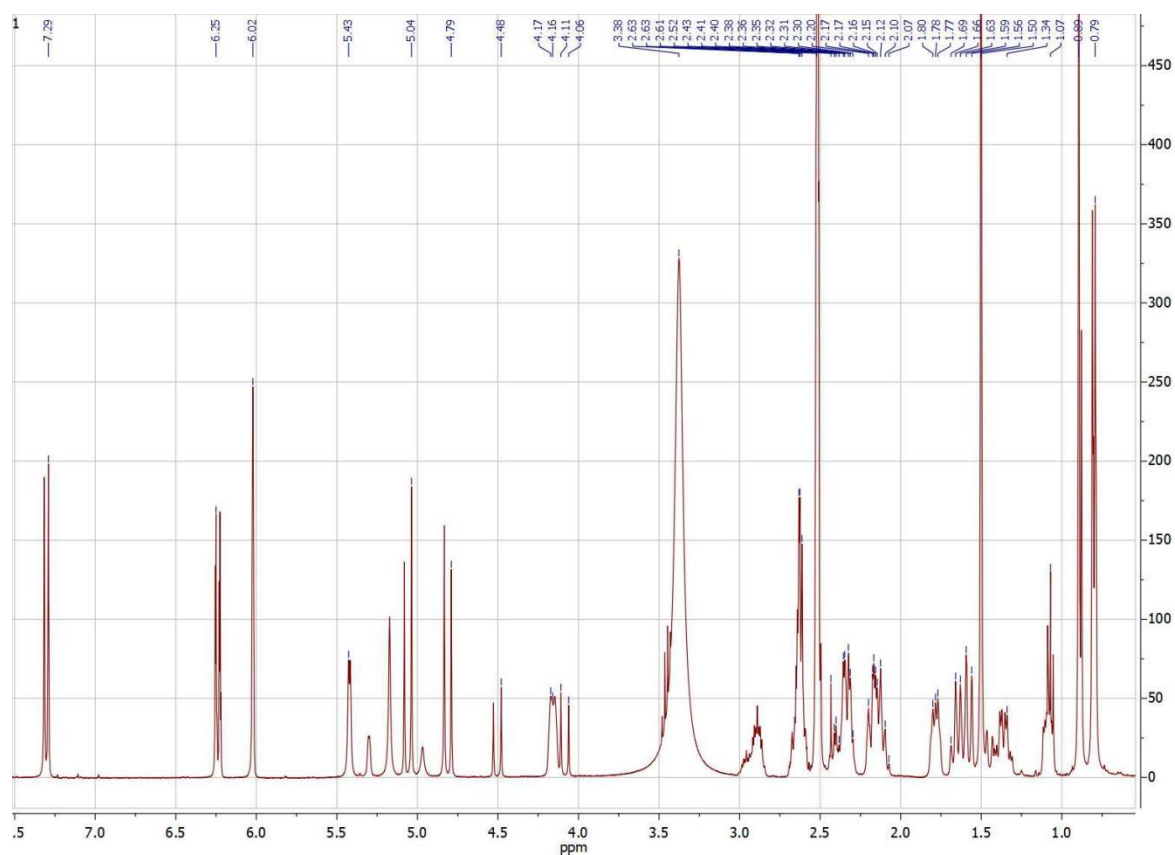
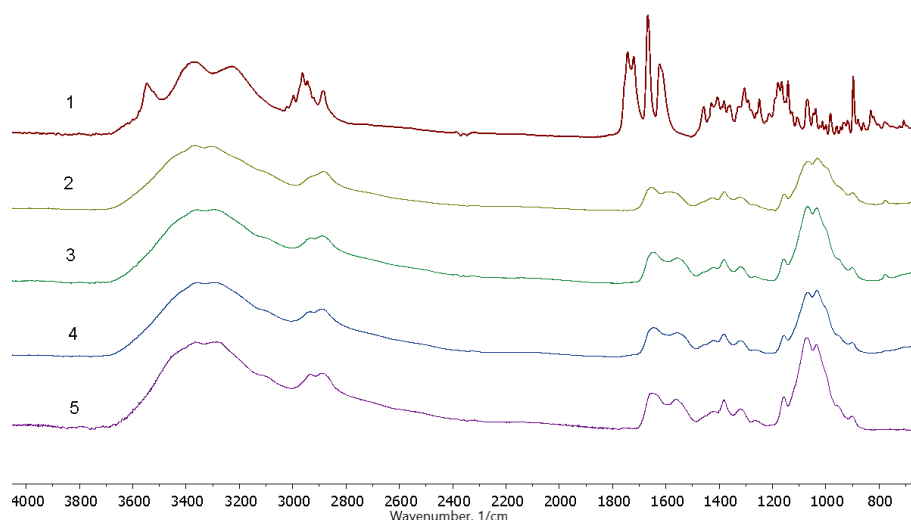


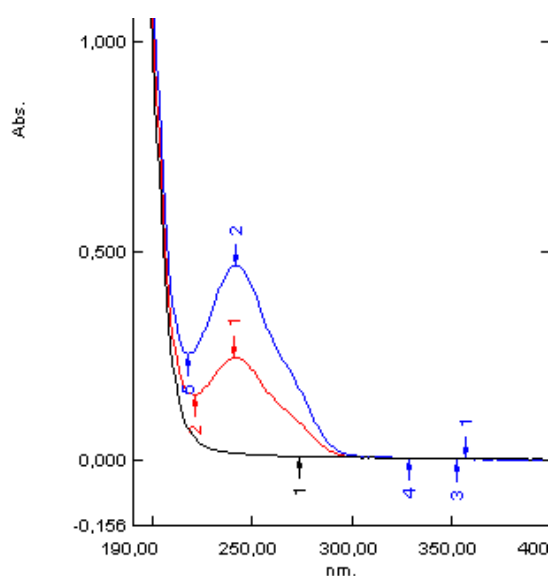
## Supplementary Materials



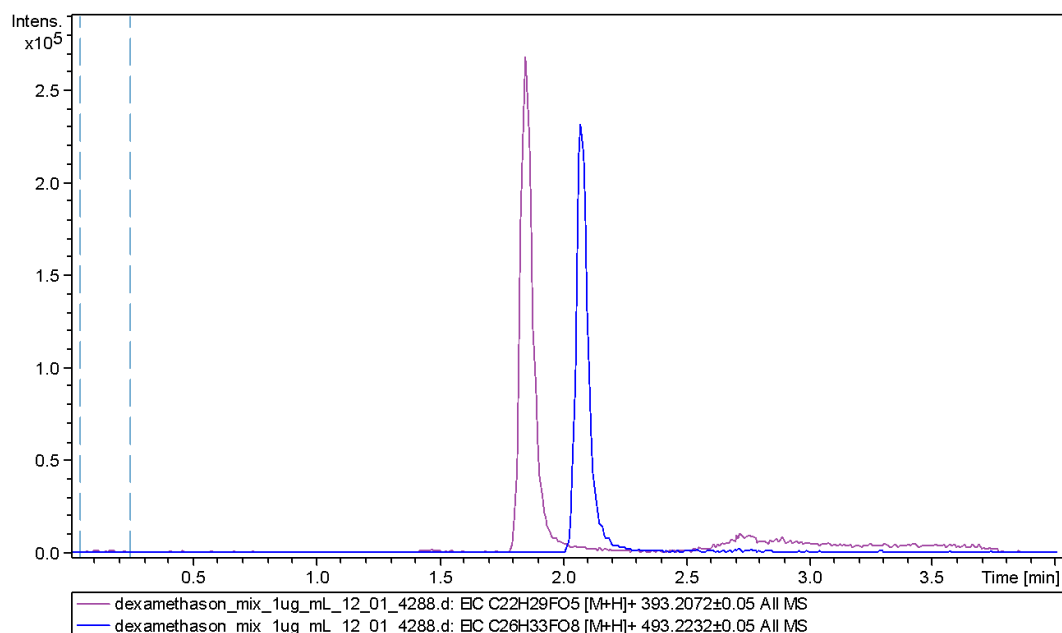
**Figure S1.**  $^1\text{H}$  NMR (400 MHz,  $\text{DMSO-d}_6$ ) spectra of succinyl dexamethasone (SucDEX):  $\delta$  7.29 (d, 1H), 6.25 (dd, 1H), 6.02 (s, 1H), 5.43 (d, 1H), 5.04 (d, 1H), 4.79 (d, 1H), 4.49 (d, 1H), 4.17–4.06 (m, 1H), 3.38(s, 2H), 2.93–2.86 (m, 1H), 2.71–2.58 (m, 1H), 2.52 (s, 2H), 2.45–2.30 (m, 2H), 2.21–2.06 (m, 2H), 1.82–1.74 (m, 1H), 1.69–1.54 (m, 1H), 1.50 (s, 1H), 1.34 (dd, 1H), 1.07 (m, 1H), 0.89 (s, 3H), and 0.79 (d, 3H).



**Figure S2.** FTIR spectra of DEX (1), CS (2), and CS-DEX-5 (3), CS-DEX-10 (4), and CS-DEX-20 (5): the increase in the intensity of the absorption band at  $2940\text{ cm}^{-1}$  corresponding to the vibrational transitions of the C-H DEX bonds indicates an increase in the DEX content in the conjugates.



**Figure S3.** UV spectra of the succinyl chitosan-dexamethasone conjugates and succinyl chitosan: SucCS-DEX-5 (red), SucCS-DEX-10 (blue), and SucCS (black).



**Figure S4.** Extracted ion chromatograms at  $m/z$  393.2072 (red) and  $m/z$  493.2232 (blue) for a 1  $\mu\text{g/mL}$  standard solution.  $m/z$  393.2072 corresponds to the protonated DEX form,  $m/z$  493.2232 corresponds to the SucDEX.