antibiotics

MDPI

Article

Synthesis Monitoring, Characterization and Cleanup of Ag-Polydopamine Nanoparticles Used as Antibacterial Agents with Field-Flow Fractionation

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Supplementary Materials

Table S1. concentration of reagents and medium used in Ag-PDA synthesis.

	Ag (AgNO3) (mM)	Dopamine-HCl (mM)	EtOH (% v/v)	Ammonia (% v/v)
R1	2	10	30	1
R2	1	10	30	1
R3	**0.5**	**10**	**30**	**1**
R4	0.5	2.5	30	1
R5	1	2.5	30	1

The synthesis of Ag-PDA nanoparticles was performed with an optimized method elaborated from literature [54-56, manuscript]. The most promising reagent ratio (green) was chosen from a screening of different Ag/Dopamine ratios shown in Table S1.

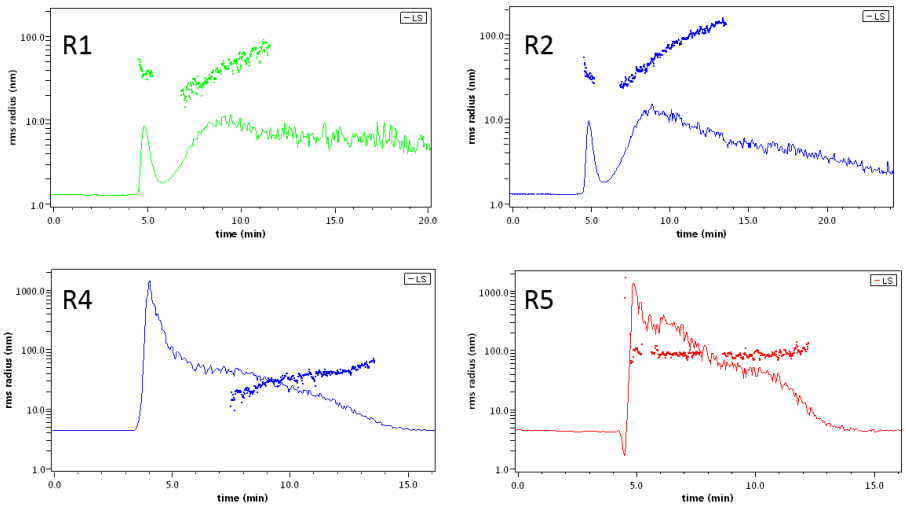

Figure S1. Solid line: LS profile of Ag-PDA particles obtained with R1-R2-R4-R5 Ag/DA ratios. Dotted distribution: Gyration radii.

Each reaction (R1-R5) was carried out for 30 hours. A 50µL aliquot was injected and analysed with FFF-multidetection to verify the formation of Ag-PDA nanoparticles.

The results showed that an increase in Ag concentration yielded less monodispersed particles, ranging from 25 to >100 nm in terms of Gyration radius (Figure S1, R1-R2).

A lower dopamine concentration led to a scarce resolution from the first population, suggesting that the formation of PDA particles was less effective. (Figure S1, R4-R5). R3 was then chosen for time monitoring, online and offline characterization, and activity tests.