

Annual transformation characteristics of ground level ozone in Kota Bharu, Malaysia

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ABSTRACT

Ground level ozone (GLO) is the products forms from its precursors that majority comes from emissions of vehicle. However, GLO formation is greatly depending on its precursors and sunlight radiation intensity. This paper aim to understand on how nitrogen oxides (NO_x) control the formation of GLO by looking at monthly temporal variation of ozone and NO_x from 1st January to 31st December 2011 in Kota Bharu, Kelantan. The annual transformation of ozone concentration were assessed using time series and diurnal plot. The annual variations of ozone concentration were negatively correlated with annual variations of NO and NO_x concentration. Results show that ozone concentration does not exceeding 100 ppb against the Malaysia Ambient Air Quality Guidelines.

Keywords: ozone fluctuation, secondary air pollutant, Kota Bharu, precursor