Abstract
This study aims to determine whether the Level 2 of Balai Ungku Aziz, a faculty building of the Oral Biology Department in the Dental Faculty of University of Malaya, exhibits the Sick Building Syndrome (SBS) and meet the standards for Indoor Air Quality as specified by ASHRAE. It is significant to conduct this research because no similar investigation has been carried out for a tropical building in Malaysia. The study covers only level 2 of the building, where the computer lab, dean's office and the library are located. Among the topics studied are the overview of the air conditioning system used in the building, load calculations, capacity measurements and other analyses that will provide Mechanical and Electrical (M&E) designers a better understanding of the air conditioning systems used in a typical tropical building. From the research conducted, it was shown, preliminary, that the Balai Ungku Aziz did not exhibit SBS as the ventilation was sufficiently high and thus, CO2 concentration was low. But further investigation for CO, Formaldehyde and TVOC studies needed to confirm SBS effect on occupants as we had limited number of IAQ and IEQ equipment in hand during studies. The calculations have brought the measured specifications of the air conditioning system closer to the design specifications. Based on the result obtained, the room temperature is slightly cooler than the thermal comfort zone recommended by ASHRAE. Therefore, it is suggested that some adjustments on the HVAC design, including the use of reheat coils, should be done on the system to meet the standard. This can lead to better energy efficiency and cost effectiveness.

Author Keywords
Fresh air supply; Humidity; HVAC systems; Sick Building Syndrome (SBS); Thermal comfort; Tropical building

References
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