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Supporting Information

Isomeric C₁₂-Alkamides from the Roots of *Echinacea purpurea* Improve Basal and Insulin-Dependent Glucose Uptake in 3T3-L1 Adipocytes

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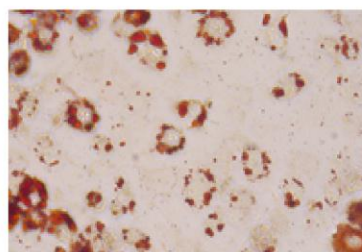
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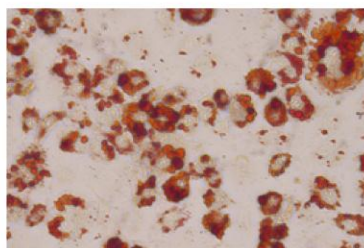
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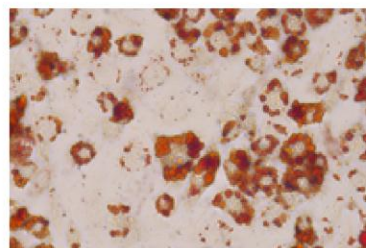
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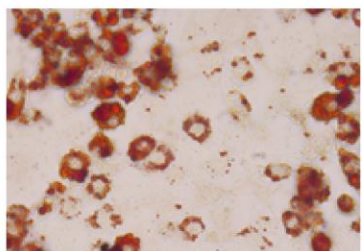
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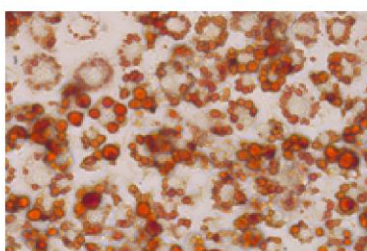
DCM extract



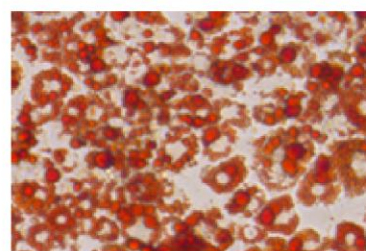
Fraction A



Fraction D



Compounds 1/2



Rosi

Fig. 1S Adipocyte differentiation of DI protocol-treated 3T3-L1 preadipocytes with DMSO, 100 $\mu\text{g/mL}$ DCM root extract of *Echinacea purpurea*, 100 $\mu\text{g/mL}$ fraction A, 100 $\mu\text{g/mL}$ fraction D, 30 μM compounds **1/2**, and 1 μM Rosi, respectively.

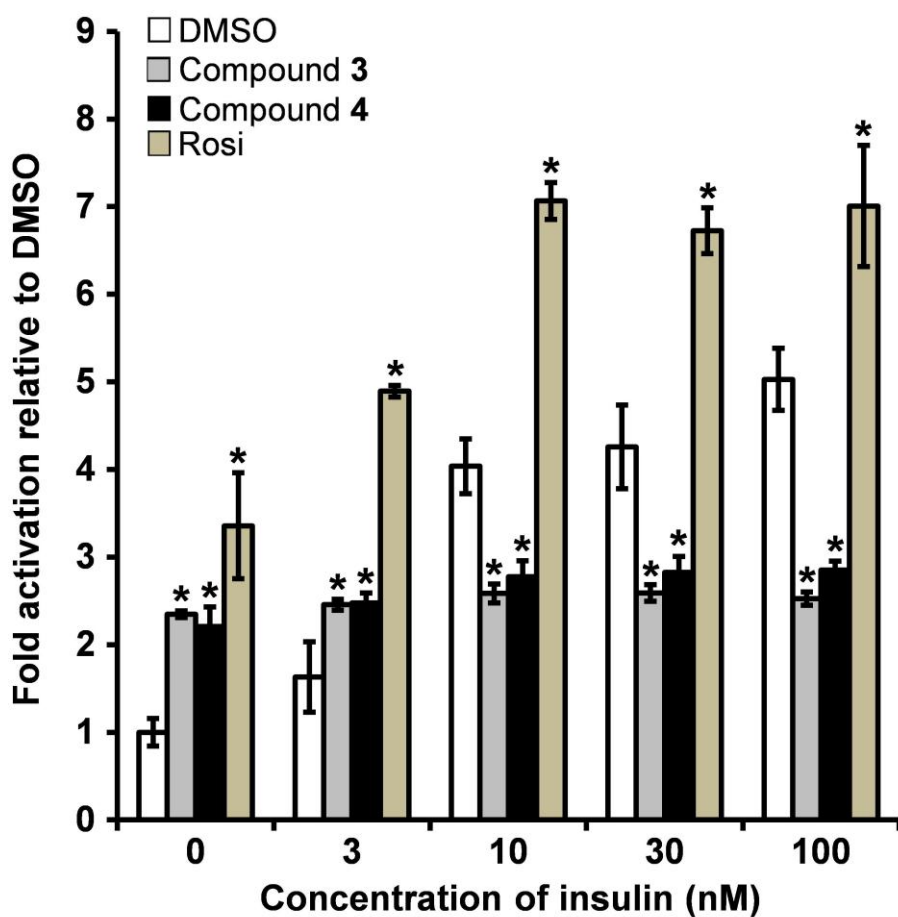


Fig. 2S Effect of compounds **3** and **4** at 30 μ M concentration on insulin-dependent glucose uptake. DMSO (vehicle) was set to 1 and the results normalized to this, while Rosi (1 μ M) was the positive control. All values are expressed as mean \pm SD of three independent experiments in triplicates. * $p < 0.001$ indicates significance relative to DMSO in each treatment.

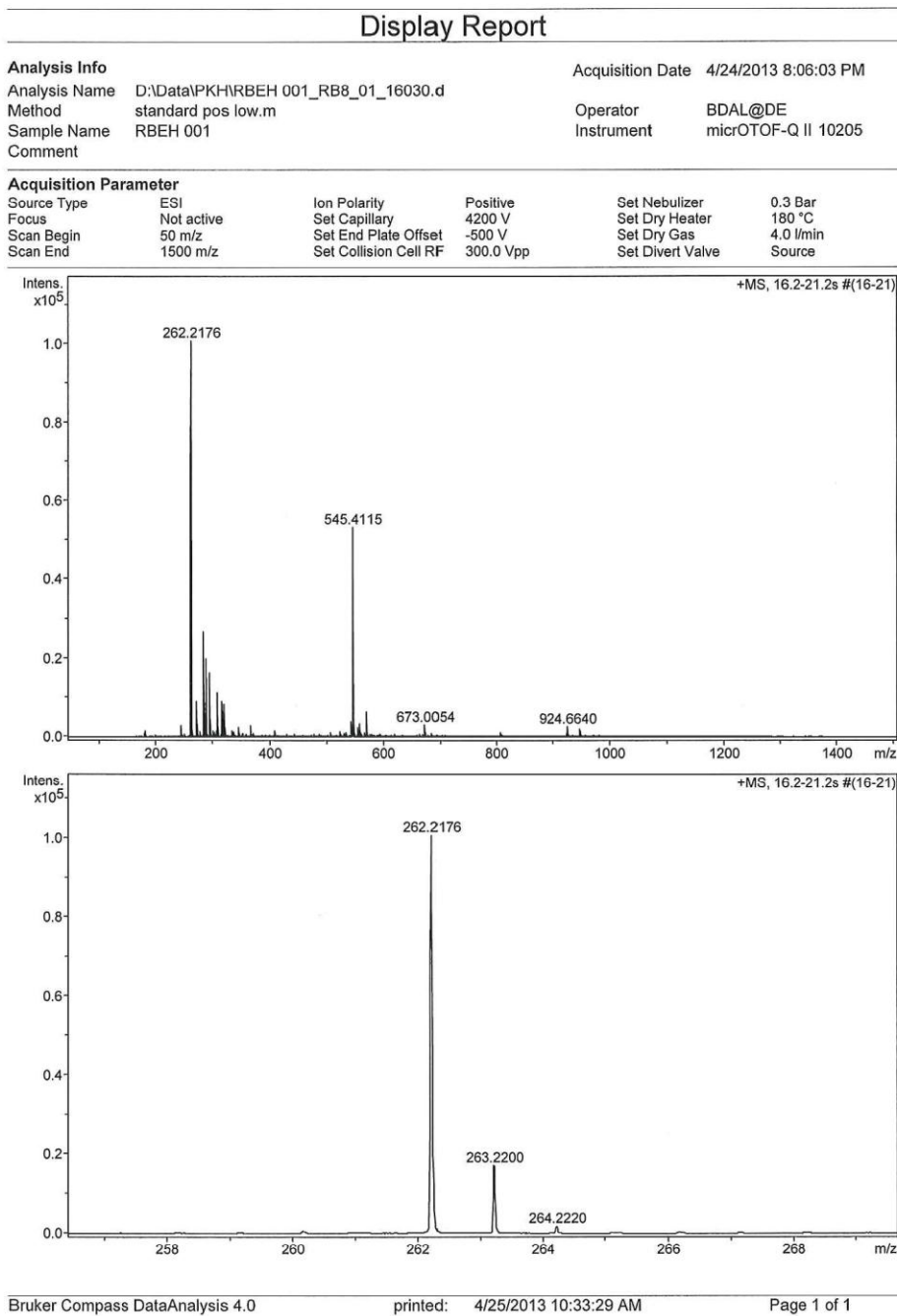


Fig. 3S HR-ESI-MS spectrum of compounds **1/2** with a quasi-molecular precursor ion at m/z 262.2176 $[M + H]^+$. The peak at m/z 545 corresponds to the adduct $[2M + Na]^+$.

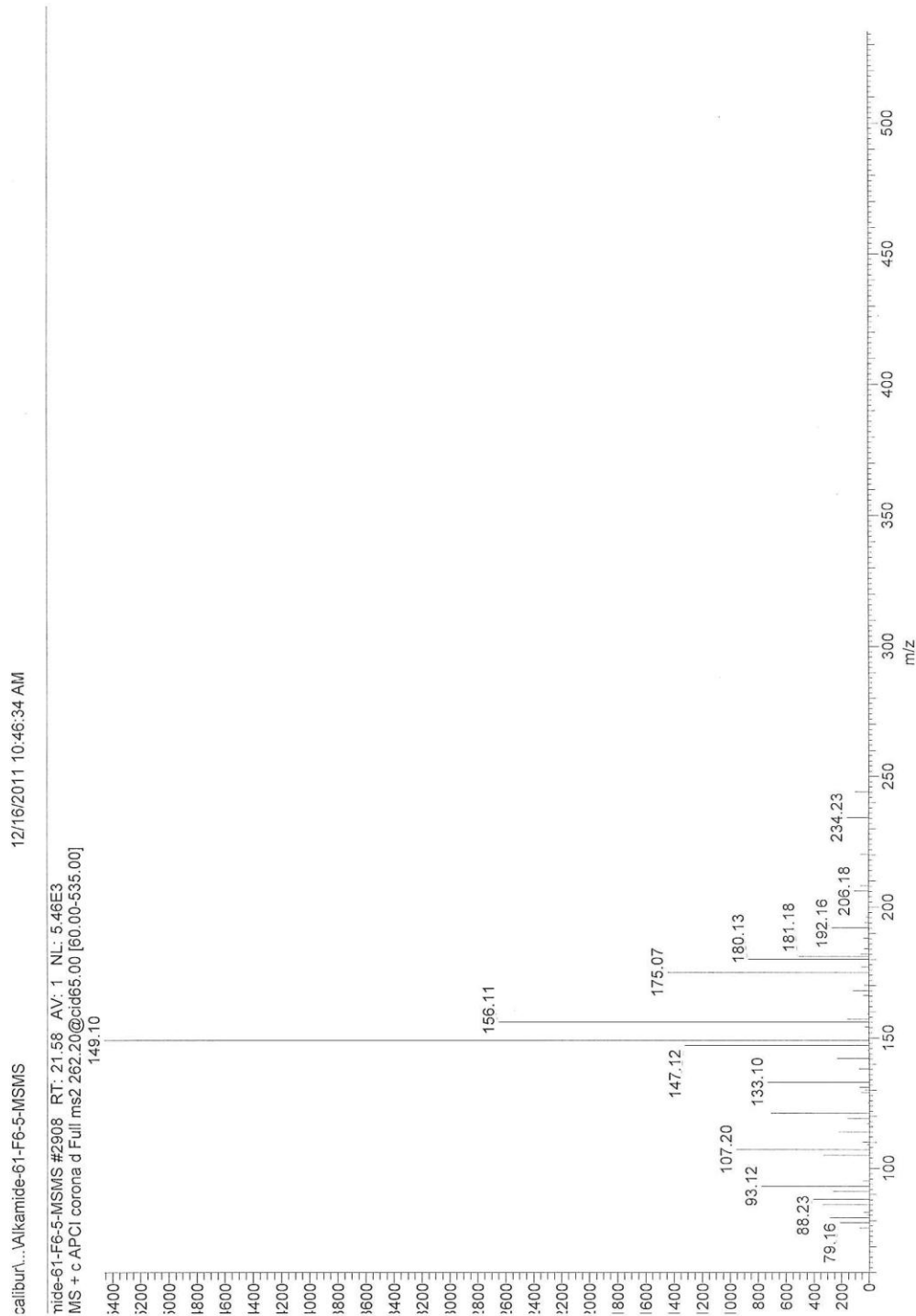


Fig. 4S MS/MS spectrum of the quasi-molecular precursor ion (m/z 262 $[M + H]^+$) of compounds 1/2.

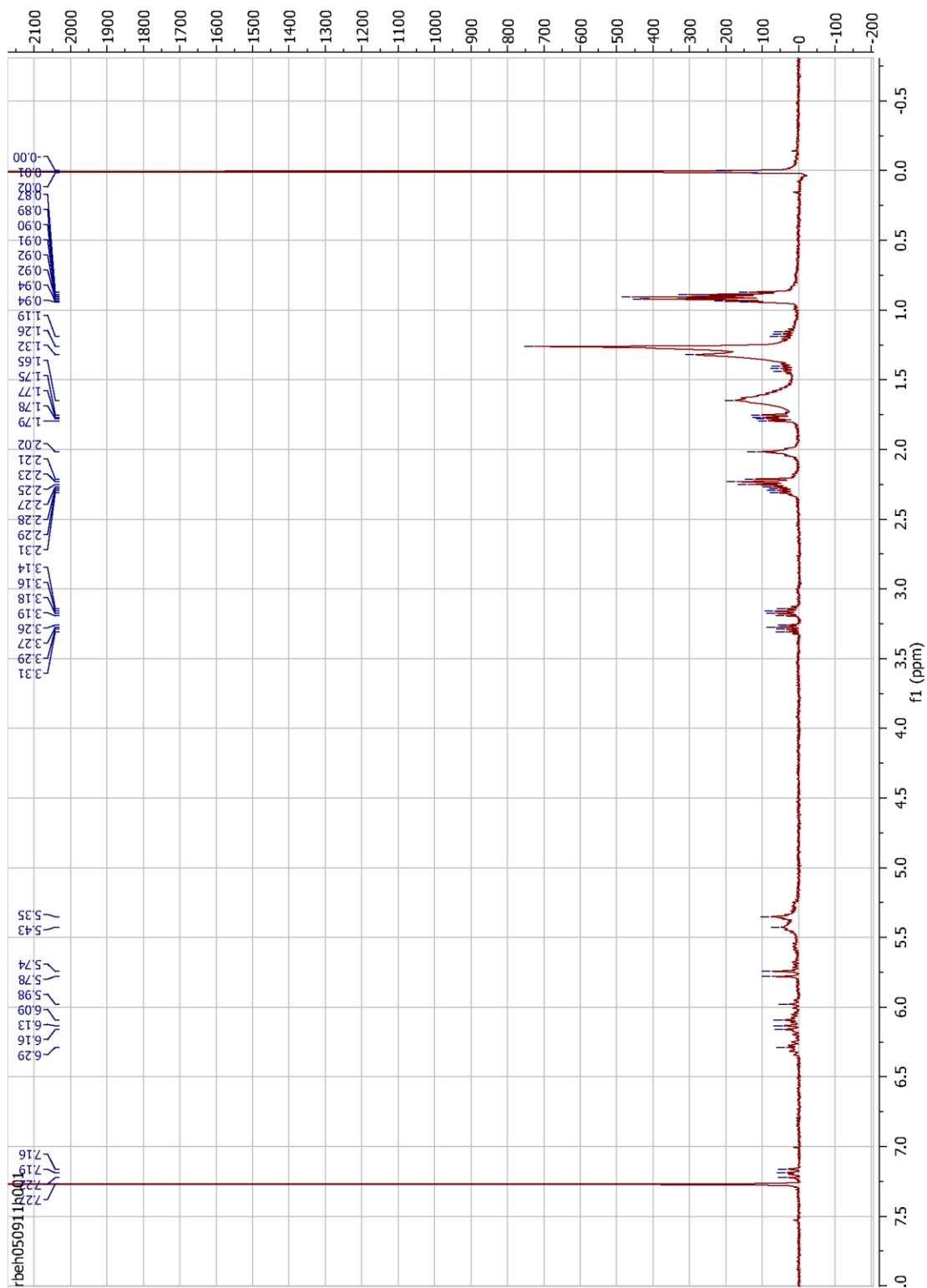


Fig. 5S ^1H NMR spectrum of compounds **1/2**.

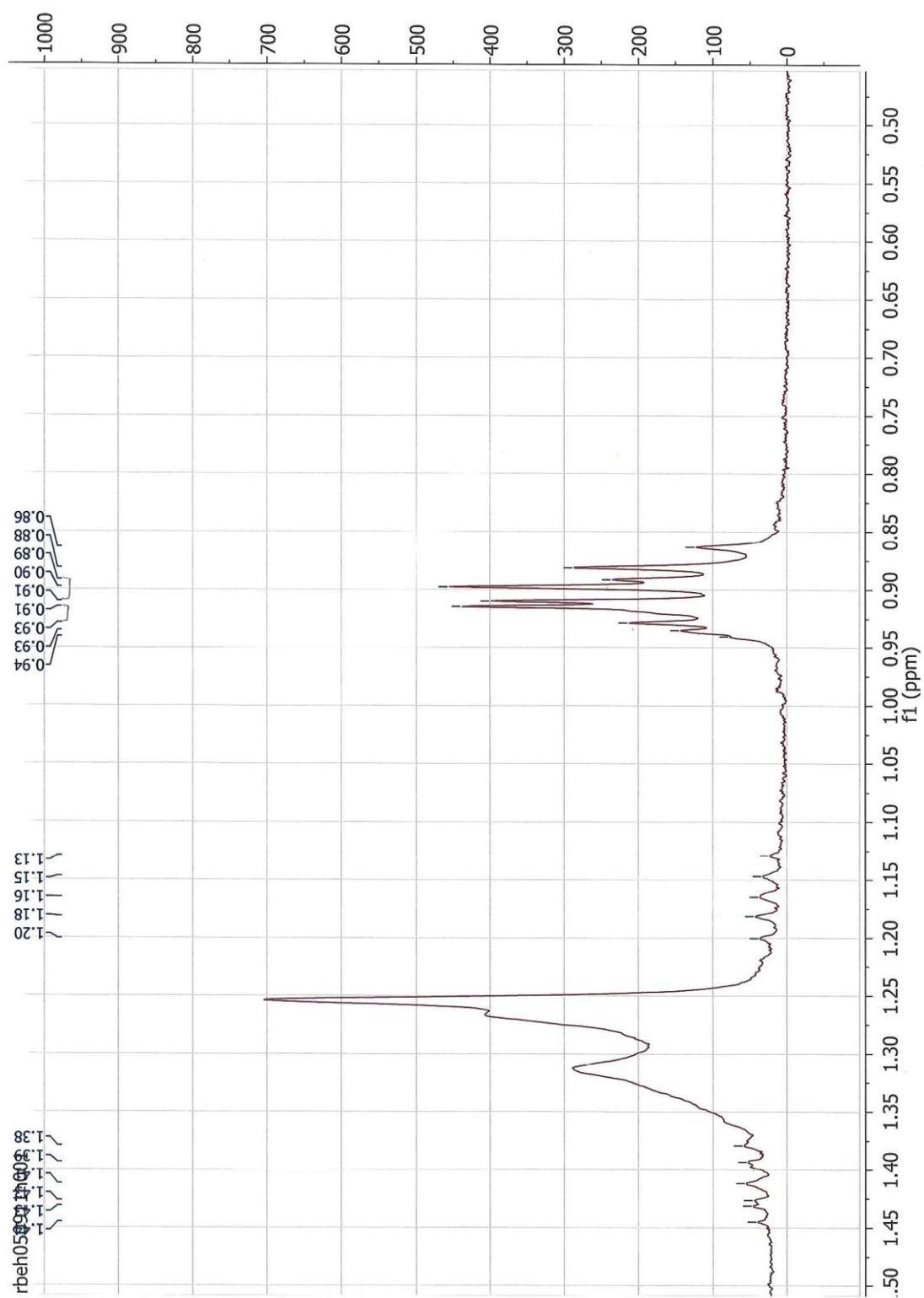


Fig. 6S ^1H NMR spectrum of compounds **1/2** expanded in the region of ≈ 0.4 – 1.5 ppm.

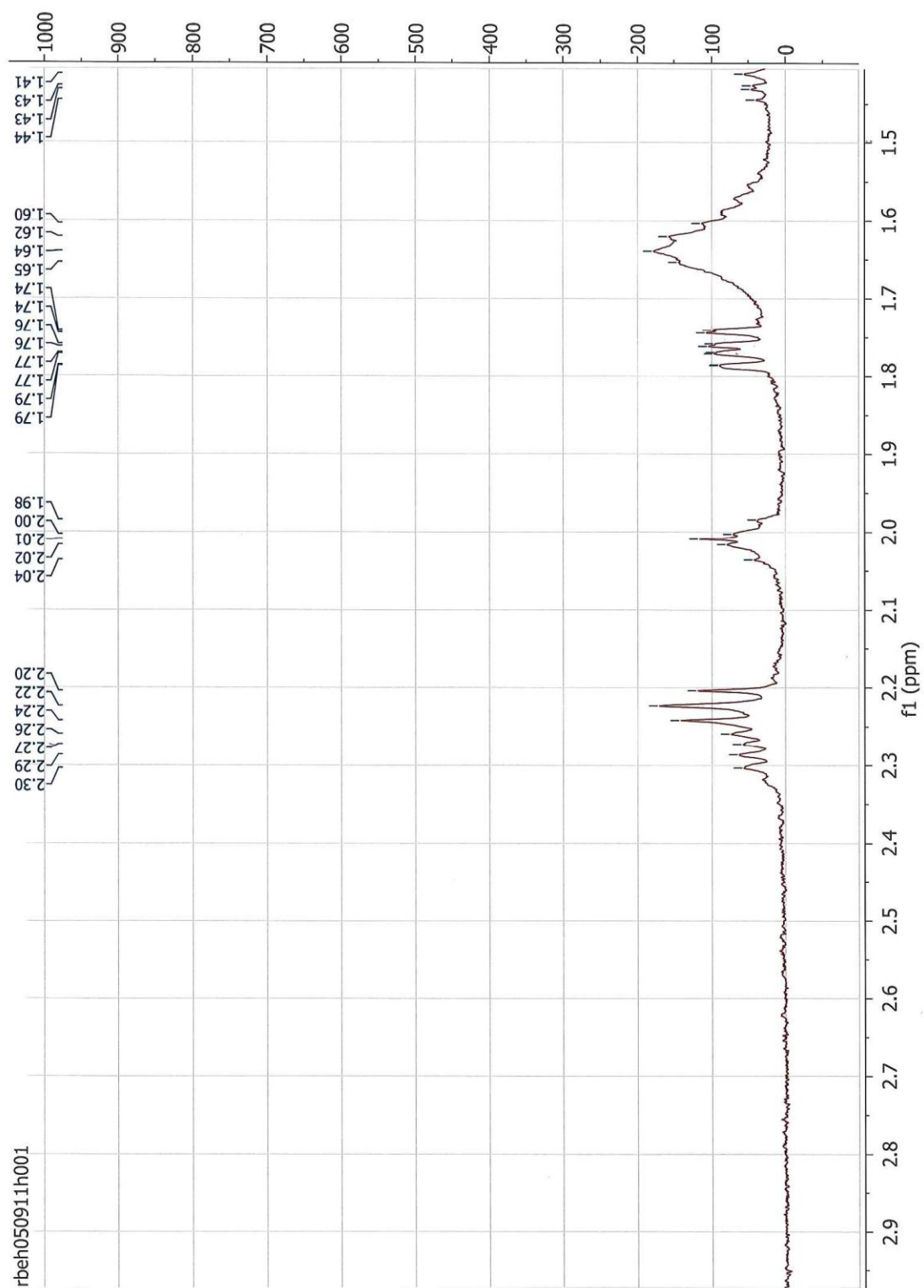


Fig. 7S ^1H NMR spectrum of compounds **1/2** expanded in the region $\approx 1.4\text{--}3.0$ ppm.

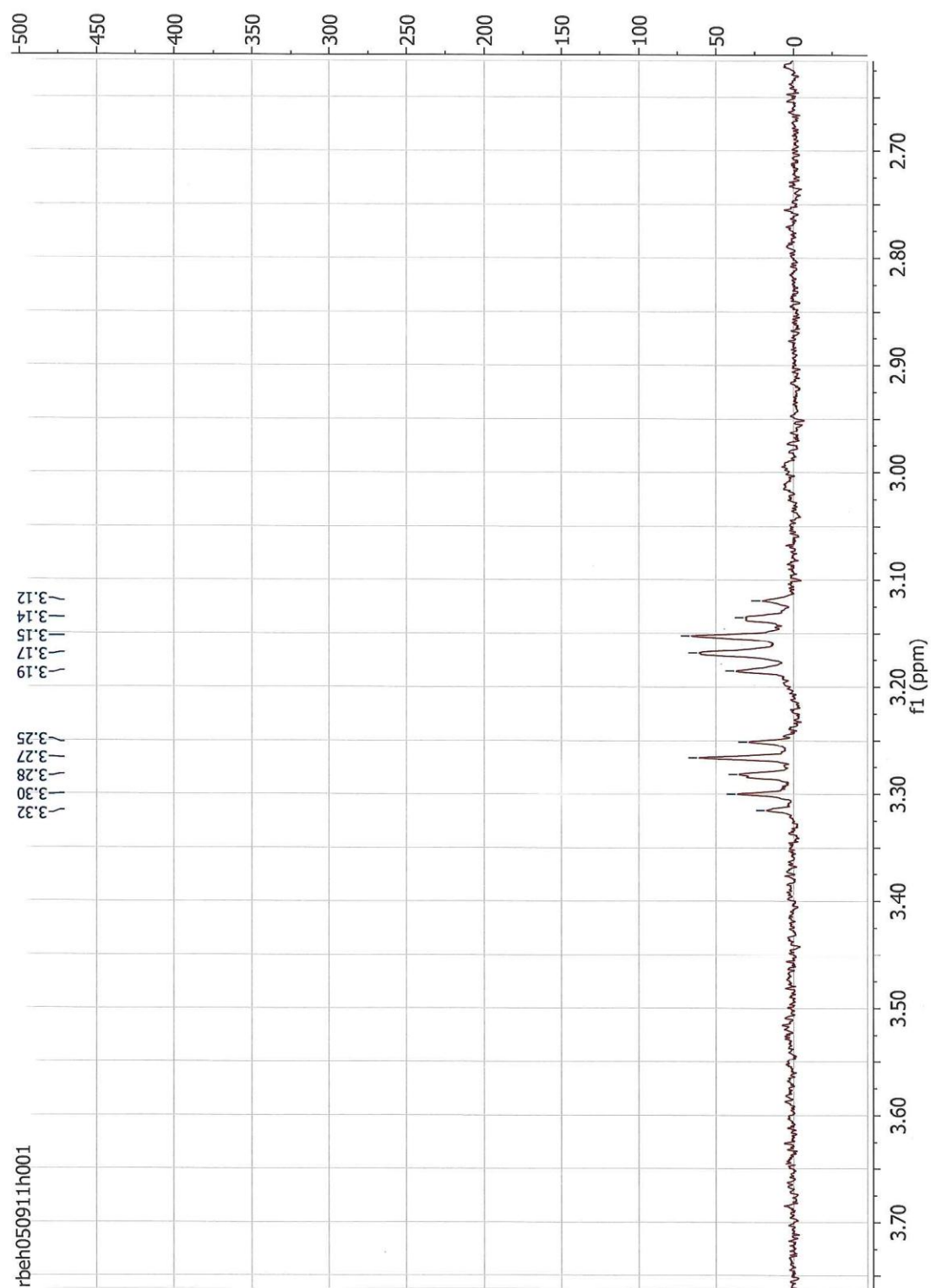


Fig. 8S ^1H NMR spectrum of compounds **1/2** expanded in the region $\approx 2.6\text{--}3.8$ ppm.

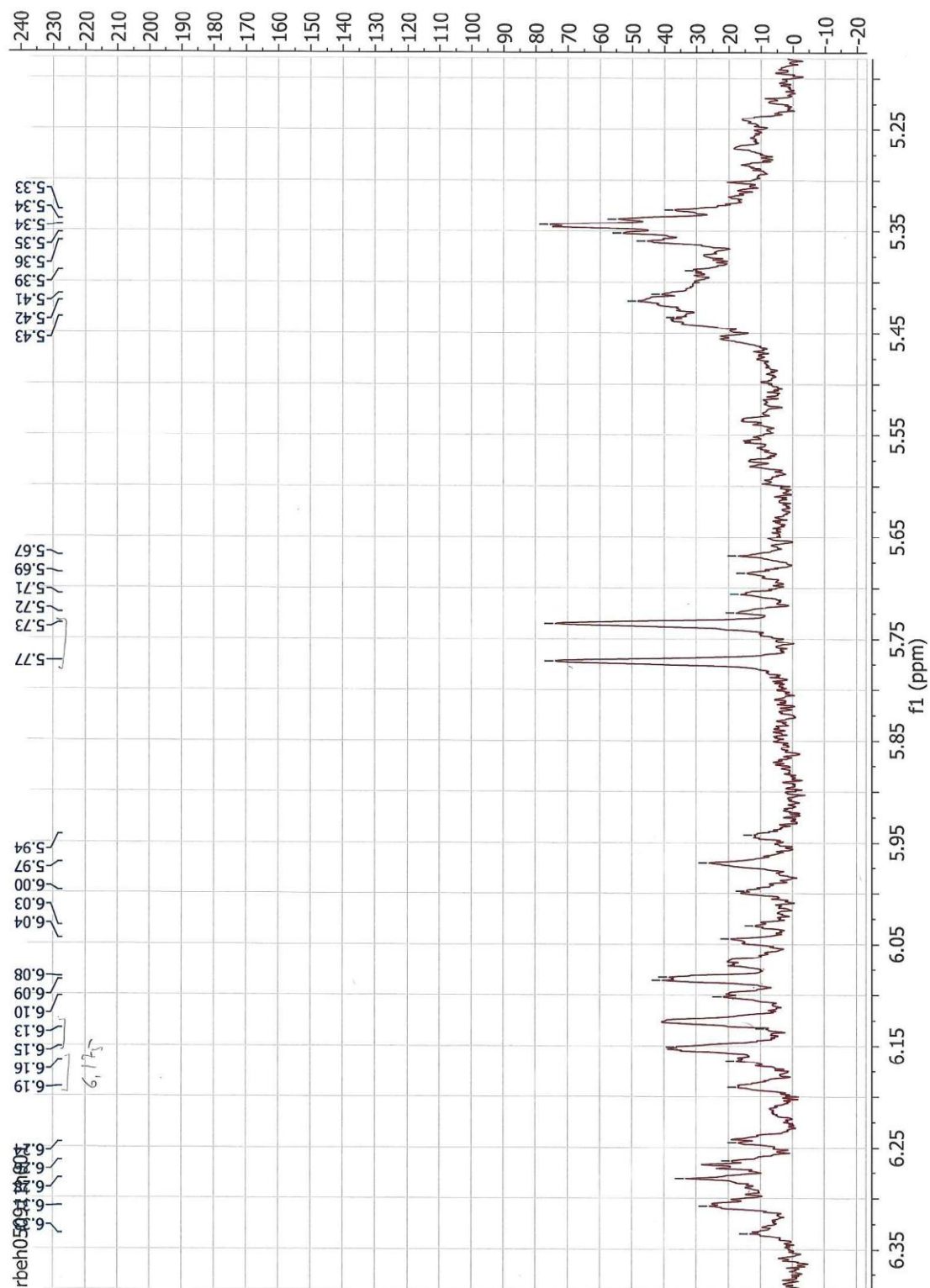


Fig. 9S ^1H NMR spectrum of compounds **1/2** expanded in the region $\approx 5.15\text{--}6.40$ ppm.

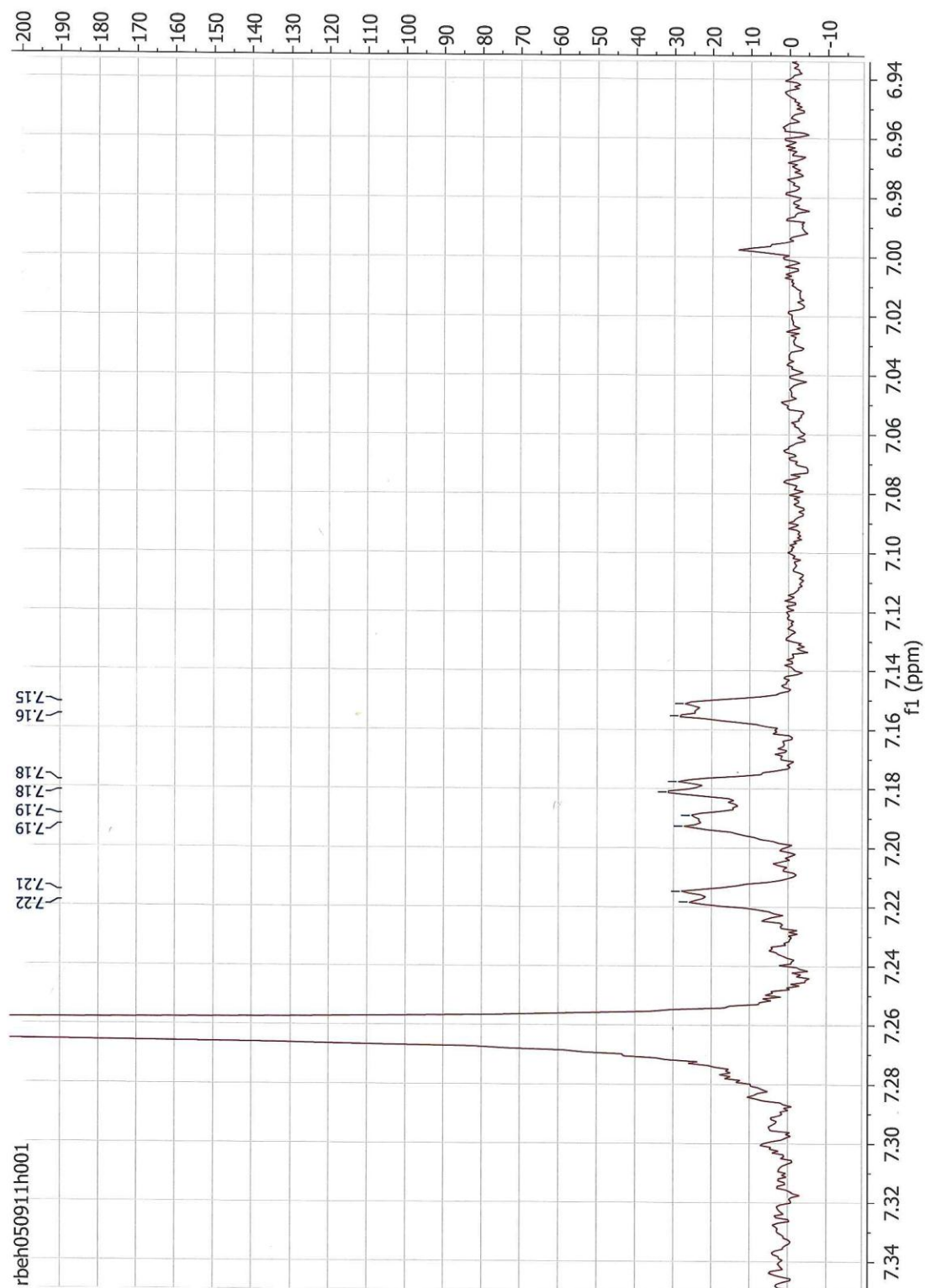


Fig. 10S ^1H NMR spectrum of compounds **1/2** expanded in the region $\approx 6.94\text{--}7.34$ ppm.

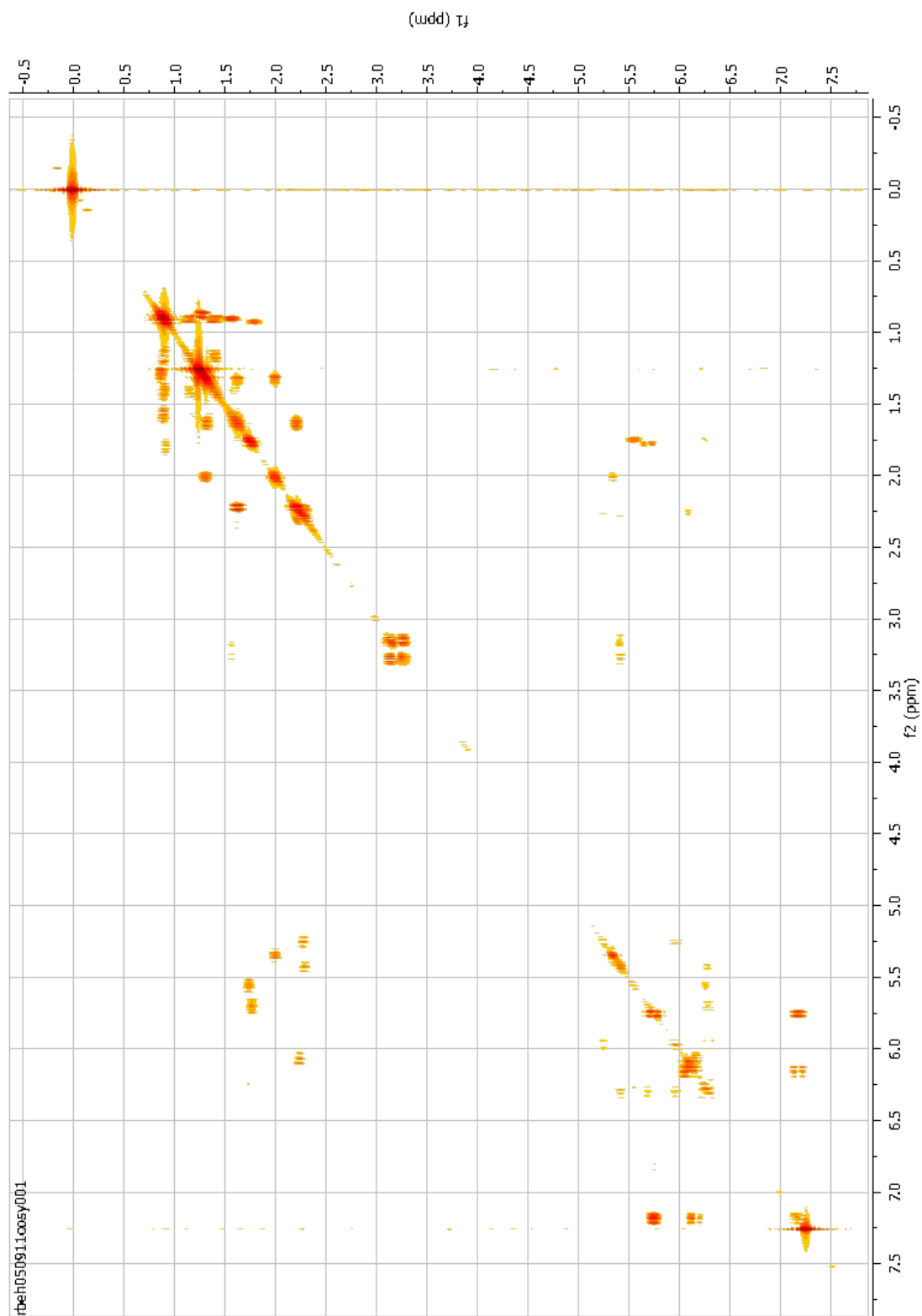


Fig. 11S ^1H - ^1H COSY spectrum of compounds **1/2**.