## Reversible and irreversible processing of biogenic olefins on acidic aerosols

## **Supplemental Information**

John Liggio and Shao-Meng Li

Air Quality Research Division, Atmospheric Science and Technology Directorate, Science and Technology Branch, Environment Canada

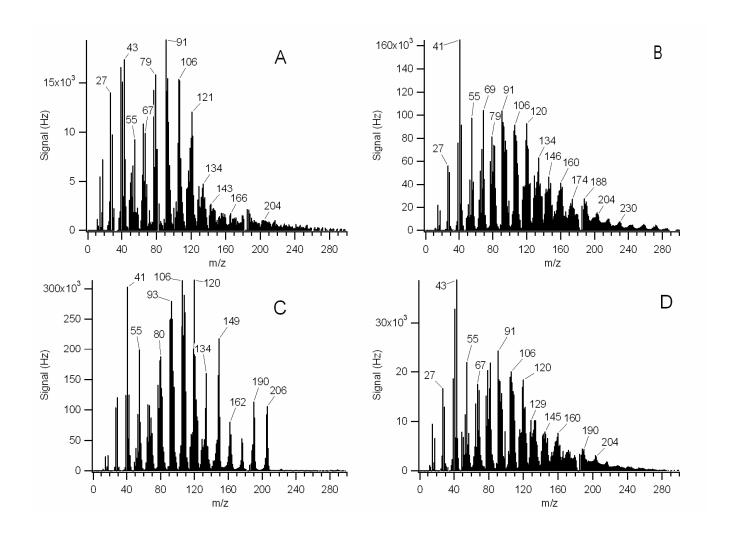
4905 Dufferin Street, Toronto, Ontario, Canada, M3H 5T4.

Email: John.Liggio@ec.gc.ca

Figure 1. Structure of biogenic species used in this study

Species	Structure	Species	Structure
eta-pinene	H <sub>3</sub> C CH <sub>3</sub>	Linalool	H <sub>3</sub> C OH CH <sub>2</sub>
Lim onene	CH <sub>3</sub> H <sub>2</sub> C H CH <sub>3</sub>	β-Caryophyll	$H_3C$ $H_3C$ $H_2C$ $H_2C$
3-Carene	H <sub>3</sub> C CH <sub>3</sub>	Humulene H <sub>3</sub> C	CH <sub>3</sub> CH <sub>3</sub> CH <sub>3</sub>
Geraniol	H <sub>3</sub> C OH CH <sub>3</sub>	Nerolidol H₃(	CH <sub>3</sub> HO CH <sub>3</sub> CH <sub>2</sub> CH <sub>3</sub>

*Figure 2.* Sample organic aerosol mass spectra for reactive uptake products of  $A - \beta$ -pinene, B – Linalool, C – Humulene, and D – Nerolidol at the end of each experiment.



*Figure 3.* Example of several potential mechanisms leading to heterogeneous products of  $\beta$ -caryophyllene

Figure 4. Potential fragments associated with organic ester products of geraniol

