AN SFG STUDY OF ADSORPTION FROM BINARY SOLUTIONS OF SDS AND PEG ON A HYDROPHILIC SUBSTRATE

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This paper presents a sum frequency spectroscopy and attenuated total internal reflection IR spectroscopy study of the adsorption of SDS from binary solutions of SDS and PEG as a function of both surfactant concentration and polymer molecular weight at the hydrophilic calcium fluoride interface. In agreement to our previously published reports significant inhibition of the surfactant is observed in the presence of PEG. Inhibition of surfactant adsorption is strongly dependent upon the molecular weight of the polymer. The results of both ppp and ssp spectra are discussed in terms of degree of conformational ordering of the surfactant and competitive adsorption at the interface with corobaratory ATR data also presented.