

# Solubilities of Oxygenated Aromatic Solids in Pressurized Hot Water

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**Table S1.** Estimates of the Activity Coefficients of Oxygenated Aromatic Solids in Aqueous Solutions at Saturation ( $\Delta C_{P2}/\text{J}\cdot\text{mol}^{-1}\cdot\text{K}^{-1} = 0$ )

| solute   | $T/\text{K}$ | $P/\text{MPa}$ | $10^{-4}\gamma_2^{\text{sat}} (\Delta C_{P2}/\text{J}\cdot\text{mol}^{-1}\cdot\text{K}^{-1} = 0)$ |
|----------|--------------|----------------|---------------------------------------------------------------------------------------------------|
| xanthene | 313.2        | 5.3            | 117                                                                                               |
|          | 323.2        | 5.3            | 78.2                                                                                              |
|          | 333.2        | 5.1            | 54.2                                                                                              |
|          | 343.2        | 5.1            | 38.6                                                                                              |
|          | 353.2        | 5.0            | 26.3                                                                                              |
|          | 363.2        | 5.0            | 19.0                                                                                              |
|          | 368.2        | 5.0            | 15.9                                                                                              |
| anthrone | 313.2        | 5.1            | 17.8                                                                                              |
|          | 333.2        | 5.0            | 10.8                                                                                              |
|          | 353.2        | 5.8            | 6.17                                                                                              |
|          | 373.2        | 5.0            | 3.39                                                                                              |
|          | 393.2        | 5.0            | 1.79                                                                                              |
|          | 413.2        | 5.0            | 0.749                                                                                             |
|          | 423.2        | 5.0            | 0.708                                                                                             |
| xanthone | 313.2        | 5.3            | 8.40                                                                                              |
|          | 333.2        | 5.1            | 5.63                                                                                              |
|          | 353.2        | 5.0            | 3.42                                                                                              |
|          | 373.2        | 5.0            | 2.31                                                                                              |
|          | 393.2        | 5.1            | 1.24                                                                                              |
|          | 413.2        | 5.0            | 0.739                                                                                             |
|          | 433.2        | 5.0            | 0.354                                                                                             |

|                    |       |     |       |
|--------------------|-------|-----|-------|
| thioxanthone       | 313.2 | 5.4 | 6.29  |
|                    | 333.2 | 5.2 | 5.38  |
|                    | 353.2 | 5.1 | 3.96  |
|                    | 373.2 | 5.1 | 2.99  |
|                    | 393.2 | 5.3 | 1.84  |
|                    | 413.2 | 5.2 | 1.01  |
|                    | 433.2 | 5.3 | 0.588 |
|                    | 453.2 | 5.3 | 0.370 |
|                    | 473.2 | 6.4 | 0.193 |
| 9,10-anthraquinone | 313.2 | 5.0 | 5.69  |
|                    | 333.2 | 5.0 | 4.26  |
|                    | 353.2 | 5.0 | 2.86  |
|                    | 373.2 | 5.1 | 1.97  |
|                    | 393.2 | 5.2 | 1.27  |
|                    | 413.2 | 5.0 | 0.795 |
|                    | 433.2 | 5.8 | 0.440 |