Supplementary materials

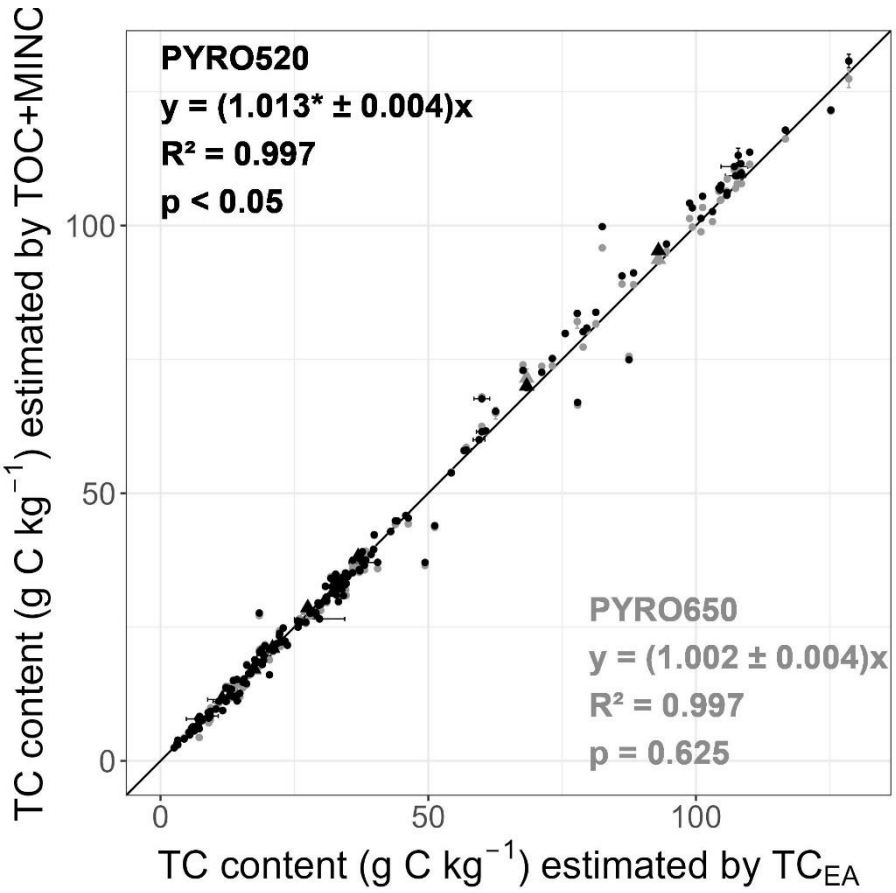

Figure S1: TC content (g C kg^{-1}) estimated by TC_{650} (gray) and TC_{520} (black) vs TC content estimated by TC_{EA} (n = 173) and reference TC content (n = 9). Soil samples are represented by dots, and reference materials by triangles. Error bars show the standard deviations of TC estimates by TC_{EA} (black symbols only, n = 50), TC_{650} (n = 20), and TC_{520} (n = 20). The 1:1 line (y = x) is plotted as a solid black line. Regression slopes are significantly different from zero (p-value (p) < 0.001). The p-values displayed on the graph indicate whether the slope significantly differs from 1. * Slope significantly differs from 1.

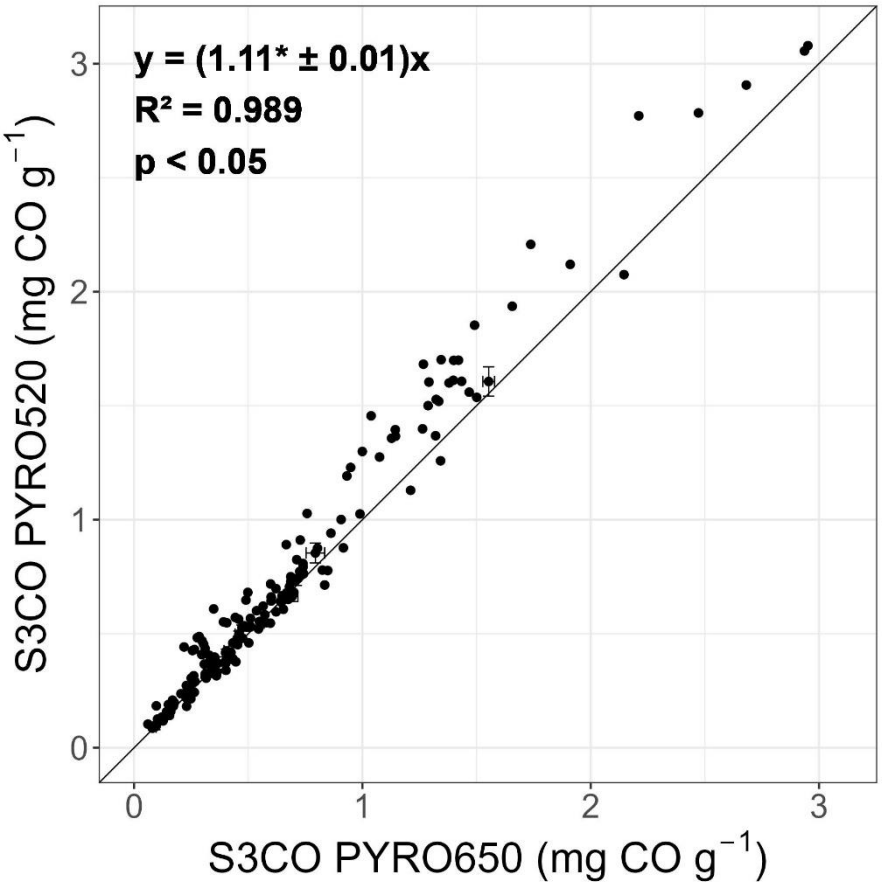

Figure S2: S3CO curves (mg CO g^{-1}) obtained with the PYRO520 cycle vs S3CO curves obtained with the PYRO650 cycle (n = 173). The 1:1 line (y = x) is plotted as a solid black line. Regression slope is significantly different from zero (p-value (*p*) < 0.001). The p-value displayed on the graph indicates whether the slope significantly differs from 1. * Slope significantly differs from 1.

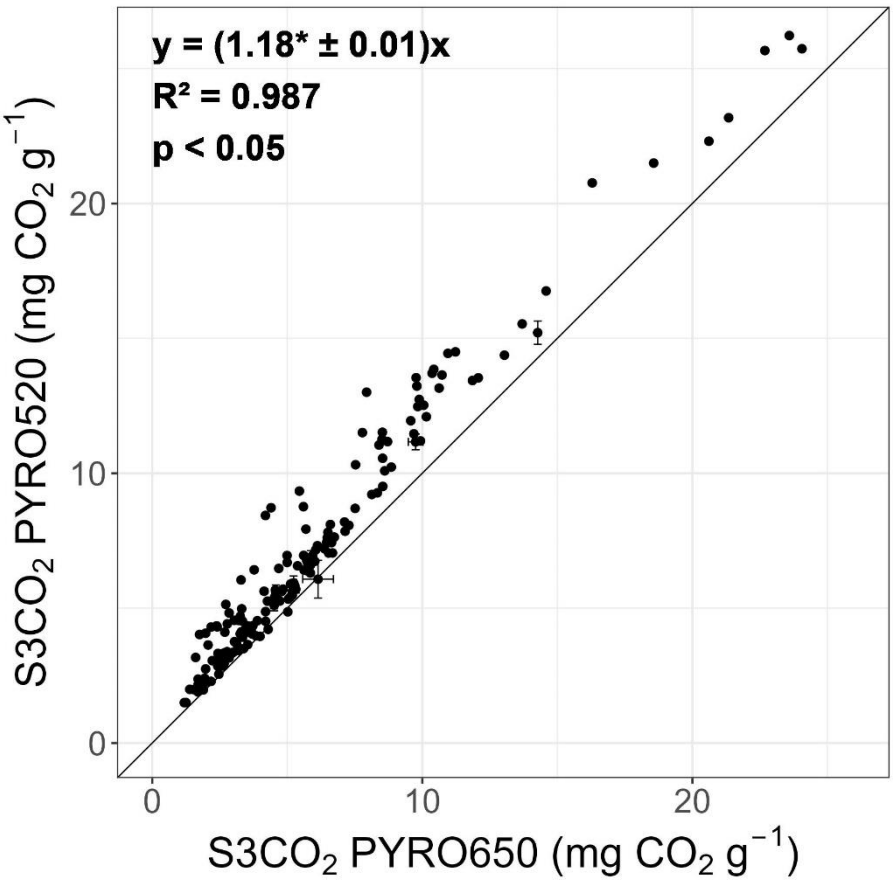

Figure S3: $S3CO_2$ curves (mg CO_2 g^{-1}) obtained with the PYRO520 cycle vs $S3CO_2$ curves obtained with the PYRO650 cycle (n = 173). The 1:1 line (y = x) is plotted as a solid black line. Regression slope is significantly different from zero (p-value (*p*) < 0.001). The p-value displayed on the graph indicates whether the slope significantly differs from 1. * Slope significantly differs from 1.

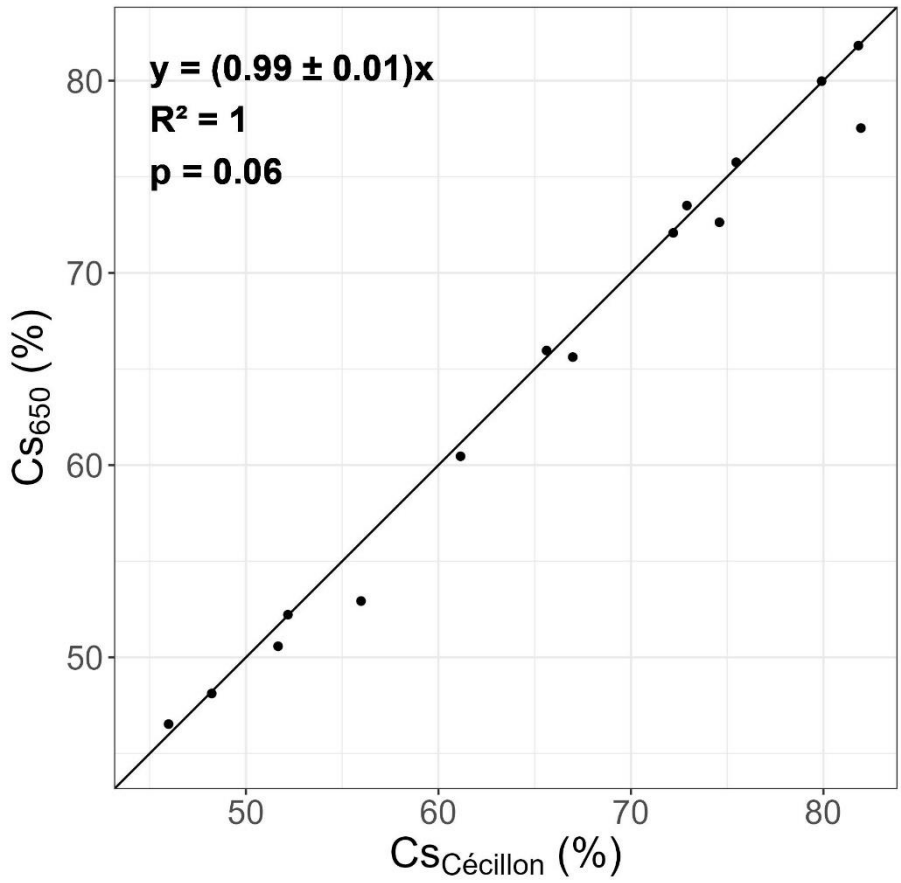

Figure S4: Cs_{650} proportions obtained with the PYRO650 cycle vs $Cs_{Cécillon}$ proportions obtained with the cycle used by Cécillon et al., 2018 (n = 15). The 1:1 line (y = x) is plotted as a solid black line. Regression slope is significantly different from zero (p-value (p) < 0.001). The p-value displayed on the graph indicates whether the slope significantly differs from 1. * Slope significantly differs from 1.