

## Supplementary Material

### 2,4-Furfurylidene-D-sorbitol and its tetra-methyl ether: synthesis, conformational studies, and radical scavenging activity

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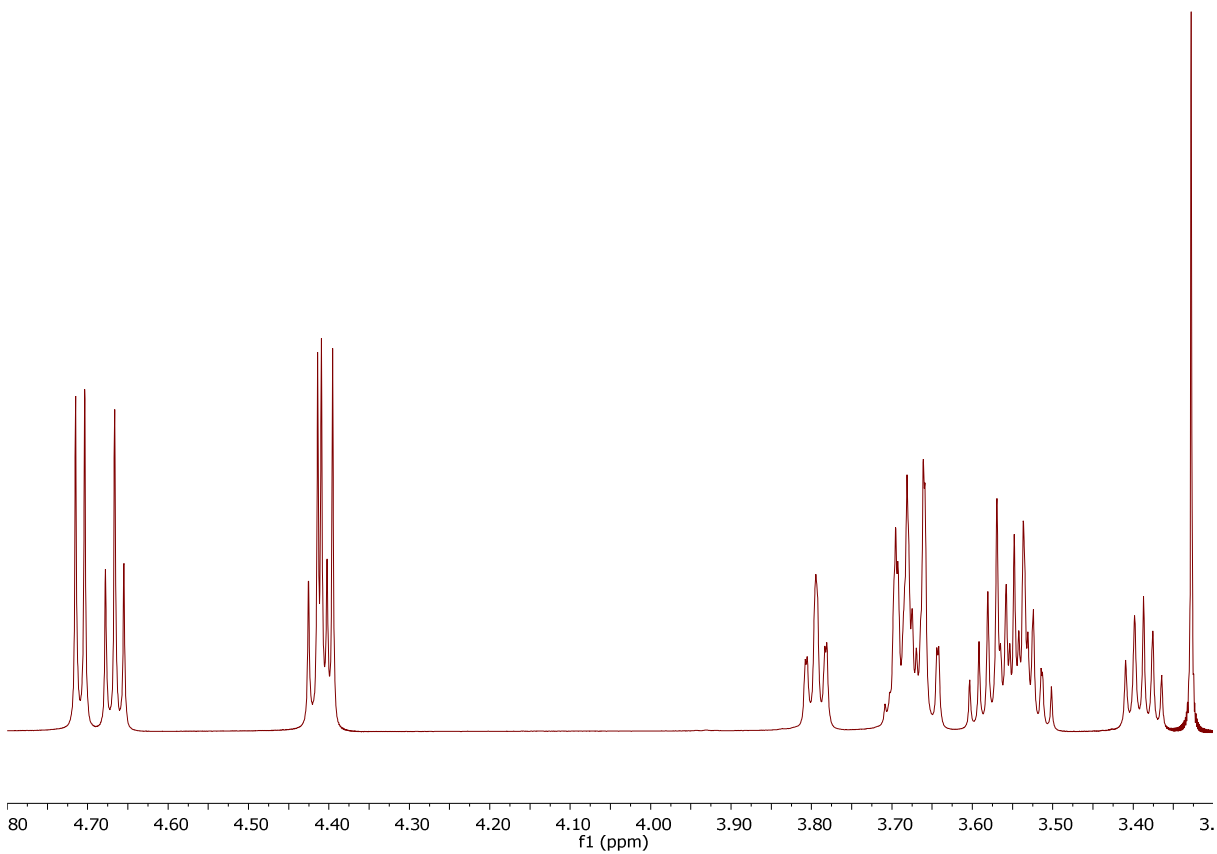
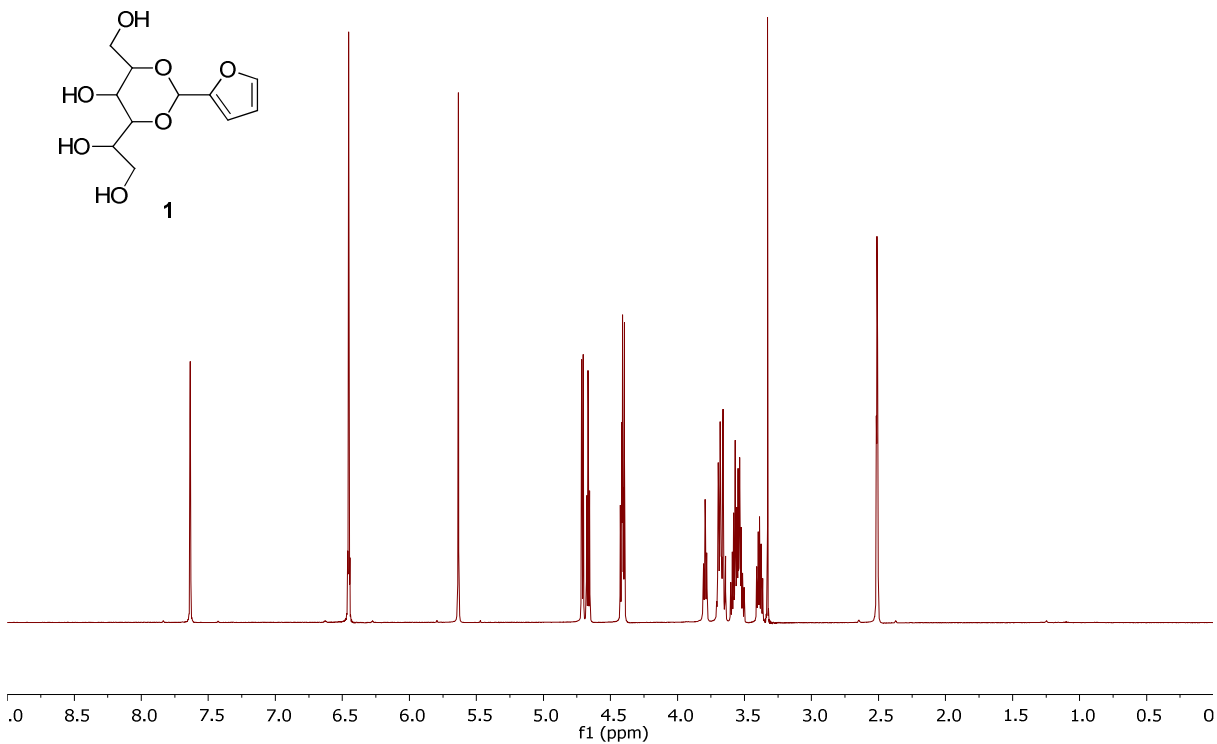
<sup>d</sup>*Department of Biomedical Sciences, Humanitas University, Via Manzoni 113, 20089 Rozzano - Milano, Italy*

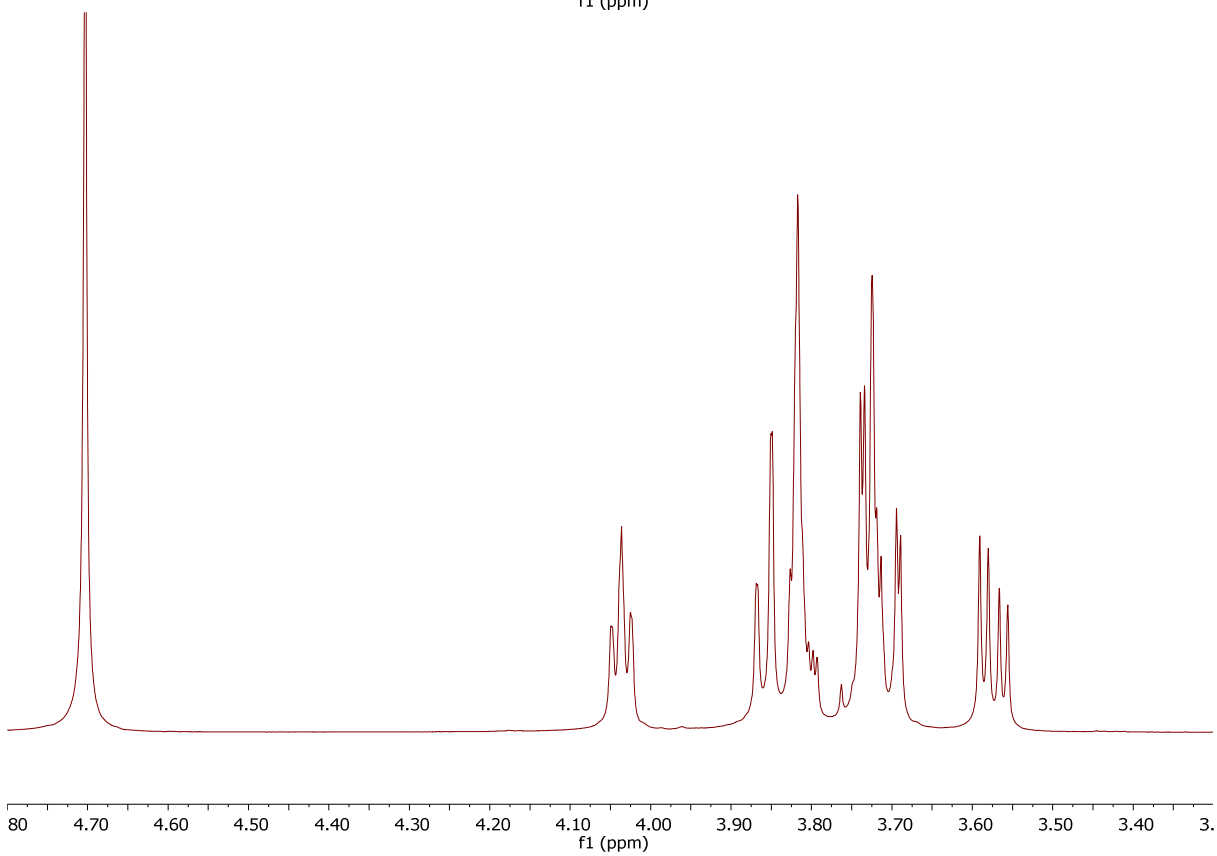
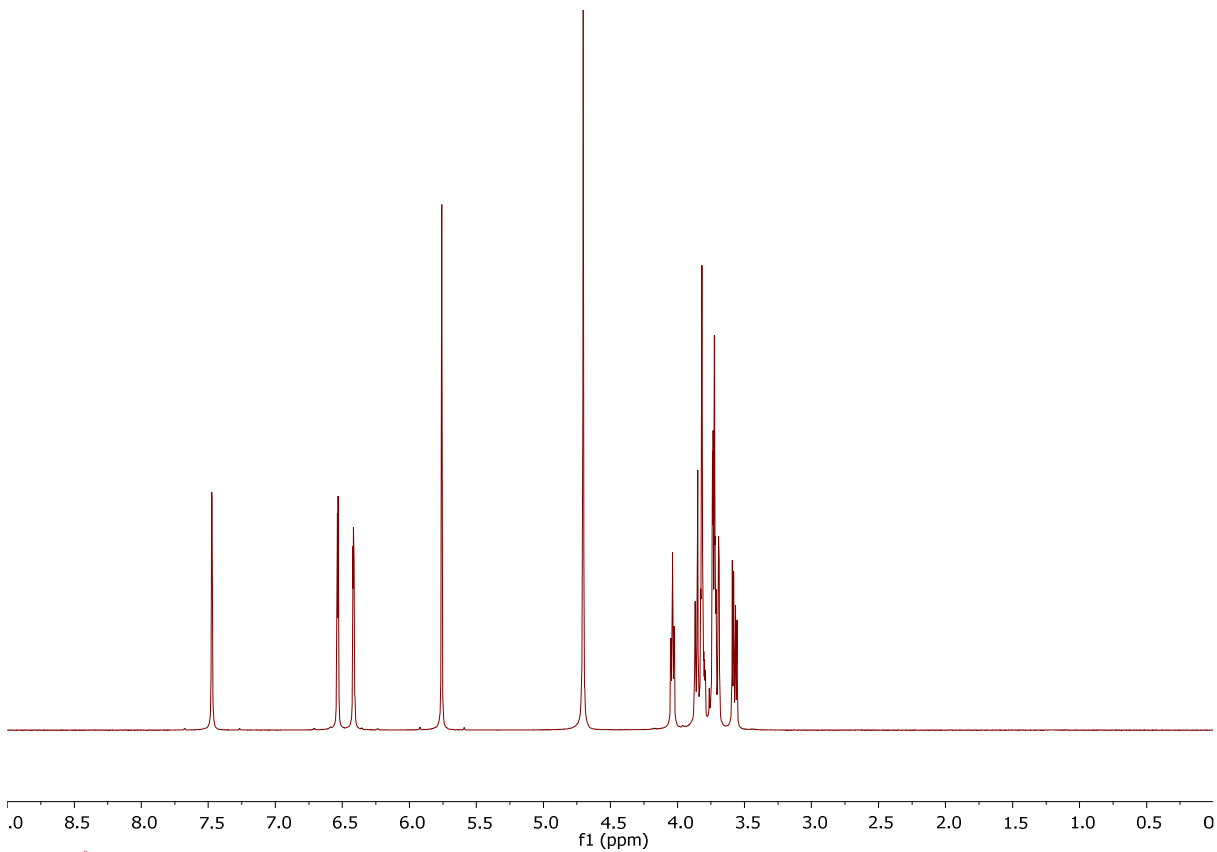
E-mail: [pierangela.ciuffreda@unimi.it](mailto:pierangela.ciuffreda@unimi.it)

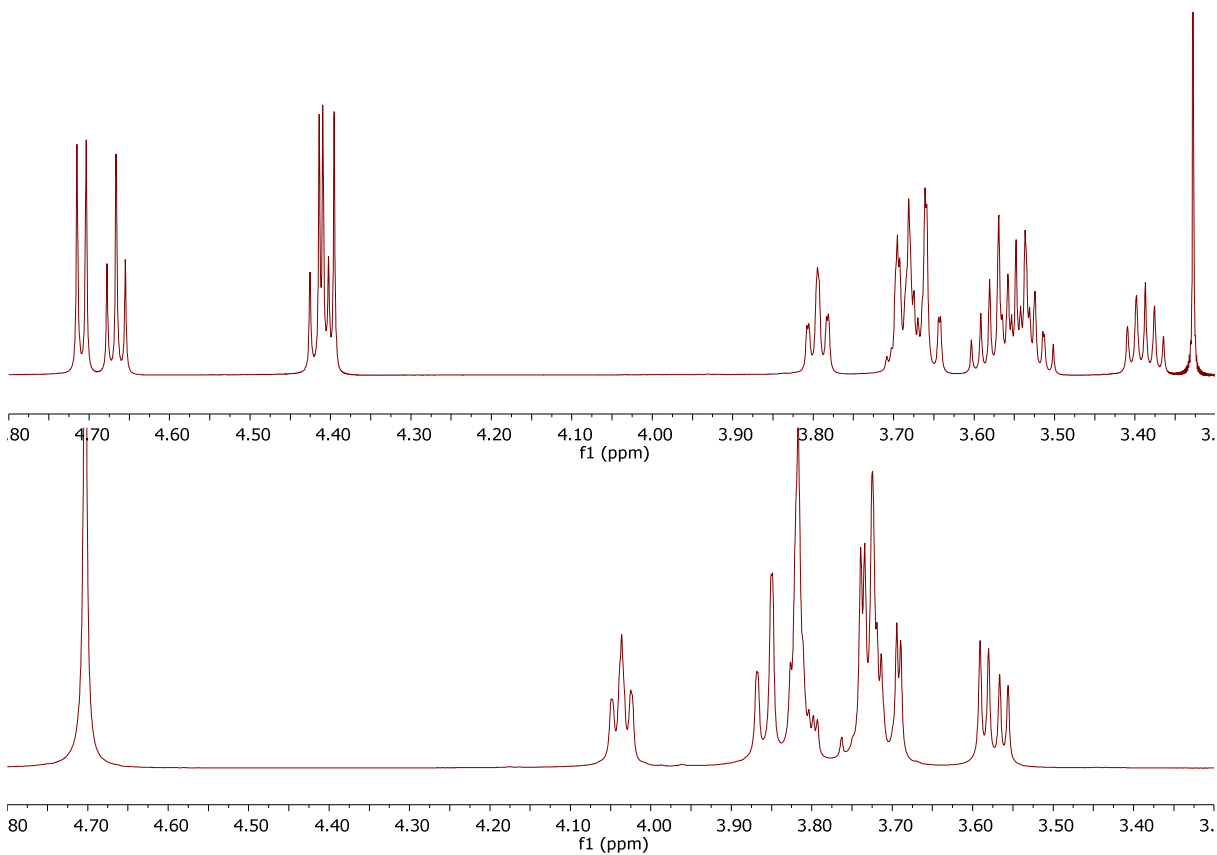
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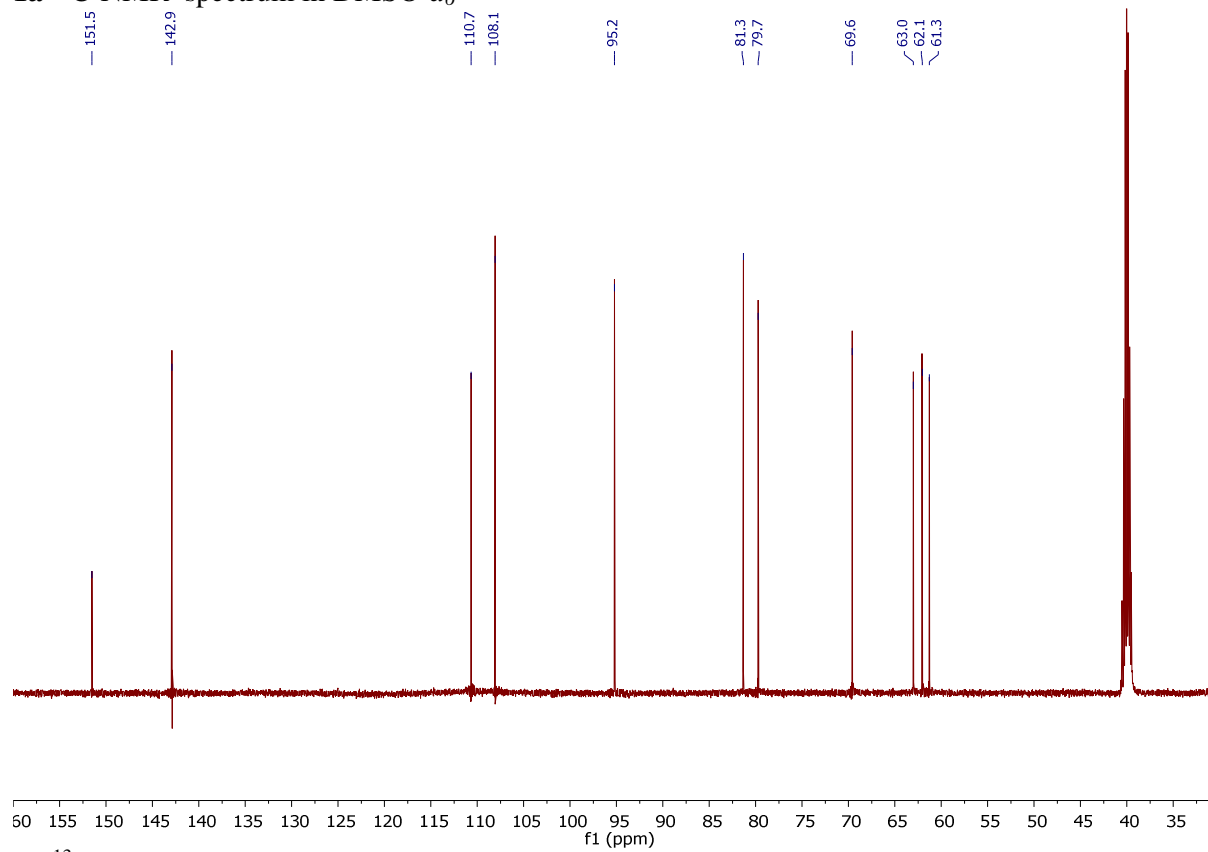
<b>1a</b> <sup>1</sup> H-NMR spectrum in DMSO- <i>d</i> <sub>6</sub>	S2
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**1a**  $^1\text{H-NMR}$  spectrum in  $\text{DMSO-}d_6$ 

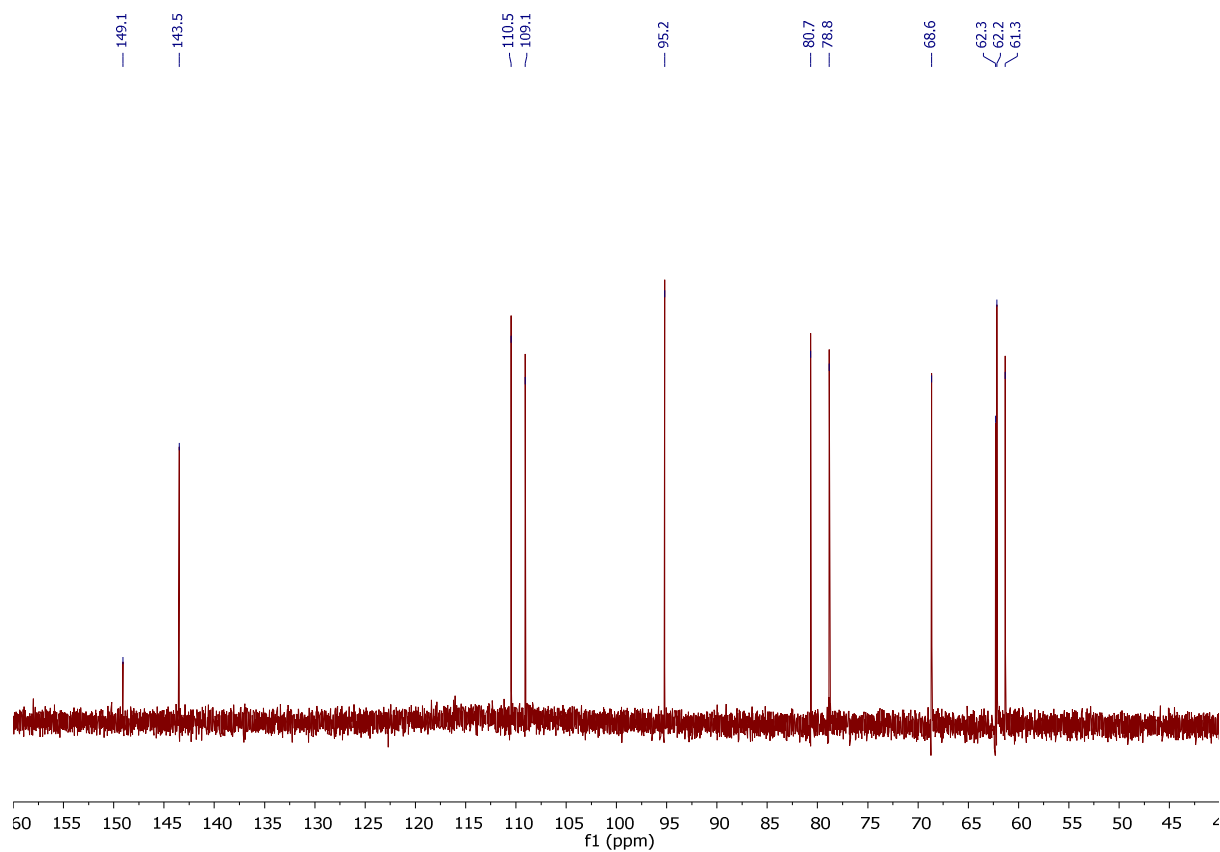
**1b**  $^1\text{H-NMR}$  spectrum in  $\text{D}_2\text{O}$ 

**1**  $^1\text{H}$ -NMR spectra in  $\text{DMSO-}d_6$  (TOP) and in  $\text{D}_2\text{O}$  (DOWN)

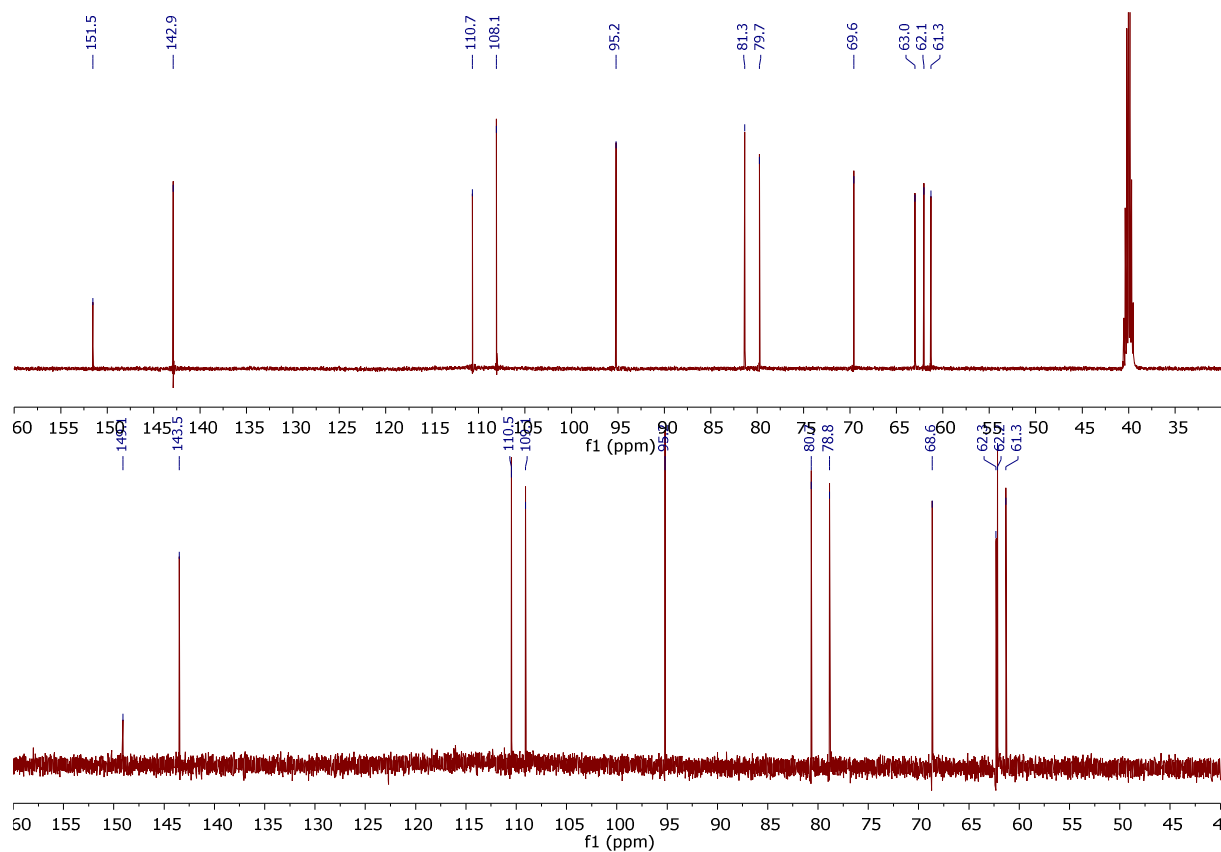
**1a**  $^{13}\text{C}$ -NMR spectrum in  $\text{DMSO-}d_6$



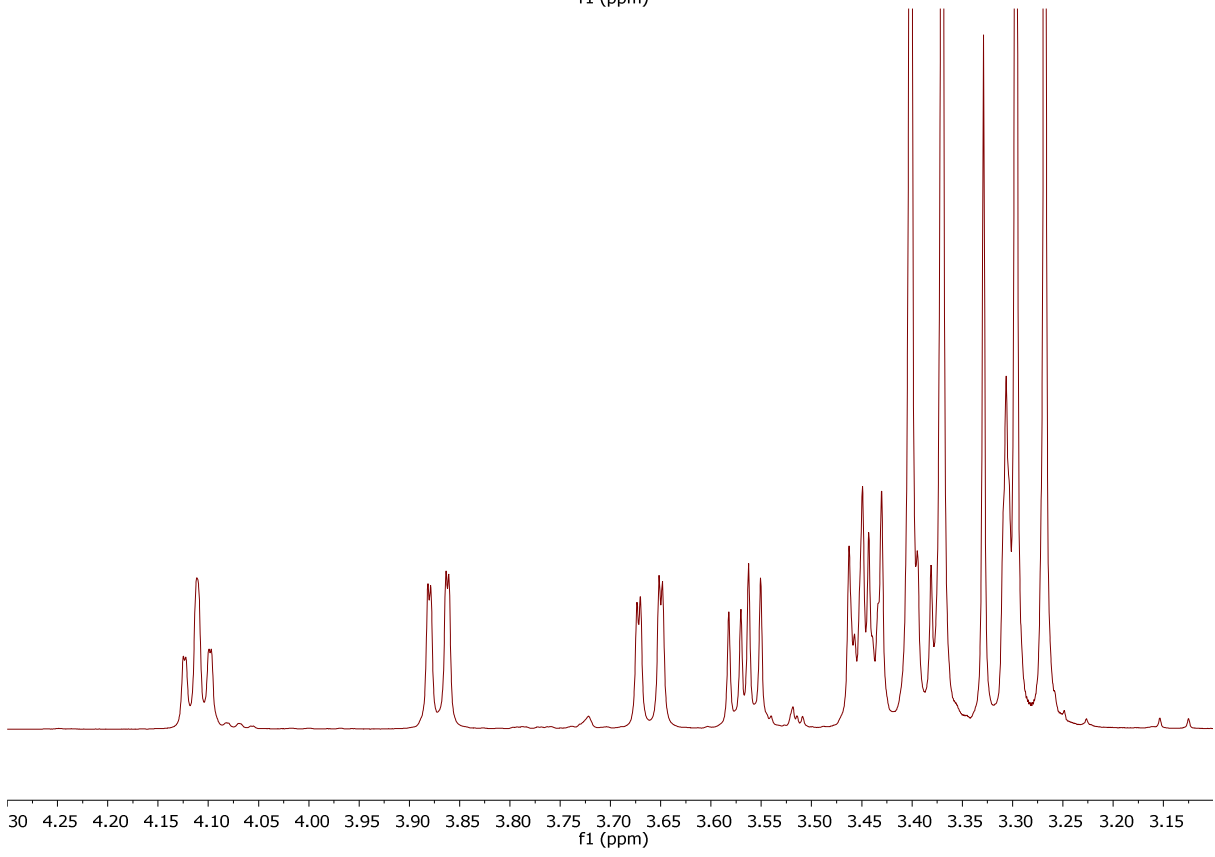
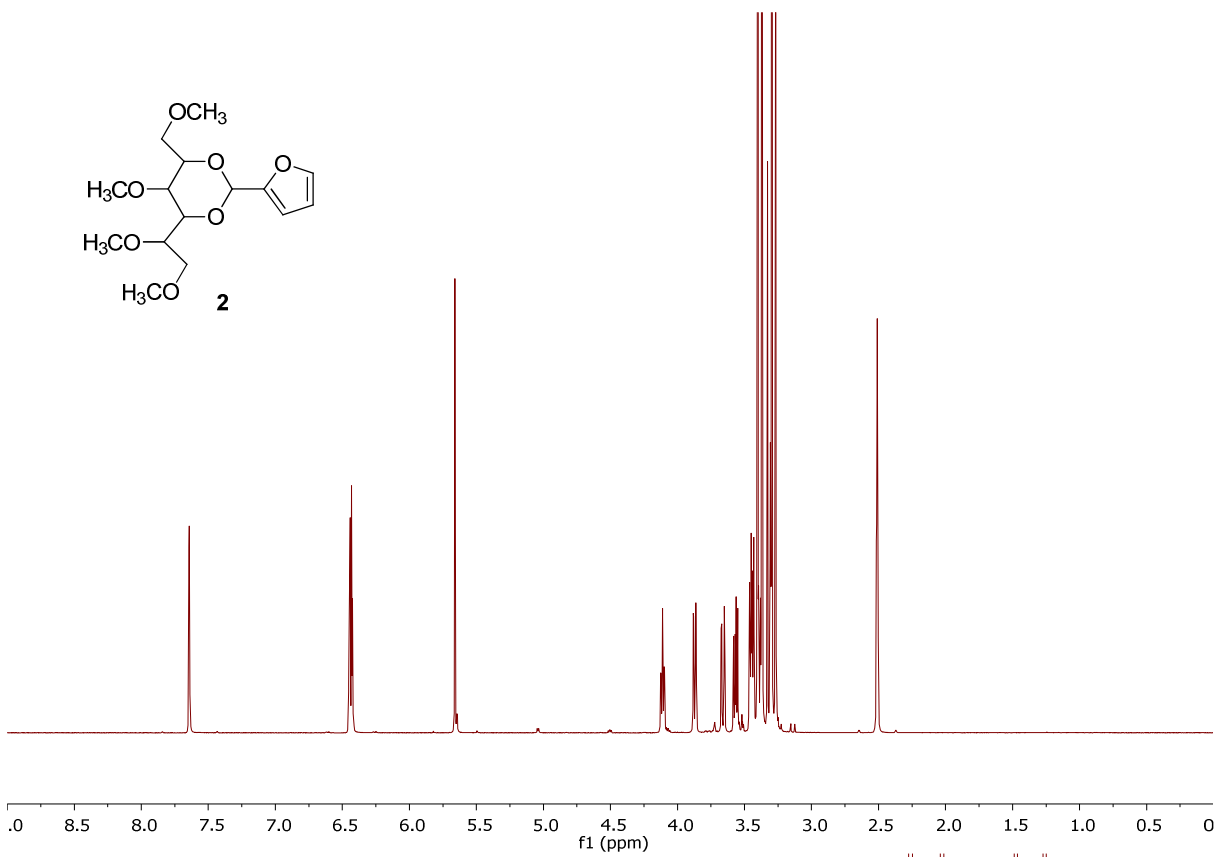
**1b**  $^{13}\text{C}$ -NMR spectrum in  $\text{D}_2\text{O}$



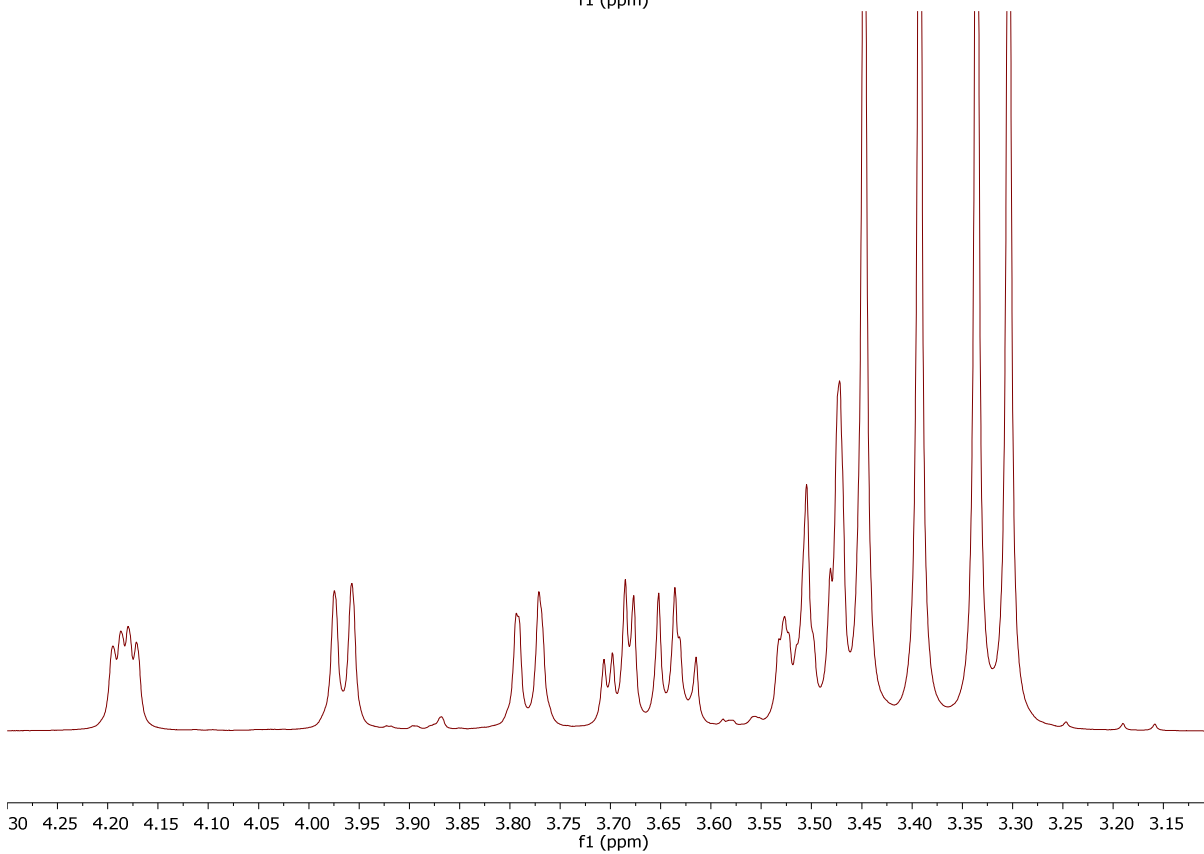
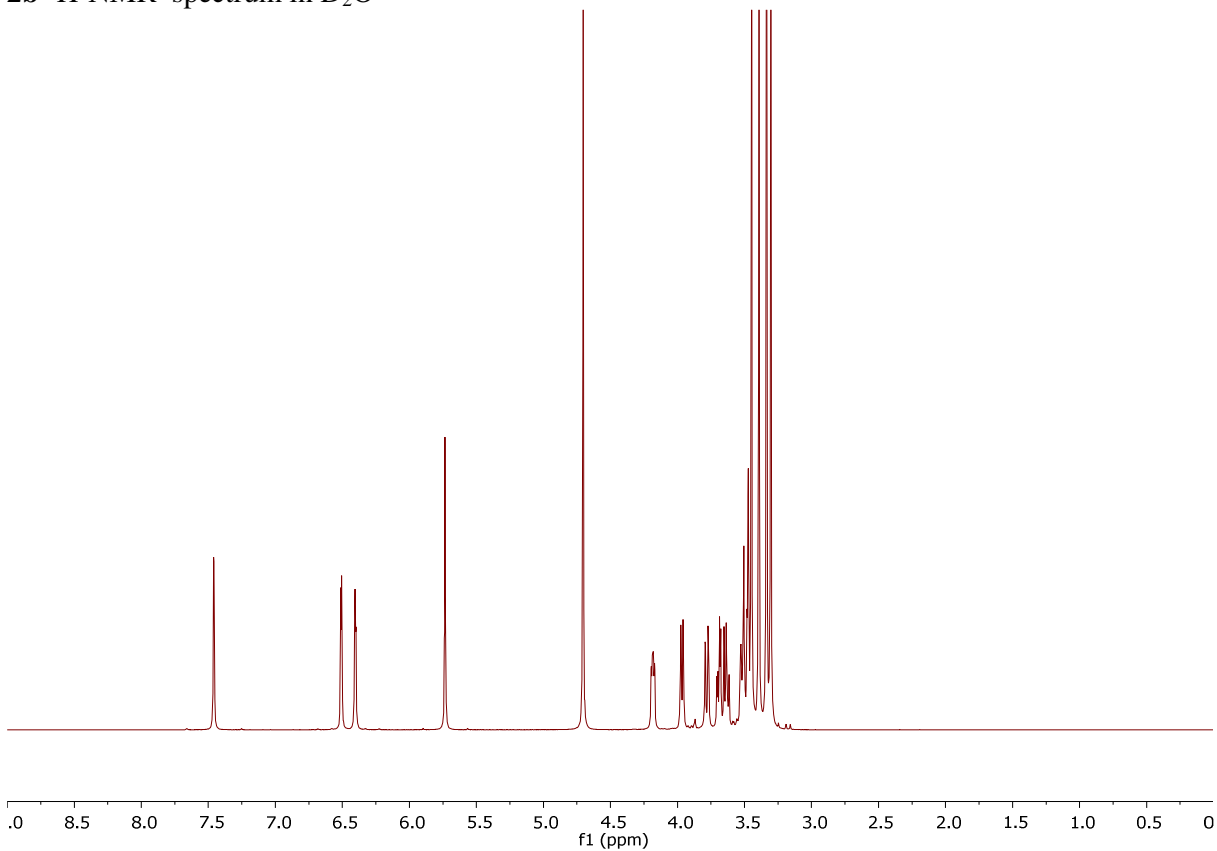
**1**  $^{13}\text{C}$ -NMR spectra in  $\text{DMSO-}d_6$  (TOP) and in  $\text{D}_2\text{O}$  (DOWN)

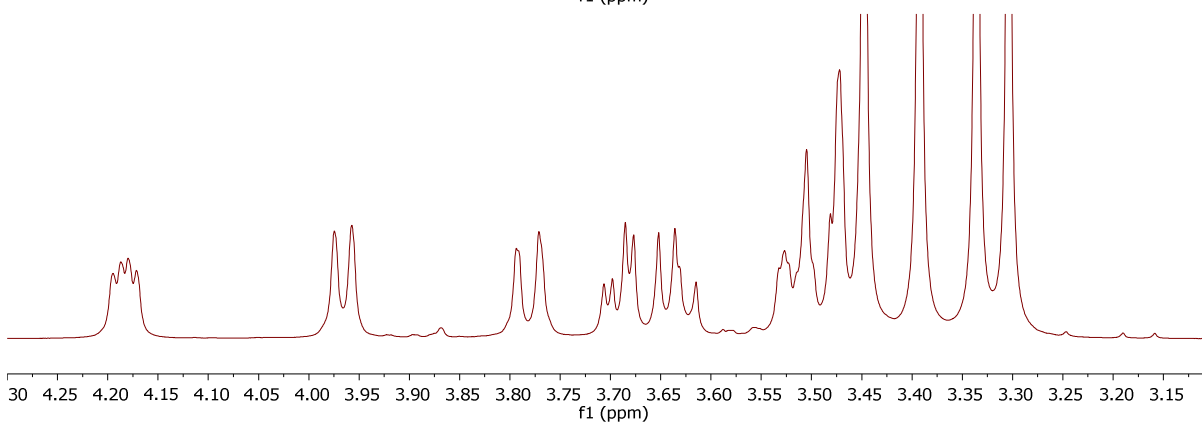
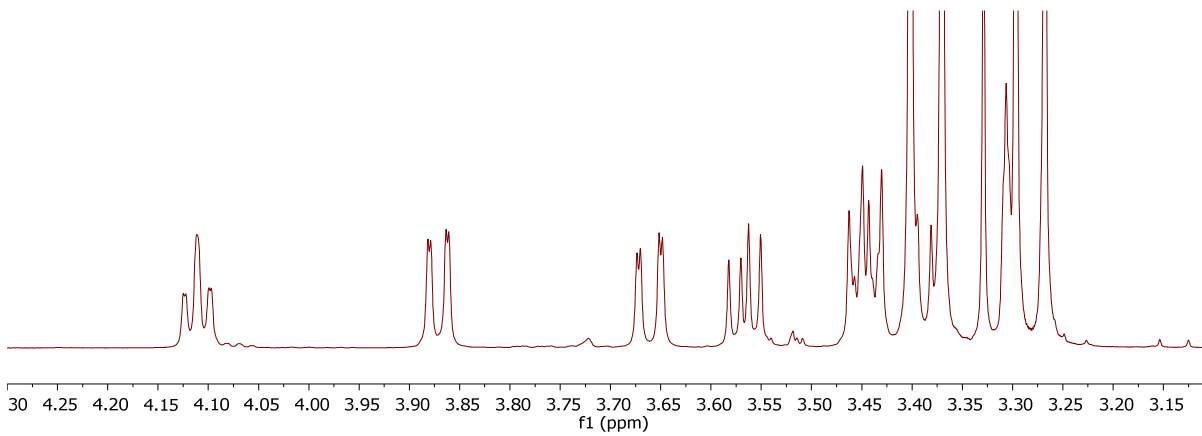


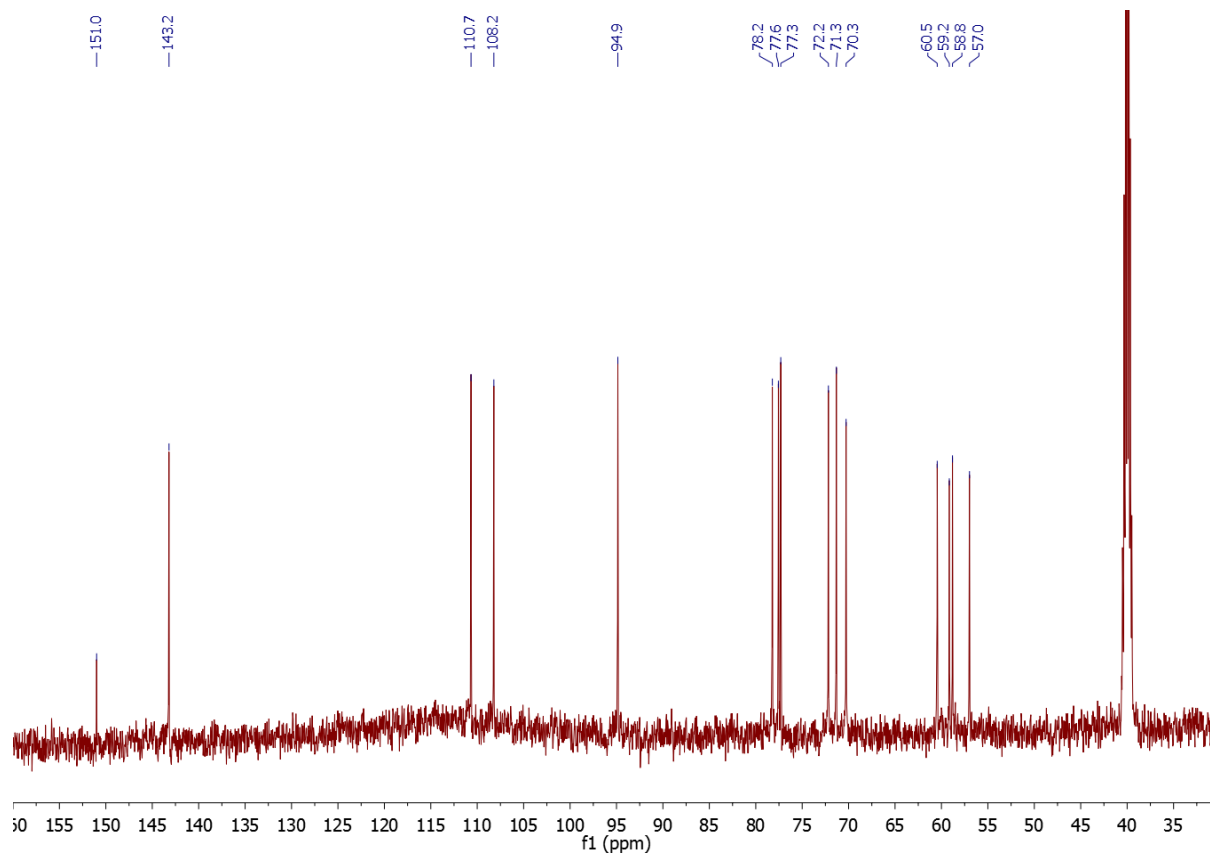
**2a** <sup>1</sup>H-NMR spectrum in DMSO-*d*<sub>6</sub>



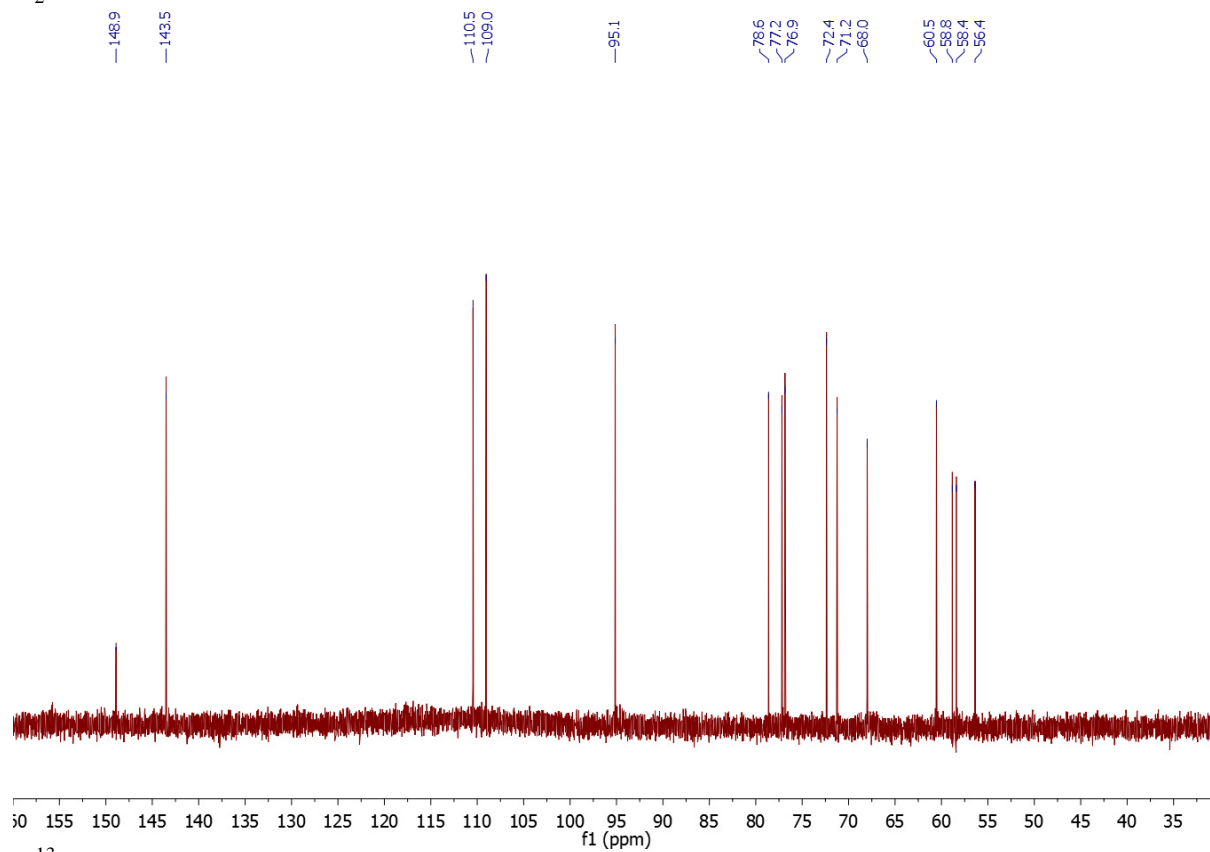


**2b**  $^1\text{H}$ -NMR spectrum in  $\text{D}_2\text{O}$ 

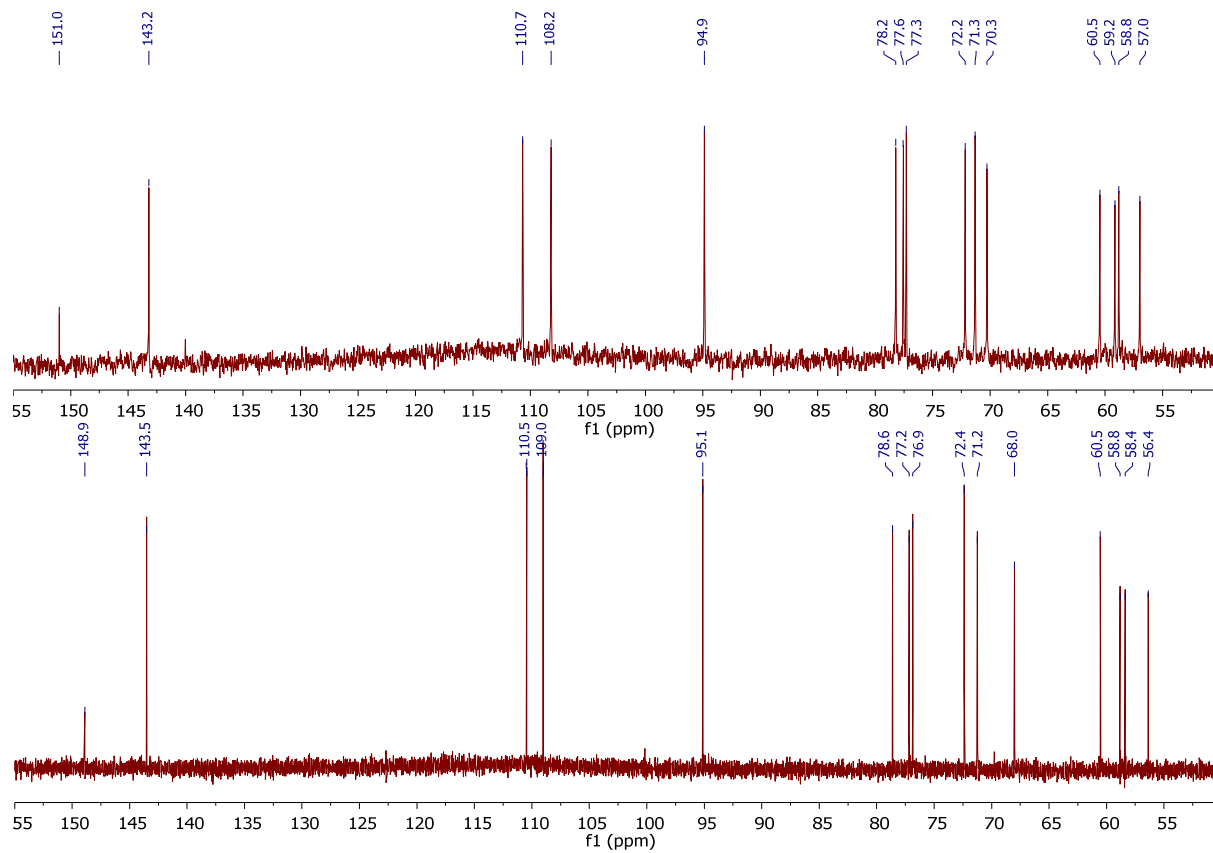
**2**  $^1\text{H}$ -NMR spectra in  $\text{DMSO-}d_6$  (TOP) and in  $\text{D}_2\text{O}$  (DOWN)

**2a**  $^{13}\text{C}$ -NMR spectrum in  $\text{DMSO-}d_6$ 

**2b**  $^{13}\text{C}$ -NMR spectrum in  $\text{D}_2\text{O}$

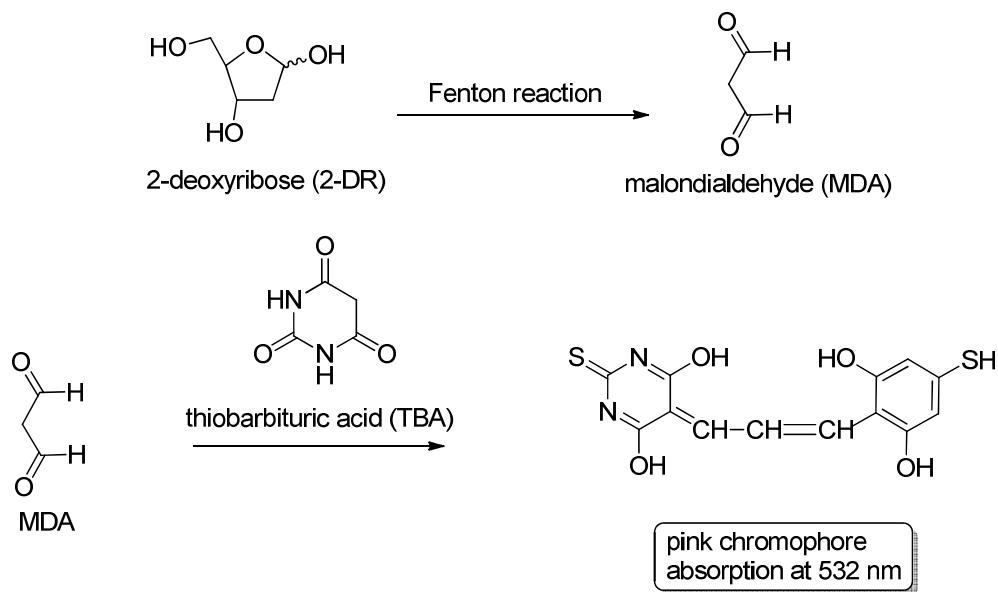


**2**  $^{13}\text{C}$ -NMR spectra in  $\text{DMSO}-d_6$  (TOP) and in  $\text{D}_2\text{O}$  (DOWN)



## 2-Deoxyribose degradation assay

The method relies on the reaction of *in situ* generated hydroxyl radicals with 2-DR that leads to the formation of malondialdehyde (MDA) and other carbonyl reacting species generally referred to as MDA-like products. These compounds react with thiobarbituric acid (TBA) affording a pink chromophore that can be evaluated spectrophotometrically at 532 nm (Figure).



**Figure.** Scheme of the 2-deoxyribose (2-DR) degradation assay