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# Volatile Organic Compounds from Decomposition of Local Food Waste and Potential Health Risk

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**Abstract :** The aim of this study is to investigate odour emission profiles from storage of food waste and to assess the potential health risk caused by exposure to volatile compounds. Food waste decomposition process was conducted for 14 days and kept at 20°C and 30°C in self-made bioreactor. VOCs emissions from both samples were collected at different stages of decomposition starting at day 0, day 1, day 3, day 5, day 7, day 10, day 12 and day 14. It was analyzed using TD-GC/MS. Findings showed that various VOCs were released during decomposition of food waste. Compounds produced were influenced by time, temperature and the physico-chemical characteristics of the compounds. The most abundant compound released was dimethyl disulfide. Potential health risk of exposure to this compound is represented by hazard ratio, HR, calculated at 1.6 x 1011. Since HR equal to or less than 1.0 is considered negligible risk, this indicates that the compound posed a potential risk to human health.

**Keywords :** volatile organic compounds, decomposition process, food waste, health risk
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