



A first Late Glacial and Early Holocene coupled 18O and 2H biomarker isotope record from Gemuendener Maar, Germany

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During the last years, we developed a method for compound-specific d18O analyses of hemicellulose-derived sugars from plants, soils and sediment archives (Zech and Glaser, 2009; Zech et al., 2014). The coupling of respective d18O sugar results with d2H alkane results from paleosol and sediment climate archives proved to be a valuable innovative approach towards quantitative paleoclimate reconstruction (Hepp et al., 2014; Zech et al., 2013).

Here we present a first coupled d18O sugar and d2H alkane biomarker record obtained for Late Glacial and Early Holocene sediments from the Gemuendener Maar in the Eifel, Germany. The d18O sugar biomarker record resembles the d18O ice core records of Greenland. The coupling with the d2H alkane biomarker results allows drawing further more quantitative paleoclimate information in terms of (i) paleohumidity and (ii) d18O of paleoprecipitation.