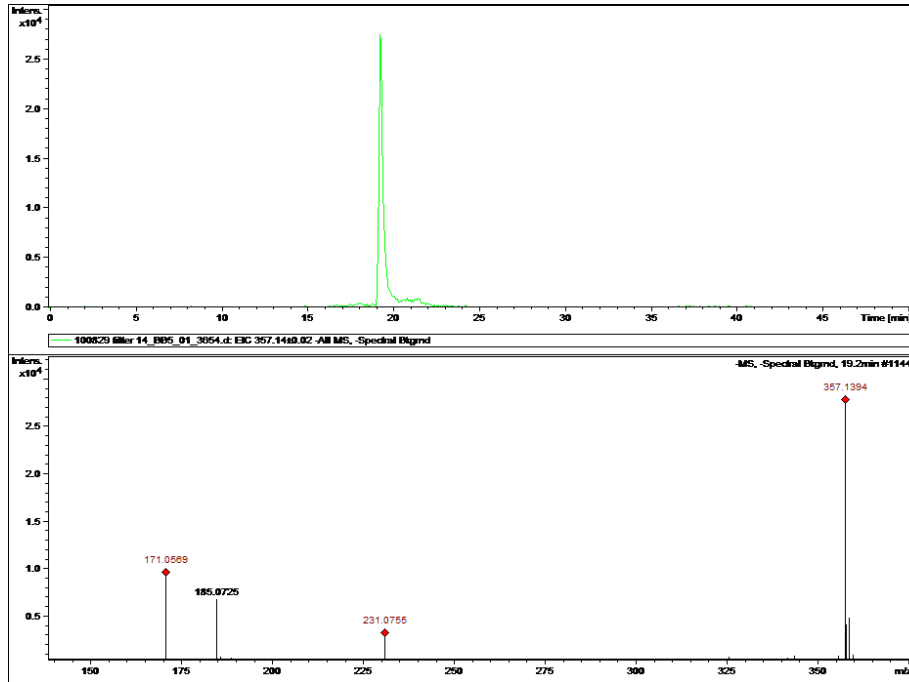


Supplemental Information

A



B

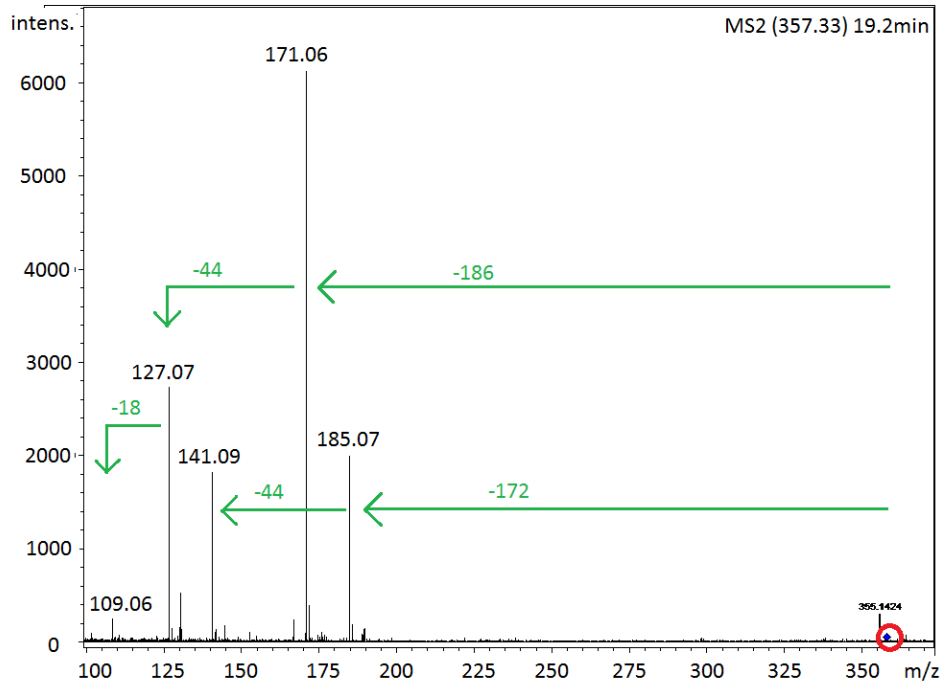


Figure S1: Extracted ion chromatogram (EIC) for m/z 357 together with the mass spectrum (A) and MS-MS fragmentation pattern (B) used to identify the compound as pinyl-diterpenyl

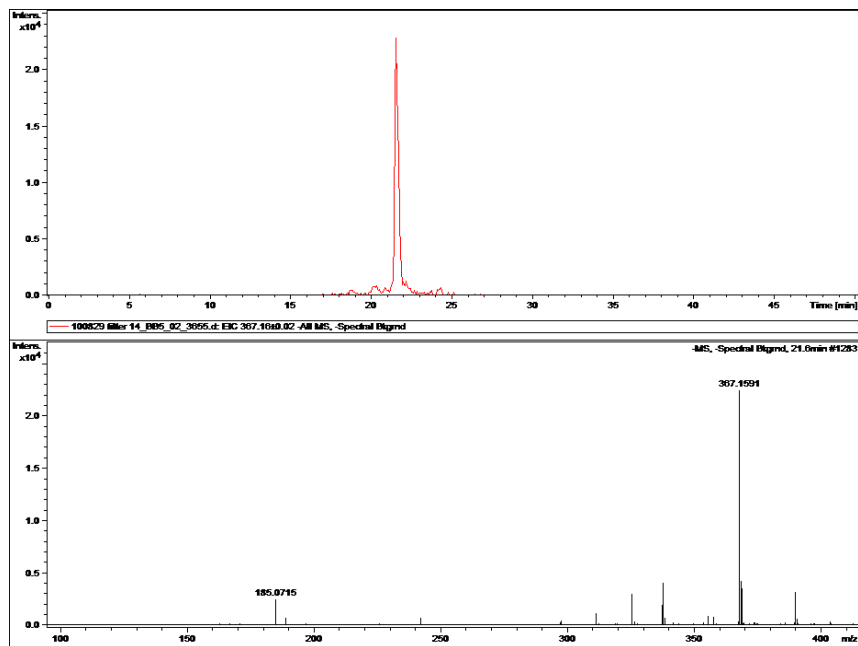
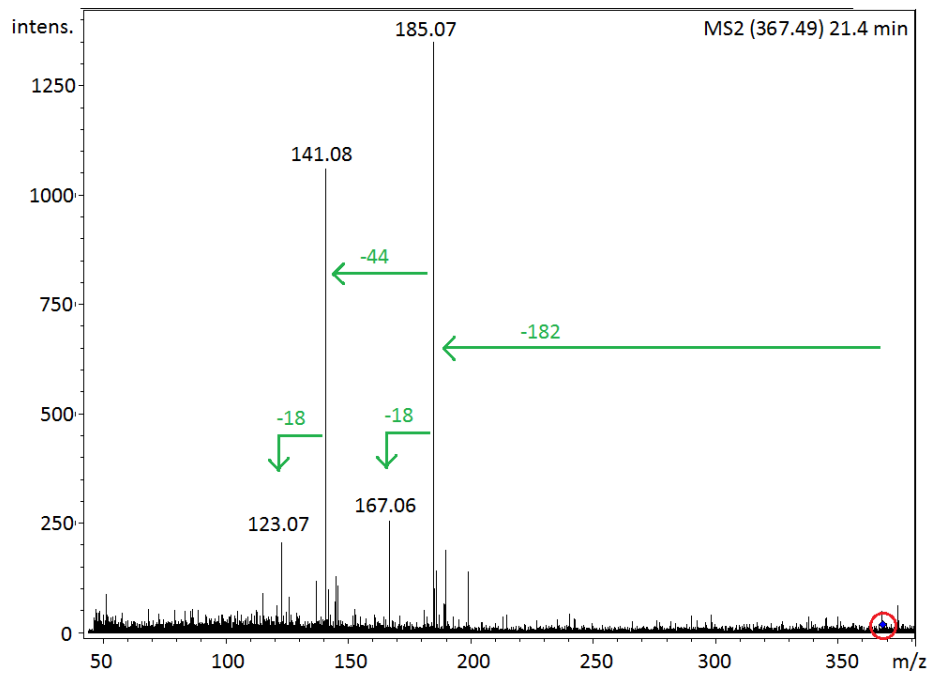
A**B**

Figure S2: EIC of m/z 367 together with the mass spectrum (**A**) and MS-MS fragmentation pattern of m/z 367 (**B**) used to identify the compound as pinonyl-pinyl ester.

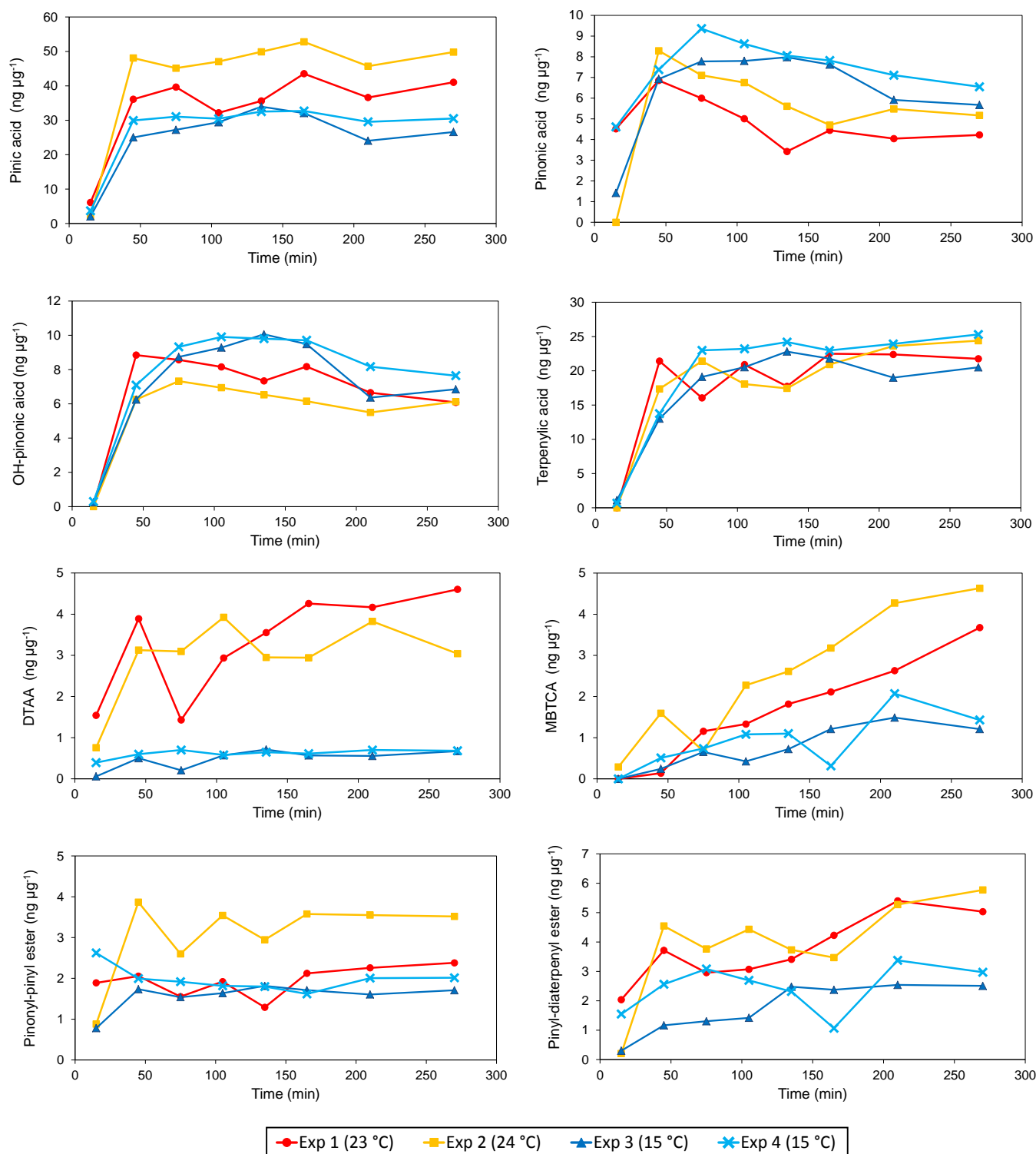


Figure S3. Normalized concentration profiles (ng μg^{-1}) during smog-chamber experiments.

● Experiment 1 (23 °C), ■ Experiment 2 (24 °C), ▲ Experiment 3 (15 °C), × Experiment 4 (15 °C).

No correction for wall losses has been applied

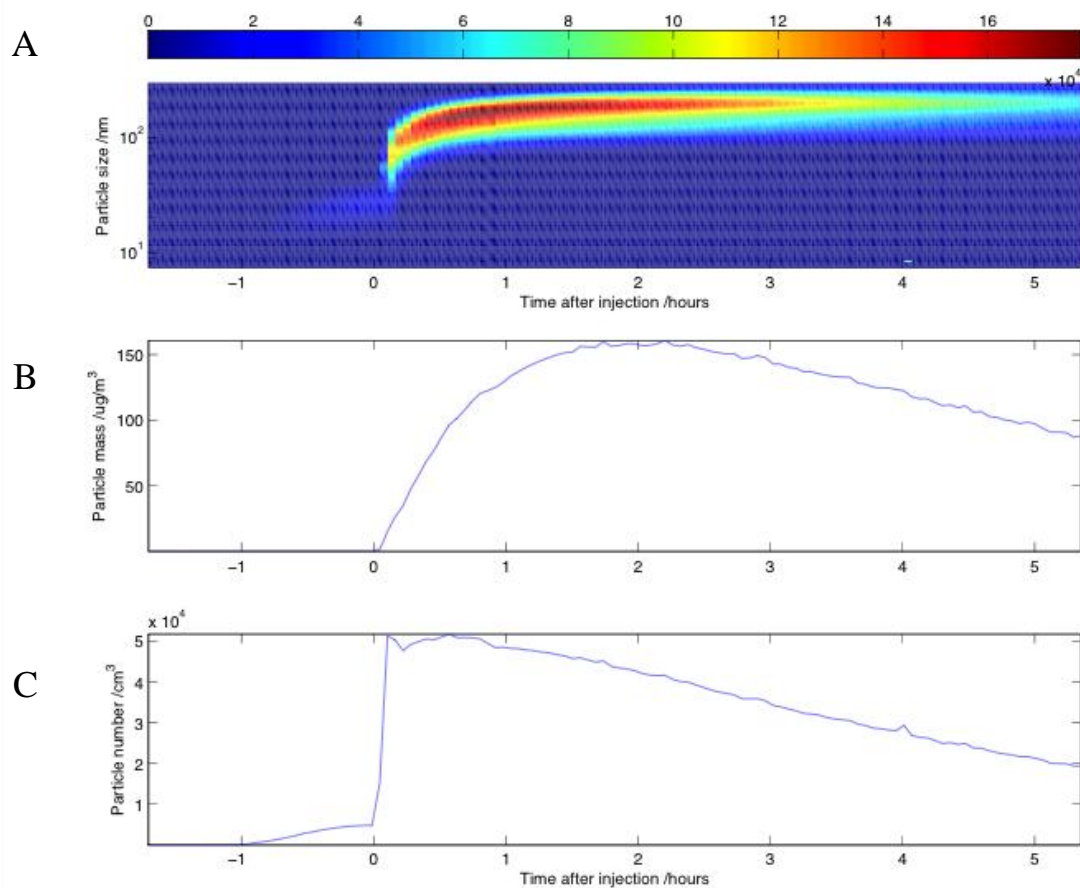


Figure S4: Panel **A** shows the particle size distribution as a function of time measured with the SMPS system during smog chamber experiment #1. Panel **B** shows the inferred particle mass and panel **C** shows the integrated number concentration as a function of time.

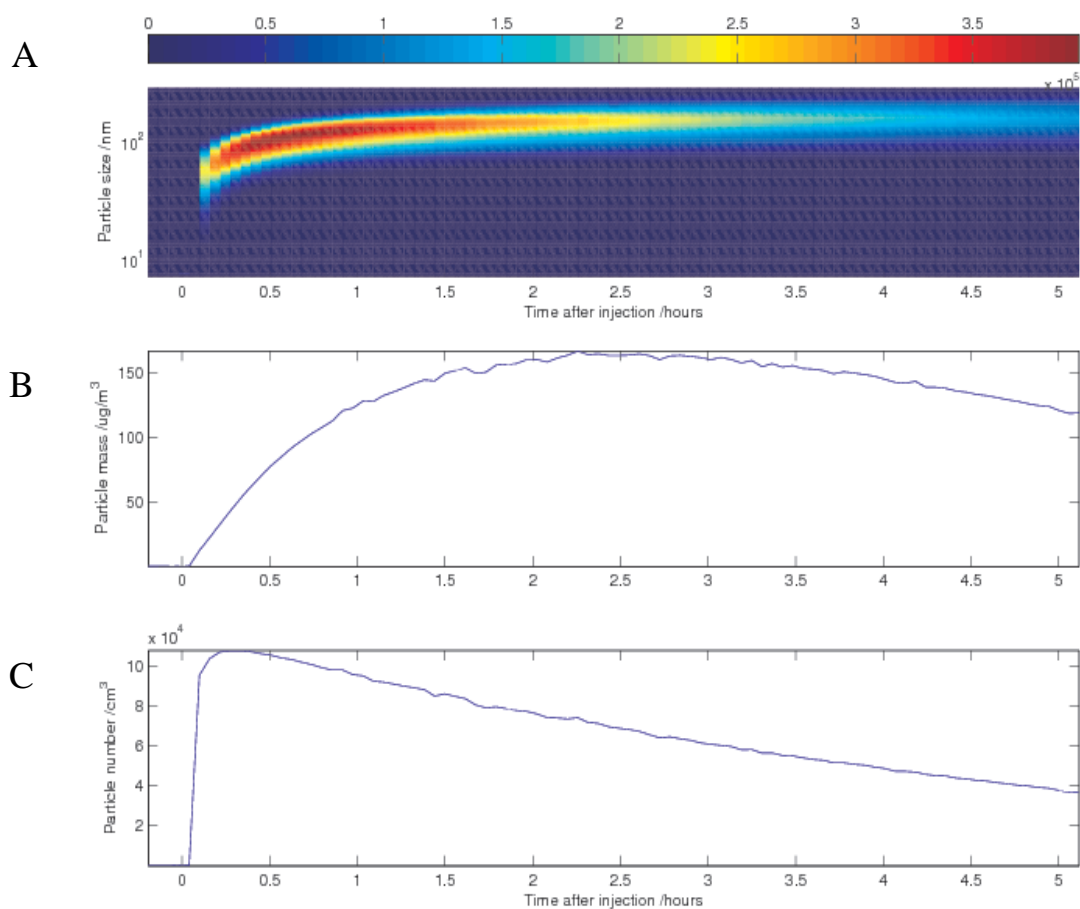


Figure S5: Panel **A** shows the particle size distribution as a function of time measured with the SMPS system during smog chamber experiment #3. Panel **B** shows the inferred particle mass and panel **C** shows the integrated number concentration as a function of time.

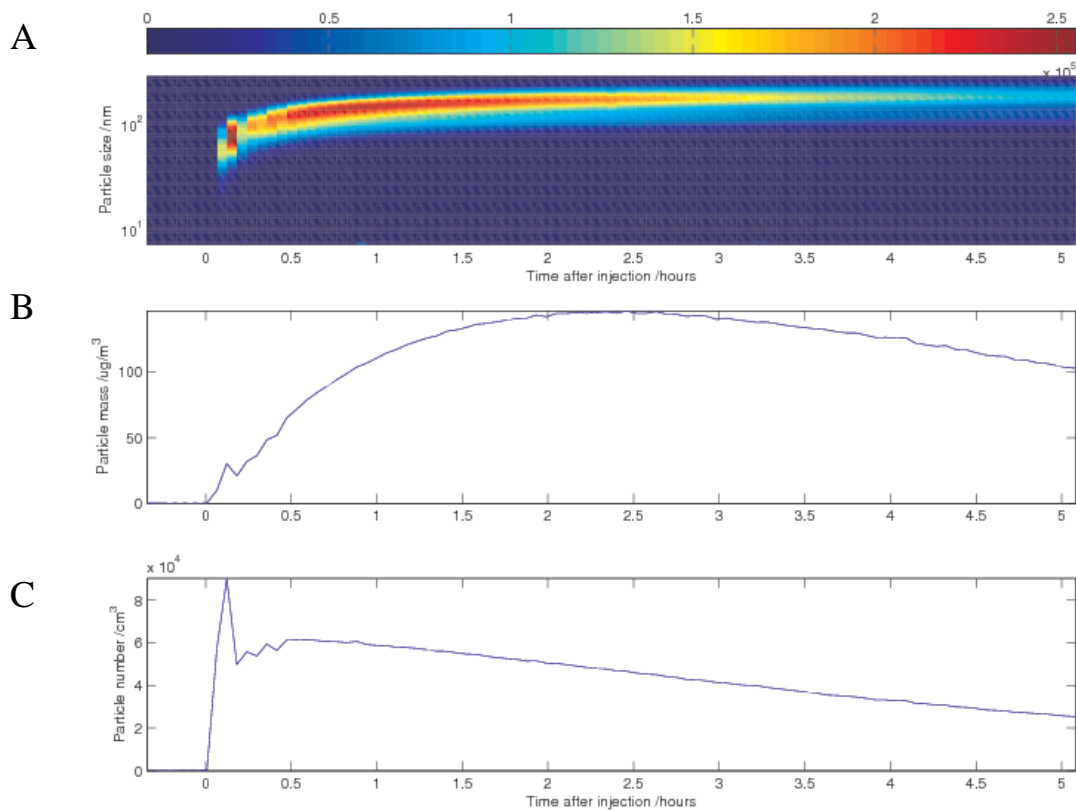


Figure S6: Panel **A** shows the particle size distribution as a function of time measured with the SMPS system during smog chamber experiment #4. Panel **B** shows the inferred particle mass and panel **C** shows the integrated number concentration as a function of time.

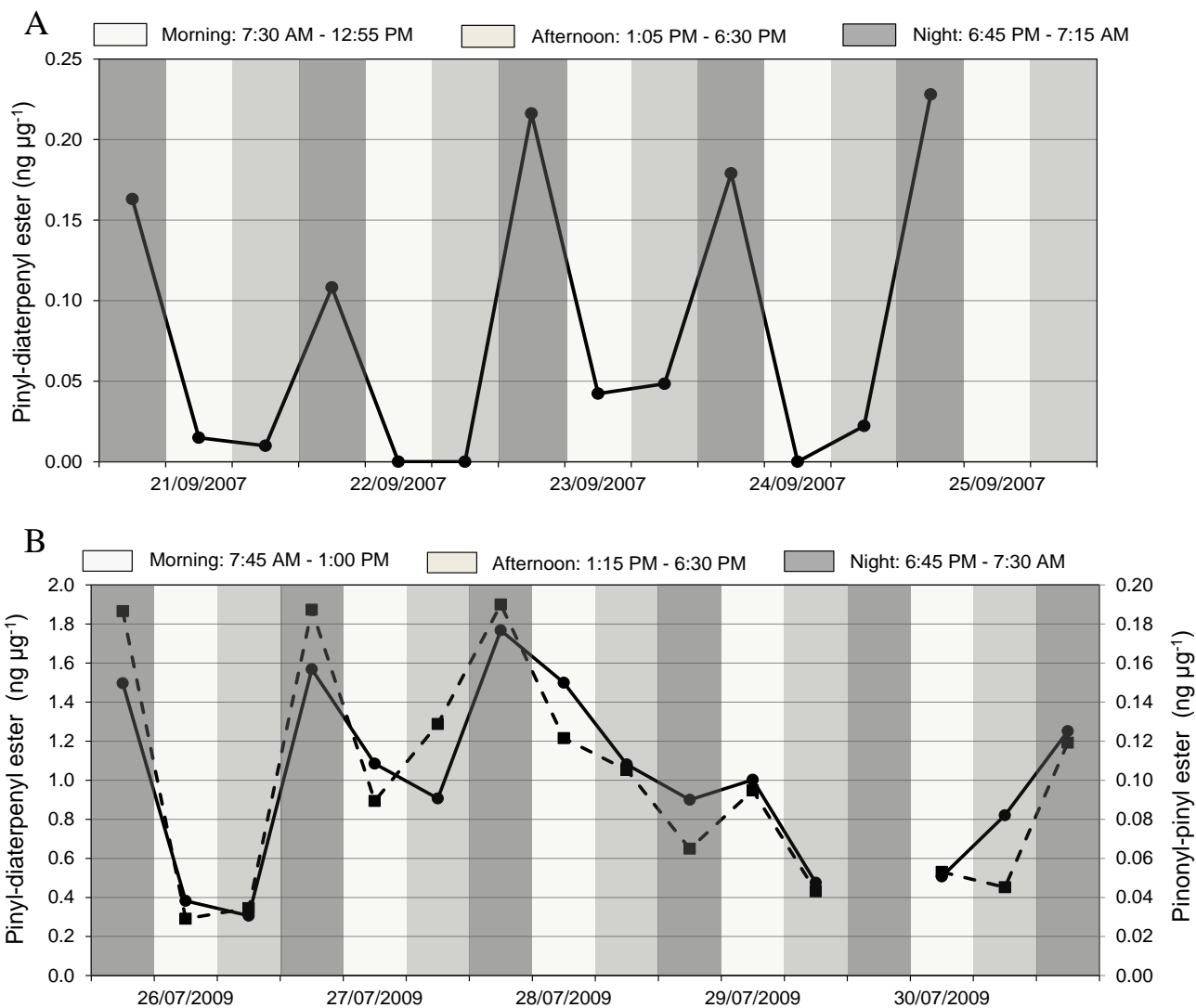
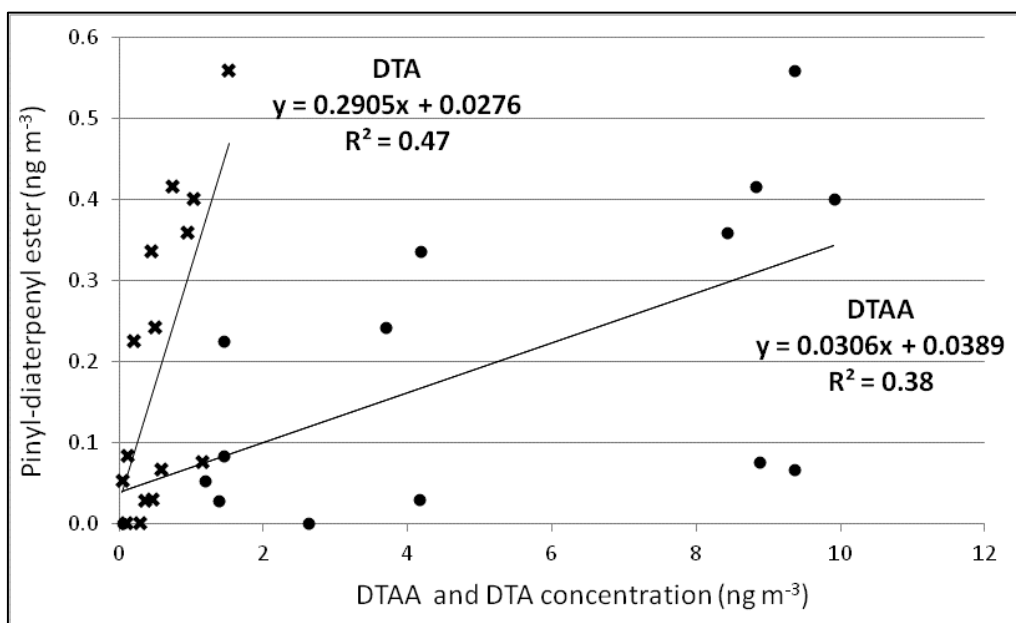


Figure S7: Normalized diurnal variation of the piny-diterpenyl ester ● ($\text{ng } \mu\text{gOA}^{-1}$) and pinonyl-piny ester ■ ($\text{ng } \mu\text{gOA}^{-1}$) during the 2007 (A) and 2009 (B) campaigns. Note the different scales for piny-diterpenyl ester in A and B. Night-time samples are highlighted in dark grey.

A



B

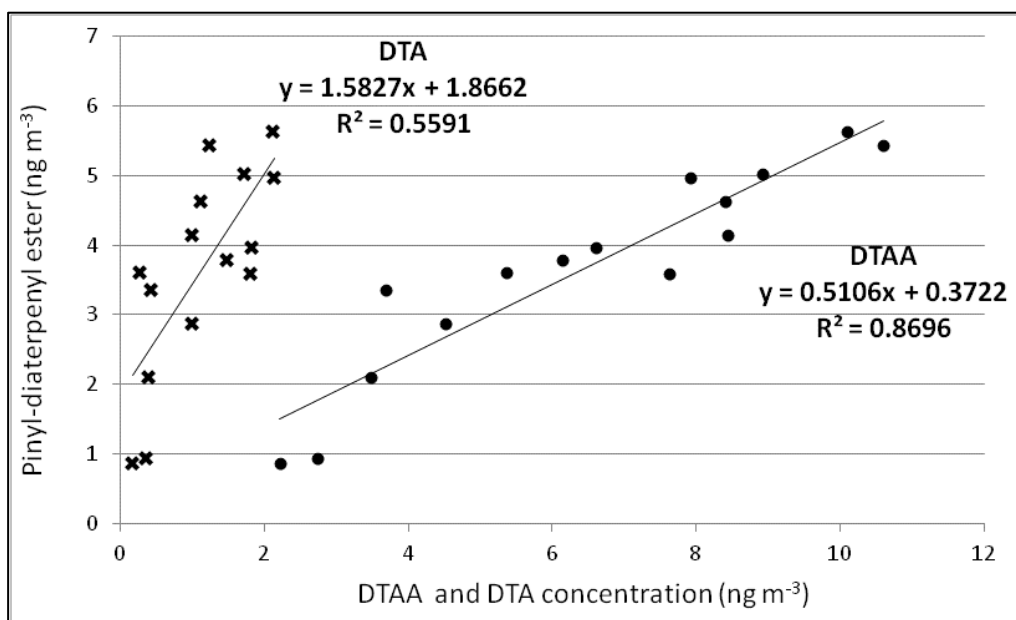


Figure S8: Scatterplots and linear correlation values (R^2) of piny-diterpenyl ester (in peak area pr m³) against diaterpenylic acid acetate (DTAA •, in ng pr m³) and against diaterpenylic acid (DTA ×, in ng pr m³) during the 2007 (A) and 2009 (B) campaigns.

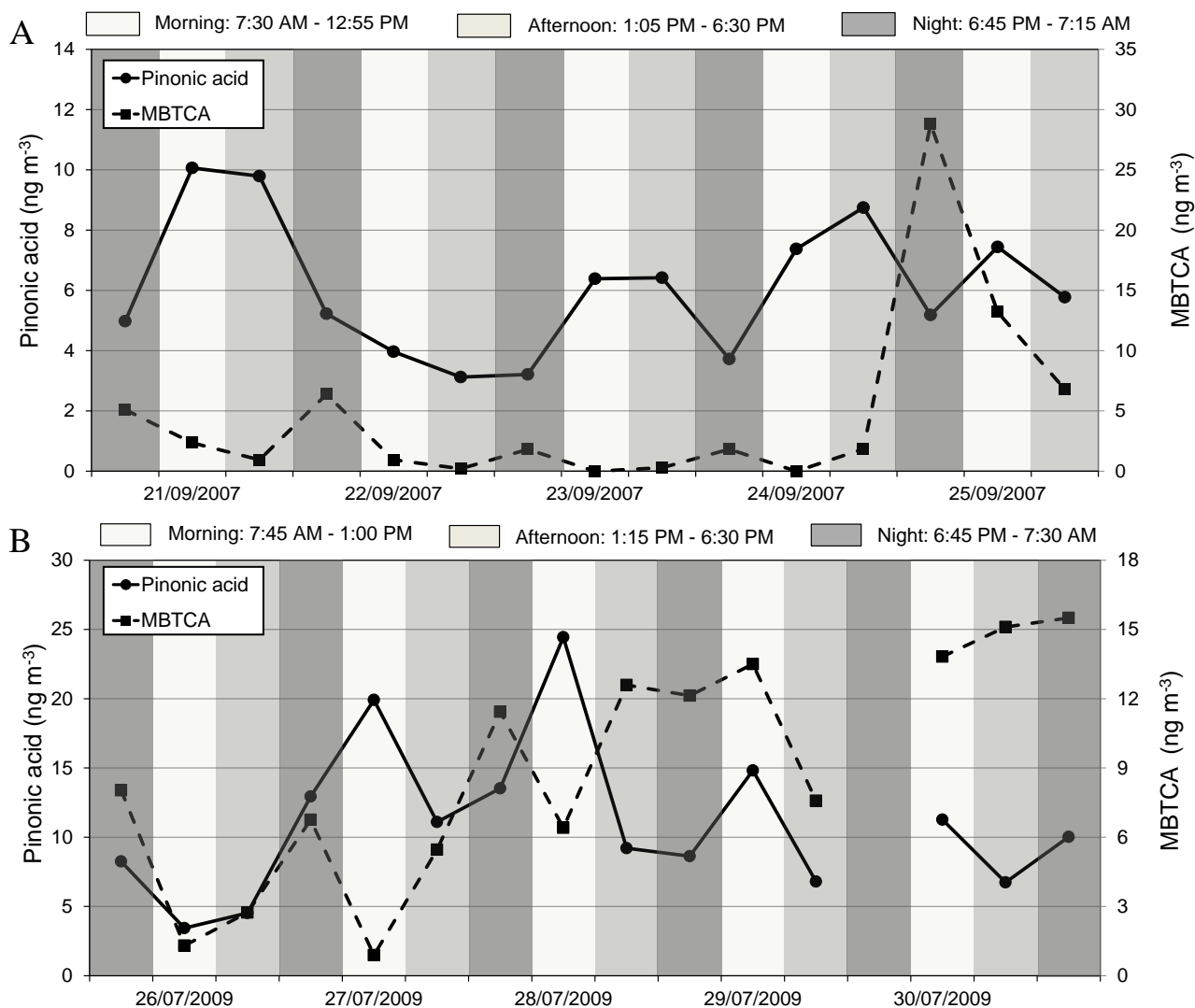


Figure S9: Diurnal variation of pinonic acid ● (ng m⁻³) and MBTCA ■ (ng m⁻³) during the 2007 (A) and 2009 (B) campaigns. Night-time samples are highlighted in dark grey.

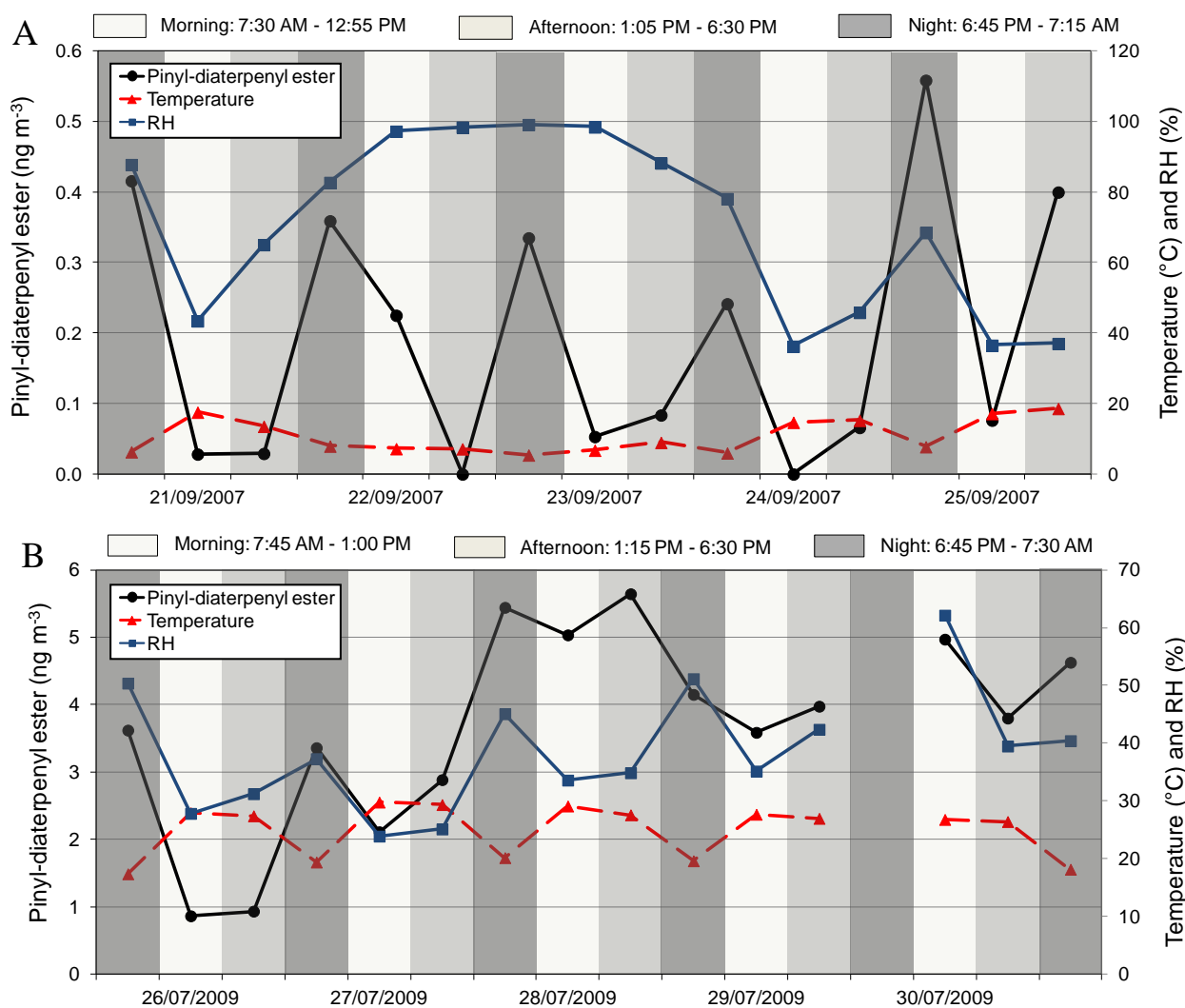


Figure S10: Diurnal variation of the pinyli-diterpenyl ester ● (ng m⁻³) and temperature ▲ (C°) and relative humidity (RH) ■ (%) during the 2007 (A) and 2009 (B) campaigns (note different scales). Night-time samples are highlighted in dark grey.