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INDOOR AIR QUALITY LEVEL OF TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCS) IN A UNIVERSITY OFFICES

Ololorin John Adebayo [1] ODUNLAMI Olayemi Abosede [2] Fakinle Bamidele Sunday [3]* Alagbe Ayooluwa A [4] Adeniran Jamiu Adetayo [5] Sonibare Jacob Ademola [6] Akeredolu Funso Alaba [7]

[1] Department of Chemical Engineering, Landmark University, Omu Aran, Nigeria.
[2] Department of Chemical Engineering, Covenant University, Ota, Nigeria.
[3] Department of Chemical Engineering, Landmark University, Omu Aran, Nigeria.
[4] Department of Chemical Engineering, Obafemi Awolowo University, Ile-Ife, Nigeria.
[5] Department of Chemical Engineering, University of Ilorin, Ilorin, Kwara State, Nigeria.
[6] Department of Chemical Engineering, Obafemi Awolowo University, Ile-Ife, Nigeria.
[7] Department of Chemical Engineering, Obafemi Awolowo University, Ile-Ife, Nigeria.

Abstract

This study investigate the ambient levels of Total volatile organic compounds (TVOCs) in some office spaces in the Obafemi Awolowo University, Ile-Ife, Nigeria. The investigation was carried out at seven different buildings on the University's main campus using a Gowe wall mount/desktop VOCs monitor. The overall range of mean measured TVOCs levels was 0 – 3.6 ppm (an equivalent of 0 – 0.74 ppm 24-hour averaging period concentrations). Mean range of temperature and relative humidity in the indoor environment during the study were 27.2 – 35.0 oC and 36.4 – 74.3%, respectively. Both indoor sources including office equipment, floor finishing, volatile organic chemicals, and outdoor sources like vehicle exhaust were the major sources of VOCs identified in the offices during the study. VOCs concentrations in the offices had weak correlations with temperature and relative humidity, with correlation coefficients of -0.27 and 0.25 respectively.

Author Keywords

Total volatile organic compounds, offices, indoor air quality, indoor air pollution

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