

다매체 퓨가시티 모델을 이용한 자동차배출오염  
물질 중 PHAs의 인체 유해성 평가 연구

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The rapid development of China generated serious environmental problems have long been of concern, especially the atmosphere pollutants. This study focus on the vehicle exhaust polycyclic aromatic hydrocarbons (VEPs) led health risk to local residences in a densely inhabited area. Multimedia fugacity models were used to predict the behaviors of VEPs in air, water, soil and sediment. The health risk of adult during their life time were calculated by the incremental lifetime cancer risk (ILCR) model through various exposure routes, which including dermal contact, inhalation and ingestion. The sensitivity analysis based on level III model was applied to find the important input parameters which influence the final risk most. The BaP is the most toxicity VEPs with ILCR value is  $2.92 \times 10^{-7}$  which is high in sediment and soil phases like other VEPs. The dynamic ILCR during 17 years in Zhengzhou city was found that the highest ILCR appeared in 2014 ( $5.3 \times 10^{-7}$ ), which is around 4 times higher than the value in 1999.

Acknowledgements

This work was supported by the National Research Foundation of Korea(NRF) grant funded by the Korea government(MSIP) (No.2015R1A2A2A11001120)