Supplementary Material

Cyclodextrin's Effect on Permeability and Partition of Nortriptyline Hydrochloride

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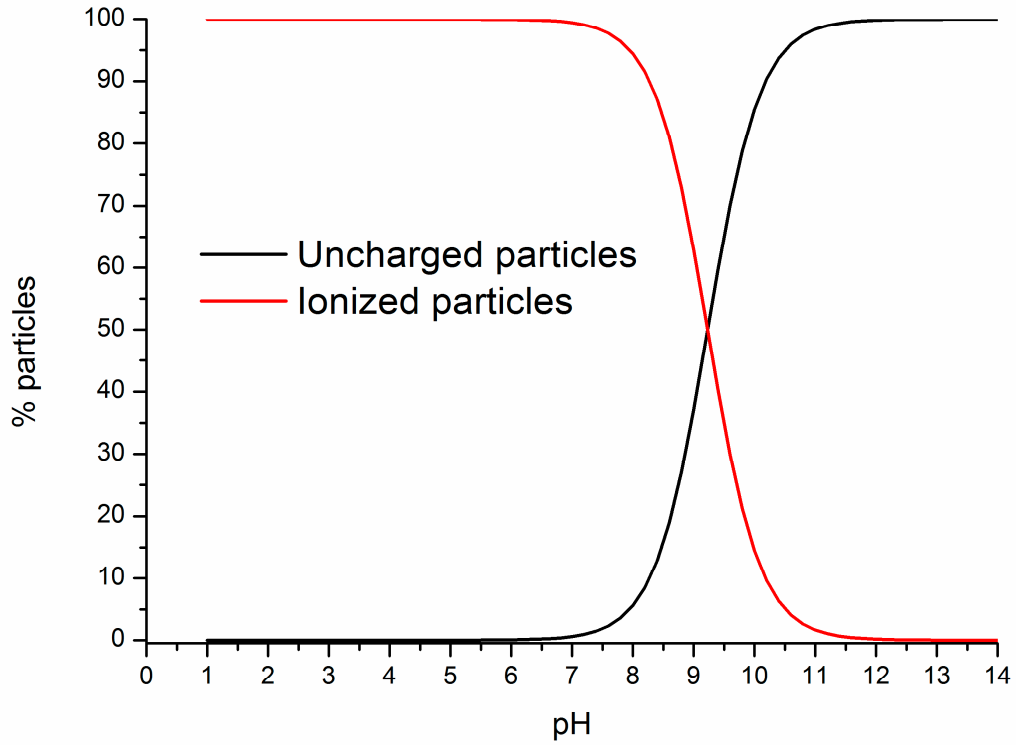

Figure S1. Particles distribution plots.

Table S1. Molar concentrations (C_2) of NTT•HCl in the organic and aqueous phases of the studied distribution systems at 37 °C.

System	$C_2^{Org/buf}$	$C_2^{buf/Org}$	$C_2^{Org/buf} \cdot 10^4$	$C_2^{buf/Org} \cdot 10^3$
	pH 6.8		pH 4.0	
	[1]1-octanol/buffer system			
Without CD	$1.82 \cdot 10^{-3}$	$3.29 \cdot 10^{-4}$	$1.58 \cdot 10^{-3}$	$3.79 \cdot 10^{-4}$
0.0115 M HP-β-CD	$1.38 \cdot 10^{-3}$	$5.29 \cdot 10^{-4}$	$4.99 \cdot 10^{-4}$	$1.67 \cdot 10^{-3}$
0.025 M HP-β-CD	$1.27 \cdot 10^{-3}$	$6.38 \cdot 10^{-4}$	$2.89 \cdot 10^{-4}$	$1.88 \cdot 10^{-3}$
0.035 M HP-β-CD	$1.11 \cdot 10^{-3}$	$7.90 \cdot 10^{-4}$	$1.99 \cdot 10^{-4}$	$1.97 \cdot 10^{-3}$
0.0115 M SBE-β-CD	$1.01 \cdot 10^{-3}$	$7.00 \cdot 10^{-4}$	$3.63 \cdot 10^{-4}$	$1.78 \cdot 10^{-3}$
0.025 M SBE-β-CD	$4.57 \cdot 10^{-4}$	$1.25 \cdot 10^{-3}$	$1.70 \cdot 10^{-4}$	$1.97 \cdot 10^{-3}$
0.035 M SBE-β-CD	$3.68 \cdot 10^{-4}$	$1.62 \cdot 10^{-3}$	$2.65 \cdot 10^{-5}$	$2.12 \cdot 10^{-3}$
	[2]n-hexane/buffer system			
Without CD	$1.11 \cdot 10^{-4}$	$1.95 \cdot 10^{-3}$	$6.58 \cdot 10^{-5}$	$1.86 \cdot 10^{-3}$
0.0115 M HP-β-CD	$1.13 \cdot 10^{-4}$	$2.16 \cdot 10^{-3}$	$5.46 \cdot 10^{-5}$	$1.97 \cdot 10^{-3}$
0.0115 M SBE-β-CD	$9.86 \cdot 10^{-5}$	$1.92 \cdot 10^{-3}$	$3.59 \cdot 10^{-5}$	$1.80 \cdot 10^{-3}$

[1]V(oct):V(buf)= 3:3;

[2]V(hex):V(buf)= 12:2.

The standard uncertainties are $u(t)$=0.2 °C. The relative standard uncertainties are $u_r(C_2^{oct/buf})$; $u_r(C_2^{buf/oct})$; $u_r(C_2^{hex/buf})$; and $u_r(C_2^{buf/hex})$=0.04.

Table S2. Donor solution concentrations (C), flux (J), and permeability coefficients (P_{app}) of NTT•HCl through the PermePad barrier (PP) and cellulose membrane (RC) at 37 °C, pH 6.8 in the donor compartment; the standard deviations are given in parenthesis.

System	$C \cdot 10^3$ (M)	J (μM·cm^{-2}·s^{-1})	P_{app} (cm·s^{-1})	$C \cdot 10^3$ (M)	J (μM·cm^{-2}·s^{-1})	P_{app} (cm·s^{-1})
	PP			RC		
	pH 6.8					
Buffer	1.42	$3.46 \cdot 10^5$	$2.44(0.07) \cdot 10^{-5}$	2.11	$8.22 \cdot 10^{-5}$	$3.90(0.11) \cdot 10^{-5}$
	HP-β-CD					
0.0115 M	2.20	$2.69 \cdot 10^{-6}$	$1.22(0.03) \cdot 10^{-6}$	1.34	$2.03 \cdot 10^5$	$1.52(0.04) \cdot 10^{-5}$
0.025 M	2.20	$2.58 \cdot 10^{-6}$	$1.17(0.03) \cdot 10^{-6}$	1.66	$2.06 \cdot 10^5$	$1.25(0.03) \cdot 10^{-5}$
0.035 M	2.23	$9.39 \cdot 10^{-7}$	$4.21(0.05) \cdot 10^{-7}$	1.34	$1.47 \cdot 10^5$	$1.10(0.03) \cdot 10^{-5}$
	SBE-β-CD					
0.0115 M	2.28	$1.48 \cdot 10^{-6}$	$6.50(0.15) \cdot 10^{-7}$	2.27	$1.31 \cdot 10^5$	$5.77(0.20) \cdot 10^{-6}$
0.025 M	2.22	$9.06 \cdot 10^{-7}$	$4.09(0.08) \cdot 10^{-7}$	1.68	$8.43 \cdot 10^{-6}$	$5.00(0.14) \cdot 10^{-6}$
0.035 M	2.36	$7.20 \cdot 10^{-7}$	$3.05(0.07) \cdot 10^{-7}$	2.36	$1.03 \cdot 10^{-5}$	$4.36(0.09) \cdot 10^{-6}$