Variation in the Molecular Structure and Radiocarbon Abundance of Mineral-Associated Organic Matter across a Lithosequence of Forest Soils

Katherine Heckman [1,*]**, Heather Throckmorton** [2]**, William R. Horwath** [2]**,
Christopher W. Swanston** [1] **and Craig Rasmussen** [3]

Table S1. Full regression models. HF = heavy fraction.

HF %N = −0.000767 + 0.0582872(HF %C) + 0.0018483(HF δ^{15}N) + 0.0196685(Fe_{PY})

HF %C, $p < 0.0001$; HF δ^{15}N, $p = 0.0053$; Fe_{PY}, $p = 0.0175$

HF %N = 0.0383344 + 1.1654402(Biomass N mg g^{-1})

Biomass N, $p = 0.0028$

HF %C = 1.2578155 − 0.235704(log(depth)) + 0.117679(Al_{PY})

log(depth), $p < 0.0001$; Al_{PY}, $p = 0.0116$

HF Δ^{14}C = 1.1349763 − 1.002719(depth) − 0.004121(Fe_D)

Depth, $p < 0.0001$; $Fe_D = 0.0036$

HF Δ^{14}C = 1.1200545 − 0.002031(depth) − 0.002987(SSA)

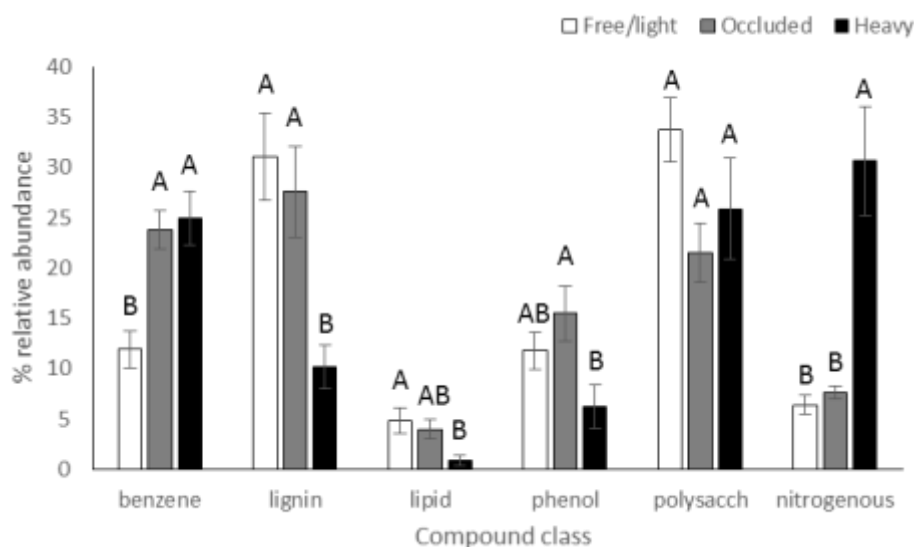Depth, $p = 0.0012$; surface area = 0.0001

Figure S1. Pyrolysis GC/MS compound class abundance: Relative compound class abundance averaged across density fractions and sites ($n = 8$), as determined by pyrolysis GC/MS analysis. Letters indicate significant differences as determined by Tukey HSD, $\alpha < 0.05$.