

Supporting information

Pilot-scale removal of organic micropollutants and natural organic matter from drinking water using ozonation followed by granular activated carbon

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Table S1. Average Limit of Quantification (LOQ) (ng L⁻¹), recovery (%) and internal standard used for all analysed compounds. *Italics text represents detected compounds.*

Compound	Average LOQ, ng L ⁻¹	DWTP*, Average recovery	Internal standard used
<i>Phenazone</i>	0.033	151%	<i>Codeine, D₃</i>
<i>O-desmethyl-venlafaxine</i>	0.035	136%	<i>Venlafaxine, D₆</i>
<i>Tolyltriazole</i>	0.35	114%	<i>Bezafibrate, D₄</i>
<i>Venlafaxine</i>	0.12	110%	<i>Venlafaxine, D₆</i>
<i>Metoprolol</i>	0.062	96%	<i>Atenolol, D₇</i>
<i>Tramadol</i>	0.024	94%	<i>Tramadol, ¹³C, D₃</i>
<i>Fluconazole</i>	0.045	93%	<i>Codeine, D₃</i>
<i>Ifosfamide</i>	0.12	90%	<i>Bezafibrate, D₄</i>
<i>Propranolol</i>	0.010	88%	<i>Atenolol, D₇</i>
<i>Trimethoprim</i>	0.010	83%	<i>Trimethoprim, D₉</i>
<i>Bicalutamide</i>	0.012	80%	<i>Diazepam, D₅</i>
<i>Diazepam</i>	0.010	73%	<i>Diazepam, D₅</i>
<i>Oxazepam</i>	0.010	71%	<i>Oxazepam, D₅</i>
<i>Cetirizine</i>	0.011	71%	<i>Oxazepam, D₅</i>
<i>Perfluorononanoic acid (PFNA)</i>	0.15	70%	<i>¹³C₉-PFNA</i>
<i>Irbesartan</i>	0.010	66%	<i>Irbesartan, D₇</i>
<i>Lamotrigine</i>	0.010	66%	<i>Oxazepam, D₅</i>
<i>Perfluorooctane sulfonate (PFOS)</i>	0.80	66%	<i>¹³C₈-PFOS</i>
<i>N,N-diethyl-3-methylbenzamide (DEET)</i>	0.30	65%	<i>DEET, D₁₀</i>
<i>Carbamazepine</i>	0.032	64%	<i>Oxazepam, D₅</i>
<i>Lidocaine</i>	0.025	63%	<i>Lidocaine-(diethyl), D₁₀</i>
<i>Sulisobenzone</i>	0.21	57%	<i>Bezafibrate, D₄</i>
<i>Losartan</i>	0.047	55%	<i>Losartan, D₄</i>
<i>Mirtazapine</i>	0.010	54%	<i>Oxazepam, D₅</i>
<i>Clindamycin</i>	0.010	53%	<i>Diazepam, D₅</i>
<i>Tris(2-butoxyethyl) phosphate (TBEP)</i>	0.10	48%	<i>Isoproturon, D₃</i>
<i>Citalopram</i>	0.010	42%	<i>Oxazepam, D₅</i>
<i>Fexofenadine</i>	0.011	34%	<i>Diazepam, D₅</i>
<i>Caffeine</i>	0.54	6%	<i>Caffeine, ¹³C₃</i>
Gemfibrozil	2.4	238%	Diltiazem, D ₄
Chlorzoxazone	6.8	204%	Bezafibrate, D ₄
Methylparaben	1.3	198%	Propylparaben, D ₇
Sotalol	0.097	198%	Atenolol, D ₇
Diclofenac	1.4	180%	Diclofenac, ¹³ C ₆
Carazolol	0.042	146%	Venlafaxine, D ₆
Chloramphenicol	0.34	129%	Tramadol, ¹³ C, D ₃
Clozapine	0.12	126%	Diazepam, D ₅
Ethylparaben	0.34	125%	Tramadol, ¹³ C, D ₃
Amitriptyline	0.043	123%	Diazepam, D ₅
Daidzein	0.34	120%	Venlafaxine, D ₆

BAM (Dichlorobenzamide)	0.43	116%	DEET, D ₁₀
Omeprazole	0.028	107%	Losartan, D ₄
Propylparaben	0.12	105%	Propylparaben, D ₇
Dibutyl phosphate	0.62	104%	Bezafibrate, D ₄
Iopromide	1.6	104%	Diazepam, D ₅
Atenolol	0.049	99%	Atenolol, D ₇
Methotrexate	2.0	99%	Codeine, D ₃
Metronidazole-OH	0.53	94%	Metronidazole, D ₄
Mefenamic acid	2.0	85%	Mefenamic acid, ¹³ C ₆
Ramipril	0.024	85%	Lidocaine-(diethyl), D ₁₀
Acetaminophen	33	84%	Acetaminophen, D ₄
Metronidazole	3.0	84%	Metronidazole, D ₄
Bisoprolol	0.018	80%	Diazepam, D ₅
Perfluoroundecanoic acid (PFUnDA)	0.32	79%	¹³ C ₇ -PFUnDA
Sulfamethoxazole	0.97	76%	Trimethoprim, D ₉
Perfluoroheptanoic acid (PFHpA)	2.5	73%	¹³ C ₄ -PFHpA
Diltiazem	0.055	71%	Diltiazem, D ₄
Perfluorooctanesulfonamide (FOSA)	0.14	70%	¹³ C ₈ -FOSA
Perfluorododecanoic acid (PFDoDA)	0.40	69%	¹³ C ₂ -PFDoDA
Perfluorohexanoic acid (PFHxA)	10	68%	¹³ C ₅ -PFHxA
Perfluorobutanesulfonic acid (PFBS)	2.0	66%	¹³ C ₃ -PFBS
Valsartan	0.27	64%	Propylparaben, D ₇
Thiabendazole	0.078	64%	Bezafibrate, D ₄
Furosemide	3.8	63%	Furosemide, D ₅
3-(4-Methylbenzylidene)camphor	3.0	62%	Oxybenzone, D ₅
Ranitidine	14	61%	Caffeine, ¹³ C ₃
Climbazole	0.031	61%	Diazepam, D ₅
Perfluorodecanoic acid (PFDA)	0.27	60%	¹³ C ₆ -PFDA
Pyrimethamine	0.011	60%	Diazepam, D ₅
Nicotine	0.040	59%	Caffeine, ¹³ C ₃
Perfluorooctanoic acid (PFOA)	1.5	59%	¹³ C ₈ -PFOA
Sertraline	0.42	59%	Cis-Sertraline, D ₃
Perfluorohexanesulfonic acid (PFHxS)	2.1	58%	¹³ C ₃ -PFHxS
Sulindac	0.23	57%	Bezafibrate, D ₄
Albuterol (Salbutamol)	0.047	55%	Atenolol, D ₇
4-Chloro-2-isopropyl-5-methylphenol	0.72	53%	Isoproturon, D ₃
Codeine	0.056	52%	Codeine, D ₃
Bezafibrate	0.47	50%	Bezafibrate, D ₄
Memantine	1.3	49%	Diazepam, D ₅
Terbutaline	0.17	49%	Atenolol, D ₇
Genistein	2.6	48%	Venlafaxine, D ₆
Fluoxetine	0.67	47%	Fluoxetine, D ₅
4-Chloro-3-methylphenol	2.7	46%	Isoproturon, D ₃
Norsertraline	20	44%	Cis-Sertraline, D ₃
Nicotinamide	0.63	43%	Atenolol, D ₇
Triisopropanolamine	0.053	42%	Atenolol, D ₇
Di-(2-ethylhexyl)phosphoric acid	0.71	40%	Isoproturon, D ₃
Clarithromycin	1.6	38%	Diazepam, D ₅
Perfluoropentanoic acid (PFPeA)	2.6	30%	¹³ C ₅ -PFPeA
Loperamide	0.018	21%	Diazepam, D ₅
Hydrochlorothiazide (HCTZ)	0.61	21%	Hydrochlorothiazide, ¹³ C, D ₂
Perfluorotetradecanoic acid (PFTeDA)	0.21	14%	¹³ C ₂ -PFTeDA
Atorvastatin (Lipitor)	0.17	12%	Atorvastatin, D ₅
Paroxetine	0.14	11%	Oxazepam, D ₅

Acesulfame (E950)	1.2	9%	Diazepam, D ₅
Tamoxifen	2.0	6%	Diltiazem, D ₄
Salicylic acid	0.83	3%	Metronidazole, D ₄
Erythromycin	0.45	2%	Lidocaine-(diethyl), D ₁₀
Roxithromycin	0.058	1%	Diazepam, D ₅

**DWTP: drinking water treatment plant*

Table S2. Physicochemical properties of studied compounds.

Substance	Molecular weight ^a	Topological polar surface area ^a	Aqueous solubility ^a	Log K _{ow} ^b	Log K _{oc} (K _{ow} derived) ^b	Log D (pH 7) ^c
Unit	g mol ⁻¹	Å ²	mg L ⁻¹	(-)	(-)	(-)
Bicalutamide	430	116	5	2.8	2.2	2.7
Carbamazepine	236	46	18	2.5	2.2	2.8
Cetirizine	389	53	101	1.7	0.9	0.8
Clindamycin	425	128	31	2.2	1.1	0.4
Desvenlafaxine	263	44	3700	2.7	2.1	0.7
Fexofenadine	502	81	0.024	2.8	0.8	2.8
Fluconazole	306	82	4363	0.5	0.9	0.6
Irbesartan	429	87	0.059	6.0	3.9	3.4
Lamotrigine	256	91	170	2.6	2.1	1.9
Lidocaine	234	32	4100	2.4	2.2	2.0
Metoprolol	267	51	16042	1.9	1.5	-0.8
N,N-diethyl-m-toluamide (DEET)	191	20	912	2.2	1.9	2.5
Oxazepam	287	62	0.02	2.2	1.7	2.9
Perfluorononanoic acid (PFNA)	464	37	0.063	5.5	3.2	2.3
Perfluorooctane sulfonate (PFOS)	500	63	0.003	4.5	3.4	4.5
Phenazone	188	24	51900	0.4	1.1	1.2
Sulisobenzone	308	109	25000	0.4	1.5	-0.1
Tolyltriazole	133	42	100	1.7	1.9	1.8
Tramadol	263	33	1151	3.0	2.0	0.2
Trimethoprim	290	106	400	0.9	1.9	0.9

Data obtained from ^aPubchem, ^bEPI Suite, ^cDürig et al.(2019)¹

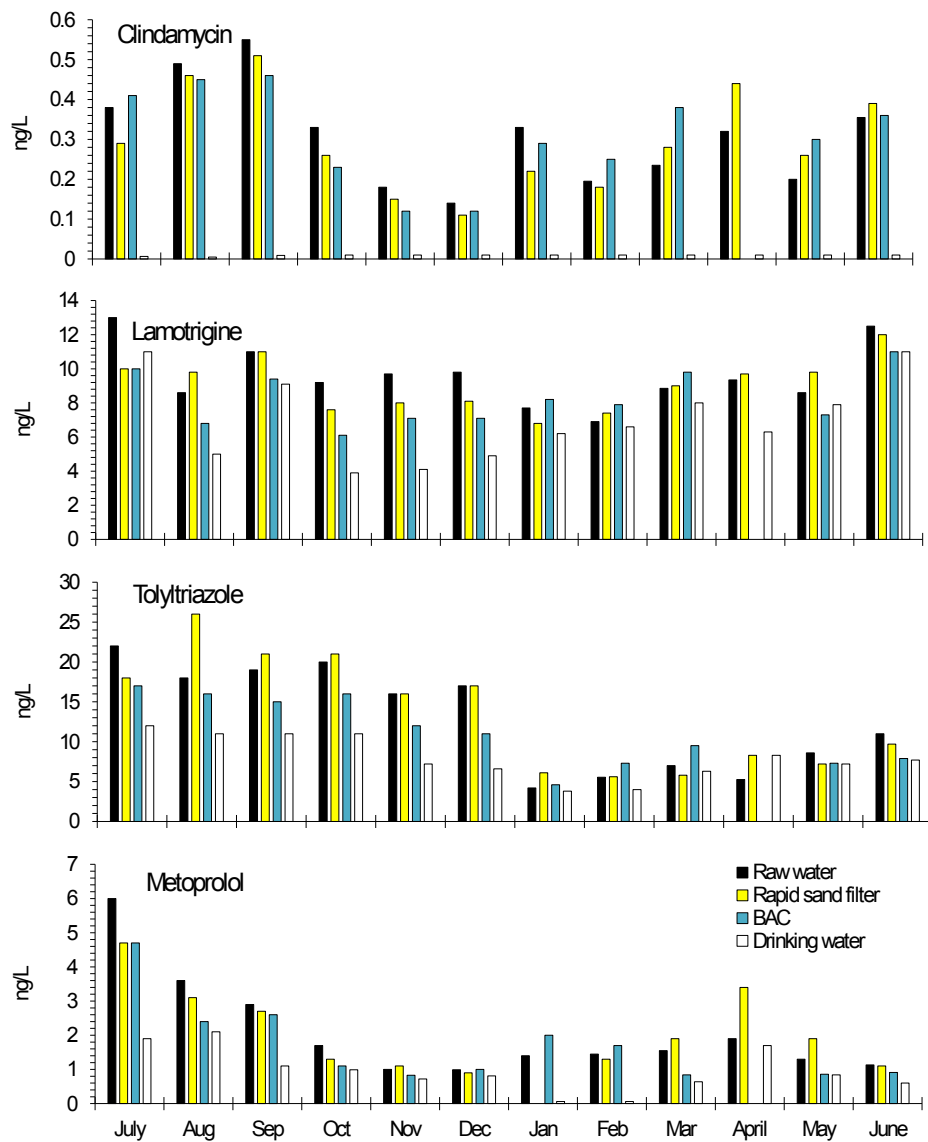


Figure S1. Individual OMPs that showed consistent removal through the full scale process. The graphs show concentrations for all sampling occasions, through the DWTP. The sampling points (as shown in main text Figure 1) were 1) raw surface water, 2) after rapid sand filtration, 3) after one of the parallel mature BAC filters, 4) in finished drinking water. There is no data for the April post-GAC sample.

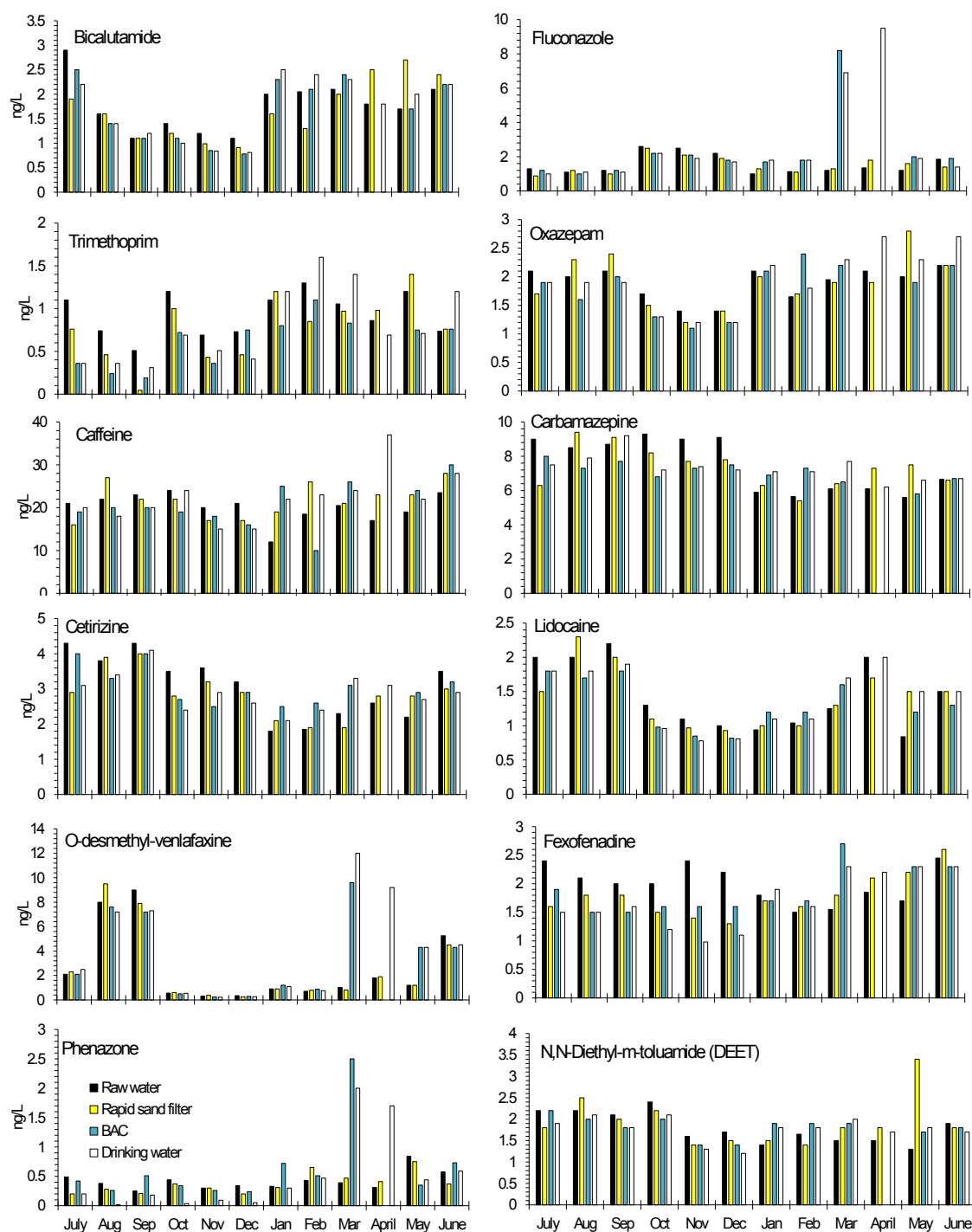


Figure S2. Individual OMPs that showed a positive removal trend for the period July to December, and a negative removal trend for the period January to June, through the full scale process. The graphs show concentrations for all sampling occasions, through the DWTP. The sampling points (as shown in main text Figure 1) were 1) raw surface water, 2) after rapid sand filtration, 3) after one of the parallel mature BAC filters, 4) in finished drinking water. There is no data for the April post-GAC sample.

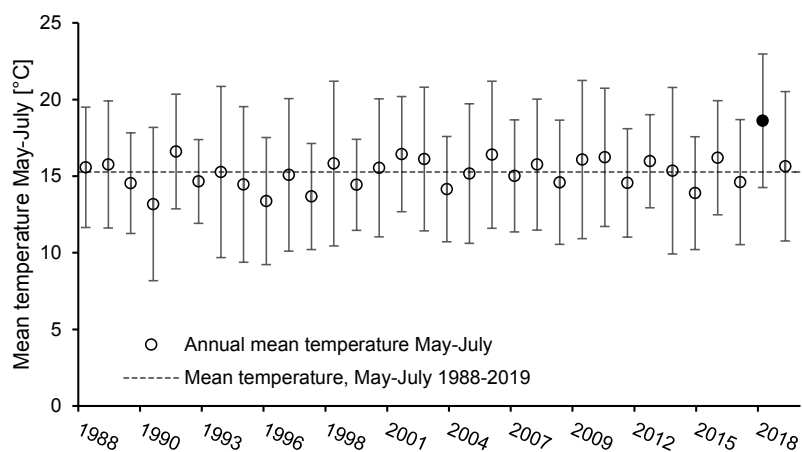


Figure S3. Mean air temperatures for period May 1st to July 31st over 30 years. Dashed line represents average for all days, May-July 1988-2019. Black dot represents summer of 2018. The data is for Stockholm.²

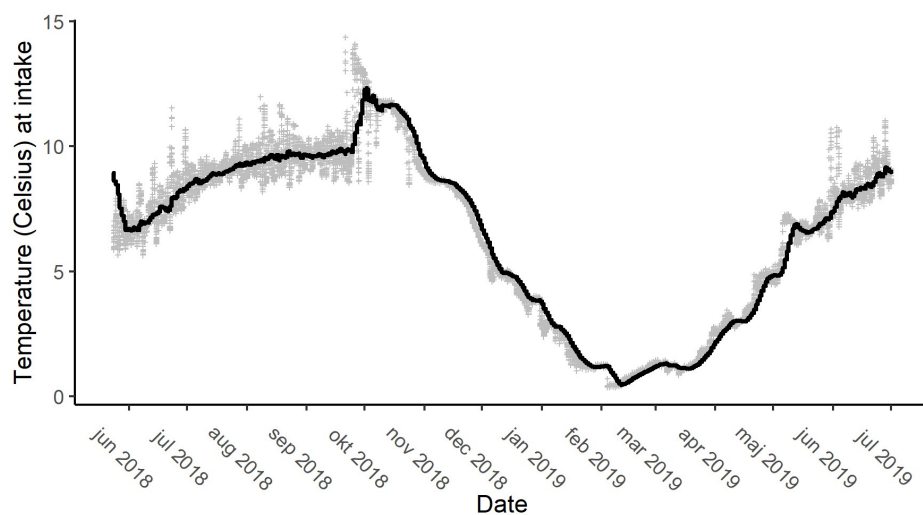


Figure S4. Water temperature (°C) at the DWTP raw water intake over the course of the experiment. Grey points are hourly values and black line is a 7-day running average.

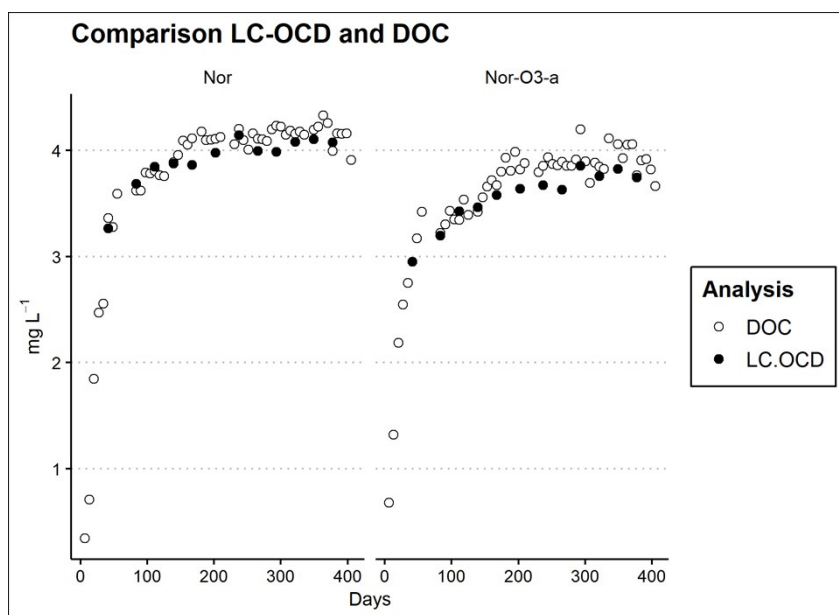


Figure S5. Comparison of DOC levels (mg L^{-1}) with sum levels of LC-OCD fractions (mg L^{-1}) over the course of the experiment for non-ozonated column (Nor, left) and ozonated column (Nor-O3-a, right).

Table S3. Difference between i in- and outgoing water ($C_{in}-C_{out}$) from ozonation process

Sampling date	<i>Molecular weight</i> (<i>g mol⁻¹</i>)	Bio polymers ($\mu\text{g L}^{-1}$)	Humic substances ($\mu\text{g L}^{-1}$)	Building blocks ($\mu\text{g L}^{-1}$)	Neutrals ($\mu\text{g L}^{-1}$)	Low molecular weight acids ($\mu\text{g L}^{-1}$)	Total ($\mu\text{g L}^{-1}$)
		>>20.000	~1000	300-500	<350	<350	
2018-07-03		-7.7	-96	-44	-51	-0.05	-198
2018-08-14		-10	-49	-37	-61	-0.2	-157
2018-09-11		-12	-103	-14	-155	0.1	-284
2018-10-09		-5.3	-39	-8.4	-20	0.1	-73
2018-11-06		6.7	-70	-6.5	-27	0.005	-97
2018-12-11		4.3	-93	27	4.8	0.1	-57
2019-01-15		-11	-200	136	-32	0.2	-107
2019-02-12		-10	-165	-52	-84	-0.1	-311
2019-03-12		-9.7	-105	13	-36	-0.02	-137
2019-04-09		-3.2	-12	-51	-77	0.2	-143
2019-05-07		5.6	-145	-11	-15	-0.1	-165
2019-06-04		-9.3	-197	-55	-2.9	138	-125
Mean		-5.2	-106	-8.5	-46	12	-155
Standard deviation		6.6	58	50	42	38	74

Table S5. Measured organic micropollutant (OMP) concentrations for all sampling locations.

Sampling date Concentration (ng L ⁻¹)		2018-07-03	2018-08-14	2018-09-11	2018-10-09	2018-11-20	2018-12-11	2019-01-15	2019-02-12	2019-03-12	2019-04-09	2019-05-07	2019-06-04
Raw water	Lamotrigine	13.0	8.6	11.0	9.2	9.7	9.8	7.7	6.9	8.9	9.4	8.6	12.5
	Bicalutamide	2.9	1.6	1.1	1.4	1.2	1.1	2.0	2.1	2.1	1.8	1.7	2.1
	N,N-diethyl-m-toluamide (DEET)	2.2	2.2	2.1	2.4	1.6	1.7	1.4	1.7	1.5	1.5	1.3	1.9
	Fluconazole	1.3	1.1	1.2	2.6	2.5	2.2	1.0	1.1	1.2	1.4	1.2	1.9
	Oxazepam	2.1	2.0	2.1	1.7	1.4	1.4	2.1	1.7	2.0	2.1	2.0	2.2
	Tris(2-butoxyethyl) phosphate (TBEP)	2.1	1.4	1.4	0.8	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	Tolyltriazole	22.0	18.0	19.0	20.0	16.0	17.0	4.2	5.6	7.0	5.3	8.6	11.0
	Ifosfamide	0.3	0.3	0.3	<0.2	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	Trimethoprim	1.1	0.7	0.5	1.2	0.7	0.7	1.1	1.3	1.1	0.9	1.2	0.7
	Carbamazepine	9.0	8.5	8.7	9.3	9.0	9.1	5.9	5.7	6.1	6.1	5.6	6.7
	Diazepam	0.1	0.03	0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Caffeine	21.0	22.0	23.0	24.0	20.0	21.0	12.0	18.5	20.5	17.0	19.0	23.5
	Sulisobenzene	1.5	1.5	1.3	1.2	0.9	<0.21	1.6	0.9	1.2	0.9	1.4	1.6
	Phenazone	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.8	0.6
	Cetirizine	4.3	3.8	4.3	3.5	3.6	3.2	1.8	1.9	2.3	2.6	2.2	3.5
	Fexofenadine	2.4	2.1	2.0	2.0	2.4	2.2	1.8	1.5	1.6	1.9	1.7	2.5
	Citalopram	0.4	0.2	0.2	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Irbesartan	0.1	0.1	0.1	0.03	0.03	0.04	0.1	0.1	0.1	0.2	0.1	0.1
	Metoprolol	6.0	3.6	2.9	1.7	1.0	1.0	1.4	1.5	1.6	1.9	1.3	1.1
	Mirtazapine	0.2	0.1	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Clindamycin	0.4	0.5	0.6	0.3	0.2	0.1	0.3	0.2	0.2	0.3	0.2	0.4
	Tramadol	2.7	1.5	1.6	0.8	0.5	0.5	0.5	0.5	0.7	1.0	0.7	4.5
	Lidocaine	2.0	2.0	2.2	1.3	1.1	1.0	0.9	1.0	1.3	2.0	0.8	1.5
	Losartan	2.8	1.9	2.7	1.8	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047
	Venlafaxine	1.4	1.6	1.8	1.3	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	Desvenlafaxine	2.1	8.0	9.0	0.6	0.3	0.4	0.9	0.7	1.0	1.8	1.2	5.3
	Propranolol	0.1	0.1	0.1	0.04	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01
	Perfluorooctane sulfonate (PFOS)	1.9	2.9	2.1	1.8	1.0	1.0	1.8	2.8	3.0	2.4	1.6	3.3
	Perfluorononanoic acid (PFNA)	0.7	0.8	0.7	1.0	0.4	0.3	0.7	0.9	1.1	0.9	0.6	1.1
Before ozonation	Lamotrigine	10.0	9.8	11.0	7.6	8.0	8.1	6.8	7.4	9.0	9.7	9.8	12.0
	Bicalutamide	1.9	1.6	1.1	1.2	1.0	0.9	1.6	1.3	2.0	2.5	2.7	2.4
	N,N-diethyl-m-toluamide (DEET)	1.8	2.5	2.0	2.2	1.4	1.5	1.5	1.4	1.8	1.8	3.4	1.8
	Fluconazole	0.9	1.2	1.0	2.5	2.1	1.9	1.3	1.1	1.3	1.8	1.6	1.4
	Oxazepam	1.7	2.3	2.4	1.5	1.2	1.4	2.0	1.7	1.9	1.9	2.8	2.2

	Tris(2-butoxyethyl) phosphate (TBEP)	2.4	1.1	0.8	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	Tolyltriazole	18.0	26.0	21.0	21.0	16.0	17.0	6.1	5.6	5.8	8.3	7.2	9.7
	Ifosfamide	<0.099	0.3	0.3	<0.2	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	Trimethoprim	0.8	0.5	0.05	1.0	0.4	0.5	1.2	0.9	1.0	1.0	1.4	0.8
	Carbamazepine	6.3	9.4	9.1	8.2	7.7	7.8	6.3	5.4	6.4	7.3	7.5	6.6
	Diazepam	0.02	0.04	0.02	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Caffeine	16.0	27.0	22.0	22.0	17.0	17.0	19.0	26.0	21.0	23.0	23.0	28.0
	Sulisobenzone	0.6	2.2	1.6	0.7	<0.21	<0.21	1.5	1.2	<0.21	0.8	<0.21	1.2
	Phenazone	0.2	0.3	0.2	0.4	0.3	0.2	0.3	0.7	0.5	0.4	0.8	0.4
	Cetirizine	2.9	3.9	4.0	2.8	3.2	2.9	2.1	1.9	1.9	2.8	2.8	3.0
	Fexofenadine	1.6	1.8	1.8	1.5	1.4	1.3	1.7	1.6	1.8	2.1	2.2	2.6
	Citalopram	0.2	0.2	0.2	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Irbesartan	0.1	0.1	0.1	<0.01	0.03	0.03	<0.010	0.1	0.1	0.2	0.1	0.1
	Metoprolol	4.7	3.1	2.7	1.3	1.1	0.9	<0.062	1.3	1.9	3.4	1.9	1.1
	Mirtazapine	0.1	0.1	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Clindamycin	0.3	0.5	0.5	0.3	0.2	0.1	0.2	0.2	0.3	0.4	0.3	0.4
	Tramadol	2.7	2.4	2.1	1.2	0.5	0.3	0.5	0.5	0.6	1.3	0.7	4.2
	Lidocaine	1.5	2.3	2.0	1.1	1.0	0.9	1.0	1.0	1.3	1.7	1.5	1.5
	Losartan	1.1	1.1	1.7	0.7	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047
	Venlafaxine	1.2	1.8	1.6	0.9	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	Desvenlafaxine	2.3	9.5	7.9	0.6	0.4	0.3	0.9	0.8	0.8	1.9	1.2	4.5
	Propranolol	0.1	0.1	0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01
	Perfluorooctane sulfonate (PFOS)	2.2	3.0	2.6	2.1	1.1	1.0	3.5	2.5	2.5	3.0	3.1	3.1
	Perfluorononanoic acid (PFNA)	0.6	0.7	0.8	1.0	0.8	0.6	0.8	1.3	1.2	0.7	1.1	0.7
After ozonation	Lamotrigine	4.9	2.5	2.9	4.1	4.0	4.0	3.4	3.0	2.7	3.5	5.2	4.9
	Bicalutamide	1.1	0.5	0.4	0.6	0.5	0.5	1.0	0.8	0.8	0.7	1.4	1.0
	N,N-diethyl-m-tolamide (DEET)	1.1	0.6	0.5	1.0	0.6	0.8	0.6	0.7	0.7	0.5	0.7	0.5
	Fluconazole	0.6	0.6	0.6	1.9	1.4	1.3	0.7	0.7	0.6	0.4	1.0	0.7
	Oxazepam	0.4	0.3	0.3	0.5	0.4	0.4	0.8	0.5	0.4	0.5	0.9	0.7
	Tris(2-butoxyethyl) phosphate (TBEP)	0.4	1.0	0.2	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	Tolyltriazole	0.4	0.6	<0.46	1.4	1.0	0.6	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
	Ifosfamide	0.1	<0.12	<0.22	<0.14	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	Trimethoprim	0.1	<0.018	<0.015	0.1	<0.01	<0.01	0.2	0.2	0.2	0.1	0.5	0.2
	Carbamazepine	0.04	<0.019	<0.016	<0.032	<0.032	<0.032	0.1	0.04	0.1	0.04	0.1	<0.032
	Diazepam	0.02	<0.012	<0.016	<0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Caffeine	<0.8	<0.36	0.8	1.2	0.9	1.2	<0.54	<0.54	<0.54	<0.54	1.4	5.4
	Sulisobenzone	<0.18	<0.25	<0.44	<0.26	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.3
	Phenazone	<0.012	<0.010	<0.017	<0.032	0.1	0.1	0.2	0.2	0.1	0.2	<0.033	0.3
	Cetirizine	<0.007	<0.007	<0.008	<0.006	<0.011	<0.011	0.1	0.1	0.1	0.1	<0.011	0.1
	Fexofenadine	<0.014	<0.013	<0.018	<0.011	<0.011	<0.011	0.1	<0.011	<0.011	<0.011	0.2	<0.011
	Citalopram	<0.012	<0.010	<0.009	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Irbesartan	<0.008	<0.008	< 0.01	< 0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01
Metoprolol	<0.05	<0.043	< 0.054	< 0.041	< 0.062	< 0.066	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062
Mirtazapine	<0.007	<0.010	< 0.008	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Clindamycin	<0.0064	<0.005	< 0.007	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01
Tramadol	<0.0094	<0.010	< 0.013	< 0.025	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024
Lidocaine	<0.013	<0.013	< 0.017	< 0.017	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
Losartan	<0.044	<0.039	< 0.053	< 0.066	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047
Venlafaxine	<0.07	<0.12	< 0.18	< 0.13	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Desvenlafaxine	<0.01	<0.015	< 0.022	< 0.016	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035
Propranolol	<0.0068	<0.010	< 0.007	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01
Perfluorooctane sulfonate (PFOS)	<0.51	3.7	2.8	2.0	0.8	1.1	2.4	2.3	1.6	2.1	2.5	2.9
Perfluorononanoic acid (PFNA)	0.8	0.8	0.8	0.7	0.4	0.5	0.7	0.8	0.3	1.1	1.3	0.9

Lamotrigine	<0.057	<0.047	< 0.093	< 0.01	< 0.01	< 0.01	0.4	1.1	1.2	1.1	1.6	0.6
Bicalutamide	<0.01	<0.010	< 0.014	< 0.010	< 0.012	< 0.012	0.1	0.3	0.5	0.4	0.3	0.2
N,N-diethyl-m-toluamide (DEET)	0.6	<0.27	< 0.18	< 0.30	< 0.30	< 0.30	0.8	1.0	1.0	0.8	0.7	0.5
Fluconazole	<0.015	<0.016	0.1	0.2	0.3	0.7	0.6	0.6	0.7	1.0	1.1	0.7
Oxazepam	<0.007	<0.011	< 0.01	< 0.01	< 0.01	0.2	0.7	0.8	1.3	1.4	1.3	0.8
Tris(2-butoxyethyl) phosphate (TBEP)	<0.11	<0.11	0.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tolyltriazole	<0.14	<0.23	< 0.59	0.4	< 0.35	1.2	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35
Ifosfamide	<0.067	<0.11	< 0.28	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Trimethoprim	<0.0084	<0.021	< 0.02	0.1	0.1	0.2	0.3	0.8	1.7	1.0	1.4	0.4
Carbamazepine	<0.012	<0.022	< 0.02	< 0.032	0.2	0.3	0.5	1.2	1.6	1.5	1.2	0.6
Diazepam	<0.011	<0.0098	< 0.018	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Caffeine	<0.56	5.4	< 0.71	0.5	< 0.54	0.7	< 0.54	< 0.54	2.3	2.0	2.6	6.2
Sulisobenzon	<0.14	<0.22	< 0.57	< 0.25	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
Phenazone	<0.011	<0.011	< 0.021	< 0.028	< 0.033	0.1	0.1	0.5	0.3	0.3	0.2	0.3
Cetirizine	0.032	0.1	0.6	0.4	0.9	1.1	1.0	1.8	1.8	2.0	1.9	1.6
Fexofenadine	0.019	0.1	0.4	0.4	0.5	0.7	1.1	1.4	1.9	1.8	1.6	1.6
Citalopram	<0.018	<0.010	< 0.012	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Irbesartan	<0.0067	<0.008	< 0.01	< 0.01	< 0.010	< 0.010	0.1	0.1	0.1	0.2	0.2	0.1
Metoprolol	<0.043	<0.04	< 0.067	< 0.041	< 0.084	< 0.088	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062
Mirtazapine	<0.007	<0.010	< 0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Clindamycin	<0.0053	<0.005	0.03	< 0.010	0.02	0.02	0.1	0.2	0.2	0.3	0.2	0.1
Tramadol	<0.0084	<0.010	0.05	0.05	< 0.024	< 0.024	0.1	0.2	0.4	0.5	0.3	0.2
Lidocaine	<0.0077	<0.011	< 0.02	< 0.011	< 0.025	< 0.025	0.1	0.2	0.3	0.3	0.2	0.1
Losartan	<0.038	<0.036	< 0.07	0.3	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047
Venlafaxine	<0.062	<0.098	< 0.18	< 0.11	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Desvenlafaxine	<0.01	<0.012	< 0.022	0.03	< 0.035	0.1	0.2	0.3	0.7	1.0	0.6	0.3
Propranolol	<0.0057	<0.010	< 0.007	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01
Perfluorooctane sulfonate (PFOS)	<0.51	<0.92	< 0.69	< 1	< 0.8	< 0.8	2.4	1.8	1.6	2.9	2.0	2.0
Perfluorononanoic acid (PFNA)	<0.50	<0.10	< 0.16	0.5	1.3	< 0.17	1.0	1.0	0.7	1.3	0.9	1.0

NOR-O ₃ -a	Lamotrigine	<0.061	<0.043	<0.067	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.5	0.1
	Bicalutamide	<0.01	<0.010	<0.012	<0.010	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
	N,N-diethyl-m-toluamide (DEET)	<0.42	<0.27	<0.16	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.3
	Fluconazole	<0.018	<0.013	<0.021	<0.036	<0.045	0.1	0.1	0.1	0.4	0.2	<0.045	0.1
	Oxazepam	<0.007	<0.011	<0.007	<0.01	<0.01	<0.01	0.3	0.3	0.3	0.2	0.2	0.1
	Tris(2-butoxyethyl) phosphate (TBEP)	-	0.8	0.3	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	Tolyltriazole	<0.14	<0.2	<0.36	0.5	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
	Ifosfamide	<0.066	<0.096	<0.17	<0.1	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	Trimethoprim	<0.0085	<0.019	<0.013	<0.011	<0.01	<0.01	<0.01	0.1	0.2	0.2	<0.01	0.1
	Carbamazepine	<0.011	<0.015	<0.016	<0.032	<0.032	<0.032	<0.032	0.1	0.1	<0.032	0.1	<0.032
	Diazepam	<0.013	<0.012	<0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Caffeine	<0.54	<0.36	0.6	0.4	0.9	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	4.8
	Sulisobenzene	<0.14	<0.2	<0.34	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
	Phenazone	<0.013	<0.010	<0.015	<0.024	<0.033	<0.033	0.2	0.2	0.1	0.2	<0.033	0.1
	Cetirizine	<0.007	<0.0048	<0.008	<0.005	<0.011	<0.011	0.1	0.1	0.1	<0.011	0.1	0.04
	Fexofenadine	<0.014	<0.013	<0.016	<0.011	<0.011	<0.011	0.1	<0.011	0.1	<0.011	<0.011	0.1
	Citalopram	<0.012	<0.010	<0.008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Irbesartan	<0.0078	<0.008	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	0.1	<0.010	<0.010	<0.01
	Metoprolol	<0.035	<0.035	<0.045	<0.032	<0.062	<0.058	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062
	Mirtazapine	<0.007	<0.010	<0.008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Clindamycin	<0.0062	<0.005	<0.007	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01
	Tramadol	<0.0097	<0.010	<0.011	<0.02	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024
	Lidocaine	<0.0099	<0.012	<0.016	<0.011	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	Losartan	<0.034	<0.024	<0.039	<0.049	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047
	Venlafaxine	<0.076	<0.12	<0.17	<0.11	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	Desvenlafaxine	<0.01	<0.015	<0.022	<0.014	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035
	Propranolol	<0.0066	<0.010	<0.007	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01
	Perfluorooctane sulfonate (PFOS)	<0.51	<0.92	<0.27	<1	<0.8	<0.8	0.9	1.6	1.8	2.1	0.9	1.2
	Perfluorononanoic acid (PFNA)	<0.50	<0.10	<0.19	<0.11	0.3	0.3	0.4	0.6	0.8	0.9	0.4	0.5
NOR-O ₃ -b	Lamotrigine	<0.072	<0.048	<0.069	<0.01	<0.01	<0.01	<0.01	<0.01	0.3	<0.01	<0.01	<0.01
	Bicalutamide	<0.012	<0.010	<0.013	<0.010	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
	N,N-diethyl-m-toluamide (DEET)	<0.48	<0.27	<0.18	<0.30	<0.30	<0.30	<0.30	<0.30	<0.3	<0.3	<0.3	<0.3
	Fluconazole	<0.017	<0.014	<0.023	<0.048	0.1	0.2	0.1	0.2	1.9	0.3	0.3	0.2
	Oxazepam	<0.007	<0.011	<0.007	<0.01	<0.01	<0.01	0.3	0.2	0.1	0.1	0.1	0.1
	Tris(2-butoxyethyl) phosphate (TBEP)	0.3	0.3	<0.087	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	Tolyltriazole	<0.15	<0.2	<0.36	<0.028	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
	Ifosfamide	<0.071	<0.094	<0.17	<0.013	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	Trimethoprim	<0.0091	<0.021	<0.014	<0.011	<0.01	<0.01	0.2	0.1	<0.01	<0.01	<0.01	<0.01
	Carbamazepine	<0.011	<0.025	<0.013	<0.032	<0.032	<0.032	0.1	0.1	<0.032	<0.032	<0.032	<0.032
	Diazepam	<0.015	<0.012	<0.016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

	Caffeine	<0.61	5.8	0.9	1.9	< 0.54	< 0.54	< 0.54	< 0.54	0.7	1.5	2.1	4.7
	Sulisobenzone	<0.15	<0.19	< 0.35	< 0.027	< 0.21	< 0.21	< 0.21	< 0.21	0.4	0.3	0.3	< 0.21
	Phenazone	<0.012	<0.010	< 0.016	< 0.028	< 0.033	< 0.033	0.2	0.4	1.2	0.5	0.2	0.1
	Cetirizine	<0.007	<0.007	< 0.008	< 0.005	< 0.011	< 0.011	0.2	0.1	0.1	< 0.011	0.1	< 0.011
	Fexofenadine	<0.016	<0.013	< 0.017	< 0.011	< 0.011	< 0.011	0.2	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011
	Citalopram	<0.012	<0.010	< 0.009	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	Irbesartan	<0.0081	<0.008	< 0.01	< 0.01	< 0.010	< 0.010	0.1	0.04	< 0.01	< 0.01	< 0.01	< 0.01
	Metoprolol	<0.04	<0.036	< 0.048	< 0.033	< 0.057	< 0.057	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062
	Mirtazapine	<0.007	<0.010	< 0.008	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	Clindamycin	<0.0071	<0.005	< 0.007	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01	< 0.01	< 0.01	< 0.01
	Tramadol	<0.0094	<0.010	< 0.012	< 0.02	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024
	Lidocaine	<0.01	<0.014	< 0.016	< 0.012	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.1	< 0.025	< 0.025
	Losartan	<0.04	<0.028	< 0.046	< 0.031	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047
	Venlafaxine	<0.079	<0.12	< 0.18	0.1	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
	Desvenlafaxine	<0.01	<0.014	< 0.022	< 0.016	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035
	Propranolol	<0.0069	<0.010	< 0.007	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01	< 0.01	< 0.01	< 0.01
	Perfluorooctane sulfonate (PFOS)	<0.51	<0.92	< 0.17	< 1	< 0.8	< 0.8	1.2	< 0.8	1.5	1.4	1.1	0.9
	Perfluorononanoic acid (PFNA)	<0.50	<0.10	< 0.17	0.3	< 0.15	< 0.23	0.6	0.3	0.9	1.2	0.6	0.5
Filt-O ₃	Lamotrigine	<0.062	<0.04	< 0.069	< 0.01	< 0.01	< 0.01	0.3	< 0.01	0.2	0.3	0.1	< 0.01
	Bicalutamide	<0.01	<0.010	< 0.013	< 0.010	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012
	N,N-diethyl-m-toluamide (DEET)	0.5	<0.27	< 0.23	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.3	< 0.3	< 0.3	< 0.3
	Fluconazole	<0.017	<0.01	< 0.021	< 0.034	< 0.045	< 0.045	< 0.045	< 0.045	0.7	0.4	0.1	< 0.045
	Oxazepam	<0.007	<0.011	< 0.007	< 0.01	< 0.01	< 0.01	0.1	0.1	< 0.01	0.1	0.05	0.05
	Tris(2-butoxyethyl) phosphate (TBEP)	<0.11	<0.11	< 0.063	0.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
	Tolyltriazole	<0.12	1.0	< 0.34	< 0.23	0.5	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	1.3	< 0.35
	Ifosfamide	<0.059	<0.076	< 0.16	< 0.11	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
	Trimethoprim	<0.0076	<0.021	< 0.012	< 0.011	< 0.01	< 0.01	< 0.01	0.2	0.1	0.1	0.1	< 0.01
	Carbamazepine	<0.011	<0.019	< 0.019	< 0.032	< 0.032	< 0.032	0.04	< 0.032	0.05	< 0.032	< 0.032	< 0.032
	Diazepam	<0.012	<0.01	< 0.016	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	Caffeine	<0.5	1.2	0.6	1.3	< 0.54	0.6	< 0.54	< 0.54	0.8	1.4	1.1	4.8
	Sulisobenzone	<0.12	<0.16	< 0.32	< 0.22	< 0.21	< 0.21	< 0.21	< 0.21	0.2	0.5	< 0.21	< 0.21
	Phenazone	<0.012	<0.010	< 0.015	< 0.024	< 0.033	< 0.033	0.3	0.2	0.9	1.7	0.1	0.1
	Cetirizine	<0.007	<0.0044	< 0.008	< 0.005	< 0.011	< 0.011	0.1	0.1	< 0.011	< 0.011	0.03	< 0.011
	Fexofenadine	<0.013	<0.011	< 0.017	< 0.011	< 0.011	< 0.011	0.1	0.1	0.1	< 0.011	0.1	< 0.011
	Citalopram	<0.012	<0.010	< 0.009	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	Irbesartan	<0.007	<0.008	< 0.01	< 0.01	< 0.010	< 0.010	0.04	< 0.010	< 0.01	< 0.01	< 0.01	< 0.01
	Metoprolol	<0.032	<0.026	< 0.047	< 0.033	< 0.057	< 0.057	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062
	Mirtazapine	<0.007	<0.010	< 0.008	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	Clindamycin	<0.0059	<0.005	< 0.007	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01	< 0.01	< 0.01	< 0.01
	Tramadol	<0.0091	<0.010	< 0.011	< 0.02	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024	< 0.024
	Lidocaine	<0.0088	<0.01	< 0.017	< 0.012	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025

	Losartan	<0.03	<0.021	< 0.039	< 0.05	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047
	Venlafaxine	<0.073	<0.1	< 0.18	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
	Desvenlafaxine	<0.01	<0.013	< 0.023	< 0.015	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035
	Propranolol	<0.006	<0.010	< 0.007	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01	< 0.01	< 0.01	< 0.01
	Perfluorooctane sulfonate (PFOS)	<0.51	<0.92	< 0.19	<1	< 0.8	< 0.8	< 0.8	1.2	< 0.8	0.9	1.3
	Perfluorononanoic acid (PFNA)	<0.50	<0.10	< 0.14	< 0.12	0.4	< 0.16	0.5	0.9	0.9	0.8	0.7
After full scale GAC filter	Lamotrigine	10.0	6.8	9.4	6.1	7.1	7.1	8.2	7.9	9.8	nd	7.3
	Bicalutamide	2.5	1.4	1.1	1.1	0.9	0.8	2.3	2.1	2.4	nd	1.7
	N,N-diethyl-m-toluamide (DEET)	2.2	2.0	1.8	2.0	1.4	1.4	1.9	1.9	1.9	nd	1.7
	Fluconazole	1.2	1.0	1.2	2.2	2.1	1.8	1.7	1.8	8.2	nd	2.0
	Oxazepam	1.9	1.6	2.0	1.3	1.1	1.2	2.1	2.4	2.2	nd	1.9
	Tris(2-butoxyethyl) phosphate (TBEP)	1.2	1.0	1.0	0.4	<0.10	<0.10	<0.10	<0.10	<0.10	nd	<0.10
	Tolyltriazole	17.0	16.0	15.0	16.0	12.0	11.0	4.6	7.3	9.5	nd	7.3
	Ifosfamide	0.2	0.2	0.4	< 0.21	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	nd	< 0.12
	Trimethoprim	0.4	0.2	0.2	0.7	0.4	0.8	0.8	1.1	0.8	nd	0.8
	Carbamazepine	8.0	7.3	7.7	6.8	7.3	7.5	6.9	7.3	6.5	nd	5.8
	Diazepam	0.02	0.02	0.02	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	nd	< 0.01
	Caffeine	19.0	20.0	20.0	19.0	18.0	16.0	25.0	10.0	26.0	nd	24.0
	Sulisobenzene	0.9	1.4	1.1	1.5	< 0.21	< 0.21	< 0.21	< 0.21	1.1	nd	1.3
	Phenazone	0.4	0.3	0.5	0.3	0.3	0.2	0.7	0.5	2.5	nd	0.4
	Cetirizine	4.0	3.3	4.0	2.7	2.5	2.9	2.5	2.6	3.1	nd	2.9
	Fexofenadine	1.9	1.5	1.5	1.6	1.6	1.6	1.7	1.7	2.7	nd	2.3
	Citalopram	0.3	0.2	0.2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	nd	< 0.01
	Irbesartan	0.1	0.1	0.1	0.1	0.02	0.04	0.1	0.1	0.2	nd	0.1
	Metoprolol	4.7	2.4	2.6	1.1	0.8	1.0	2.0	1.7	0.8	nd	0.9
	Mirtazapine	0.1	0.1	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	nd	< 0.01
	Clindamycin	0.4	0.5	0.5	0.2	0.1	0.1	0.3	0.3	0.4	nd	0.3
	Tramadol	2.6	1.6	1.7	0.7	0.3	0.3	0.7	0.6	15.0	nd	3.6
	Lidocaine	1.8	1.7	1.8	1.0	0.9	0.8	1.2	1.2	1.6	nd	1.2
	Losartan	1.3	1.8	0.9	0.8	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	nd	< 0.047
	Venlafaxine	1.5	1.6	1.5	1.1	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	nd	< 0.12
	Desvenlafaxine	2.1	7.6	7.2	0.5	0.3	0.3	1.2	0.9	9.6	nd	4.3
	Propranolol	0.1	0.1	0.1	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01	nd	< 0.01
	Perfluorooctane sulfonate (PFOS)	2.1	2.9	2.4	2.1	< 0.8	1.0	2.9	3.1	3.7	nd	3.6
	Perfluorononanoic acid (PFNA)	1.0	0.8	0.7	0.8	< 0.17	< 0.17	1.3	0.9	1.0	nd	1.1
Finished drinking water,	Lamotrigine	11.0	5.0	9.1	3.9	4.1	4.9	6.2	6.6	8.0	6.3	7.9
	Bicalutamide	2.2	1.4	1.2	1.0	0.8	0.8	2.5	2.4	2.3	1.8	2.0
	N,N-diethyl-m-toluamide (DEET)	1.9	2.1	1.8	2.1	1.3	1.2	1.8	1.8	2.0	1.7	1.8
	Fluconazole	1.0	1.1	1.1	2.2	1.9	1.7	1.8	1.8	6.9	9.5	1.9
	Oxazepam	1.9	1.9	1.9	1.3	1.2	1.2	2.2	1.8	2.3	2.7	2.3

Tris(2-butoxyethyl) phosphate (TBEP)	1.6	1.0	1.0	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tolyltriazole	12.0	11.0	11.0	11.0	7.2	6.6	3.8	4.0	6.3	8.3	7.2	7.7
Ifosfamide	0.1	0.3	0.4	<0.2	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
Trimethoprim	0.4	0.4	0.3	0.7	0.5	0.4	1.2	1.6	1.4	0.7	0.7	1.2
Carbamazepine	7.5	7.9	9.2	7.2	7.4	7.2	7.1	7.1	7.7	6.2	6.6	6.7
Diazepam	0.1	0.03	0.03	<0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Caffeine	20.0	18.0	20.0	24.0	15.0	15.0	22.0	23.0	24.0	37.0	22.0	28.0
Sulisobenzene	1.5	1.1	1.3	<0.34	<0.21	<0.21	<0.21	<0.21	1.3	1.8	0.9	2.6
Phenazone	0.2	0.02	0.2	<0.035	0.1	0.1	0.3	0.5	2.0	1.7	0.4	0.6
Cetirizine	3.1	3.4	4.1	2.4	2.9	2.6	2.1	2.4	3.3	3.1	2.7	2.9
Fexofenadine	1.5	1.5	1.6	1.2	1.0	1.1	1.9	1.6	2.3	2.2	2.3	2.3
Citalopram	0.3	0.2	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Irbesartan	0.1	0.1	0.1	<0.01	0.02	0.03	<0.010	<0.010	0.1	0.1	0.1	0.1
Metoprolol	1.9	2.1	1.1	1.0	0.7	0.8	<0.062	<0.062	0.6	1.7	0.8	0.6
Mirtazapine	0.1	0.05	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Clindamycin	<0.0066	<0.005	<0.009	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.01
Tramadol	2.9	1.7	2.1	0.8	0.4	0.4	0.8	0.8	12.0	28.0	4.3	4.1
Lidocaine	1.8	1.8	1.9	1.0	0.8	0.8	1.1	1.1	1.7	2.0	1.5	1.5
Losartan	1.8	1.0	2.2	1.4	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047
Venlafaxine	1.5	1.4	1.6	1.0	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
Desvenlafaxine	2.5	7.2	7.3	0.5	0.2	0.3	1.1	0.8	12.0	9.2	4.3	4.5
Propranolol	0.03	0.1	0.05	0.02	<0.010	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.01
Perfluorooctane sulfonate (PFOS)	2.6	2.8	2.4	2.0	<0.8	1.0	3.8	1.8	3.8	3.6	6.7	4.0
Perfluorononanoic acid (PFNA)	0.6	0.8	0.8	0.9	0.7	0.8	0.8	0.8	1.0	1.2	2.0	1.0

References

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