Phases and Metastable Phases in the Ternary System Ni2+(AOT)2/Isooctane/Water

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A survey in the phase diagram prism (T=5-80 ^{0}C, mixtures f×= 0.02-0.22, fÑ= 0.50, 0.75, and 0.90) is presented for the systems Ni(AOT)2/isooctane/water. At low surfactant concentration, we found the inversion from w/o microemulsions at low temperatures, to o/w microemulsions at higher temperatures, passing through a three-phase body, without the addition of salt to the ternary mixture. We measured the size of the micelles using light scattering as a function of temperature along the Winsor sequence. At high concentrations of surfactant, we found the system in one phase (bicontinuous), as well as in transparent, and opaque phases some of them birefringent in equilibrium with an isooctane rich phase.