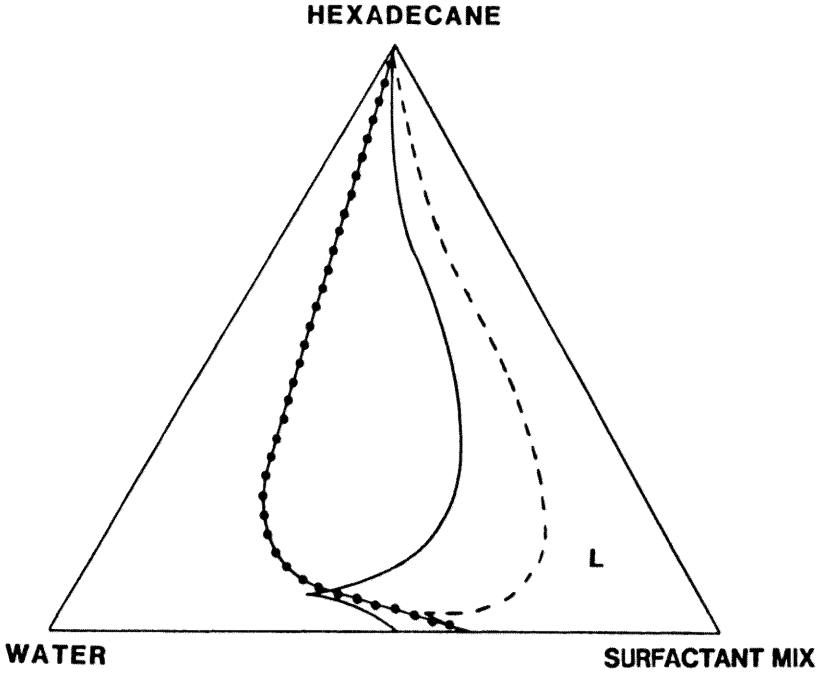

Figure 17.7 Pseudo-ternary-phase behavior for the water-hexadecane-Arlacel 20-AOT system, in which the Arlacel 20/AOT weight ratio is 60:40 (-●-●-); 72.5:27.5 (——); and 85:15 (---). The single-phase clear, isotropic microemulsion side of the diagram is labeled by L.

100% AOT-75 are completely miscible with hexadecane, and the amount of water soluble in the surfactant-hexadecane solutions grows as the amount of Arlacel 20 increases. Figures 10 and 11 show the transition region near the maximum water solubility microemulsion. The maximum water solubility appears to occur between 55:45 and 60:40 AOT-75/Arlacel 20 ratios and is approximately the same for hexadecane/surfactant mixture ratios between 20:80 and 50:50. At 54% AOT-75, a two-phase region appears inside the one-phase microemulsion region. The samples in this two-phase region, and nearby in the one-phase region, were temperature-sensitive and were examined in a temperature-controlled air chamber. As the fraction of AOT-75 decreases further, the microemulsion region also decreases in size (Fig. 12).