

Spectroscopic investigations of interactions of heteropolyacids with α -lactalbumin complexes

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Abstract

The interaction between α -lactalbumin with heteropoly acids occurred. The best denaturation of α -lactalbumin with Preyssler heteropoly acid occurred in comparison with heteropoly acids including Keggin and Dawson structures. Based on calculated thermodynamics parameters, it is shown that during denaturation of protein, preyssler heteropoly acid has the highest $\Delta G(H_2O)$, m value and lowest C_m at the shortest time compared with other polyoxometalates (POMs) with Keggin and Dawson structures. The electrostatic interaction of protein with various heteropoly acids is important on a molecular level for the interpretation and development of model compounds with selective affinity for particular proteins.

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α -Lactalbumin; Heteropoly acid; Polyoxometalate; Preyssler; Protein denaturation; Stability

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