Electrochemical treatment of effluent for the removal of contaminants of emergent concern and culturable microorganisms

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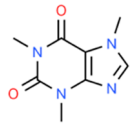
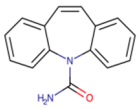
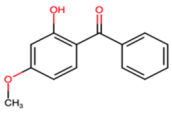
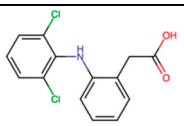
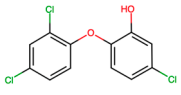
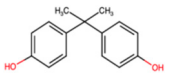
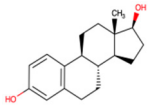
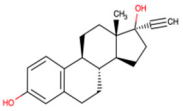
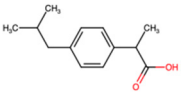
Table S1. Physicochemical properties of each contaminant of emergent concern used in this study.

Compound (abbreviation)	**CAS**	**Chemical structure**	**Molecular weight (g/mol)**	**Solubility in water (mg/L)**	**K_H (atm-cu m/mole)**	**pKa**	**Log K_{ow}**	**Log K_{oc}**
Caffeine (CAF)	58-08-2		194.19	$2.16x10^4$ [a]	$1.1x10^{-11}$	0.7/14.0	-0.07	2.87 – 3.89 [e]
Carbamazepine (CBZ)	298-46-4		236.27	17,7 [c]	$1.1x10^{-10}$	13.9	2.45	2.71
Oxybenzone (OXY)	131-57-7		228.25	69 [a]	$1.5x10^{-8}$	8.07	3.79	2.98
Diclofenac (DCF)	15307-86-5		296.15	2.37 [a]	$6.1x10^{-8}$	4.15	4.51	2.39
Triclosan (TCS)	3380-34-5		289.54	10 [b]	$2.1x10^{-8}$	7.90	4.76	3.38 – 4.20
Bisphenol A (BPA)	80-05-7		228.29	120 [c]	$4.0x10^{-11}$	9.60	3.32	2.06 – 3.59
17β-estradiol (E2)	50-28-2		272.40	3,6 [e]	$3.6x10^{-11}$	10.3	4.01	4.48
17α-ethinylestradiol (EE2)	57-63-6		296.41	11,3 [e]	$7.9x10^{-12}$	10.3	3.67	2.71
Ibuprofen (IBU)	15687-27-1		206.29	21 [a]	$1.5x10^{-7}$	4.91	3.97	3.53

References: pubchem.ncbi.nlm.nih.gov, www.chemicalbook.com, www.SigmaAldrich.com.

[a] at 25 °C; [b] at 20 °C; [c] at 37 °C; [d] at 27 °C; [e] silt - sandy loam soils

Table S2. HPLC-DAD-FLD limit of detection and quantification.

Sample	Compound (abbreviation)	HPLC-DAD-FLD (mg/L)		
		LD*	LQ**	R^2
S1 and S2	Caffeine	0.37	1.10	0.9991
	Carbamazepine	0.55	1.64	0.9986
	Oxybenzone	0.44	1.32	0.9993
S3	Caffeine (CAF)	0.13	0.40	0.9995
	Carbamazepine (CBZ)	0.09	0.26	0.9995
	Diclofenac (DCF)	0.18	0.54	0.9985
	Oxybenzone (OXY)	0.17	0.5	0.9996
	Triclosan (TCS)	0.33	0.99	0.9987
	Bispenhol A (BPA)	0.11	0.34	0.9999
	17β-estradiol (E2)	0.08	0.24	1.000
	17α-ethinylestradiol (EE2)	0.14	0.42	0.9999
	Ibuprofen (IBU)	0.27	0.82	0.9996

* limit of detection ; ** limit of quantification