

Supplementary Materials

Enhanced Antibacterial Activity of a Cationic Macromolecule by its Complexation with a Weakly Active Pyrazole Derivative

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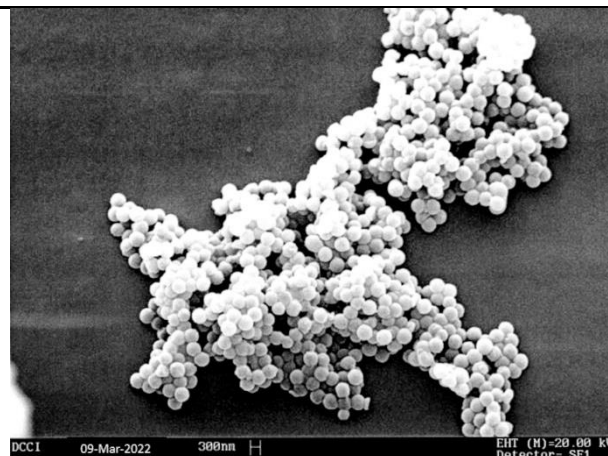
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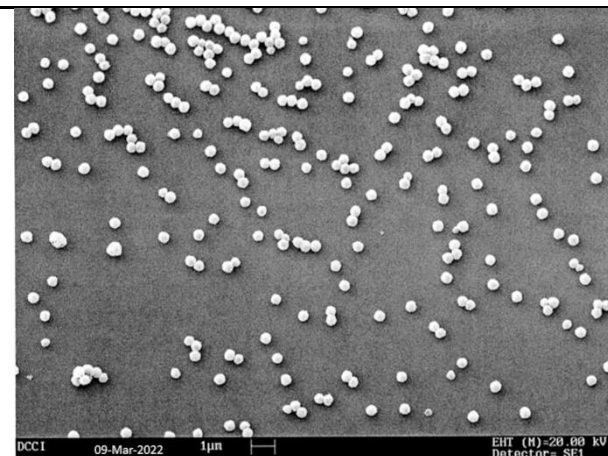
Table S1. Main physicochemical properties of CB1H-P7 NPs.

Analysis			CB1H-P7 NPs
FTIR [cm ⁻¹]			
Principal Components Analysis (PCA)			
UV-Vis	Ultraviolet Spectrum	$\lambda_{\text{abs}} = 250 \text{ nm}$	
UV-Vis	DL (%)	48.6±1.4	
	EE (%)	81.5±2.50	
DL% (UV-Vis)	MW	26,623.9±260.3	

Scanning Electron
Microscopy (SEM)

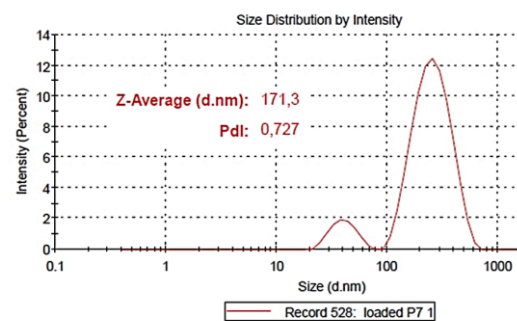


P7 (342.9 ± 57.2 nm)



CB1H-P7 NPs (332.8 ± 67.9 nm)

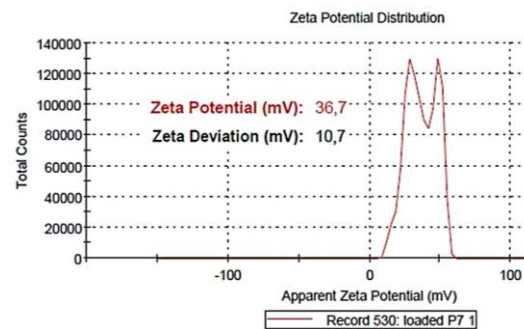
Z-Ave² (nm)
PDI³



142.9 \pm 20.1
0.626 \pm 0.071

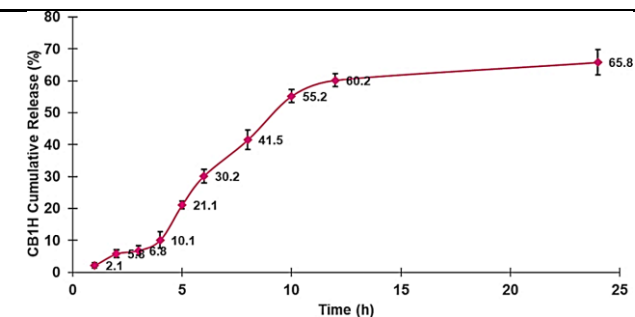
DLS¹ Analysis

ζ -p⁴ (mV)

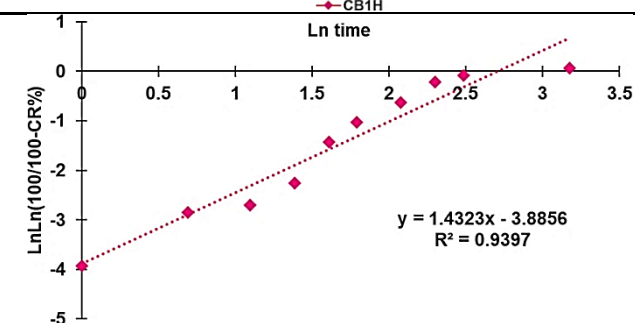


+36.7 \pm 10.7

Cumulative Release (% , 24h)



Dialysis Method (UV-Vis)

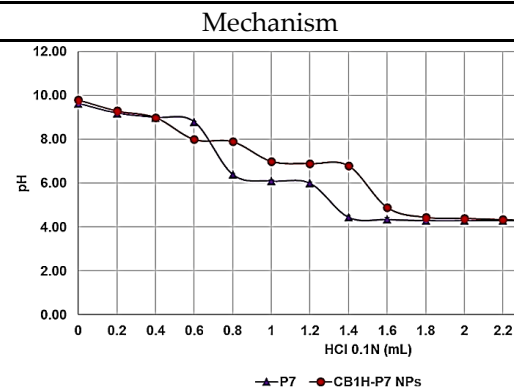


Mathematical Model

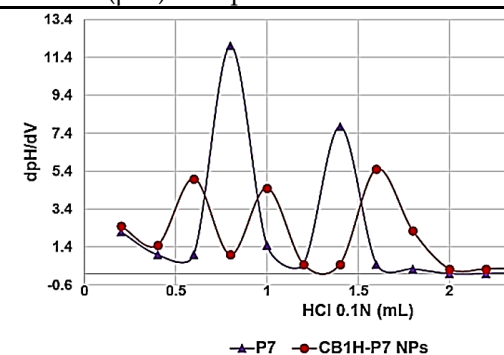
◆ Weibull Kinetic Model

($\beta > 1$) Complex Mechanisms

Potentiometric Titration[#]



Potentiometric Titration



First Derivative

¹ dynamic light scattering; ² hydrodynamic diameters of particles; ³ polydispersity indices; ⁴ measures of the electrical charge of particles suspended in the liquid of acquisition (water).