

Ecotoxic effects of nano plastic on freshwater plankton (*Scenedesmus obliquus* and *Daphnia magna*)

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The amount of nano- and microparticles in the aquatic environment rises due to the industrial production of nanoplastic and the degradation of macroplastic into small particles. Little is known about the fate and effects of nanoplastic, while there are lots of speculations about possible effects. In this study, the effects of nano polystyrene on performance of green algae *Scenedesmus obliquus* and zooplankton *Daphnia magna* were assessed. At high doses inhibiting effects on the growth of *S. obliquus* were shown. During chronic tests the suspensions of nano polystyrene were not lethal to *D. magna* but reproduction effects were observed. Interestingly, aqueous vs. dietary exposure to nano polystyrene played an important role in the occurrence of effects on *D. magna*. Thereby this study provides a novel indication about the importance of uptake routes in nano plastic exposure.

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