

alkyl nitrate:²²



The peroxyalkyl-NO₂ reaction proceeds principally by

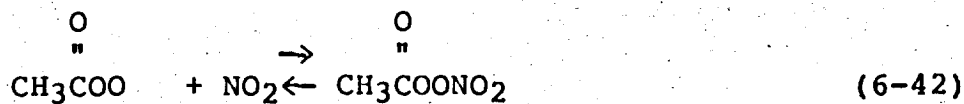


The peroxy nitrate may thermally decompose according to

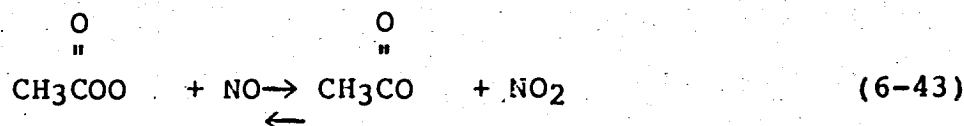


Measured rate constants for the RO₂-NO₂ reaction and the RO₂NO₂ decomposition are not currently available.

Peroxyacyl nitrates have been recognized as important components of photochemical air pollution.²⁷ Peroxyacetyl nitrate (PAN) exists in equilibrium with the peroxyacetyl radical and NO₂:



There exists a competition between NO and NO₂ for the peroxyacetyl radical through:



The acetyl radical will rapidly decompose as follows:



followed by:

