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Influence of Chemical Speciation on Photochemical Transformation of Three Fluoroquinolones (FQs) in Water: Kinetics, Mechanism, and Toxicity of Photolysis Products

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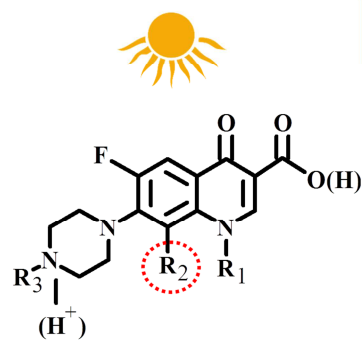
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FQs

$R_2$	acidic pH (FQsH <sub>2</sub> <sup>+</sup> )	neutral pH (FQsH)	alkaline pH (FQsH <sup>-</sup> )
F	F <sup>-</sup> at C <sub>8</sub> > P	F <sup>-</sup> at C <sub>8</sub> > P(O)	F <sup>-</sup> at C <sub>8</sub> & P
H	P	F <sup>-</sup> at C <sub>6</sub> > P(O)	
O		HCOO <sup>-</sup> & P(O)	P(O) > HCOO <sup>-</sup>

F<sup>-</sup>: defluorination

P/P(O): piperazinyl ring cleavage/oxidation

HCOO<sup>-</sup>: decarboxylation

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