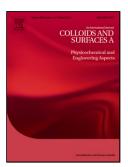
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ACCEPTED MANUSCRIPT

Potential role of engineered nanoparticles as contaminant carriers in aquatic ecosystems: Estimating sorption processes of the cyanobacterial toxin microcystin-LR by TiO₂ nanoparticles

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Keywords: microcystin-LR; titanium dioxide nanoparticle; adsorption; kinetics; adsorbent dosage; particle size

Abbreviations

<xps:span class=deft>*C*₀</xps:span> <xps:span class=defd>initial concentration of adsorbate (µg/L)</xps:span>

<xps:span class=deft>*C_e*</xps:span> <xps:span class=defd>equilibrium liquid-phase of adsorbate (µg/L)</xps:span>

<xps:span class=deft>V </xps:span> <xps:span class=defd>solution volume (L)</xps:span>

<xps:span class=deft>*m*</xps:span> <xps:span class=defd>mass of adsorbent (g)</xps:span>

<xps:span class=deft>*q*_e </xps:span> <xps:span class=defd>adsorption capacity at equilibrium (µg/g)</xps:span>

<xps:span class=deft>qt</xps:span> <xps:span class=defd>adsorption capacity at time *t* (µg/g)</xps:span>

<xps:span class=deft> k_1 </xps:span> <xps:span class=defd>first-order rate constant of
pseudo-first-order equation (h⁻¹)/xps:span>

<xps:span class=deft> k_2 </xps:span> <xps:span class=defd>second-order rate constant of pseudo-second-order equation (g/µg h)</xps:span>

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