

Sub-statement on the potential risk(s) from exposure to microplastics: Inhalation route

Microplastics - Inhalation route - Potential new approaches

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82. To date there are no standardised characterisation, collection, and analytical methods for airborne microplastics or comprehensive risk assessment of NMPs. However, studies are beginning (Koelmans 2022a) to suggest ways in which this could be done.

83. It has also been suggested that an adverse outcome pathway (AOP) framework including the mechanisms of adverse effects, and new approach methodologies (NAMs) can be used in improving the decision-making process with regard to microplastic hazard assessment. The use of read-across, microphysicochemical systems (such as organs on a chip), fluid dynamics, computational models and “omics” can not only reduce the number of animals used and the traditional testing methodologies, but might also provide a more robust scientific basis for decision-making (Halappanavar and Mallach 2021). However, to date, these methods have had only limited success in relation to

ambient air pollutants.