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Effect of Associative Polymers on the Foaming Properties of Surfactant Solutions[1] ALFREDO CERVANTES, EMMANUEL ROBLES, Departamento de Investigación en Polímeros y Materiales, Universidad de Sonora, HERIBERTO ACUÑA, ROGELIO GAMEZ, AMIR MALDONADO, Departamento de Física, Universidad de Sonora — Aqueous foams are materials which have many industrial applications. Their stability is affected by three mechanisms: bubble coalescence (film rupture), coarsening (gas diffusion) and drainage (gravity-driven liquid flow). The aim of this work is to obtain some insight into the effect of associative polymers on the foamability, foam stability and drainage of surfactant solutions. The foams were produced by air bubbling and by the turbulent mixing method. The surfactant is SDS and the associative polymers studied are HEUR and POE-Stearate. We studied the effect of polymer concentration for each macromolecule. The results show that two opposite effects are present when the polymer concentration is increased: for low polymer concentrations, foamability and foam stability is higher than for high concentrations. Results are discussed in terms of the properties of the solution: surface tension, electrical conductivity, bulk viscosity, etc.

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