Supporting Information

Table S1. CECs analyzed in Sant Vicenç dels Horts Site, and their main applications. Highlight those analyzed also in Palamos site.

| Function and/or main use | Compound |
|---|---|
| Analgesics and anti-inflammatories | **Diclofenac** |
| | **Ibuprofen** |
| | **Naproxen** |
| | **Paracetamol** |
| | **Phenazone** |
| Stimulants and caffeine metabolites | **Caffeine** |
| | **Paraxanthine** |
| | **Theobromine** |
| | **Theophylline** |
| | **1-Methylxanthine** |
| | **3-Methylxanthine** |
| Antihypertensive Agents | **Atenolol** |
| | **Metoprolol** |
| | **Sotalol** |
| Contrast Media | **Iohexol** |
| | **Iomeprol** |
| | **Iopamidol** |
| | **Iopromide** |
| Antibiotics | **Clarithromycin** |
| | **Erythromycin** |
| | **Roxithromycin** |
| | **Sulfamethoxazole** |
| | **Trimethoprim** |
| Lipid regulators | **Bezafibrate** |
| | **Clofibric acid** |
| | **Gemfibrozil** |
| Antihistamines | **Cetirizine** |
| | **Loratadine** |
| Anticonvulsants and sedatives | **Carbamazepine** |
| | **Diazepam** |
| | **Primidone** |
| | **Tetrazepam** |
| Selective serotonin reuptake inhibitors | **Citalopram** |
| | **Fluoxetine** |
| | **Sertraline** |
| Pesticides and pesticide Metabolites | **Atrazine** |
| | **Desethylatrazine** |
| | **Desisopropylatrazine** |
| | **Diuron** |
| | **Isoproturon** |
| | **Mecoprop** |
| | **Metazachlor** |
| Corrosion inhibitors | **Benzotriazole** |
| | **Tolyltriazole** |

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|---|---|
| Cocaine Metabolite | **Benzoylecgonine** |
| Proton Pump Inhibitor | **Pantoprazole** |
| Antipsychotic | **Haloperidol** |
| Selective estrogen receptor modulators | **Tamoxifen** |
| tobacco alkaloid | **Cotinine** |
| Herbicide | **Terbutylazine** |
| Metabolite | **Atenololic acid** |

Table S2. CECs analyzed at Palamos site, and their main applications. Highlight those analyzed also in Sant Vicenç dels Horts site.

| Function and/or main use | Compound |
|---|---|
| UV filters | **Benzophenone 3** |
| | **Benzophenone 1** |
| | **Benzophenone 2** |
| | **Benzophenone 4** |
| | **4-Hydroxybenzophenone** |
| | **4,4'-Dihydroxybenzophenone** |
| | **2,2'-4-methoxy-benzophenone** |
| | **Avobenzone** |
| | **Octyl methoxycinnamate** |
| | **3-(4-methylbenzylidene)camphor** |
| | **Ethyl 4-aminobenzoate** |
| | **1,2,3-Benzotriazole** |
| | **5Methyl Benzotriazole** |
| | **Dimathyl benzotriazole** |
| | **2-(2-Benzotriazolyl-p-cresol** |
| Parabene preservatives | **Benzyl parabene** |
| | **Buthyl parabene** |
| | **Propyl parabene** |
| | **Methyl parabene** |
| Pharmaceuticals | **Flumequine** |
| | **Ofloxacin** |
| | **Ciprofloxacin** |
| | **Nalidixic acid** |
| | **Oxolonic acid** |
| | **Tetracycline** |
| | **Oxytetracycline** |
| | **Succynil-sulfathiazole** |
| | **Sulfadiazine** |
| | **N4-Acetyl sulfamerazine** |
| | **Sulfamerazine** |
| | **N4-Acetyl Sulfamerazine** |
| | **N4-Acetyl Sulfamethazine** |
| | **Sulfamethoxazole** |
| | **N4-acetylsulfaquinoxaline** |
| | **Sulfamethoxypyridazine** |
| | **Sulfapyridine** |
| | **N4-Acetylsulfapyridine** |
| | **Sulfaquinoxaline** |

| | |
|---|---|
| | **Sulfathiazole** |
| | **Sulfisomidin** |
| | **Sulfadimethoxine** |
| | **Trimethoprim** |
| | **Gemfibrozil** |
| | **Mefenamic acid** |
| | **Naproxen** |
| | **Diclofenac** |
| | **Diclofenac-13C** |
| | **Diclofenac 4-hydroxy** |
| | **Ketoprofen** |
| | **Paracetamol** |
| | **Ibuprofeno** |
| | **Carbamazepine** |
| Pharmaceuticals | **Carbamazepine 10,11-epoxy** |
| | **Atenolol** |
| | **Norfluoxetine** |
| | **N-desmethylvenlafaxine** |
| | **Salicylic acid** |
| | **Caffeine** |

Table S3. Average values of Tª, pH, EC and average concentration of DOC, $O_2$, $NO_3^-$, $NH_4^+$, $SO_4^{-2}$, measured in samples of infiltration water, monitoring point placed immediately below the unsaturated zone (Point-O), and effluents (Point-E) of the reference system (T2), and the systems operating with reactive barrier based on compost (T4), and woodchips (T5). The travel distances from the infiltration area to the O points is 1m while the distance to the effluent point is 15 m.

| | **Infiltration** | **T2-O** | **T2-E** | **T4-O** | **T4-E** | **T5-O** | **T5-E** |
|---|---|---|---|---|---|---|---|
| **DOC (mg/l)** | 16.55 | 21.52 | 9.37 | 38.23 | 14.48 | 17.37 | 14.06 |
| **$O_2$ (mg/l)** | 4.46 | 0.41 | 2.29 | 0.32 | 2.52 | 0.28 | 2.46 |
| **$NO_3^-$ (mg/l)** | LOD | 16.58 | LOD | 12.43 | 6.5 | 5.99 | 0.39 |
| **$NH_4^+$ (mg/l)** | 43.63 | 19.85 | 18.2 | 25.8 | 21.09 | 33.05 | 26.64 |
| **$SO_4^{-2}$ (mg/l)** | 17.3 | 16.99 | 17.38 | 18.4 | 18.32 | 17.47 | 18.02 |
| **Tª (ºC)** | 16.7 | 15.58 | 14.36 | 15.49 | 14.18 | 13.48 | 13.69 |
| **pH** | 7.58 | 6.85 | 6.88 | 6.88 | 7.17 | 6.77 | 6.85 |
| **EC (µS/cm)** | 2324 | 1801 | 2798 | 1688 | 2874 | 1280 | 2873 |
| **Travel distance (m)** | 0 | 1 | 15 | 1 | 15 | 1 | 15 |