UNIVERSITI TEKNOLOGI MARA

INDOOR AIR QUALITY AND SICK BUILDING SYNDROME AT UiTM HEALTH CENTRE SHAH ALAM

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DECLARATION

Project entitle "Indoor air quality and Sick Building Syndrome in UiTM Health Center" is my presentation of my original 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. Abd Rahim Dal as Project Supervisor and Assoc. Hazillia Hussain as Co-supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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ABSTRACT

INDOOR AIR QUALITY AND SICK BUILDING SYNDROME AT UiTM HEALTH CENTER SHAH ALAM

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Building related illness has still not gained the same prominence as those related to outdoor air quality. As such Malaysia definitely needs to identify and highlight the importance of the impact of indoor air quality on health as it is believed that residents in urban areas spend 90% of their time indoor. The study was conducted in health center located in MARA University of Technology, Shah Alam, Selangor. The study design of this study is cross-sectional study and evaluation the health problems of the occupants related to indoor air quality. Sampling data collection using QUESTemp° 36; Area Heat Stress and Thermal Comfort monitor, Gas Alert Micro 5 IR (1, 2, 3, 4 and 5 gas detector), BW Technologies by Honeywell International Ltd and modified Industry Code of Practice on Indoor Air Quality, Department of Occupational, Safety and Health questionnaire. A statistical analysis that is statistical package for the social science (SPSS) version 19.0 was used in this study. The study found that the reading of the sampled parameters carbon monoxide (0.123 ppm), carbon dioxide (2030 ppm), temperature (25.9 °C), air velocity (0.09 m/s) and relative humidity (56.8%). Carbon dioxide is the only reading that exceeds the permissible limit with 2030 ppm. The respondent has experienced the symptoms of sick building syndrome, headache (83.1%), thick-witted (64.6%), fatigue or lethargic (70.8%), sleepy (78.5%), dizziness (55.4%), nausea or vomiting (23.1%), cough (55.4%), stuffy nose (58.5%), dry throat (61.5%), skin rash or itchiness (33.8%), initiation of the eyes (26.2%) and itching scalp or ears (33.8%). The CO_2 concerntration was the only parameter that has violation but others was below the acceptable limit. From the results by using Pearson Correlation between work environment and Sick Building Syndrome symptoms, there was 0.763 where is significant at the 0.01 level (2-tailed). It shows there was a strong relationship between work environment and diseases or symptoms.

Keywords: Building related illness, Indoor Air Quality, Sick Building Syndrome, acceptable limit.