

A Study on Solubility of Solids in Supercritical Carbon Dioxide and Hydrofluorocarbons

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Supercritical fluids extraction utilizes rapid changes of properties in supercritical region. Due to low critical temperature and pressure, carbon dioxide is widely used in supercritical extraction. But due to the low solubilities for polar compounds, using carbon dioxide in supercritical fluid extraction is limited to relatively non-polar compounds. HCFCs can be used as an alternative of carbon dioxide to extract polar compounds because some HCFCs have larger dipole moment than carbon dioxide. In this study soy bean and several natural products were extracted by supercritical carbon dioxide and HCFCs. Solubilities were correlated by EOS-type calculations.