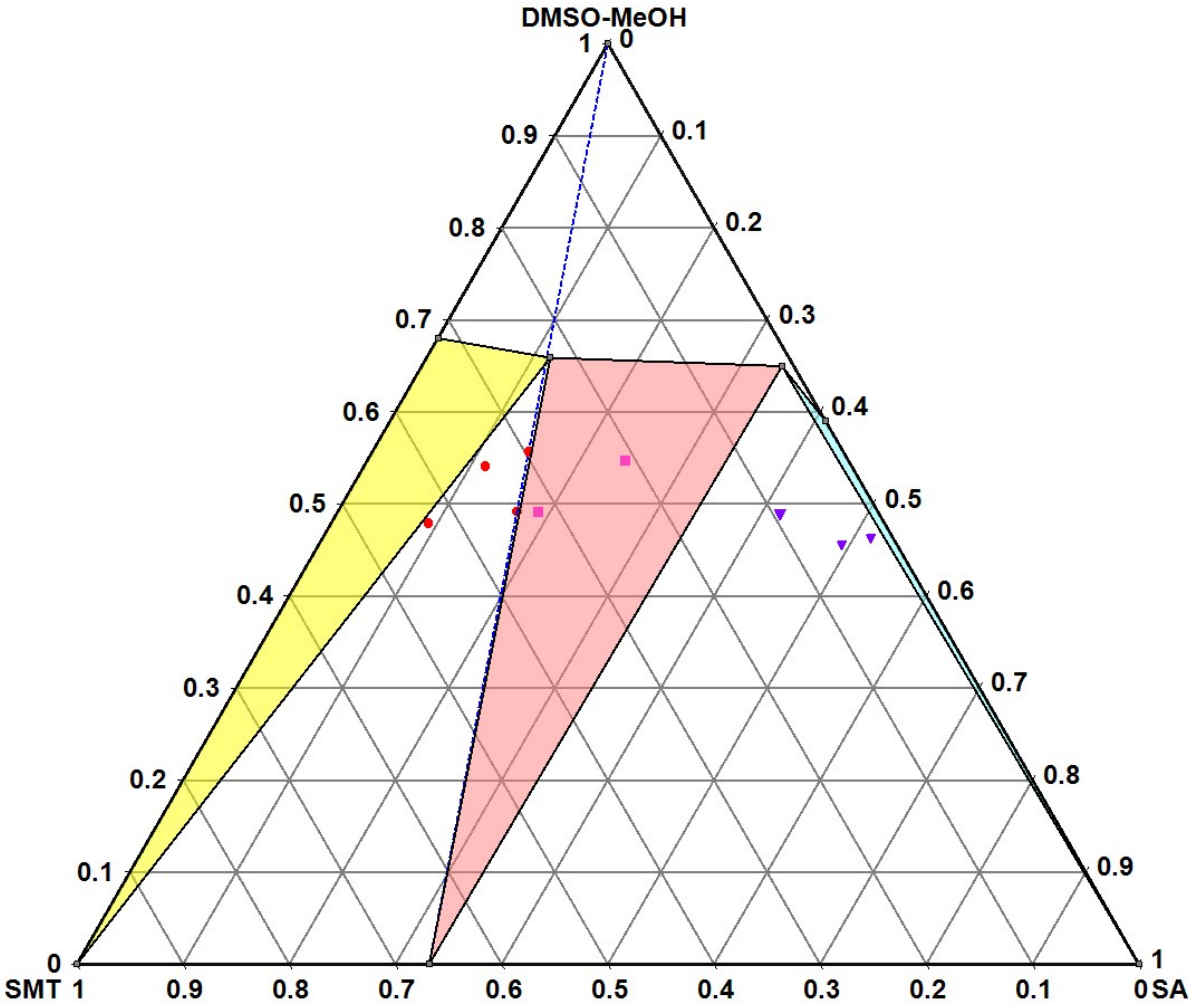

Figure S7. Ternary phase diagram of SMT-SA co-crystal system in 7:3 (v/v) DMSO-methanol mixture at 20°C. The points, regions and line explained in Figure 4 of article.

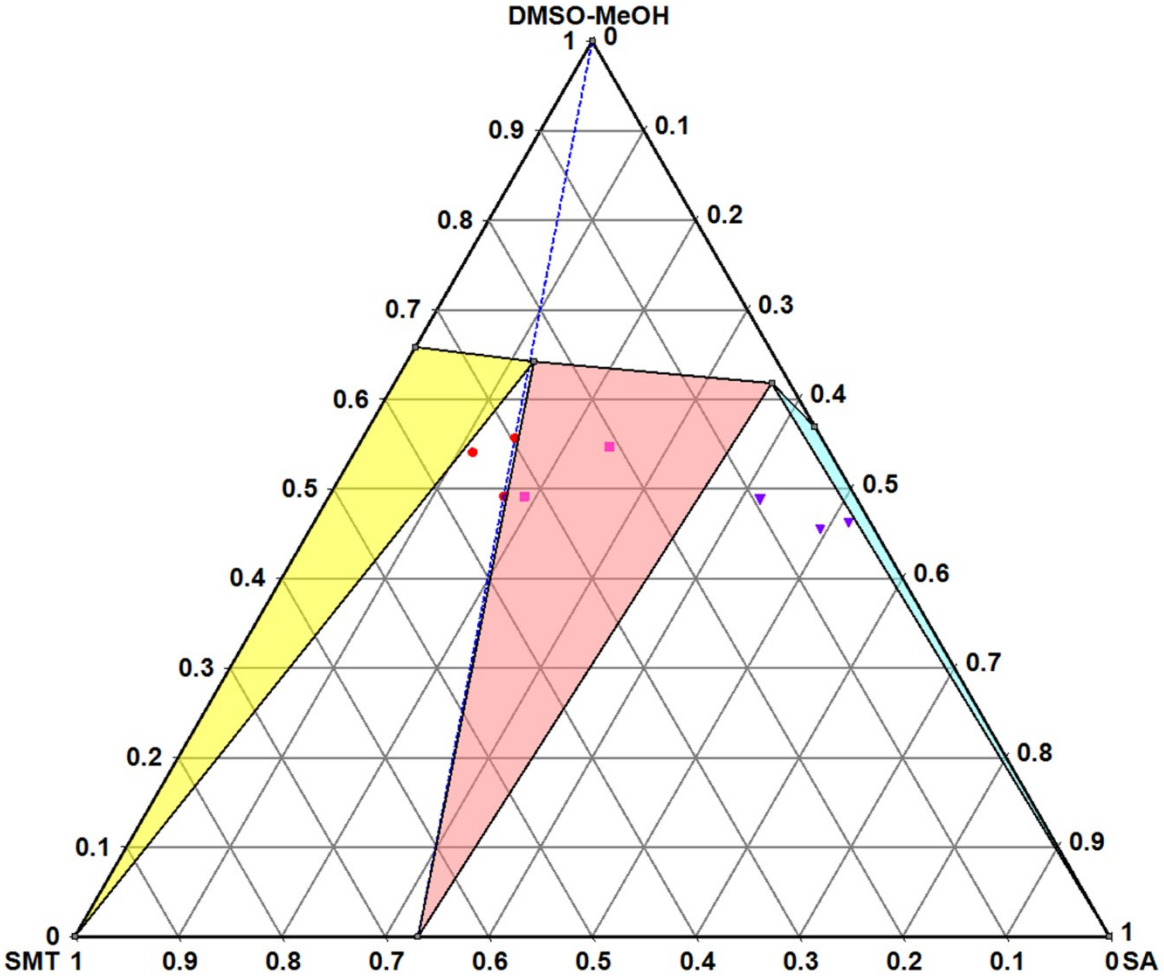

Figure S8. Ternary phase diagram of SMT-SA co-crystal system in 7:3 (v/v) DMSO-methanol mixture at 40°C. The points, regions and line explained in Figure 4 of article.

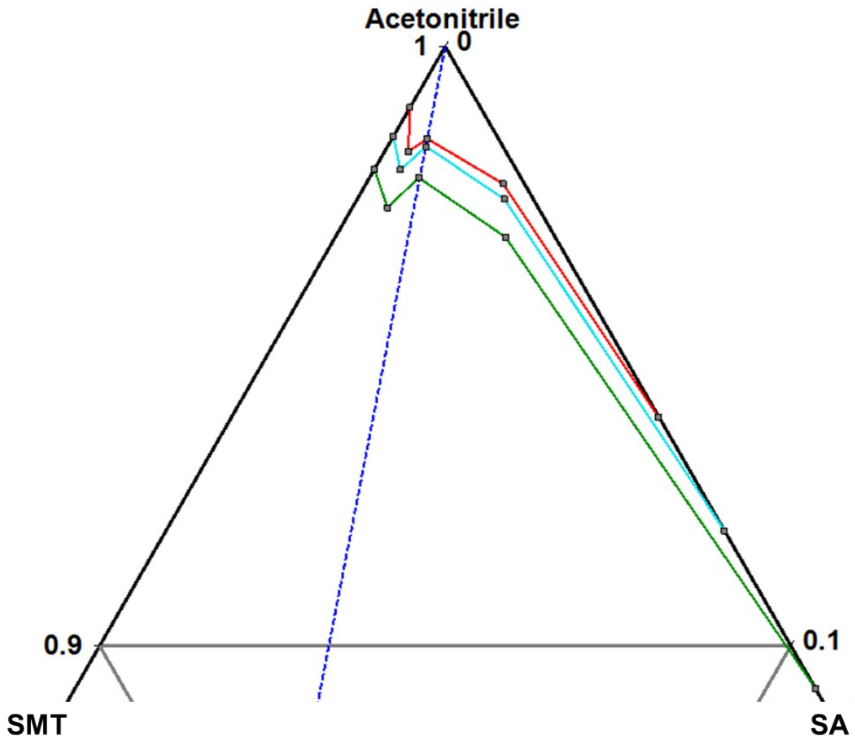

Figure S9. A zoom-in view of the ternary phase diagram of SMT-SA co-crystal system in acetonitrile depicting the solubility points and invariant points at 10 (red), 20 (blue) and 30^{o}C (green) showing the effect of temperature.

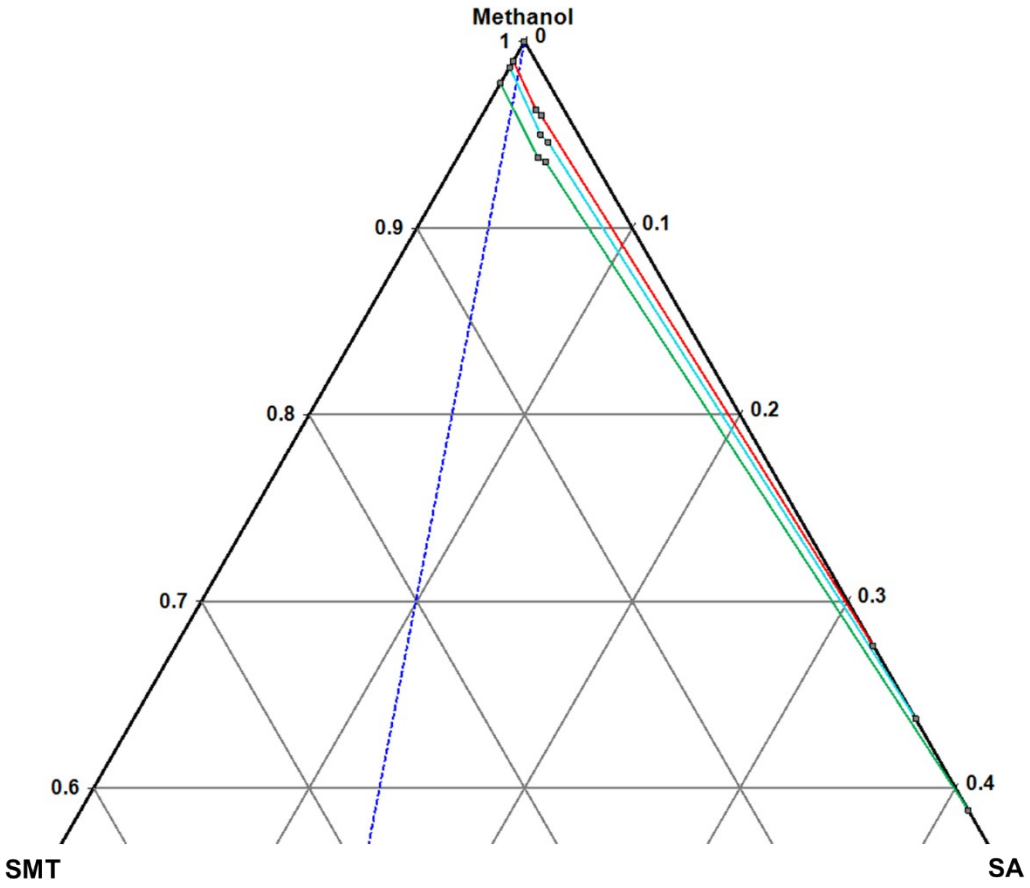

Figure S10. A zoom-in view of the ternary phase diagram of SMT-SA co-crystal system in methanol depicting the solubility points and invariant points at 10 (red), 20 (blue) and 30^{o}C (green) showing the effect of temperature.

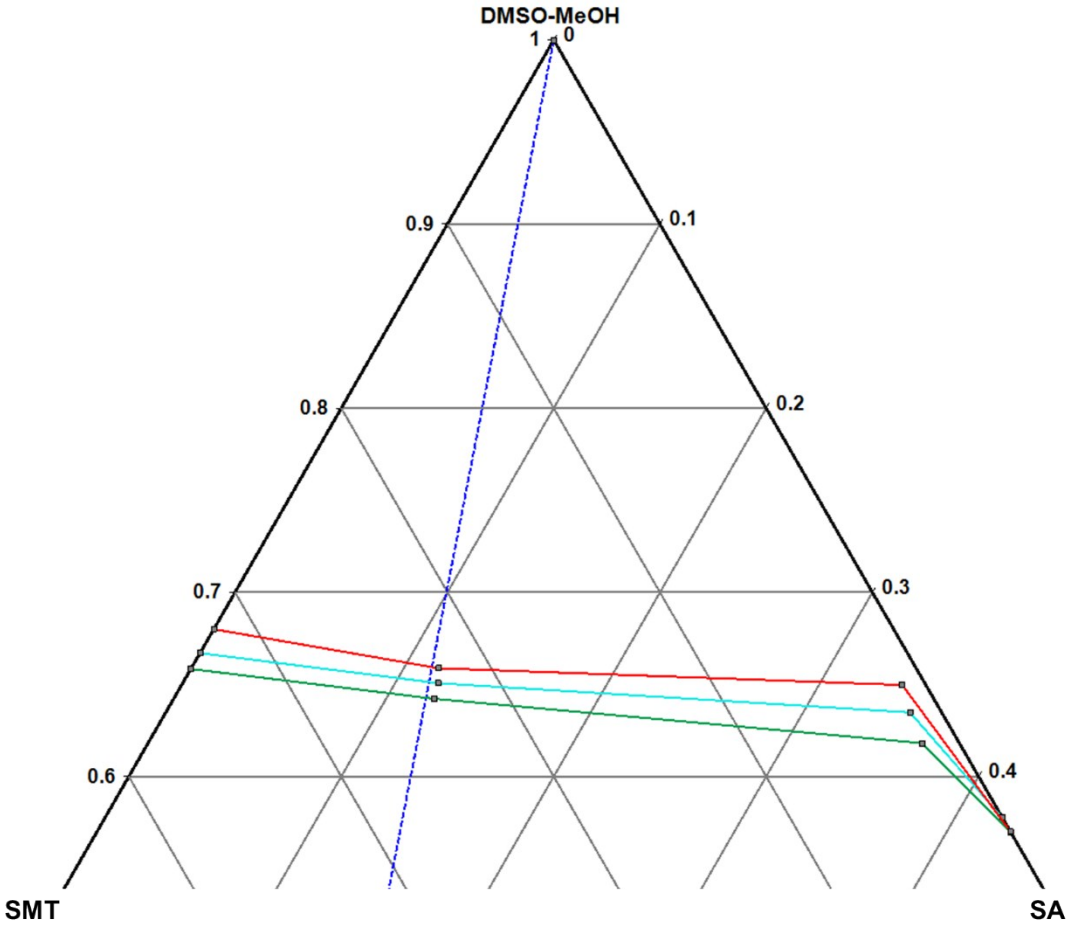

Figure S11. A zoom-in view of the ternary phase diagram of SMT-SA co-crystal system in 7:3 (v/v) DMSO-methanol mixture depicting the solubility points and invariant points at 20 (red), 30 (blue) and 40°C (green) showing the effect of temperature.

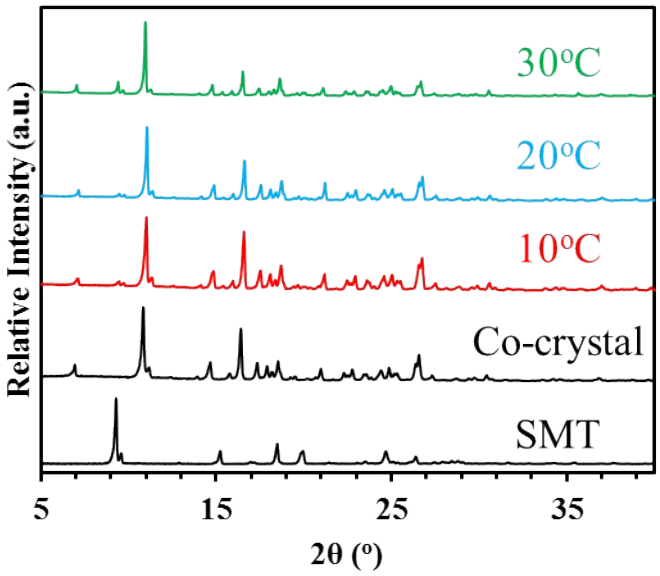

Figure S12. PXRD patterns of the pure SMT, 1:1 SMT-SA co-crystal and the invariant points at 10 (red), 20 (blue) and 30°C (green) in methanol where SMT and co-crystal co-exist.

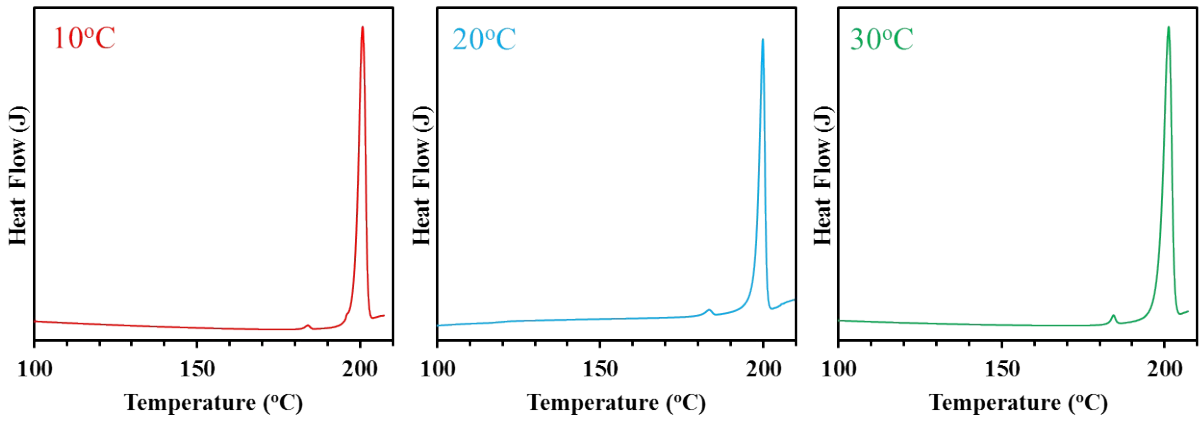

Figure S13. DSC thermograms of the invariant points at 10 (red), 20 (blue) and 30°C (green) in methanol where SMT and co-crystal co-exist.

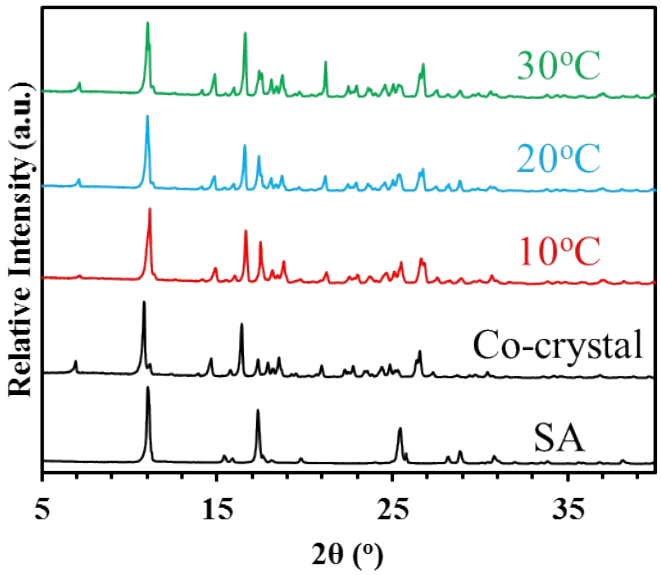

Figure S14. PXRD patterns of the pure SA, 1:1 SMT-SA co-crystal and the invariant points at 10 (red), 20 (blue) and 30°C (green) in methanol where SA and co-crystal co-exist.

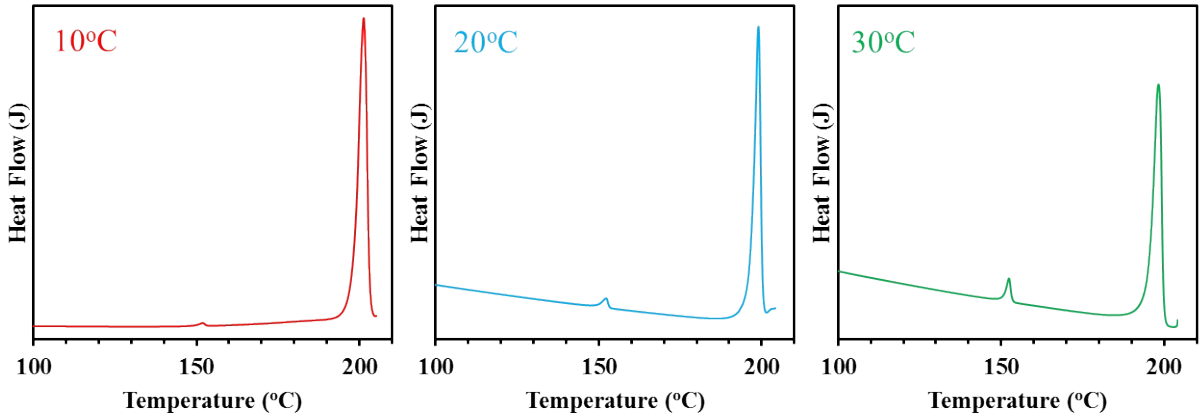

Figure S15. DSC thermograms of the invariant points at 10 (red), 20 (blue) and 30°C (green) in methanol where SA and co-crystal co-exist.

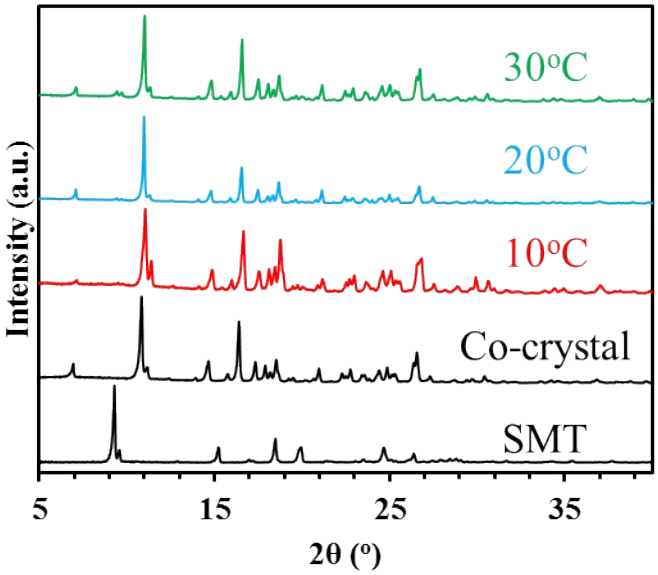

Figure S16. PXRD patterns of the pure SMT, 1:1 SMT-SA co-crystal and the invariant points at 10 (red), 20 (blue) and 30°C (green) in ACETONITRILE where SMT and co-crystal co-exist.

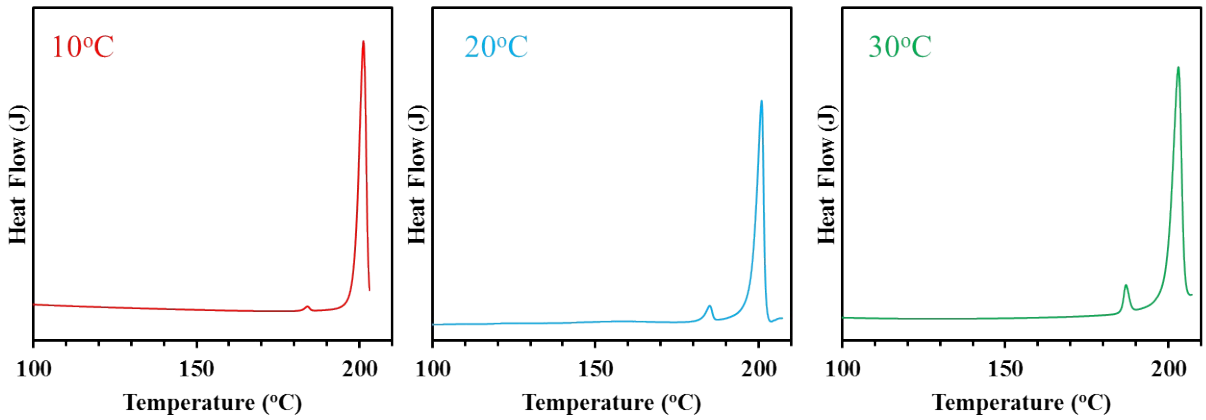

Figure S17. DSC thermograms of the invariant points at 10 (red), 20 (blue) and 30°C (green) in acetonitrile where SMT and co-crystal co-exist.

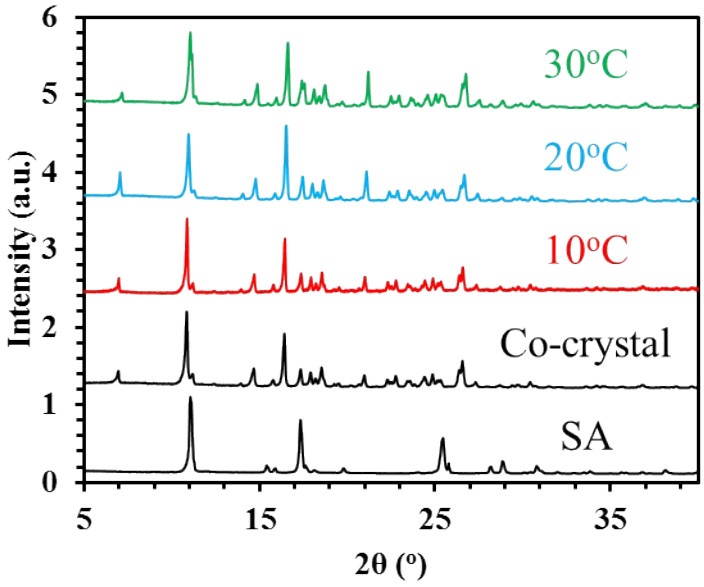

Figure S18. PXRD patterns of the pure SA, 1:1 SMT-SA co-crystal and the invariant points at 10 (red), 20 (blue) and 30°C (green) in acetonitrile where SA and co-crystal co-exist.

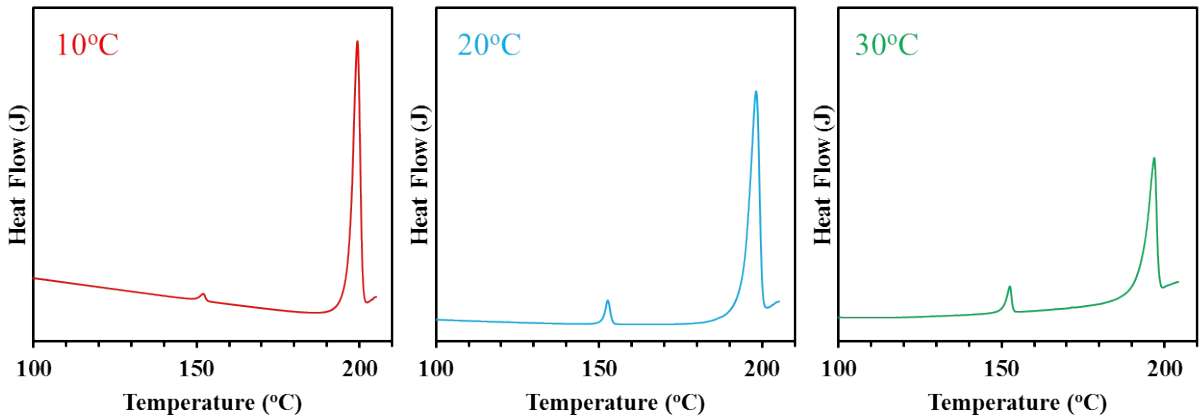

Figure S19. DSC thermograms of the invariant points at 10 (red), 20 (blue) and 30°C (green) in acetonitrile where SA and co-crystal co-exist.

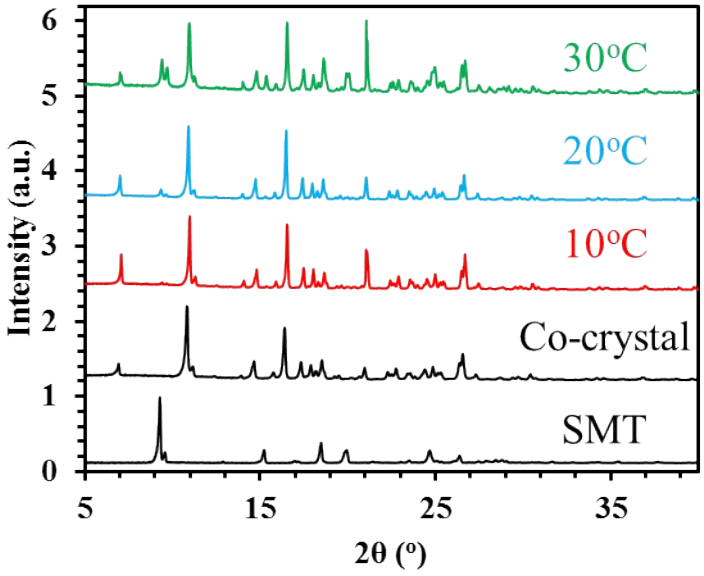

Figure S20. PXRD patterns of the pure SMT, 1:1 SMT-SA co-crystal and the invariant points at 10 (red), 20 (blue) and 30°C (green) in 7:3 (v/v) DMSO-methanol mixture where SMT and co-crystal co-exist.

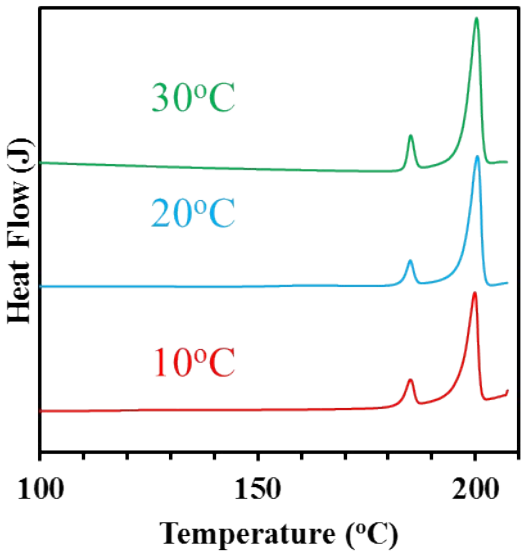

Figure S21. DSC thermograms of the invariant points at 10 (red), 20 (blue) and 30°C (green) in 7:3 (v/v) DMSO-methanol mixture where SMT and co-crystal co-exist.

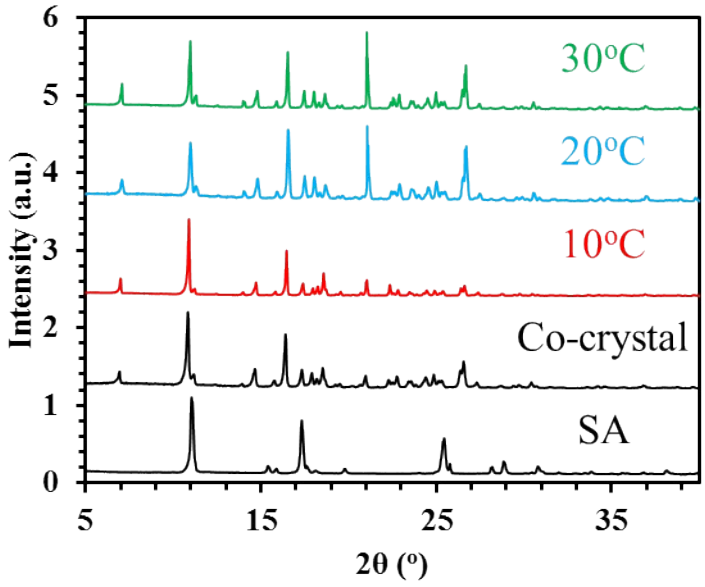

Figure S22. PXRD patterns of the pure SA, 1:1 SMT-SA co-crystal and the invariant points at 10 (red), 20 (blue) and 30°C (green) in 7:3 (v/v) DMSO-methanol mixture where SA and co-crystal co-exist.

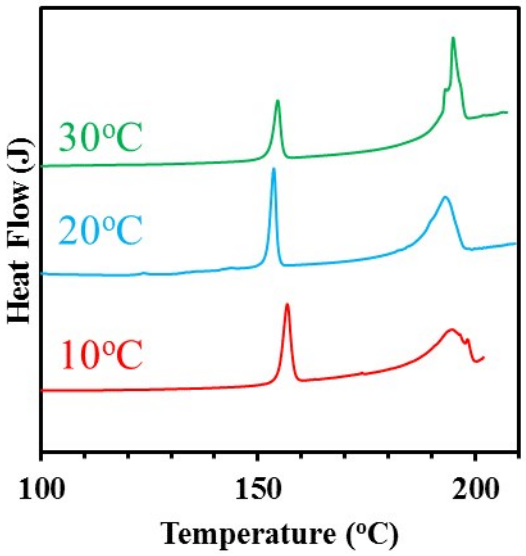

Figure S23. DSC thermograms of the invariant points at 10 (red), 20 (blue) and 30°C (green) in 7:3 (v/v) DMSO-methanol mixture where SA and co-crystal co-exist.