

In this paper, we investigate to reproduce the current level of photochemical oxidants in the Kinki district. The effect of changes in temperature and VOCs emission rates on the concentration of photochemical oxidants was investigated. As a result, the analysis of the effects of an increase in temperature on the concentration of photochemical oxidants showed that the oxidant concentration increased by a maximum of 5.3 ppb when the temperature increased by 1 degree Celsius. In addition, it was shown that an increase in vegetation-derived VOCs had twice the effect as the acceleration of photochemical reactions caused by increasing the temperature. Furthermore, it was suggested that vegetation-derived VOCs have a substantial influence on the oxidant concentration.