

UV-visible spectroscopic characterization on organic solvent effect of the sodium salt of bis  
(2,2,3,3,4,4,5,5-octafluoro-1-pentanol) sulfosuccinate (F-AOT)

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Various researches for using supercritical CO<sub>2</sub> have been carried out in many fields. One of these is the research about the formation of emulsion that polar chemicals of small size droplets in diameter were dispersed in CO<sub>2</sub>. The fluorinated tails of hybrid fluorocarbon-hydrocarbon surfactant increased markedly their affinity for CO<sub>2</sub>, so this surfactant was dissolved in CO<sub>2</sub> and formed microemulsion. In this study, we formed W/CO<sub>2</sub> microemulsion by using this surfactant, and measured the phase behavior of this microemulsion and investigated the change of its phase behavior when various organic solvents were added to W/CO<sub>2</sub> microemulsion as a co-solute. And the interaction among water-surfactant-organic solvents was investigated by UV-visible spectroscopy. It was found that the cloud point of water/organic solvent/CO<sub>2</sub> microemulsion is affected by polarity change of solute. Moreover, this surfactant is also affected by organic solvent through shift of maximum absorption wavelengths (nm) in different solvent environment.