**README1093**

Dataset Title: Plant wax *n*-alkane concentration and carbon isotopic data of leaves grown under ambient and elevated CO2 over four years.

Description: This dataset contains mass fraction and stable carbon isotopic composition of leaf wax *n*-alkanes, as well as bulk leaf stable carbon isotopes, from specimens of Acer pseudoplatanus and Corylus avellana that were collected at the Birmingham Institute of Forest Research (BIFoR)’s Free Air Carbon dioxide Enrichment (FACE) facility, Staffordshire, monthly through the growth season (roughly May-October) from 2018 to 2021. Data were measured by GC-FID (gas chromatography-flame ionisation detection for mass fraction in ng/g dry weight of leaf), EA-IRMS (elemental analyser-isotope ratio mass spectrometry for bulk leaf isotopes) and GC-C-IRMS (gas chromatography-combustion-isotope ratio mass spectrometry for compound specific isotope analysis). Leaves were collected by technicians onsite as part of the lead author’s PhD project.

Key words: *n*-alkane, CO2, leaf wax, δ13C, biomarker, organic geochemistry

Research data type: Dataset

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