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Title: Solubility of oleic acid, triacylglycerol and their mixtures in supercritical carbon dioxide and thermodynamic modeling of phase equilibrium

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### ACCEPTED MANUSCRIPT

# Solubility of oleic acid, triacylglycerol and their mixtures in supercritical carbon dioxide and thermodynamic modeling of phase equilibrium

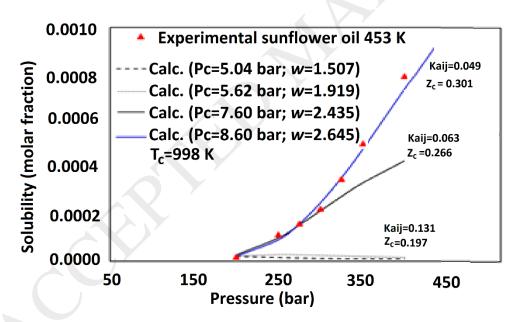
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#### **Graphical Abstract**



#### Highlights

- Solubility of oleic acid in supercritical CO<sub>2</sub> was measured.
- The solubility of the sunflower oil blend with oleic acid in scCO2 was measured.
- The critical properties values was crucial to well correlate the data from the phase equilibrium.
- The modeling using Peng-Robinson equation was unable to represent the ternary system..

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