

Supplementary Materials: Oxidation Products of Ester-Based Oils with and without Antioxidants Identified by Stable Isotope Labelling and Mass Spectrometry

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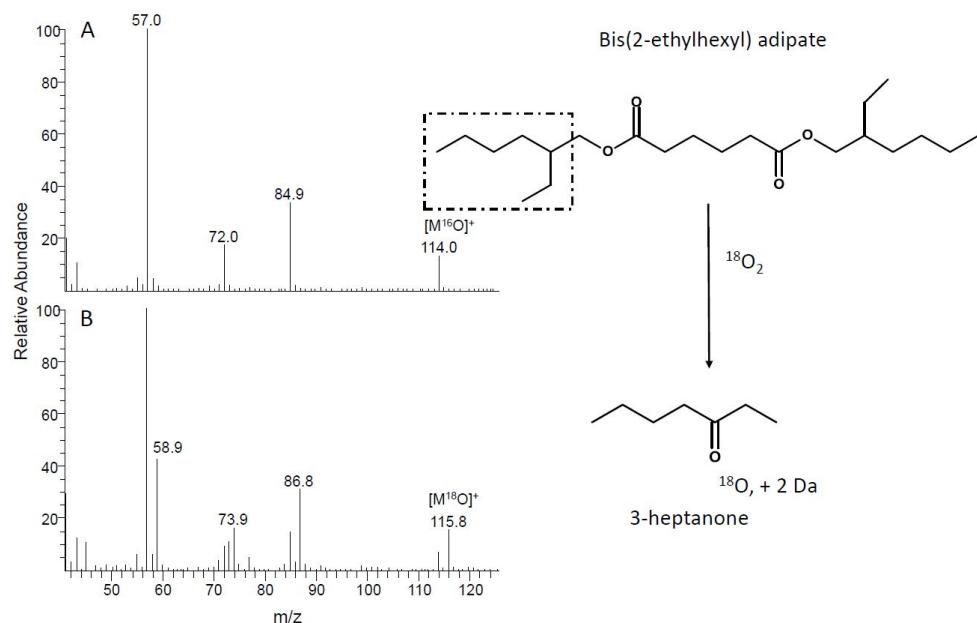


Figure S1. Positive ion mass spectra of 3-heptanone (c) obtained after alteration under $^{16}\text{O}_2$ (A) and $^{18}\text{O}_2$ (B) atmosphere, respectively. Peaks of fragments where a change of the m/z value due to isotope labelling occurred are labelled with the respective values. A simplified oxidation reaction is suggested for the respective molecule.

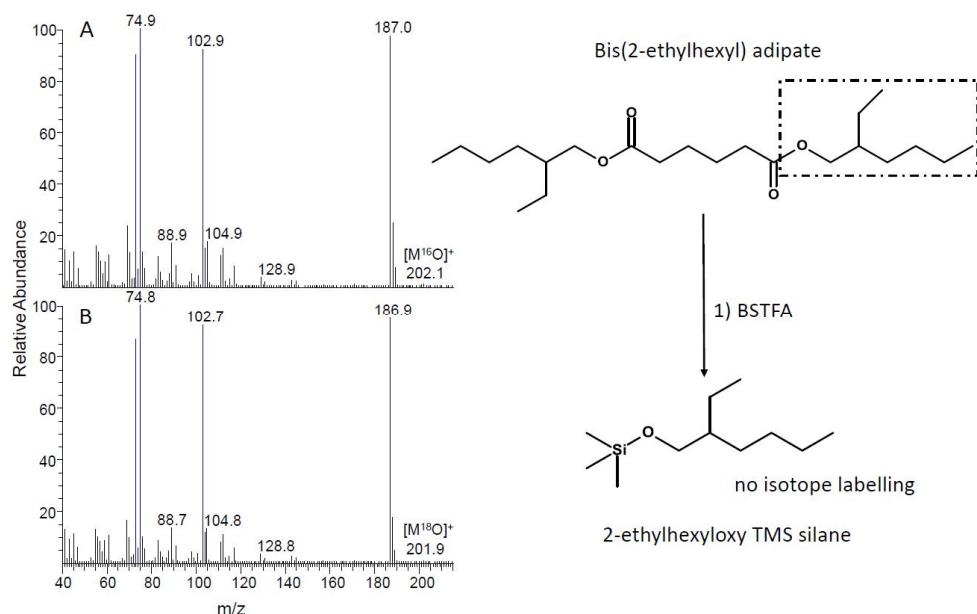


Figure S2. Positive ion mass spectra of (2-ethylhexyl)oxy TMS silane (d) obtained after alteration under $^{16}\text{O}_2$ (A) and $^{18}\text{O}_2$ (B) atmosphere, respectively. Random peaks of fragments where a change of the m/z value could have occurred due to isotope labelling are labelled with the respective values. A simplified oxidation reaction is suggested for the respective molecule.

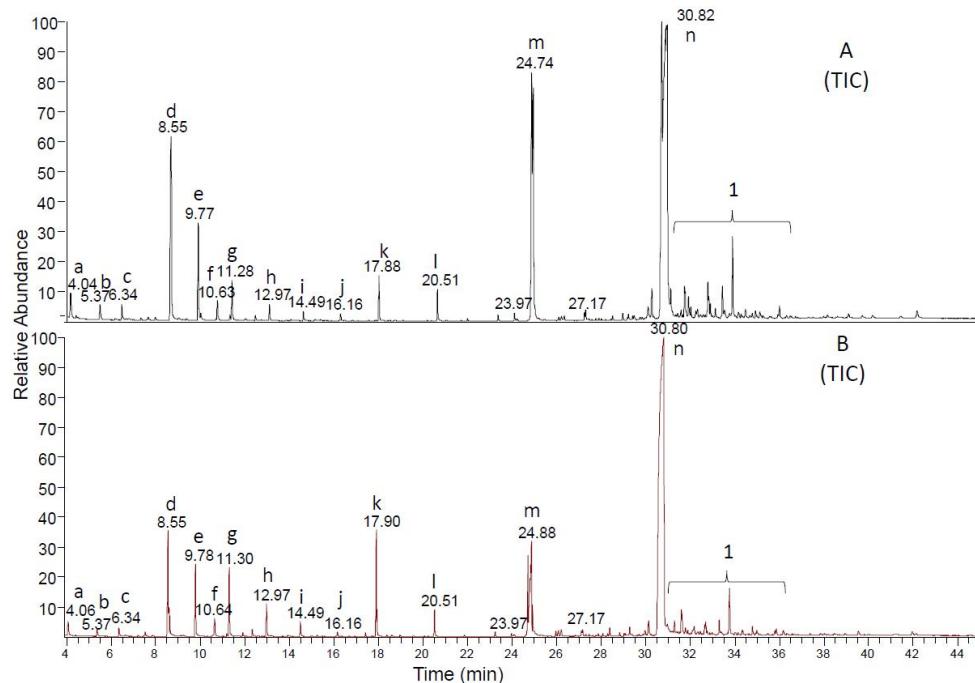


Figure S3. TIC chromatograms of alteration products obtained under 1 bar $^{16}\text{O}_2$ (A) and 2 bar $^{16}\text{O}_2$ (B) atmosphere without AO. Main products (a-m) and target molecule (n, starting material) are marked and given in Table 1 and 3. Peaks under bracket with label 1 indicate oxidized molecules of ester-based base oil bis(2-ethylhexyl) adipate.

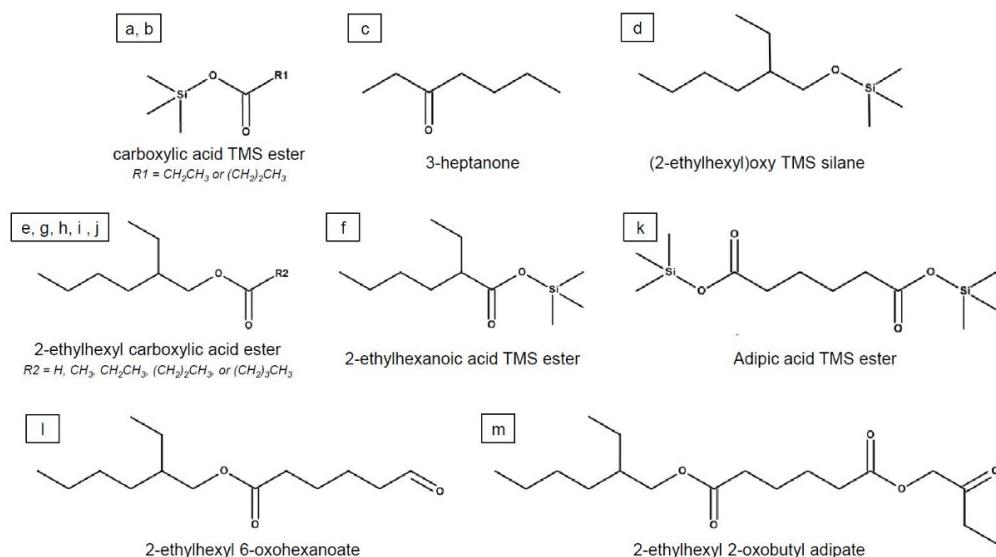


Figure S4. Structures of main degradation products according to Table 1 and 2.