

## Supplementary Information

### Novel Hydroxytyrosol Esters as Potential Anti-Amyloid and Neuroprotective Agents for Alzheimer's Disease

Ioanna Kalpaktsi<sup>1</sup>, Anthi Panara<sup>2</sup>, Barbara Mavroidi<sup>3</sup>, Giorgos Garcia Niforos<sup>4</sup>, Amalia D. Kalampaliki<sup>1</sup>, Ioanna C. Vlachogianni<sup>5</sup>, Eleftheria A. Georgiou,<sup>1</sup> Elizabeth Fragopoulou<sup>5</sup>, Anthony Tsarbopoulos<sup>6</sup>, Alexios-Leandros Skaltsounis<sup>7</sup>, Maria Pelecanou<sup>8</sup>, Kontantinos Palikaras<sup>4</sup>, Evangelos Gikas<sup>2</sup>, Ioannis K. Kostakis<sup>1,\*</sup>

<sup>1</sup>Division of Pharmaceutical Chemistry, Department of Pharmacy, National and Kapodistrian University of Athens, Panepistimiopolis Zografou 15771, Athens, Greece

<sup>2</sup>Laboratory of Analytical Chemistry, Department of Chemistry, National and Kapodistrian University of Athens, Panepistimiopolis, Zografou, Athens 15771, Greece.

<sup>3</sup>Institute of Biosciences & Applications, National Centre for Scientific Research "Demokritos", 15310 Athens, Greece

<sup>4</sup>Department of Physiology, Medical School, National and Kapodistrian University of Athens, Athens 11527, Athens, Greece

<sup>5</sup>Department of Nutrition & Dietetics, School of Health Sciences and Education, Harokopio University, Athens, Greece

<sup>6</sup>Department of Pharmacology, Medical School, National and Kapodistrian University of Athens, 11527 Athens, Greece

<sup>7</sup>Division of Pharmacognosy and Natural Products Chemistry, Department of Pharmacy, National and Kapodistrian University of Athens, Panepistimiopolis Zografou 15771, Athens, Greece

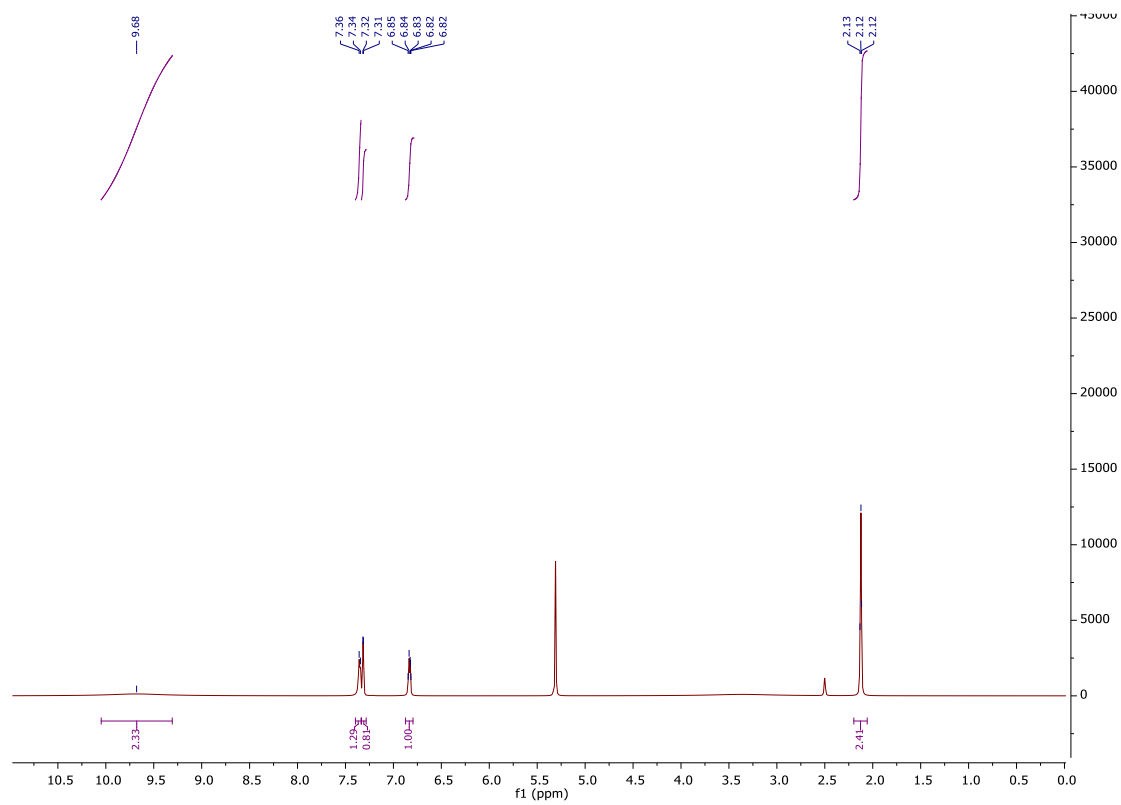
\* Corresponding author.

E-mail address: [ikkostakis@pharm.uoa.gr](mailto:ikkostakis@pharm.uoa.gr) (IKK).

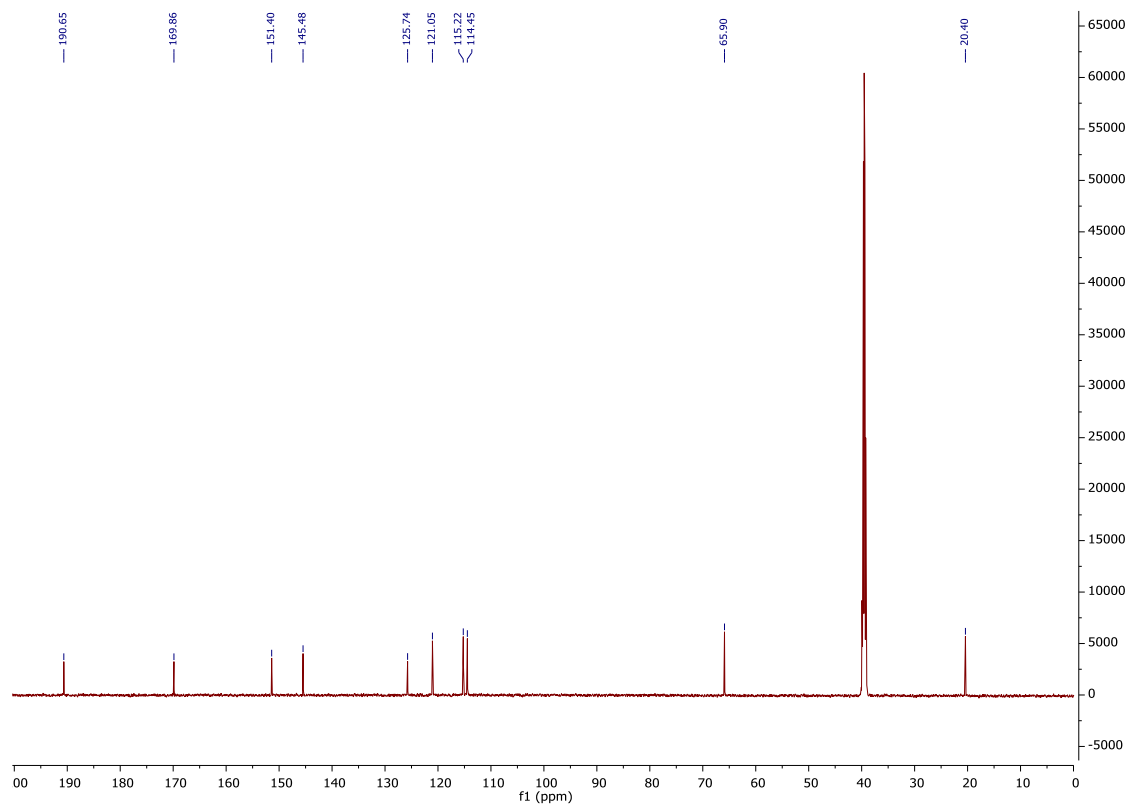
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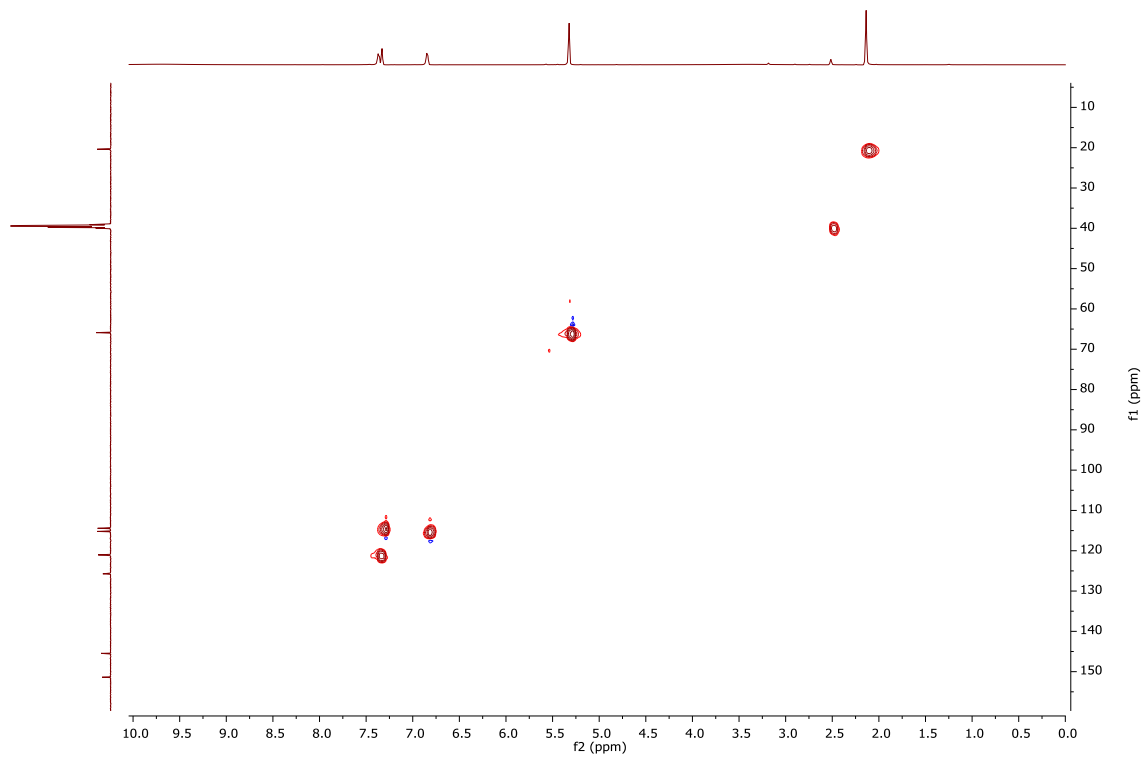
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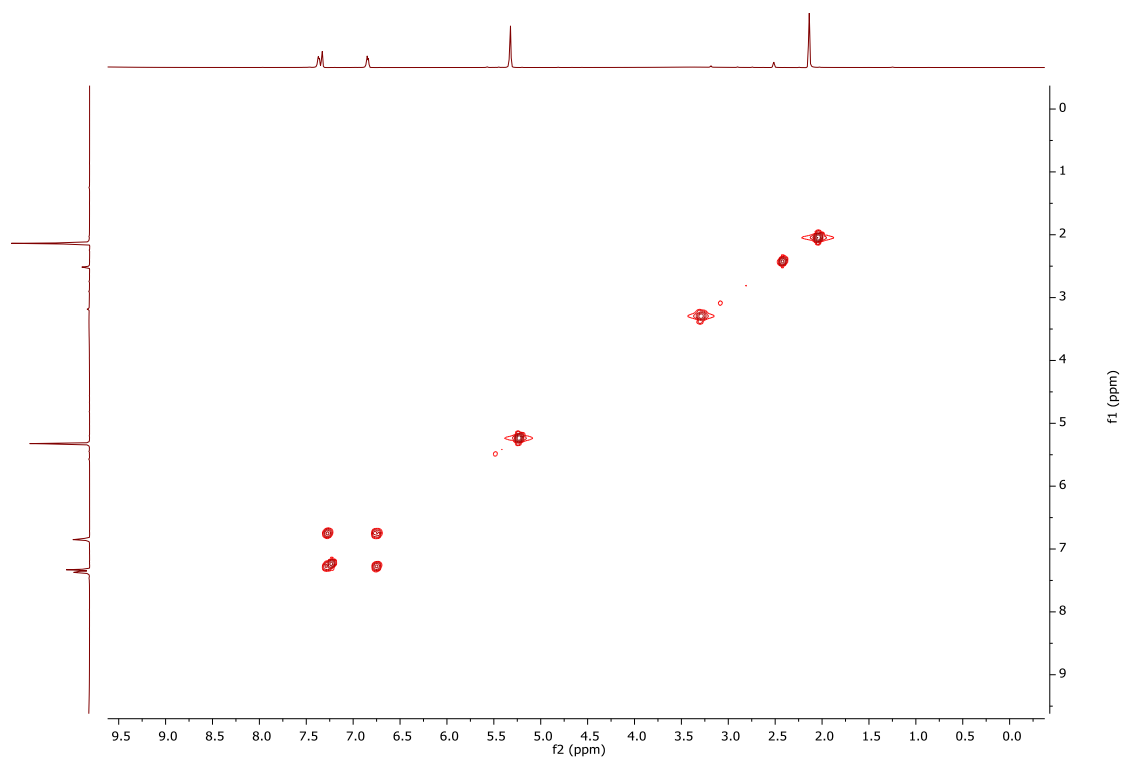
<sup>1</sup>H NMR spectrum of 3a.



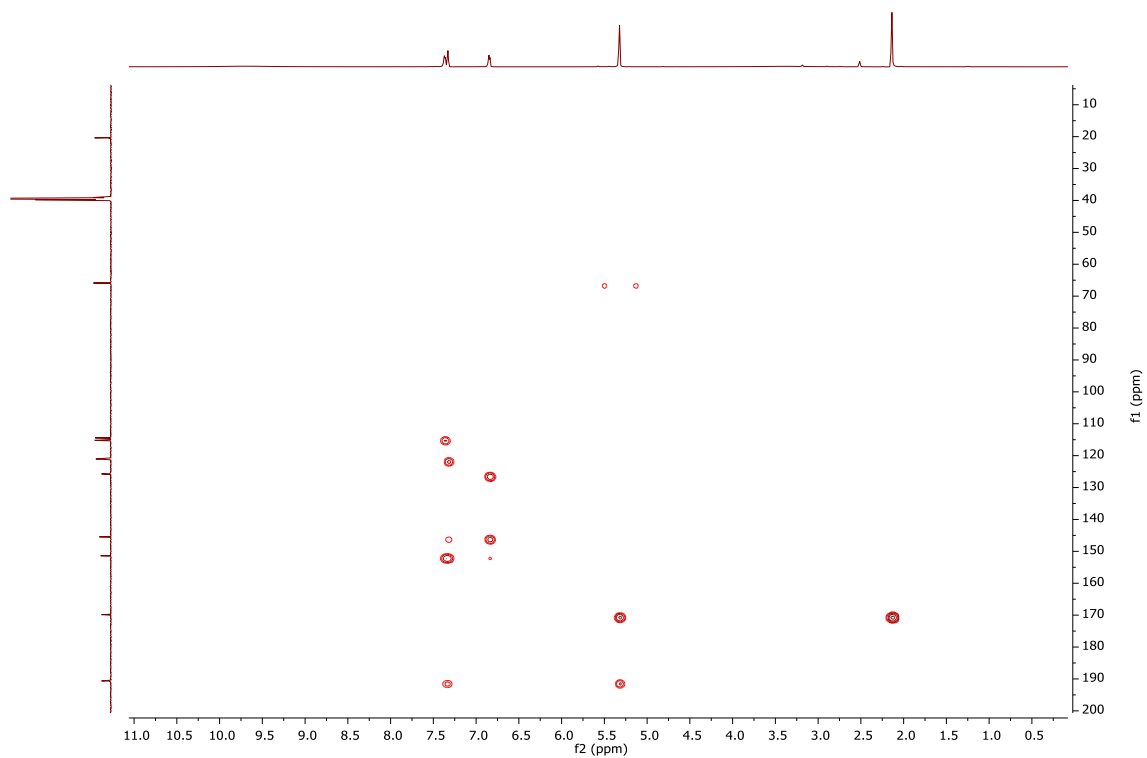
<sup>13</sup>C NMR spectrum of 3a.



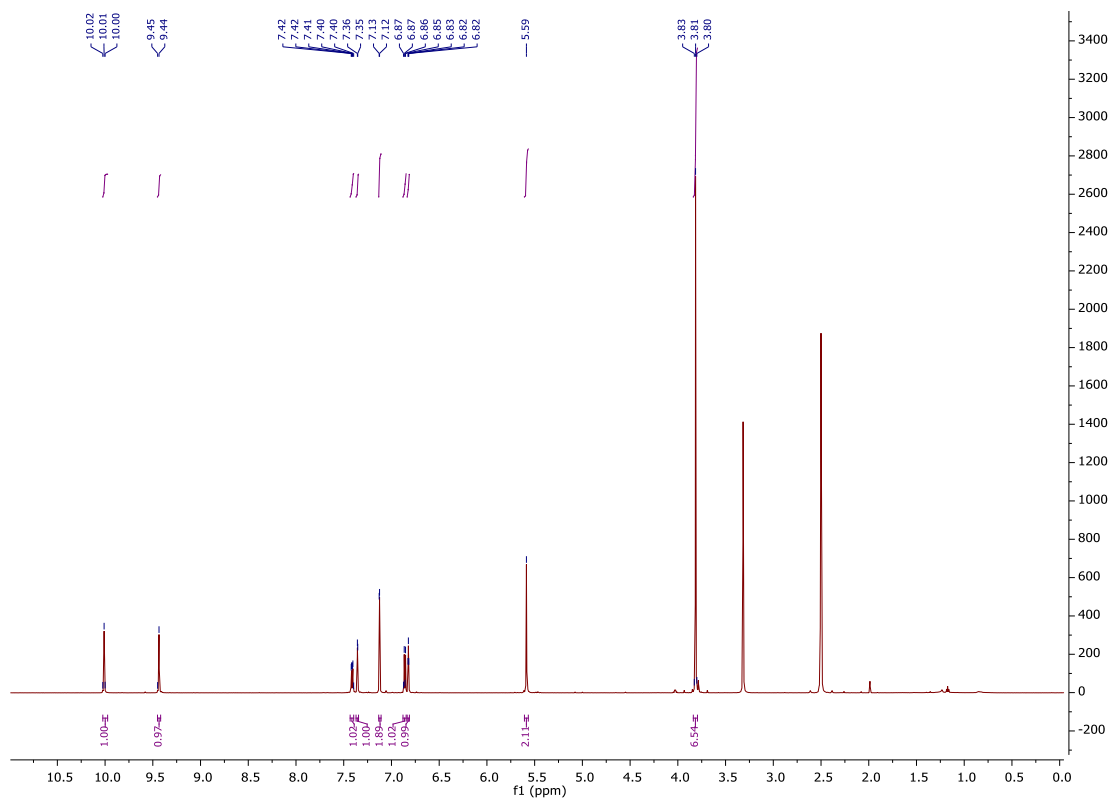
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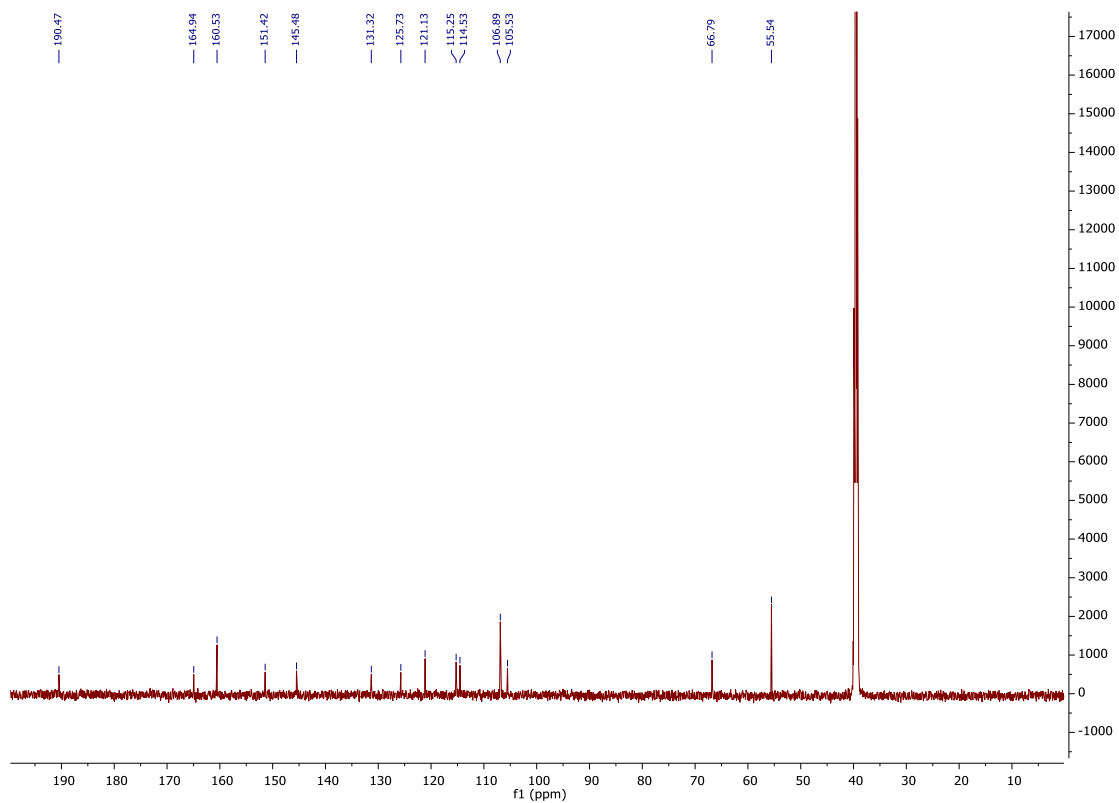
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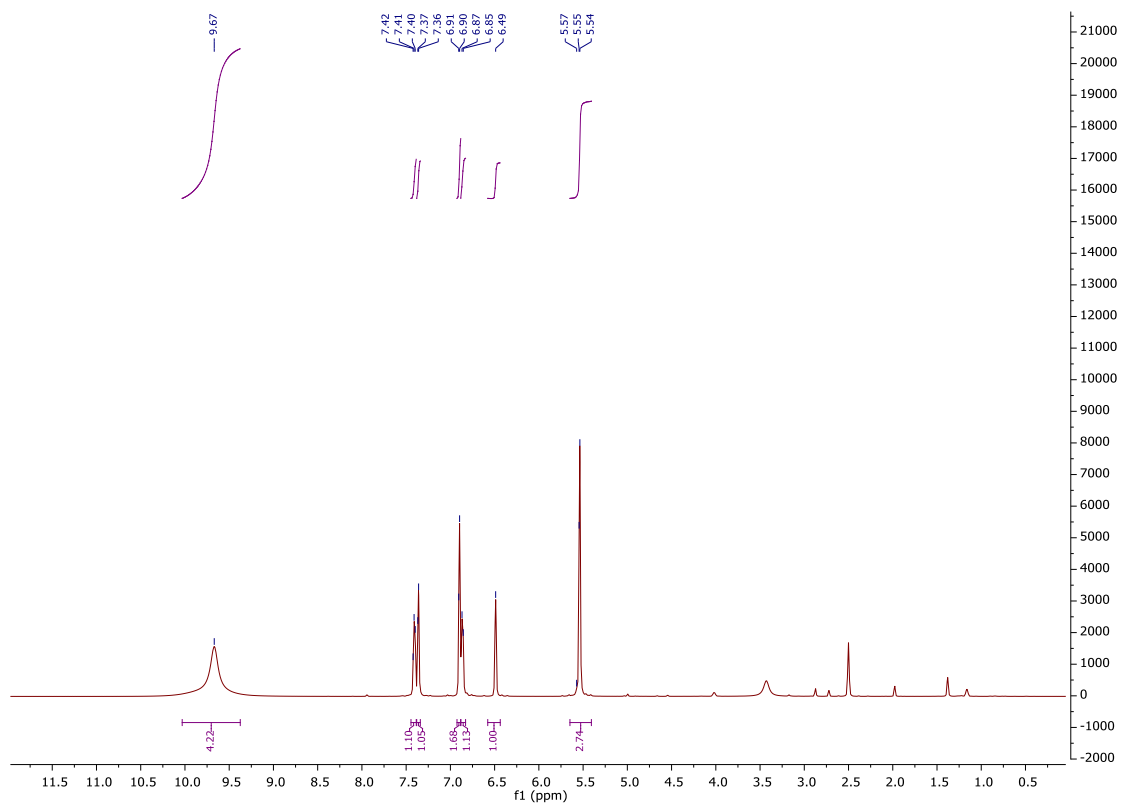
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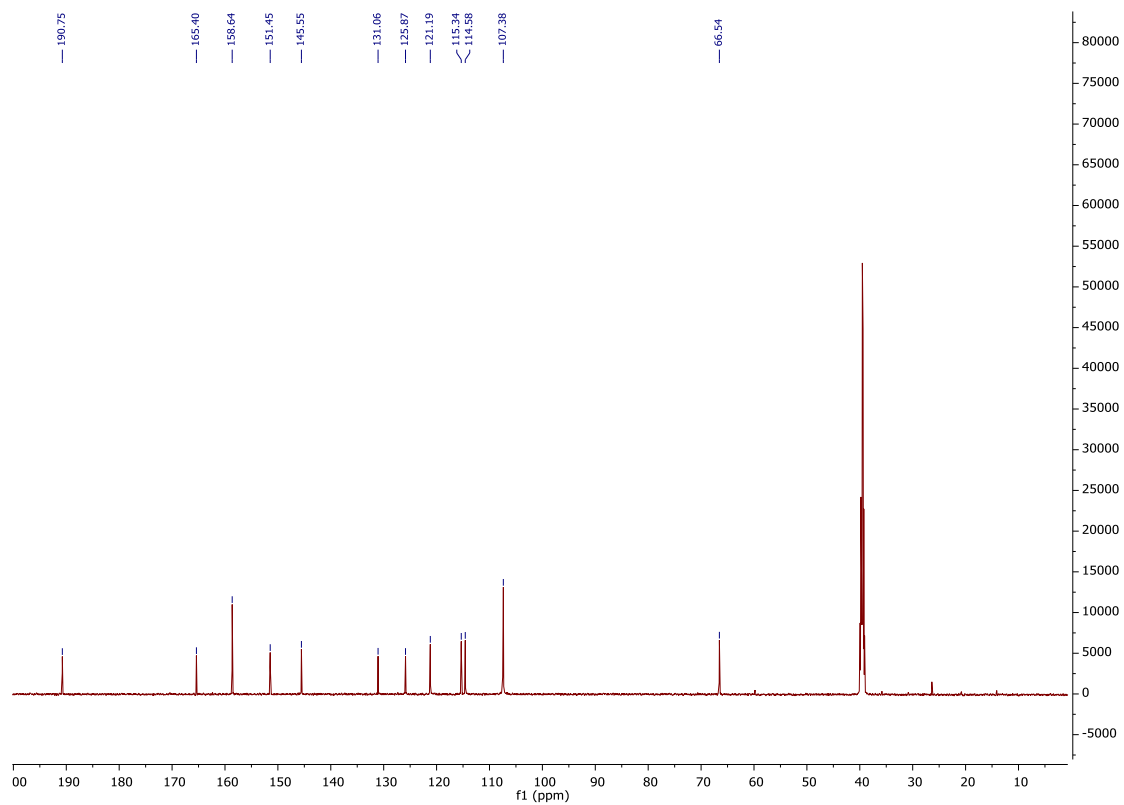
$^1\text{H}$   $^1\text{H}$  NMR spectrum of **3b**.



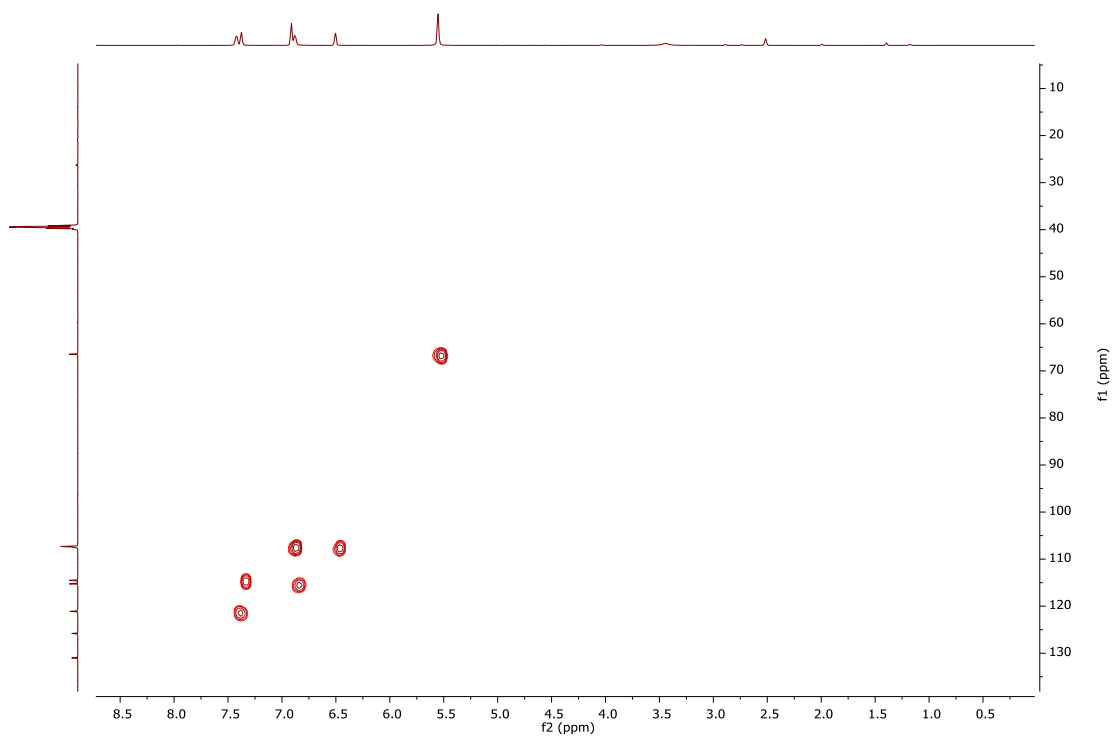
<sup>13</sup>C NMR spectrum of **3b0**



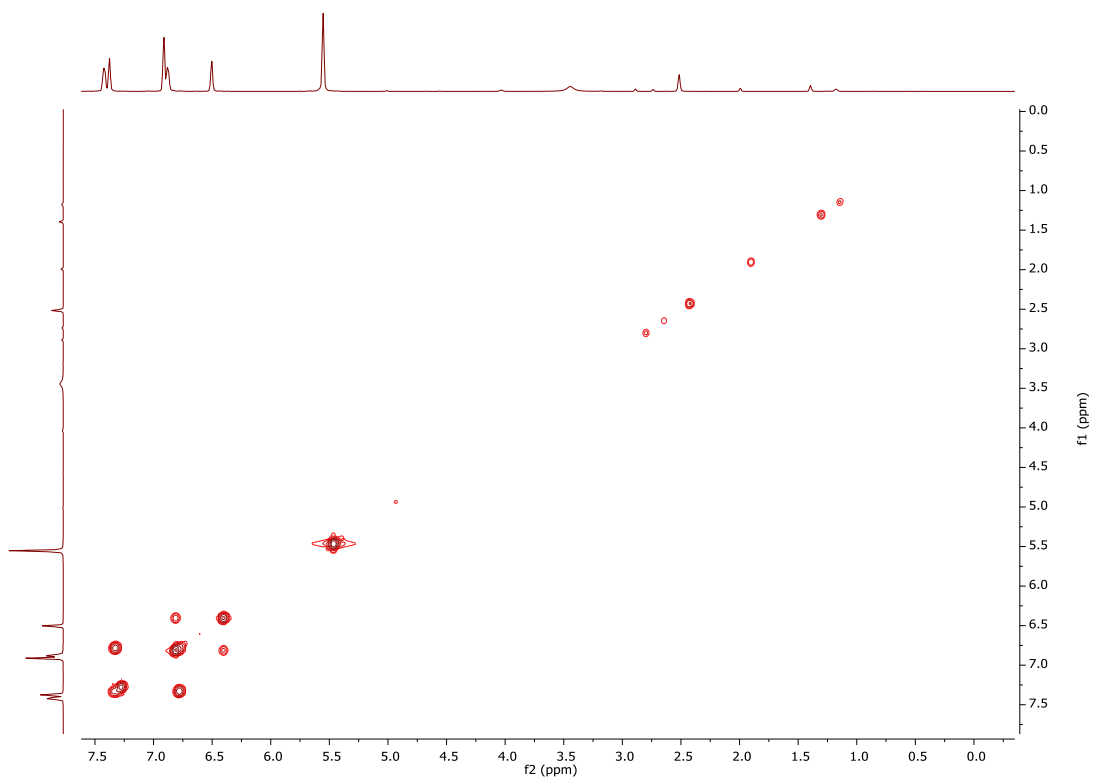
<sup>1</sup>H NMR spectrum of **3c**



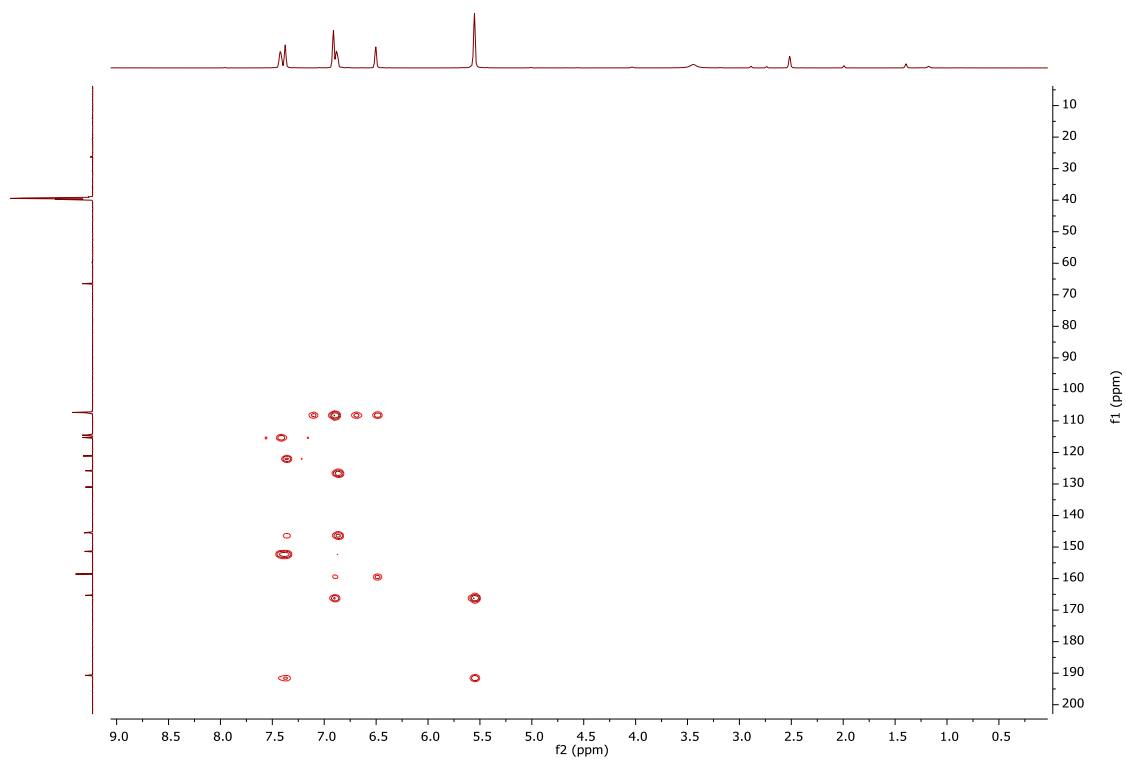
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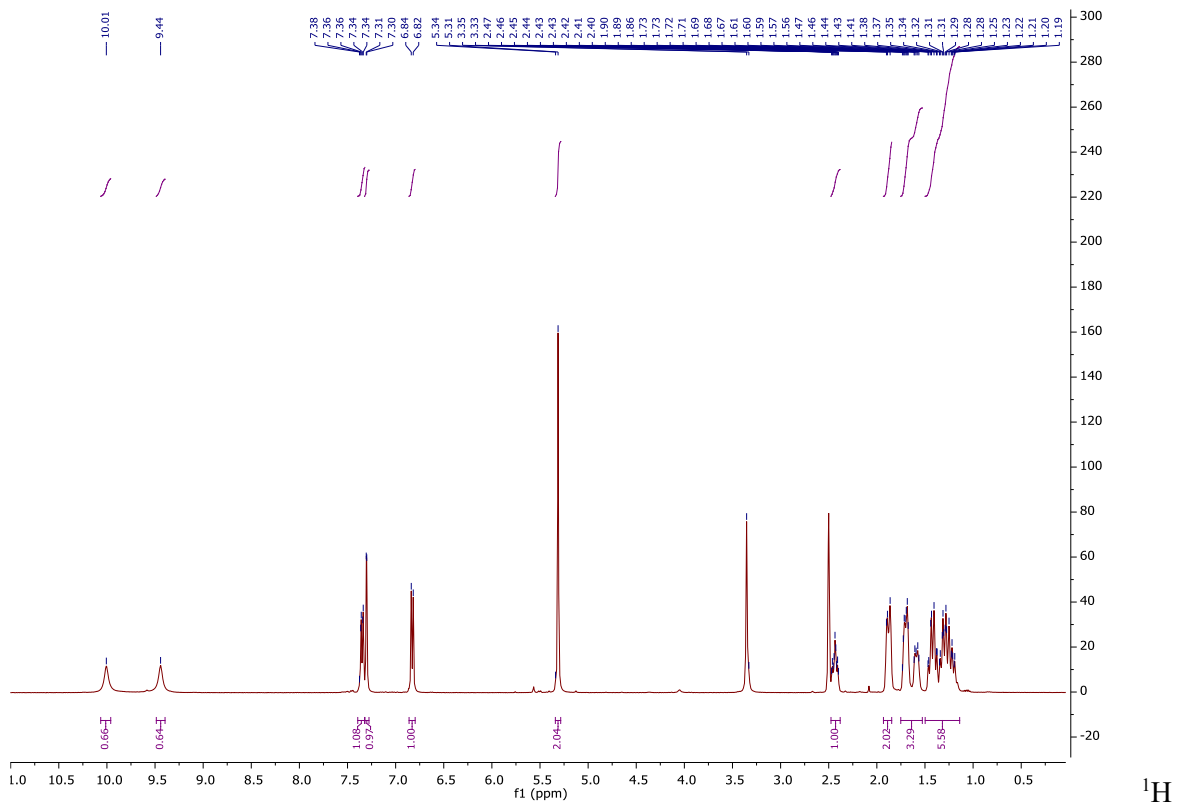
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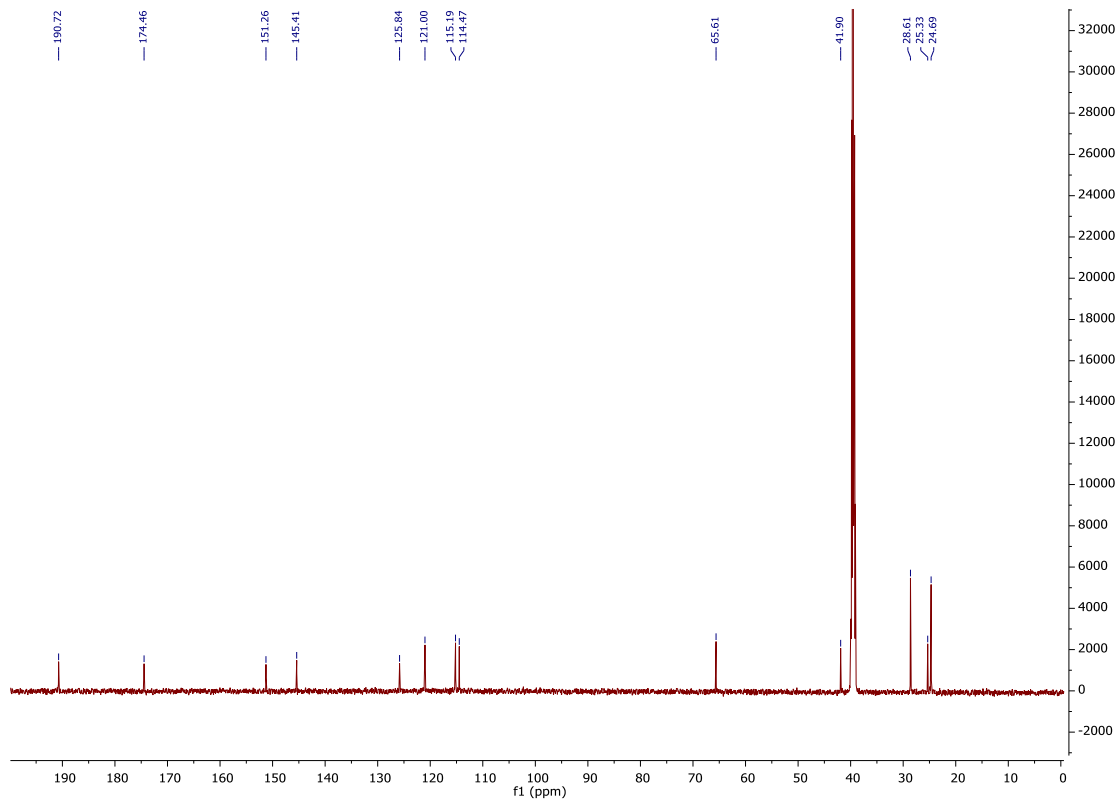
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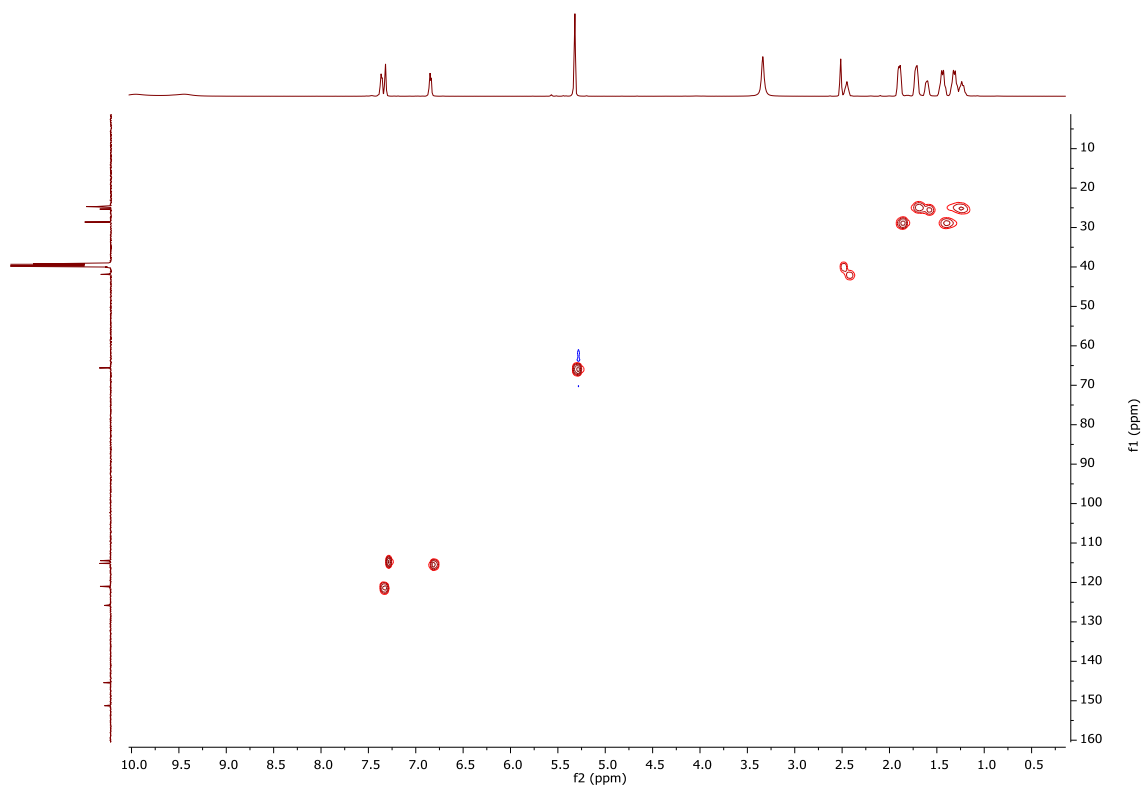
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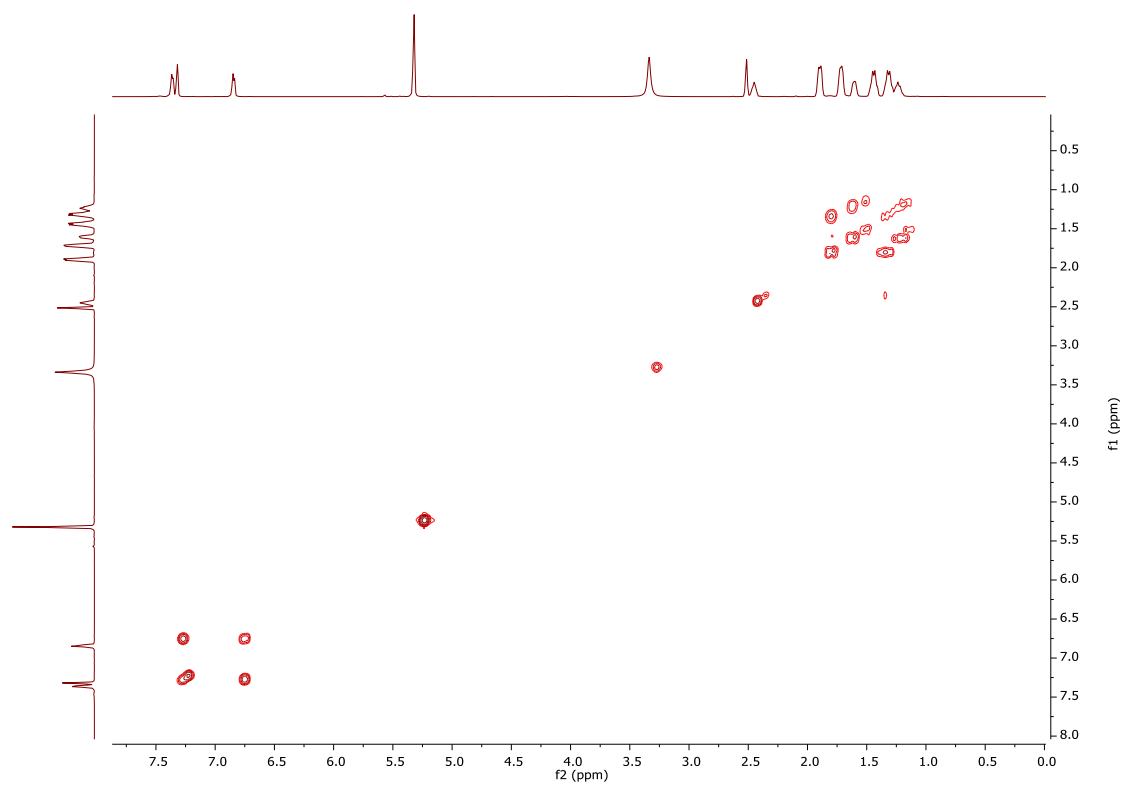
NMR spectrum of 3d



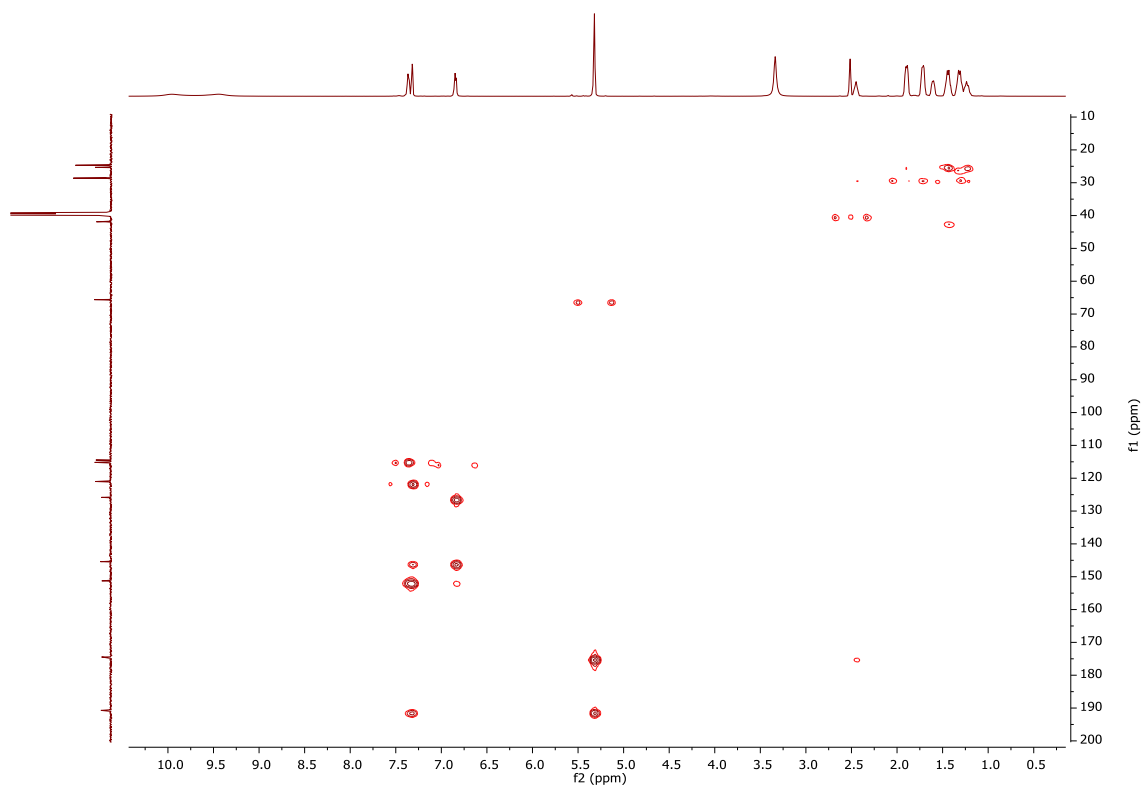
<sup>13</sup>C NMR spectrum of 3d



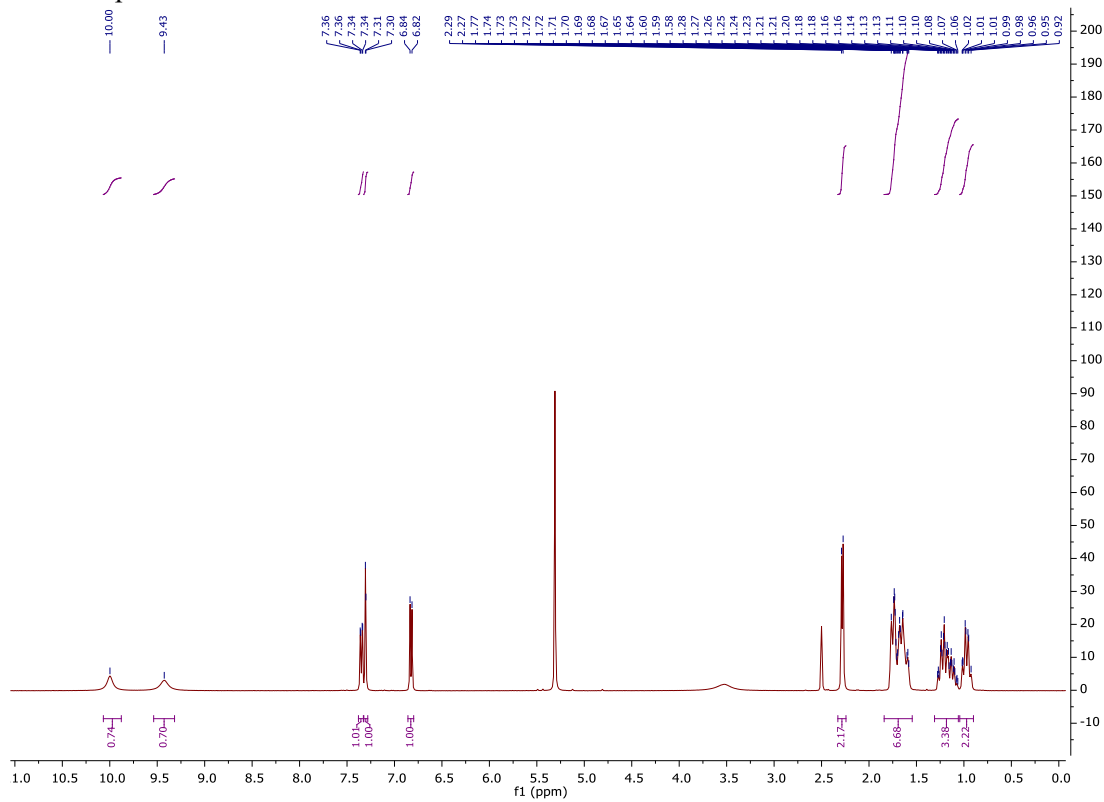
HSQC spectrum of 3d



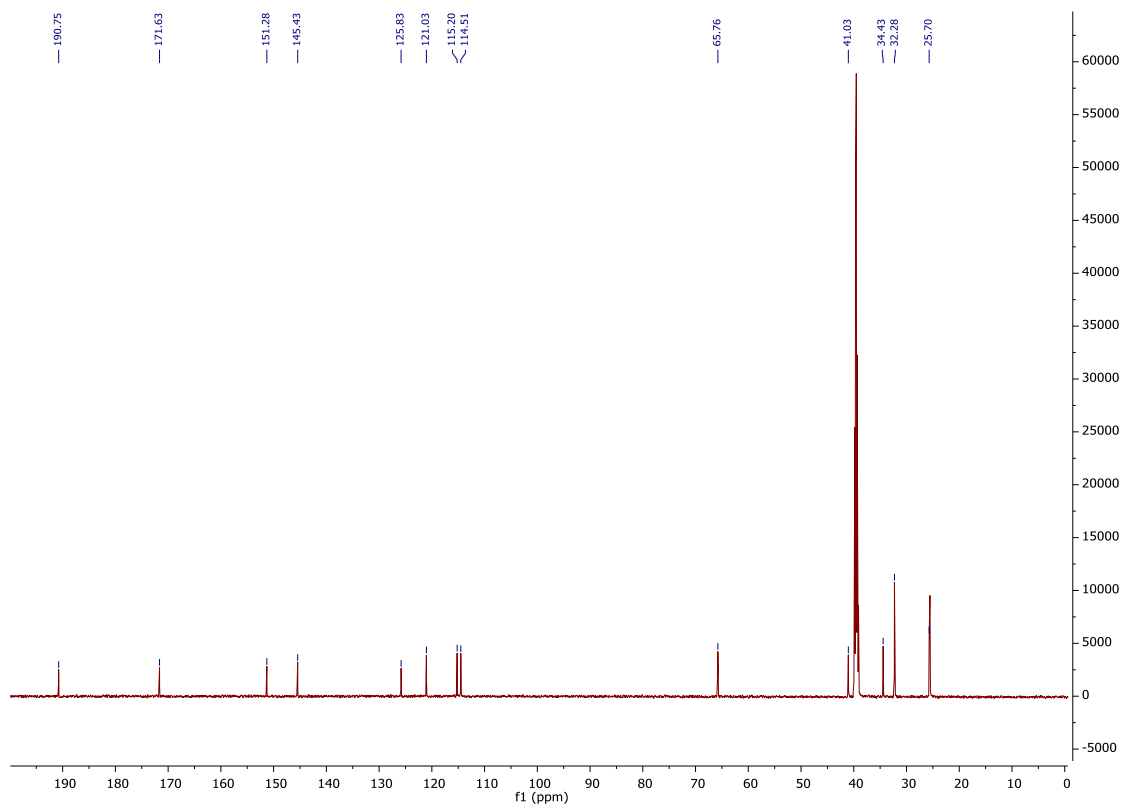
COSY spectrum of 3d



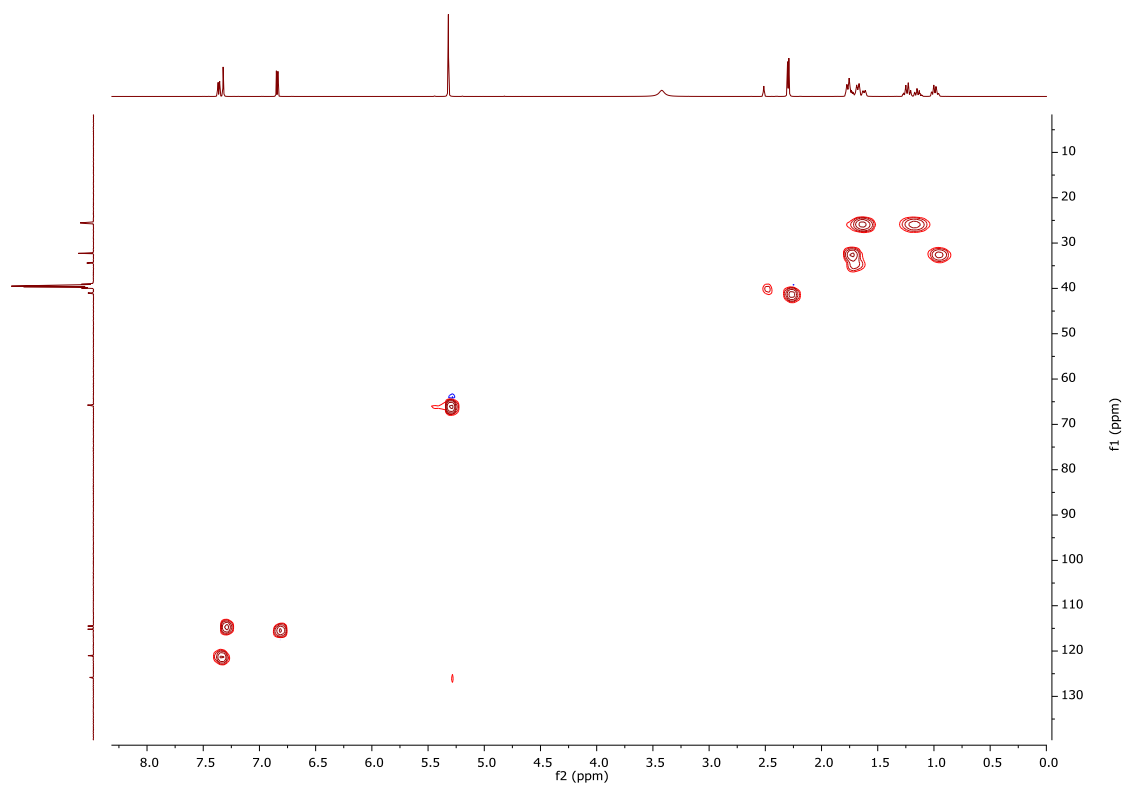
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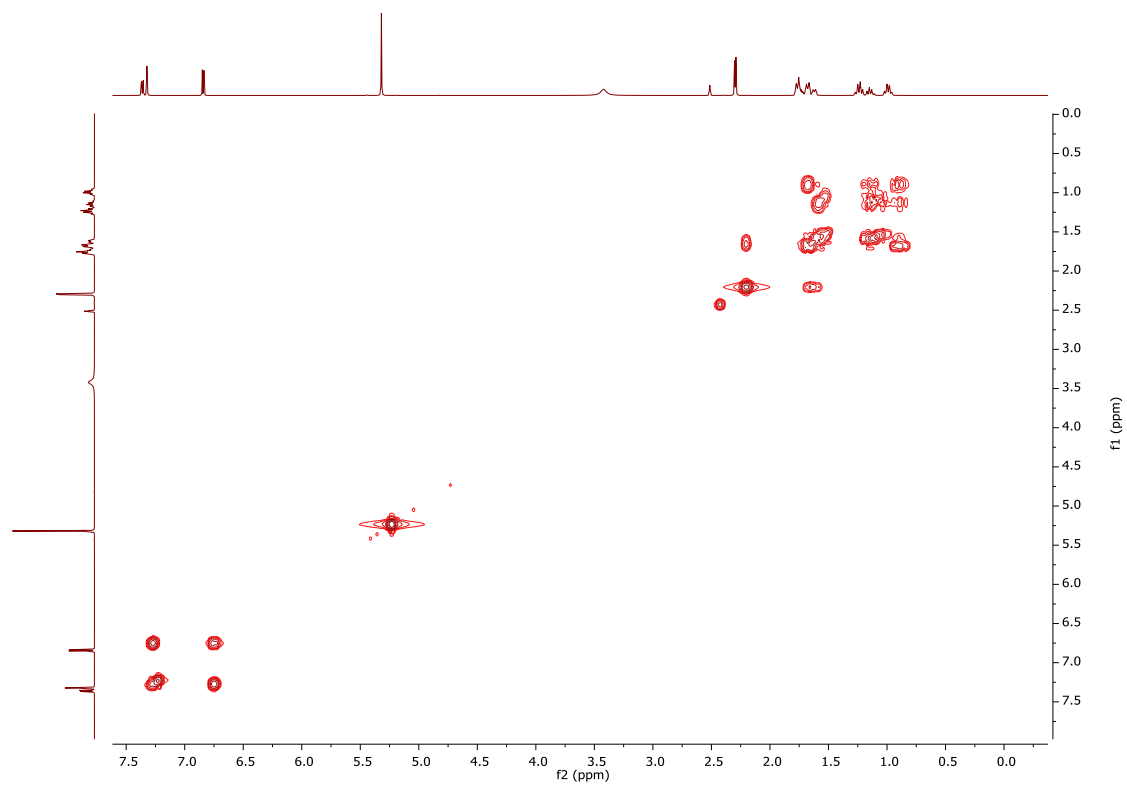
$^1\text{H}$ NMR spectrum of **3e**



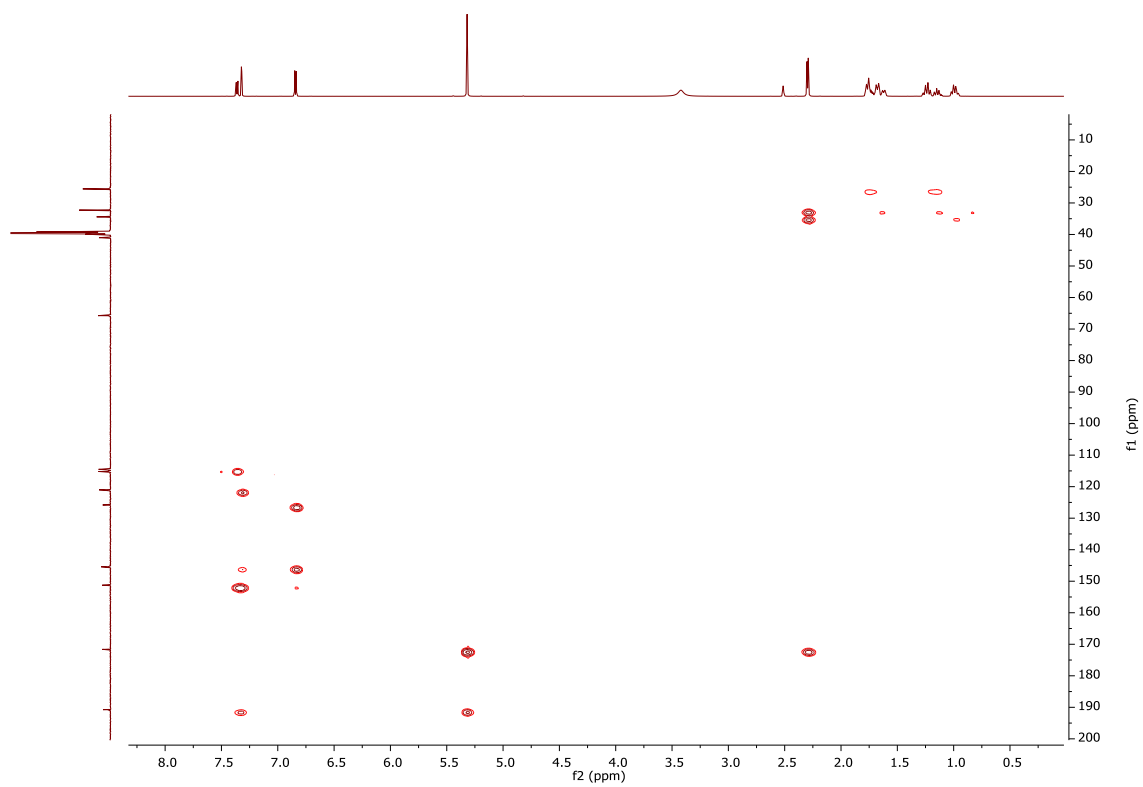
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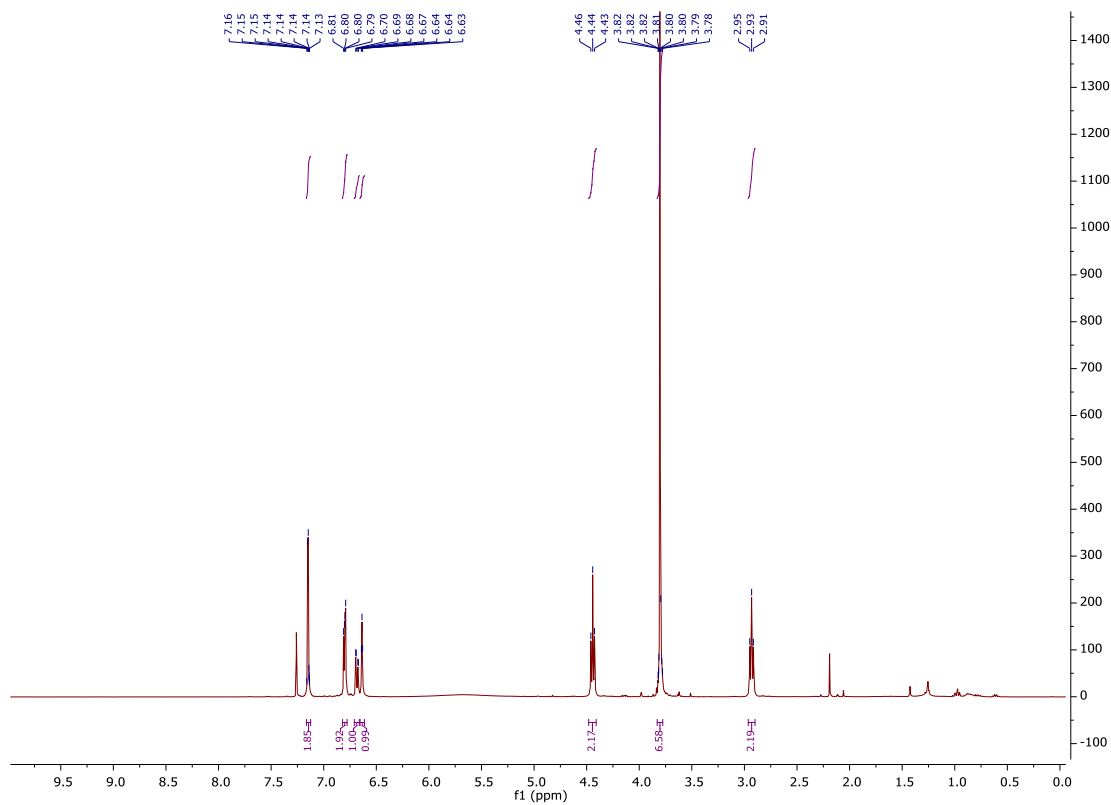
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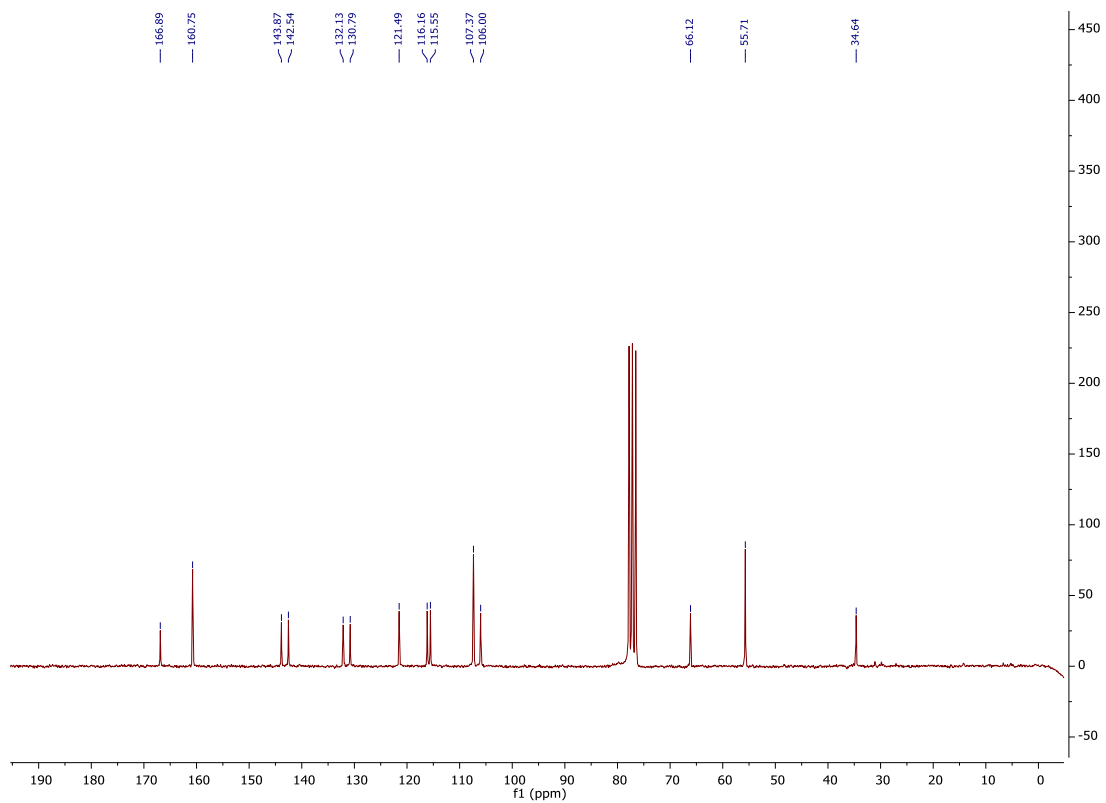
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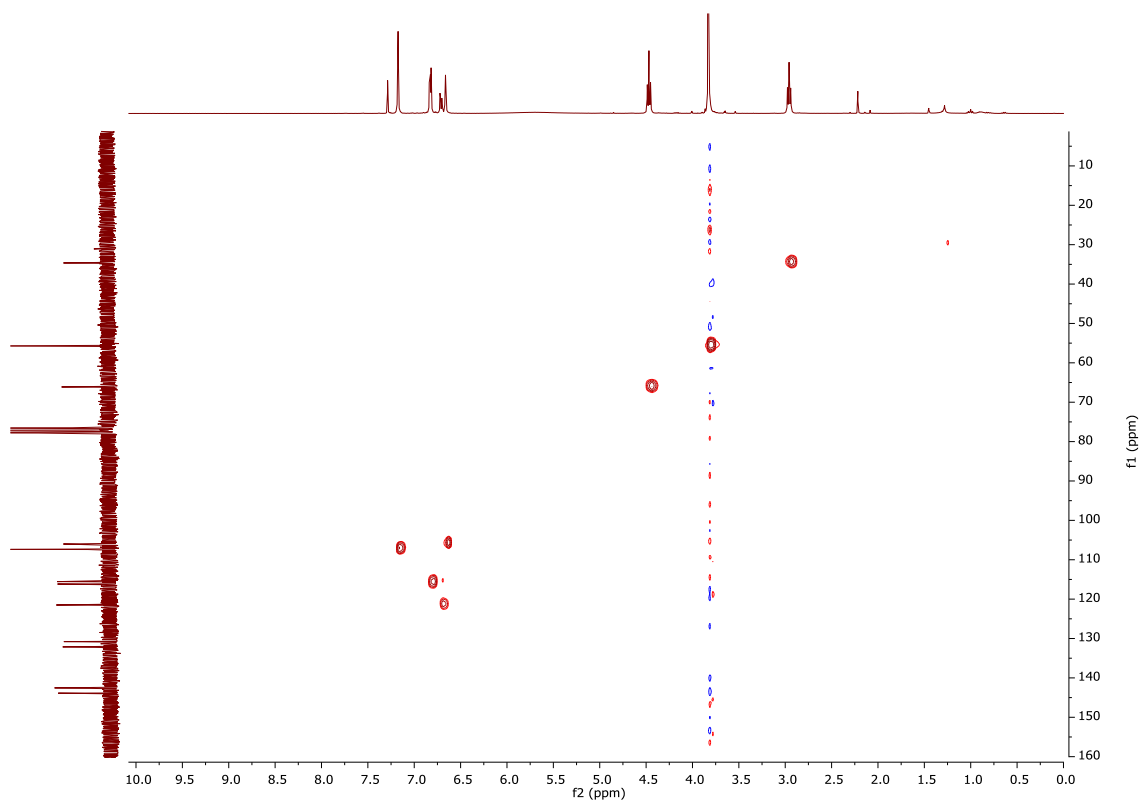
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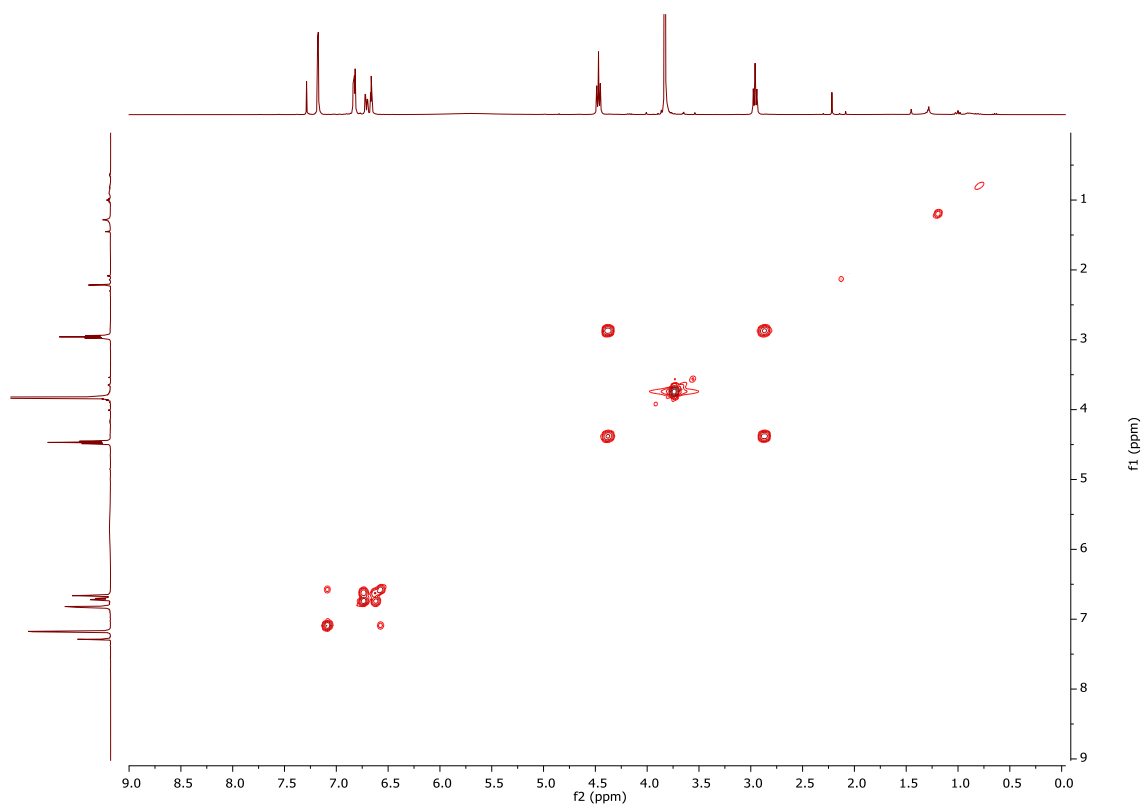
<sup>1</sup>H NMR spectrum of **4b**.



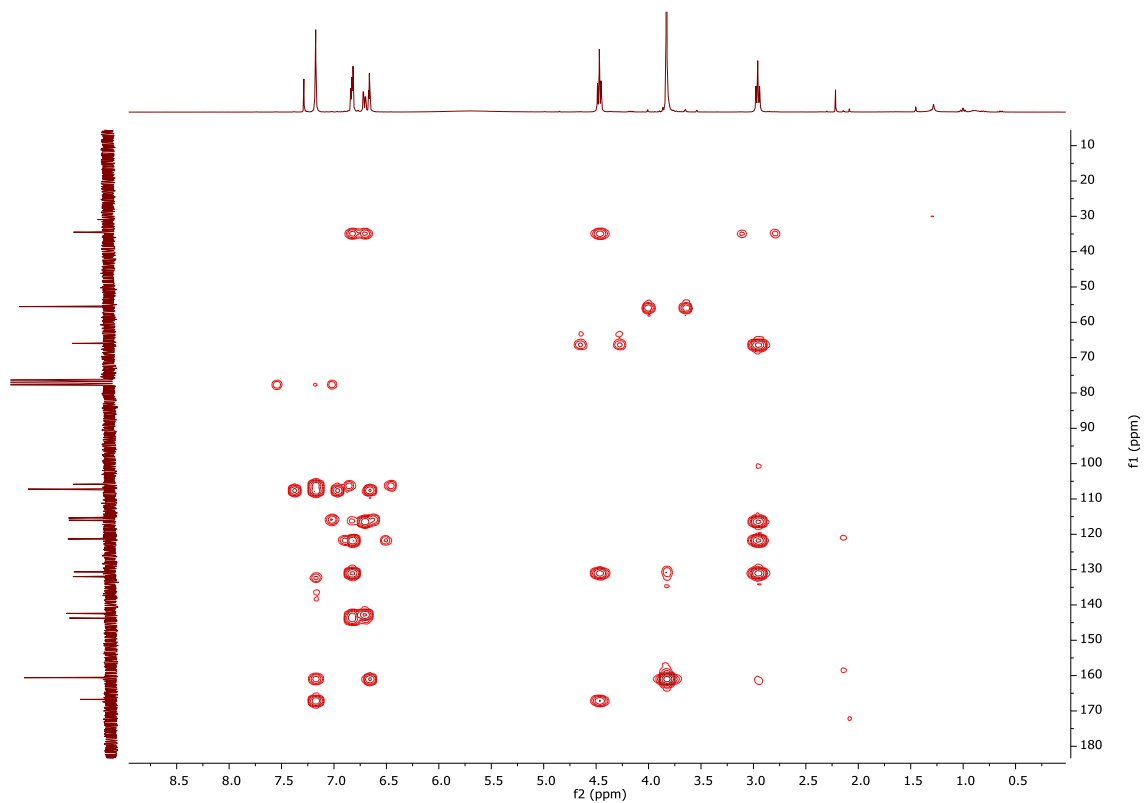
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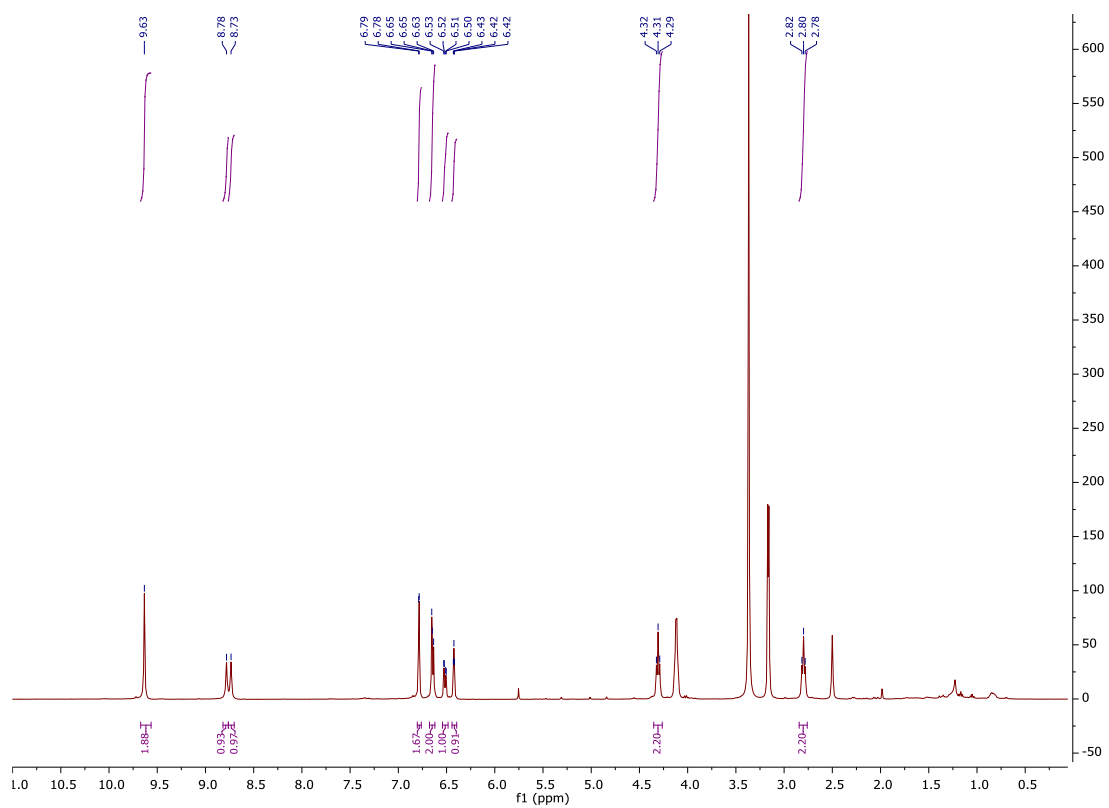
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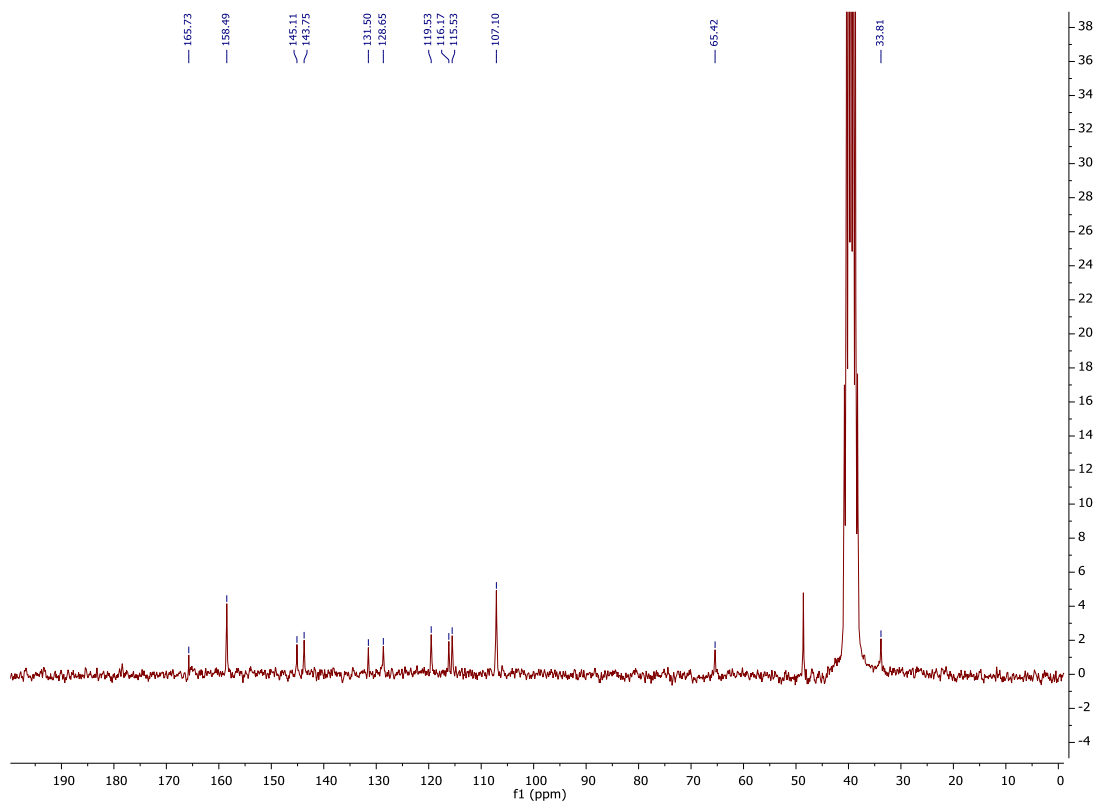
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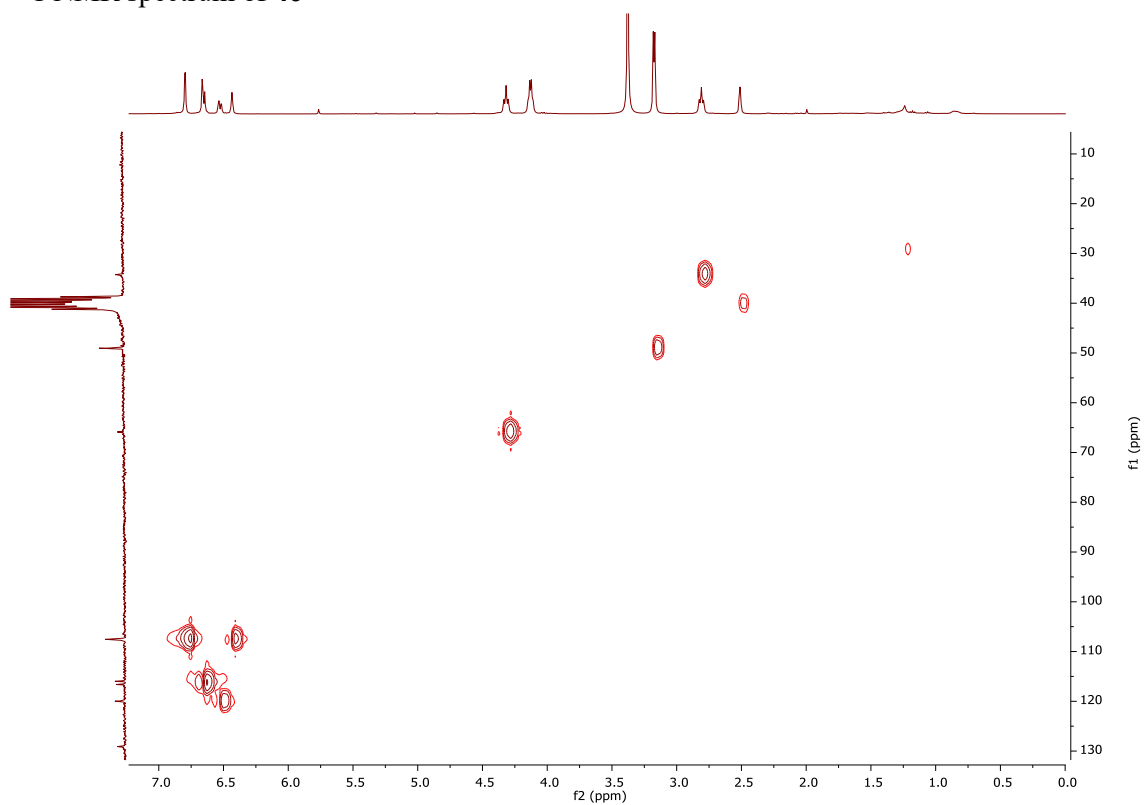
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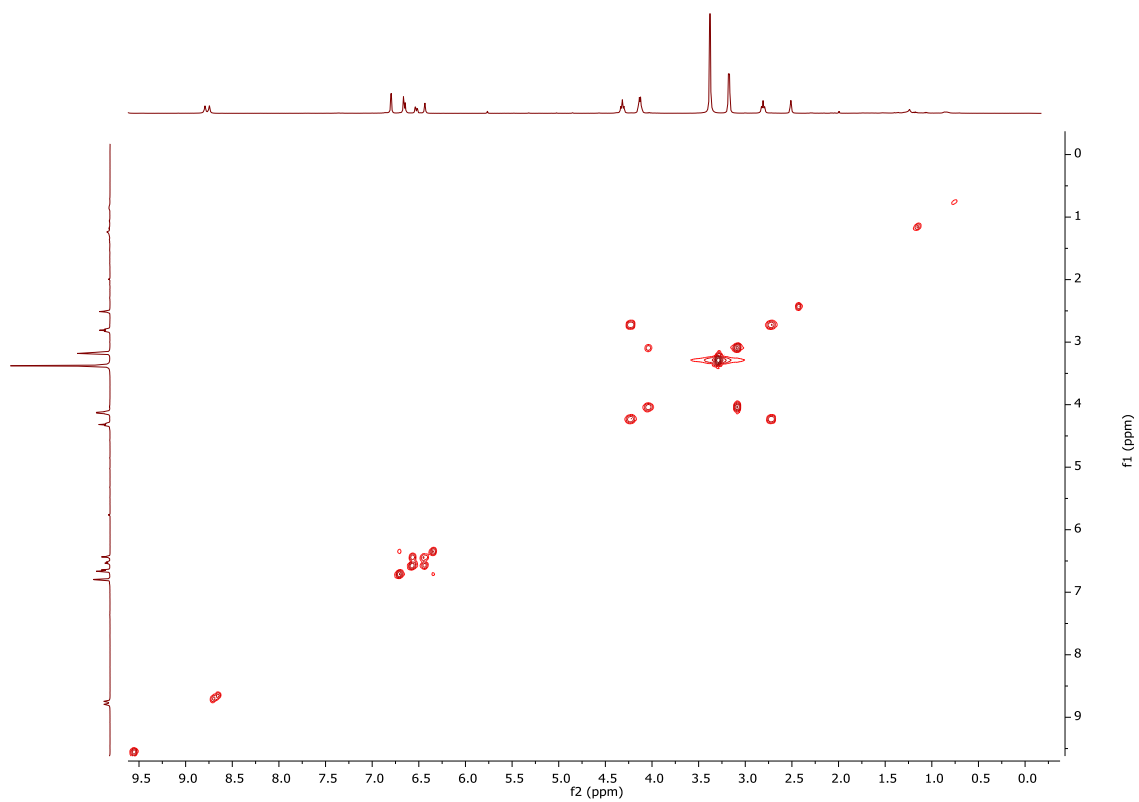
<sup>1</sup>H NMR spectrum of **4c**.



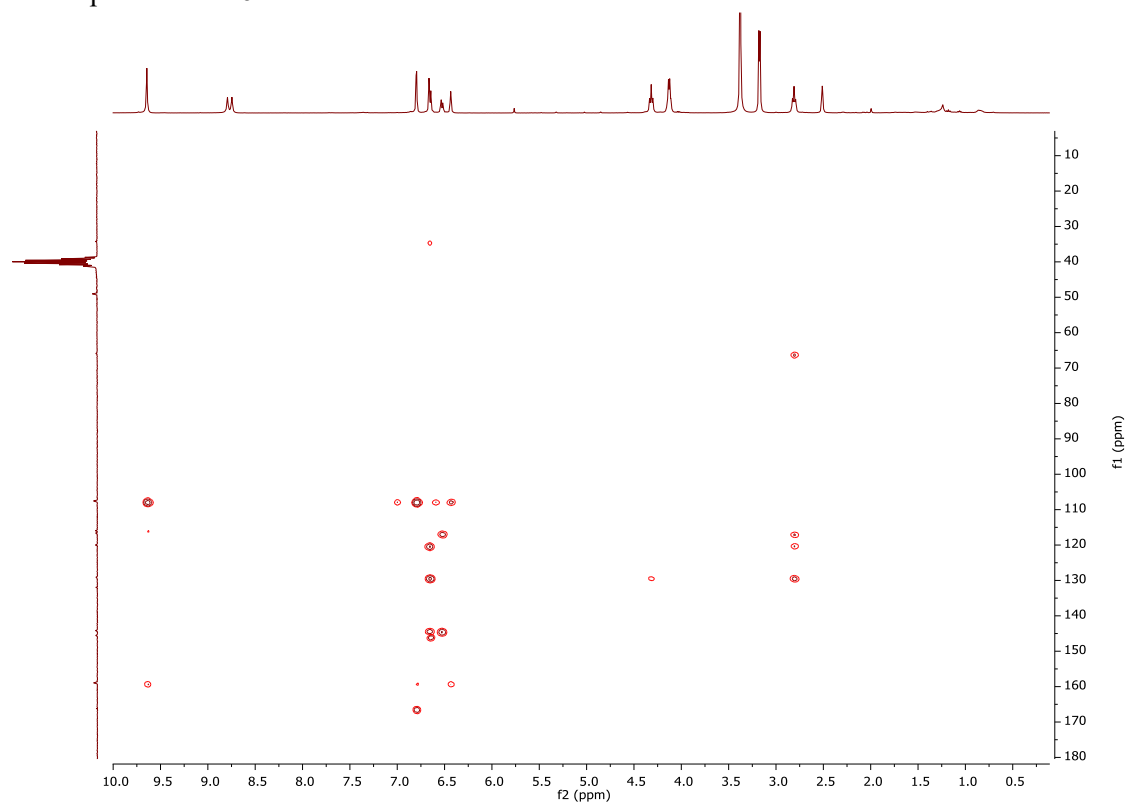
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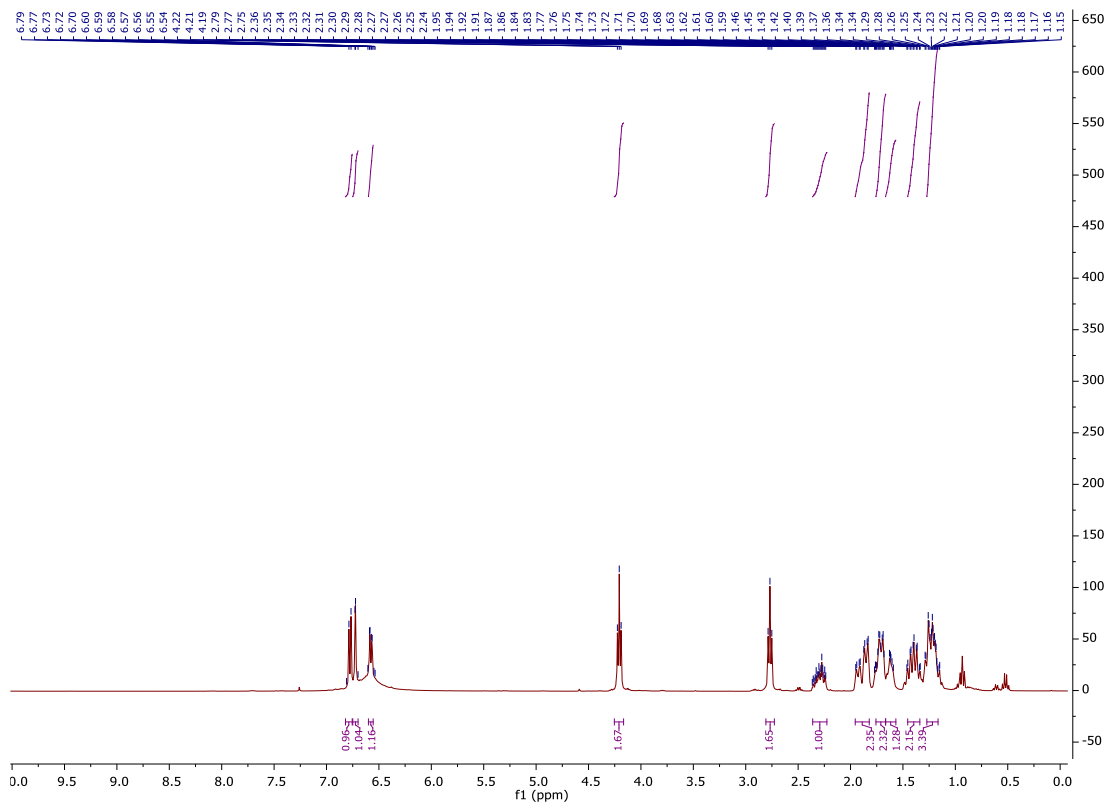
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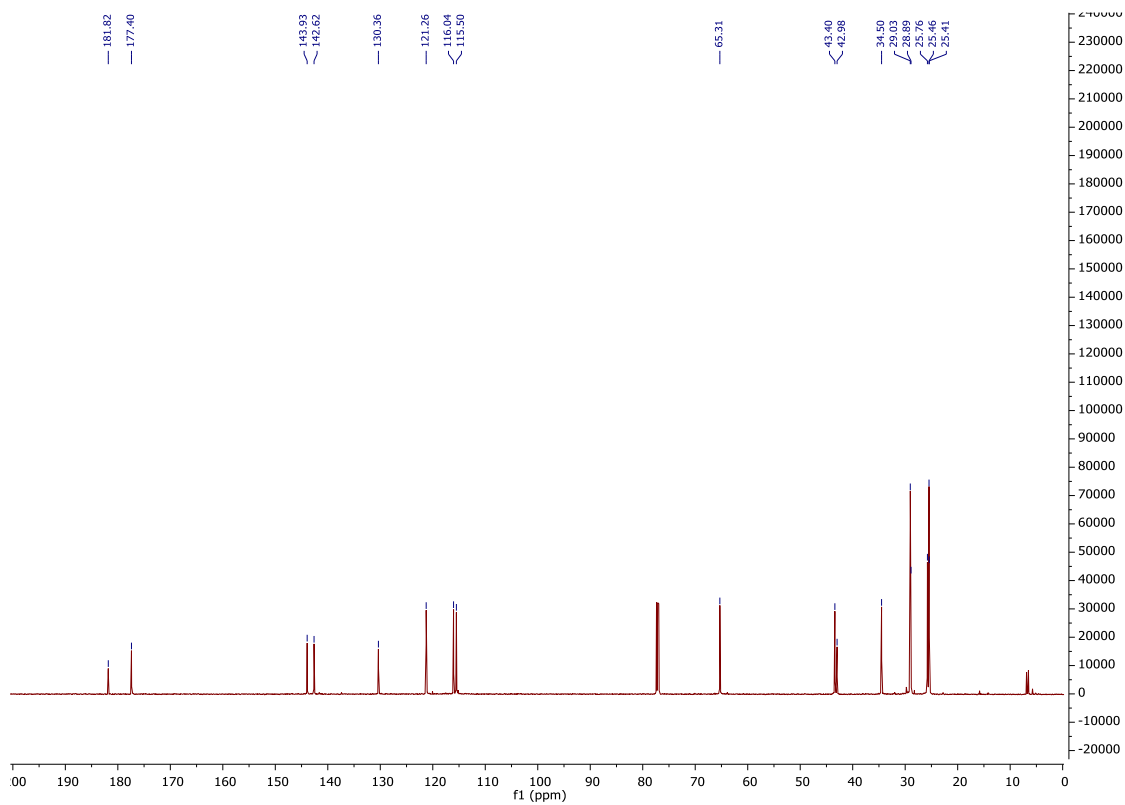
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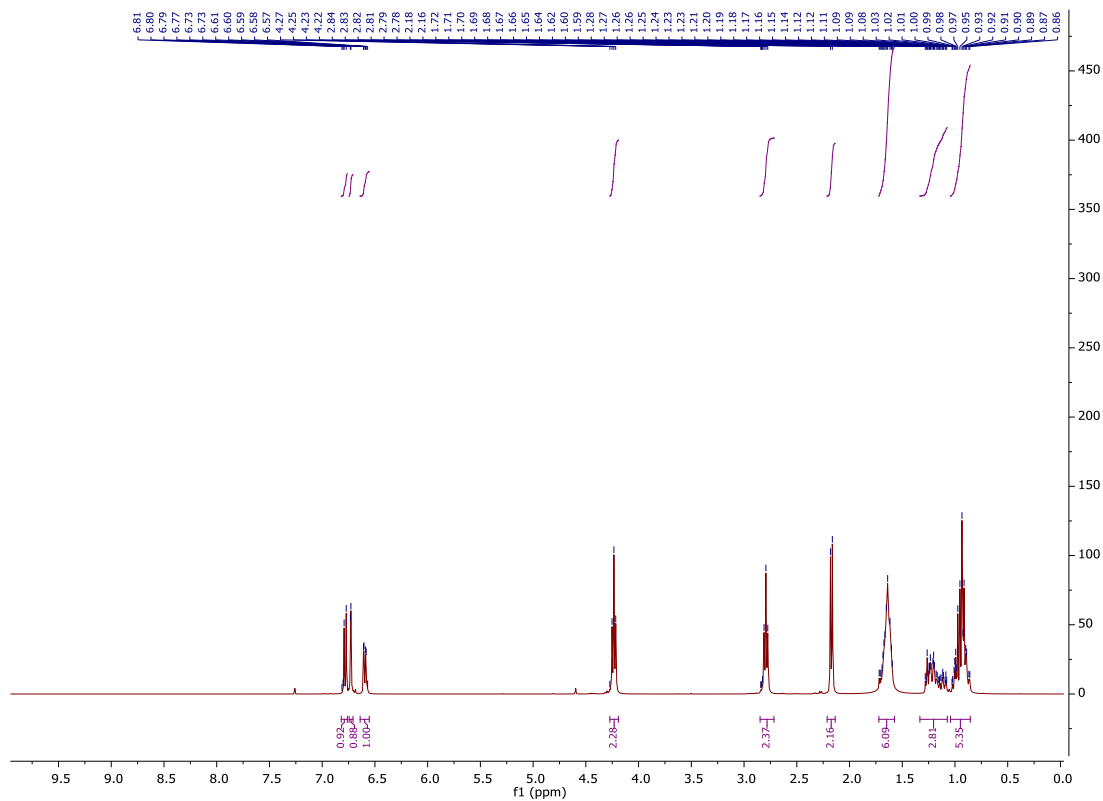
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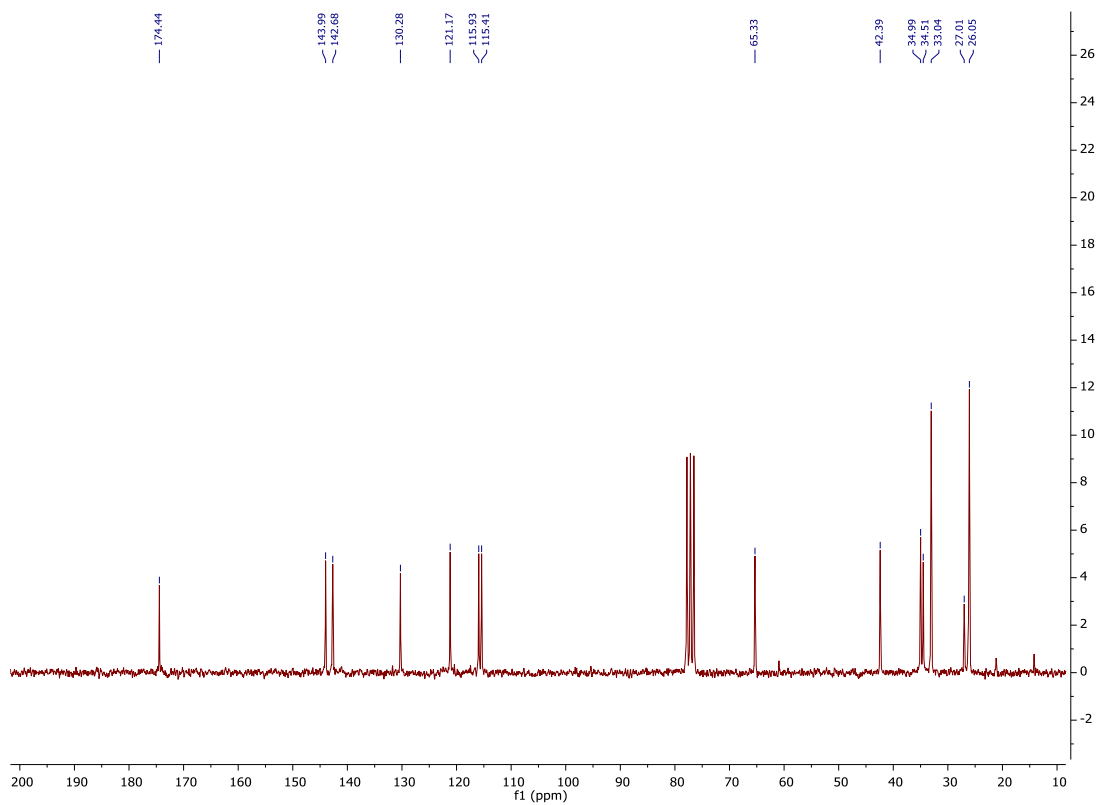
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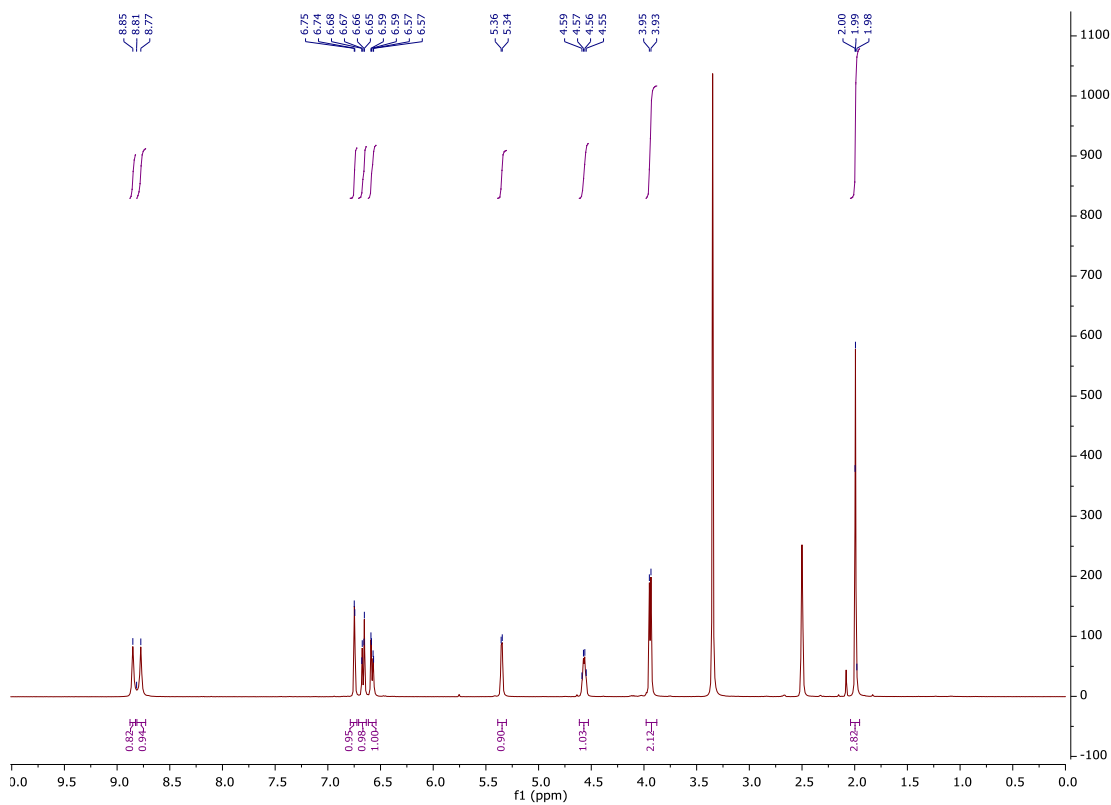
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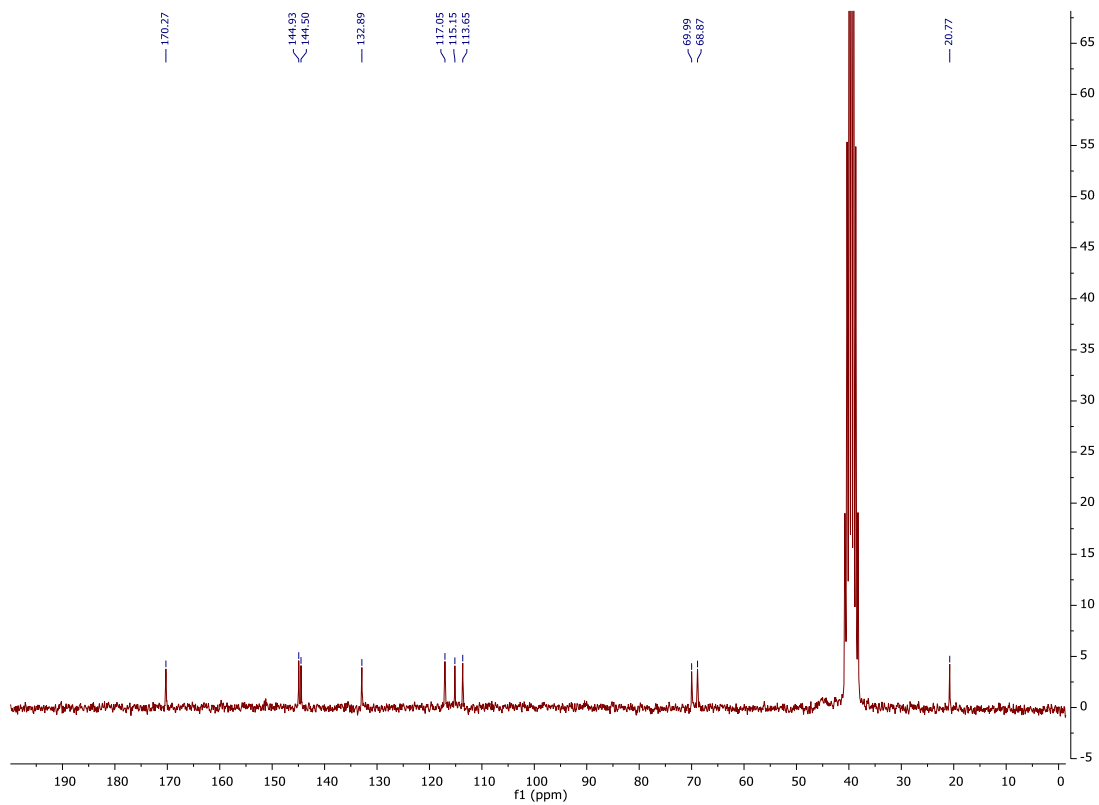
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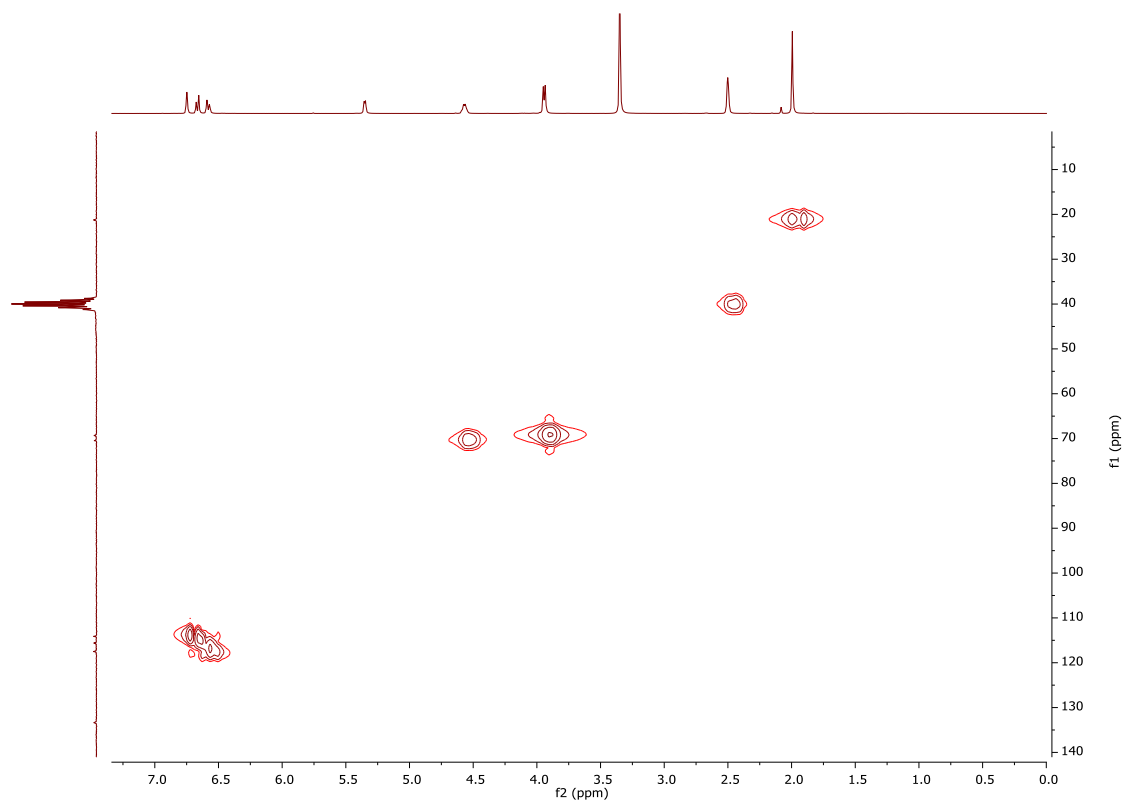
**<sup>13</sup>C NMR spectrum of 4e**



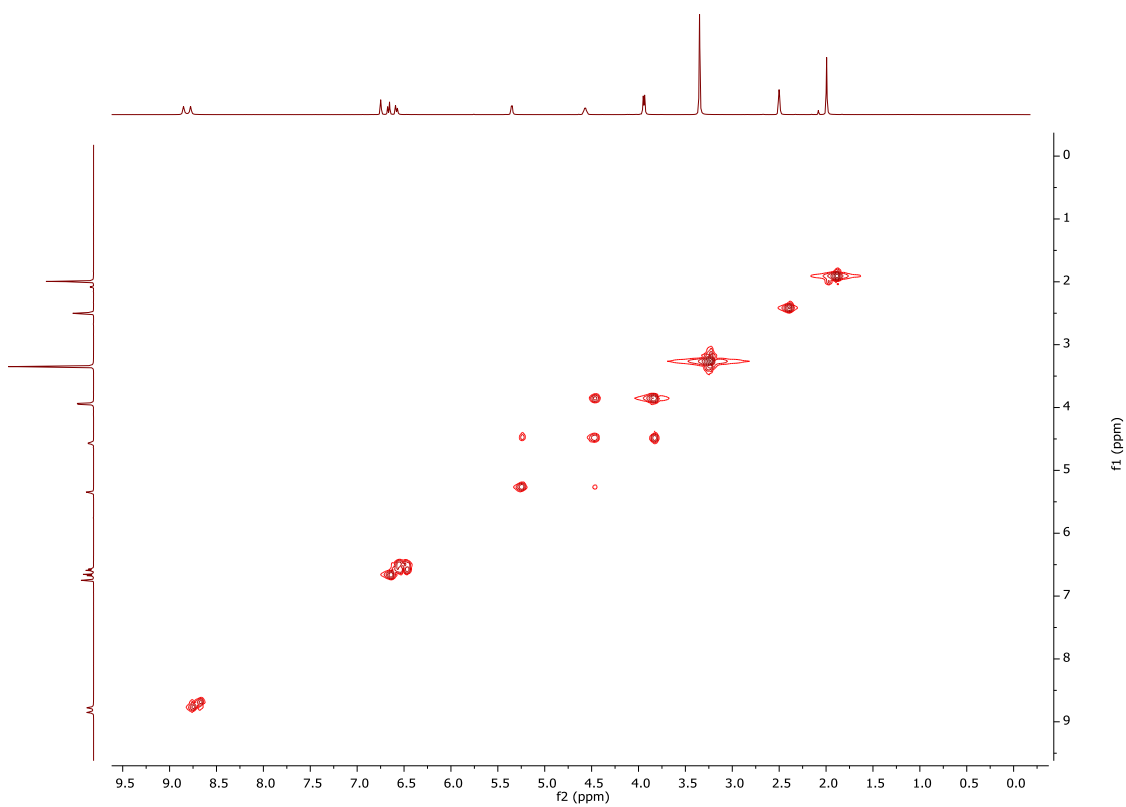
<sup>1</sup>H NMR spectrum of **5a**.



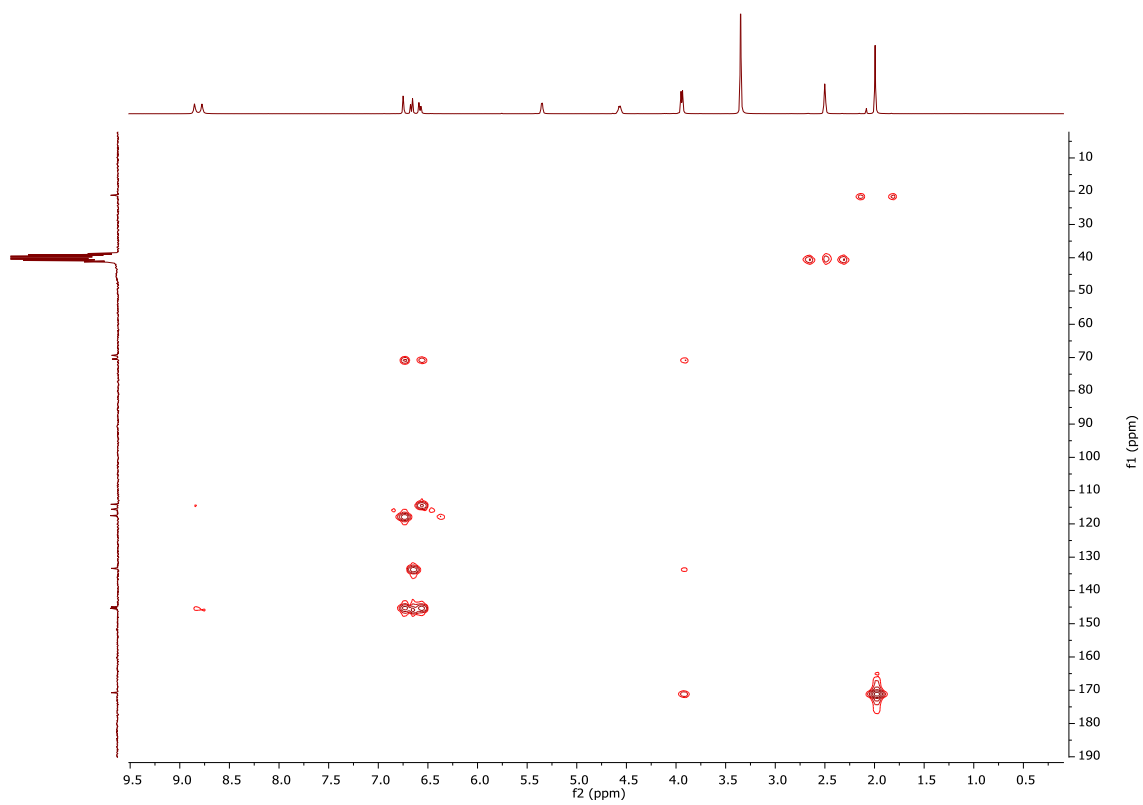
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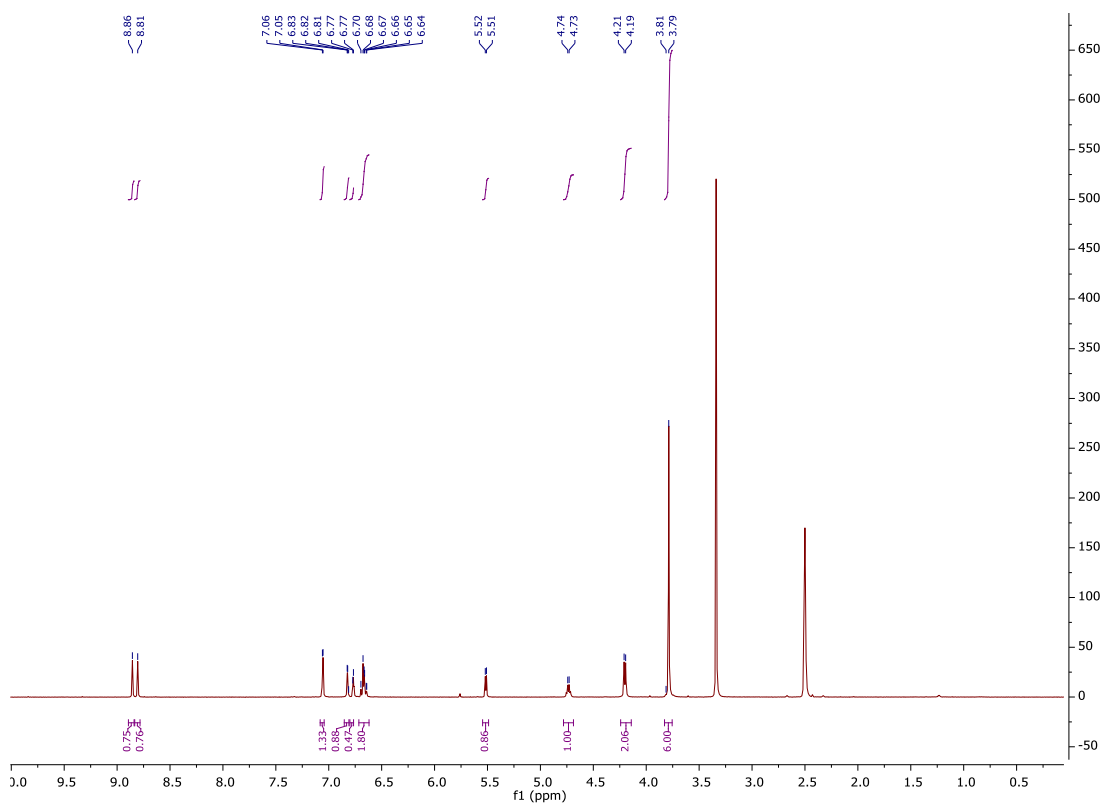
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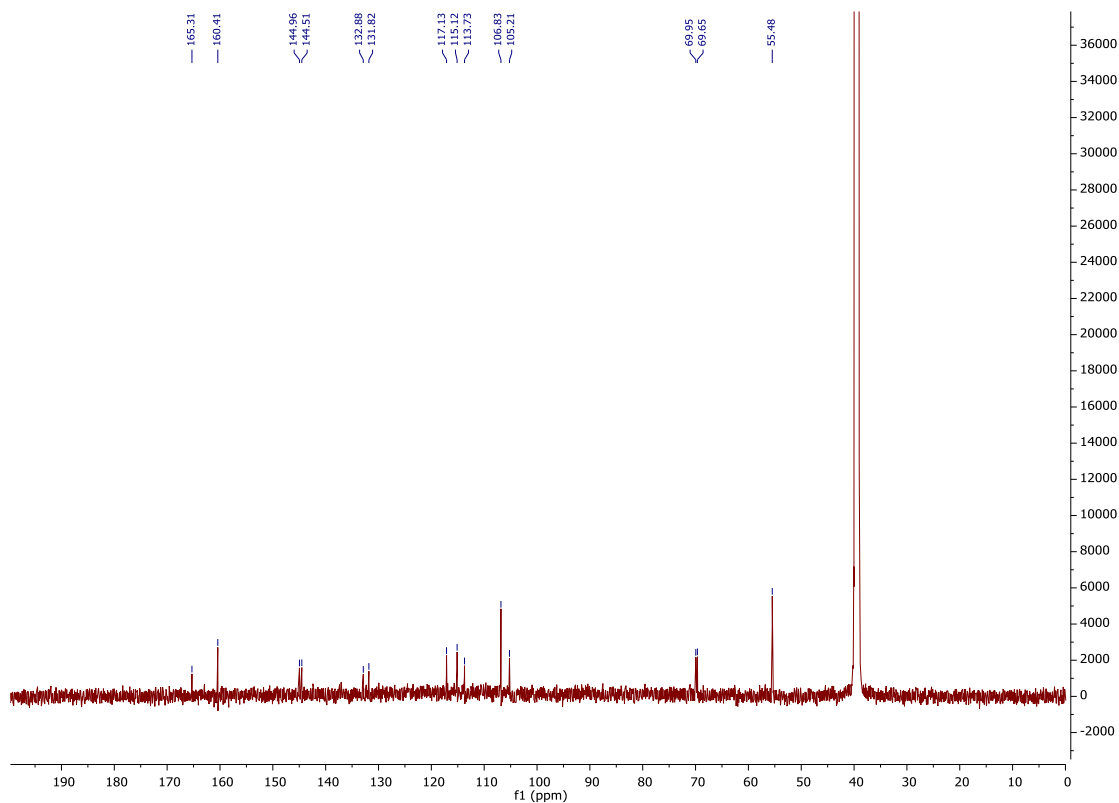
COSY spectrum of **5a**



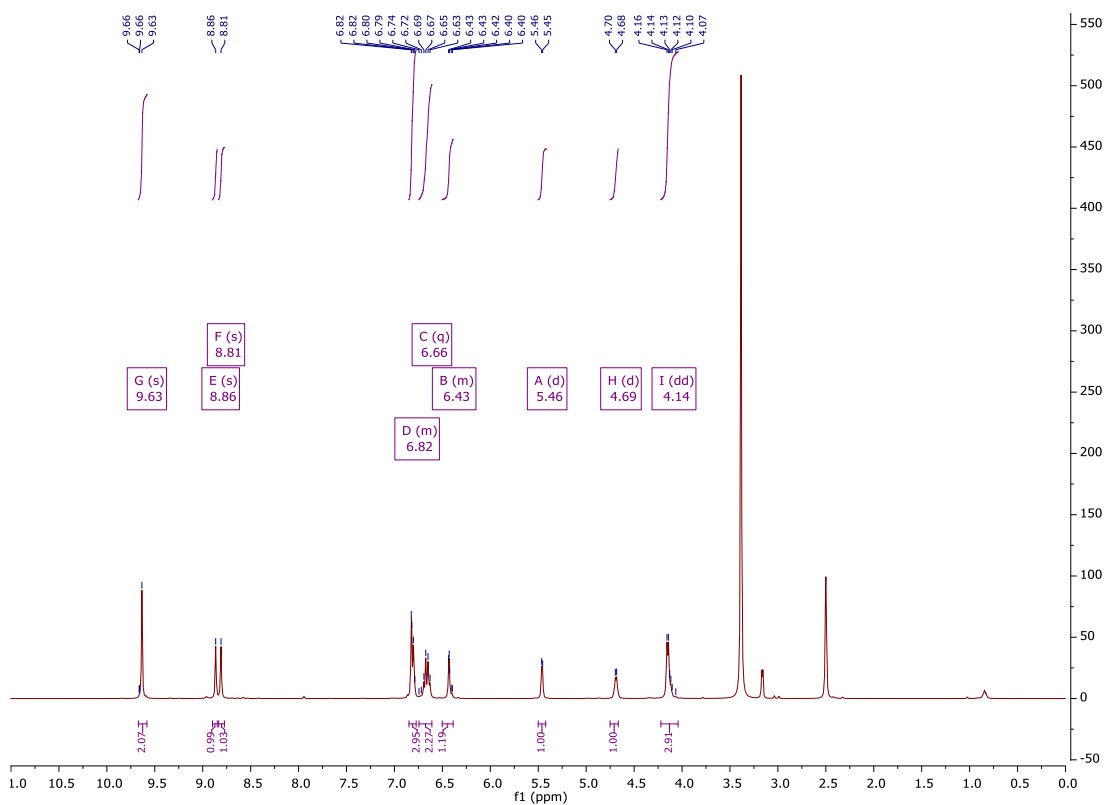
HMBC spectrum of **5a**



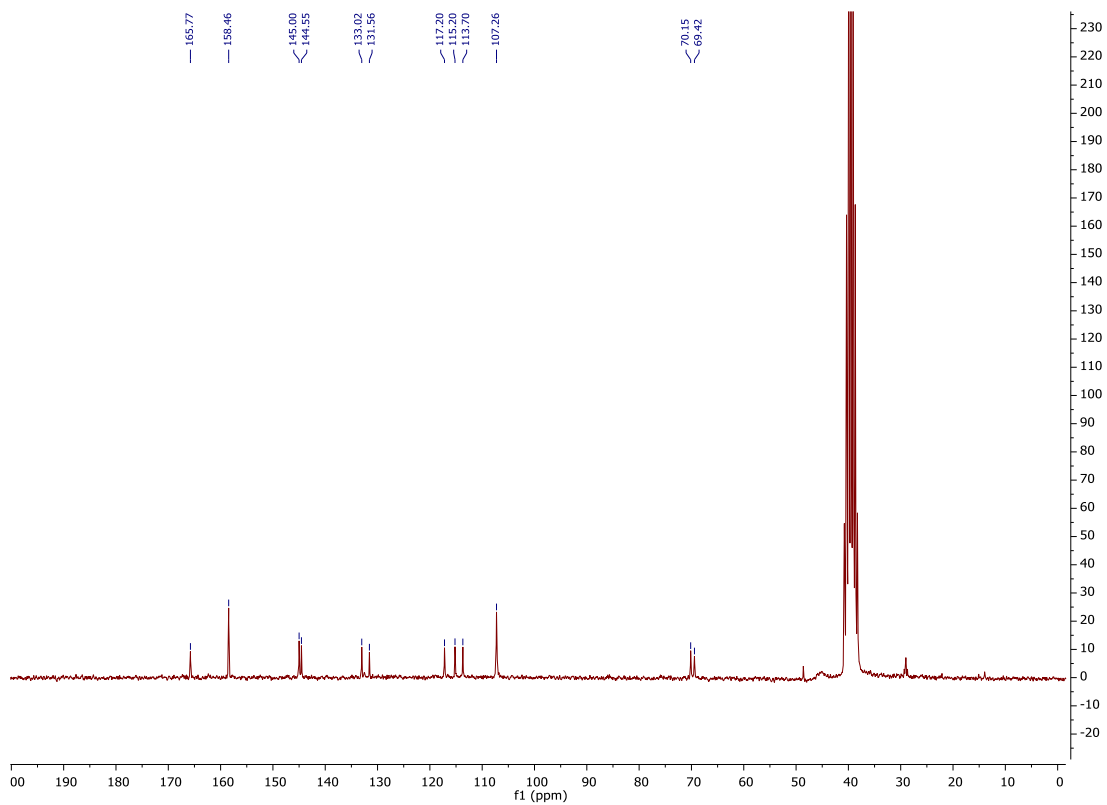
$^1\text{H}$ NMR spectrum of **5b**.



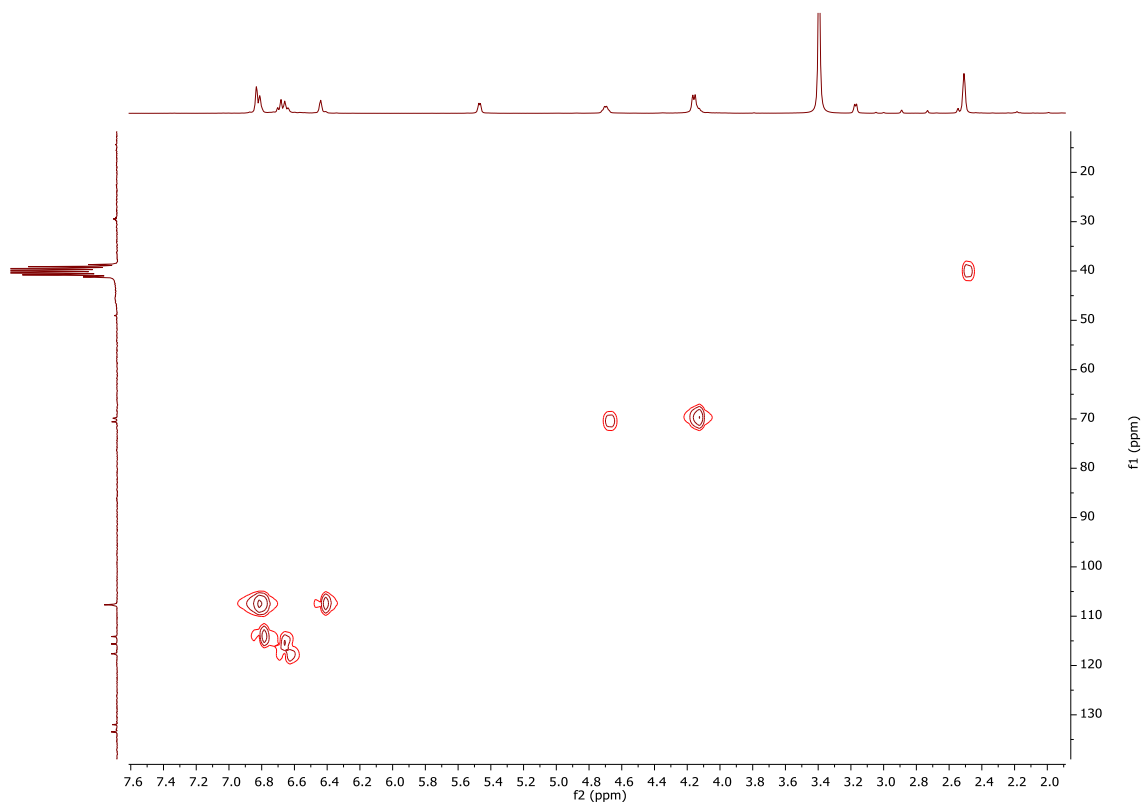
<sup>13</sup>C NMR spectrum of **5b**.



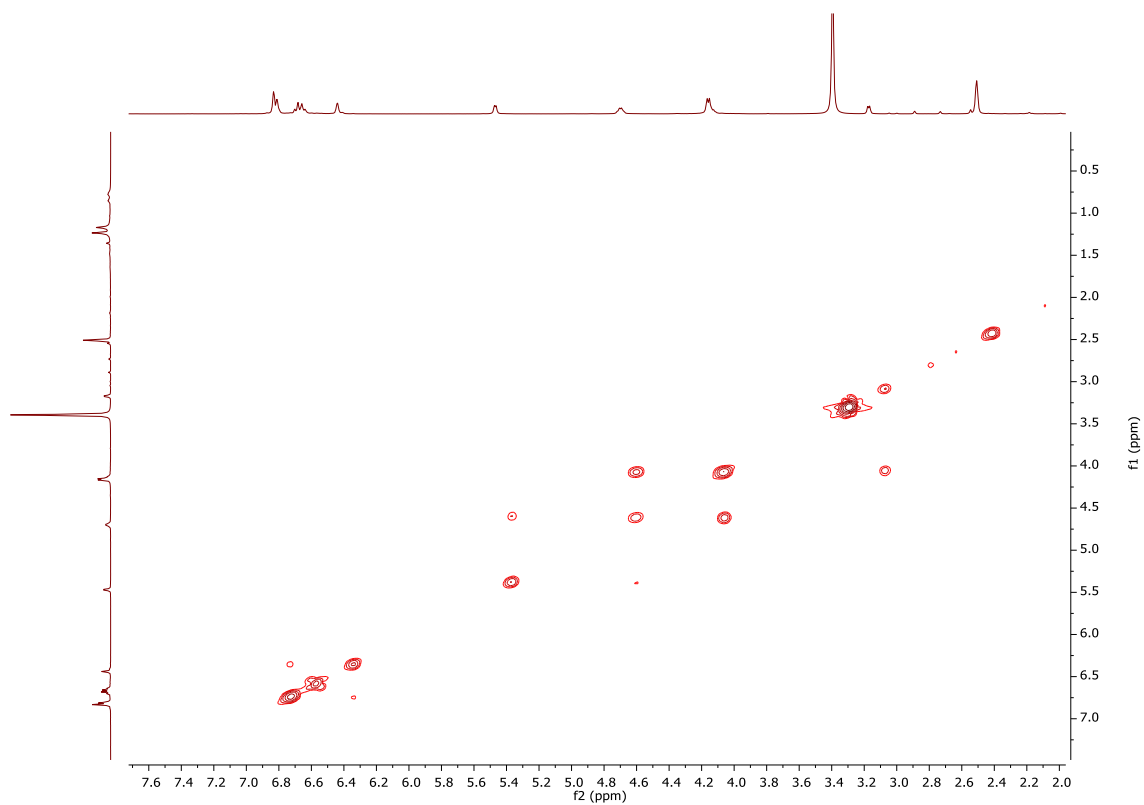
<sup>1</sup>H NMR spectrum of **5c**.



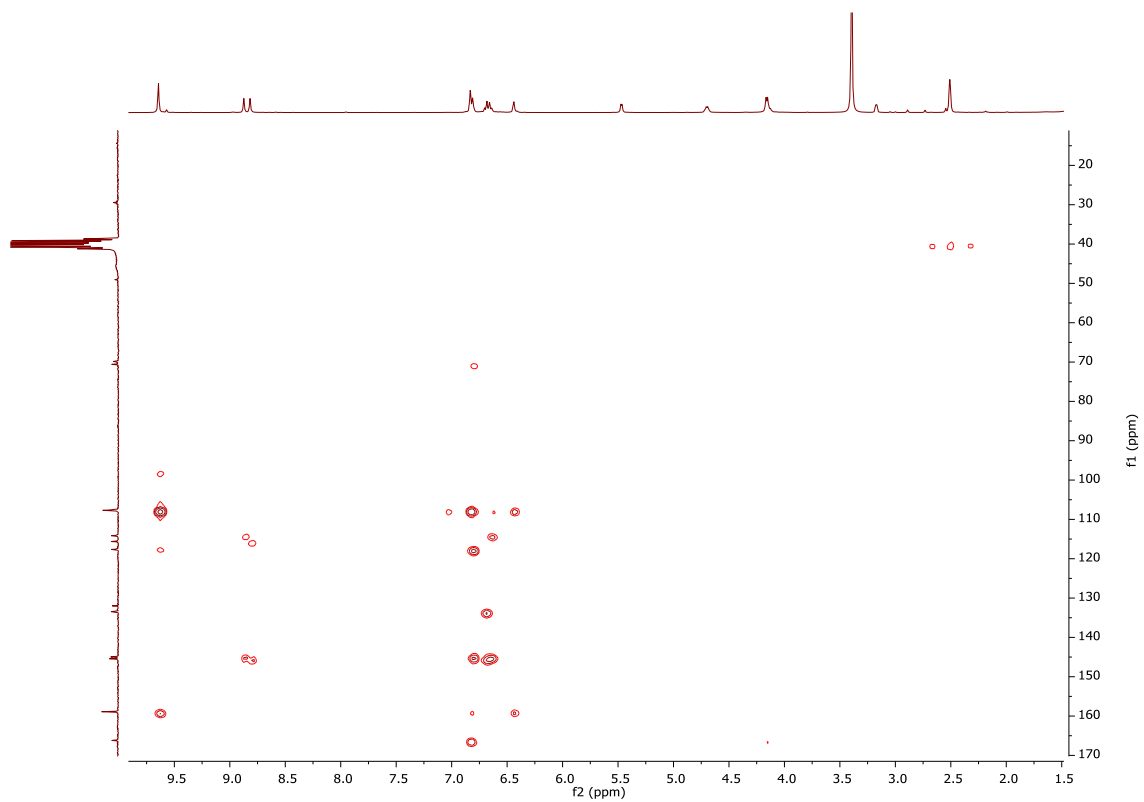
$^{13}\text{C}$  NMR spectrum of **5c**.



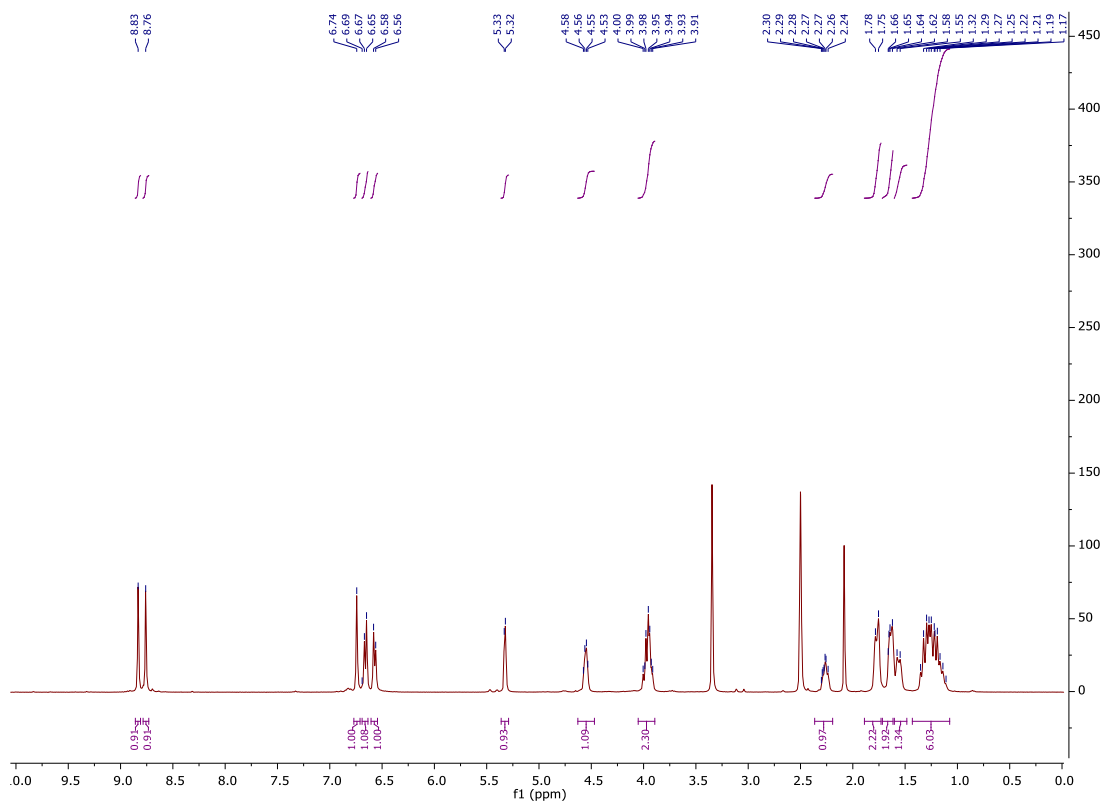
HSQC spectrum of **5c**



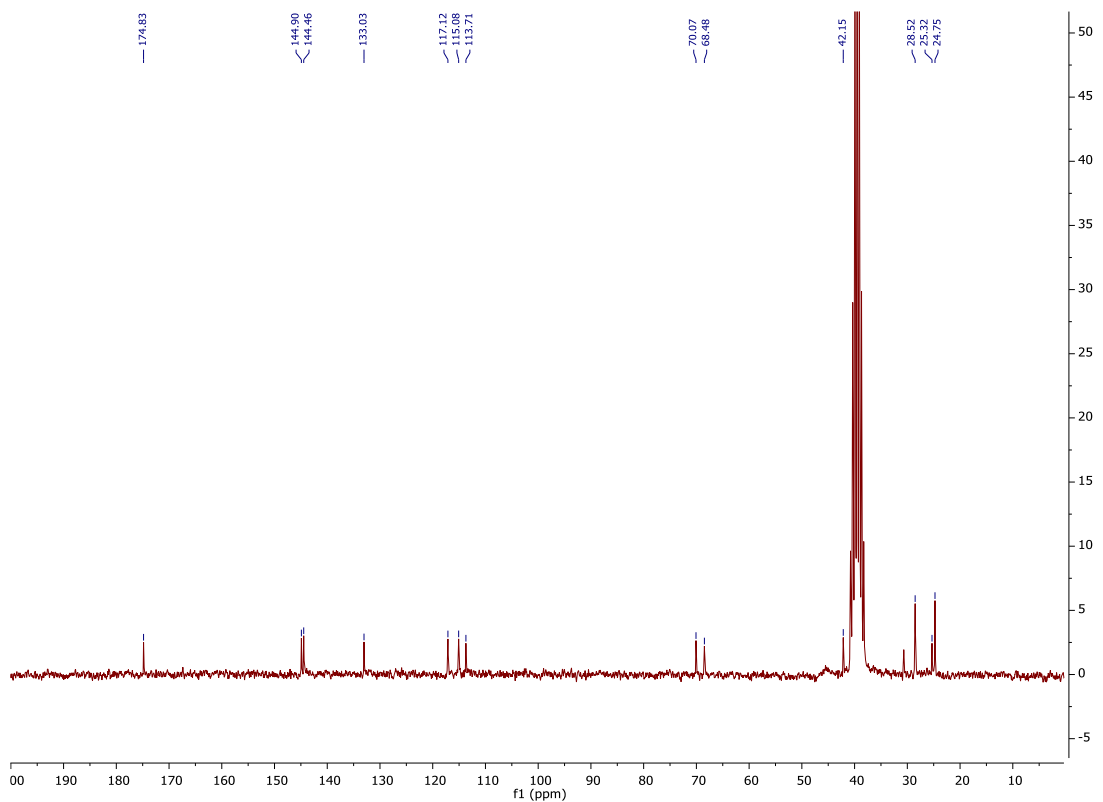
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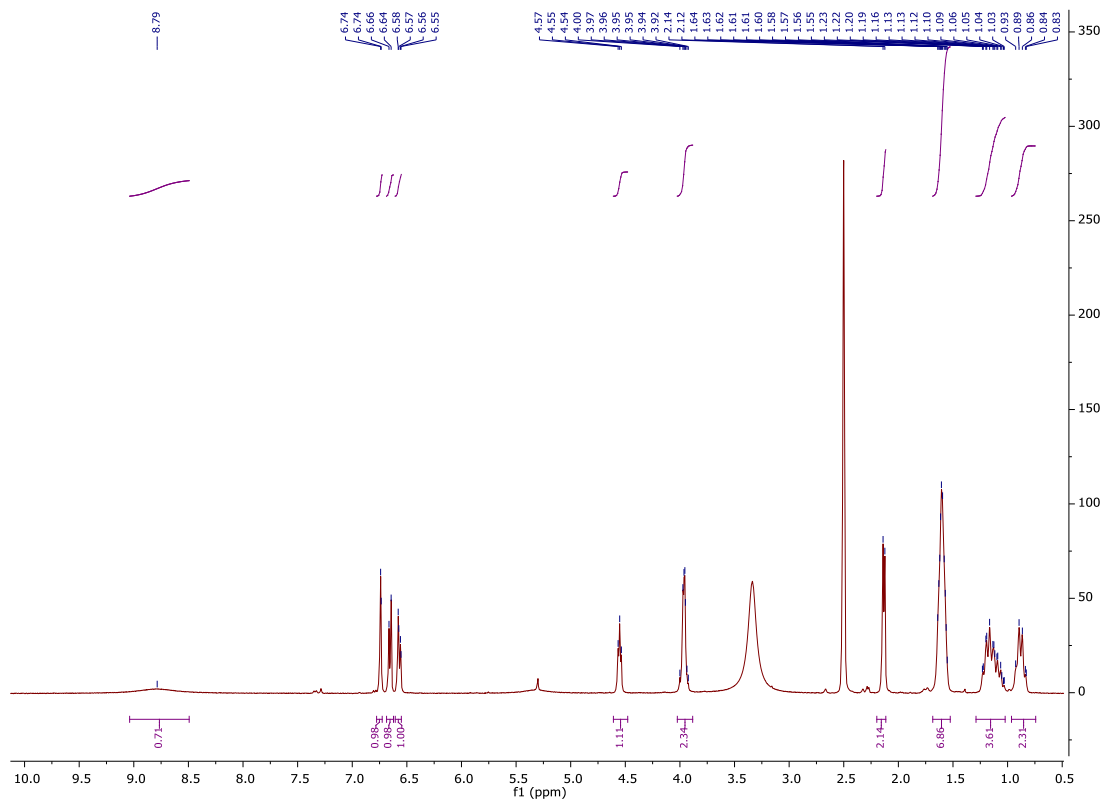
HMBC spectrum of **5c**



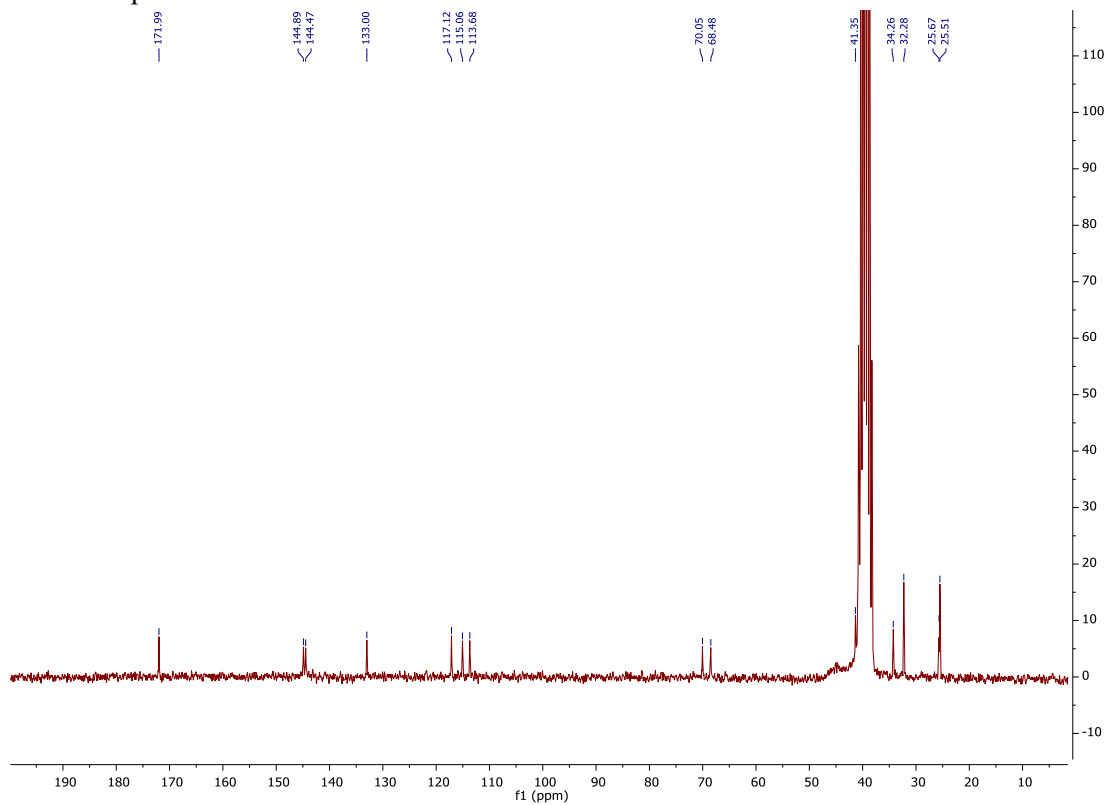
$^1\text{H}$  NMR spectrum of **5d**.



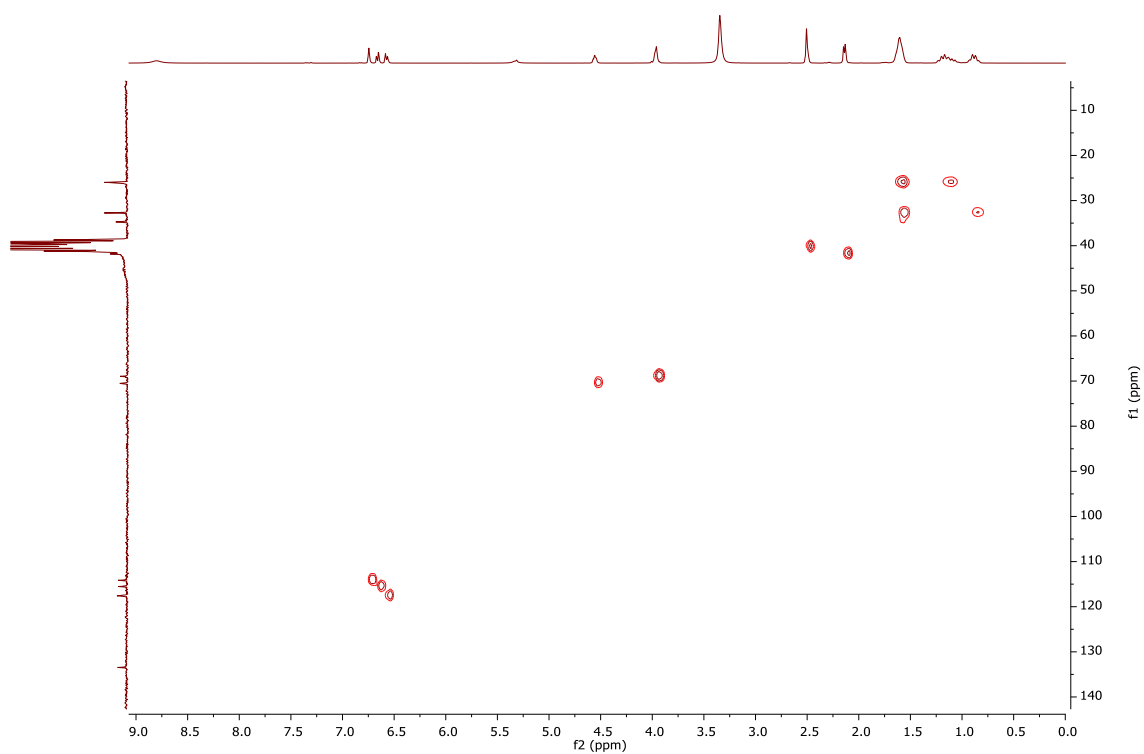
NMR spectrum of **5d**.



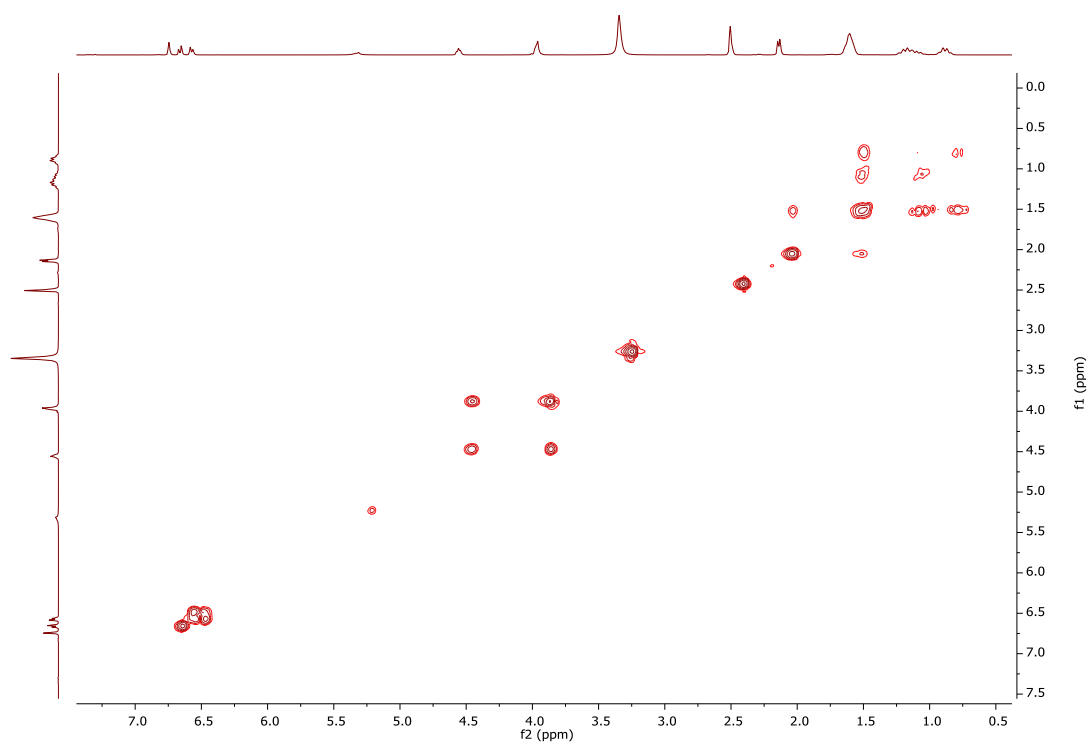
<sup>1</sup>H NMR spectrum of 5e.



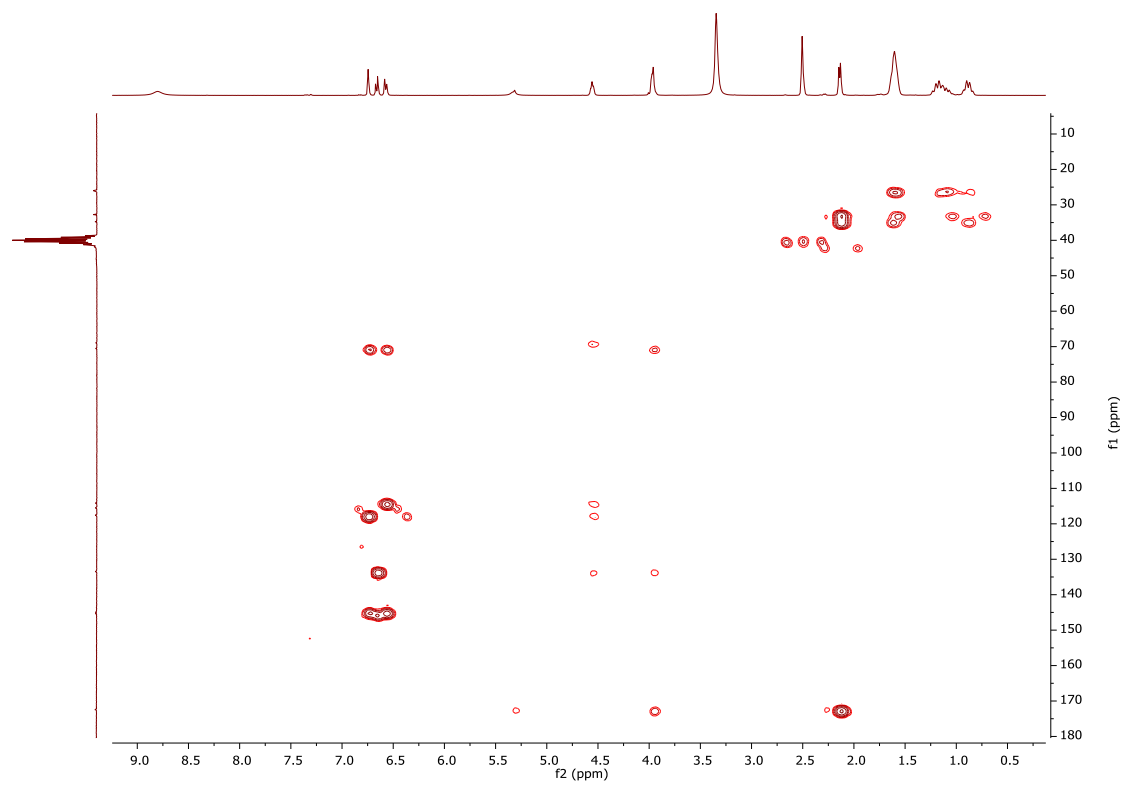
<sup>13</sup>C NMR spectrum of 5e



HSQC spectrum of **5e**



COSY spectrum of **5e**



HMBC spectrum of **5e**



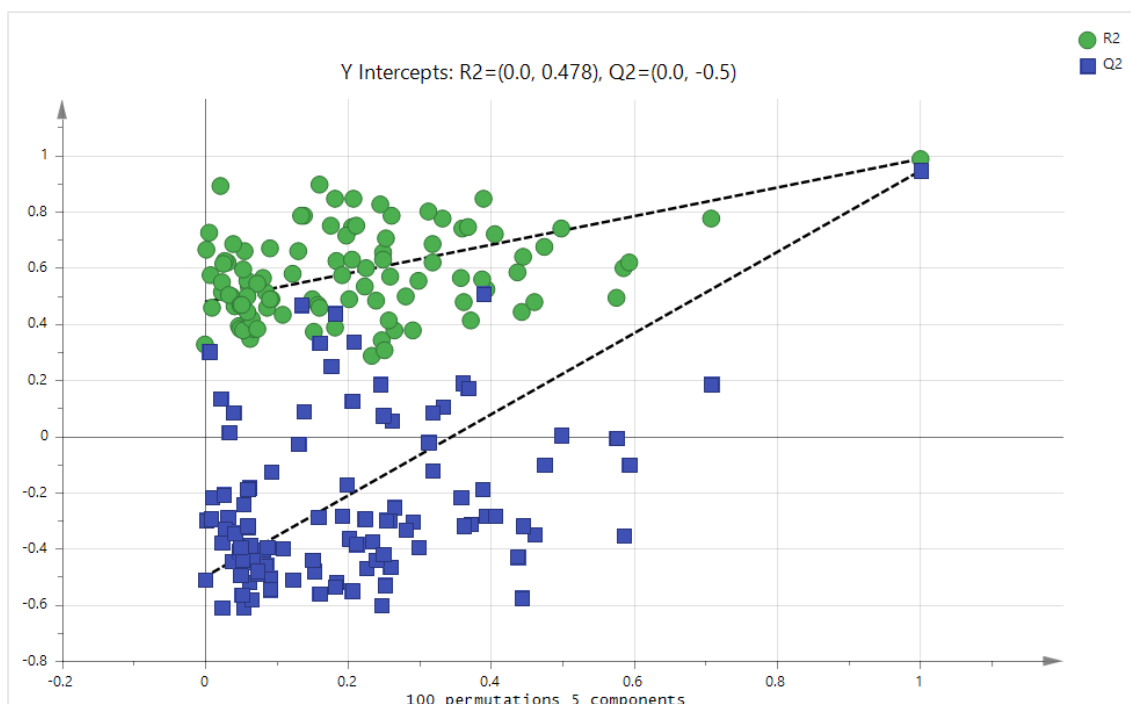


Figure S3: Permutation testing on the generated QSAR reduced model (n=100 permutations)

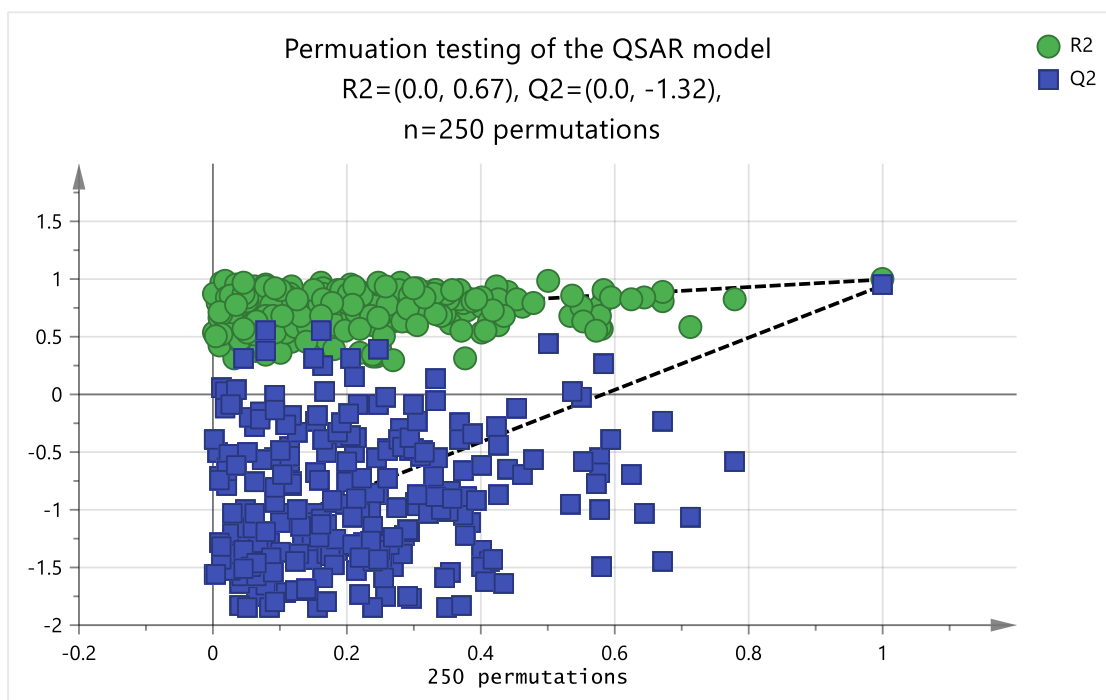


Figure S4: Permutation testing on the generated QSAR reduced model (n=250 permutations)

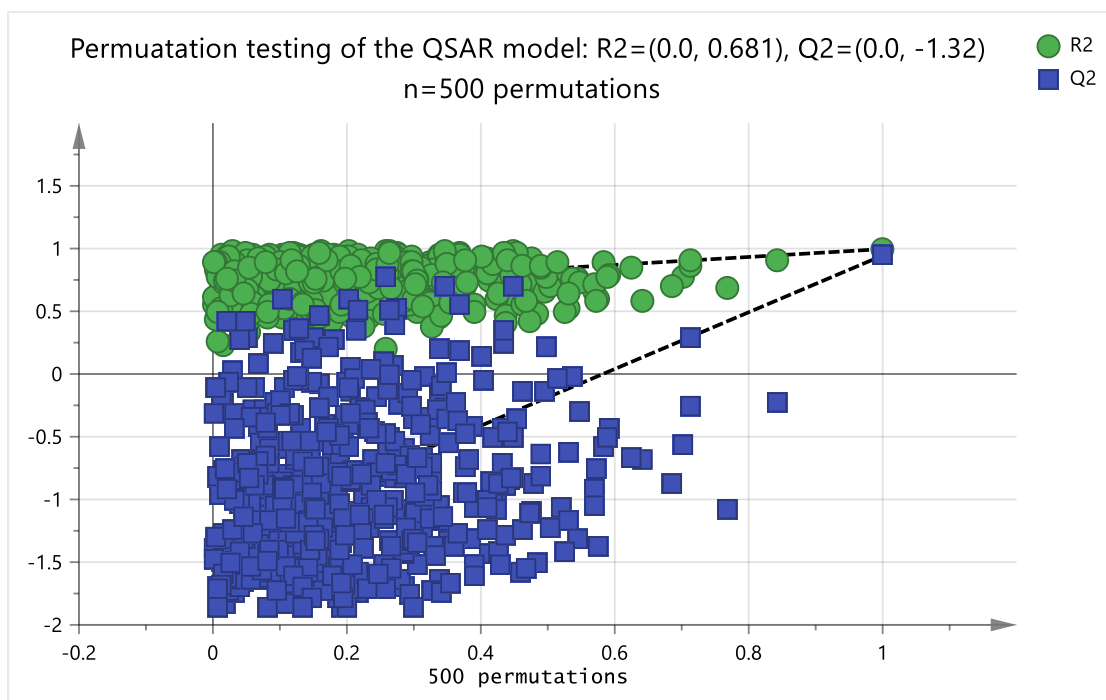


Figure S5: Permutation testing on the generated QSAR reduced model ( $n=500$  permutations)

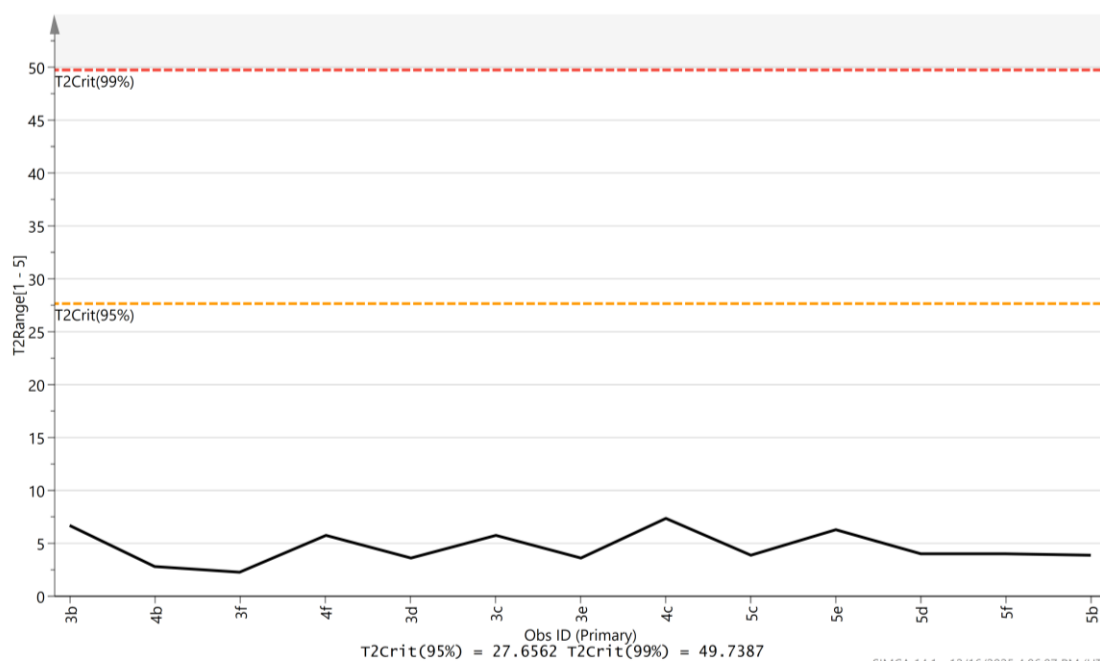


Figure S6: Validation of the QSAR model, T2 Hotelling testing for severe outliers of the reduced model

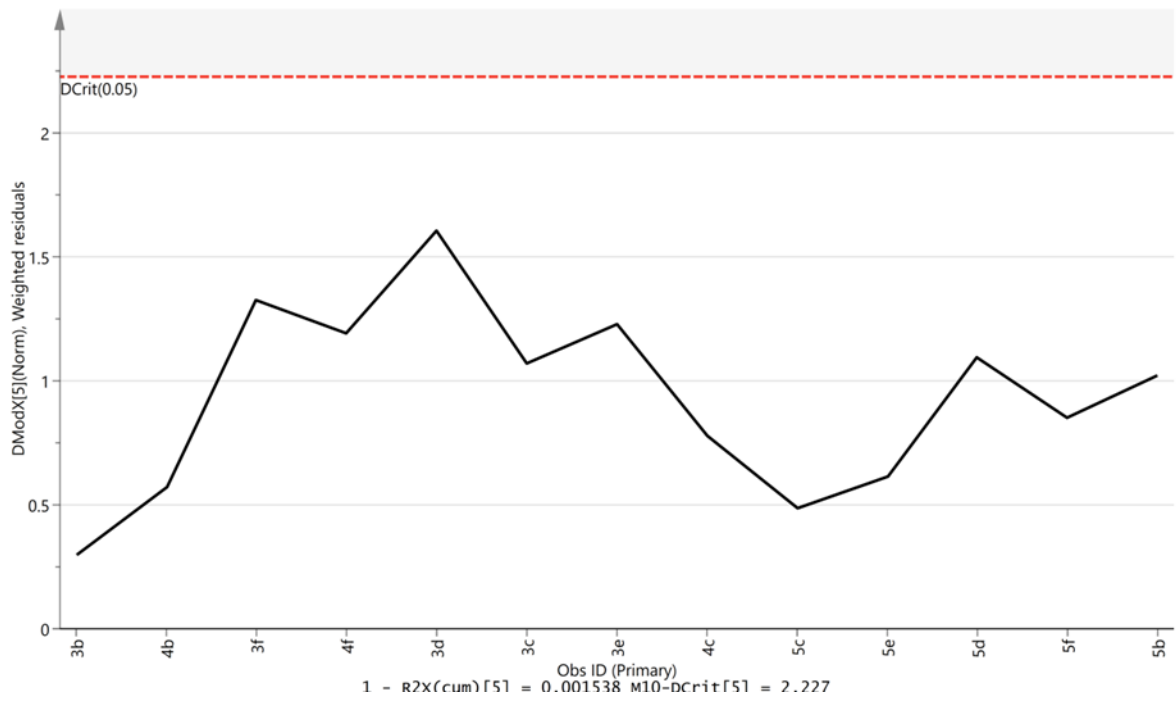


Figure S7: Validation of the QSAR reduced model DModX testing for mild outliers

## Tables

Table S1: Parameters used for the exploration of the non-covalent complexes between the A $\beta$  and the examined molecules

Capillary (kV)	3.5
Source ( $^{\circ}$ C)	120
L.M.	4.7
H.M.	15.0
Collision Energy (V)	5.0
Sampling Cone (V)	2.0
Desolvation ( $^{\circ}$ C)	220
Cell Entrance (V)	2.0
Extraction Cone (V)	2.0
Cone	Off
Ion Energy (V)	0.5
Cell Exit (V)	-10
Ion Guide: (V)	3.0
Desolvation (L/hr)	400
Pre Filter (V)	2.0
Scan range (m/z)	150-2000
Detector (V)	1900

Table S2: Cross validation testing

Number of groups (k)	R <sup>2</sup>	Q <sup>2</sup>
2	0.987	0.934
5	0.987	0.925
7	0.987	0.944
10	0.987	0.922
16 (Leave one out)	0.996	0.935