



Synthesis And Characterization of Thermo-Responsive Particles of Poly(Hydroxybutirate-Co-Hydroxyvalerate)-B-Poly(N-Isopropylacrylamide)

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A new kind of thermo-responsive particles were prepared by the self-assembly technique, comprising poly(hydroxyvalerate-co-hydroxybutirate)-b-poly(N-isopropylacrylamide)/ (PHBHV-b-PNIPAAm) block copolymers. The hydrophilic part PNIPAAm was synthesized by Reversible Addition- Fragmentation chain Transfer (RAFT) polymerization. Particles with core-shell morphology were obtained with hydrophilic outer shells and hydrophobic inner cores. Dexametasone acetate (DexAc) was used as a model drug with an encapsulation

efficiency of 77%. The release of DexAc in aqueous solution was strongly dependent on temperature, suggesting that PHBHV-b-PNIPAAm particles can be used as a thermo-responsive carrier material with external control in a drug release system.

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