Electronic Supplementary Material (ESI) for Analyst.

β-Cyclodextrin decorated Nanocellulose: A smart approach towards the selective fluorimetric determination of danofloxacin in milk samples

SUPPORTING INFORMATION

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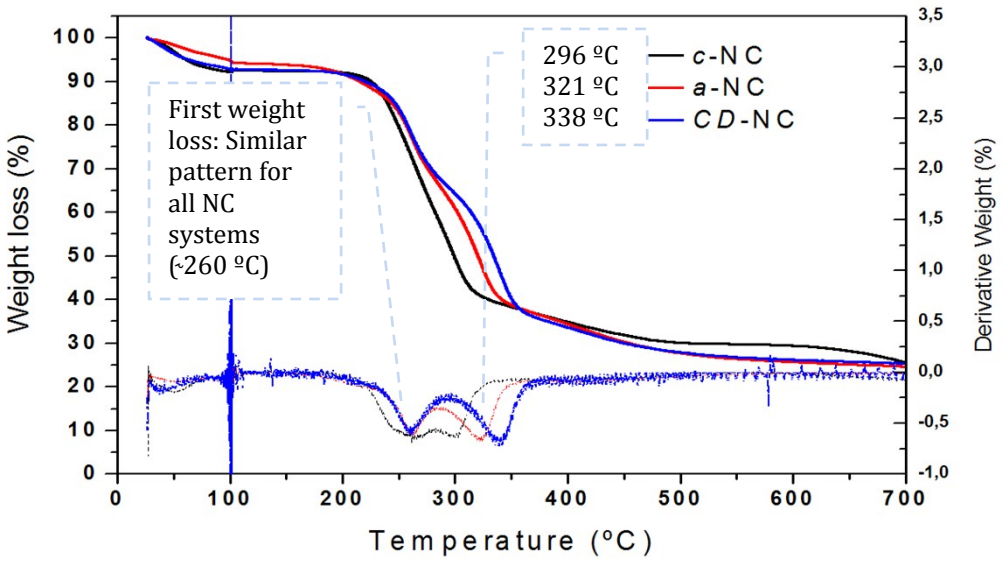
A



B

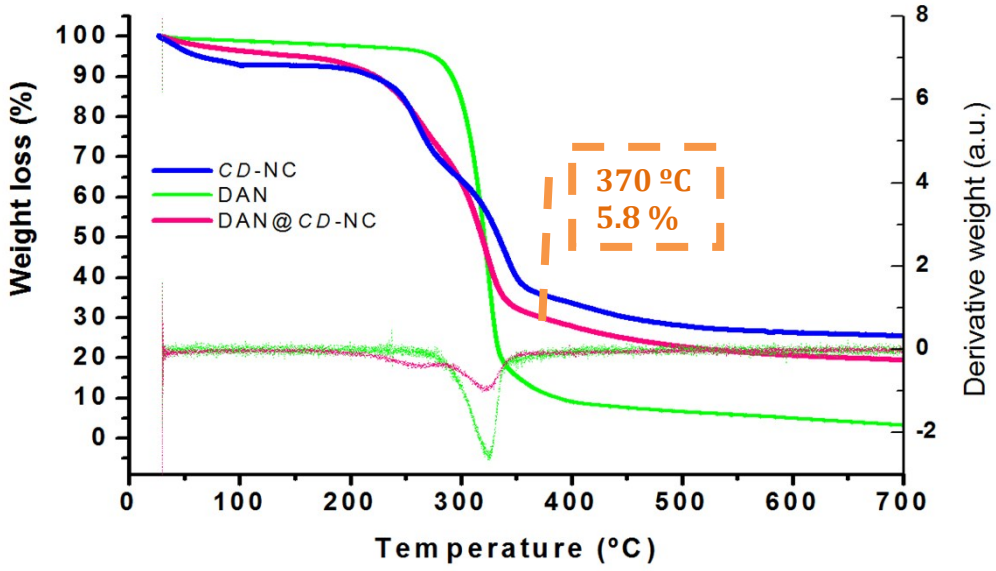


Figure S1. TGA analysis of *c*-NC, *a*-NC and *CD*-NC (A) and both bound and unbound *CD*-NC and danofloxacin (B).

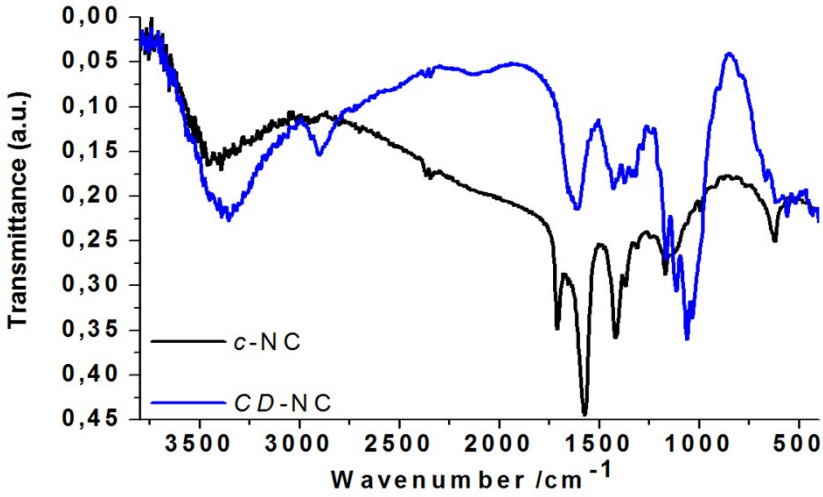
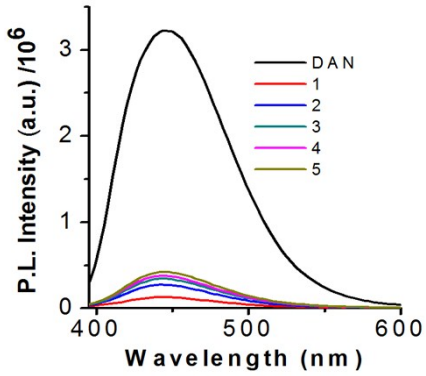
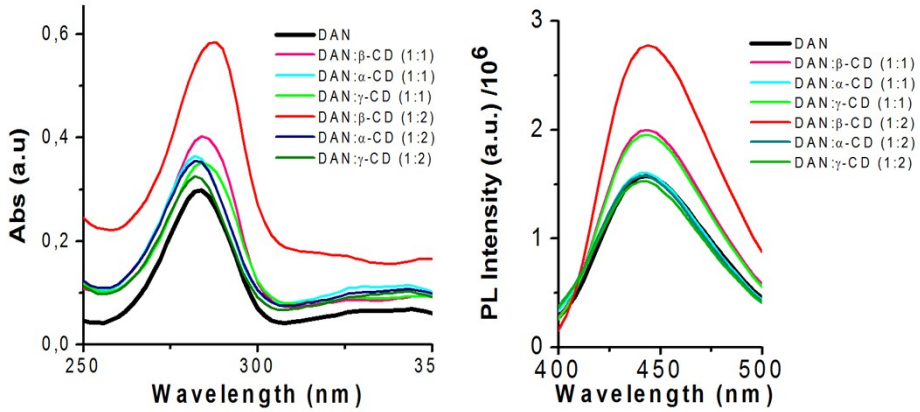


Figure S2. IR spectra of *c*-NC and *CD*-NC.



(A)



(B) **(C)**

Figure S3. PL behaviour of DAN in aqueous solution in presence of different concentrations of NC modified with β-CD (**A**). Absorption (**B**) and fluorescent spectra of DAN in absence and in presence of α-CD, β-CD and γ-CD (**C**).

Table S1. Selected parameters and optimized values for elution of danofloxacin.

Parameters considered	Interval studied	Optimal value
Phosphate concentration	25-100mM	50mM
pH buffer	2.5-4.5	3.5
Organic solvent proportion	0-30%	12% of MeCN
MeOH volume before elution	0-300 µL	150 µL

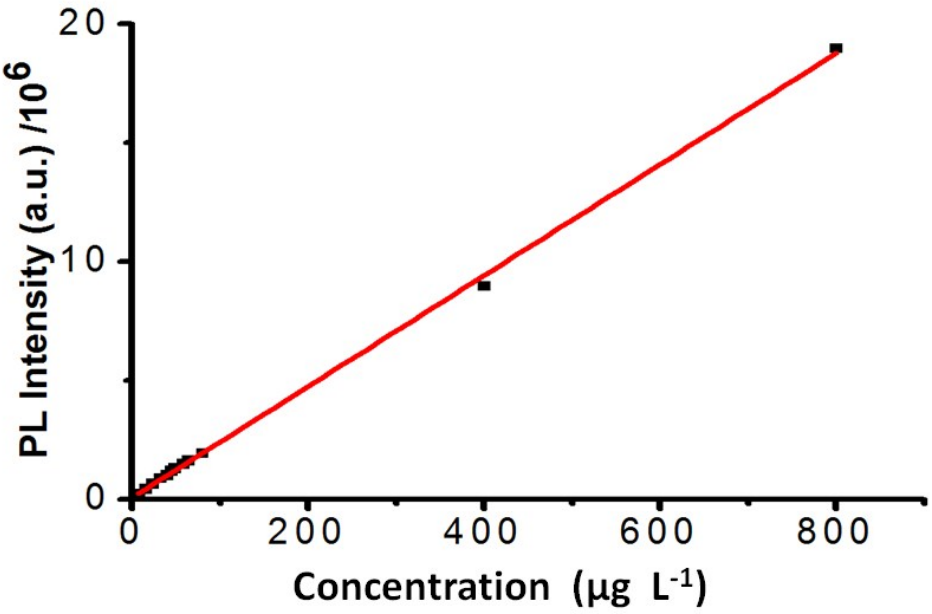


Figure S4. Linearity of the proposed method.

Table S2. Comparison of different commercial sorbents in the determination of quinolones.

Analyte	Type of sorbent	Absolute extraction recovery (%)	Detection system	Limit of Detection (LoD) (µg/L)	Reference
Quinolones	SDB-RPS	66-91	CE-DAD	14-25	Electrophoresis. 25 (2004) 65-73
	Oasis Max	23-96		7-30	
Quinolones	SDB-RPS	81-93	LC-UV	5-12	Ovidius University Annals of Chemistry 20 (2009) 165-179
Quinolones	Strata X	-	LC-UV	9-13	Analytica Chimica Acta. 613 (2008) 98-107
			LC-FD	3-8	
			LC-MS	1-5	
			LC-MS-MS	0.5-1	
Quinolones	Oasis HLB	61-87	LC-UV	5-10	Journal of Chromatography A. 1029 (2004) 145-151
	Oasis Max	23-96		5-10	
	SDB-RPS	66-91		5-10	
	Direct Extraction	42-80		10-30	
Fluoroquinolones	Oasis HLB	_	CE	13-20	Chromatographia. 68 (2008) 425-429
Fluoroquinolones	Oasis HLB	_	CE	20-30	Electrophoresis 2012, 33, 2978–2986
Fluoroquinolones	C18	85-97	HPLC-FD	10-50	Microchemical Journal 110 (2013) 533–537

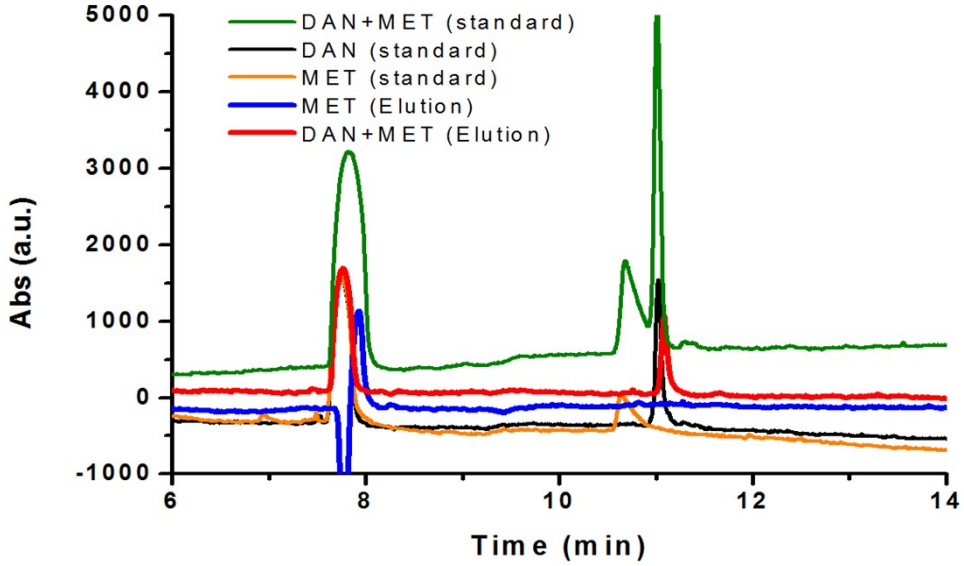


Figure S5. Electrophoretic profiles of standards of both DAN and MET together (at 2.5 mg L^{-1}) or independently (at 1.0 mg L^{-1}) and the eluted solution after using samples containing DAN and MET together and independently.