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Title: Effect of morphine, oxycodone and thebaine on resonance light scattering properties of human serum albumin: Investigation possibility of morphine determination in the presence of the two other drugs

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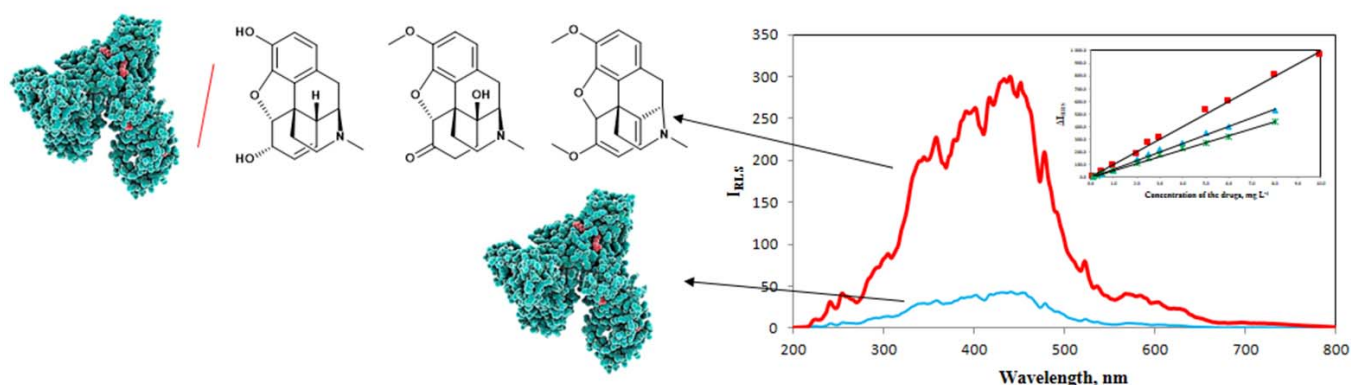
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**Effect of morphine, oxycodone and thebaine on resonance light scattering properties of human serum albumin: Investigation possibility of morphine determination in the presence of the two other drugs**

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### Abstract

This work reports on the Resonance light scattering (RLS) technique for studying the interaction of human serum albumin (HSA) with three opiates drugs (i.e. morphine (MO), oxycodone (OX) and thebaine (TH)). RLS is very sensitive to the interaction caused by weak binding forces such as intermolecular electrostatic attraction, hydrogen bonding, hydrophobic interaction, and aggregation interaction of biological macromolecules. The results of this work showed that the investigated drugs, with similar chemical structures, have different affinities to interact with HSA and enhance its RLS signal in following order: MO > OX > TH. Furthermore, the

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