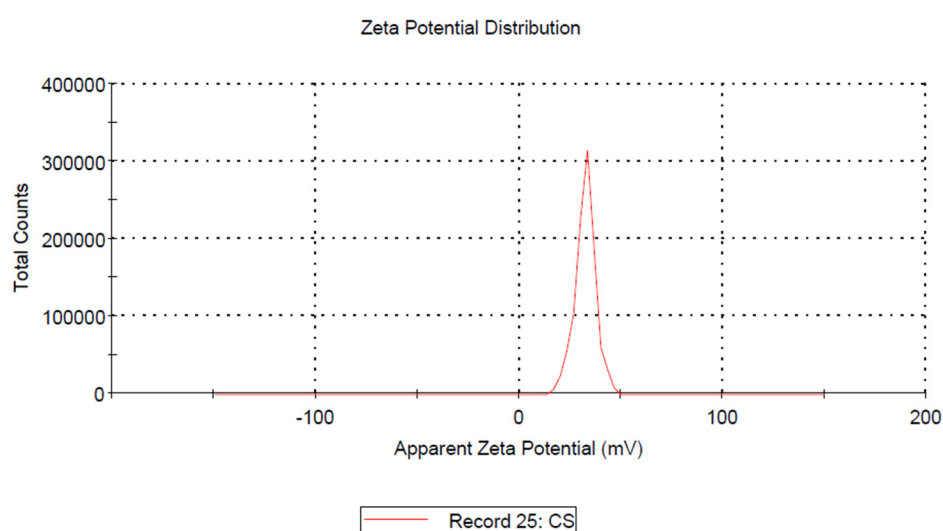
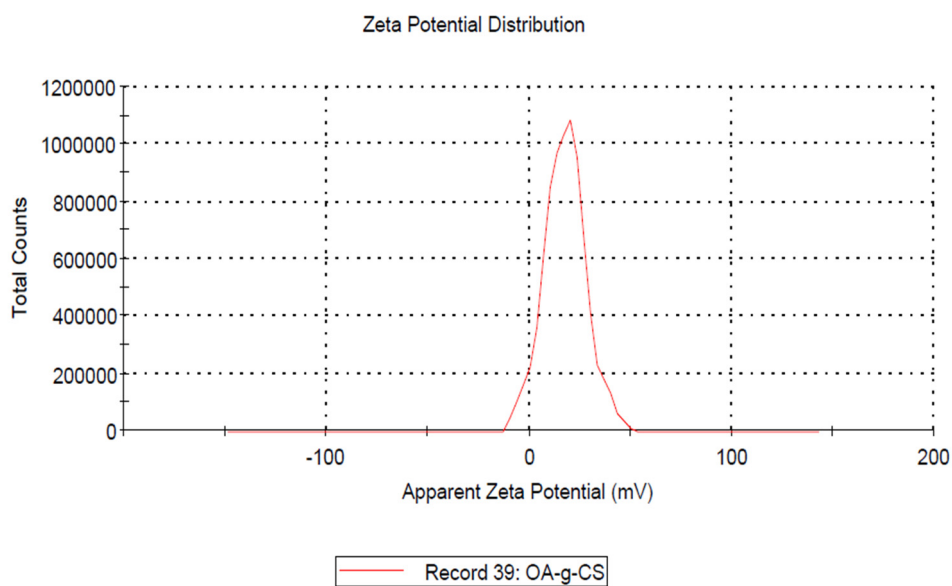


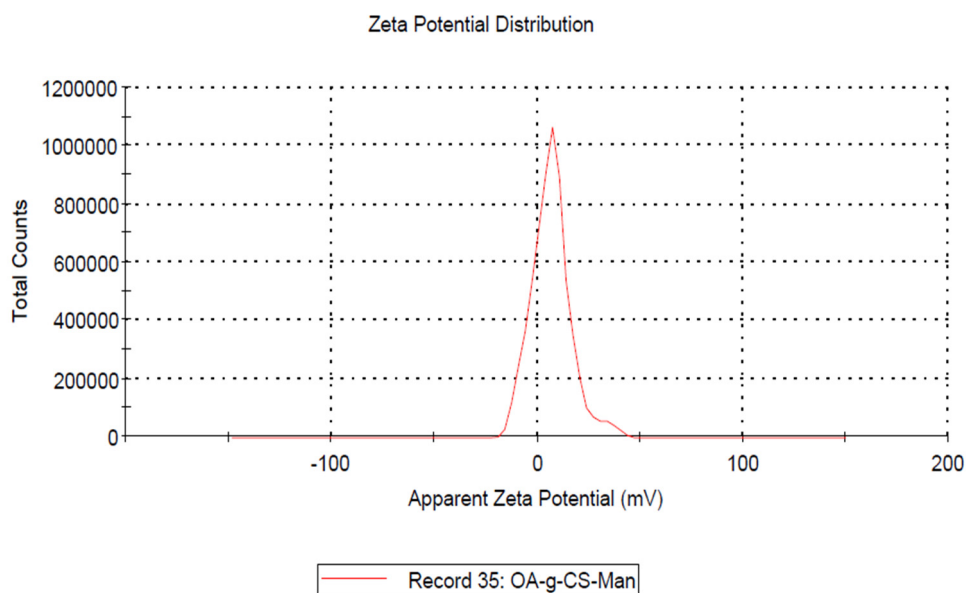
**Figure S1.** Particle size distribution for different chitosan polymer formulations using dynamic light scattering method.



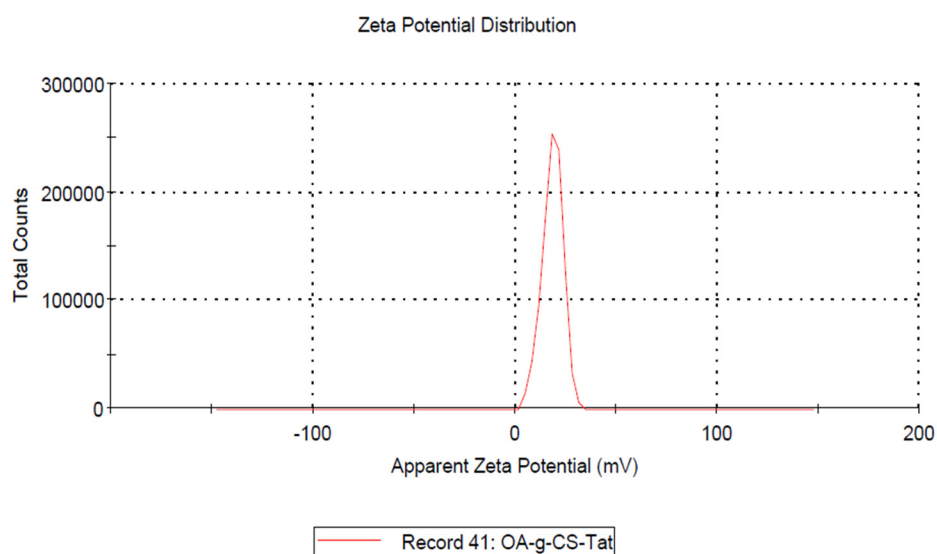
**Figure S2.** Zeta potential distribution for chitosan using dynamic light scattering method.



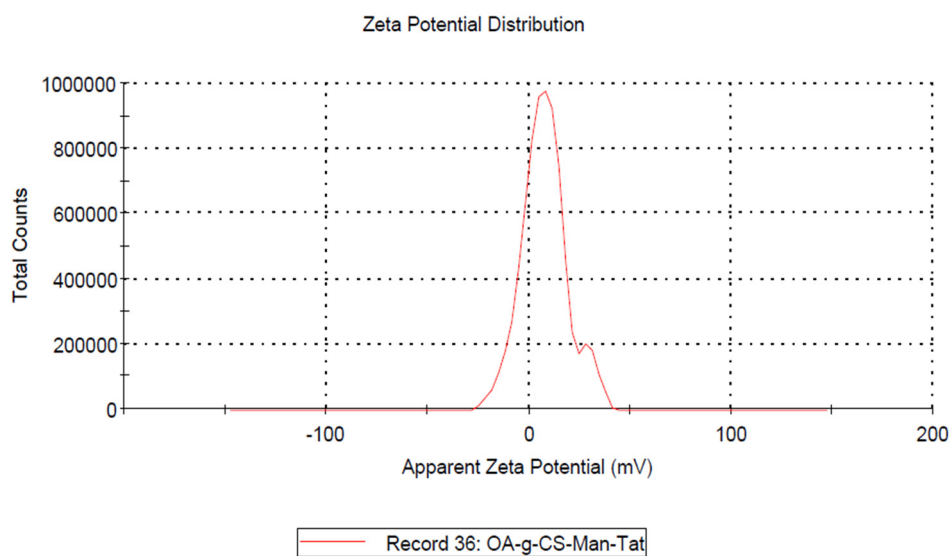
**Figure S3.** Zeta potential distribution for Oleic acid grafted chitosan using dynamic light scattering method.



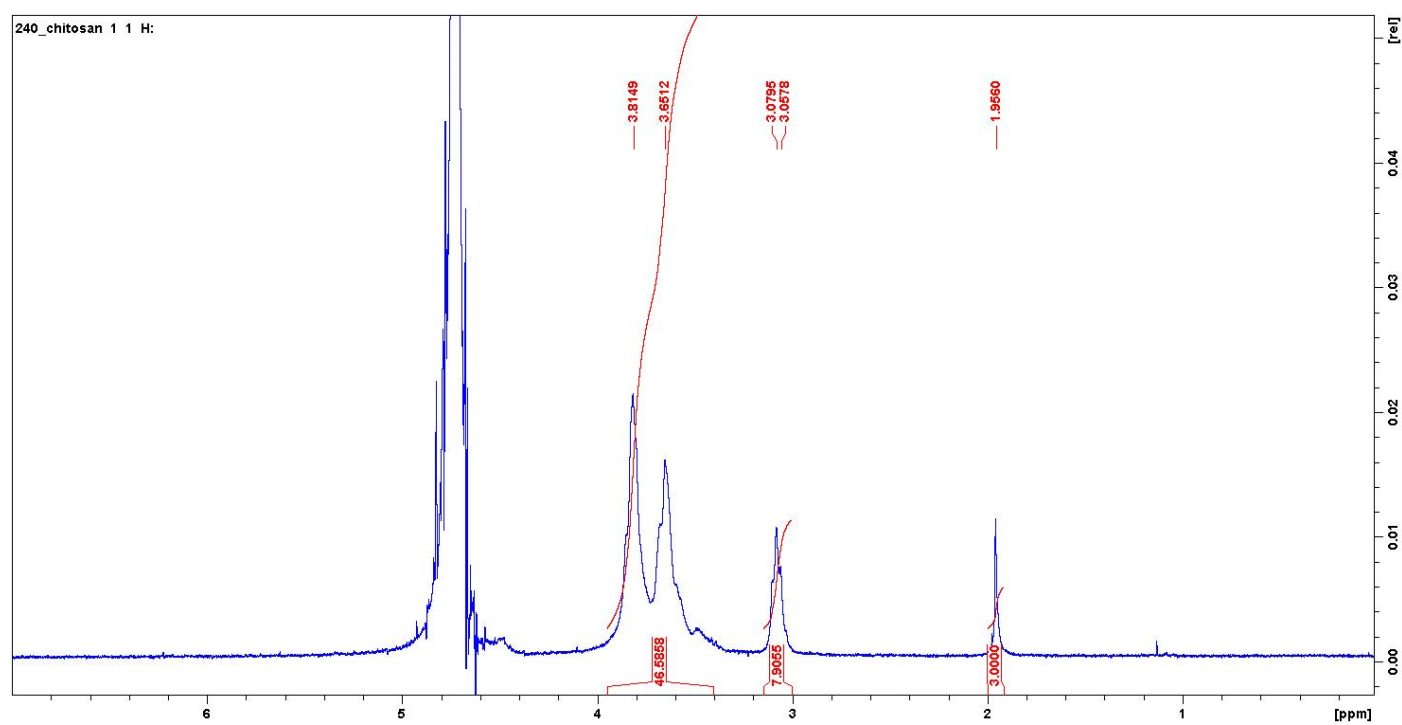
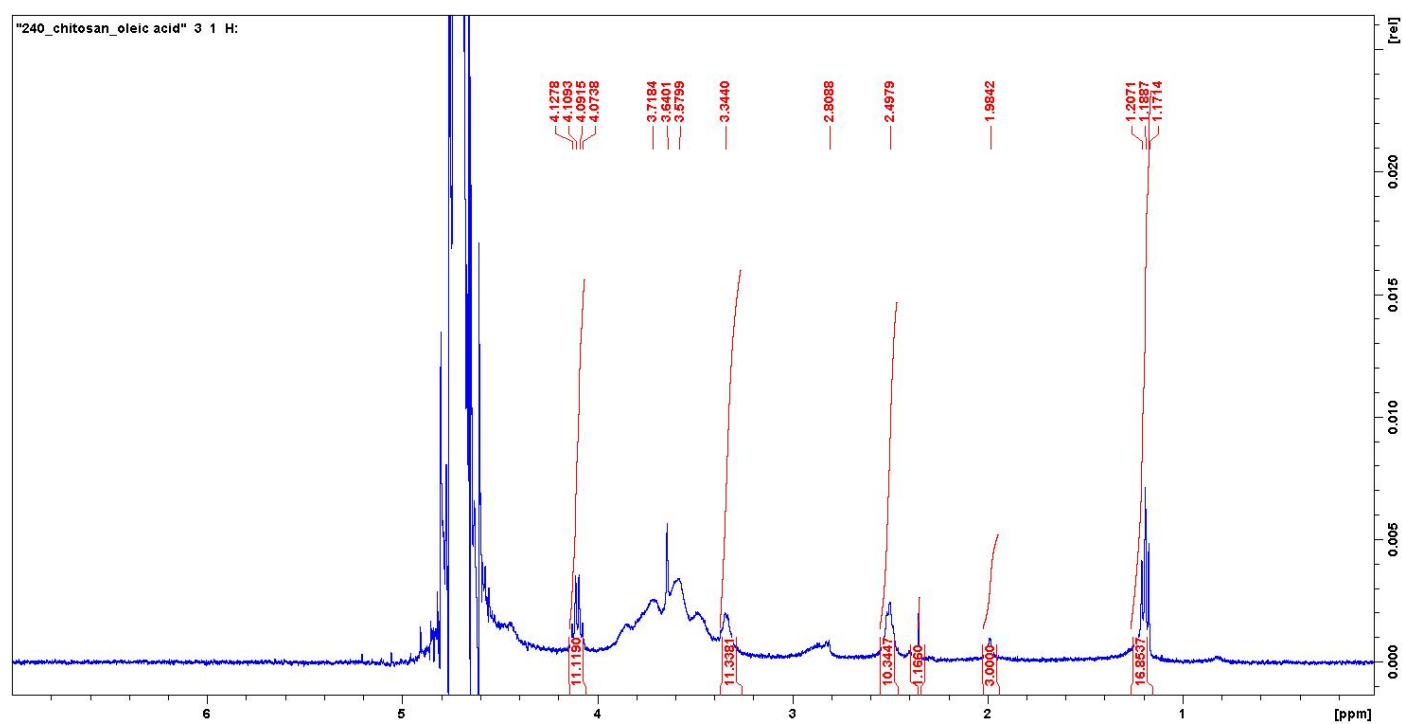
**Figure S4.** Zeta potential distribution for OA-g-CS-Man using dynamic light scattering method.

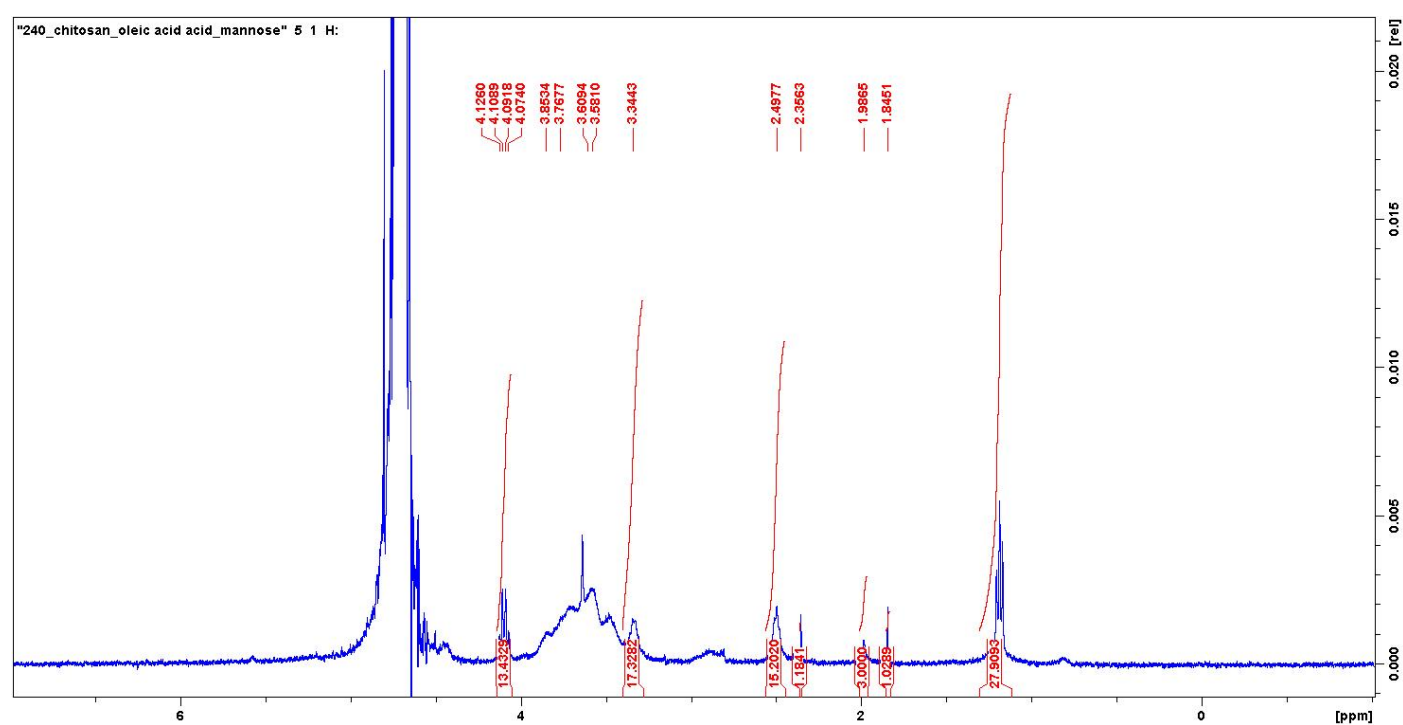
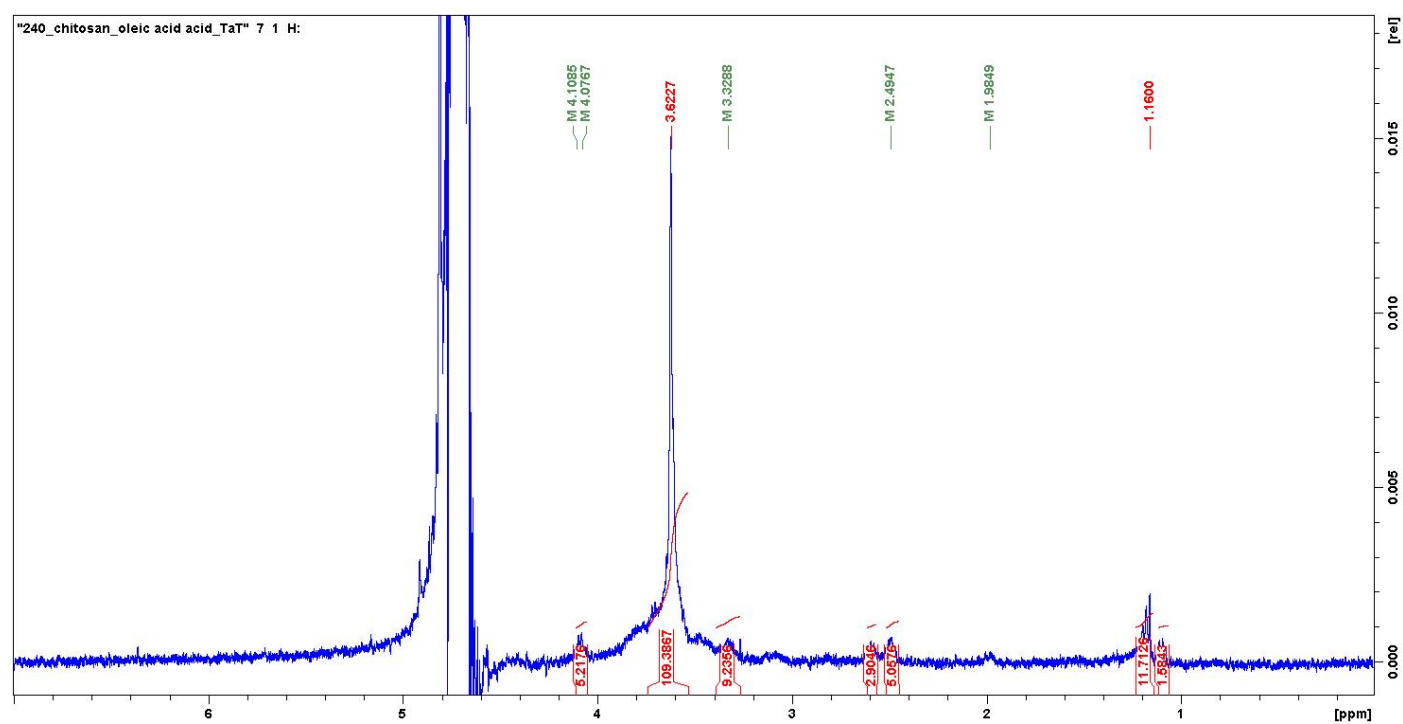


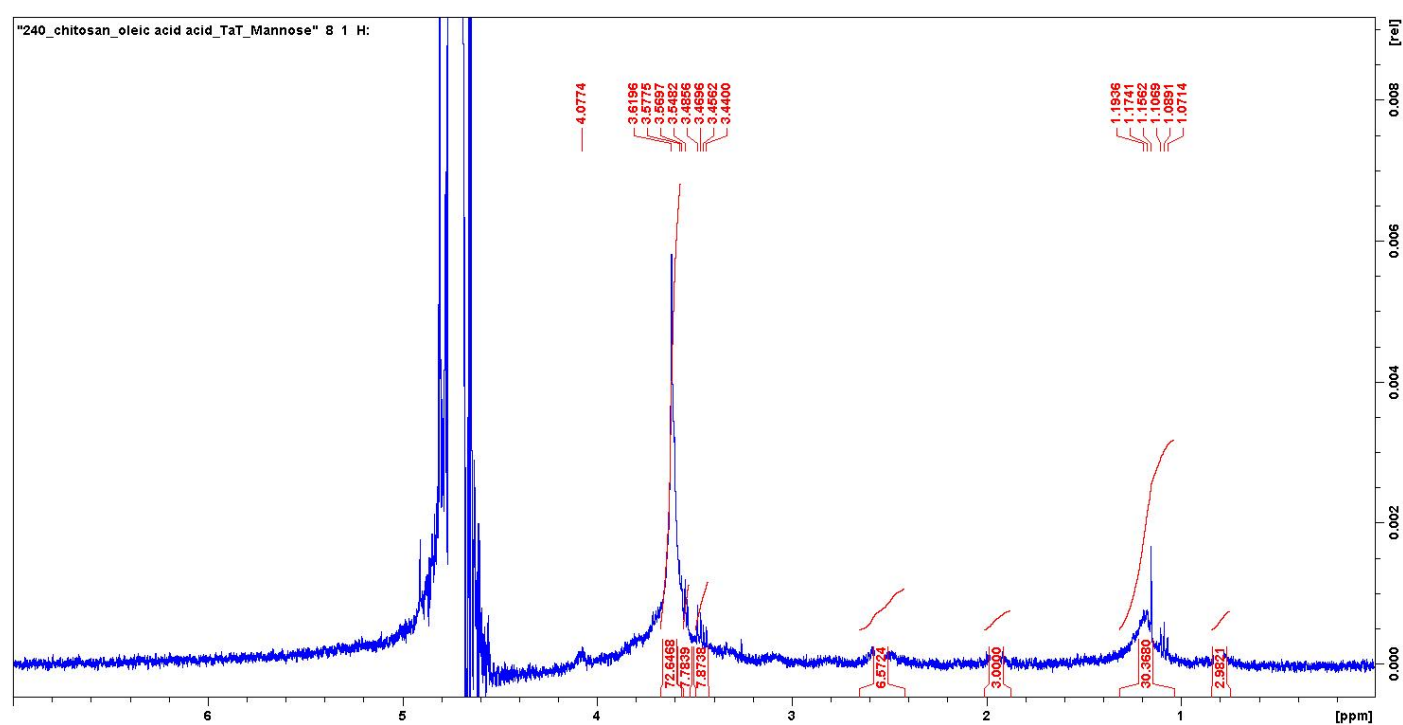
**Figure S5.** Zeta potential distribution for OA-g-CS-Tat using dynamic light scattering method.

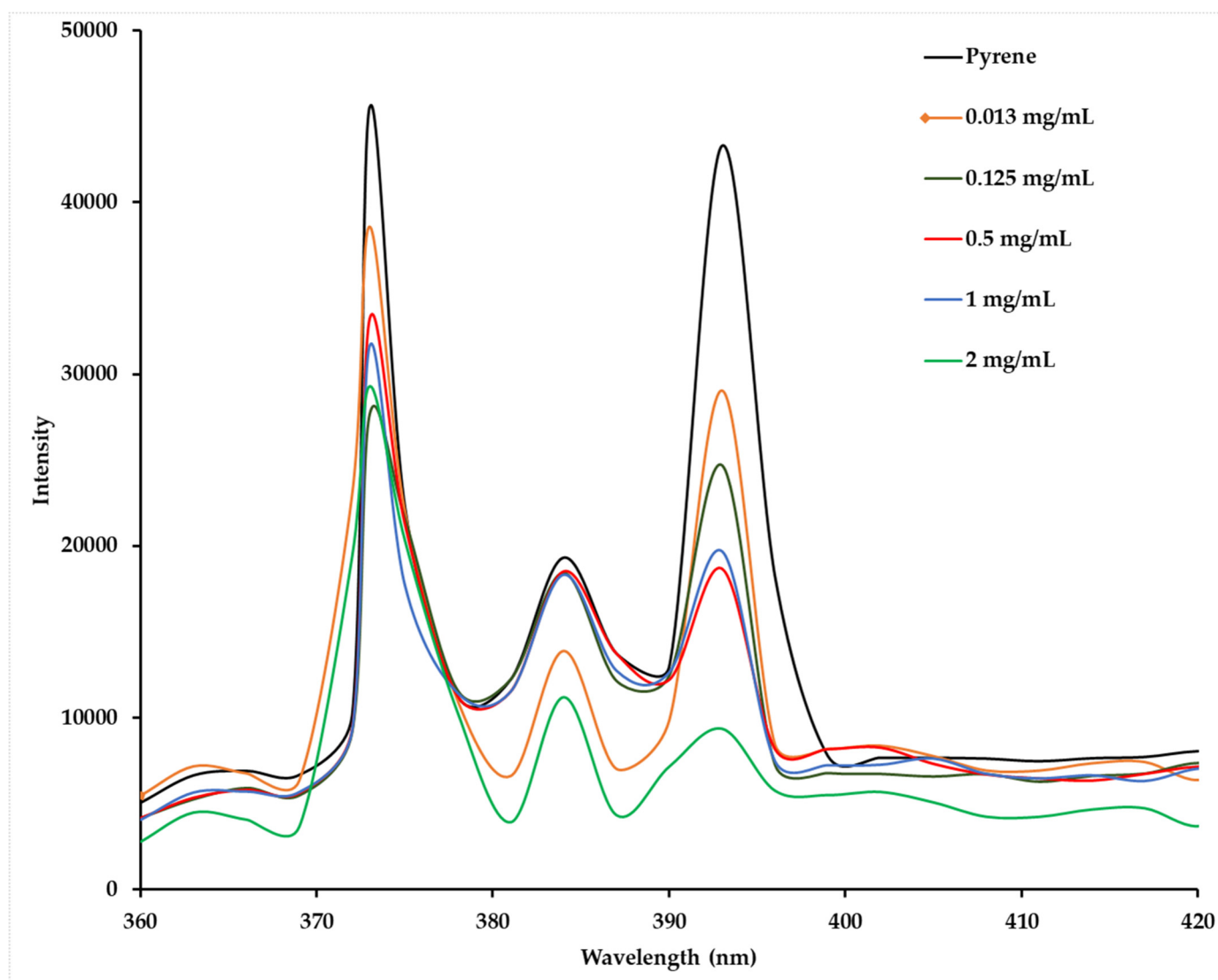


**Figure S6.** Zeta potential distribution for OA-g-CS-Man-Tat using dynamic light scattering method.

Figure S7.  $^1\text{H}$ NMR of Chitosan.Figure S8.  $^1\text{H}$ NMR of OA-g-CS.

Figure S9. <sup>1</sup>H NMR of OA-g-CS-Man.Figure S10. <sup>1</sup>H NMR of OA-g-CS-Tat.

Figure S11. <sup>1</sup>H NMR of OA-g-CS-Man-Tat.



**Figure S12.** Fluorescence spectra of hydrophobic probe pyrene with increasing concentration of CS-g-OA.