

Octanol-rich and water-rich domains in dynamic equilibrium in the pre-ouzo region of ternary systems containing a hydrotrope

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Supplementary material

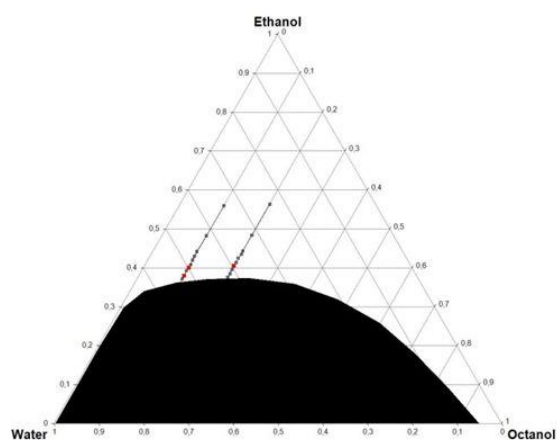


Figure 1 phase diagram of the ternary water-ethanol-octanol system showing the immiscibility gap and the different studied line within the pre-ouzo region. Only one sample was studied combining neutron and x-ray experiment at $T=35^{\circ}\text{C}$. The other one were studied using DLS and SAXS but as shown in the article SANS tool is useful for determining the various fraction of solvent in the water- and oil-rich domains.

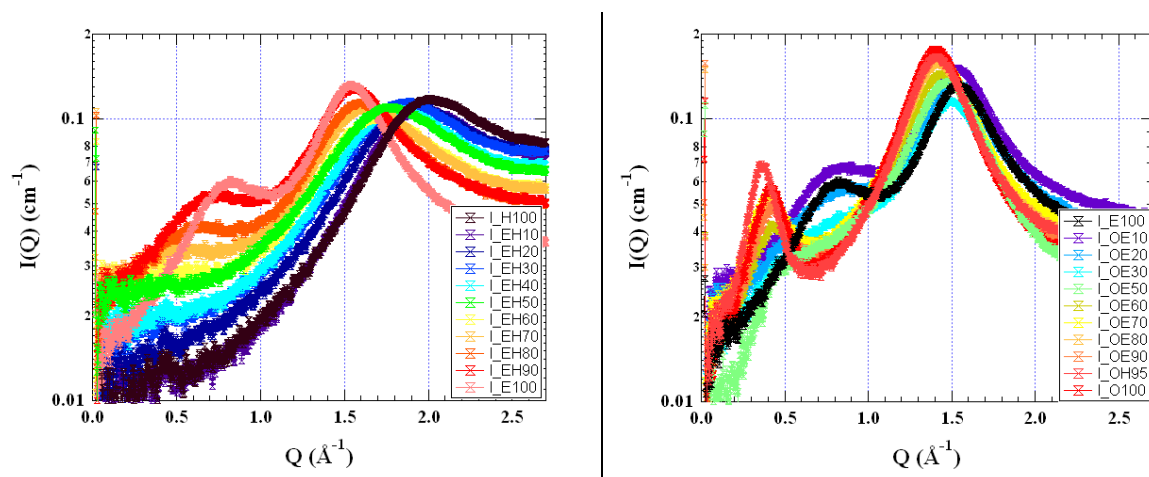


Figure 2 : left) SWAXS spectra on lin-log scale and in absolute units for the binary water (H) / ethanol (E) system varying the fraction of ethanol in water from black to red curve. For pure ethanol til 50/50 (E/H) we can observe two peaks as expected, the inner one characteristic of the OH correlation distance and the outer one characteristic of the carbon groups. right) SWAXS spectra on lin-log scale and in absolute units for the binary ethanol (E)/ octanol (O) system varying the fraction of octanol in ethanol from black to red curve. The 40/60 curves for each binary system are combined to analyse the WAXS part of the ternary system studied in the article.

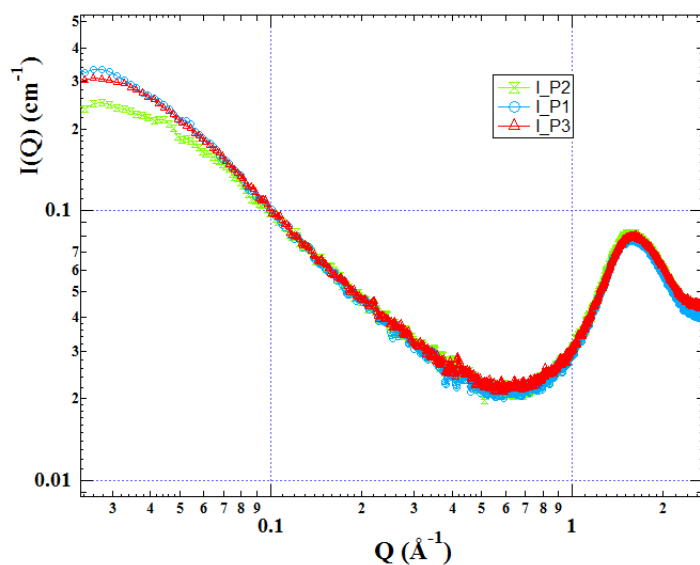


Figure 3: SAXS curves for samples at same composition but with three different contrasts used for SANS experiments

	H2O	D2O	octanol-D	octanol-H	ethanol-D	ethanol-H
neutron SLD (cm/cm ³)	-5,60E+09	6,40E+10	5,75E+10	-3,17E+09	6,10E+10	-3,45E+09

Neutron Scattering length densities (SLD) for the various compounds