*Article*

# Production of an Anise- and Woodruff-like Aroma by Monokaryotic Strains of *Pleurotus sapidus* Grown on *Citrus* Side Streams

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# Supplementary Material

**Table S1:** Classification of PSA strains into odor categories after surface cultivation on *Citrus*-supplemented medium; 1: musty, unpleasant, 2: PSA-typical, but weak and partly with off-notes, 3: PSA-typical, 4: woodruff-like, coumarin, herbaceous and partly sweetish, Dk: dikaryon, Mk: monokaryon.

| Categorie 1 | Categorie 2 | Categorie 3 | Categorie 4 |
|---|---|---|---|
| Mk 106 | Dk 69 | Mk 13 | Mk 37 |
| Mk 125 | Mk 1 | Mk 19 | Mk 41 |
| Mk 209 | Mk 2 | Mk 28 | Mk 49 |
| Mk 214 | Mk 5 | Mk 33 | Mk 57 |
| Mk 232 | Mk 15 | Mk 34 | Mk 55 |
| Mk 233 | Mk 27 | Mk 38 | Mk 74 |
| | Mk 31 | Mk 90 | Mk 117 |
| | Mk 32 | Mk 100 | Mk 124 |
| | Mk 45 | Mk 101 | Mk 126 |
| | Mk 60 | Mk 103 | Mk 216 |
| | Mk 70 | Mk 113 | Mk 229 |
| | Mk 78 | Mk 127 | |
| | Mk 82 | Mk 201 | |
| | Mk 85 | Mk 219 | |

| | | |
|---|---|---|
| | Mk 88 | Mk 225 |
| | Mk 93 | Mk 234 |
| | Mk 96 | |
| | Dk 3174 | |
| | Mk 107 | |
| | Mk 108 | |
| | Mk 115 | |
| | Mk 119 | |
| | Mk 129 | |
| | Mk 132 | |
| | Mk 203 | |
| | Mk 217 | |
| | Mk 223 | |
| | Mk 226 | |
| | Mk 228 | |

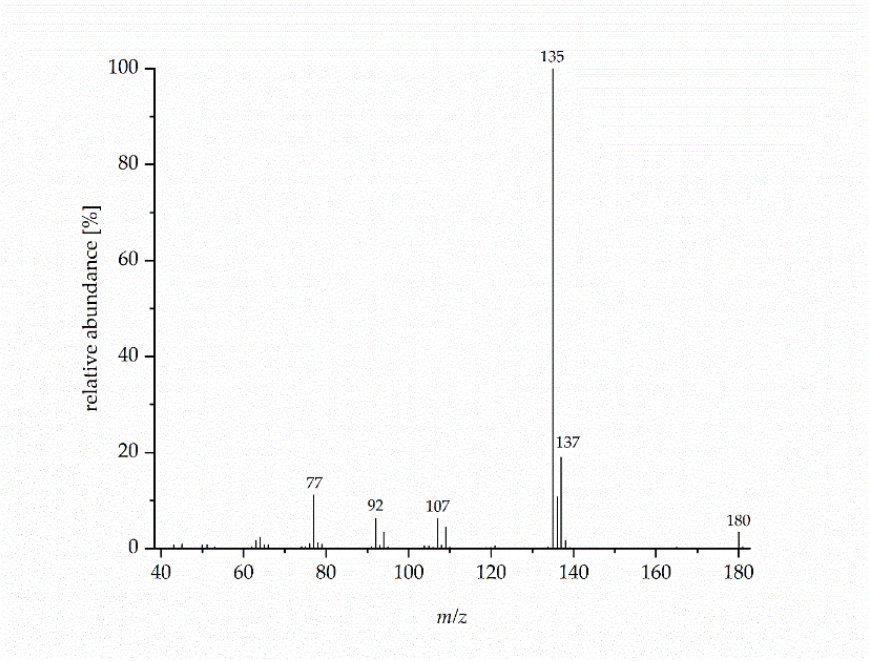
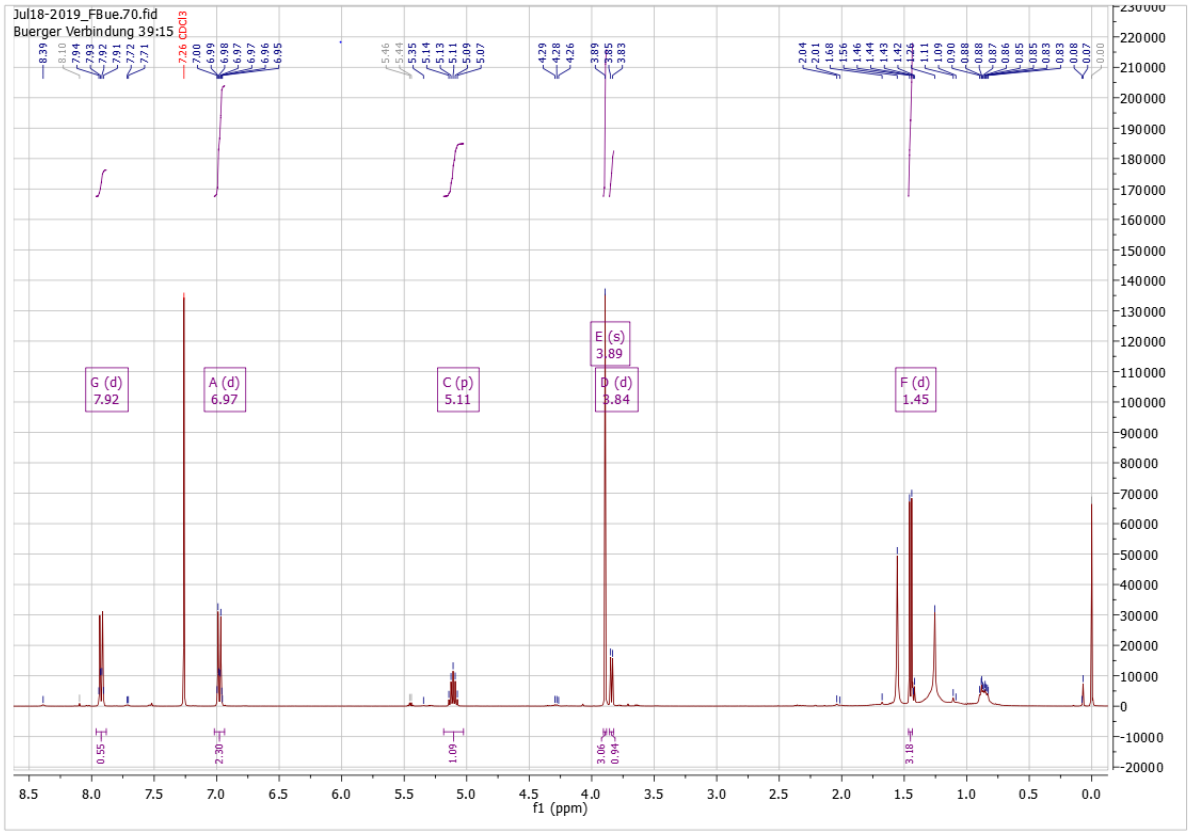



**Figure S1** Mass spectrum (EI, 70 eV) of 2-HPP **48**.



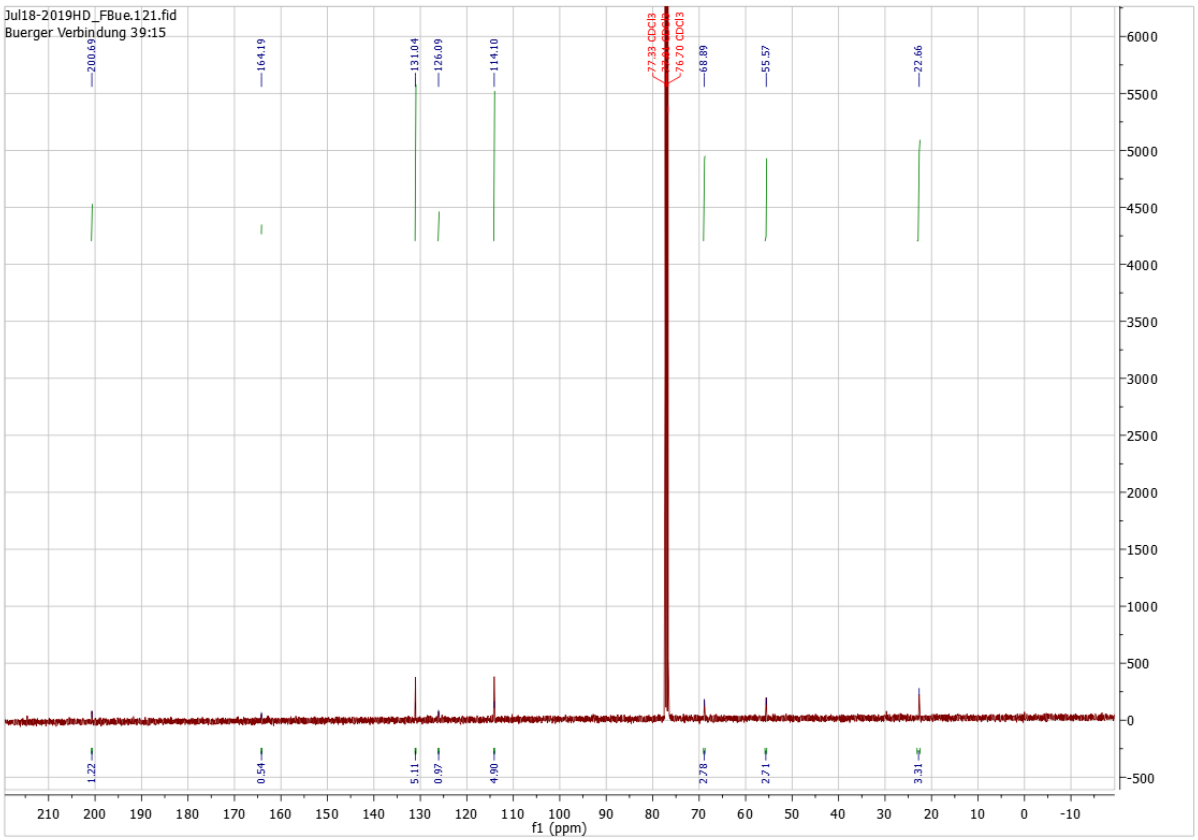




**Figure S2** [1]H and [13]C NMR spectra of 2-HPP **48**.

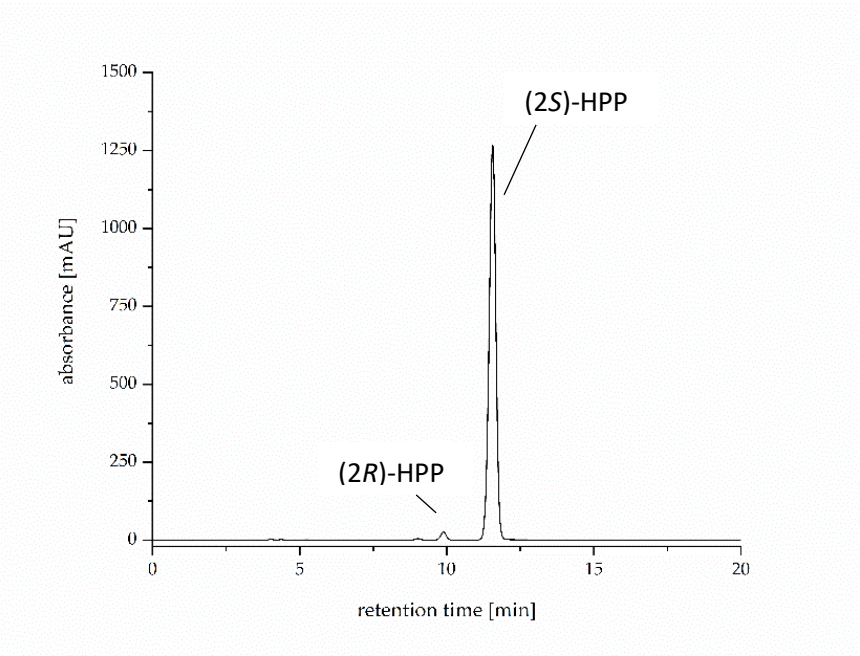



**Figure S3** Chromatogram of isolated 2-HPP **48** by chiral HPLC analysis.

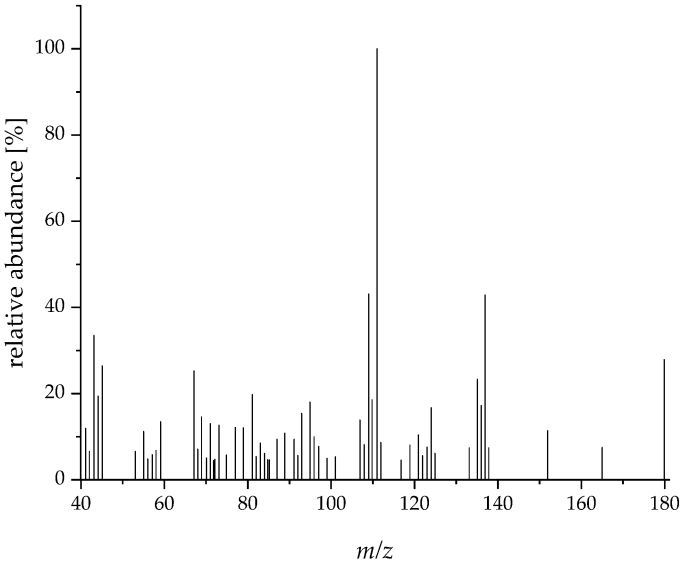



**Figure S4** Mass spectrum (EI, 70 eV) of **42**.

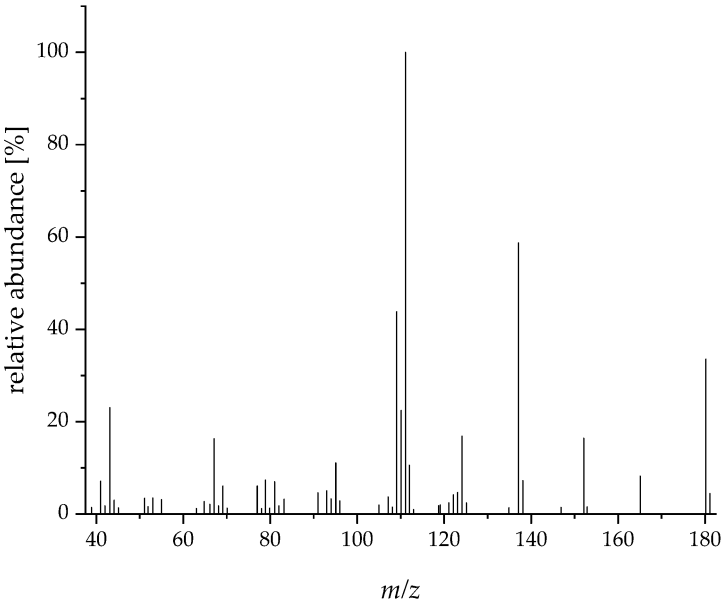



**Figure S5** Mass spectrum (EI, 70 eV) of 5,6,7,7a-tetrahydro-4,4,7a-trimethyl-2(4*H*)-benzofuranone.

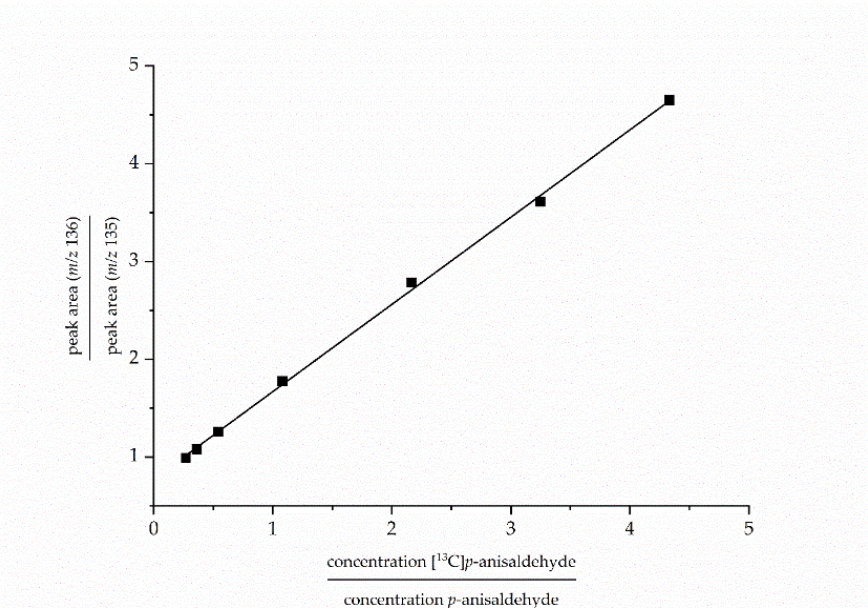



**Figure S6** Calibration curve obtained by gas chromatography-mass spectrometry of defined mixtures of *p*-anisaldehyde and [$^{13}$C]*p*-anisaldehyde.

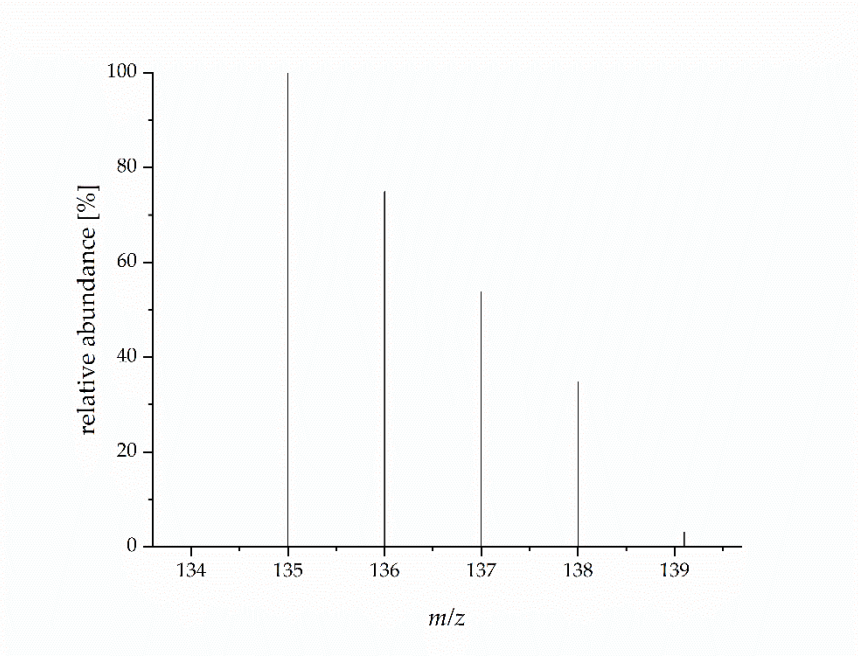



**Figure S7** Section of mass spectrum (EI, 70 eV) of [3,5-$^2$H]-4-methoxybenzaldehyde of PSA Dk culture supplemented with L-2-amino-3-([3,5-$^2$H]-4-hydroxyphenyl)-propanoic acid**.**

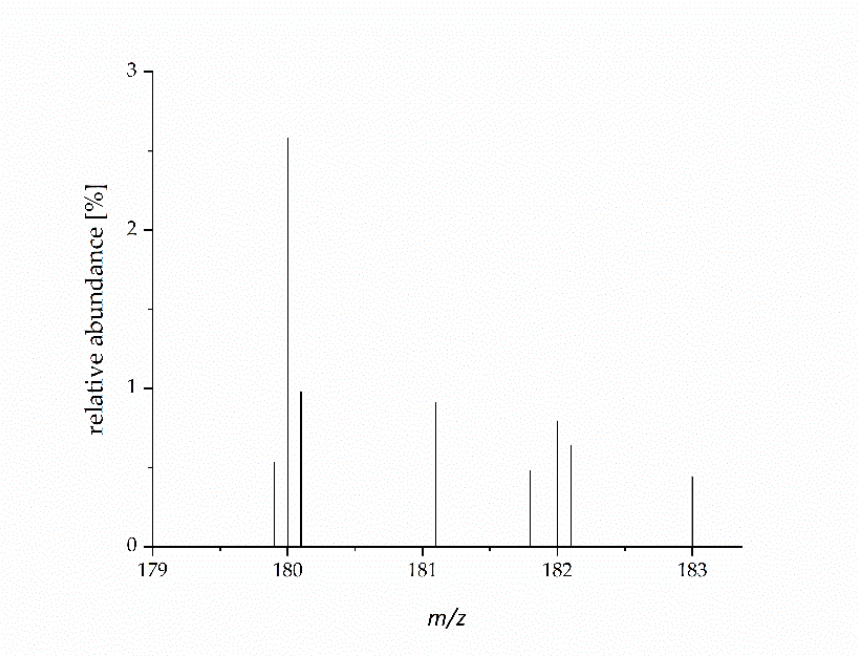



**Figure S8** Section of mass spectrum (EI, 70 eV) of 2-hydroxy-1-([3,5-$^2$H]-4-methoxyphenyl)-1-propanone of PSA Dk culture supplemented with L-2-amino-3-([3,5-$^2$H]-4-hydroxyphenyl)-propanoic acid.

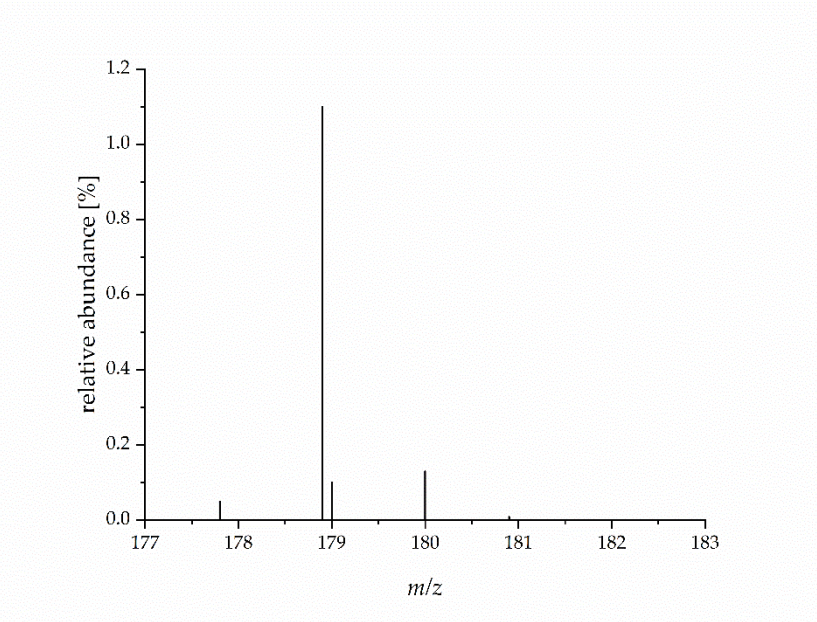



**Figure S9** Section of mass spectrum (EI, 70 eV) of 1-(4-methoxyphenyl)propane-1,[2-$^{13}$C]-dione.

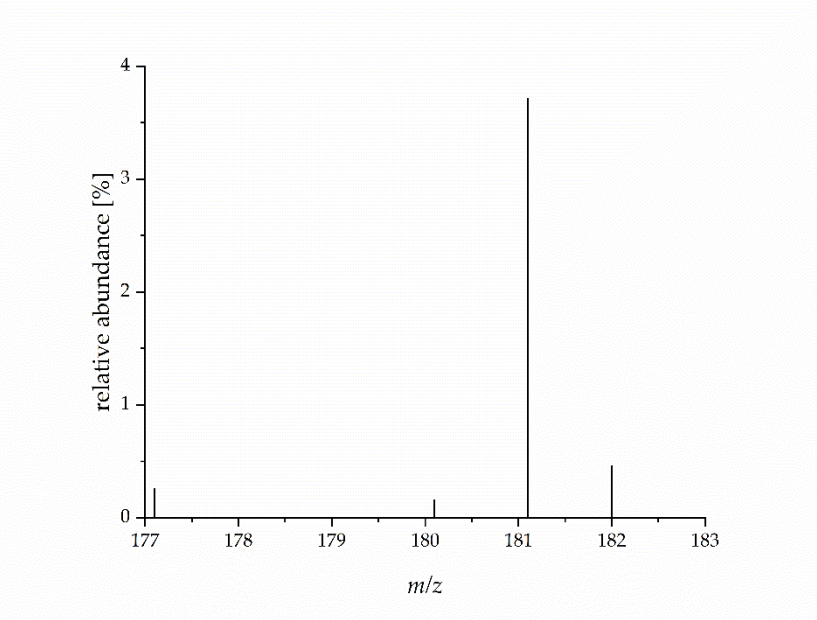



**Figure S10** Section of mass spectrum (EI, 70 eV) of [2-$^{13}$C]-hydroxy-1-(4-methoxyphenyl)-1-propanone after biotransformation of 1-(4-methoxyphenyl)propane-1,[2-$^{13}$C]-dione by PSA Mk 37 lyophilisate.

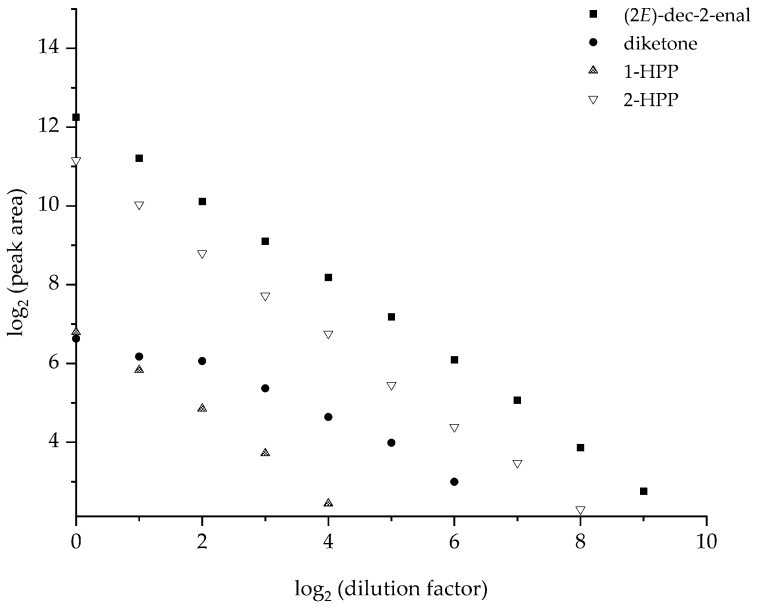



**Figure S11** $Log_2$-plotting of the peak areas of detected compounds against the dilution factor, analyzed by gas chromatography-flame ionization detection.