

Study of Aqueous Solution of Sodiumdodecylsulfate and Polyethyleneoxide 10000 by NMR NOESY

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Two-dimensional *Nuclear Overhauser Enhancement Spectroscopy* NMR has been applied to study sodiumdodecylsulfate (SDS)/polyethyleneoxide (PEO)/D₂O at 10, 20, 25, and 40 °C. The results indicate that PEO interacts preferentially with the surface of the micelle aggregates at 20 and 25 °C, displacing some water molecules from the hydration sphere. At 40 °C the polymer tends to penetrate the interior of the SDS micelle, since its solubility in hydrophobic media increases with temperature.

Key words: Polyethyleneoxide; SDS; NOESY.