

UNIVERSITI TEKNOLOGI MARA

**TOTAL VOLATILE ORGANIC COMPOUND
(TVOC) AND SICK BUILDING SYNDROMS
(SBS) IN OLD AND NEW LIBRARIES.**

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Declaration by Students

Project entitled Total Volatile Organic Compound (TVOC) and Sick Building Syndromes (SBS) in Old and New Libraries is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature and acknowledgement of collaborative research and discussions. The project was done under the guidance of Mr. Razi Ikhwan bin Md Rashid as project supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the degree of Bachelor (Hons.) of Environmental Health and Safety.

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Abstract

Total Volatile Organic Compound (TVOC) and Sick Building Syndromes (SBS) in Old and New Libraries

Asma Hani binti Hassan

Introduction: TVOC are present in the atmosphere mainly as gases, and usually emitted from certain solids or liquids. TVOC are emitted from many types of product and usually use in daily activities and also in occupational activities. The exposure of some TVOC may cause short and long-term adverse health effects. Hence, the study had been conducted in two different library located in UiTM Puncak Alam and UiTM Shah Alam, The aim of the study is to investigate the relationship between Total Volatile Organic Compounds (TVOC) and Sick Building Syndrome (SBS) in two different libraries (old and new).

Methodology: This is a cross-sectional comparative study conducted on 40 office workers have worked for at least four months, including males and females from both new and old buildings. A straight forward questionnaire had been used and the question taken from the Industry Code of Practice on Indoor Air Quality 2010, Questionnaires for Building Occupants is used. The data collected were analyzed by using the Statistical Package for the Social Sciences (SPSS) version 18.0.

Result: According to this study, it is clearly show that 71.4% respondents in new building exposed to TVOC were in age of 25 to 39 while for old building is 76.9 %. The results showed that there was statistically significant difference for association between exposure toward TVOC and the appearance of all symptoms which are headache, fatigue, drowsiness, nausea/vomiting, cough stuffy nose and horse dry throat since the p-value is less than 0.05 (<0.05). For the prevalence of SBS in PTAR Shah Alam, there are of 86 % librarian having sick building syndrome compared to 42.9% librarian in PTAR Puncak Alam and the different was statistically significant since p-value 0.000 (<0.05).

Conclusion: There are association between old and new library with all of the symptoms. All of these associated symptoms have significant value.

Keyword: Total Volatile Organic Compound (TVOC), Sick Building Syndromes (SBS)