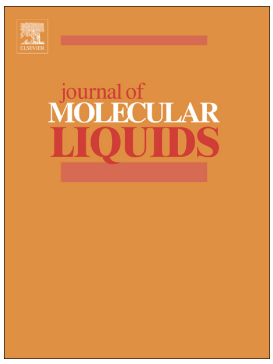

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Interaction of ninhydrin with chromium-glycylglycine complex in the presence of dimeric gemini surfactants

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AB S T R A C T

Studies of interaction between chromium-glycylglycine complex ([Cr(III)-Gly-Gly]$^{2+}$) and ninhydrin in 16-*s*-16 gemini surfactants were executed at various composition of substrates and temperatures. The effect of pH was also performed on the title reaction. The rate constant values have been determined in the presence of geminis. Studies reveal that the reaction has same first- and fractional-order path in metal-dipeptide and [ninhydrin] in gemini surfactants to that of aqueous medium. Investigation of effect of gemini surfactants were carried out on the [Cr(III)-Gly-Gly]$^{2+}$ and ninhydrin reaction. The detailed activities/behaviors of geminis on the reaction are described in the text. The various parameters such as enthalpy of activation ($\Delta H^{\#}$), entropy of activation ($\Delta S^{\#}$), micelle-substrate constant (K_X), micelle-ninhydrin constant (K_Y) and second-order rate constants (k_m) have been evaluated. Variation in rates of the reaction in the presence gemini surfactants was analyzed quantitatively by pseudo-phase model.

Keywords:
Spectrophotometer
Rate constant
Interface
Chromium-glycylglycine
Geminis

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1. Introduction