

Exposure to Particulate Matter Taking Various Transportation Modes in Cebu City, Philippines

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Abstract : This study gives a comparison of the commuters' exposure to particulate matter while taking different transportation mode (jeepney, motorcycle and taxi) in Cebu City, Philippines. A personal aerosol monitor (Sidepak AM510) was used for data collection; in addition, both temperature and humidity were also documented. Analysis was done and showed that Jeepney, which is the most commonly used mode in the country, has the highest PM collected having an average of $358.0 \mu\text{g}/\text{m}^3$, followed by the motorcycle with an average of $244.6 \mu\text{g}/\text{m}^3$. The taxi recorded to have an average of $50.0 \mu\text{g}/\text{m}^3$ and the lowest between the microenvironments sampled. The outcome was greatly significant to the traffic volume together with several factors that could possibly affect the result. However, due to the lack of time and resources, the data collected was limited. Further and thorough investigation should be implemented to provide more essential information regarding the subject.

Keywords : air quality, particulate matter, Philippines, transportation

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