

# Curvophilic-curvophobic balance of monoalkyl-mannosides determines the magnitude of disturbance promoted in synthetic bilayers

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The principles governing surfactant-lipid interactions, involved in biological membrane solubilization and reconstitution processes, are a topic of great interest in the field of membrane biochemistry and biophysics. Among non-ionic surfactants, which are extensively used in purification, characterization and reconstitution of membrane proteins and for reconstitution studies, sugar-based surfactants are particularly interesting because, besides being considered "green" chemicals, they have very good physical-chemical and dermatological properties. Mixtures of non-ionic sugar-based surfactants and phospholipids can result in interesting aggregates (micelles or vesicles) with promising applications in drug delivery, as a biocompatible carrier system. In this work, we studied how the incorporation of three different monoalkyl mannoside derivatives in synthetic bilayers modify their physical-chemical properties (transition temperature, fluidity) or promotes their solub