

Pharmaceuticals and Personal Care Products in Drinking Water

2021

LC-MS-MS Endocrine Disruptors Positive Mode	Minimum Reporting Limit (ng/L)	Lake Ontario Raw Water (ng/L)	Lake Ontario Effluent Water (ng/L)	Otisco Lake Raw Water (ng/L)	Otisco Lake Effluent Water (ng/L)	Likely Source and/or Typical Use
1,7-Dimethylxanthine	5	ND	ND	ND	ND	
Acetaminophen	10	ND	ND	ND	ND	Pain Reliever
Albuterol	5	ND	ND	ND	ND	
Amoxicillin (semi-quantitative)	20	ND	ND	ND	ND	
Androstenedione	10	ND	ND	ND	ND	
Atenolol	5	ND	ND	ND	ND	
Atrazine	5	55	23	28	18	Herbicide
Bezafibrate	5	ND	ND	ND	ND	
Bromacil	5	ND	ND	ND	ND	
Caffeine	5	20	15	10	12	Coffee, Tea, Soft Drinks
Carbadox	5	ND	ND	ND	ND	
Carbamazepine	5	ND	ND	ND	ND	
Carisoprodol	5	ND	ND	ND	ND	
Chloridazon	5	ND	ND	ND	ND	
Chlorotoluron	5	ND	ND	ND	ND	
Cimetidine (semi quantitative)	5	ND	ND	ND	ND	
Cotinine	10	ND	ND	ND	ND	
DACT	5	67	32	26	ND	Herbicide
DEA	5	46	28	22	13	Corrosion Inhibitor
DEET	10	NR	NR	NR	NR	Insect Repellant
Dehydronifedipine	5	ND	ND	ND	ND	
DIA	5	20	8.6	6.8	5.2	Herbicide Metabolite
Diazepam	5	ND	ND	ND	ND	
Dilantin	20	ND	ND	ND	ND	
Ditiazem	5	ND	ND	ND	ND	
Diuron	5	ND	ND	ND	ND	
Erythromycin	10	ND	ND	ND	ND	
Flumequine	20	ND	ND	ND	ND	
Fluoxetine	10	ND	ND	ND	ND	
Isoproturon	20	ND	ND	ND	ND	
Ketoprofen	5	ND	ND	ND	ND	
Ketorolac	5	ND	ND	ND	ND	

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Lidocaine	5	ND	ND	ND	ND	
Lincomycin	10	ND	ND	ND	ND	
Linuron	5	ND	ND	ND	ND	
Lopressor	20	ND	ND	ND	ND	
Meclofenamic Acid	20	ND	ND	ND	ND	
Meprobamate	5	ND	ND	ND	ND	
Metazachlor	5	ND	ND	ND	ND	
Metformin	20	ND	ND	ND	ND	
Metolachlor	5	11	ND	20	16	Herbicide
Nifedipine(semi quantitative)	20	ND	ND	ND	ND	
Norethisterone	10	ND	ND	ND	ND	
OUST (Sulfometuron,methyl)	5	ND	ND	ND	ND	
Oxolinic acid	10	ND	ND	ND	ND	
Pentoxifylline	5	ND	ND	ND	ND	
Phenazone	5	ND	ND	ND	ND	
Primidone	5	ND	ND	ND	ND	
Progesterone	10	ND	ND	ND	ND	
Propazine	5	ND	ND	ND	ND	
Quinoline	20	ND	ND	ND	ND	
Simazine	5	ND	ND	ND	ND	
Sulfachloropyridazine	5	ND	ND	ND	ND	
Sulfadiazine	5	ND	ND	ND	ND	
Sulfadimethoxine	5	ND	ND	ND	ND	
Sulfamerazine	5	ND	ND	ND	ND	
Sulfamethazine	5	ND	ND	ND	ND	
Sulfamethizole	5	ND	ND	ND	ND	
Sulfamethoxazole	5	ND	ND	ND	ND	
Sulfathiazole	5	ND	ND	ND	ND	
TCEP	10	ND	ND	ND	ND	
TCP	200	ND	ND	ND	ND	
TDCPP	100	ND	ND	ND	ND	
Testosterone	10	ND	ND	ND	ND	
Theobromine	50	100	ND	ND	ND	Metabolite of Caffeine
Theophylline (semi quantitative)	10	ND	ND	ND	ND	
Thiabendazole	5	ND	ND	ND	ND	
Trimethoprim	5	ND	ND	ND	ND	

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LC-MS-MS Endocrine Disruptors Negative Mode	Minimum Reporting Limit (ng/L)	Lake Ontario Raw Water (ng/L)	Lake Ontario Effluent Water (ng/L)	Otisco Lake Raw Water (ng/L)	Otisco Lake Effluent Water (ng/L)	Likely Source and/or Typical Use
2,4-D	50	ND	ND	ND	ND	Herbicide
4-nonylphenol - semi quantitative	400	ND	ND	ND	ND	
4-tert-Octylphenol	25	ND	ND	ND	ND	
Acesulfame-K	20	100	ND	ND	ND	Artificial Sweetner
Bendroflumethiazide	10	ND	ND	ND	ND	
BPA	10	ND	ND	ND	ND	
Butalbital	10	ND	ND	ND	ND	
Butylparaben	5	ND	ND	ND	ND	
Chloramphenicol	10	ND	ND	ND	ND	
Clofibric Acid	5	ND	ND	ND	ND	
Diclofenac	5	ND	ND	ND	ND	
Estradiol	10	ND	ND	ND	ND	
Estriol	10	ND	ND	ND	ND	
Estrone	10	ND	ND	ND	ND	
Ethinyl Estradiol - 17 alpha	10	ND	ND	ND	ND	
Ethylparaben	20	ND	ND	ND	ND	
Gemfibrozil	5	ND	ND	ND	ND	
Ibuprofen	25	ND	ND	ND	ND	
Iohexal	20	26	21	ND	ND	
Iopromide	10	ND	ND	ND	ND	
Isobutylparaben	10	ND	ND	ND	ND	
Methylparaben	20	28	ND	43	ND	Preservative
Naproxen	10	ND	ND	ND	ND	
Propylparaben	5	ND	ND	ND	ND	Preservative
Salicylic Acid	200	350	260	350	420	Found in Aspirin
Sucralose	100	250	130	ND	ND	Artificial Sweetner
Triclocarban	20	ND	ND	ND	ND	
Triclosan	20	ND	ND	ND	ND	
Warfarin	5	ND	ND	ND	ND	