Pharmaceuticals and Personal Care Products in Source Water

2024

LC-MS-MS Endocrine Disruptors Positive Mode	Minimum Reporting Limit (g/L)	Lake Ontario Raw Water (ug/L)	Otisco Lake Raw Water (ug/L)	Likely Source and/or Typical Use
1,7-Dimethylxanthine (Paraxanthine)	0.020	< 0.020	< 0.020	
Acetaminophen	0.020	<0.020	< 0.020	
Amoxicillin (semi-quantitative)	1.0	< 1.0	< 1.0	
Andorostenedione	0.0050	< 0.0050	< 0.0050	
Phenazone	0.0050	< 0.0050	< 0.0050	
Atenolol	0.0050	< 0.0050	< 0.0050	
Azithromycin	0.010	< 0.010	< 0.010	
Caffeine	0.010	**0.015**	**0.018**	Coffee, Tea, Soft Drinks
Carbadox	0.0050	< 0.0050	< 0.0050	
Carbamazepine	0.0050	< 0.0050	< 0.0050	
Cimetidine	0.0050	< 0.0050	< 0.0050	
Epitestosterone	0.0050	< 0.0050	< 0.0050	
Codeine	0.0050	< 0.0050	< 0.0050	
Cotinine	0.0050	< 0.0050	< 0.0050	
DEET	0.010	< 0.010	< 0.010	
Dexamethasone	0.0050	< 0.0050	< 0.0050	
Diazepam	0.0050	< 0.0050	< 0.0050	
Diltiazem	0.010	< 0.010	< 0.010	
Diphenhydramine	0.0050	< 0.0050	< 0.0050	
Erythromycin	0.020	< 0.020	< 0.020	
Fluoxetine	0.0050	< 0.0050	< 0.0050	
Lincomycin	0.0050	< 0.0050	< 0.0050	
Meprobamate	0.0050	< 0.0050	< 0.0050	
Metformin	0.020	**0.25**	< 0.020	Anti-diabetic
Monensin	0.0050	< 0.0050	< 0.0050	
Narasin	0.020	< 0.020	< 0.020	
Nicotine	0.40	< 0.40	< 0.40	
Oleandomycin	0.0050	< 0.0050	< 0.0050	
Primidone	0.0050	< 0.0050	< 0.0050	
Progesterone	0.0050	< 0.0050	< 0.0050	
Quinoline	0.050	< 0.050	< 0.050	
Roxithromycin	0.0050	< 0.0050	< 0.0050	
Salinomycin	0.020	< 0.020	< 0.020	
Sulfadiazine	0.0050	< 0.0050	< 0.0050	
Sulfadimethoxine	0.0050	< 0.0050	< 0.0050	
Sulfamerazine	0.010	< 0.010	< 0.010	
Sulfamethazine	0.0050	< 0.0050	< 0.0050	
Sulfamethizole	0.010	< 0.010	< 0.010	
Sulfamethoxazole	0.010	< 0.010	< 0.010	
Sulfasalazine	0.050	< 0.050	< 0.050	
Sulfathiazole	0.0050	< 0.0050	< 0.0050	
Theobromine	0.40	< 0.40	< 0.40	
Testosternone	0.0050	< 0.0050	< 0.0050	
TDCPP	0.40	< 0.40	< 0.40	
TCPP	0.40	< 0.40	< 0.40	

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TCEP	0.010	< 0.010	< 0.010	
Tylosin	0.0050	< 0.0050	< 0.0050	
Virginiamycin M1	0.0050	< 0.0050	< 0.0050	
Trimethoprim	0.0050	< 0.0050	< 0.0050	
LC-MS-MS Endocrine Disruptors Negative Mode	**Minimum Reporting Limit (ng/L)**	**Lake Ontario Raw Water (ng/L)**	**Otisco Lake Raw Water (ng/L)**	**Likely Source and/or Typical Use**
17a-Estradiol	0.0050	< 0.0050	< 0.0050	
17a-Ethinylestradiol	0.010	< 0.010	< 0.010	
Estradiol	0.010	< 0.010	< 0.010	
4-tert-Octylphenol	0.020	< 0.020	< 0.020	
Acesulfame-K	0.020	**0.071**	< 0.020	Artificial Sweetner
Bezafibrate	0.0050	< 0.0050	< 0.0050	
BPA	0.020	< 0.020	< 0.020	
Chloramphenicol	0.0050	< 0.0050	< 0.0050	
Clofibric Acid	0.0050	< 0.0050	< 0.0050	
Diclofenac acid	0.0050	< 0.0050	< 0.0050	
Diethylstilbestrol	0.010	< 0.010	< 0.010	
Dilantin	0.010	< 0.010	< 0.010	
Equilin	0.010	< 0.010	< 0.010	
Estriol	0.010	< 0.010	< 0.010	
Estrone	0.0050	< 0.0050	< 0.0050	
Gemfibrozil	0.0050	< 0.0050	< 0.0050	
Ibuprofen	0.020	< 0.020	< 0.020	
Iohexal	0.050	< 0.050	< 0.050	
Iopromide	0.010	< 0.010	< 0.010	
Levothyroxine	0.020	< 0.020	< 0.020	
Naproxen	0.020	< 0.020	< 0.020	
4-nonylphenol	0.20	< 0.20	< 0.20	
Penicillin G	0.010	< 0.010	< 0.010	
Penicillin V	0.010	< 0.010	< 0.010	
Pentachlorophenol	0.050	< 0.050	< 0.050	
4-Phenylphenol	0.050	< 0.050	< 0.050	
Prednisone	0.0050	< 0.0050	< 0.0050	
Salicylic Acid	0.20	**0.60**	<0.20	Aspirin-pain, skin conditions
Sucralose	0.10	**0.26**	< 0.10	Artificial Sweetner
Tetrabromobisphenol A	0.050	< 0.050	< 0.050	
Trichlorophenols, Total	0.10	< 0.10	< 0.10	
Theophylline	0.020	< 0.020	< 0.020	
Triclocarban	0.050	< 0.050	< 0.050	
Triclosan	0.050	< 0.050	< 0.050	