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**Comparison of the droplets size and rheology of two emulsions of heavy and light oils mixed with aqueous solution** JOSÉ GUADARRAMA-CETINA, ENRIQUE SOTO, ROCÍO G. DE LA TORRE, PATSY V. RAMÍREZ-GONZÁLEZ, SERGIO H. QUIÑONES-CISNEROS, Univ Nacl Autonoma de Mexico — Two kinds of emulsions have been studied: the first with a heavy oil and the second with a light oil. The emulsions were made by mixing at several controlled conditions and ratios of aqueous solution. For all cases the oil was the continuous phase. The morphology of the dispersed aqueous phase was studied showing a clear trend for increase viscosity with decrease in droplet size. After a period of time, the viscosity of the emulsions changes due to drops coalescence. For the heavy oil emulsions, the viscosity increased when the bigger drops coalesced and segregate, so the average drops size decreases too. In case the light oil emulsions, however, the opposite behavior was observed.

José Guadarrama-Cetina  
Univ Nacl Autonoma de Mexico

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