

Antioxidant Activity of Biogenic Cinnamic Acid Derivatives in Polypropylene

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1. ¹H- and ¹³C-NMR spectra of chemicals

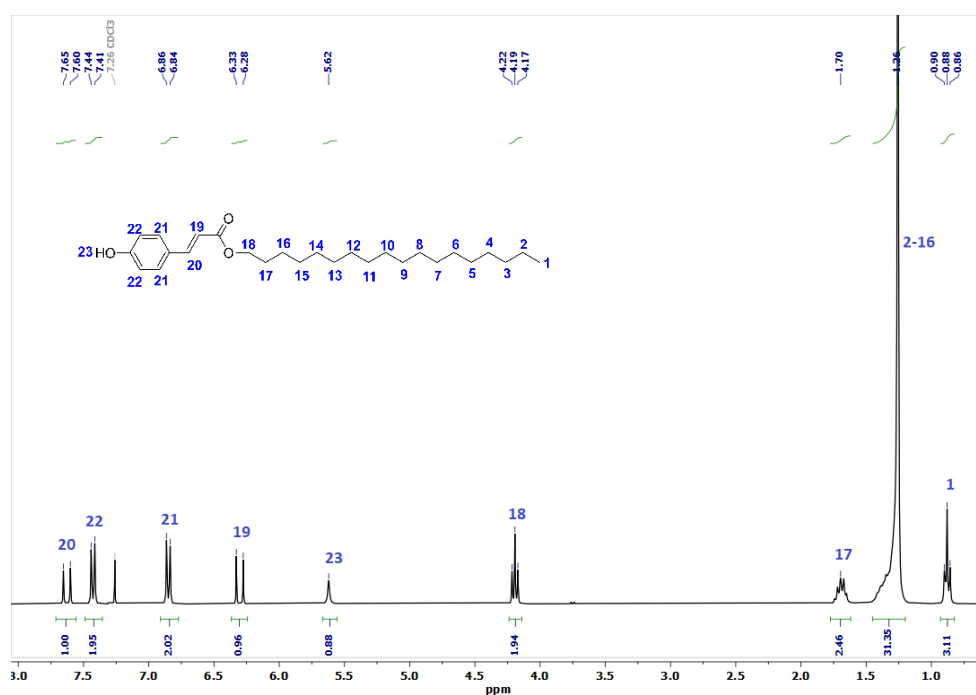


Figure S1 ¹H NMR of Hzoed in Chloroform-d.

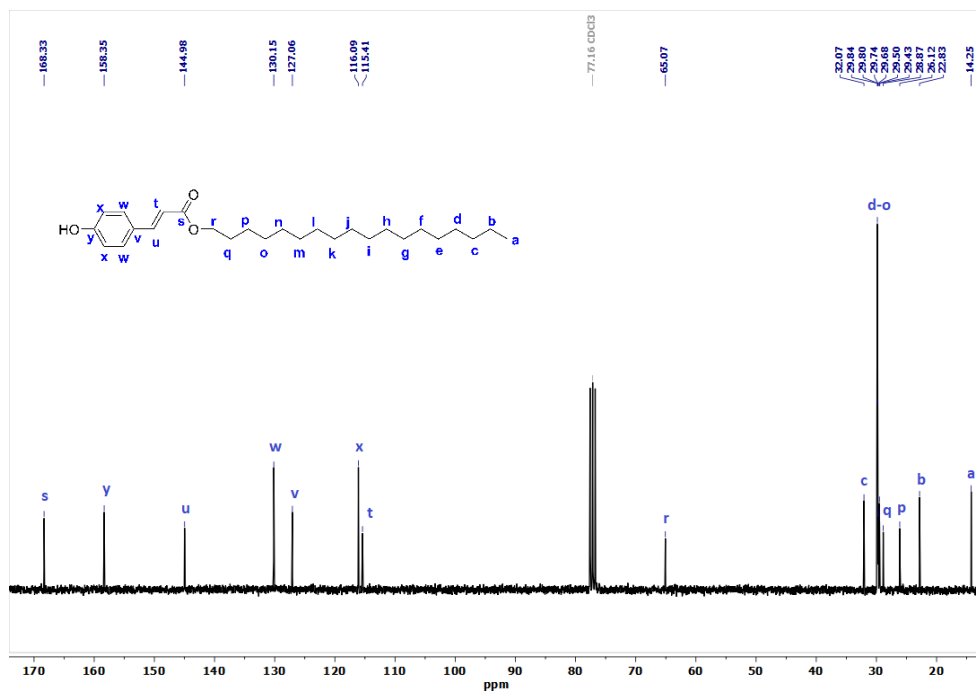


Figure S2 ¹³C NMR of Hzocd in Chloroform-d.

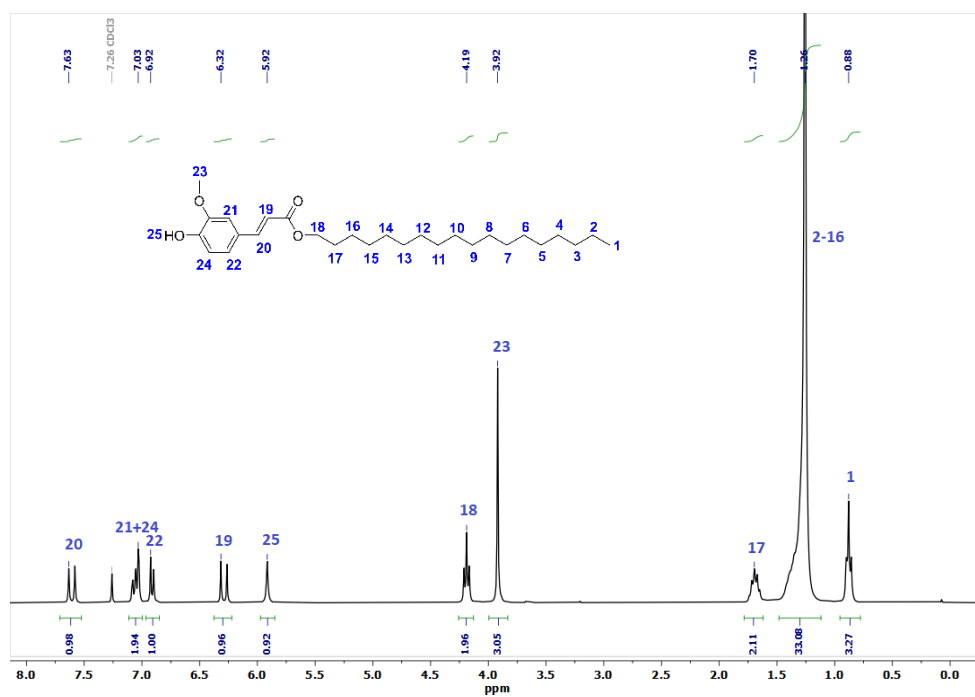


Figure S3 ¹H NMR of FaSa in Chloroform-d.

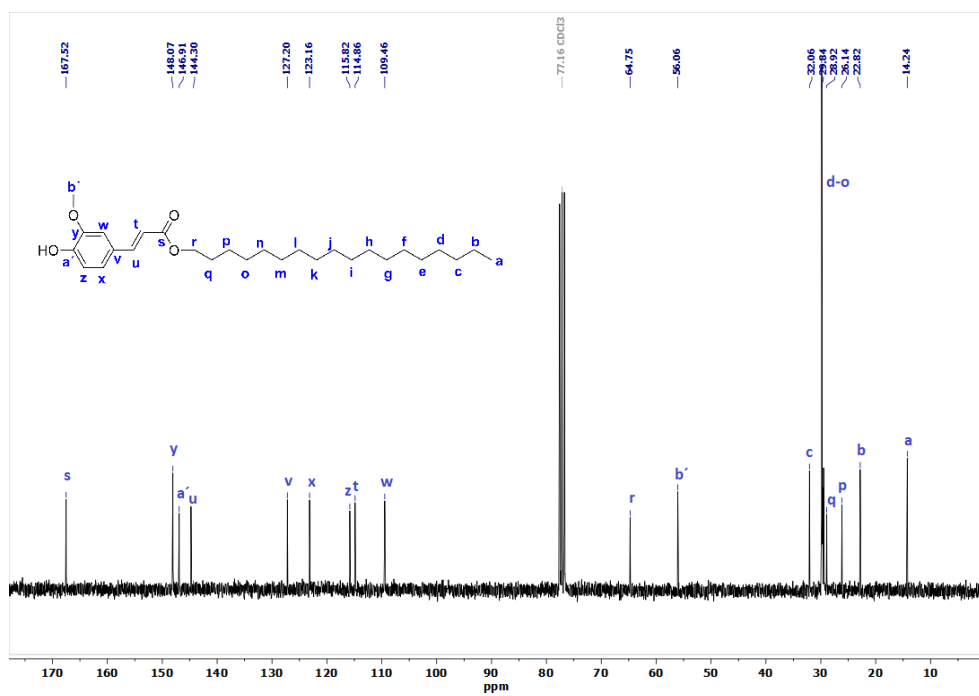


Figure S4 ^{13}C NMR of FaSa in Chloroform-d.

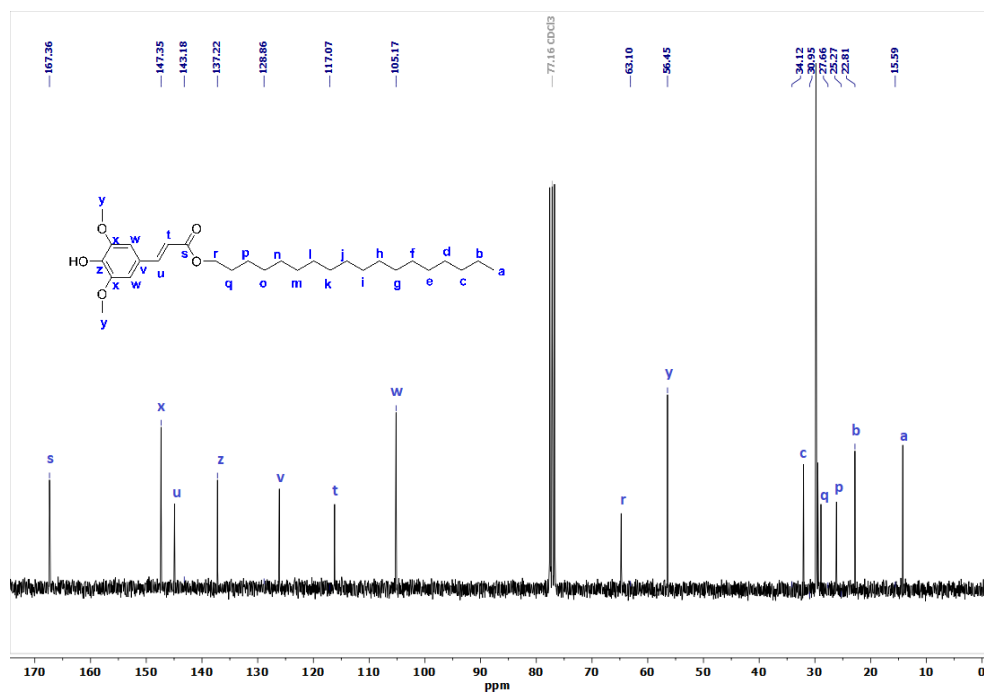


Figure S5 ^{13}C NMR of SinSa in Chloroform-d.

2. FTIR spectra

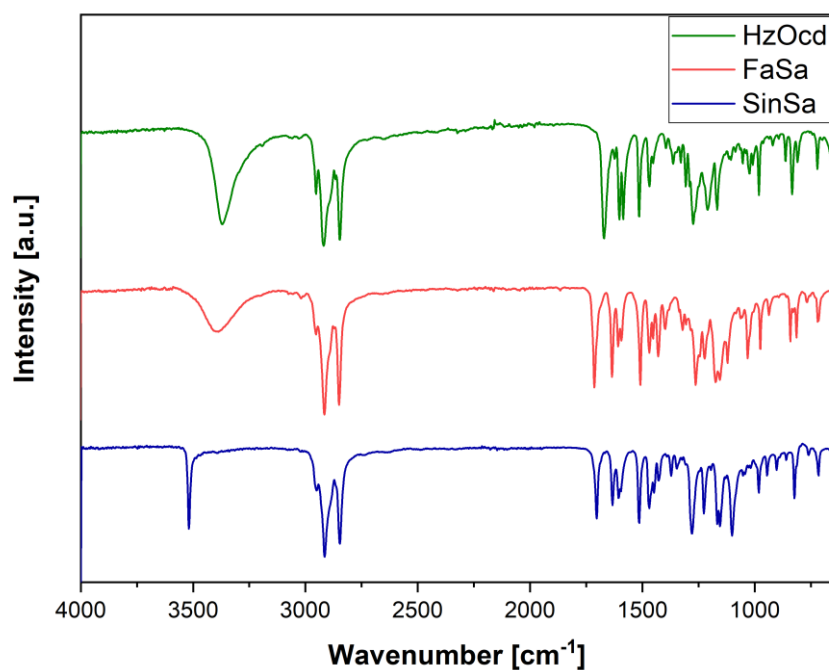


Figure S6 FTIR spectra of the synthesized hydroxycinnamic acid stearyl esters.

3. DPPH assay

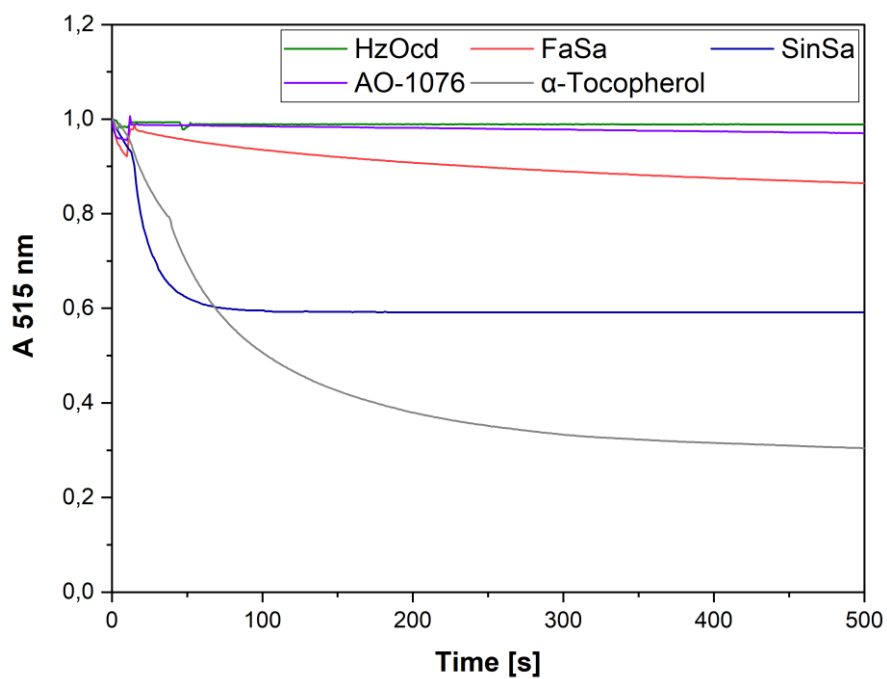


Figure S7 Decoloration kinetic curves of the examined antioxidants in the DPPH assay.

4. Performance as processing stabilizer

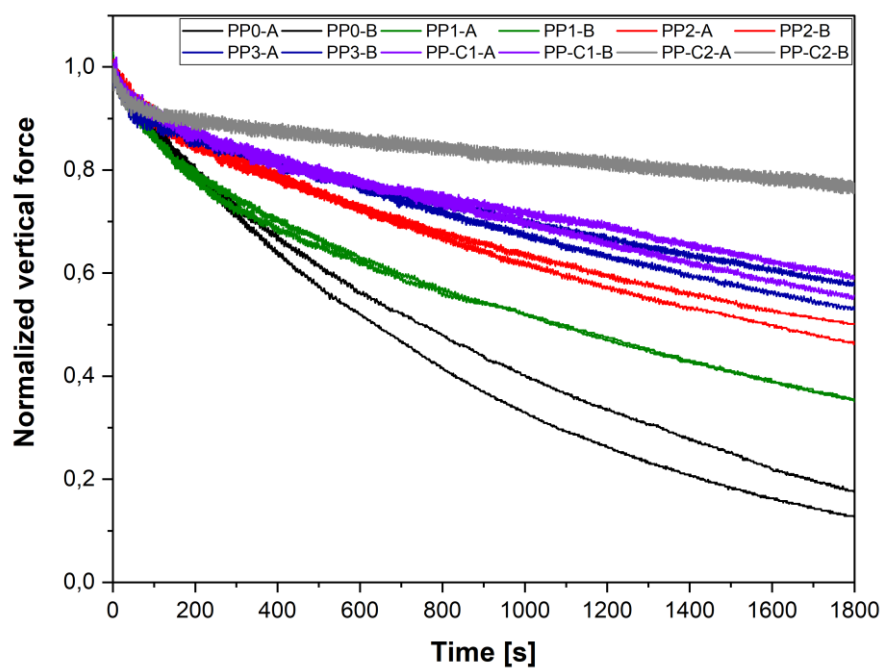


Figure S8 Obtained normalized vertical forces during 30 min micro-compounding with 200 °C and 200 rpm. Each compound is measured twice.

5. Long-term stability during accelerated aging

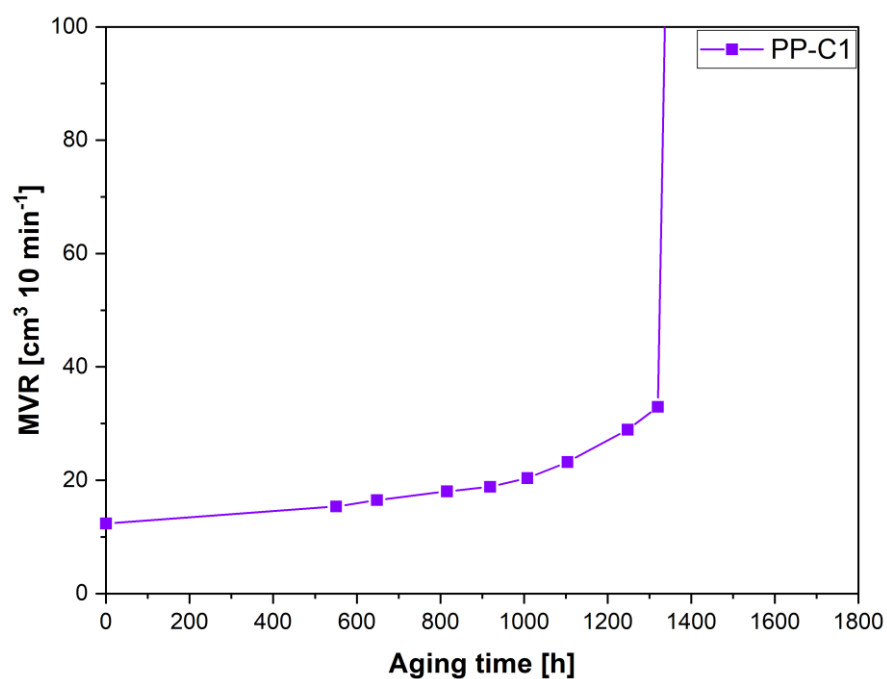


Figure S9 MVR values (2.16 kg/230 °C) during aging at 150 °C.

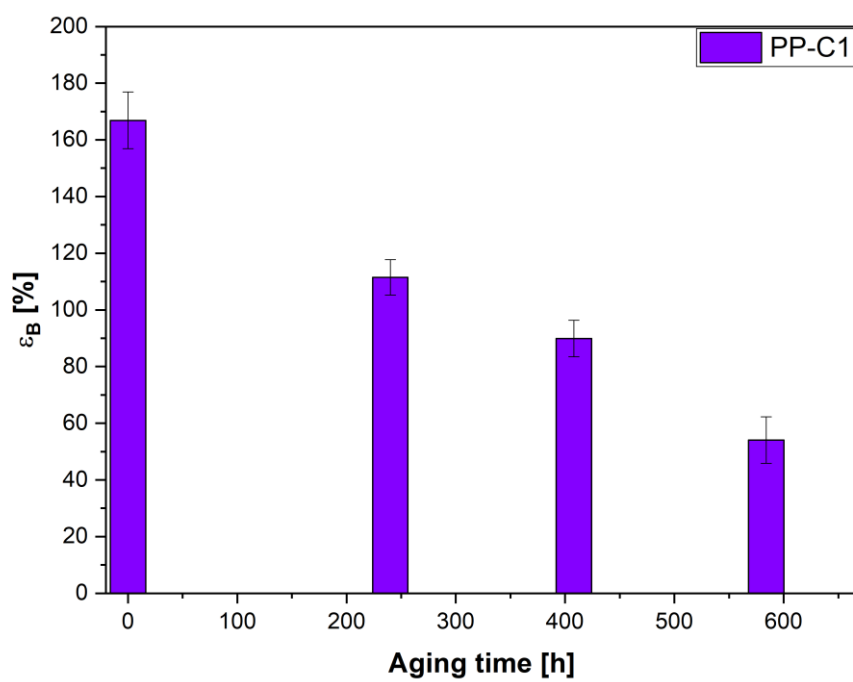


Figure S10 Elongation at break during aging at 150 °C.