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ACCEPTED MANUSCRIPT

State Diagram of Crystallized Date-Syrup: Freezing Curve, Glass Transition, Crystals-Melting and Maximal-Freeze-Concentration Condition

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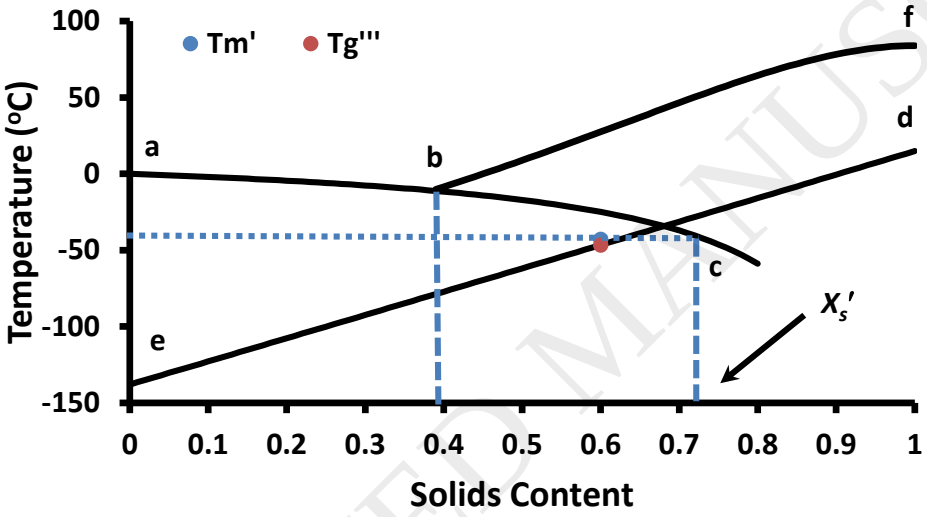
Graphical Abstract



Highlights

- State diagram of crystallized date-syrup was developed using thermal analysis
- Freezing curve, glass transition, and sugar crystal-melting curves were modeled by theoretical thermodynamic equations
- Maximal-freeze-concentration was determined to estimate end point of freezing and un-freezable water content
- Eutectic point was determined from the intersection of the freezing curve and solute crystallized line

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