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Title: Structural properties, in vitro release and radical scavenging activity of lecithin based curcumin-encapsulated inverse hexagonal (H_{II}) liquid crystals

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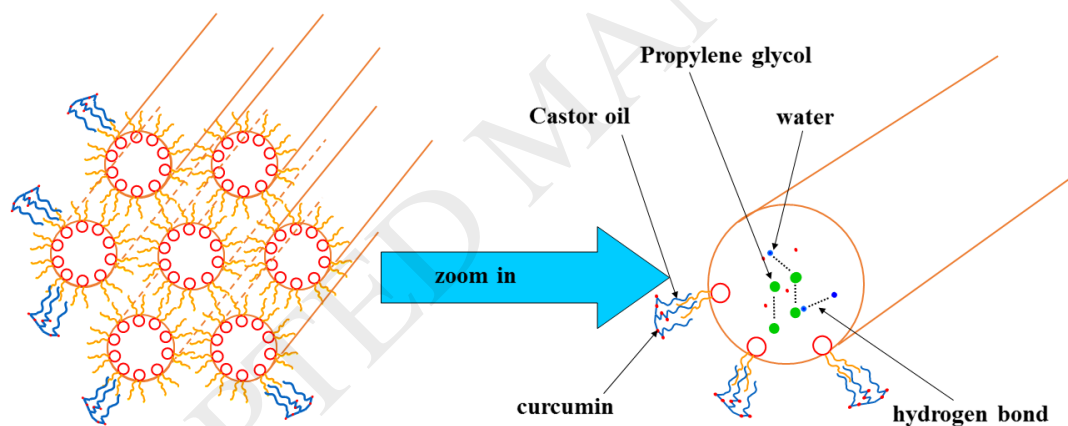
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Graphical abstract



Abstract

The main purpose of this study was to prepare a food grade inverse hexagonal (H_{II}) liquid crystals to encapsulate the poorly water soluble curcumin. H_{II} mesophases were constructed by soybean lecithin (SL), castor oil (Coil) and water and characterized by polarized light microscopy (POM), small angle X-ray scattering (SAXS) and rheology. A small amount of H_{II} phase was transformed into lamellar phase (L_{α}) after introducing 1,2-propylene glycol (PG). Furthermore, the H_{II} phase could be completely transformed into L_{α} phase with the decrease of Coil content. The mesophase with hexagonal array

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