

Annual Congress on
ENVIRONMENTAL POLLUTION AND SUSTAINABLE ENERGY
July 20-22, 2017 Melbourne, Australia

Assessment of automobile induced pollution in an urban area: A case study of Owerri city southeast Nigeria

S I Okonkwo¹ and K O Okpala²

¹Universidad Nacional de Loja, Ecuador

²Universidad Técnica Particular de Loja, Ecuador

Studies on the effect of automobile emission in an urban area (Owerri City, Southeast Nigeria) were carried out for one month period. Locations noted for heavy traffic congestion in the city were chosen for the study and concentration measure for carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), hydrogen sulfide (H₂S), hydrocarbon (HC) and total suspended particles (TSP) were carried out in the morning (7.00-8.00 am) and evenings (5-7 pm), peak periods of traffic congestion using standard gas monitors. Temperature at the time of measurement were noted and velocity to assess its effect on dispersion rate. The following values were obtained 37.042 ppm, 0.127 ppm, 0.113ppm, 0.067 ppm 0.021 ppm and 0.013 mg/m³, respectively. When compared with the World Organization standard, it was found out that the area is polluted with CO, NO₂, SO₂ and H₂S.

sylocs70@yahoo.com