

## Supplementary Information

### Discovery of a potent and highly $\beta$ 1 specific proteasome inhibitor from a focused library of urea-containing peptide vinyl sulfones and peptide epoxyketones

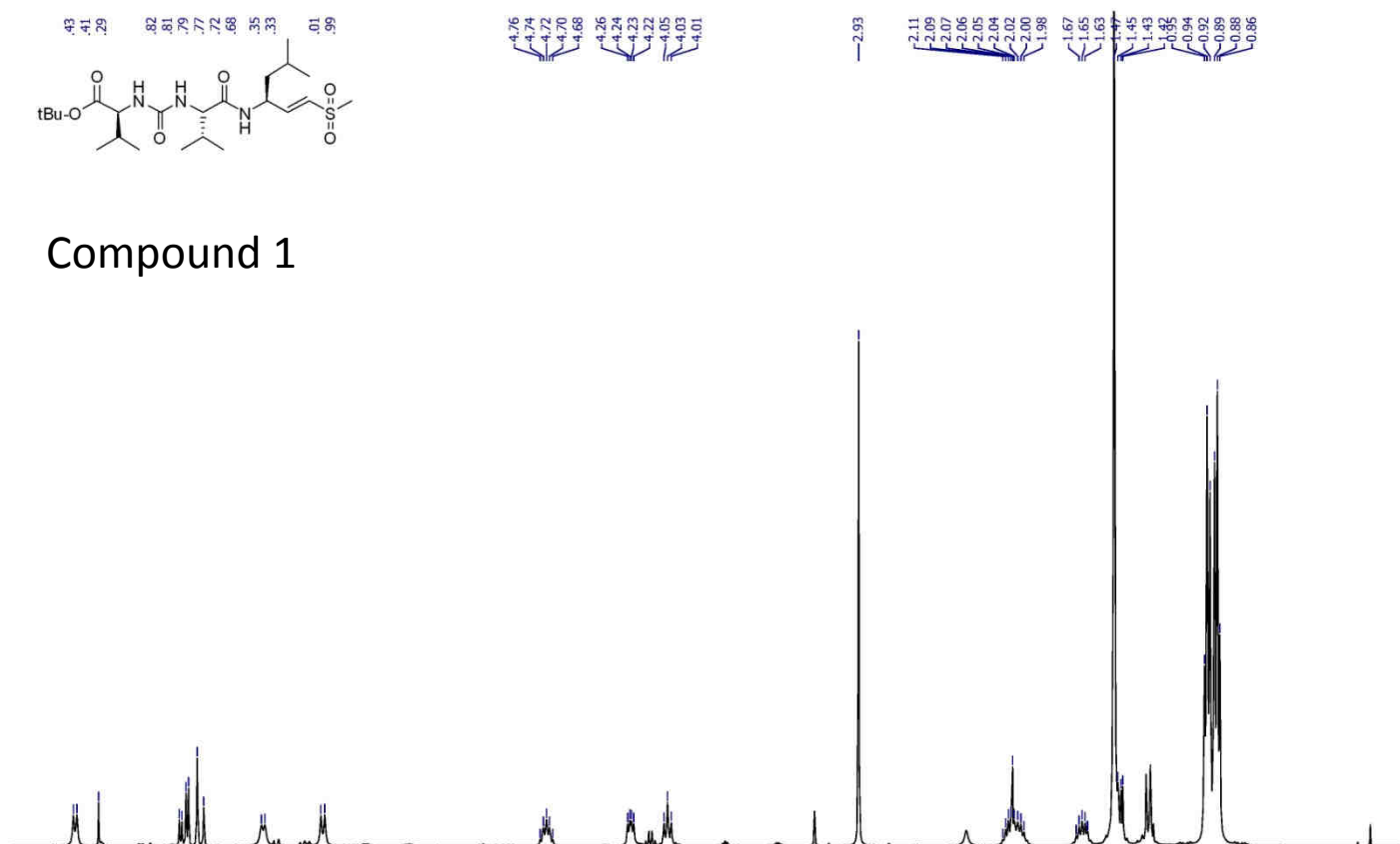
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Nan Li,<sup>a</sup> Mark Ruben,<sup>a</sup> Bogdan Florea,<sup>a</sup> Gijs A. van der Marel,<sup>a</sup> Markus  
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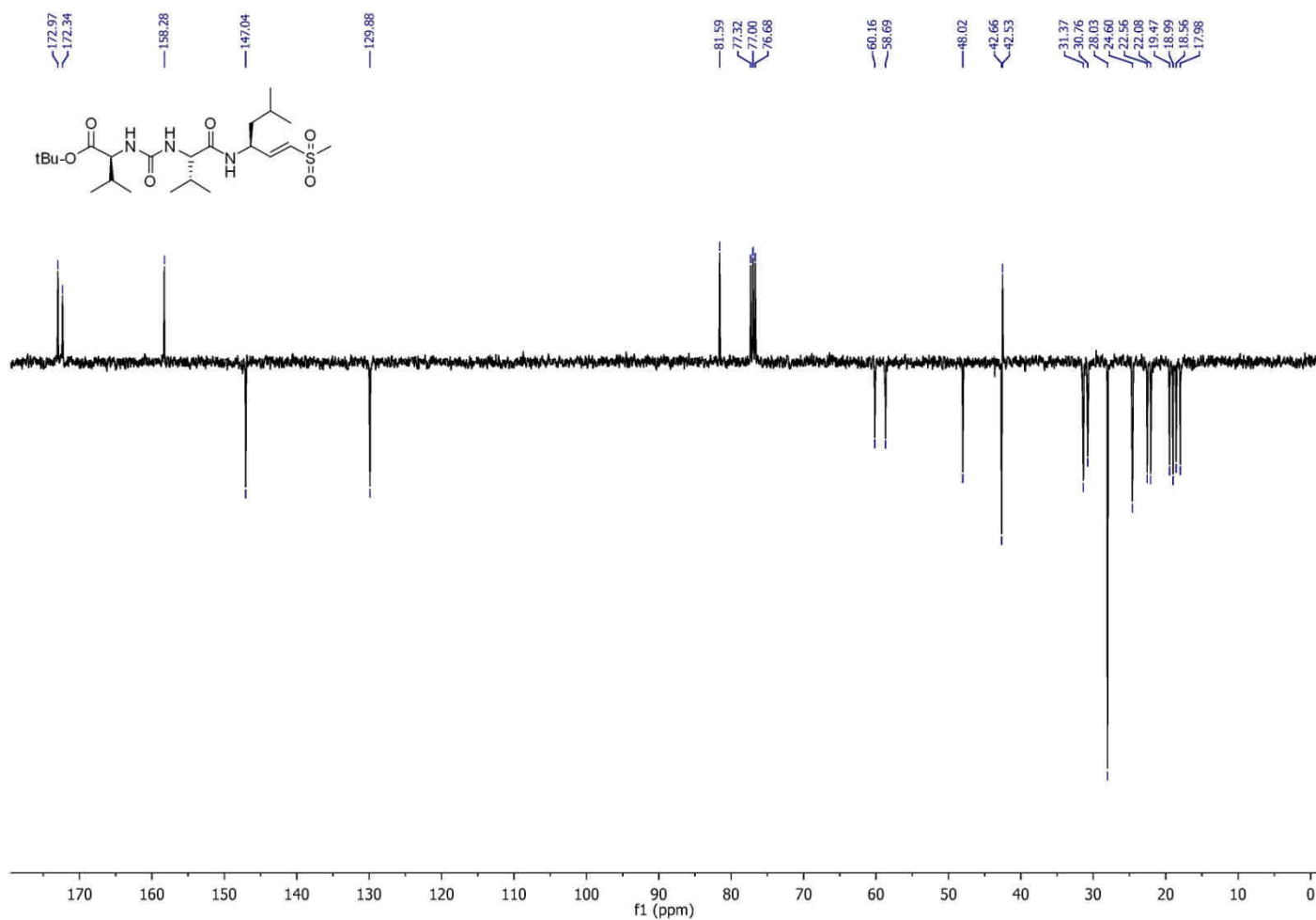
*b. Norris Cotton Cancer Center, Dartmouth Medical School, Dartmouth College, Lebanon, NH 03756, USA. E-mail: alexei.f.kisselev@dartmouth.edu*

*c. ZMB/Faculty of Biology, Building S03 S02 A55, Universität Duisburg-Essen, Campus Essen, 45117 Essen, Germany. Tel: +49-201-183-4980; Email: Markus.Kaiser@uni-due.de*

Figure S1: NMR spectra of new compounds



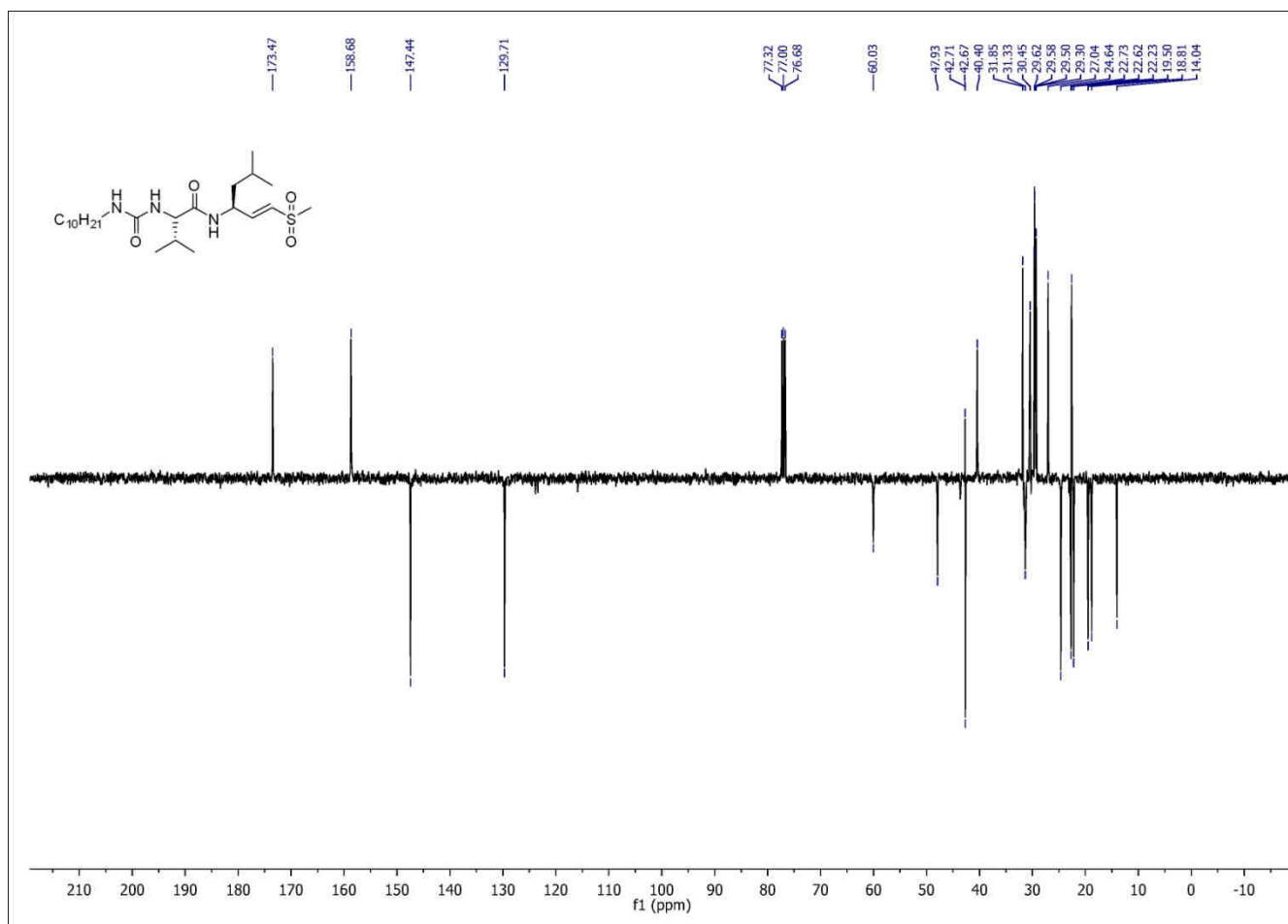
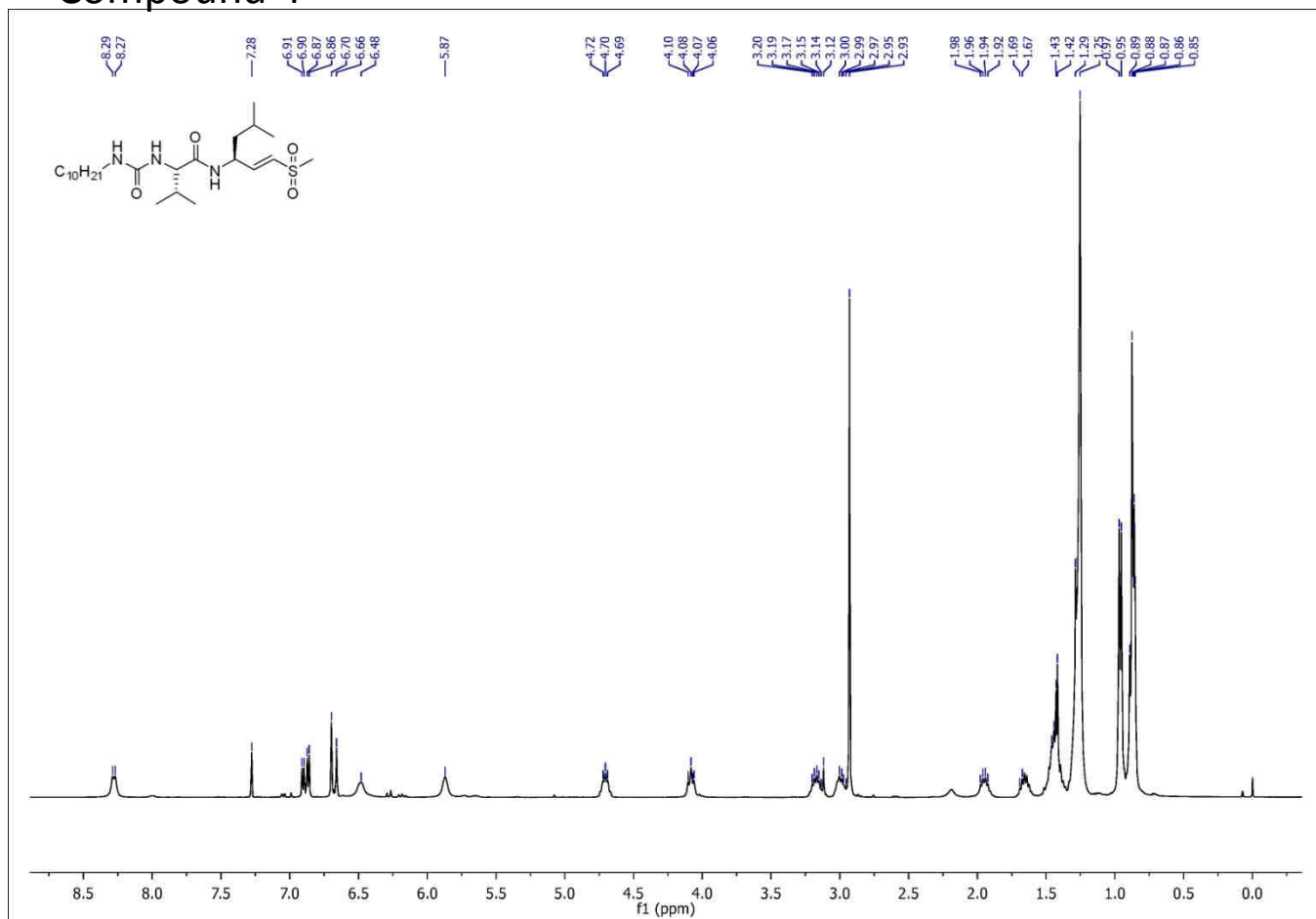
## Compound 1





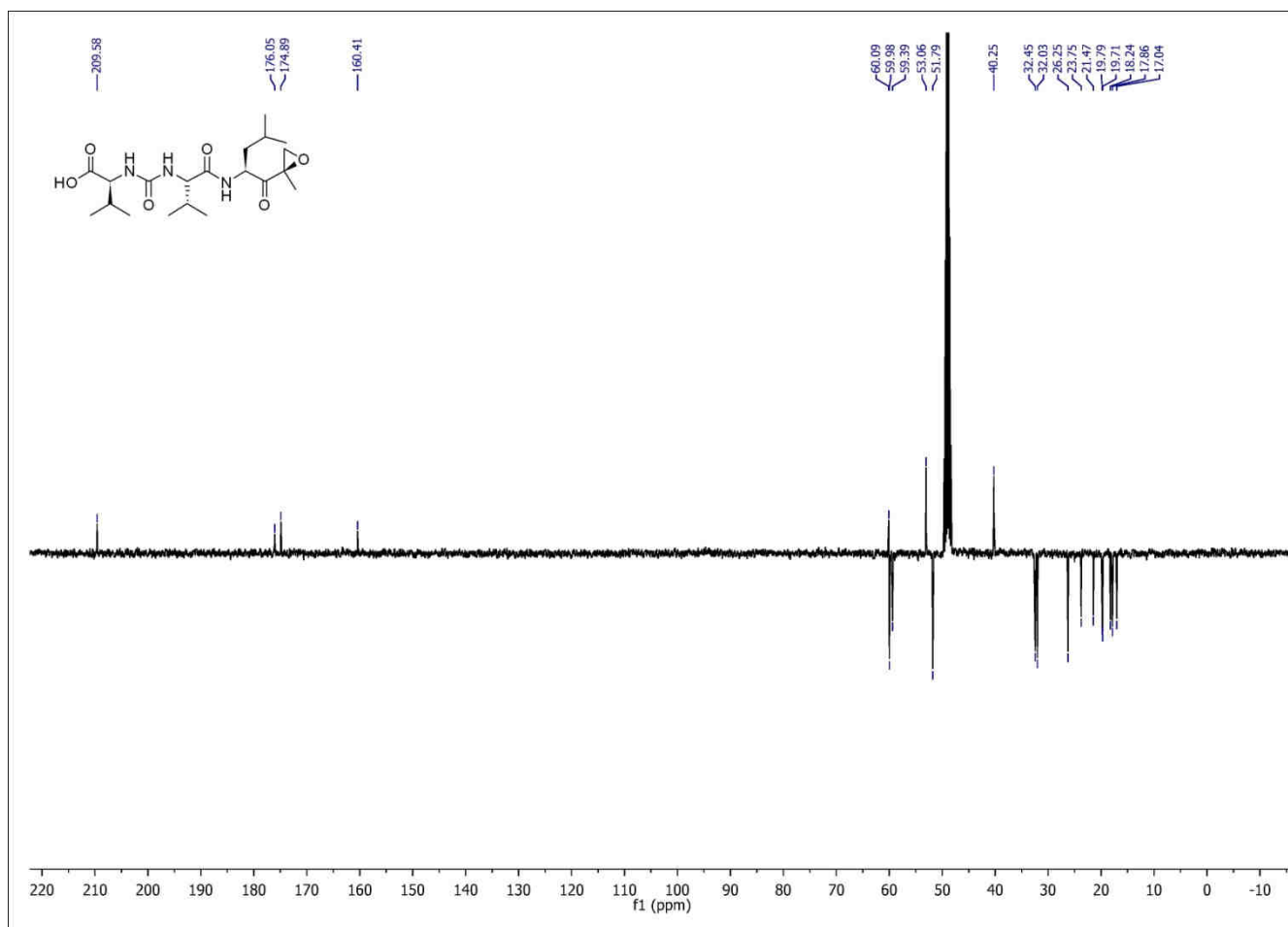
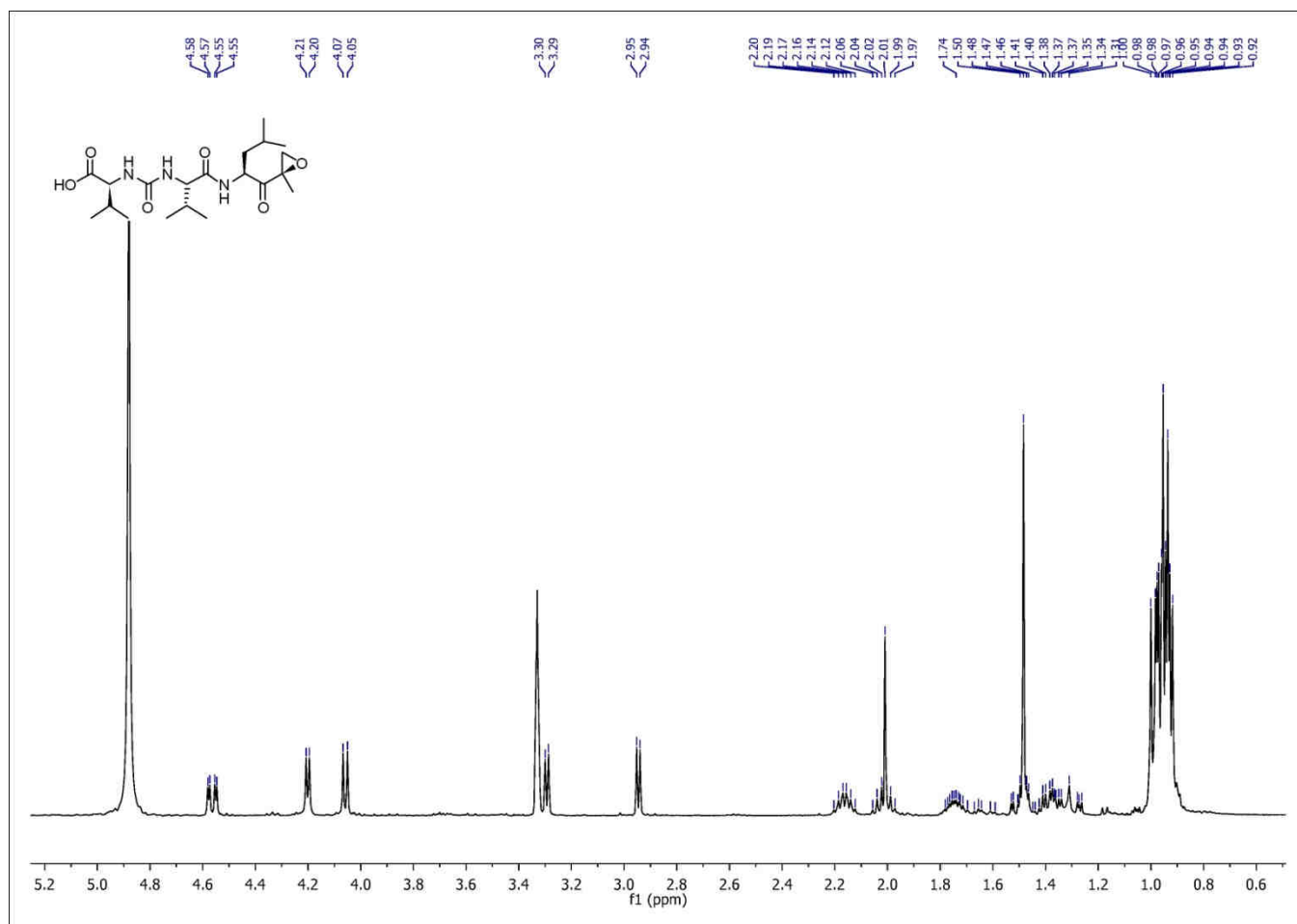


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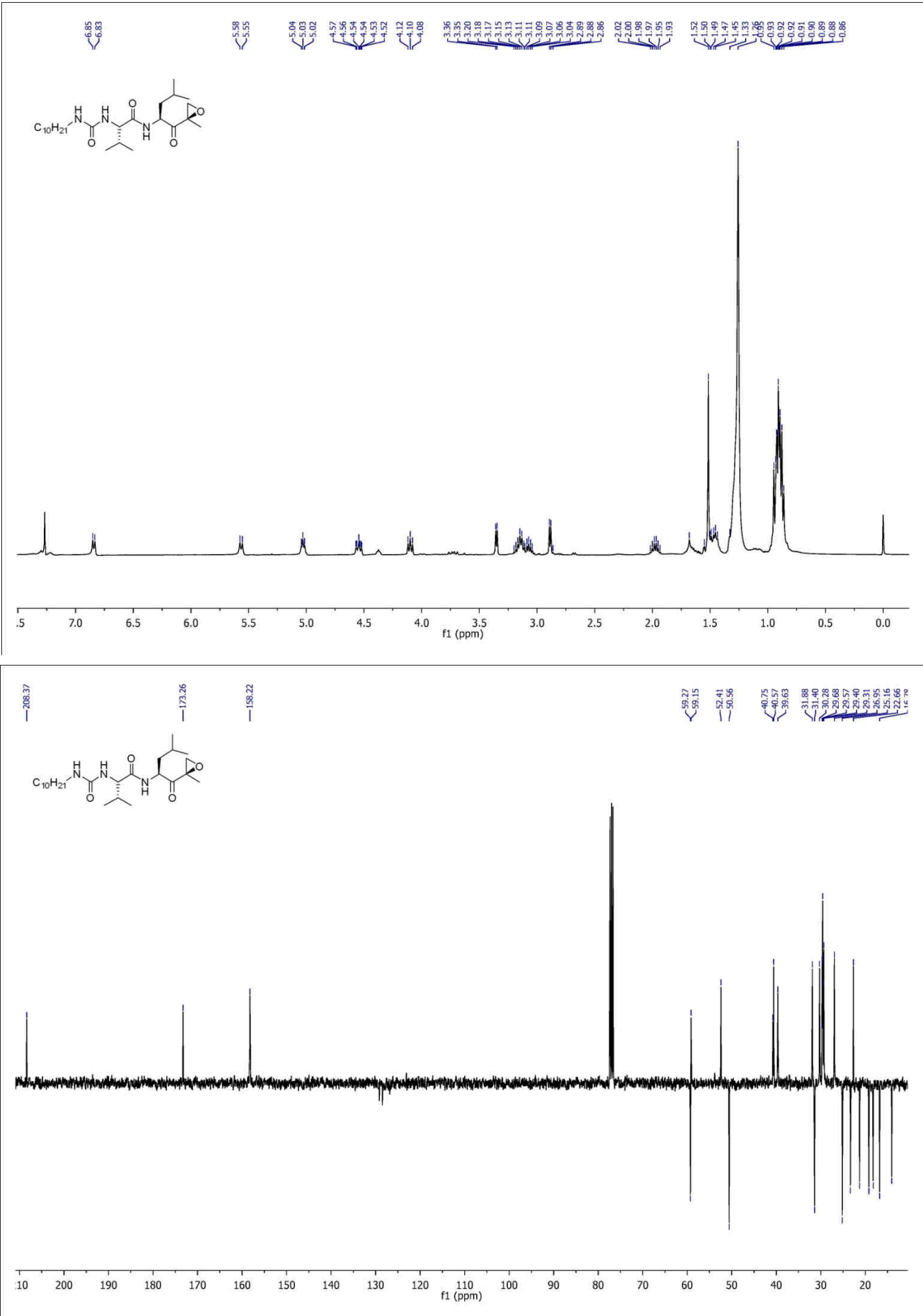




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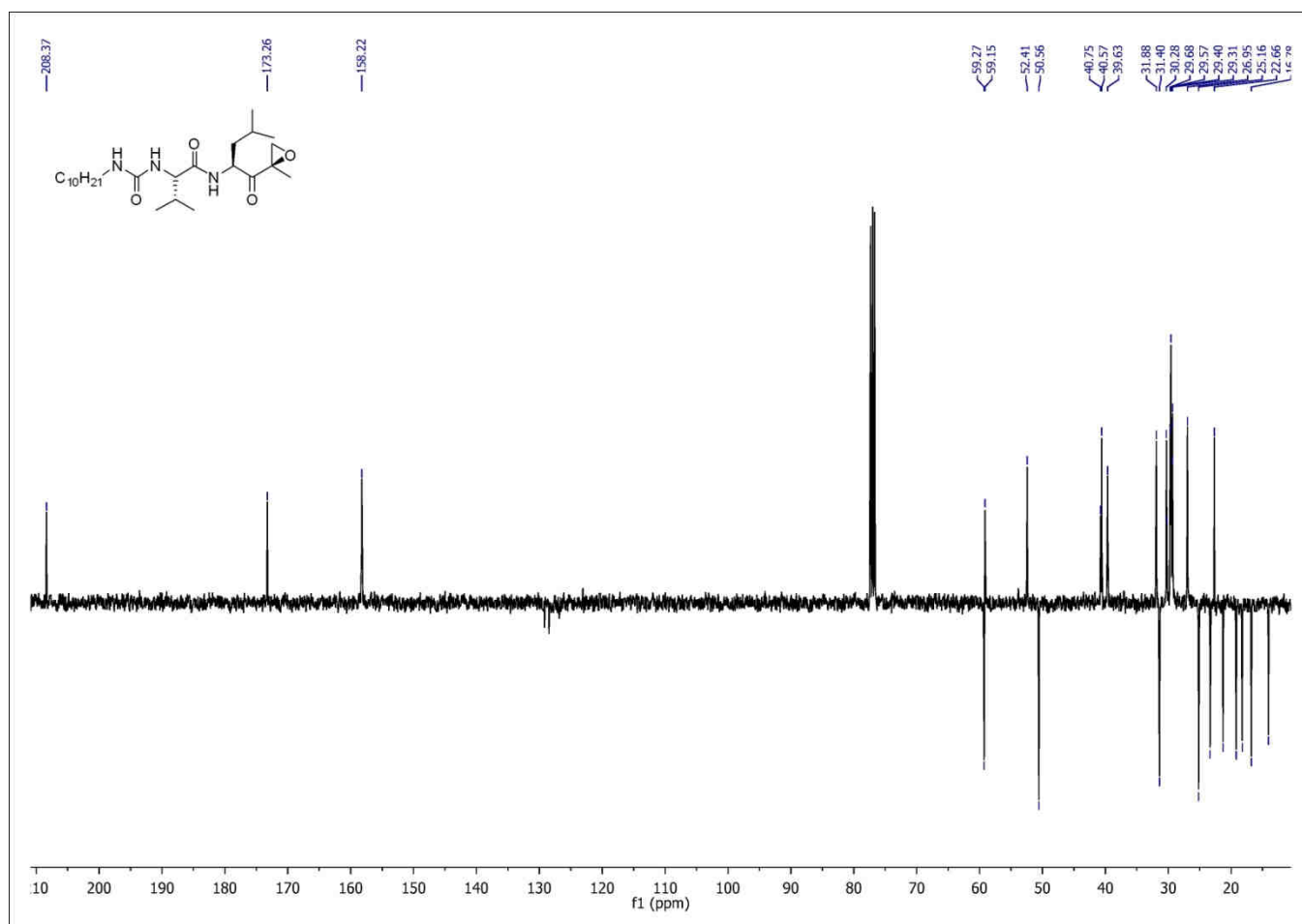
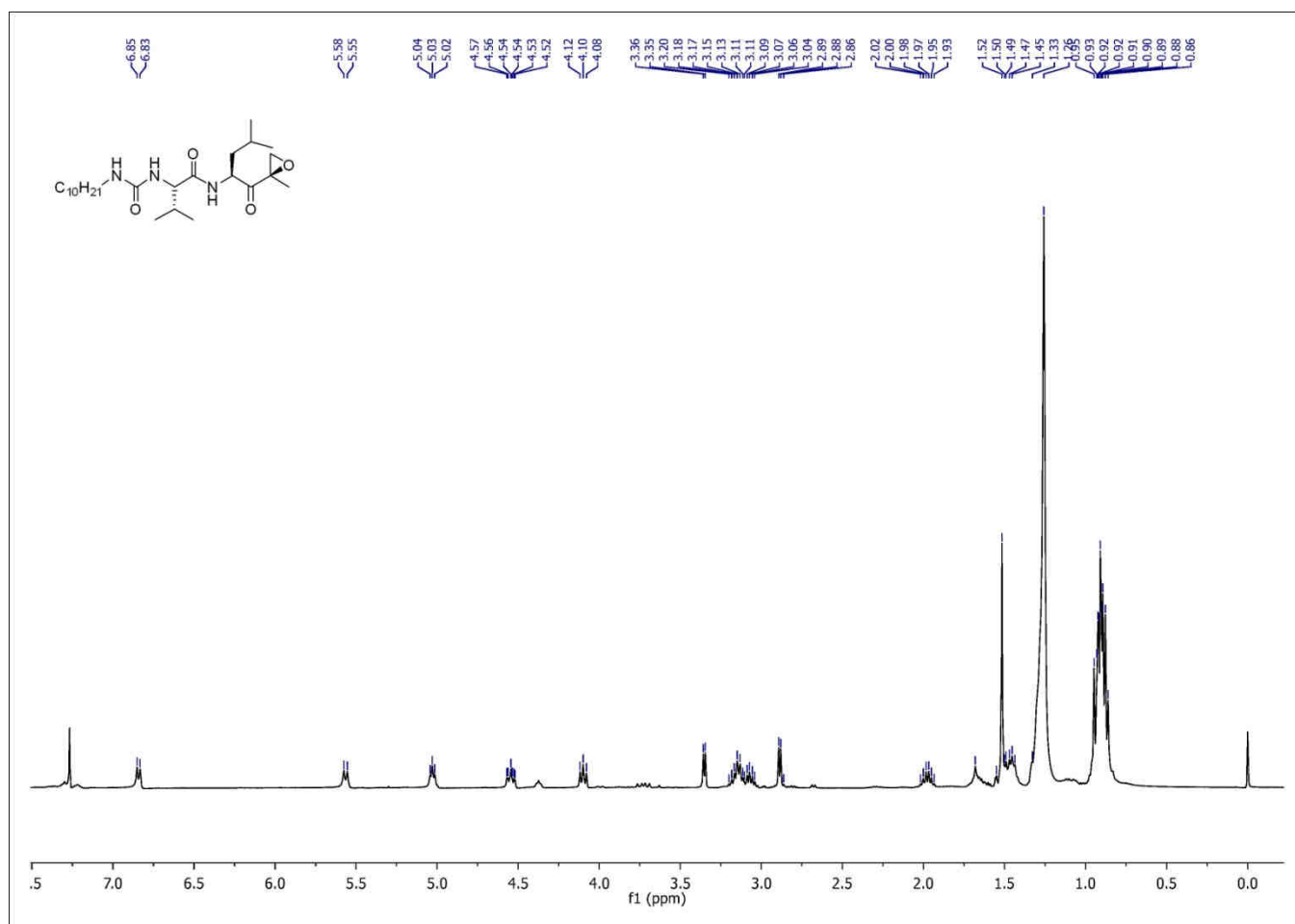


Compound 7



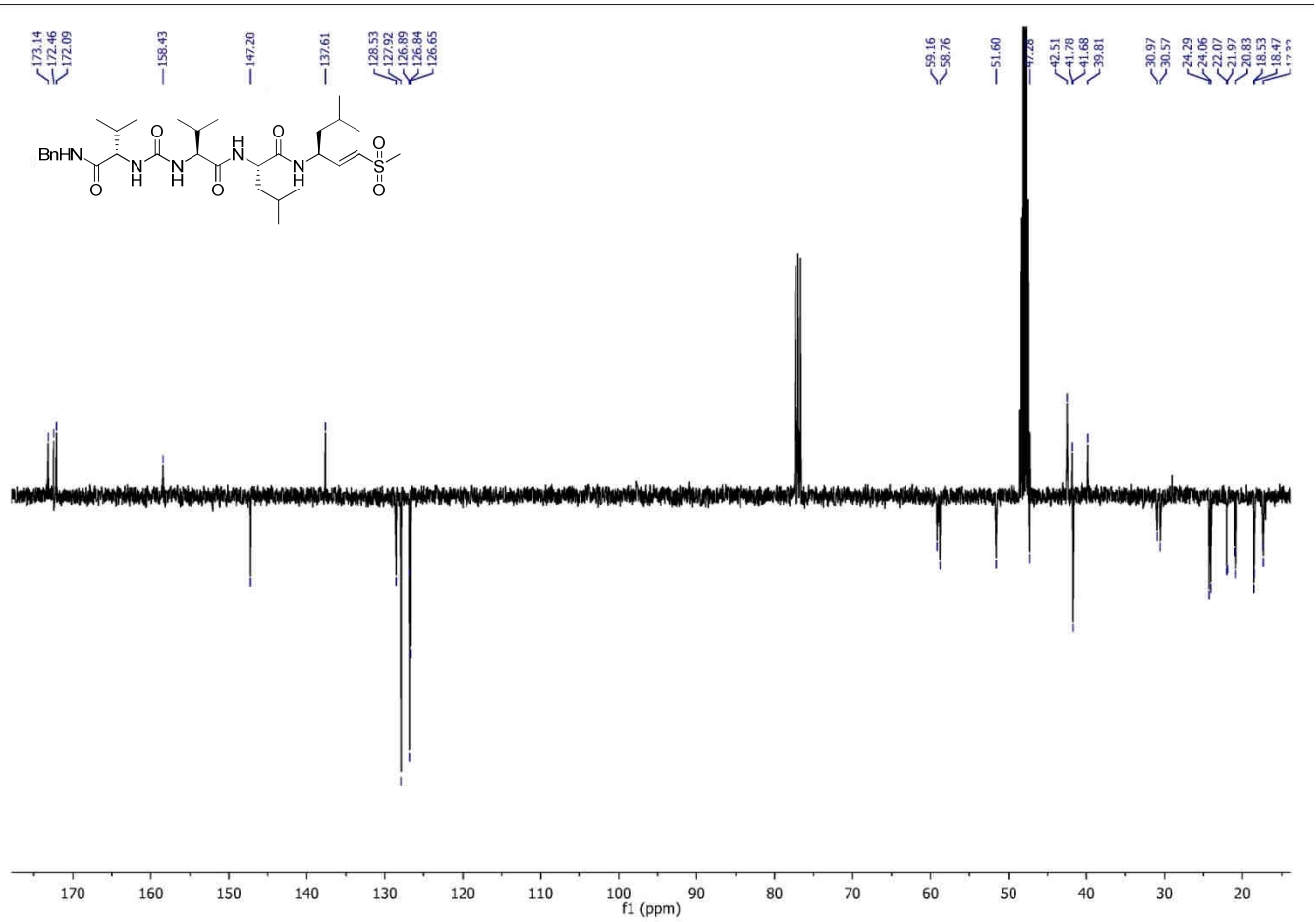
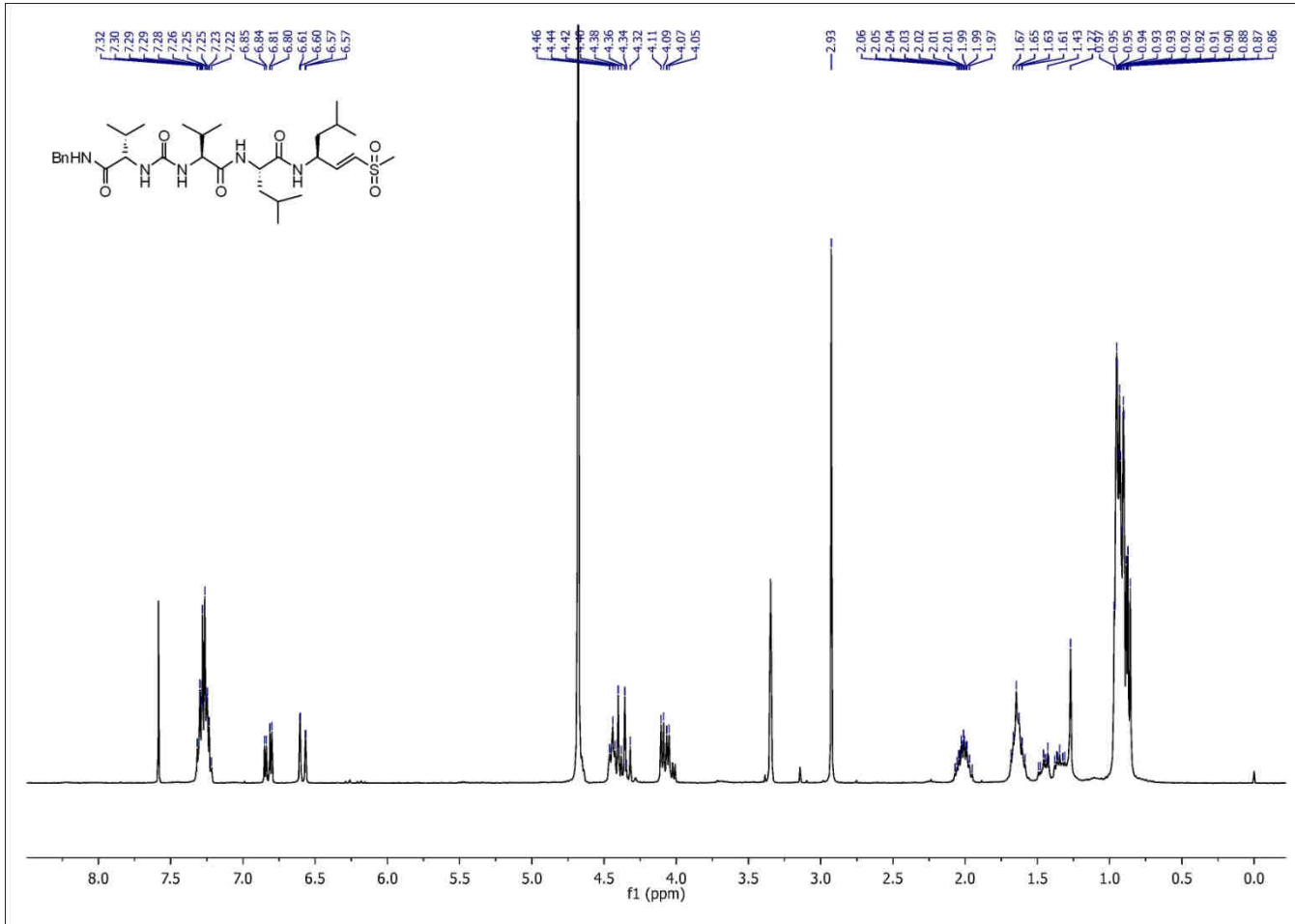


## Compound 8

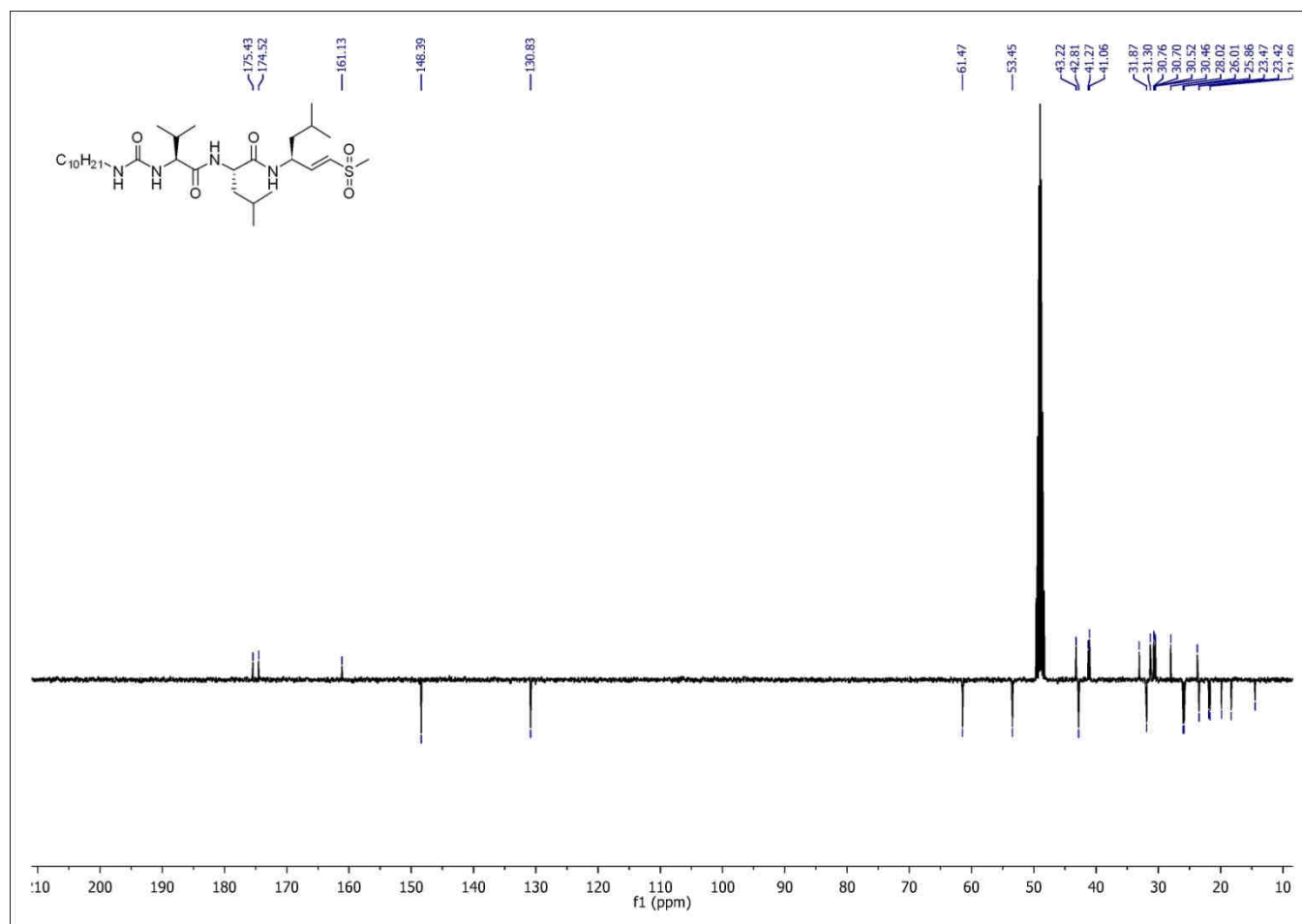
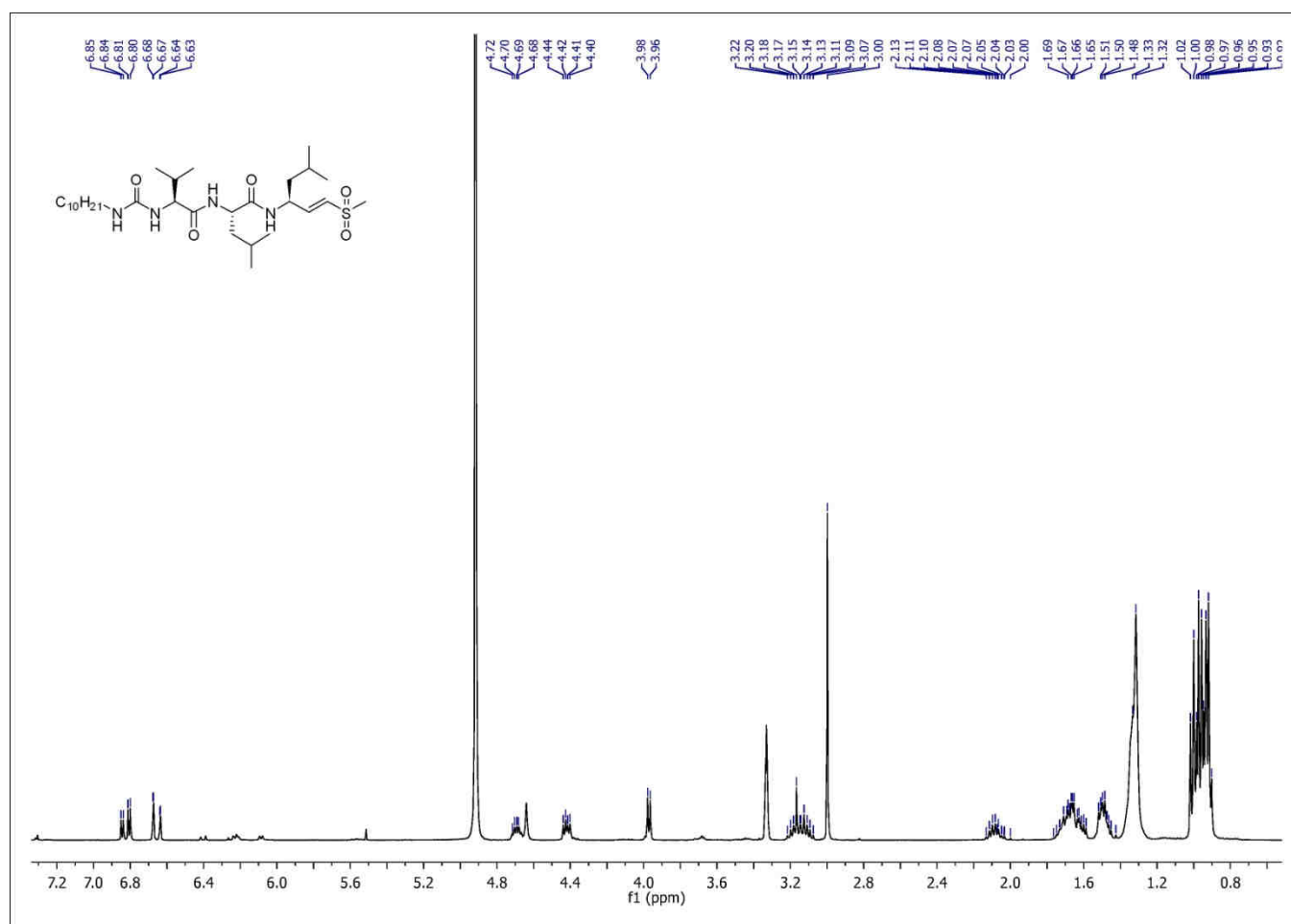




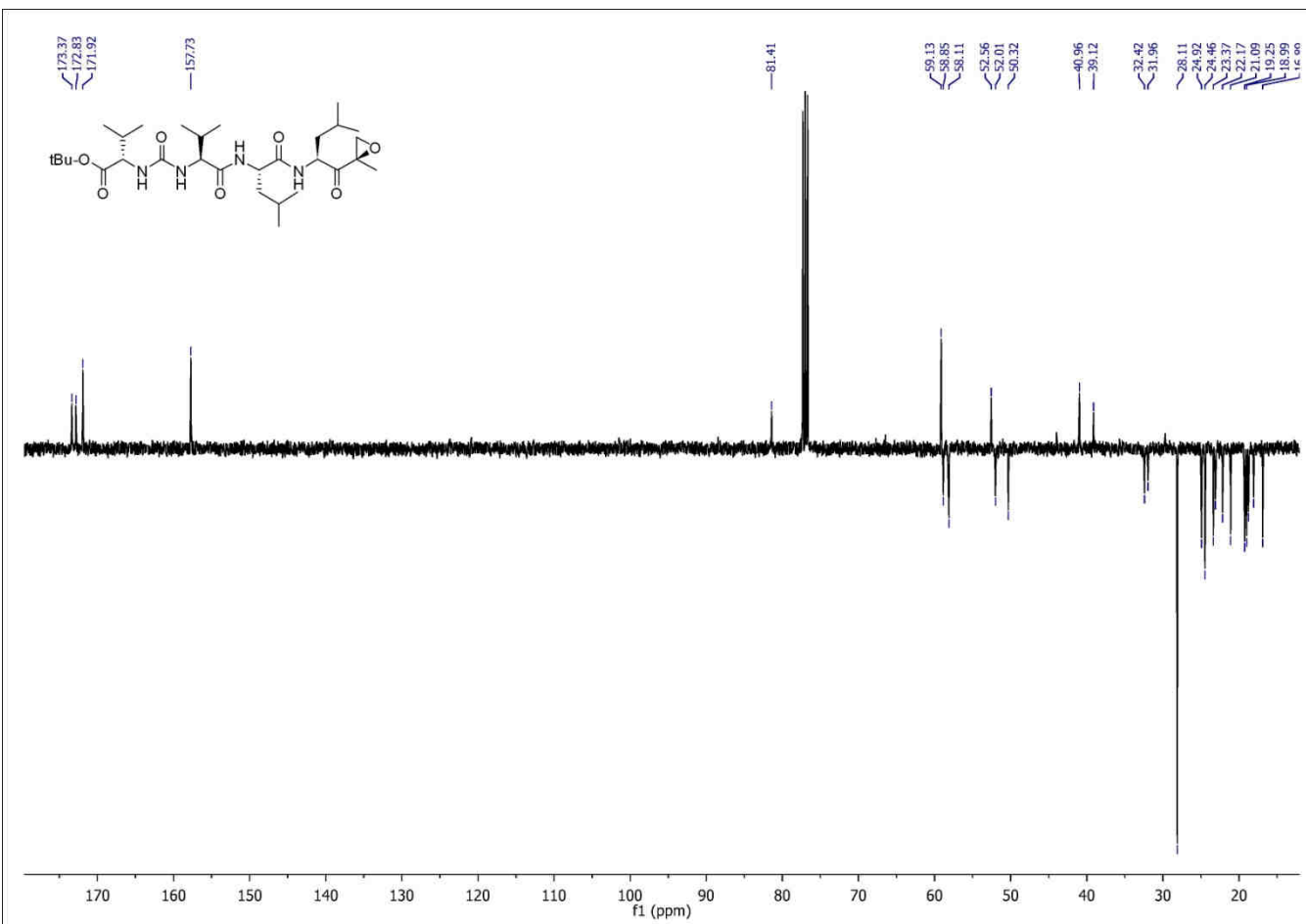
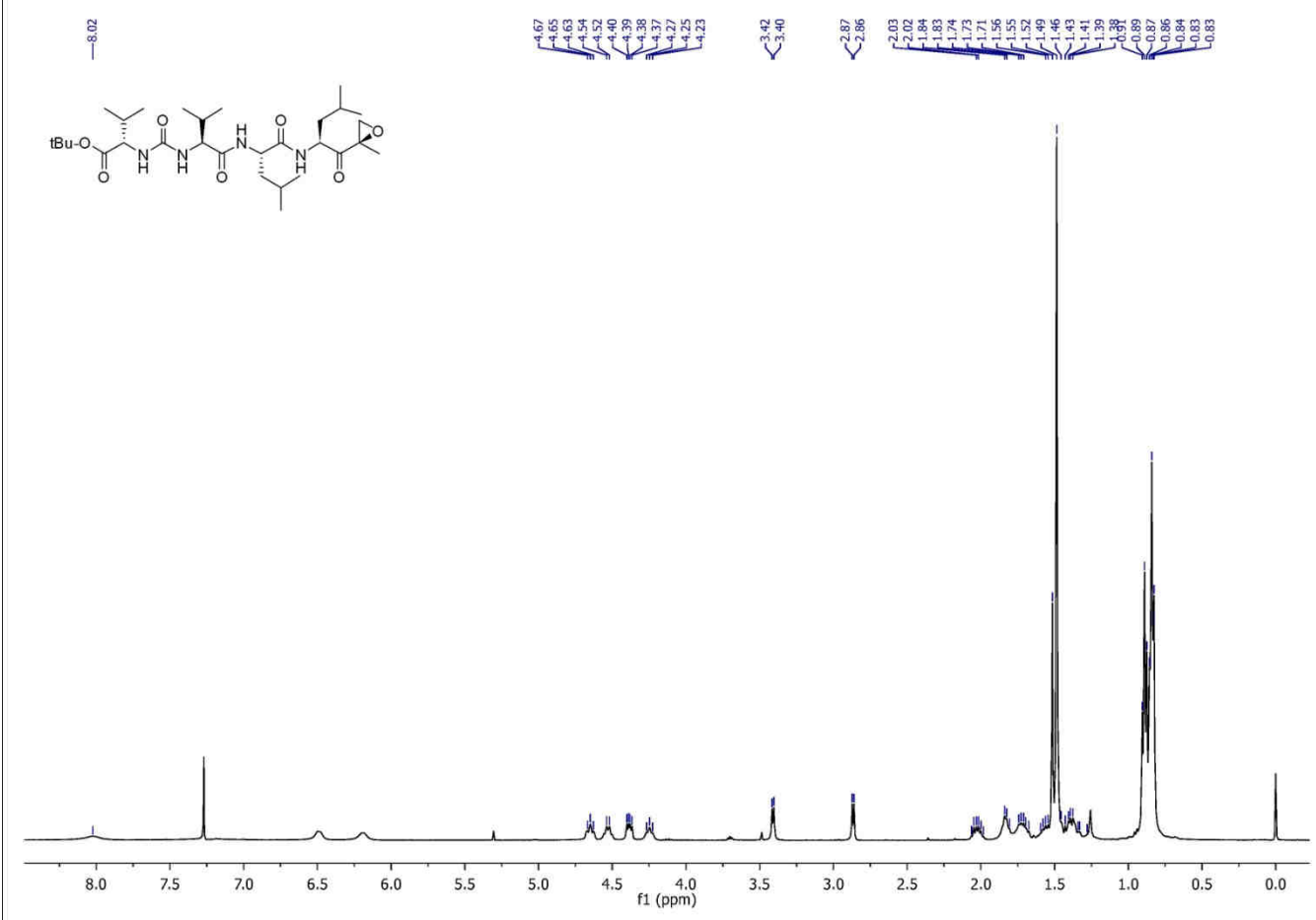




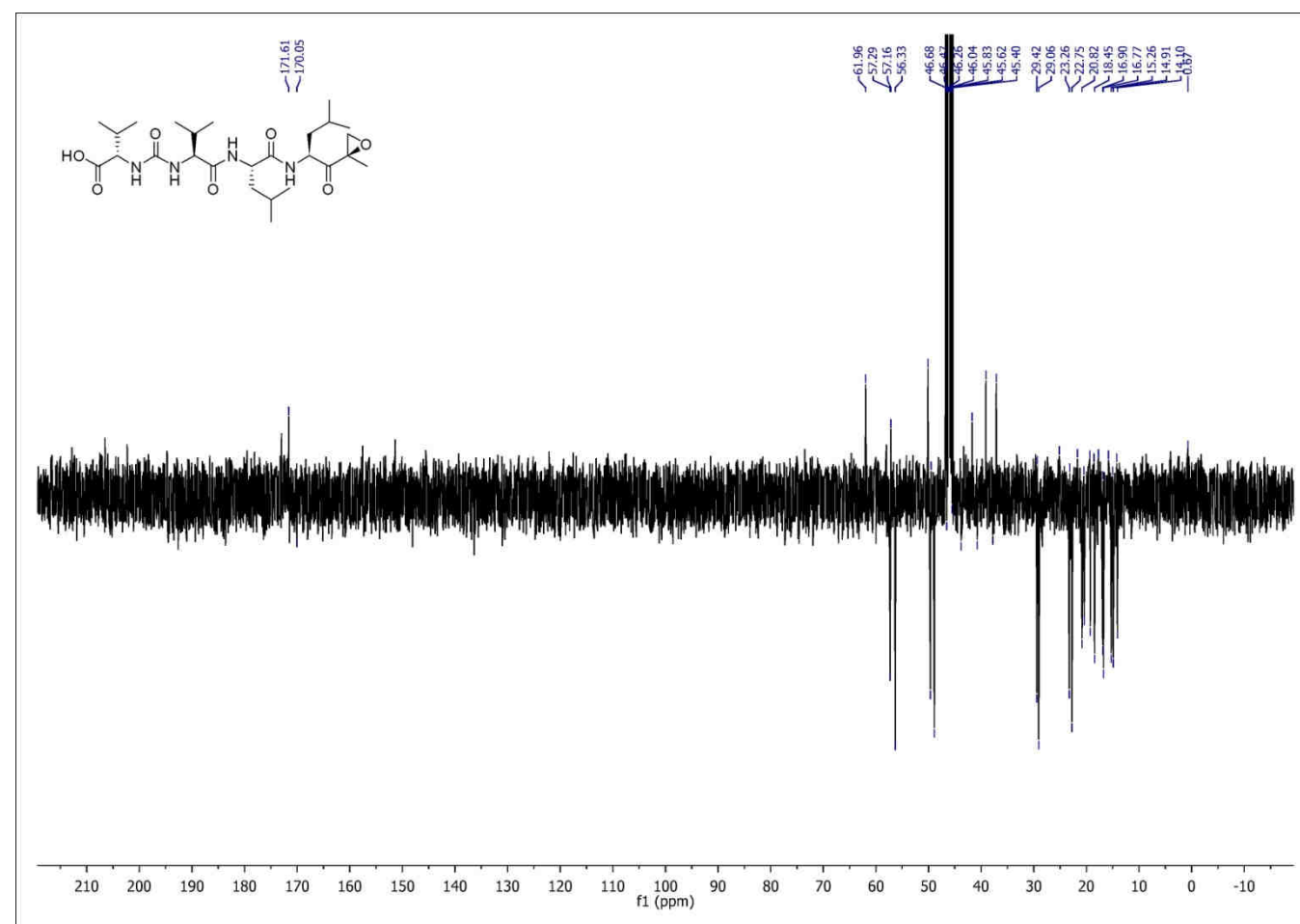
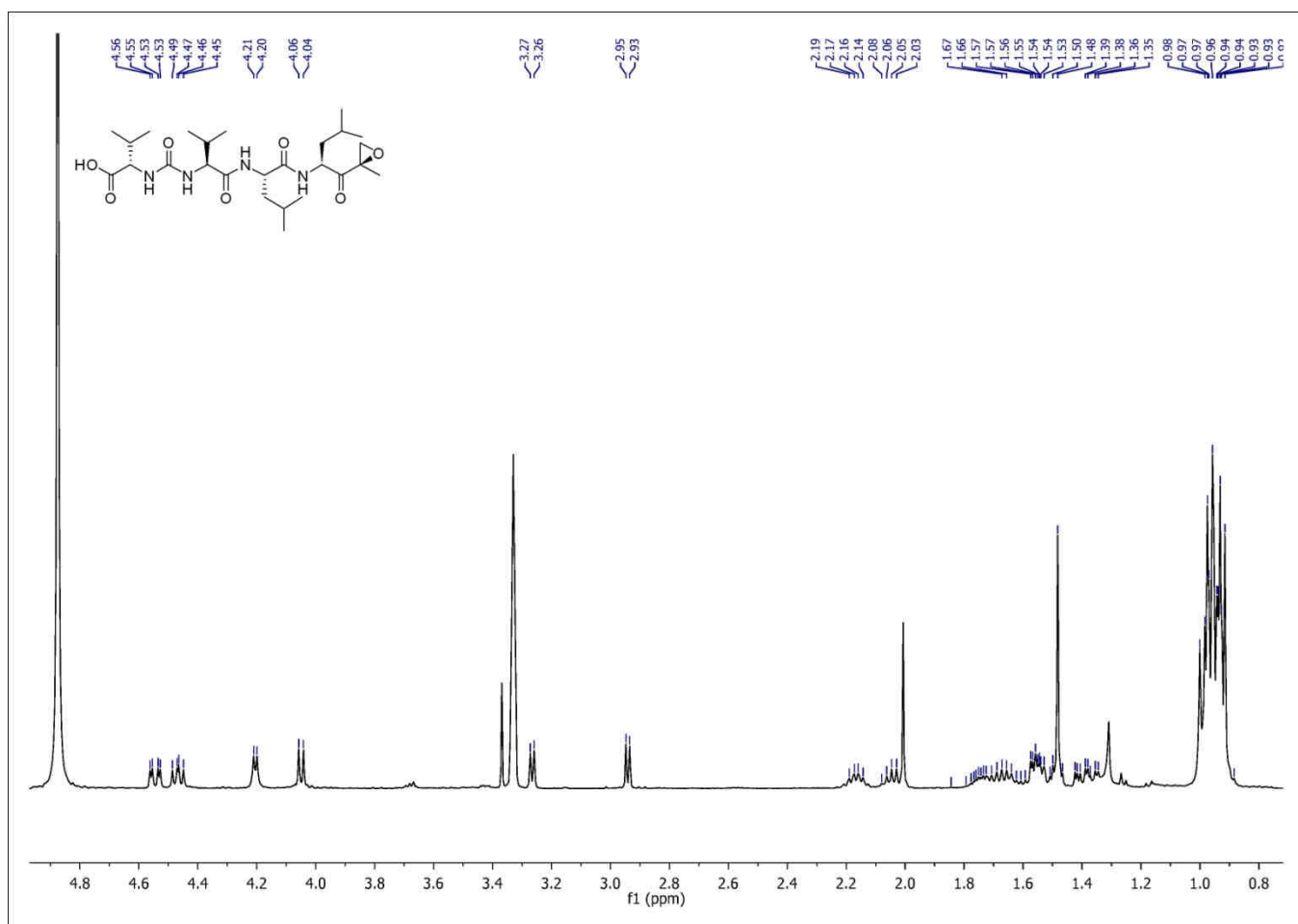
# Compound 12



Compound 13



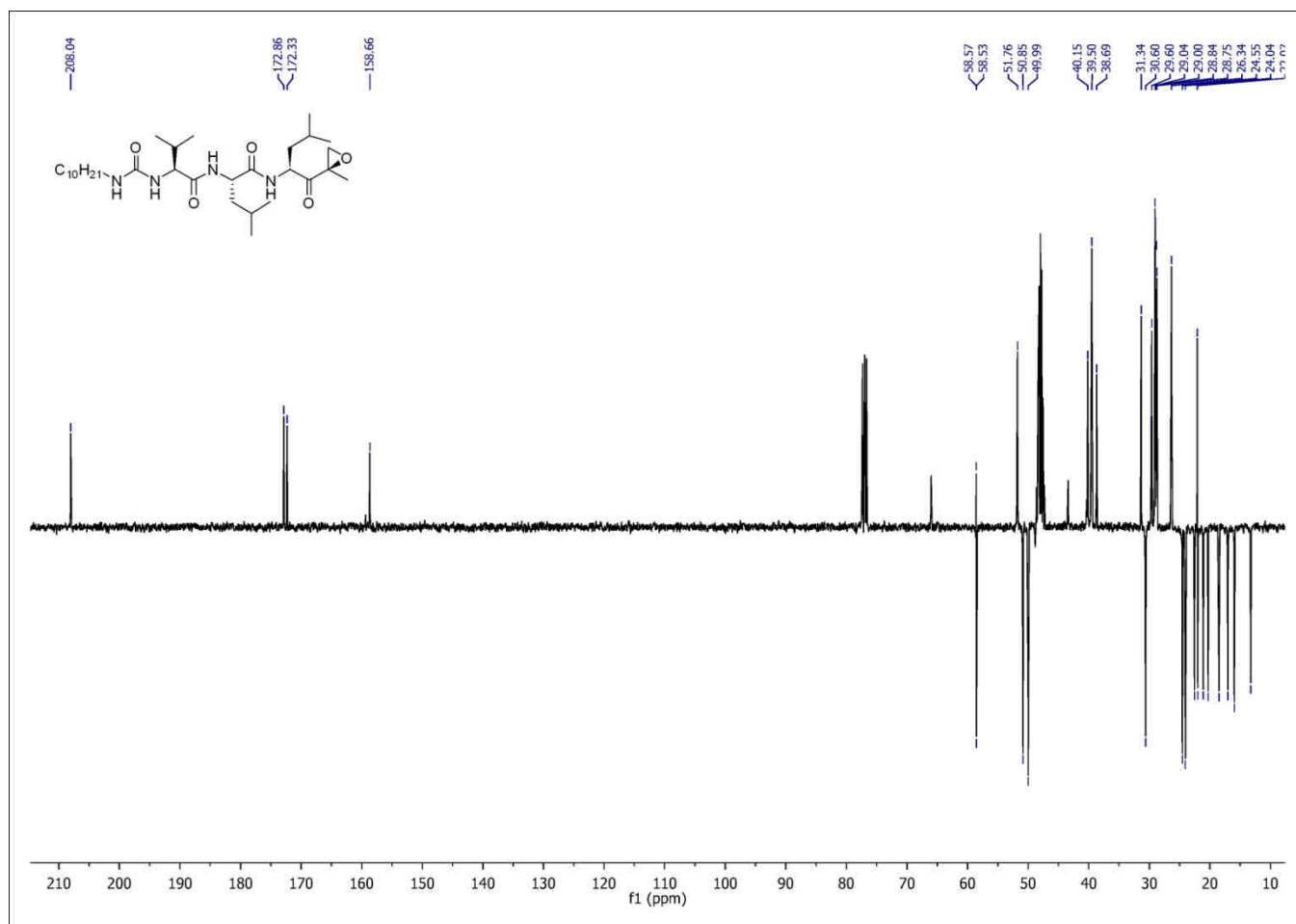
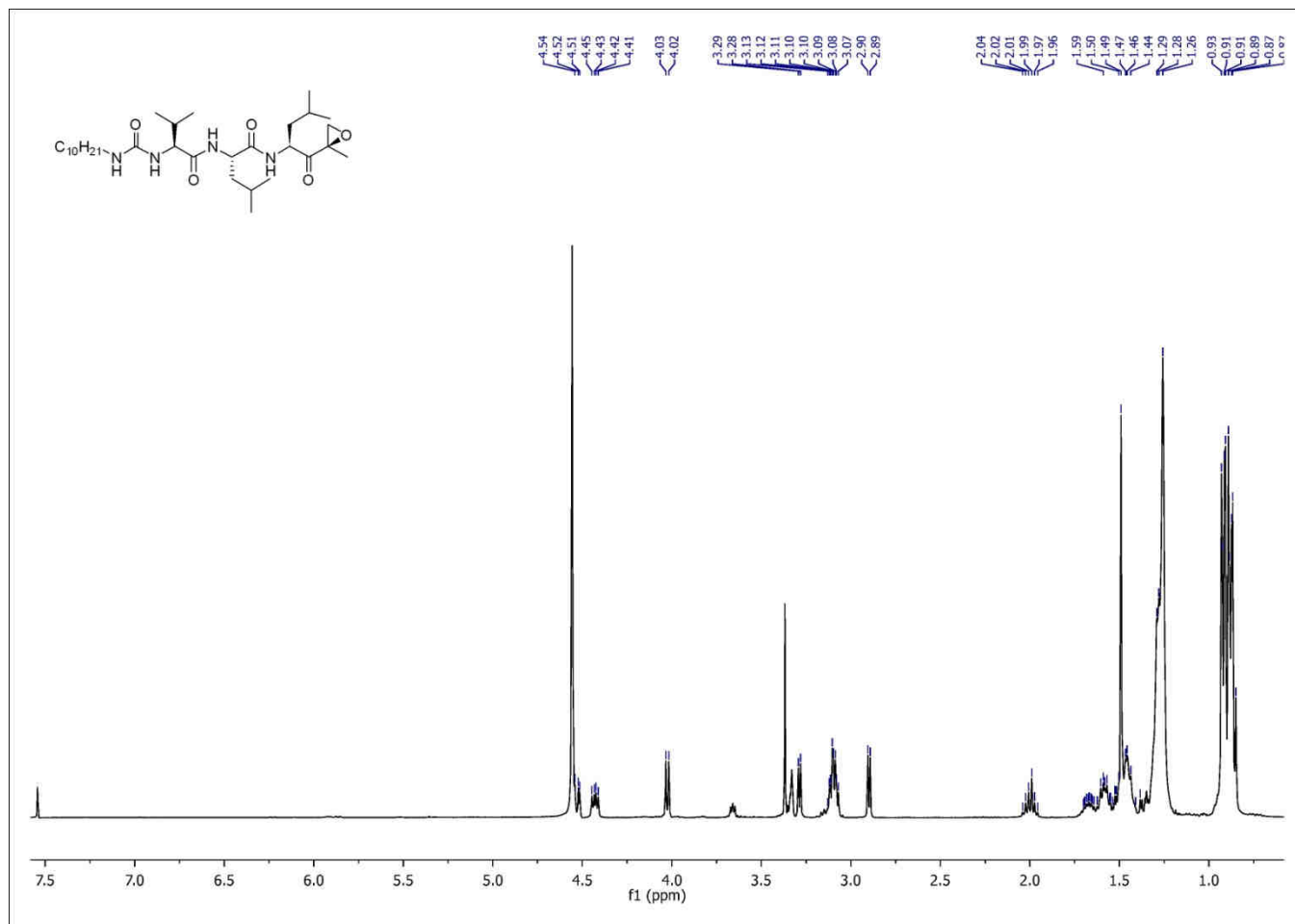
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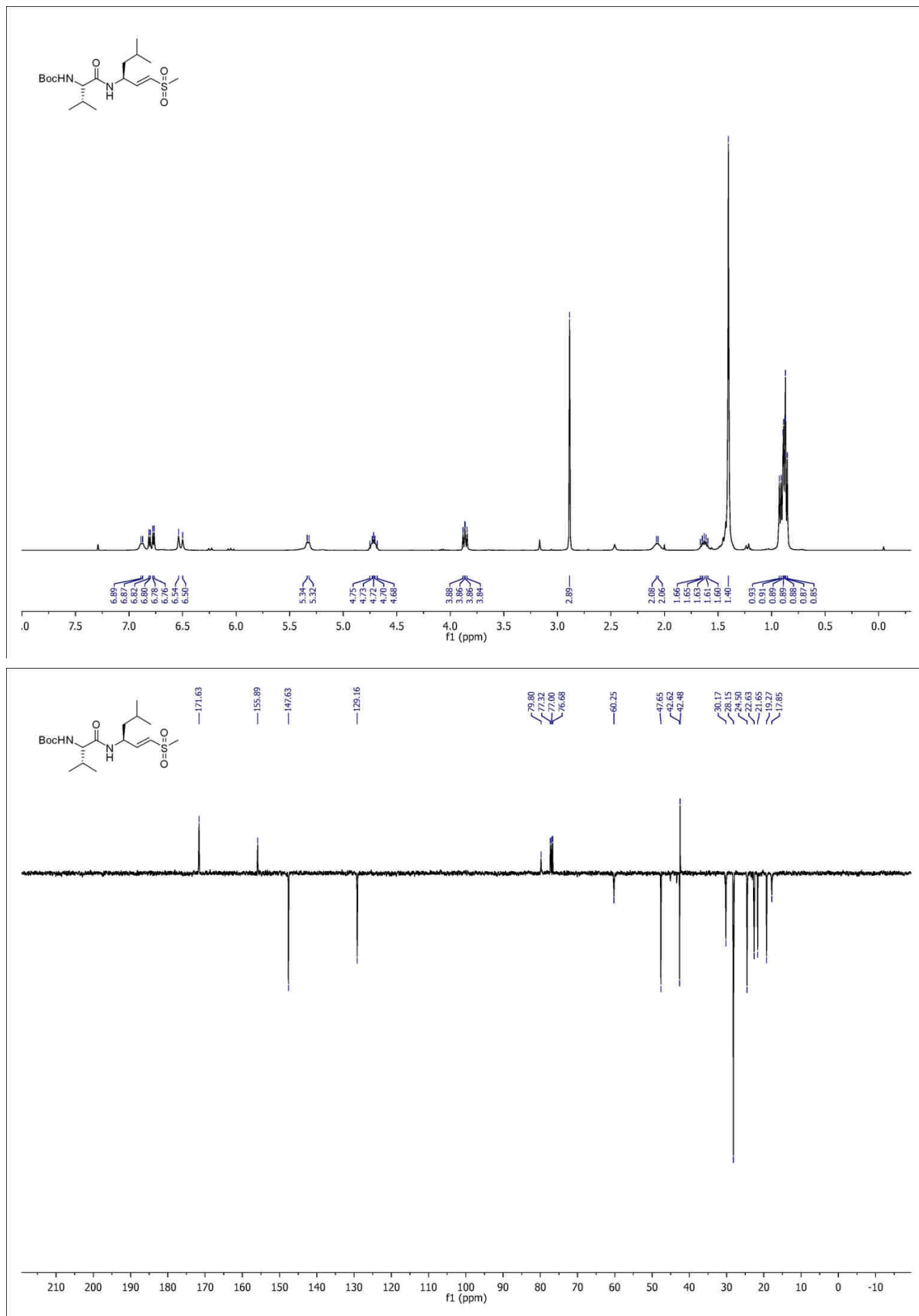




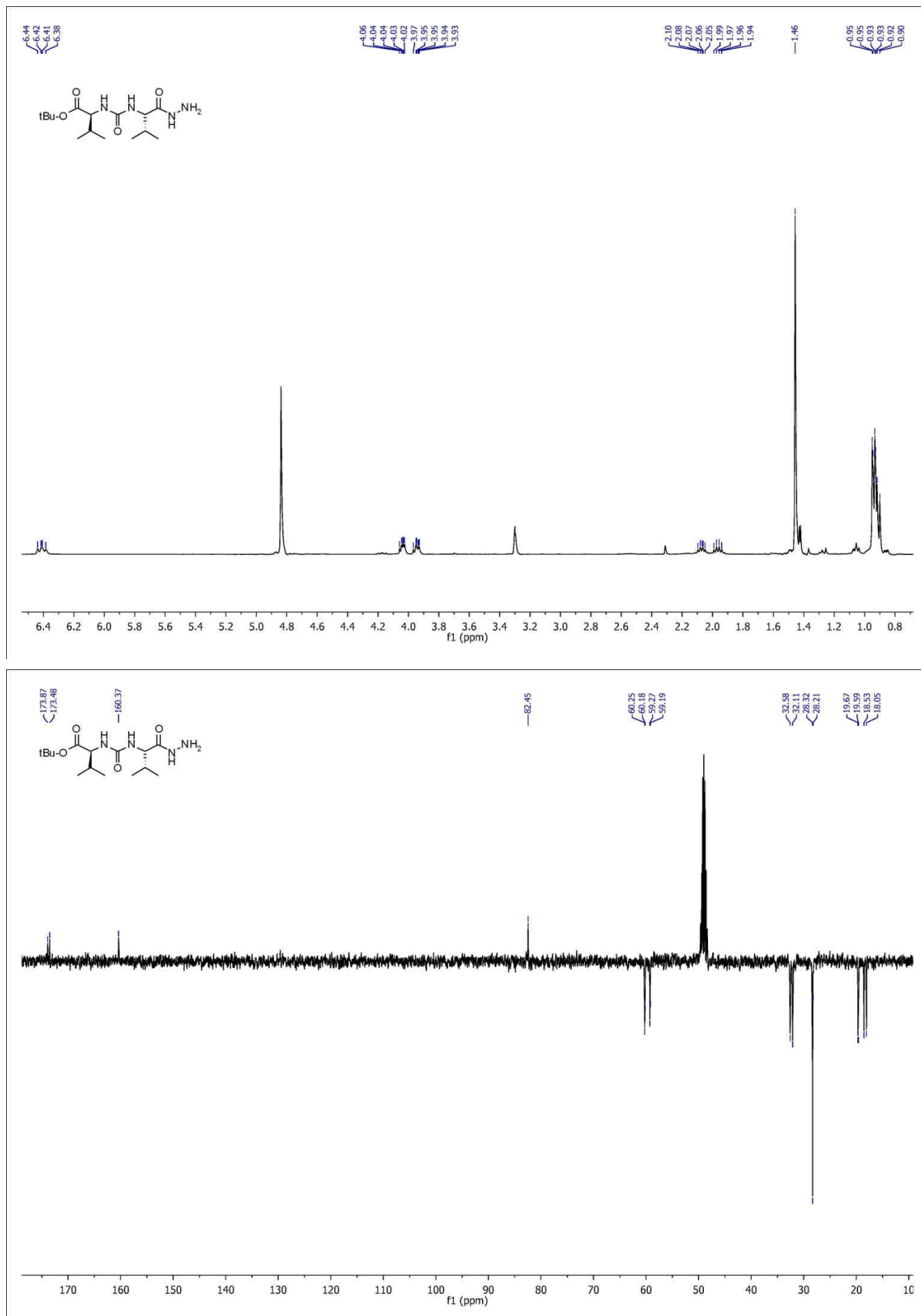
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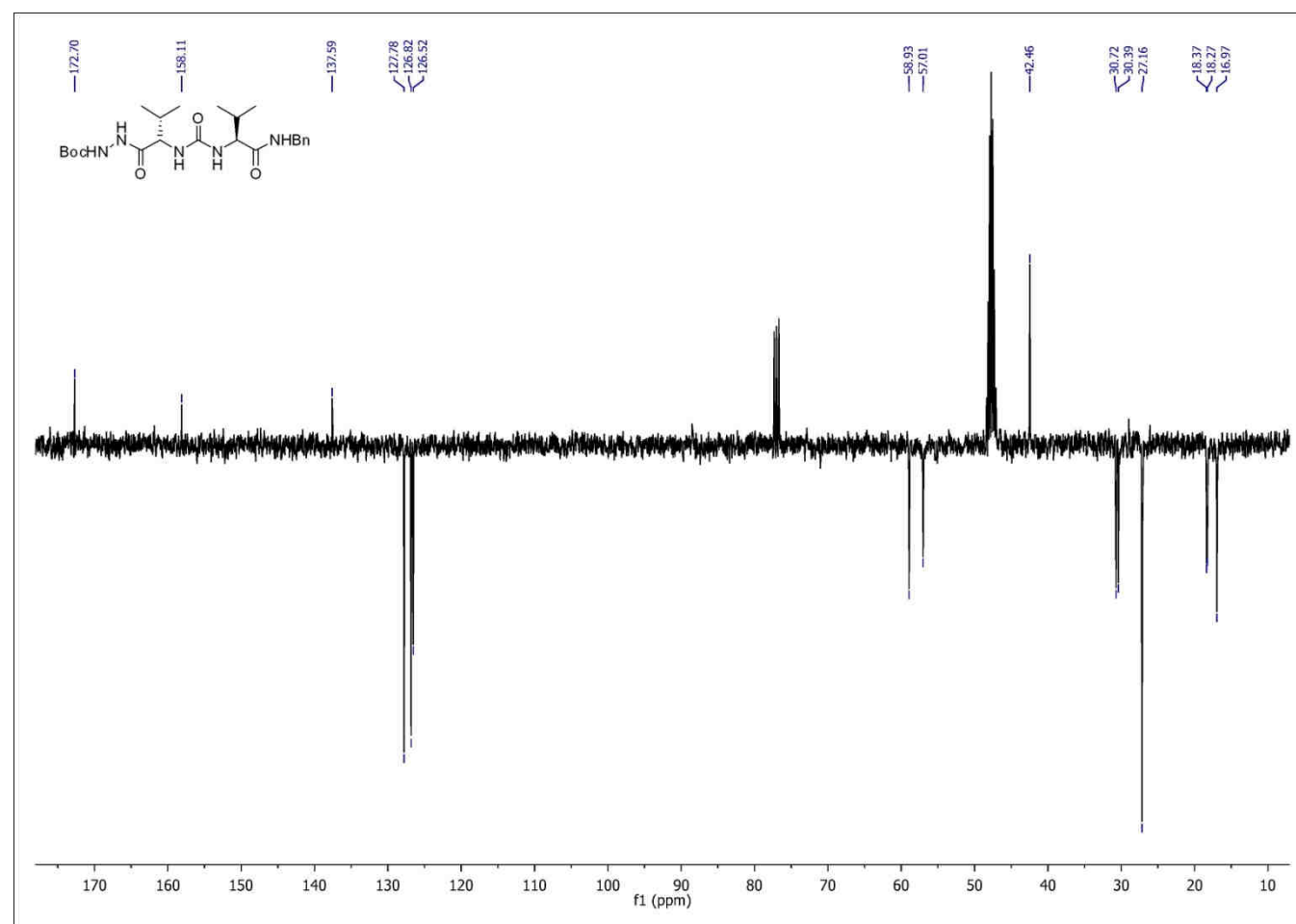
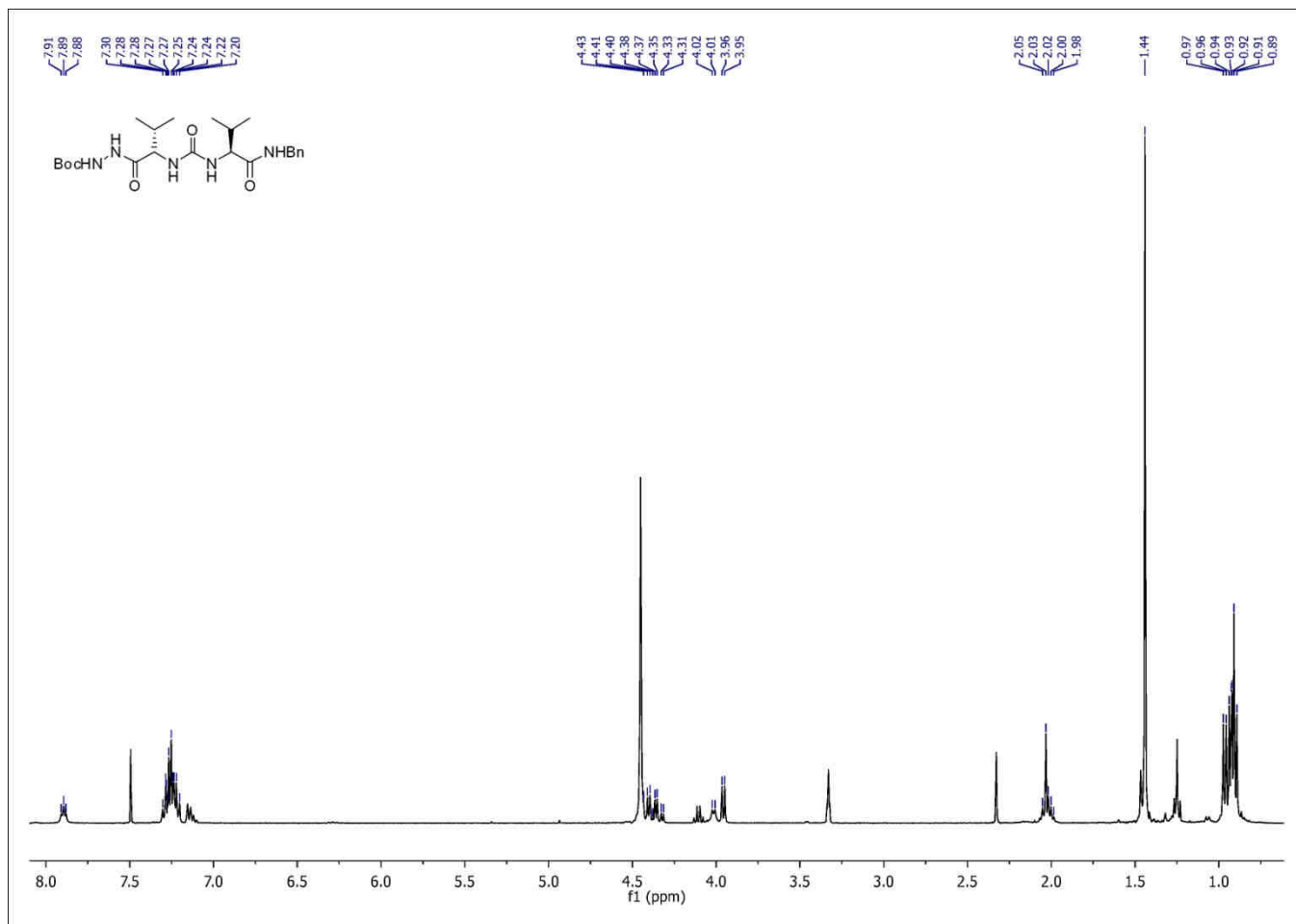
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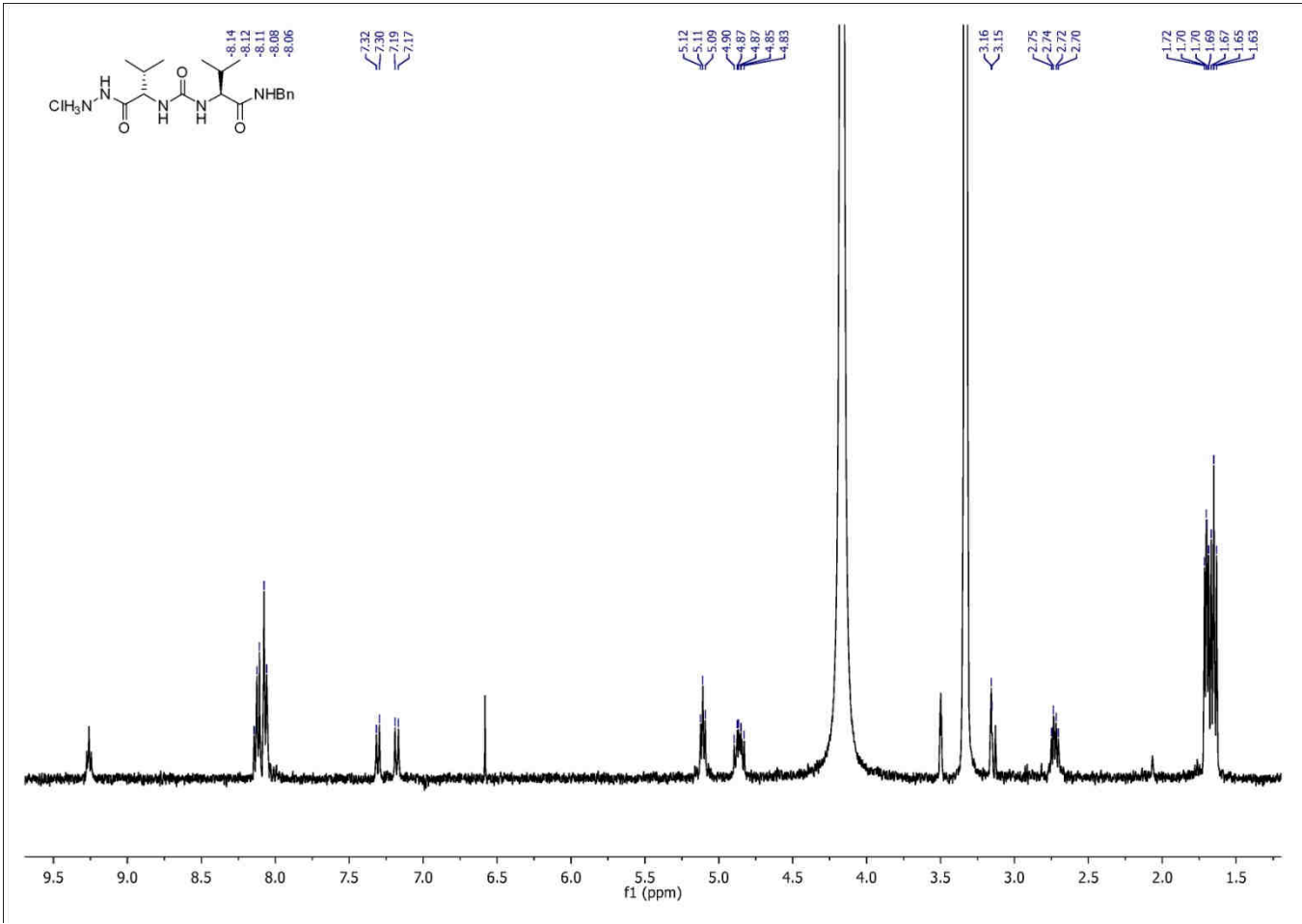
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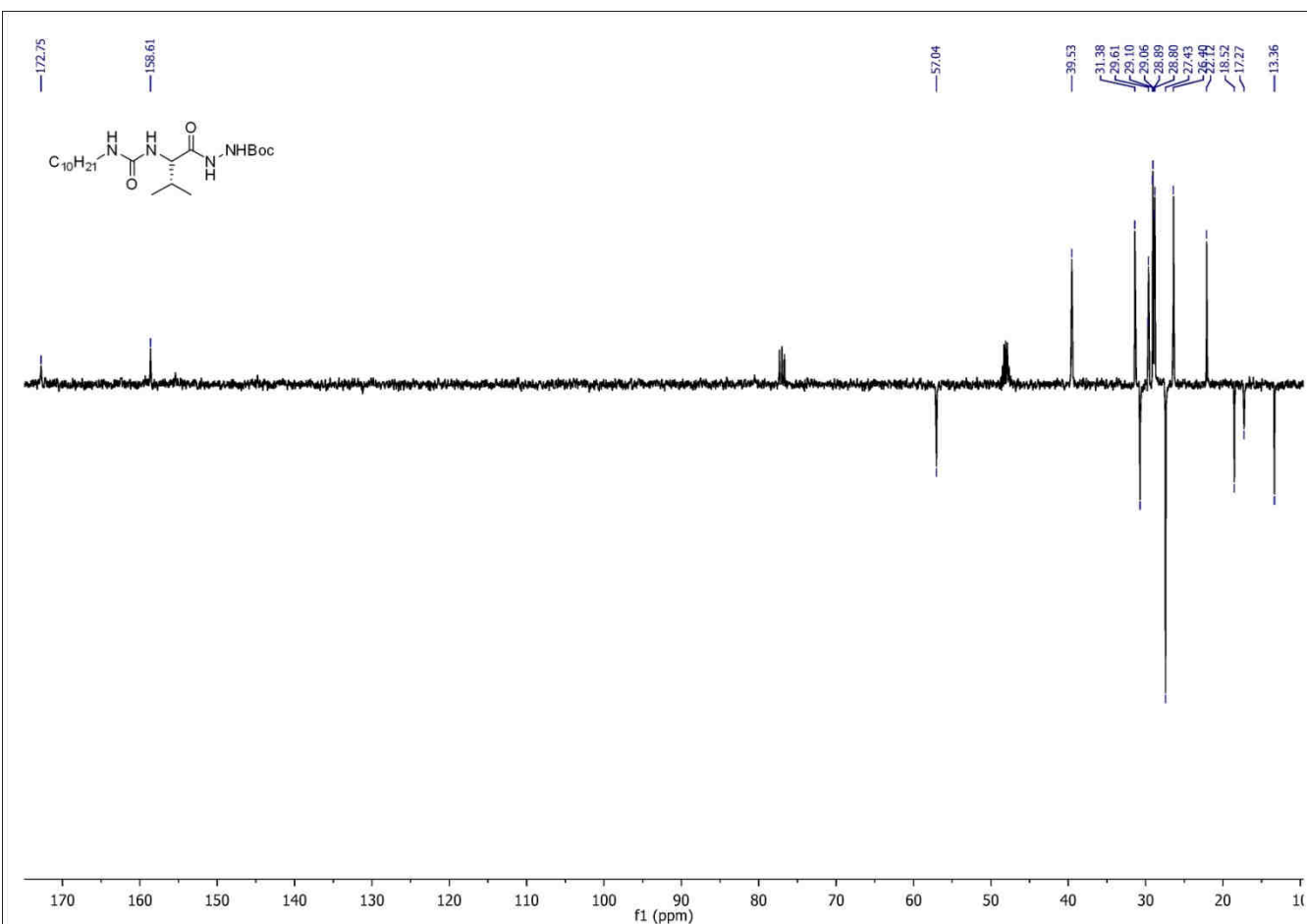
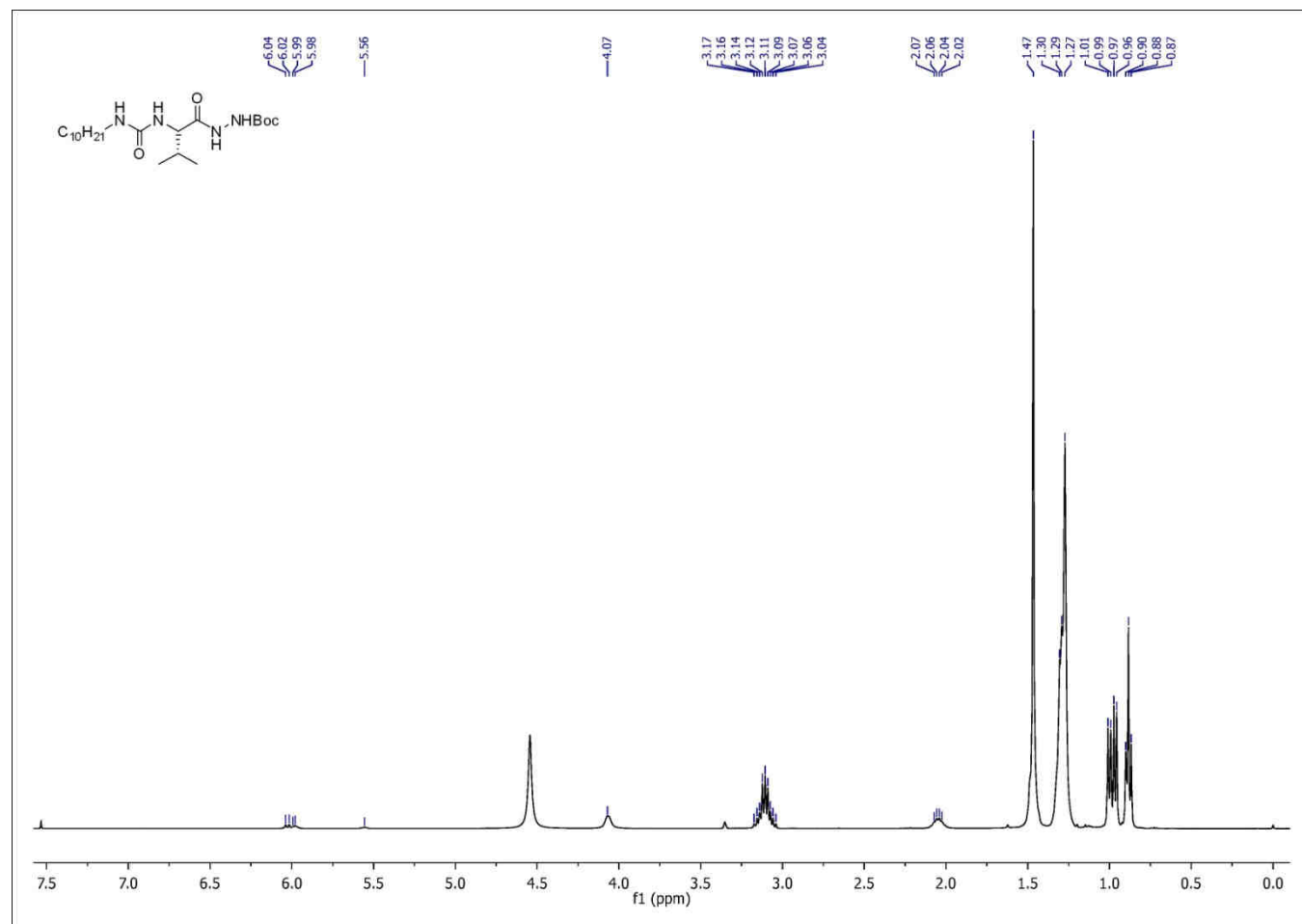
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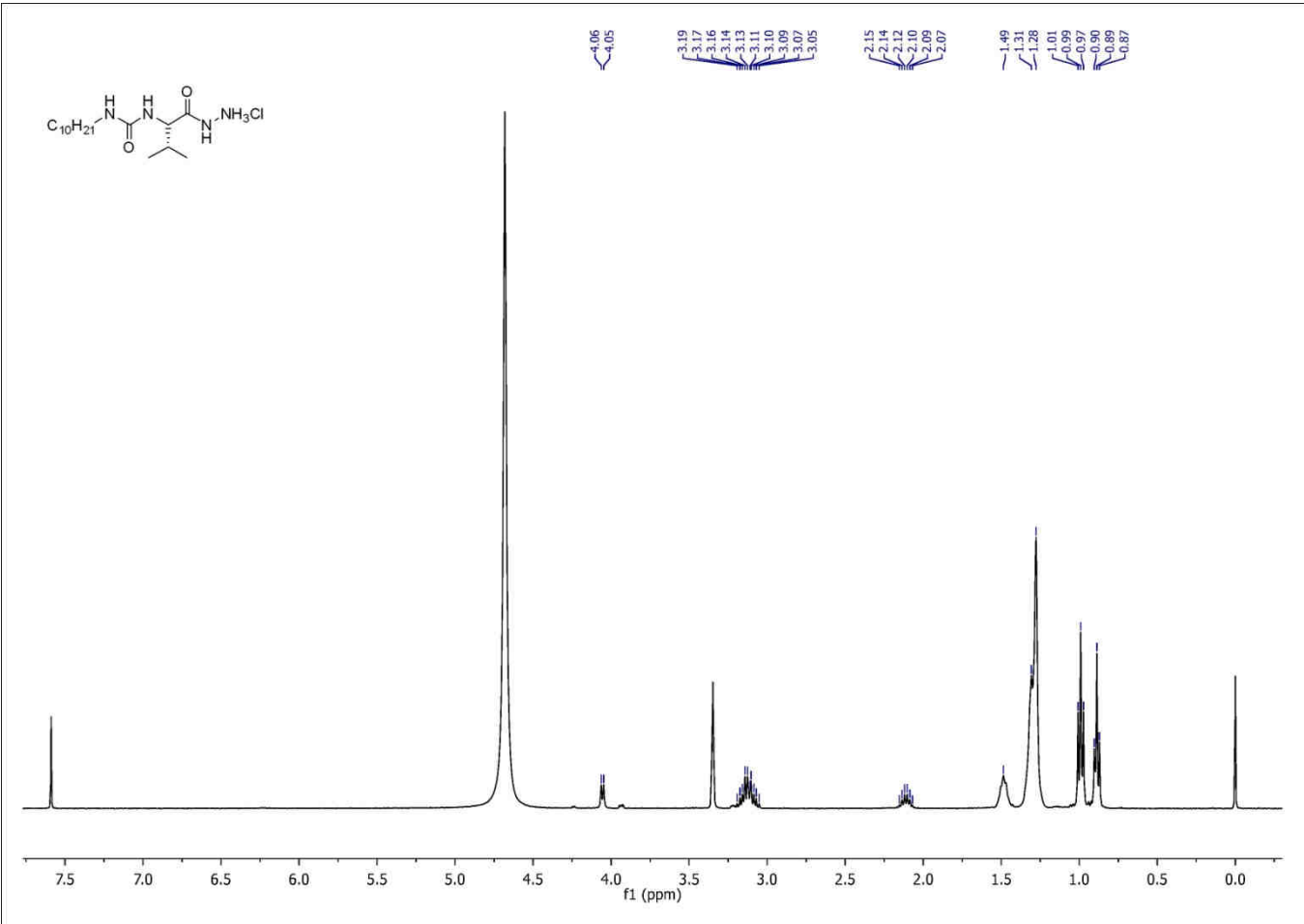
Compound 23



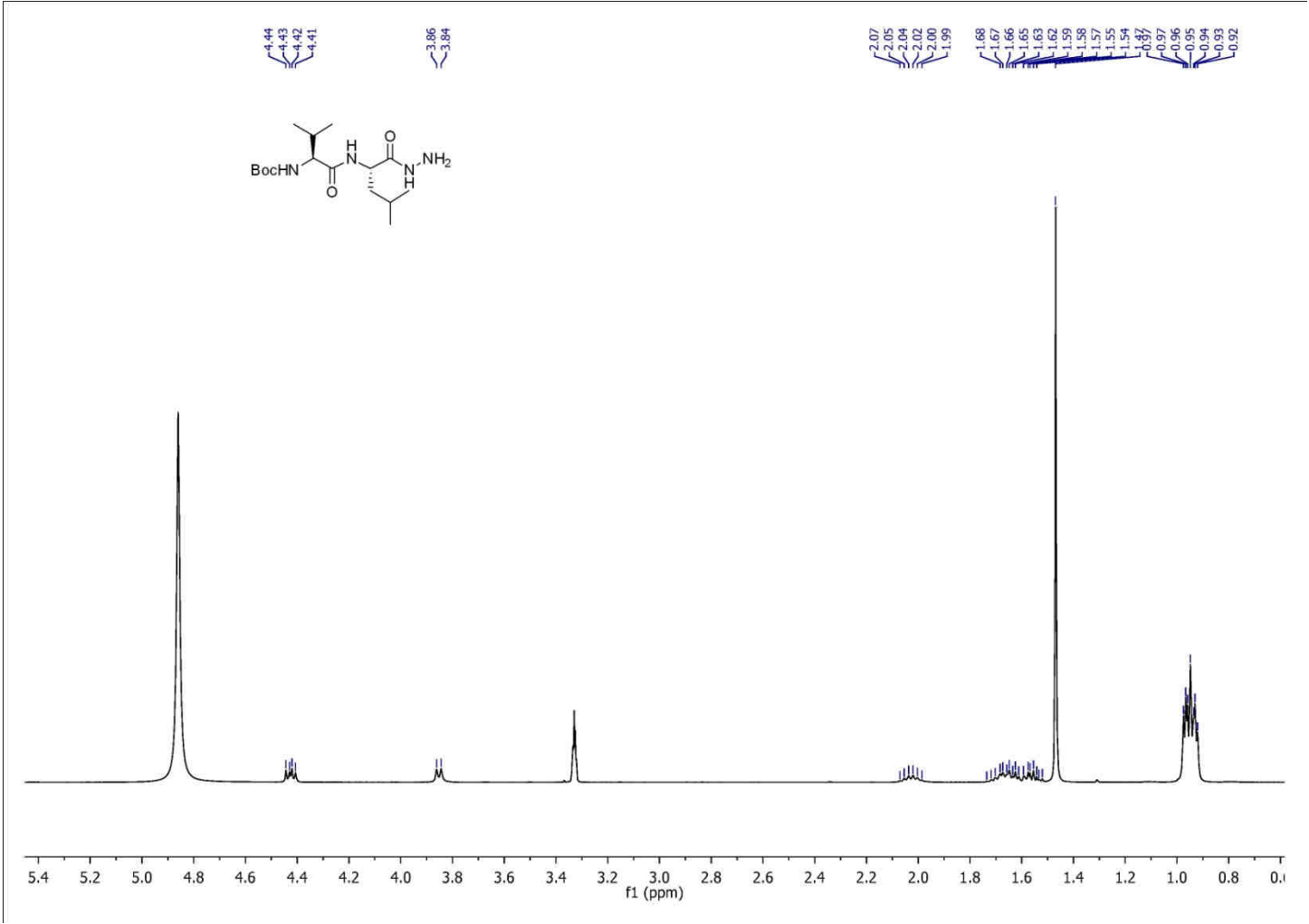
## Compound 24



Compound 25



Compound 27

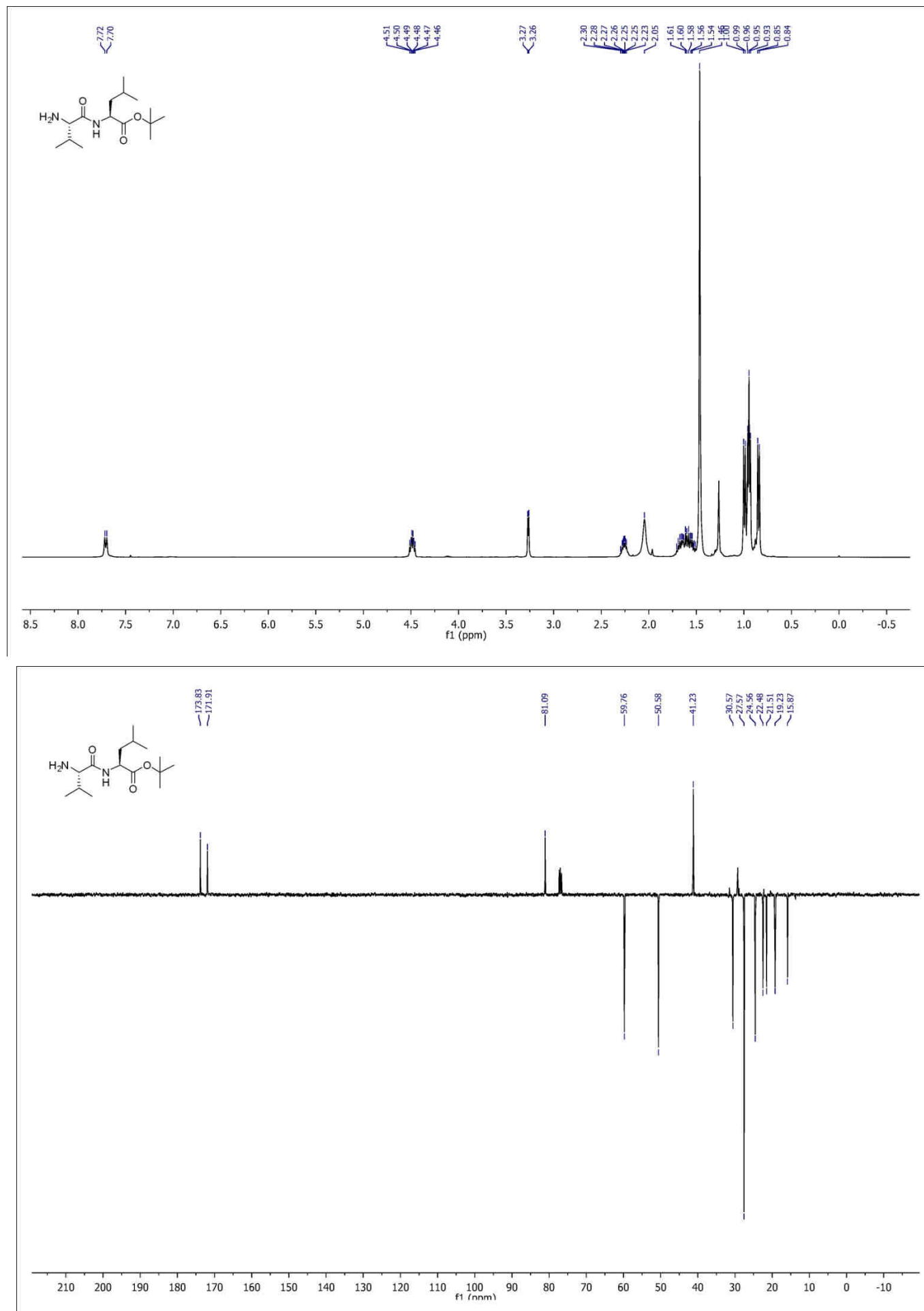




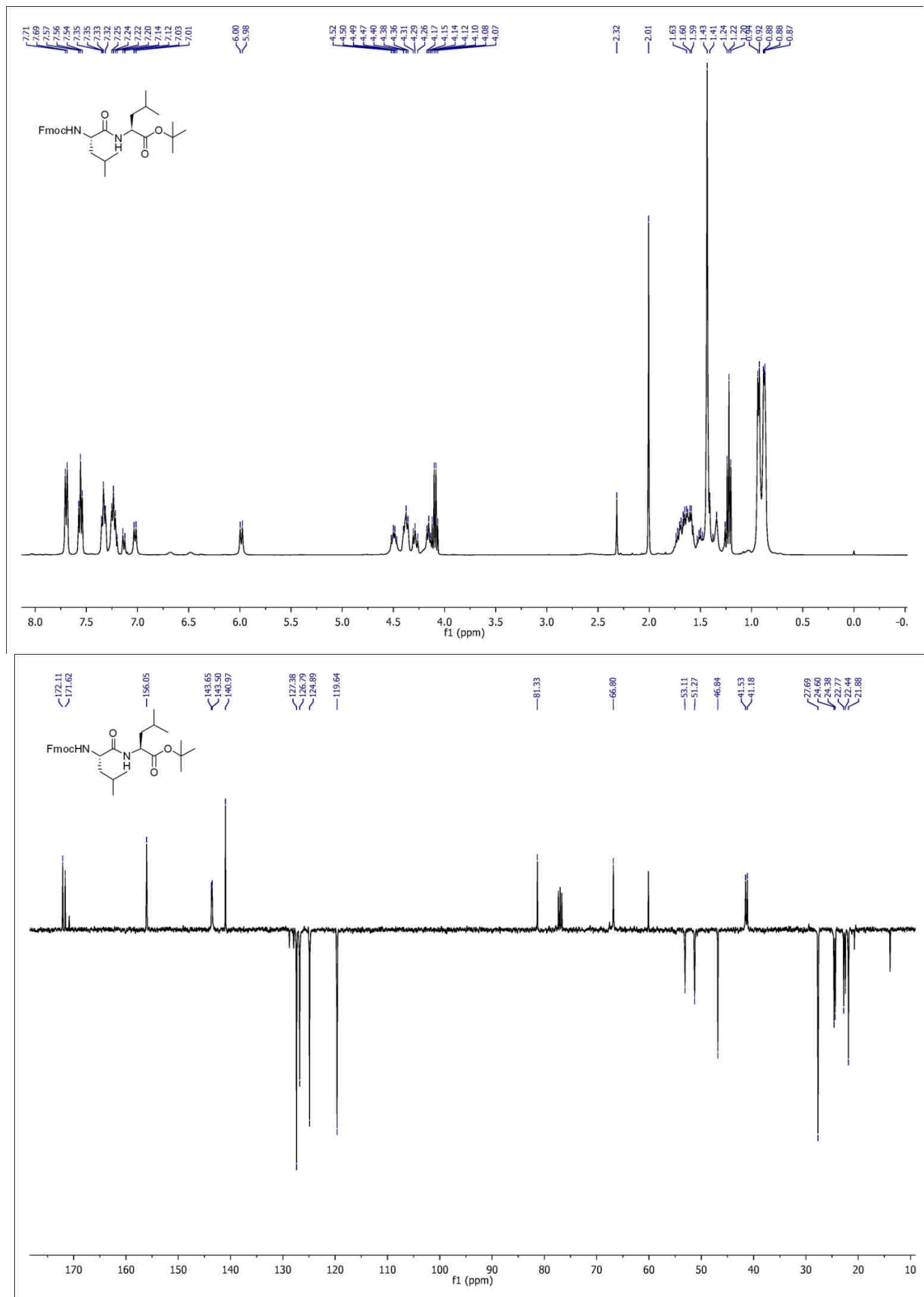




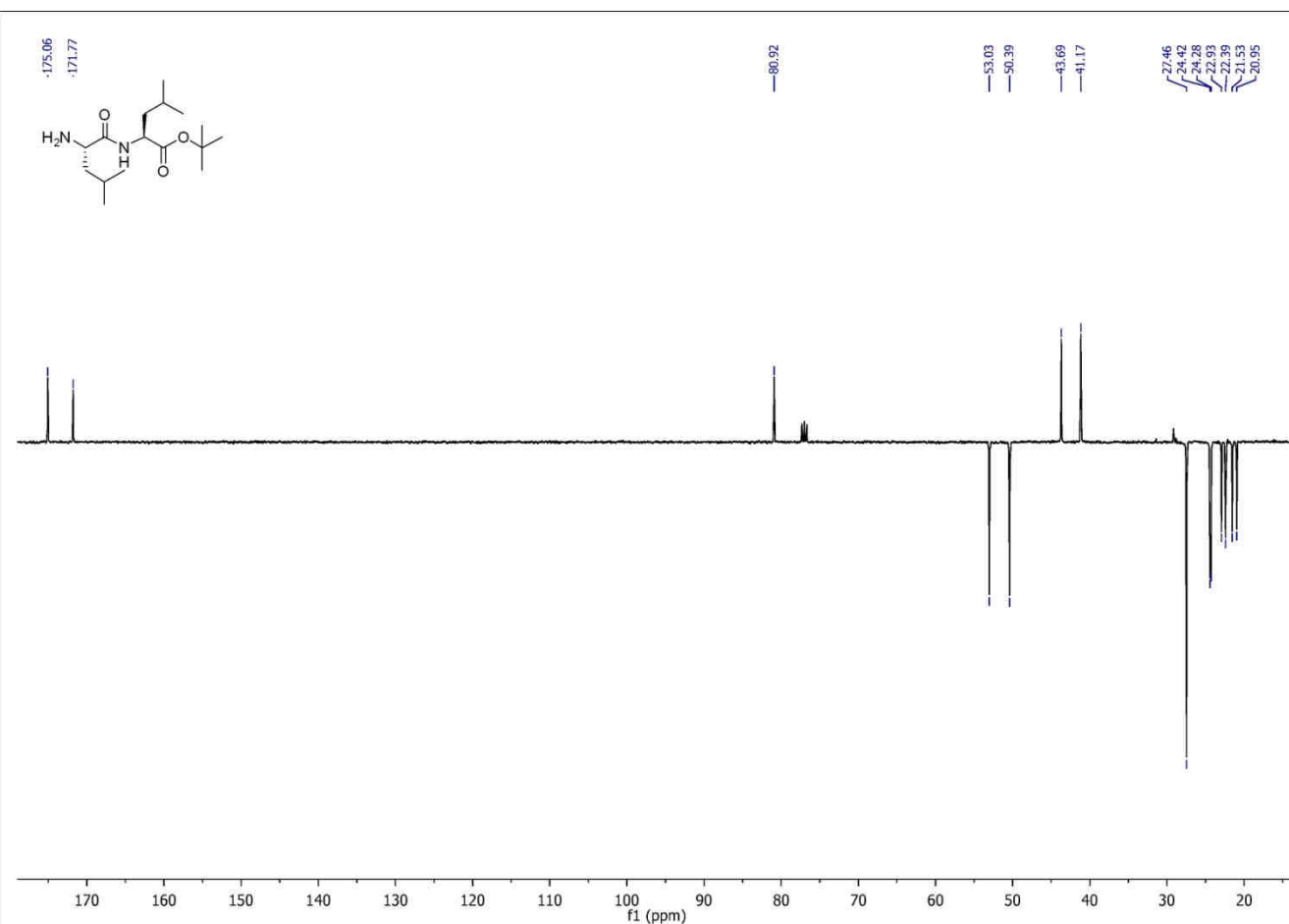
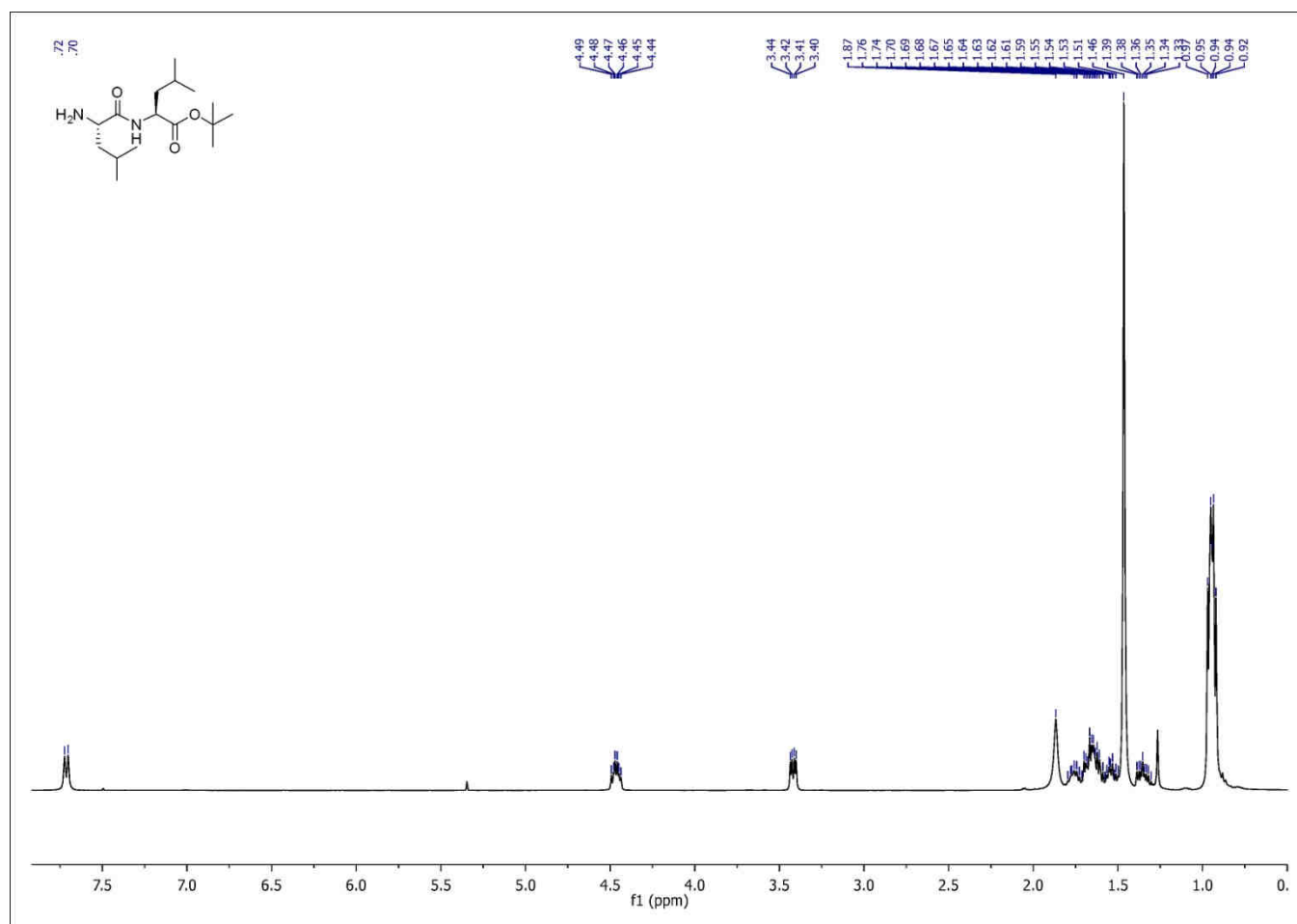
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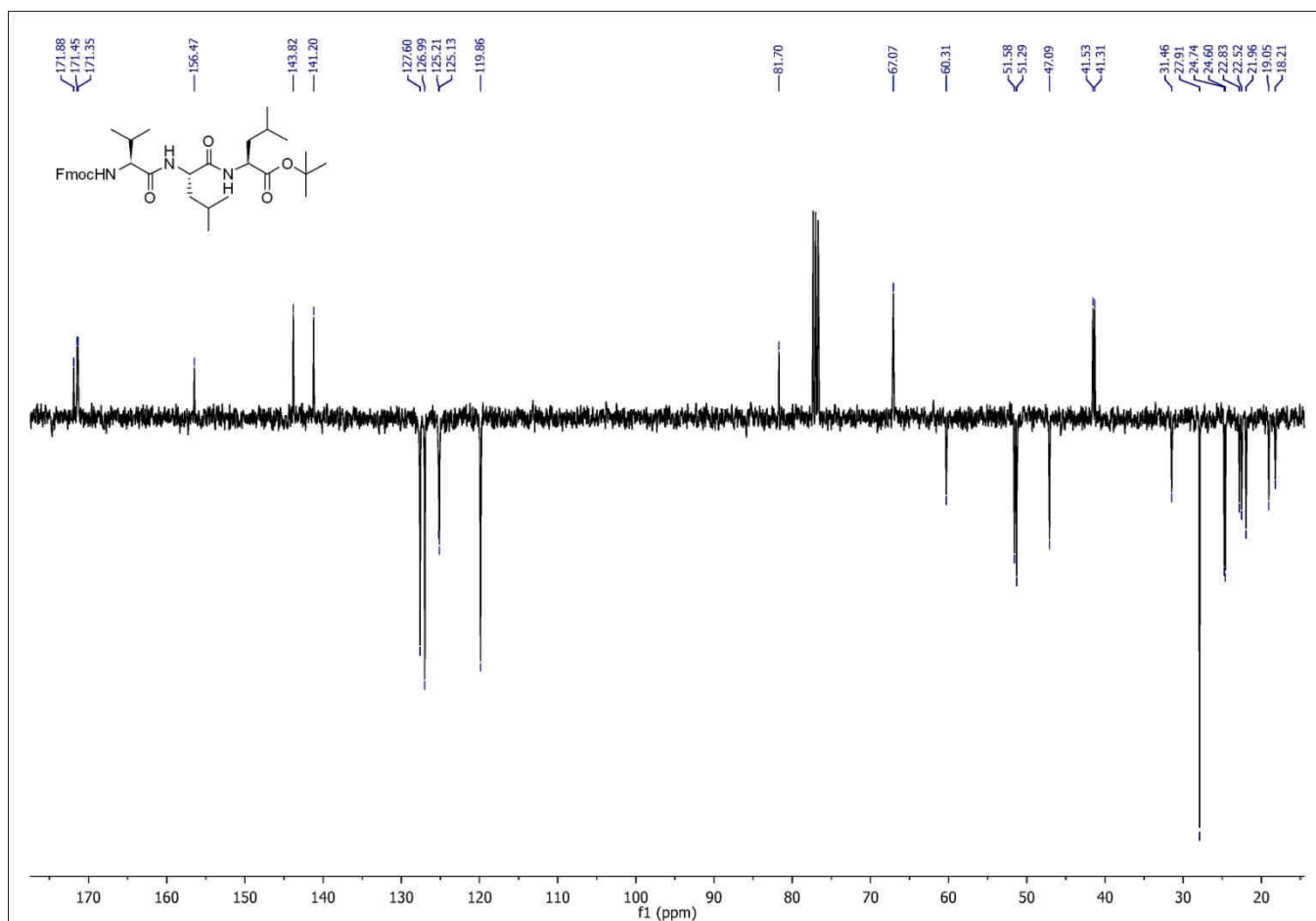
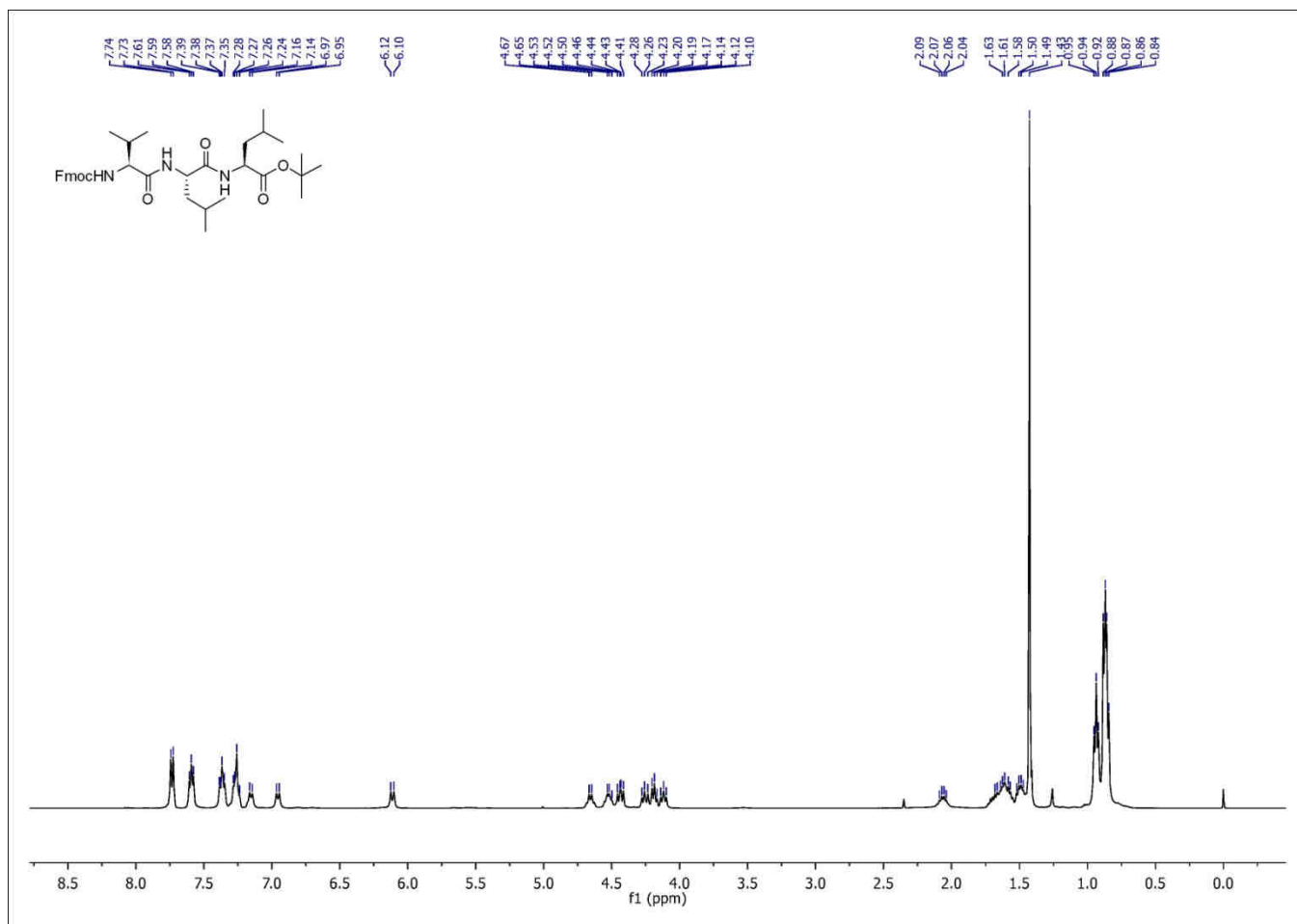
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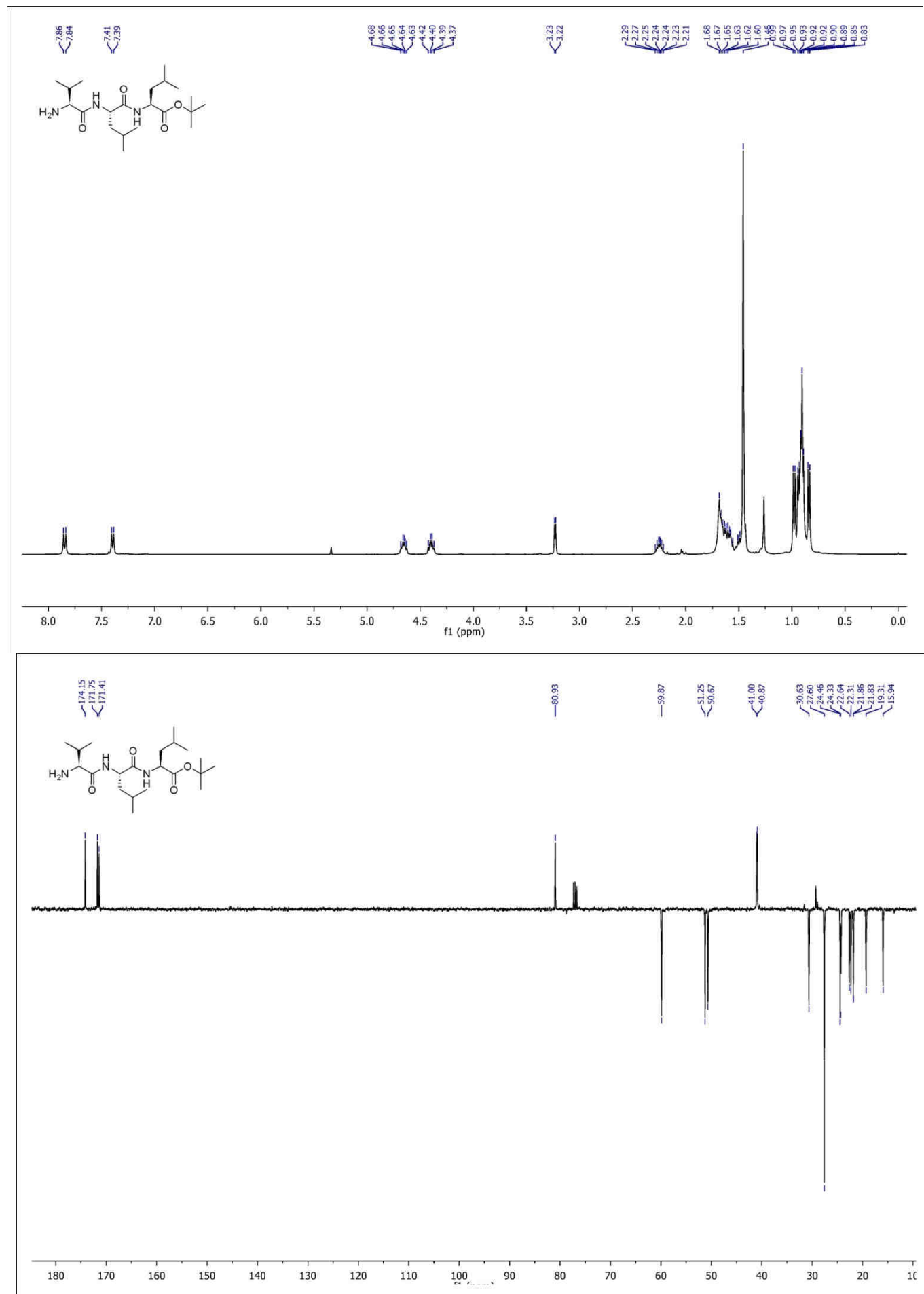
# Compound 35



## Compound 36



# Compound 37



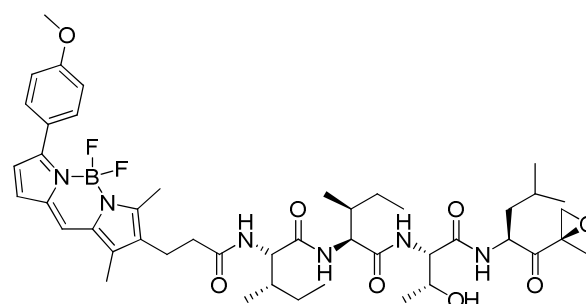
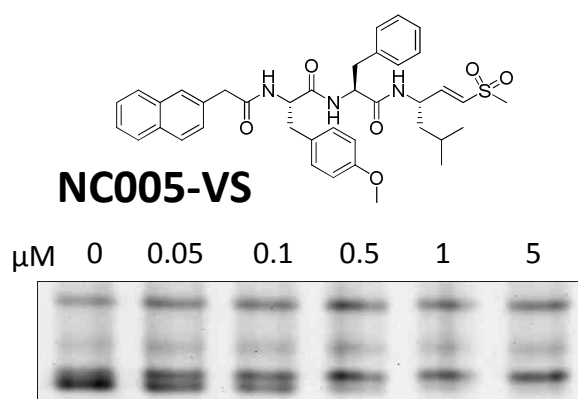
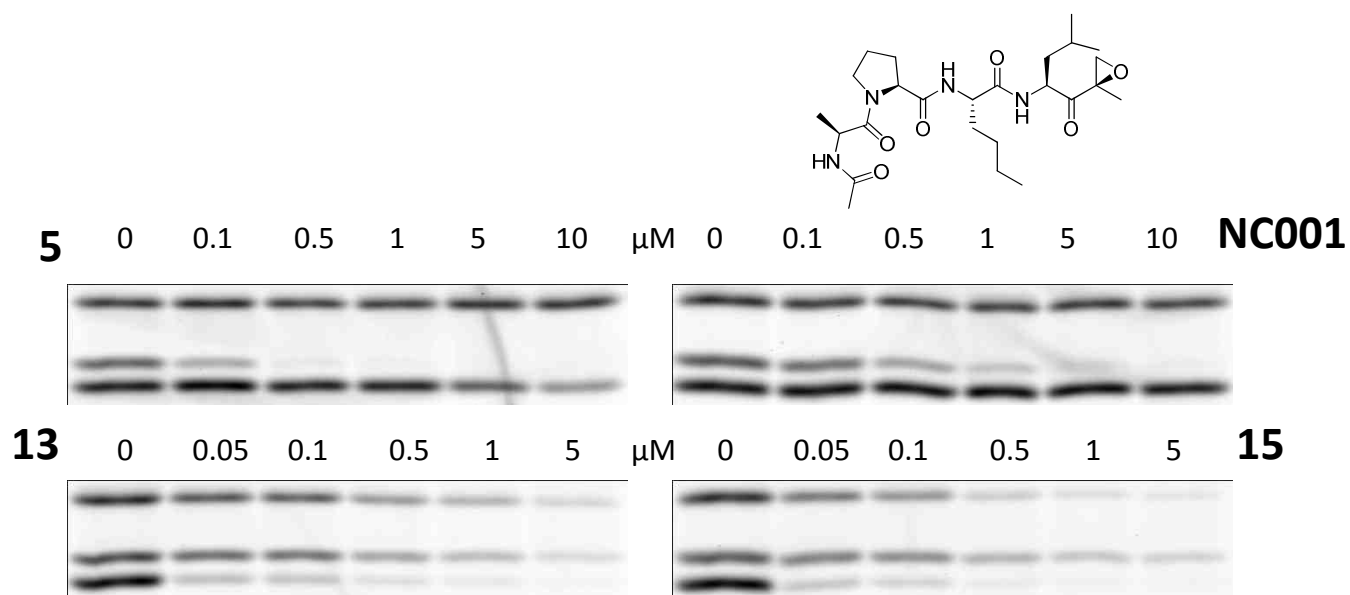






## Figure S2: gels of competition assay in living HEK293T cells

Typhoon readout of competition assay in living HEK293T cells of indicated inhibitors versus MVB003



**MVB003**

Coomassie Brilliant Blue staining of gels

