

Study of the Ambient Particulate Matters in the Campus Area of Ta-jen Junior College of Pharmacy

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ABSTRACT

This study was conducted to investigate the air qualities in the campus area of the Ta-Jen Junior College of Pharmacy by measuring the concentration of PM10 and those of lead, zinc and manganese in the particulate phase. The results revealed that the daily mean value of PM10 was 108.9 ($\mu\text{g}/\text{m}^3$) in spring (March ~ May) of 1996. However, nearly 37.5 % of the days within the time period were with concentrations of PM10 above the national air quality standard, 125 ($\mu\text{g}/\text{m}^3$). The PM10 values inspected at the end of June were down to 25.5 ($\mu\text{g}/\text{m}^3$) and could be presumed as the background value in the ambient air of the Ta-Jen area. Both lead and manganese concentrations in the particulate phase were very low or hardly to be detected. It could be speculated that the air qualities of the Ta-Jen area were not bad in most time when comparing with the national air quality standards. Unfortunately, the concentrations of zinc in the particles of the Ta-Jen area were remarkably higher than those values measured from the six air monitoring stations in Kao-Hsiung City, Taiwan, during the same time period. Although there is not any air quality regulation to specify the limit of zinc species in the air in Taiwan, the air with a high concentration of zinc species would be a problem to the air quality. Further investigation is suggested to progress for finding out the pollution sources and to reduce the zinc concentration in the air.

Keywords : Suspended Solid (PM 10)、Particulate、Heavy Metal