



Targeting aquatic micropollutants for monitoring: Exposure categorization and application to the Swiss situation

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For water pollution control and the evaluation of water protection measures it is crucial to screen for micropollutants (MPs). However, the selection of which MPs to screen for from several hundreds to thousands of potentially important MPs is complex. Existing methods usually are limited because of a lack of requested data.

We propose a simple methodology that provides a systematic overview of a broad range of MPs according to their potential to occur in the water-phase of surface waters. The method requires only input of publically available data and missing data are estimated with quantitative structure-property-relationships (QSPRs).

We distinguish seven different exposure categories based on different compound properties and input dynamics. Ranking the defined exposure categories based on a chemical's potential to occur in the water-phase of surface waters, exposure categories I and II contain chemicals with a very high potential, categories III and IV contain chemicals with a high potential, and categories V and VI contain chemicals with a low potential.

The presented methodology supports compound selection for (i) water quality guidance, (ii) monitoring programs, and (iii) further research on the chemical's ecotoxicology.