

1 **Supplementary Table 1. Main physicochemical properties of the selected compounds**

Pharmaceuticals	Molecular Weight (g/mol)	Vapor Pressure (mm Hg)	Solubility (mg/Lat 25°C)	pK <sub>a</sub> (20 °C)	Log K <sub>ow</sub>	Henry's constant (at m <sup>3</sup> ·m <sup>-1</sup> )	Half-life time (days)
Diclofenac	296.2	6.14 × 10 <sup>-8</sup>	2.37	3.99-4.3*	4.51*	4.7 × 10 <sup>-12</sup>	< 8-30**
Ibuprofen	206.3	1.86 × 10 <sup>-4</sup>	21	4.91-5.3*	3.97*	1.5 × 10 <sup>-7</sup>	4.6-32**

14 \*data from <http://pubchem.ncbi.nlm.nih.gov>; \*\*data from field studies (freshwater environments). From Bu Q, Shi X, Yu G, Huang J, Wang B.

15 Assessing the persistence of pharmaceuticals in the aquatic environment: Challenges and needs. *Emerg Contam* 2016;2:145-7. doi:

16 10.1016/j.emcon.2016.05.003.

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