

Supporting Information

Measurement of NO₃ and N₂O₅ in a residential kitchen

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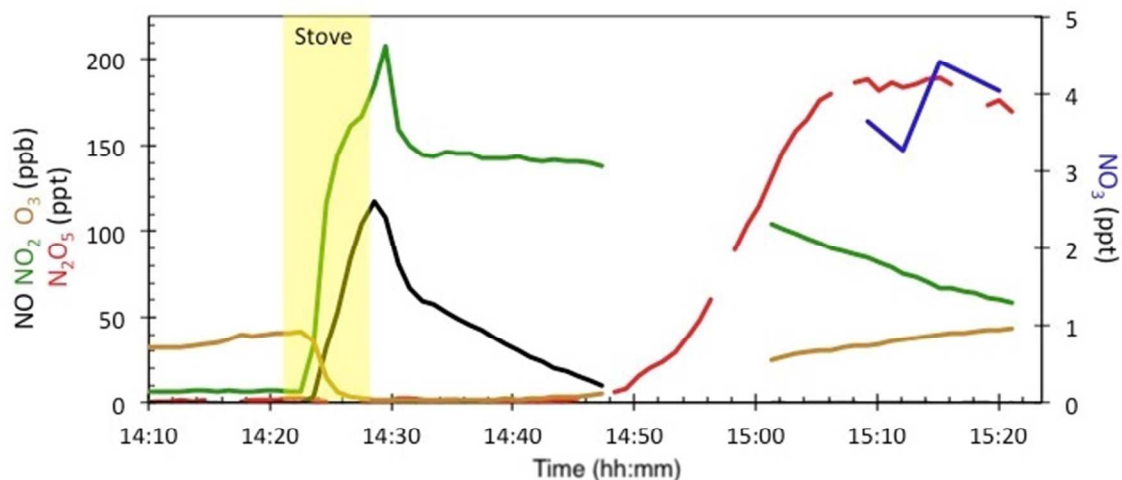


Figure S1: Concentrations of NO, NO₂, NO₃, N₂O₅, and O₃ during the first ozone-added stove experiment. The yellow shaded region indicates when the stove was on. Due to the short duration of NO₃ measurements, this experiment was not used to calculate NO₃ reactivity.

Table S1: Model parameters. Dilution, not shown, was at a rate of 0.0007 s⁻¹. Rate coefficients are for 293 K, the temperature at which the model was run.

reaction	rate coefficient
NO + O ₃ → NO ₂ + O ₂	$1.74 \times 10^{-14} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}{}^a$
NO ₂ + O ₃ → NO ₃ + O ₂	$3.06 \times 10^{-17} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}{}^a$
NO ₂ + NO ₃ → N ₂ O ₅	$1.25 \times 10^{-12} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}{}^a$
N ₂ O ₅ → NO ₂ + NO ₃	$0.0238 \text{ s}^{-1}{}^a$
NO + NO ₃ → 2 NO ₂	$2.62 \times 10^{-11} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}{}^a$
NO ₃ + MT → PNO ₃ MT + MT	$1.20 \times 10^{-11} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}{}^{a,b}$
N ₂ O ₅ (+ H ₂ O) → 2HNO ₃	$0.0015 \text{ s}^{-1}{}^c$
O ₃ + MT → PO ₃ MT + MT	$2.10 \times 10^{-16} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}{}^{a,b}$
NO ₃ → LNO ₃	$0.5 \text{ s}^{-1}{}^d$

^aCoefficients from R. Atkinson, D. L. Baulch, R. A. Cox, J. N. Crowley, R. F. Hampson, R. G. Hynes, M. E. Jenkin, M. J. Rossi, and J. Troe, *Atmos. Chem. Phys.*, 4, 1461-1738 (2004); IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation, <http://iupac.pole-ether.fr>.

^bRates used for the 'generic monoterpene', MT, are for reaction with d-limonene.

^cEstimated using ref [25] - [27].

^dNO₃ reactivity was adjusted to match experimental results.

