

Supplementary Materials: Contact and Repellent Activities of the Essential Oil from *Juniperus formosana* against Two Stored Product Insects

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The NMR data for α -pinene (1), 4-terpineol (2) and D-limonene (3).

α -Pinene (1). Colorless oil, C₁₀H₁₆. ¹H-NMR (500 MHz, CDCl₃) δ (ppm): 5.21 (1H, s, H-3), 2.36 (1H, m, H-7 β), 2.21 (1H, dd, J = 20.0 Hz, H-4 α), 2.17 (1H, dd, J = 20.0 Hz, H-4 β), 2.09 (1H, s, H-5), 1.96 (1H, t, J = 5.0 Hz, H-1), 1.68 (3H, s, 10-CH₃), 1.29 (3H, s, 8-CH₃), 1.18 (1H, d, J = 5.0 Hz, H-7 α), 0.86 (3H, s, 9-CH₃); ¹³C-NMR (125 MHz, CDCl₃) δ (ppm): 144.6 (C-2), 116.0 (C-3), 47.0 (C-1), 40.7 (C-5), 38.0 (C-6), 31.5 (C-7), 31.3 (C-4), 26.4 (C-8), 23.0 (C-10), 20.8 (C-9).

4-Terpineol (2). Colorless oil, C₁₀H₁₈O. ¹H-NMR (500 MHz, CDCl₃) δ (ppm): 5.32 (1H, m, H-5), 2.17 (2H, m, H-6), 1.94 (2H, m, H-3), 1.71 (3H, s, 10-CH₃), 1.67 (1H, m, H-7), 1.58 (2H, m, H-2), 0.97 (3H, d, J = 7.0 Hz, 8-CH₃), 0.94 (3H, d, J = 7.0 Hz, 9-CH₃); ¹³C-NMR (125 MHz, CDCl₃) δ (ppm): 133.88 (C-4), 118.45 (C-5), 71.75 (C-1), 36.78 (C-7), 34.64 (C-2), 30.78 (C-6), 27.07 (C-10), 23.27 (C-3), 16.83 (C-8, 9).

D-Limonene (3). Colorless oil, C₁₀H₁₆. ¹H-NMR (500 MHz, CDCl₃) δ (ppm): 5.43 (1H, m, H-6), 4.74 (2H, s, H-9), 2.05–2.16 (3H, m, H-2, H-4), 1.93–2.00 (2H, m, H-5), 1.81–1.85 (1H, m, H-3a), 1.76 (3H, s, H-10), 1.68 (3H, s, H-7), 1.46–1.54 (1H, m, H-3b); ¹³C-NMR (125 MHz, CDCl₃) δ (ppm): 150.25 (C-8), 133.73 (C-1), 120.66 (C-6), 108.37 (C-9), 41.10 (C-4), 30.82 (C-2), 30.61 (C-5), 27.94 (C-3), 23.46 (C-7), 20.80 (C-10).