

UNIVERSITI TEKNOLOGI MARA

**STUDY OF EXPOSURE PARTICULATE
MATTER (PM_{2.5}) IN ART STUDIOS AT FACULTY
ART AND DESIGN, UITM PUNCAK ALAM**

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Project submitted in fulfilment of the requirements for the degree of
Bachelor in Environmental Health and Safety
(Hons.)

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DECLARATION BY STUDENT

Project entitled “Study of Exposure Particulate Matter (PM_{2.5}) in Art Studios at Faculty Art and Design, UiTM Puncak Alam” is a presentation of my original research work. Whenever contributions of others are involved, every effort is made to indicate this clearly, with due reference to literature, acknowledgement of collaborative research and discussion. The project was under the guidance and supervision of Project Supervisor, Mr Megat Azman Bin Megat Mokhtar and Miss Farah Ayuni Binti Sahafea @ Shafie as Co-supervisor. It has been submitted to the faculty of Health Science in partial fulfillment of the requirement for the awarding of Bachelor in Environmental Health and Safety (Hons).

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ABSTRACT

Particulate matter (PM) is a main indicator of air pollution that brought into the air by many source of nature and human activities. A lot of studies conducted related to particulate matter at the study places to produce a safe and healthy study places. This study was carried out to assess the concentration of particulate matter PM_{2.5} before, during and after the different activities was carried out in the different studios. Faculty Art and Design was selected. The 8 hours measurement of PM_{2.5} were monitored during the class session. The measurement were measured by using Dust Trak (TSI), which to evaluate concentration of PM_{2.5} in the studios. The result that are obtained from the analysis shows the printing activities had dominated the mean concentration which is 92.45 µg/m³ compare to others activities- painting activities 90.33 µg/m³, drawing activities 72.21 µg/m³, wood work activities 91.91 µg/m³ and spraying activities 66.45 µg/m³ respectively. The concentration of PM_{2.5} in all studios is fall under the standard by Malaysia Ambient Air Standard (MAAQS) but exceed the standard limit at the certain time, which is 75 µg/m³ for PM_{2.5}. The finding shows the activities in the different studios is significantly influenced for PM_{2.5} concentration where p<0.05. PM_{2.5} exposure concentration in the printing studio is the highest where 12.11 µg/m³, and the lowest exposure concentration of PM_{2.5} is in art studio 2 where 8.71 µg/m³. The findings shows student exposed to the low risk exposure of PM_{2.5} concentration. Therefore, this study to assess the concentration of PM_{2.5} is necessary because student is exposed to the respiratory diseases cause by particulate matter. Thus, from this study the mitigation measure should be taken to overcome the crisis.

Keyword: PM_{2.5}, art studio, exposure assessment, air quality