

Highly Stable Silica-Encapsulated Curcumin Core-Shell Nanoparticles for Lipid Recognition

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Curcumin is a highly potent, nontoxic, bioactive agent found in turmeric and has been known for centuries as a household remedy to many ailments. Also, Curcumin has been known to have an interaction with Lipid. Thus, it has been studied as a material for lipid detection. But the only disadvantage is low aqueous solubility, low stability and poor bioavailability. To solve this problem, Silica-encapsulated curcumin nanoparticles have been developed as a core-shell structure to prepare curcumin as nanoparticles and to improve stability. In this study, curcumin is manufactured into nano-sized particles by reprecipitation. Subsequently, very small nano-sized silica is deposited directly on the surface to enhance the stability of curcumin.