

Methodological approach for the evaluation of potential toxic effects of micro- and nanoplastics

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The widespread presence of micro- and nanoplastics (MNPs) in the environment has raised public concern for their potential hazard to human health. Although there is limited information on the potential toxicity of these particles, which could involve oxidative stress, inflammatory reactions, DNA damage and metabolism disorders. In order to be able to carry out a correct risk assessment for human health following oral exposure to MNPs, it is necessary to obtain reliable information both on their potential effects and on the actual levels of exposure. The present study, through *in vitro* and *in vivo* approaches, intends to contribute to the development and standardization of reliable and new approach methodologies suitable for the assessment of human health risk resulting from exposure to MNPs present in food chain, water, in a "One Health" perspective.