

Electronic Supplementary Information

Syntheses of mGluR5 PET Radioligands through the Radiofluorination of Diaryliodonium Tosylates

Sanjay Telu, Joong-Hyun Chun, Fabrice G. Siméon, Shuiyu Lu, and Victor W. Pike*

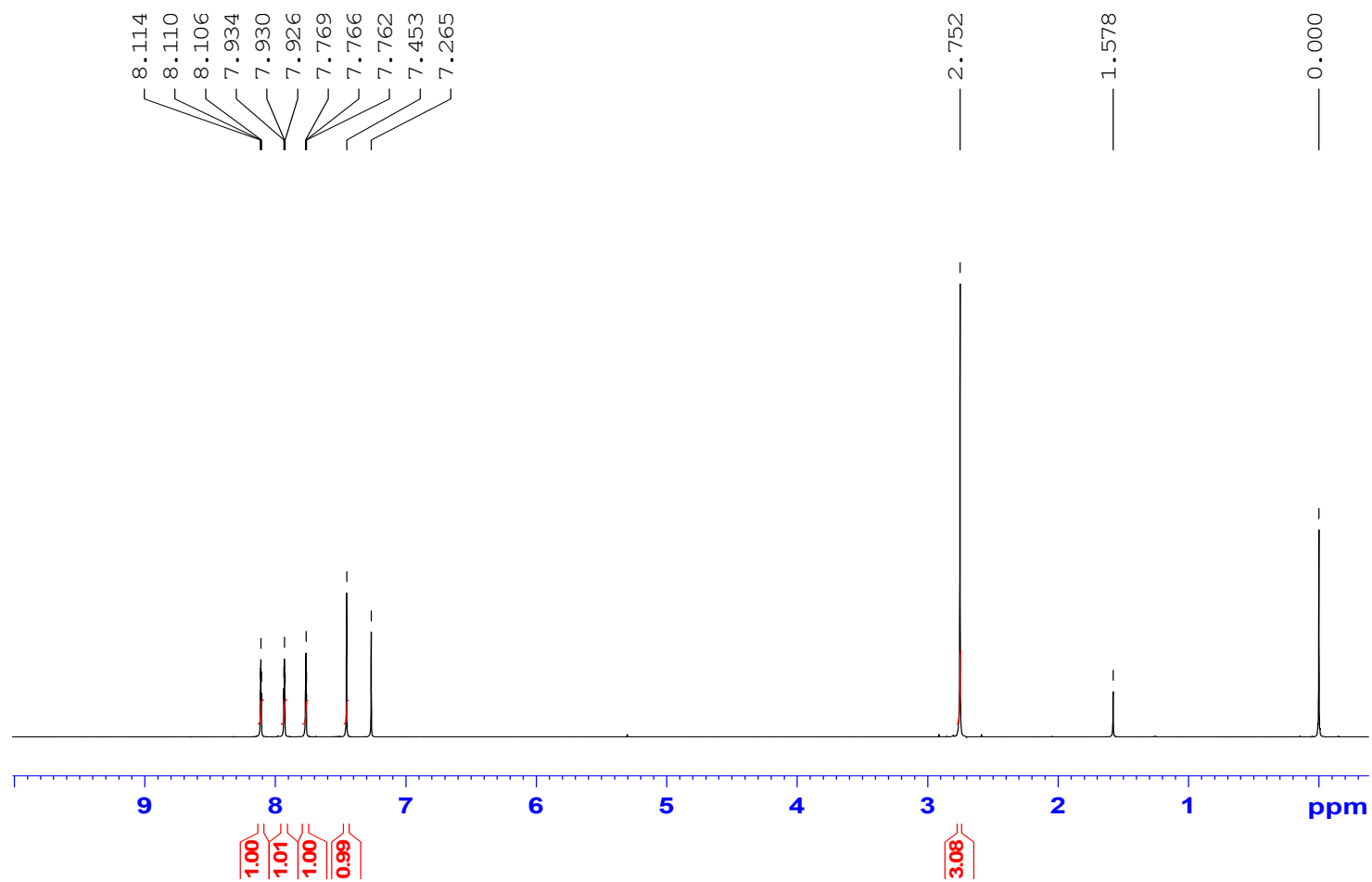
Molecular Imaging Branch, National Institute of Mental Health, National Institutes of Health, Rm. B3 C346A, 10 Center Drive, Bethesda MD 20892-1003, USA.

E-mail: pikev@nih.gov; Fax: +1 301 480 5112; Tel: +1 301 594 5986.

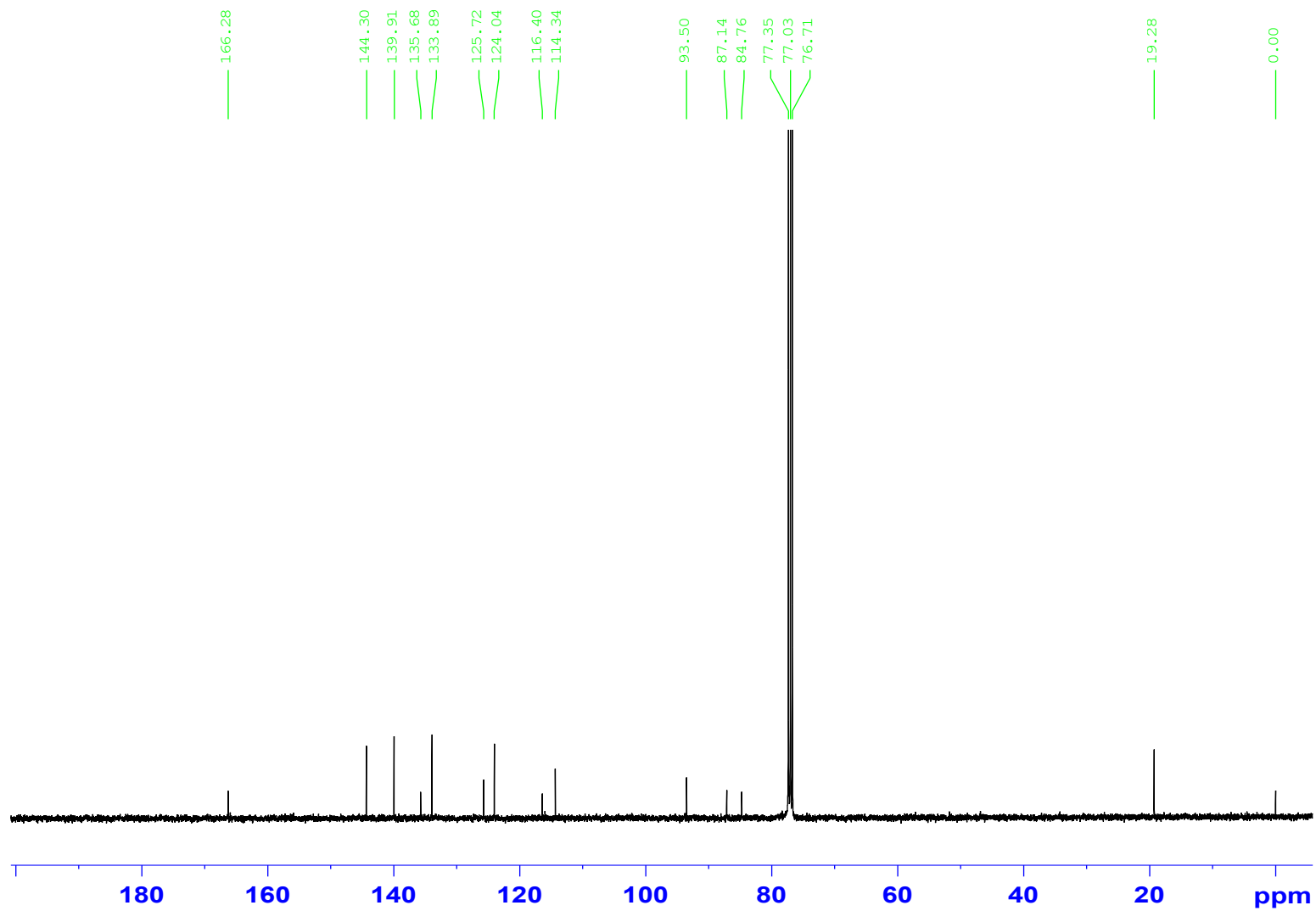
Appendix 1. ^1H , ^{19}F and ^{13}C NMR spectra	2–38
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Appendix 1. ^1H , ^{19}F and ^{13}C NMR spectra

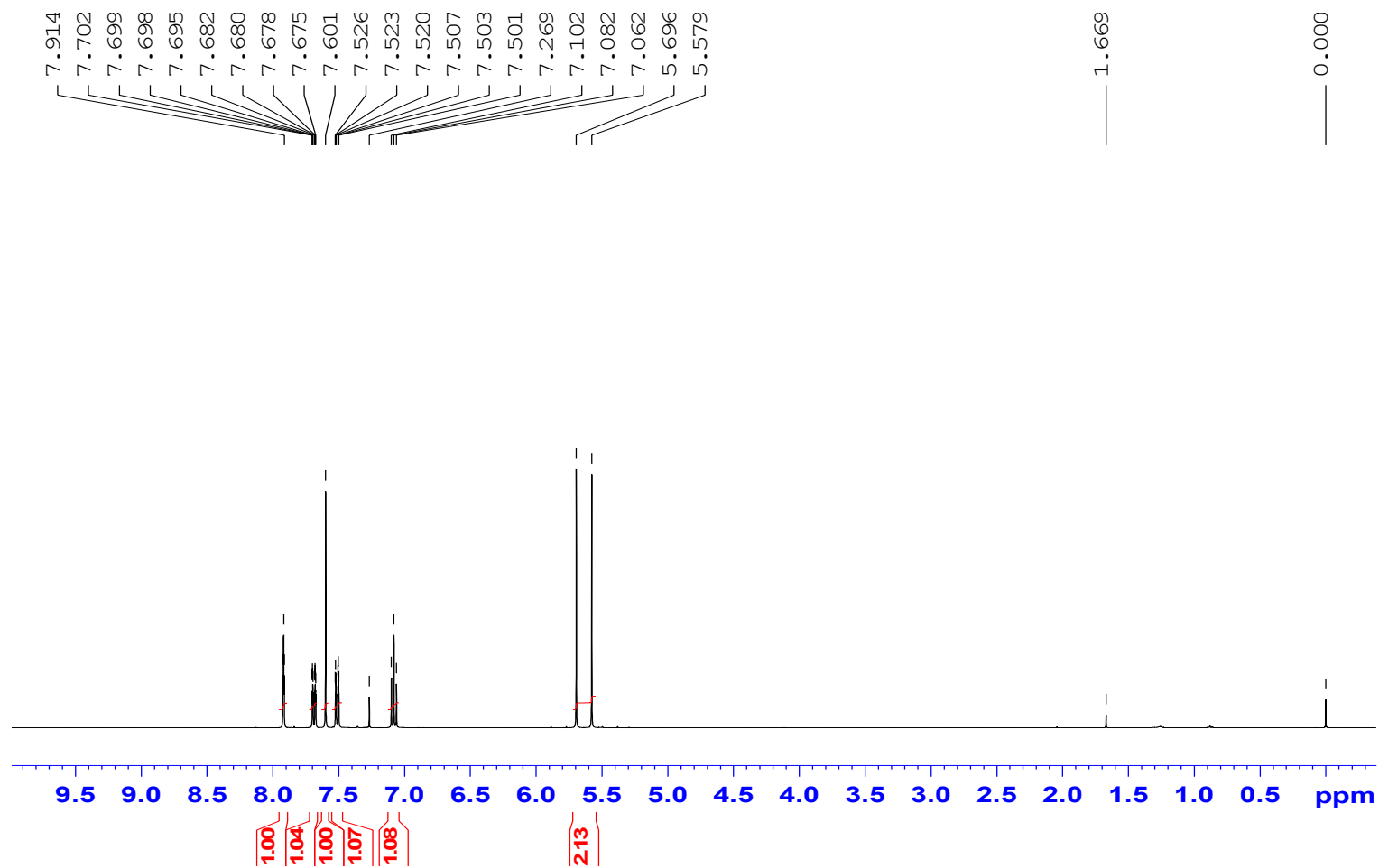
Compound 5a



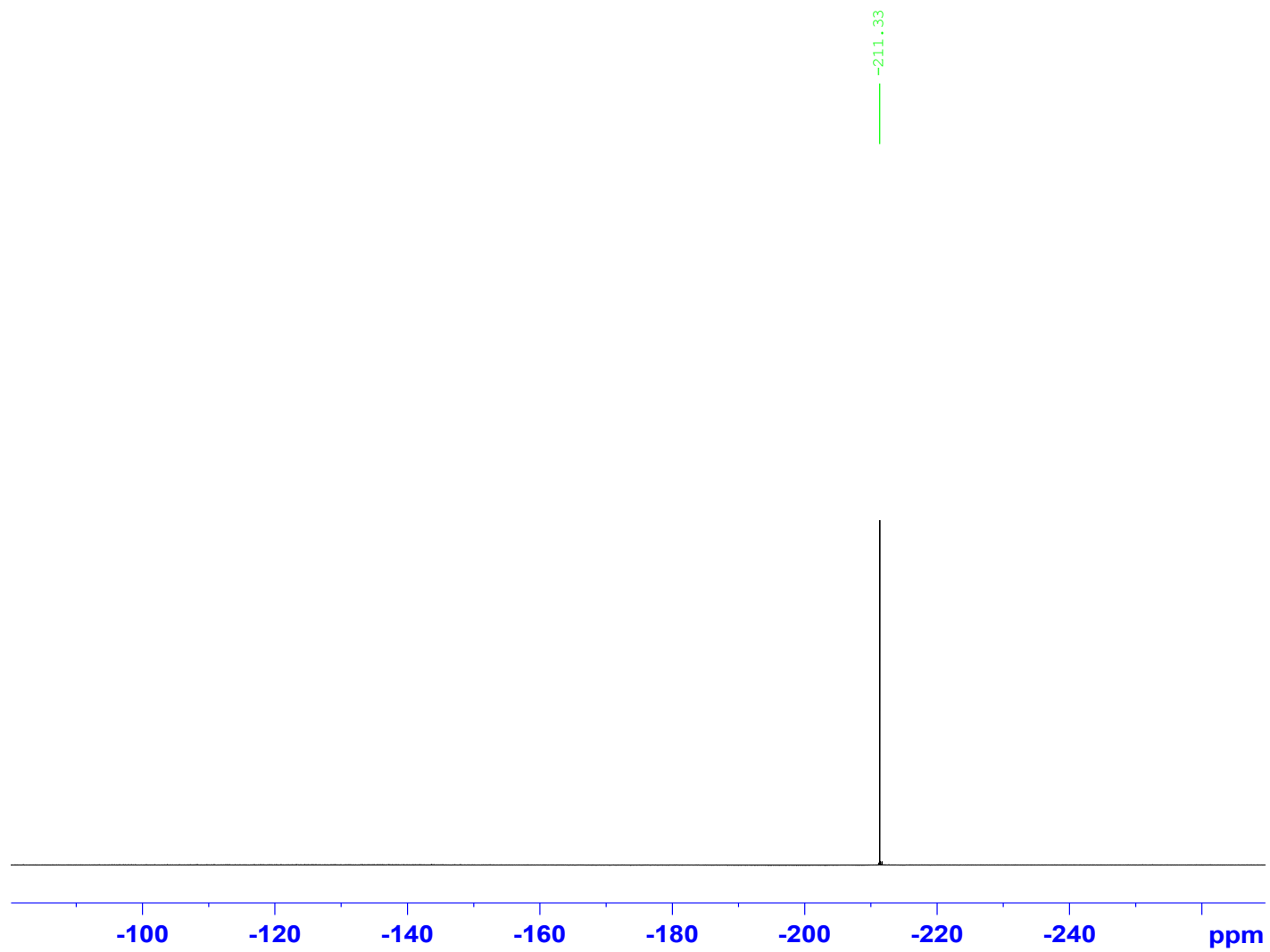
Compound 5a



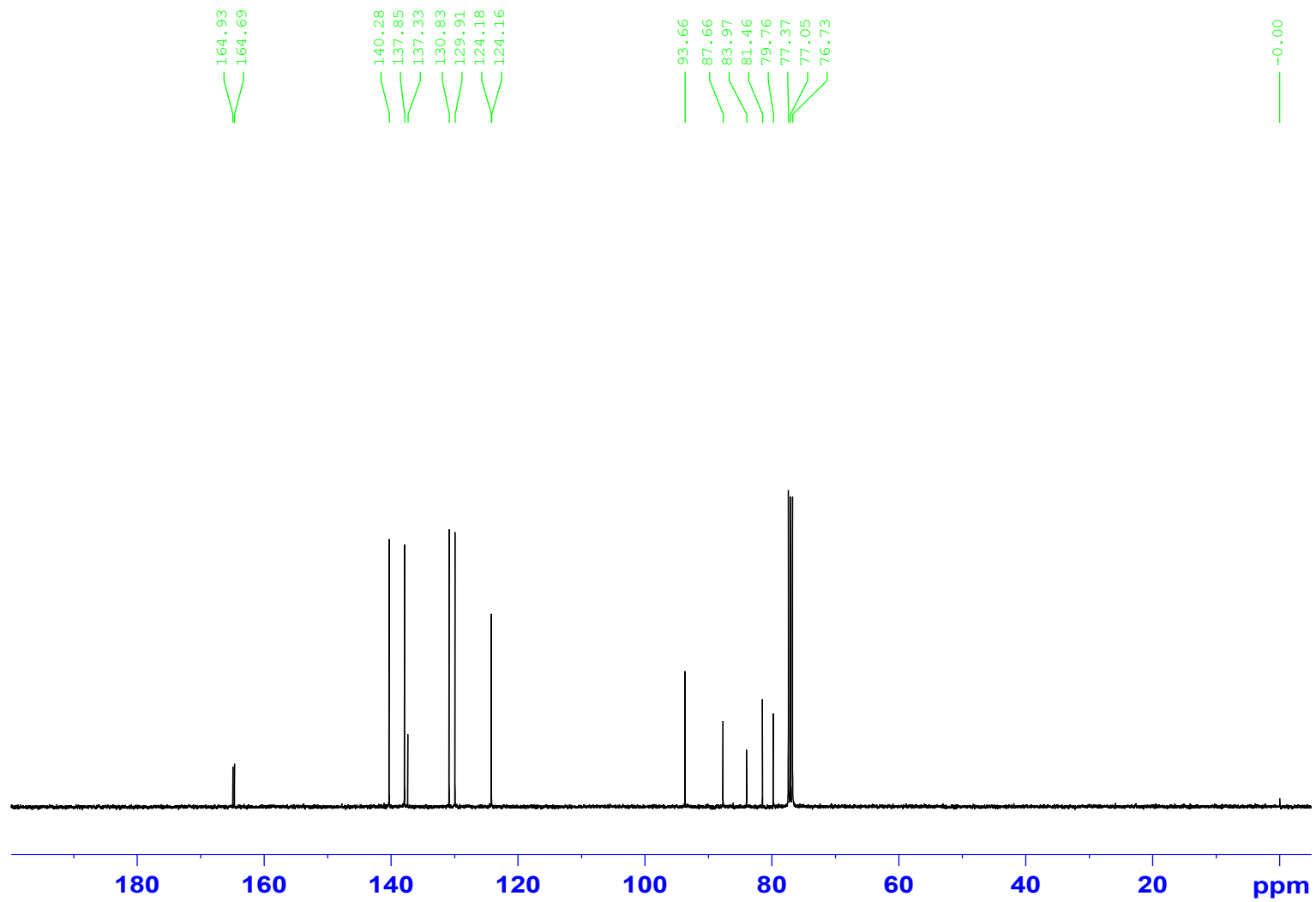
Compound **5b**



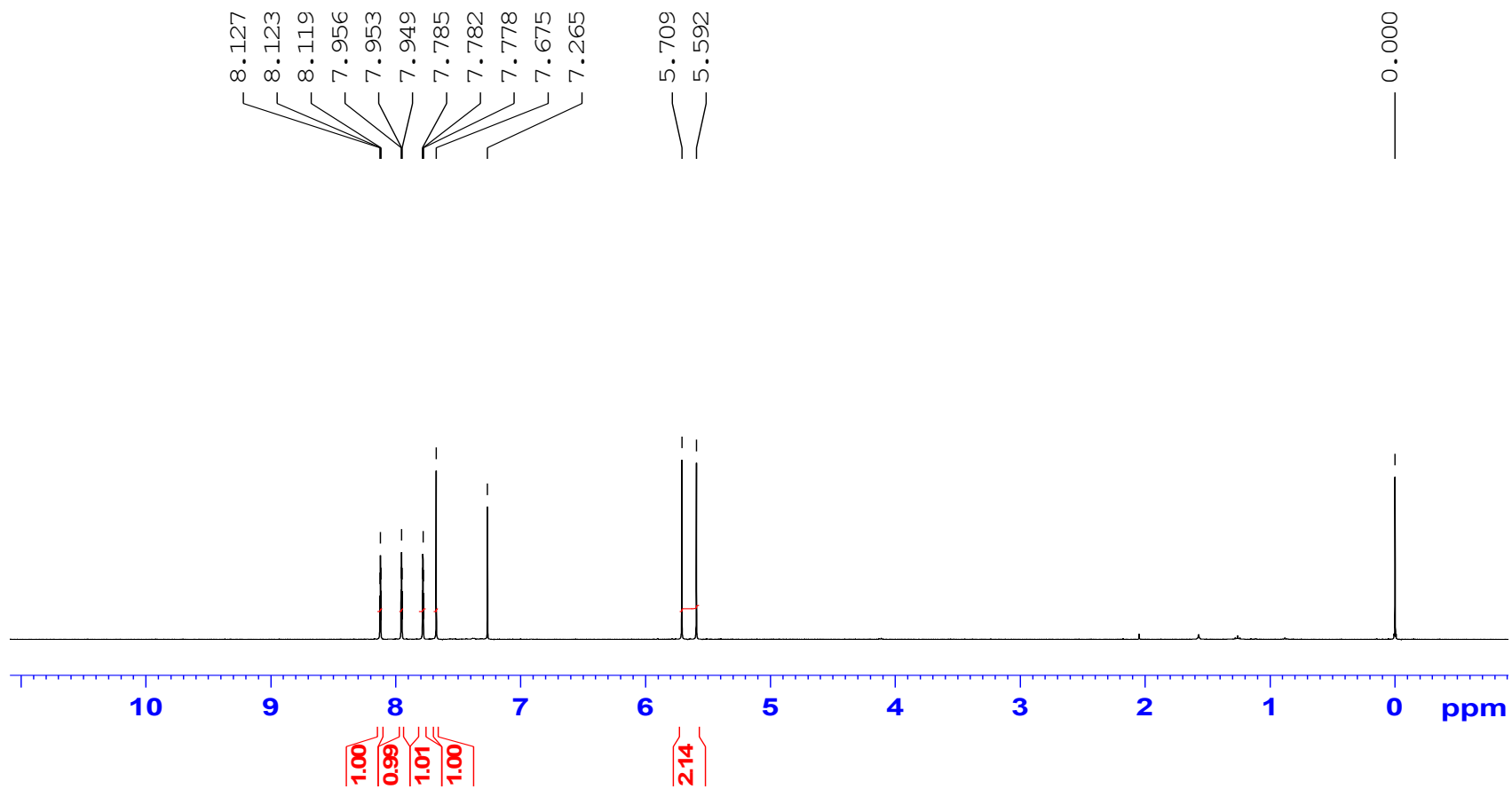
Compound **5b**



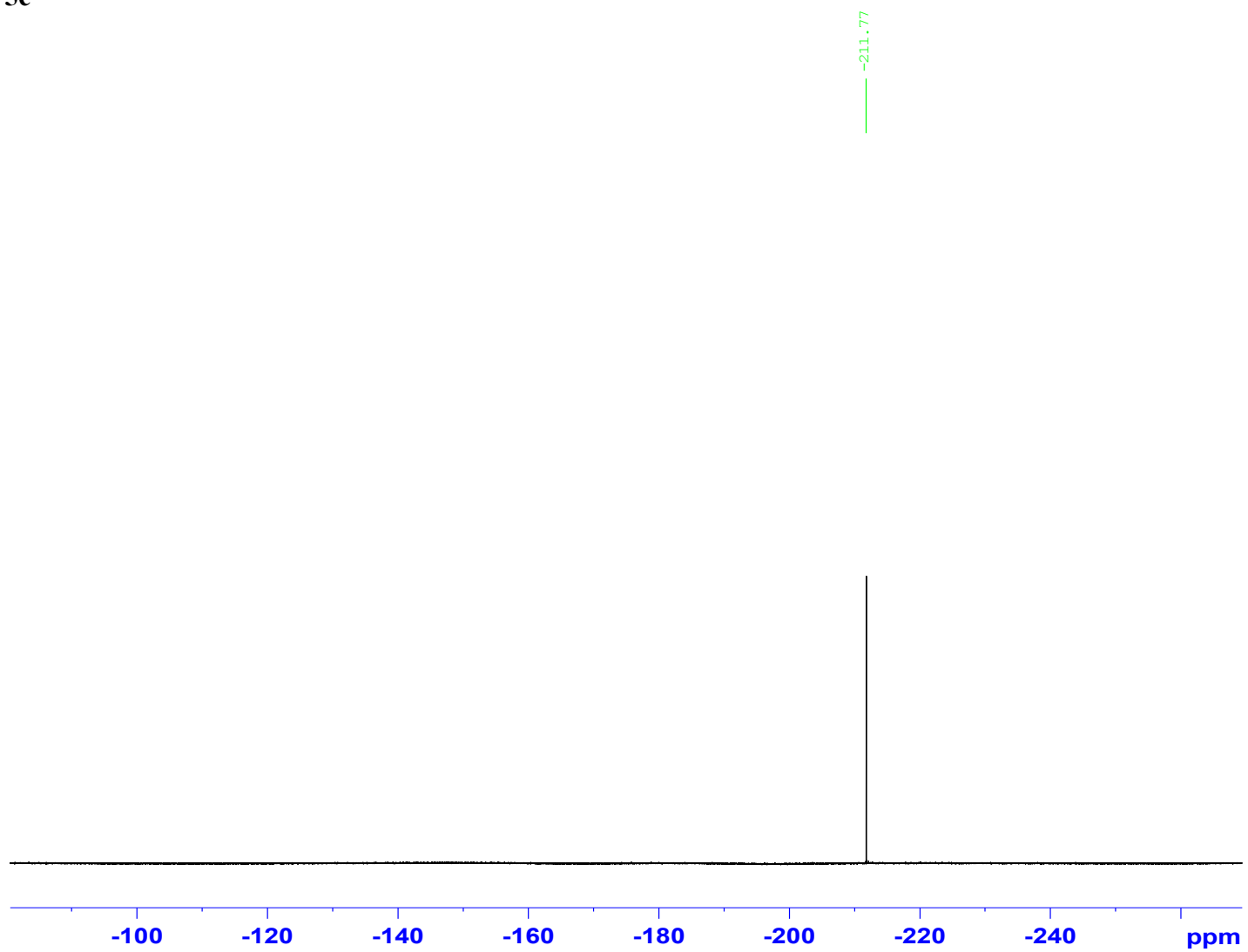
Compound **5b**



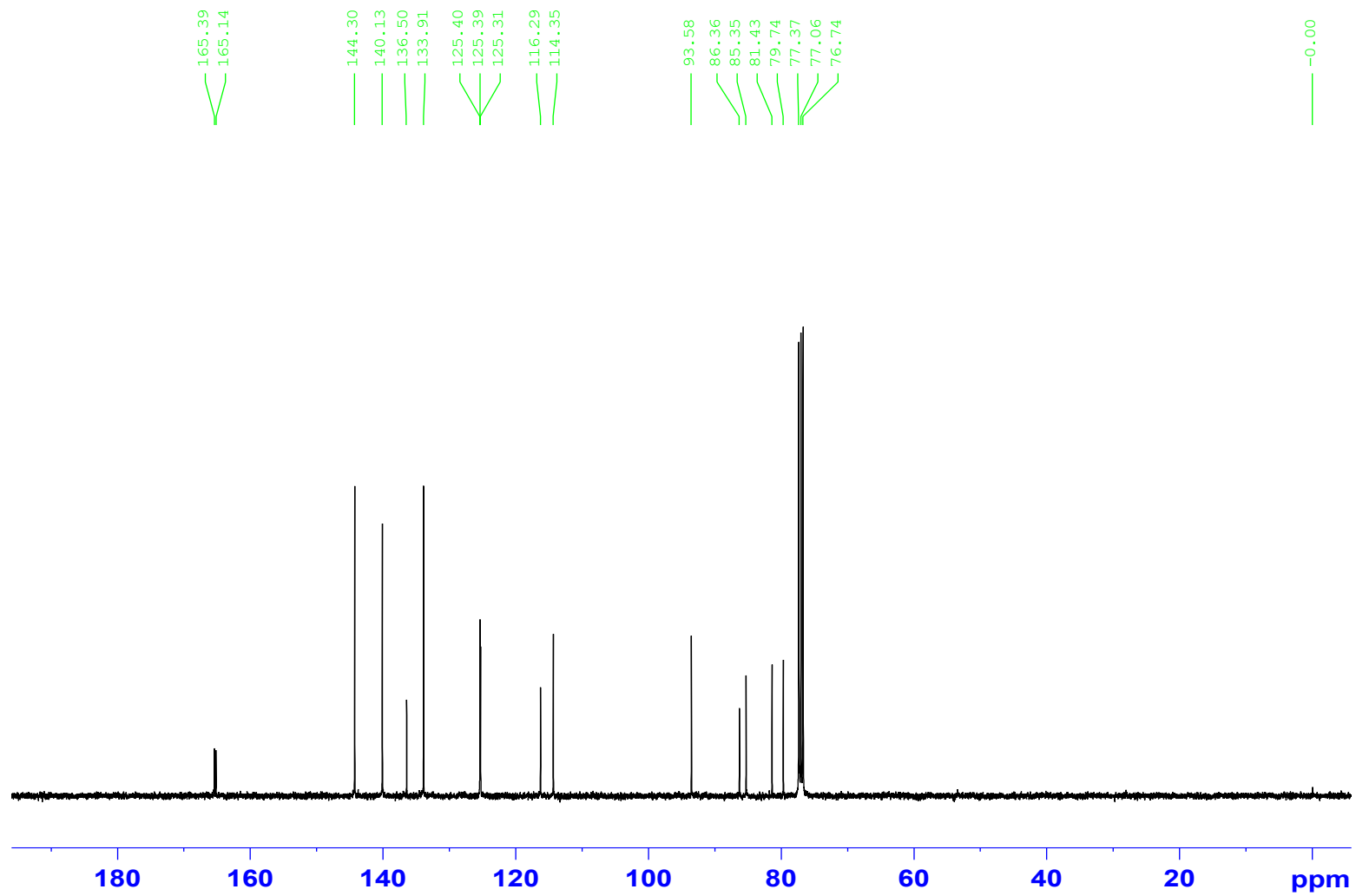
Compound **5c**



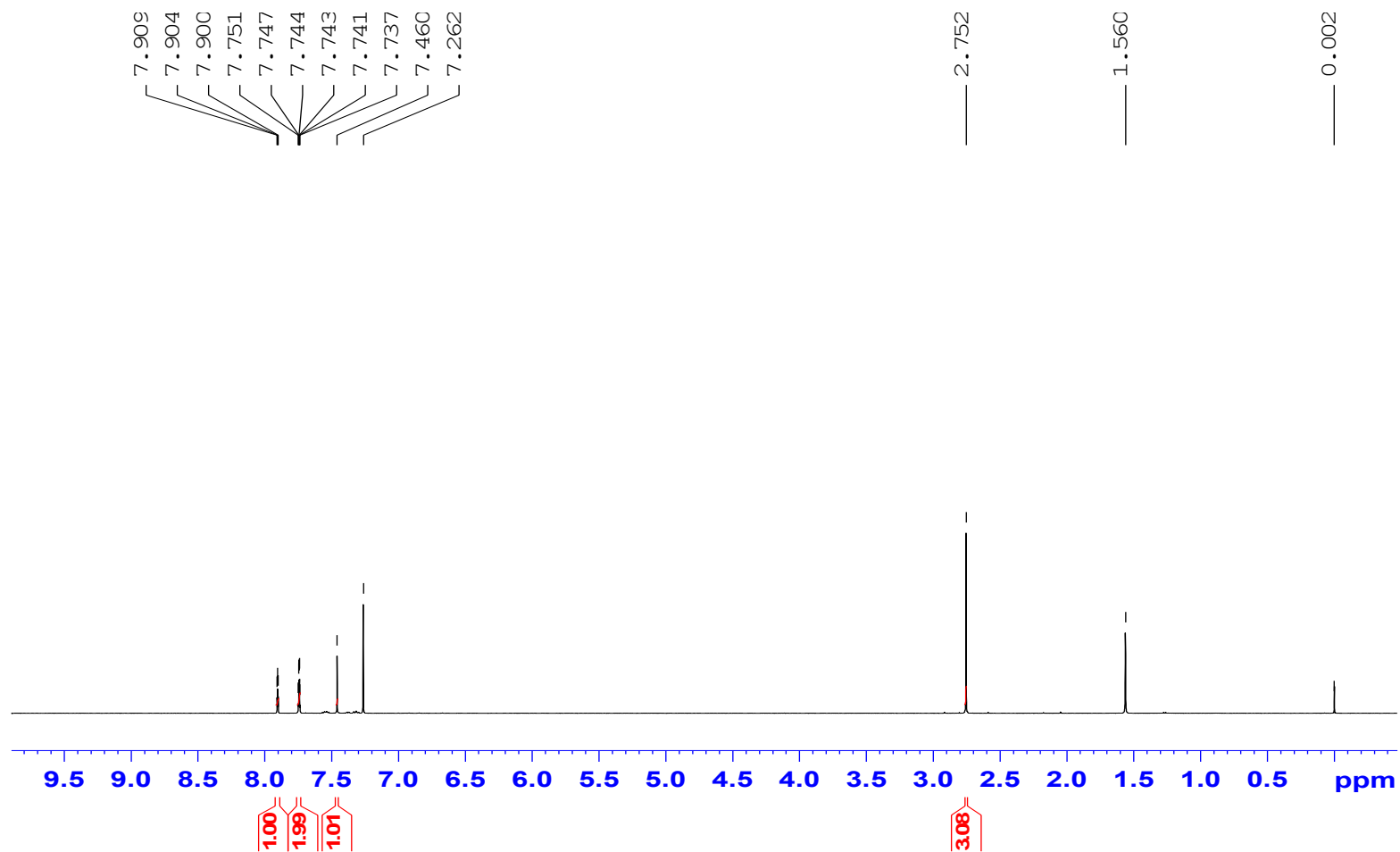
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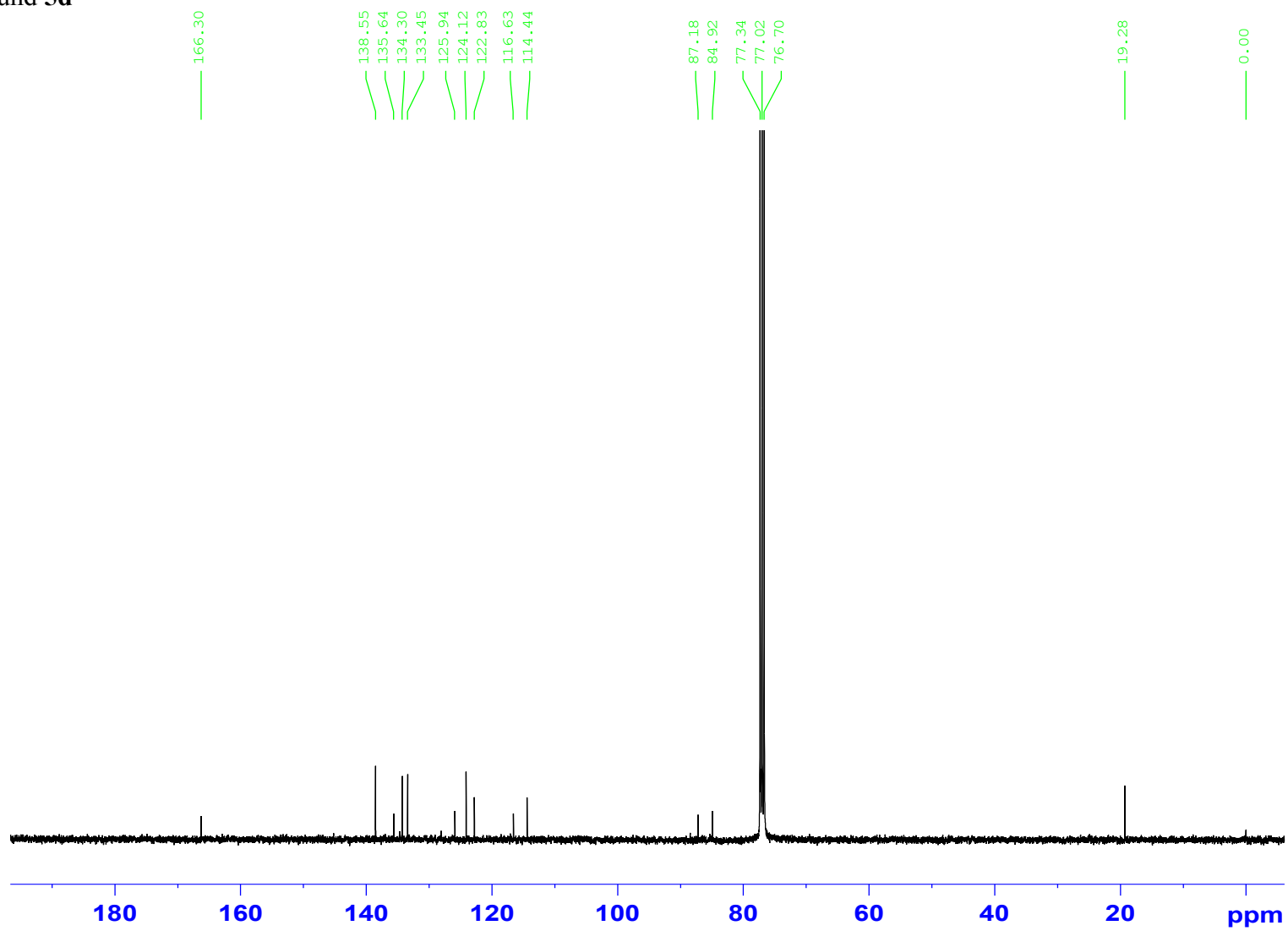
Compound 5c



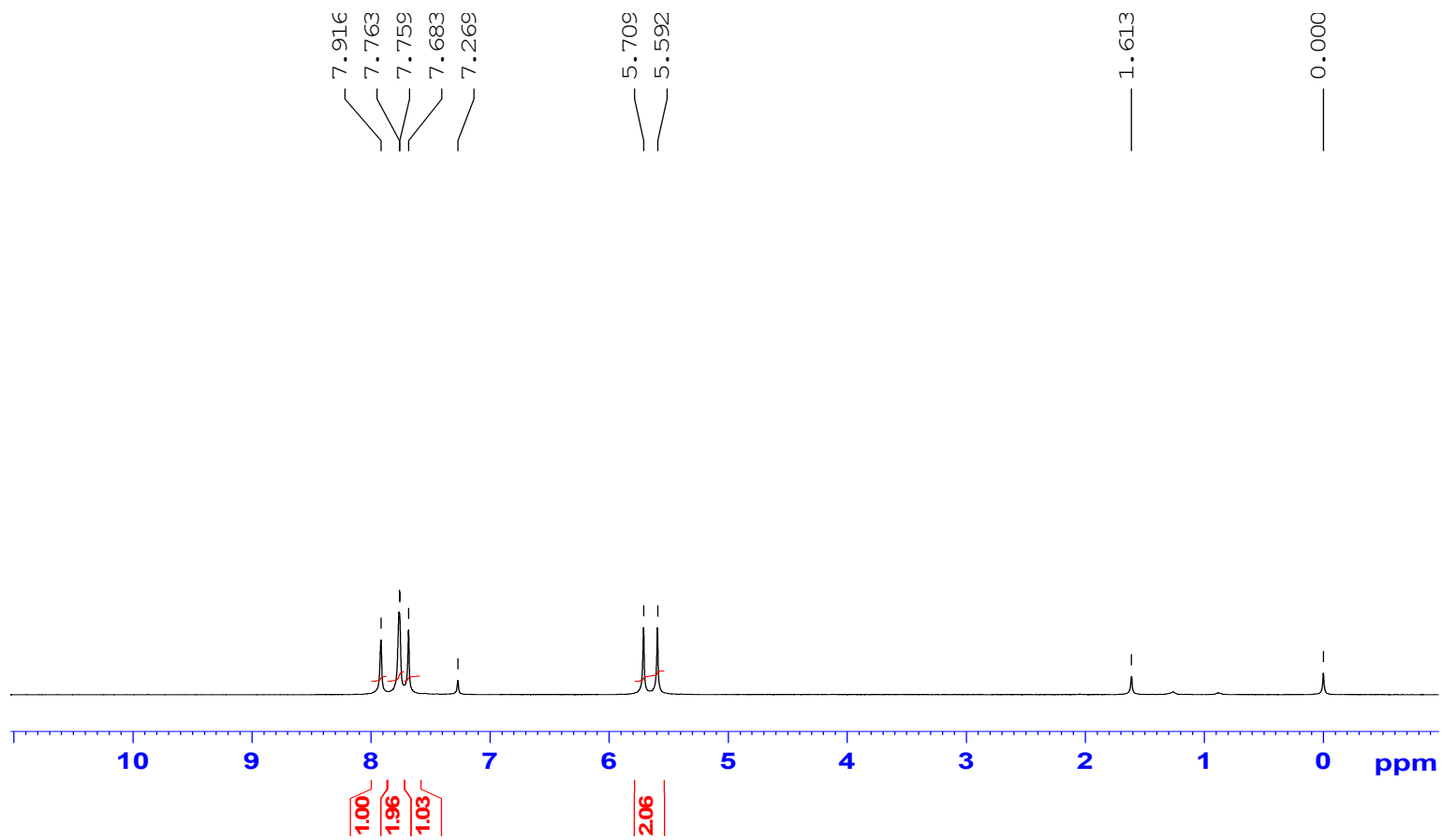
Compound **5d**



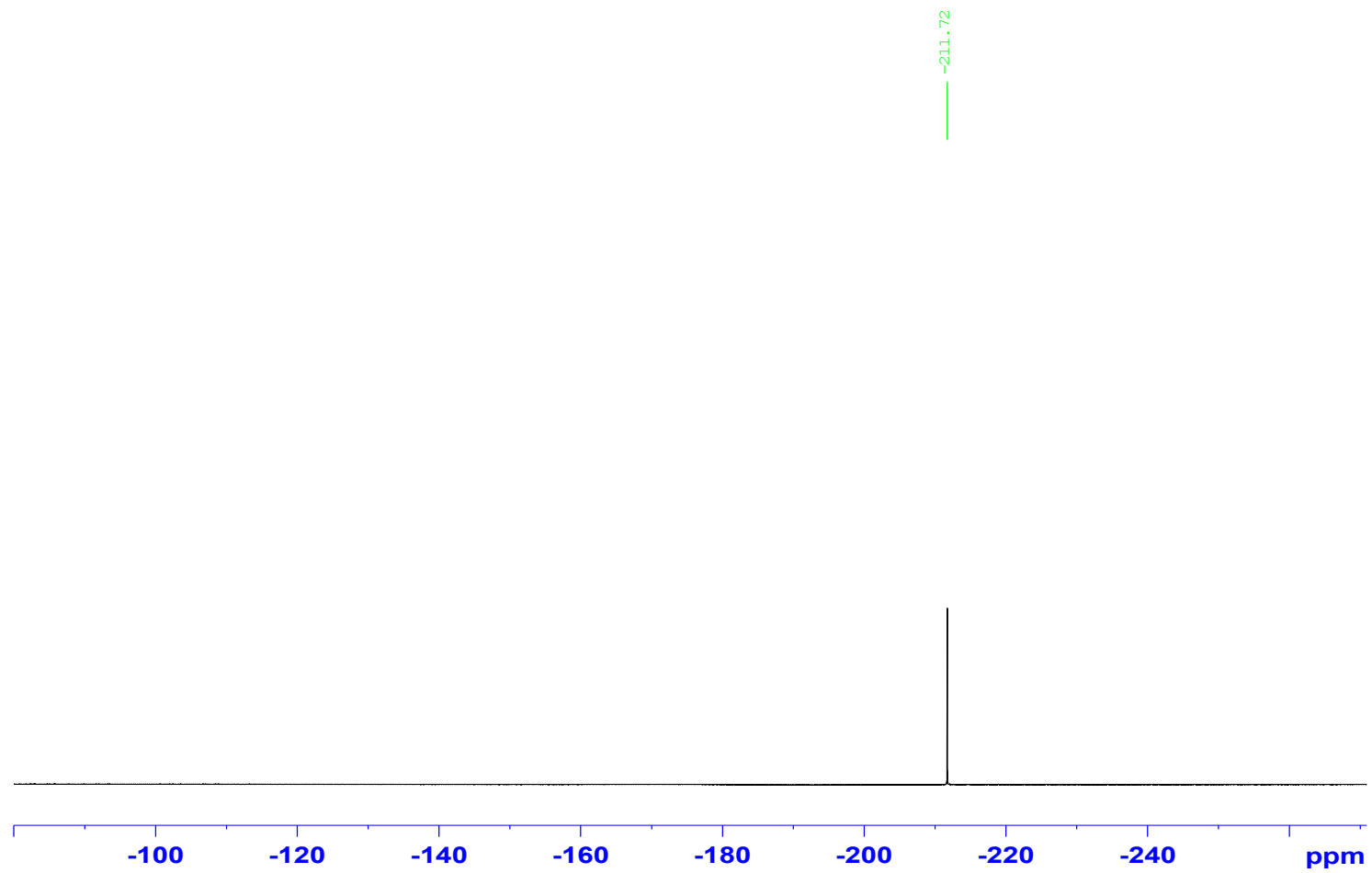
Compound **5d**



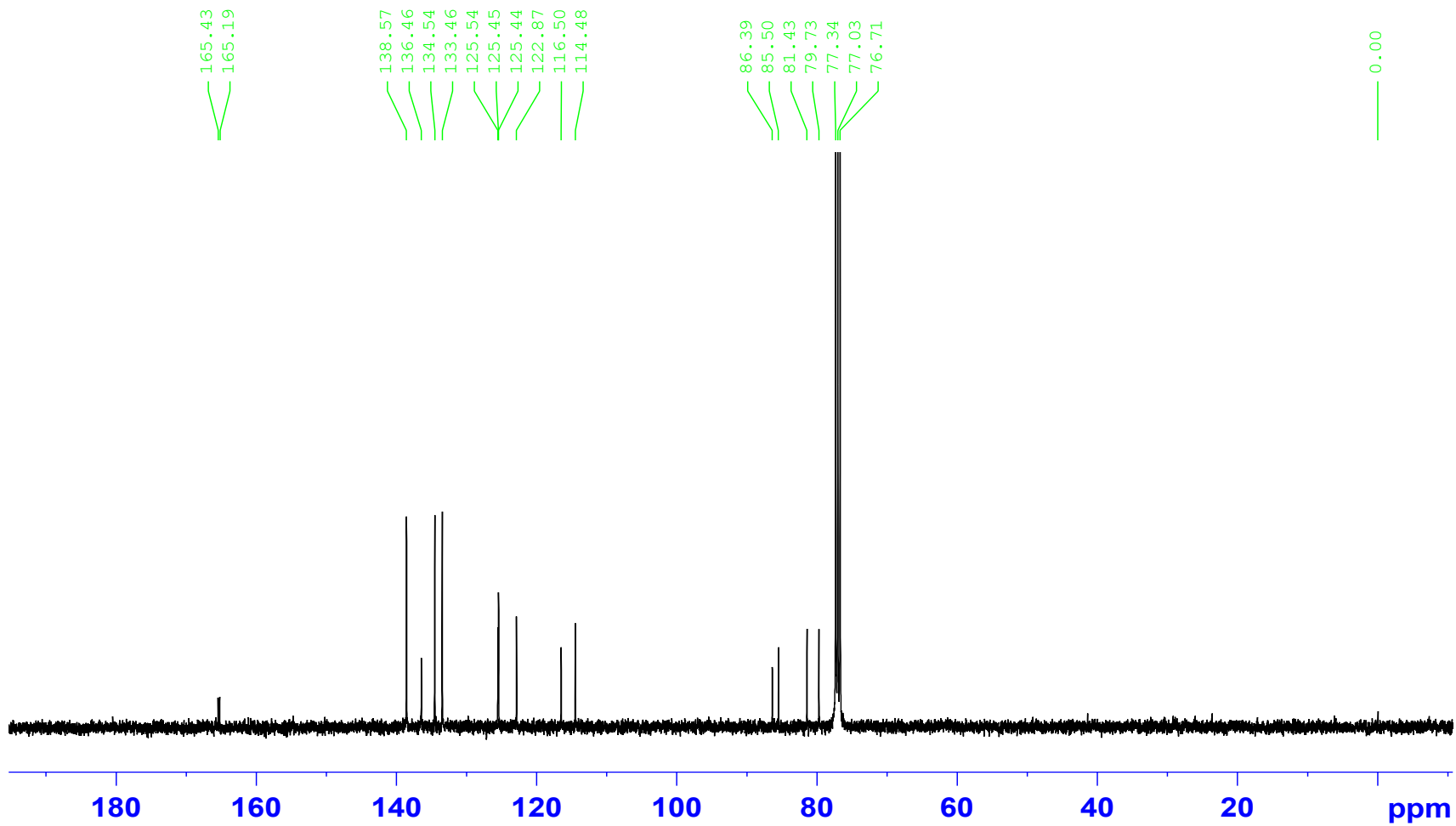
Compound **5e**



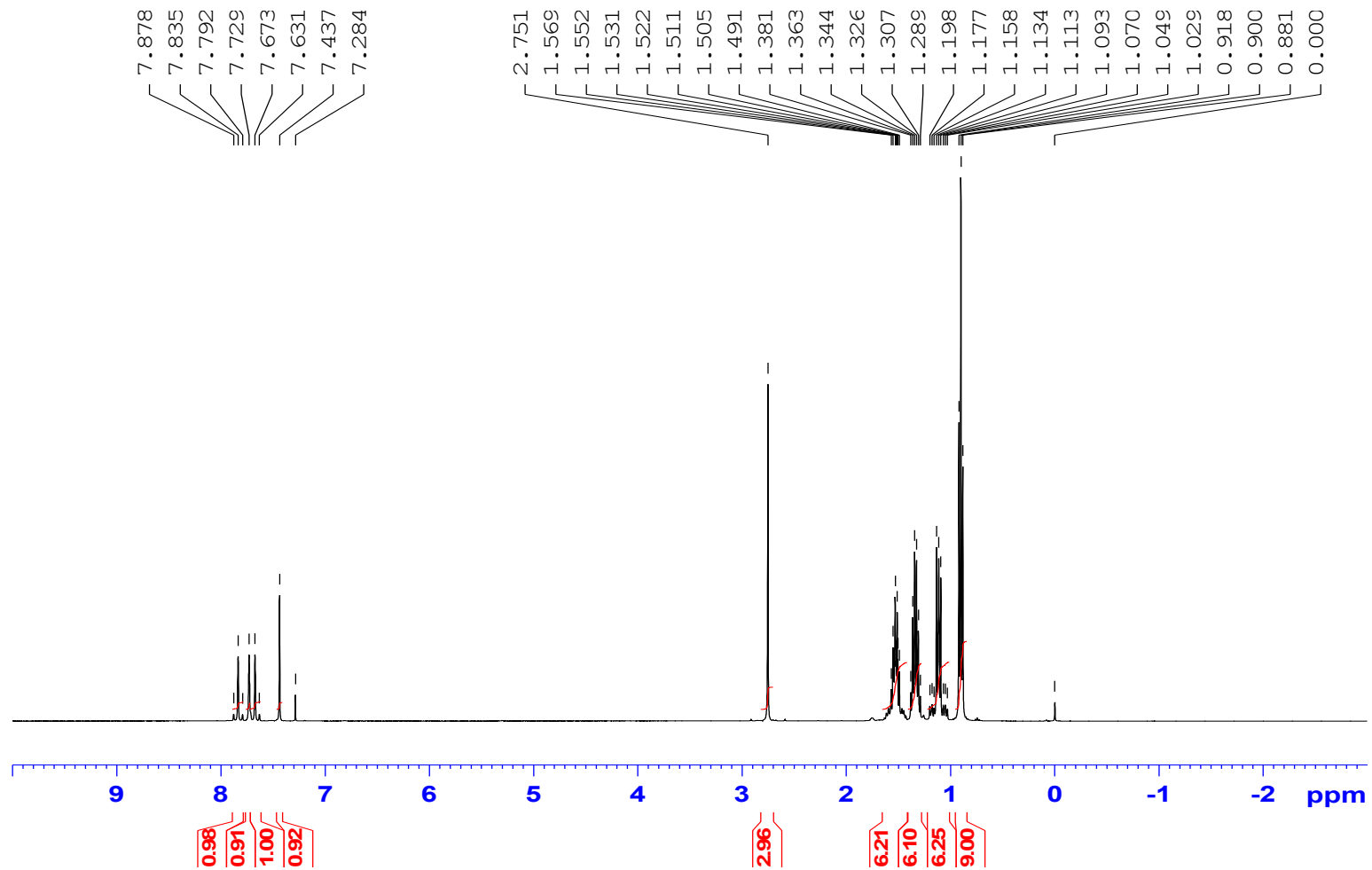
Compound 5e



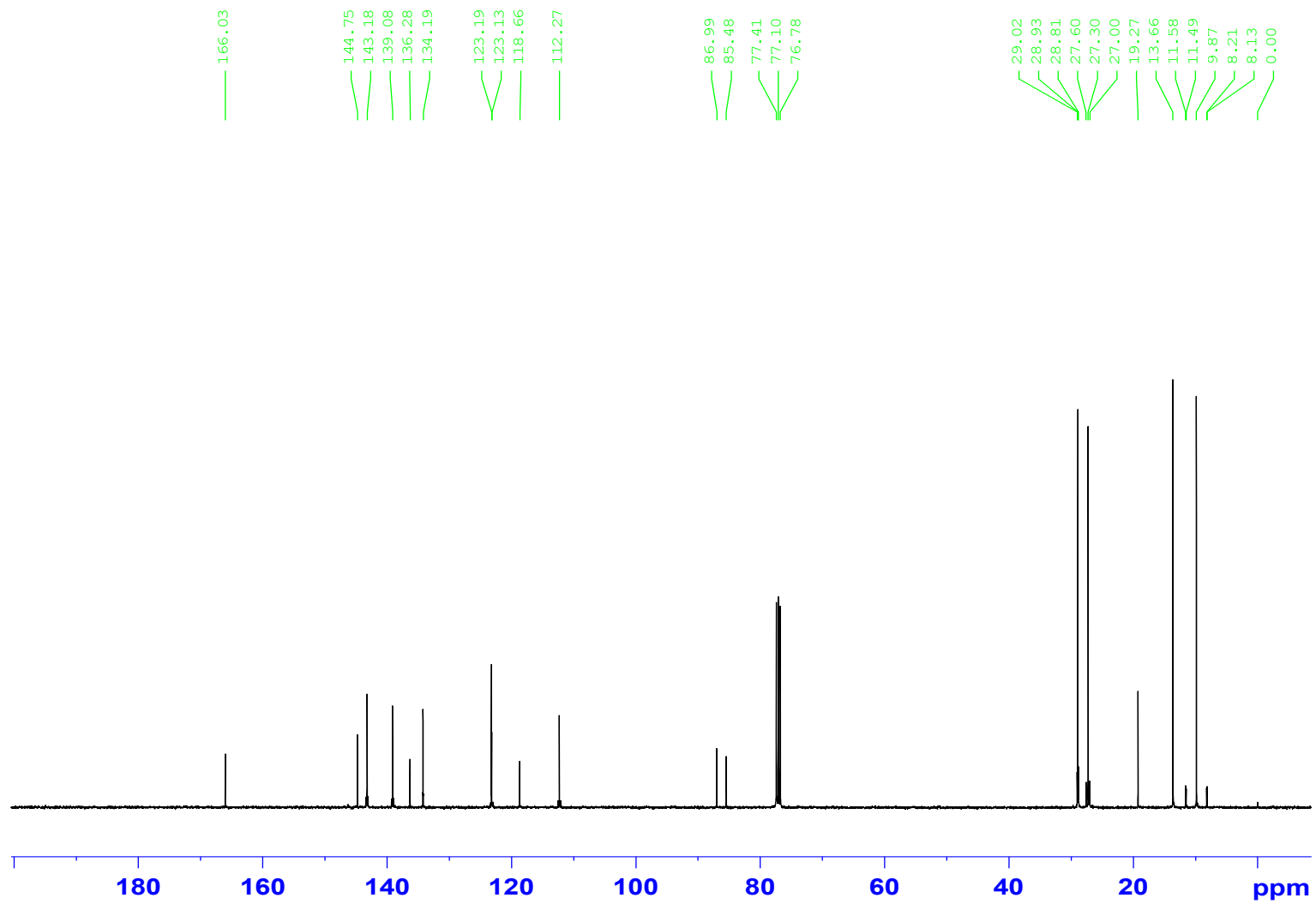
Compound 5e



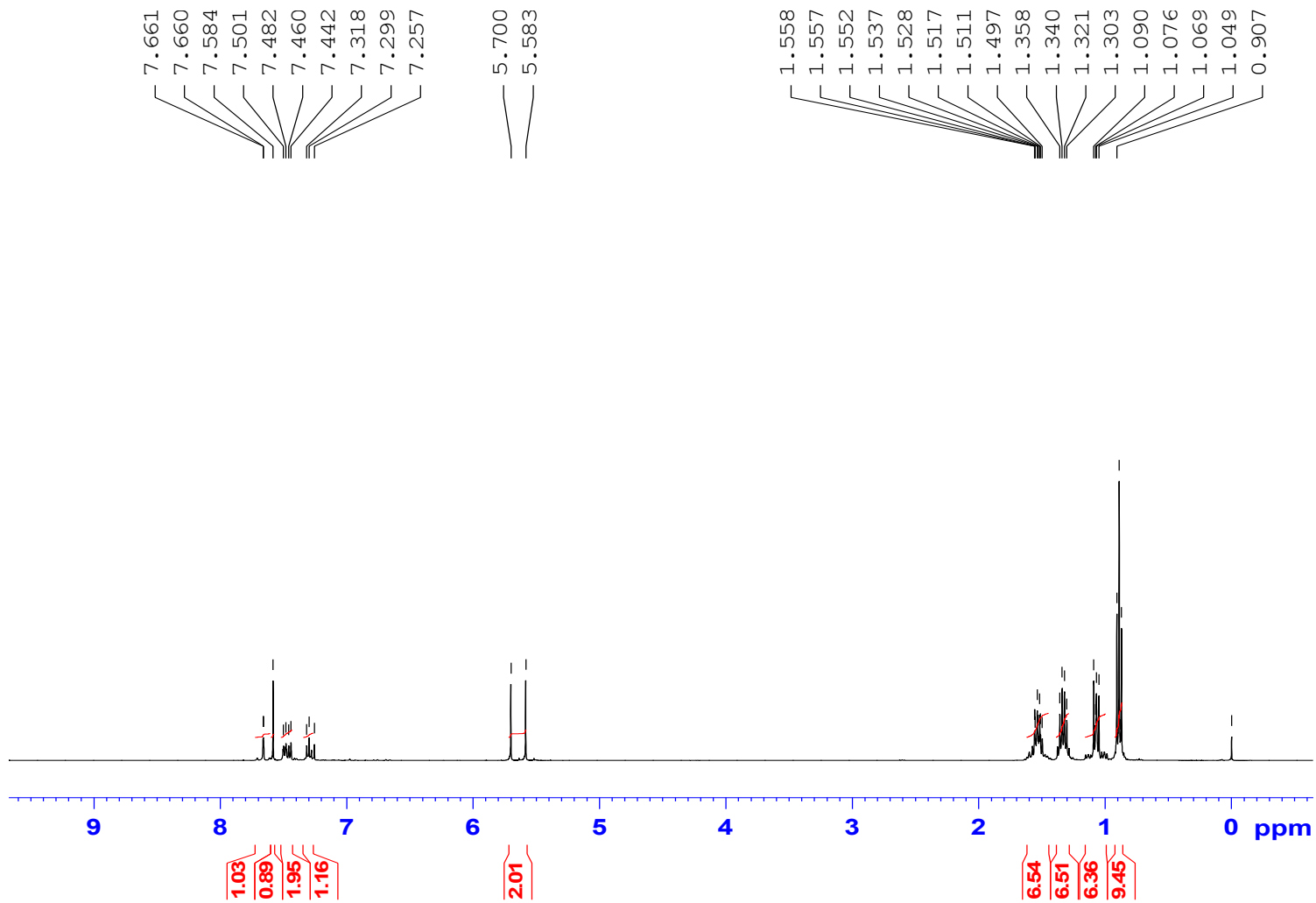
Compound **6a**



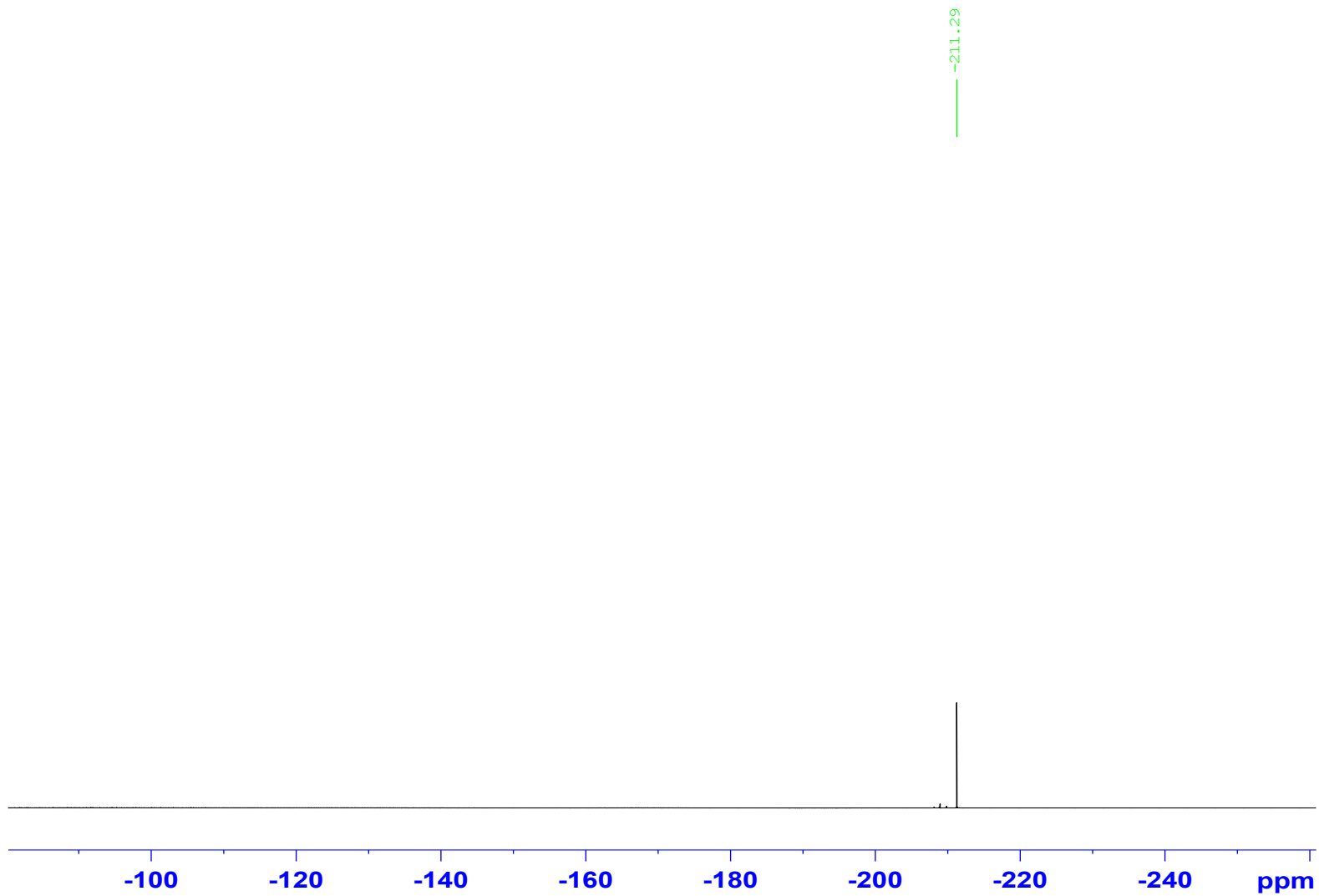
Compound 6a



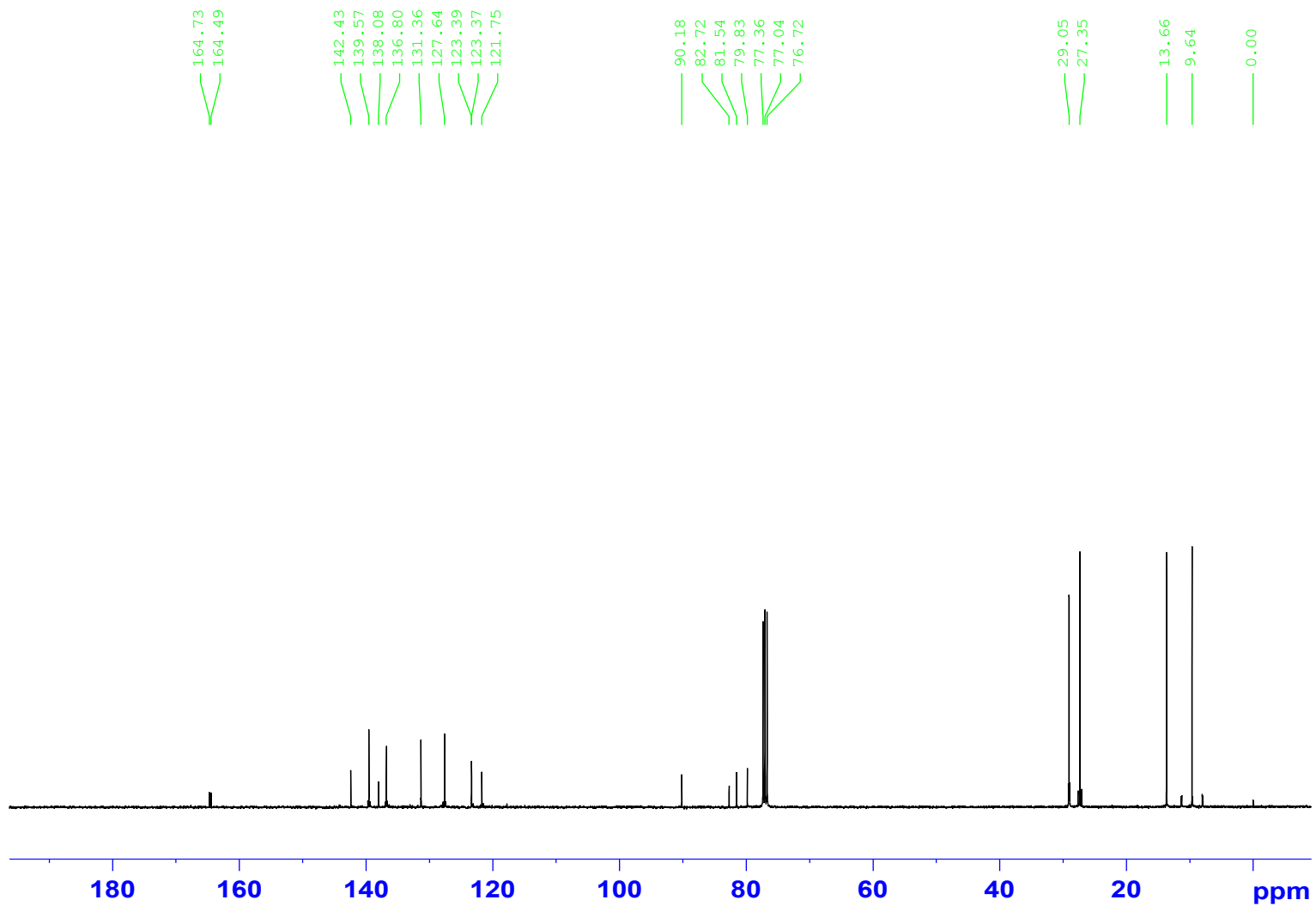
Compound **6b**



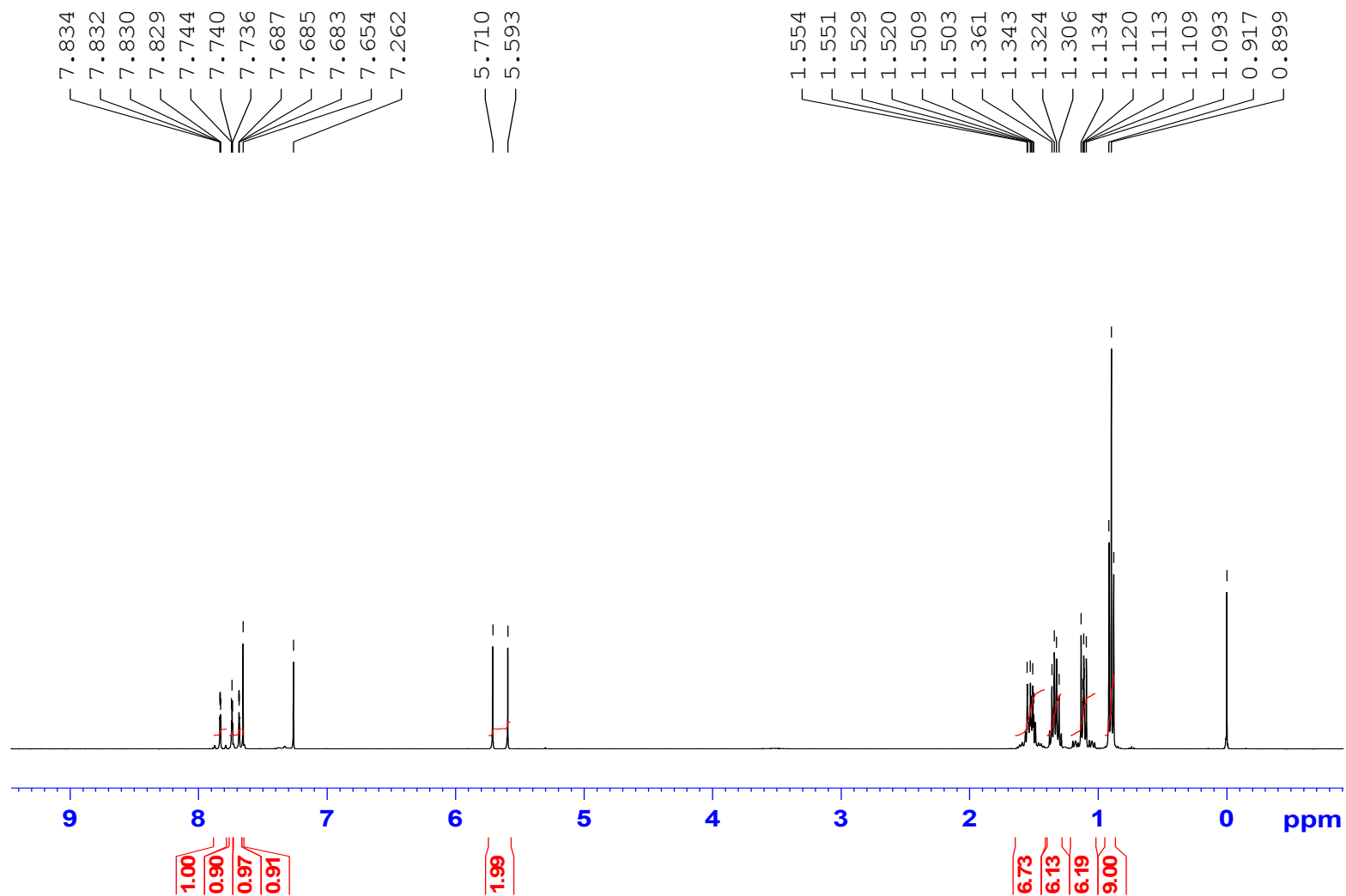
Compound **6b**



Compound **6b**



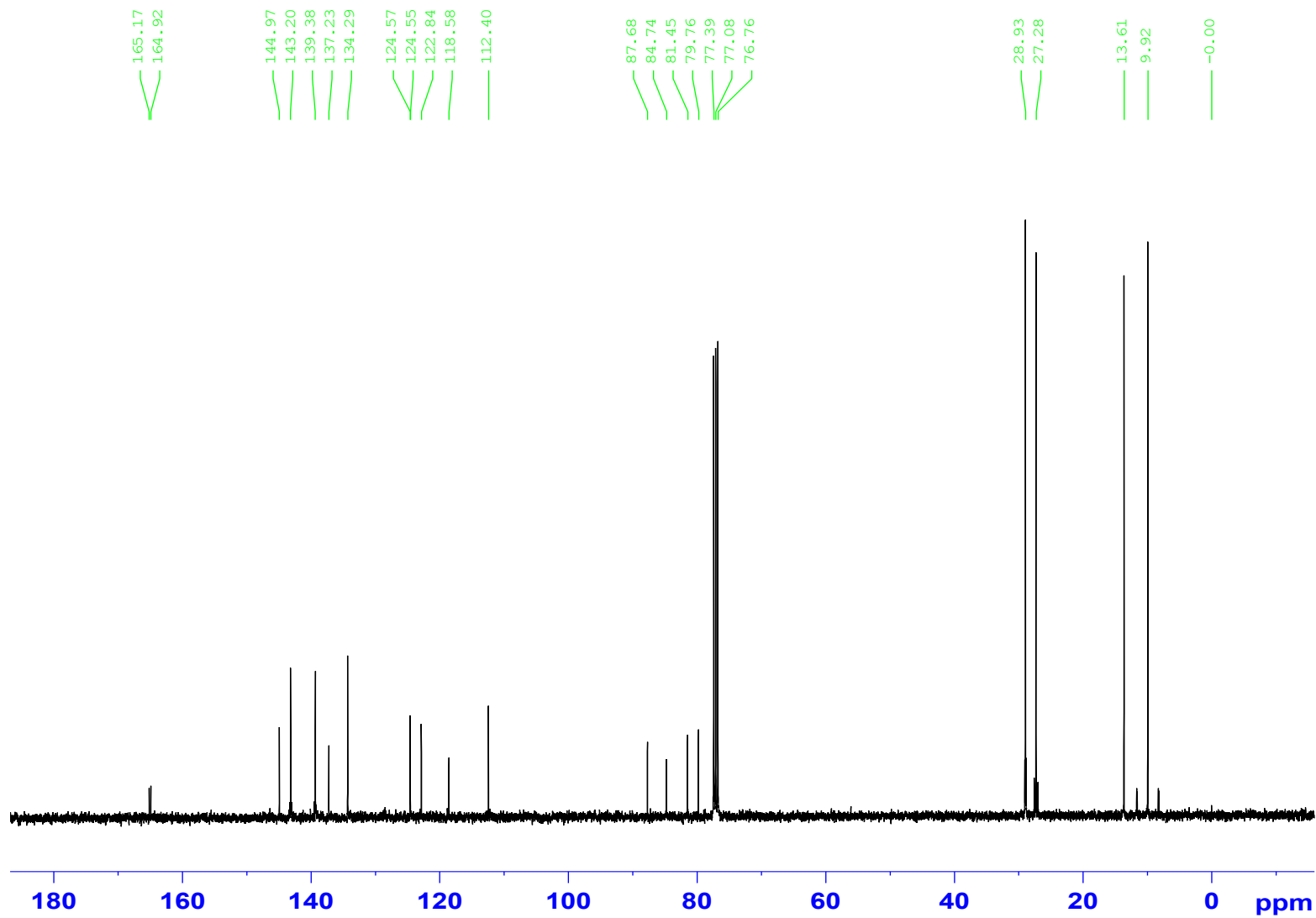
Compound **6c**



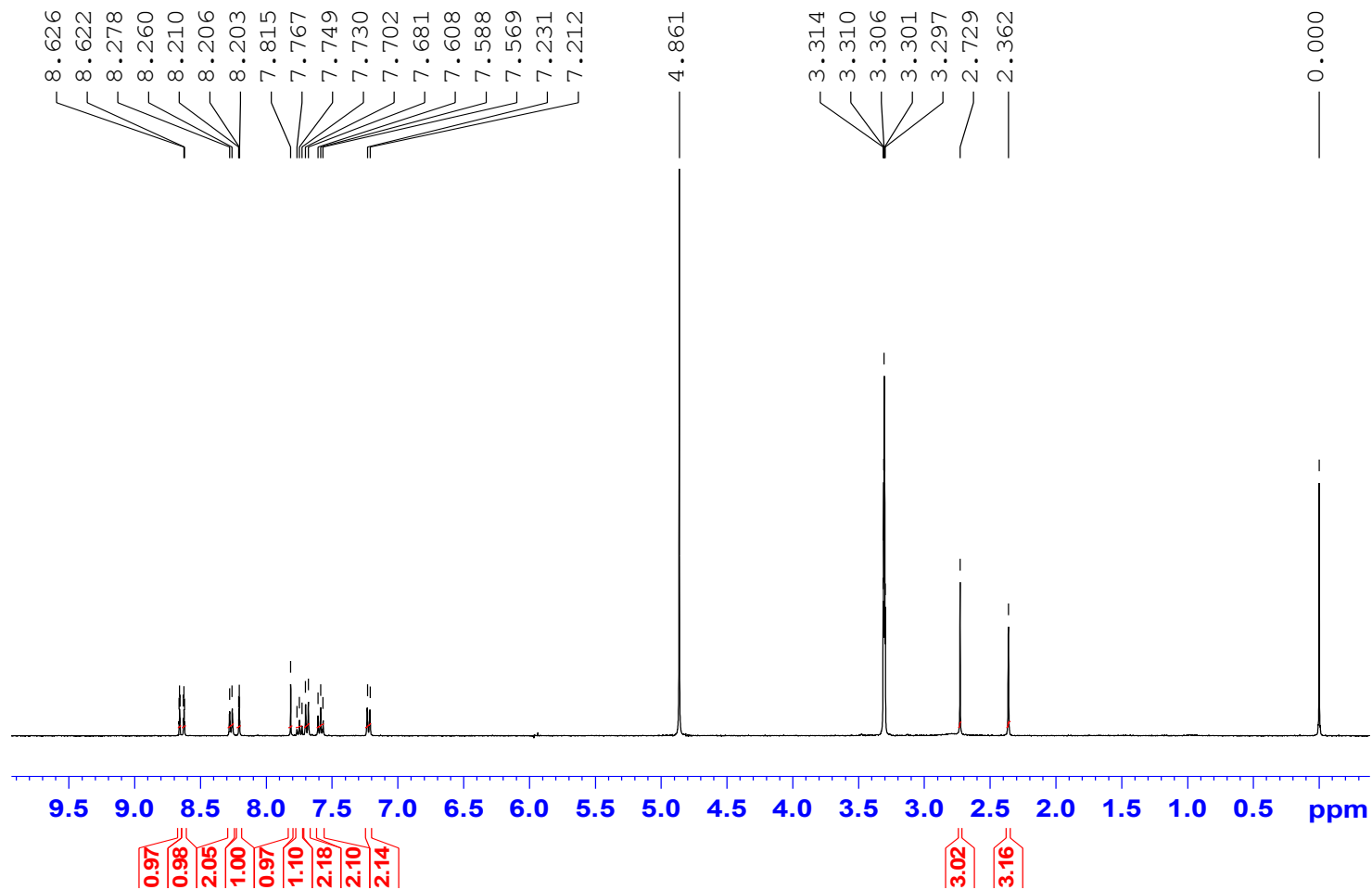
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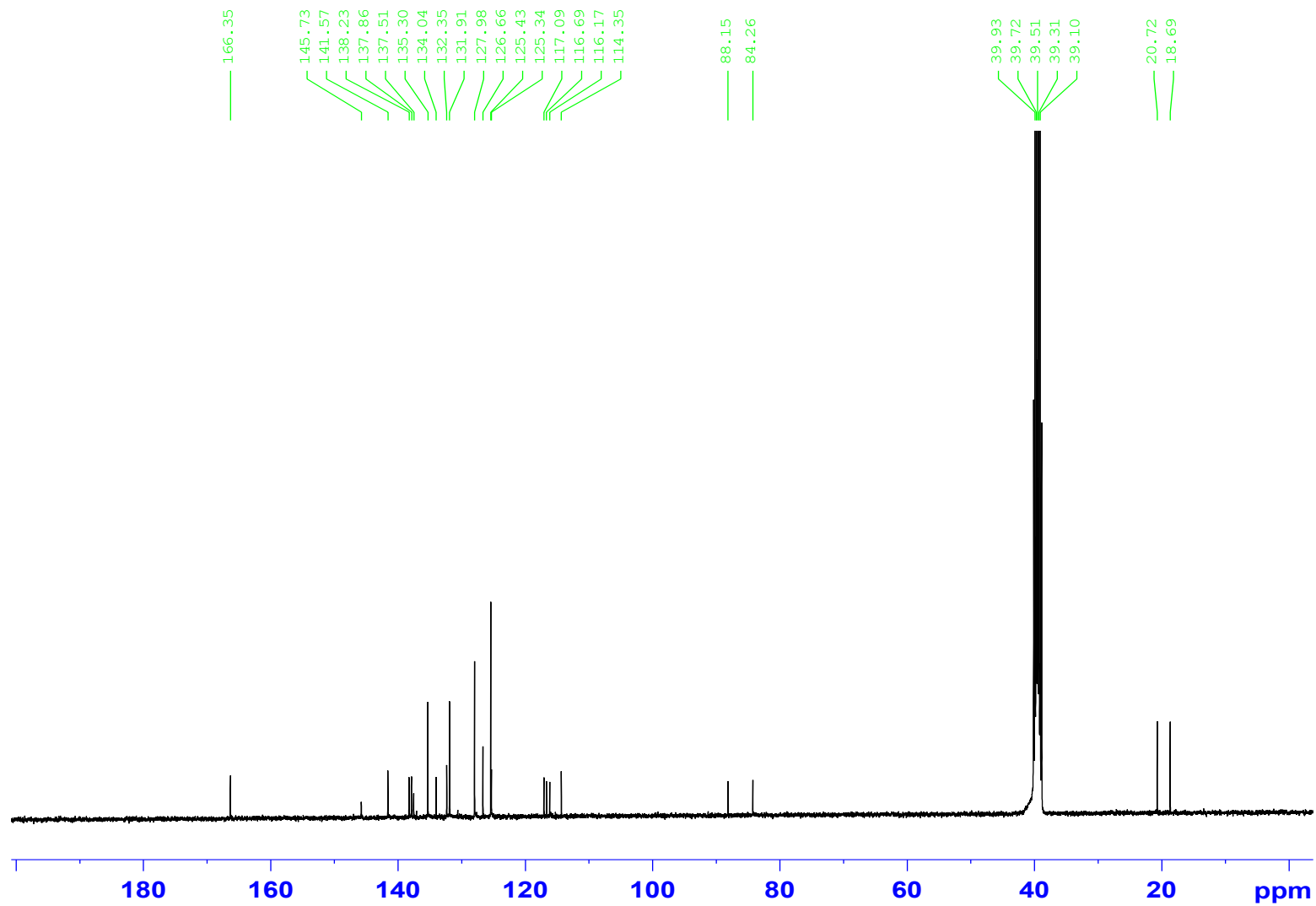
Compound **6c**



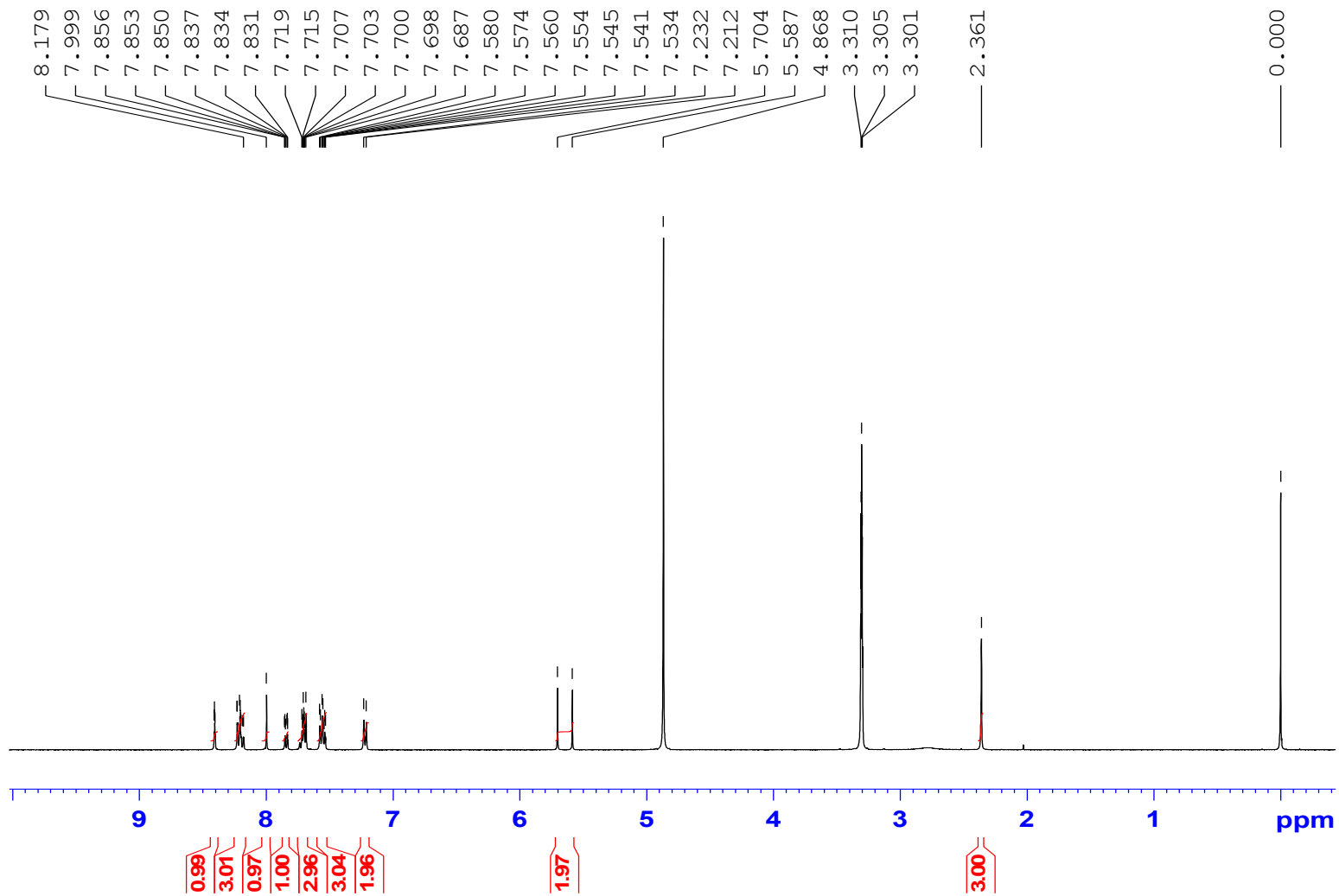
Compound **7a**



Compound **7a**



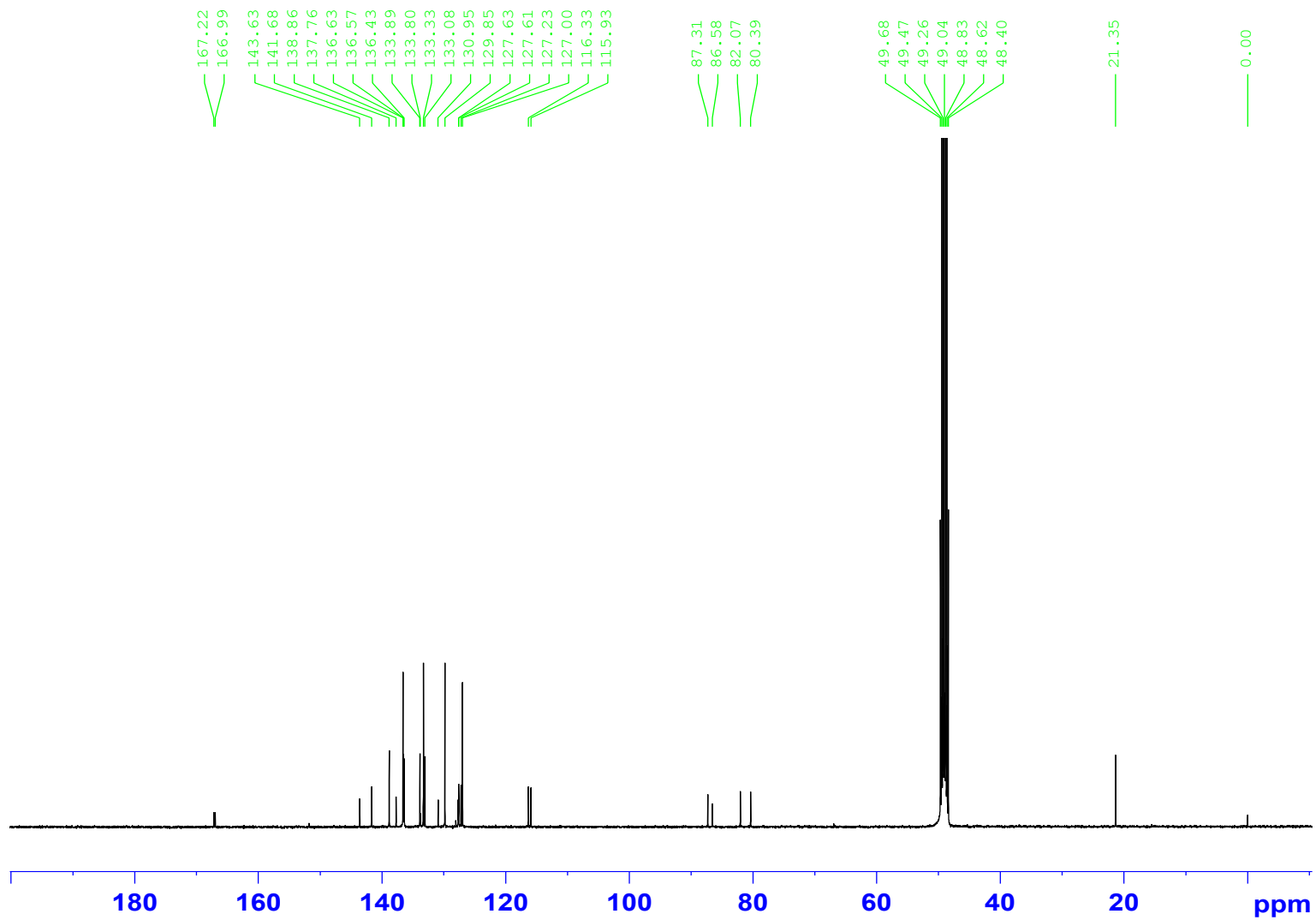
Compound **7b**



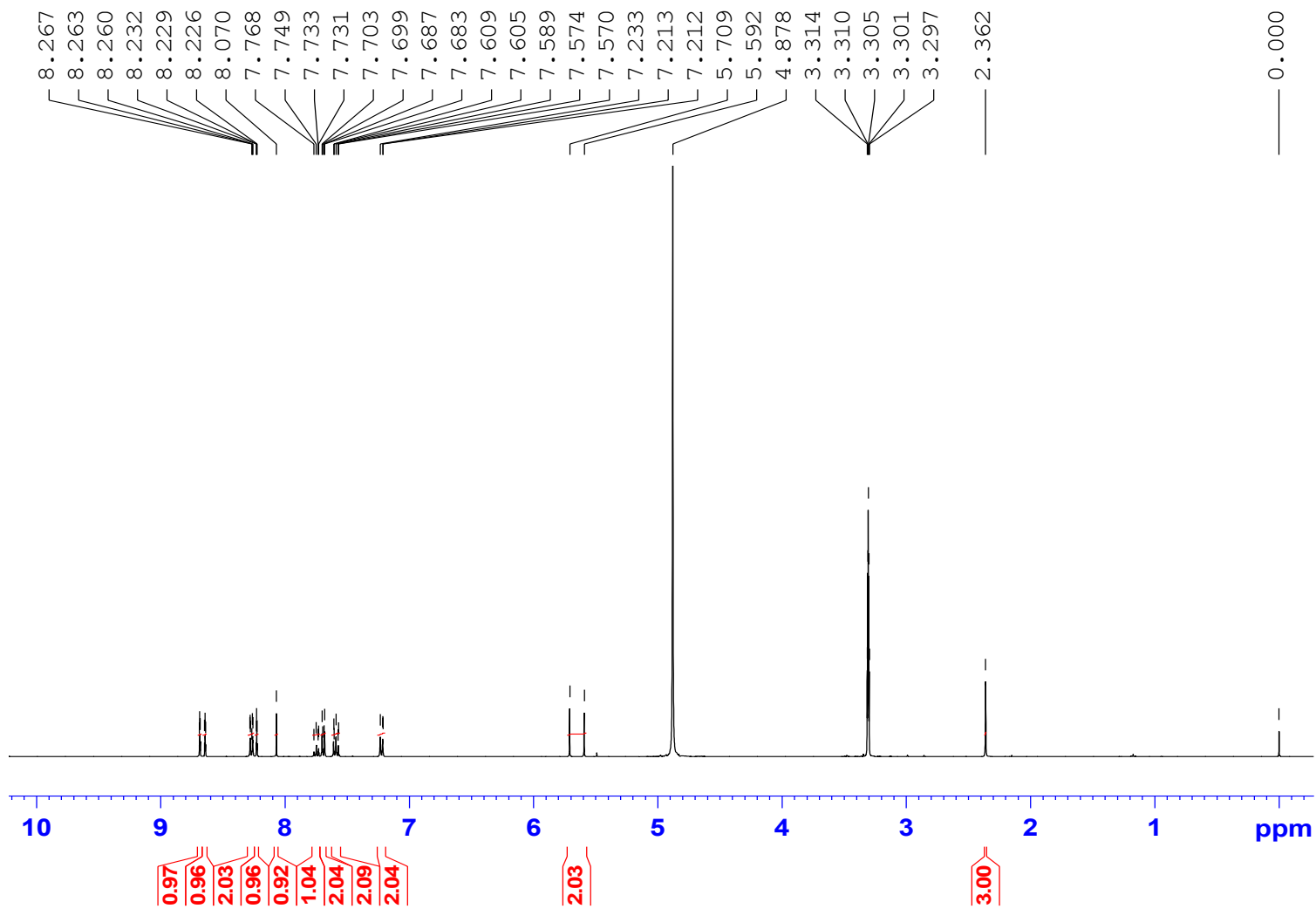
Compound **7b**



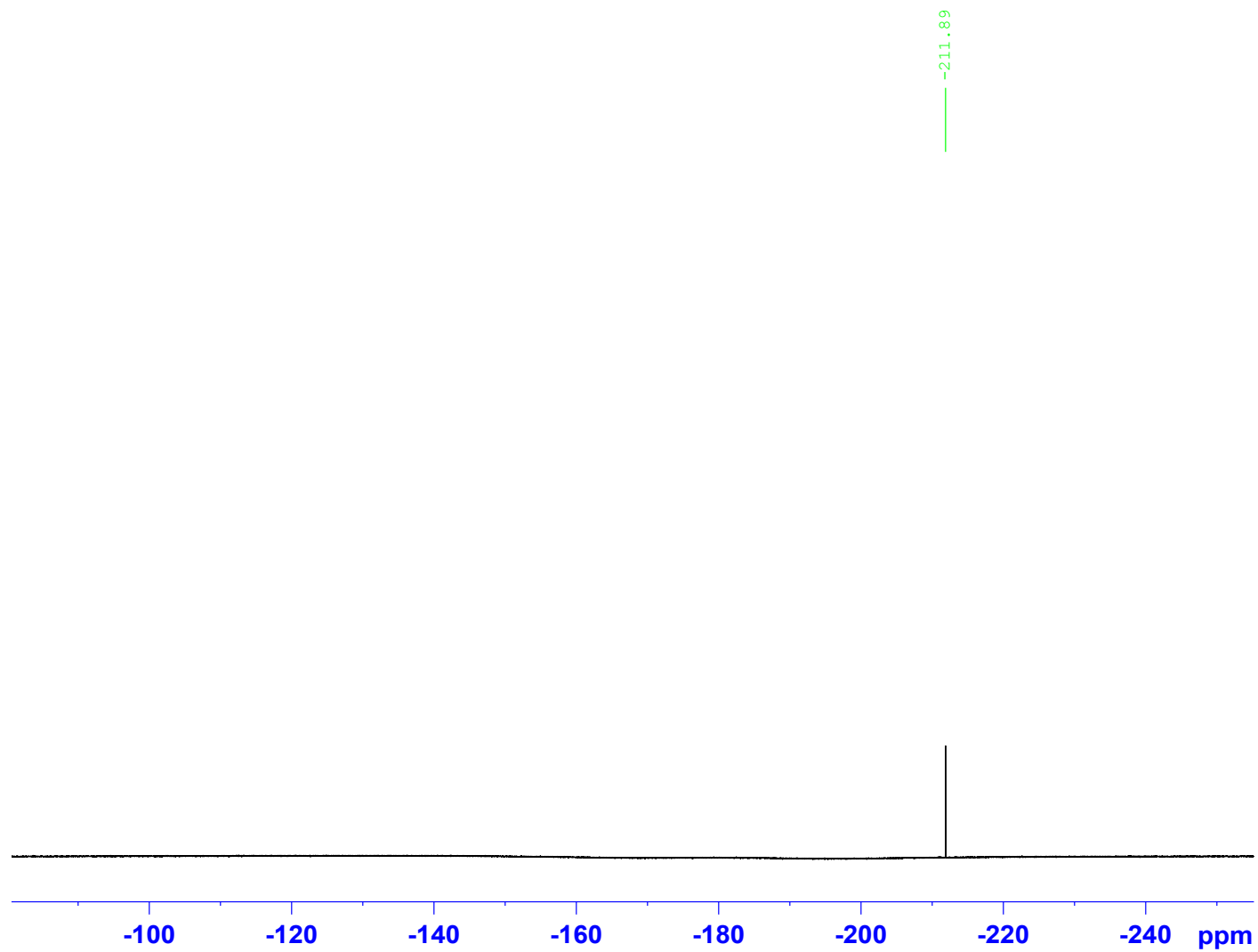
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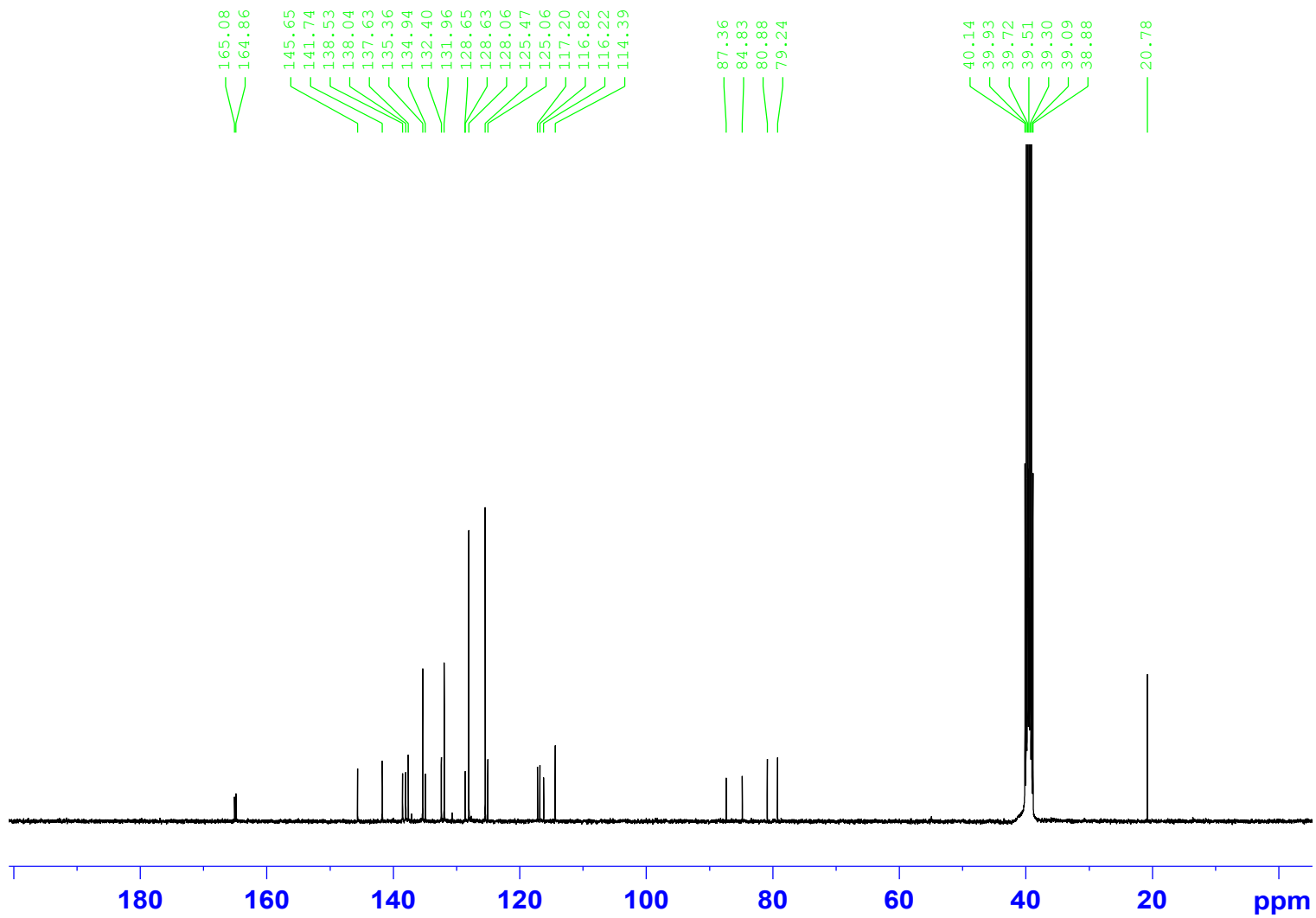
Compound **7c**



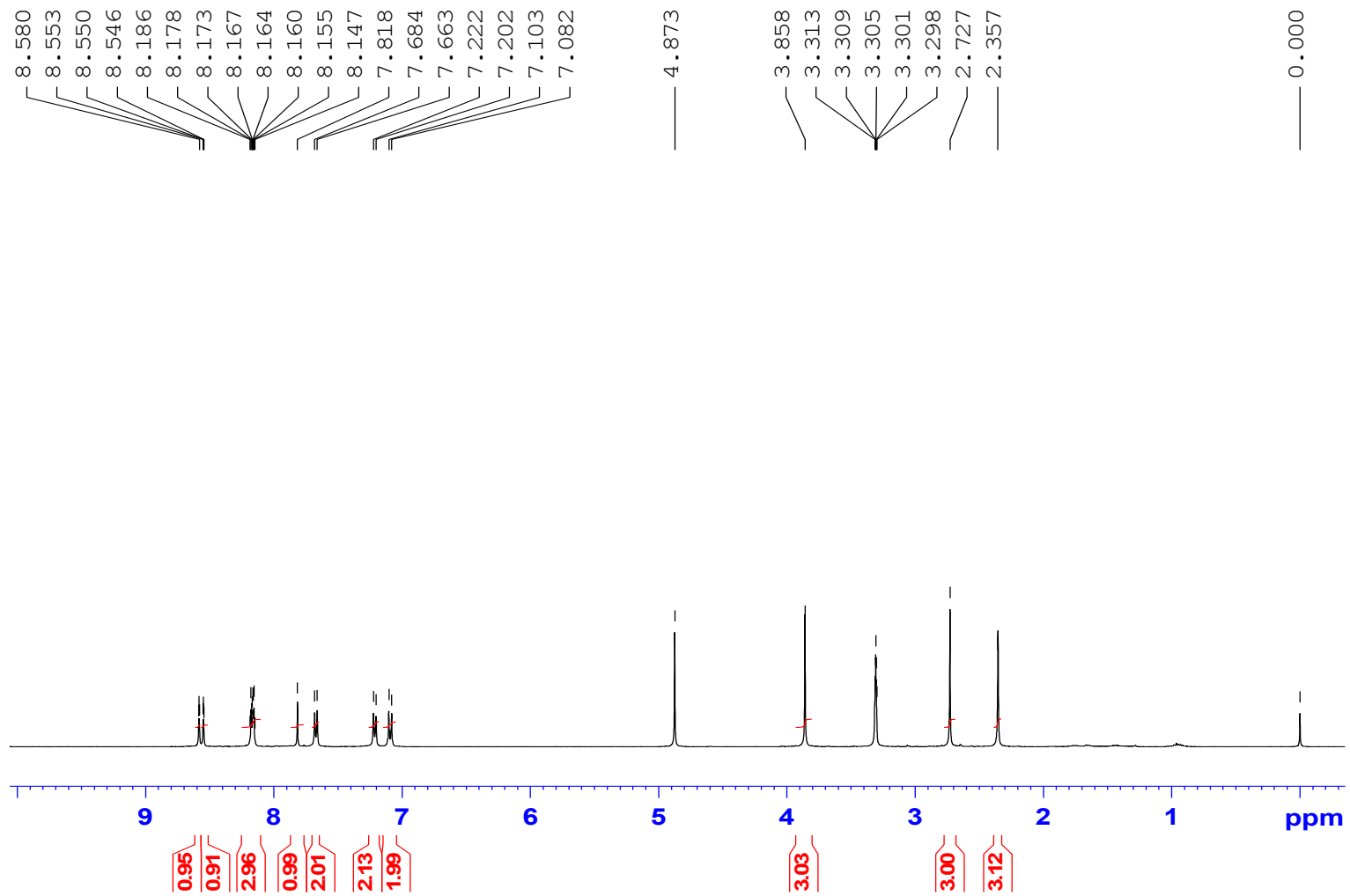
Compound **7c**



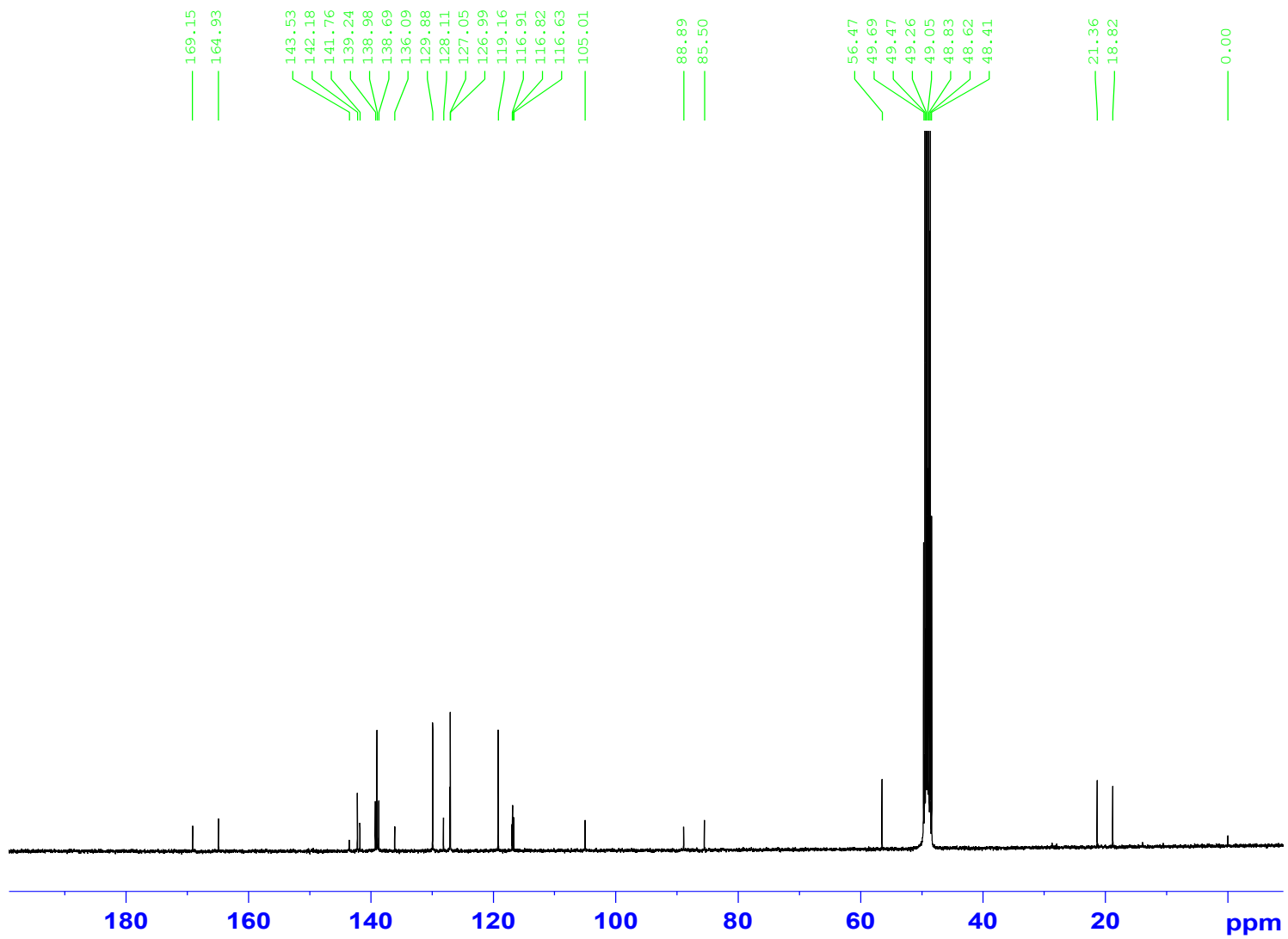
Compound 7c



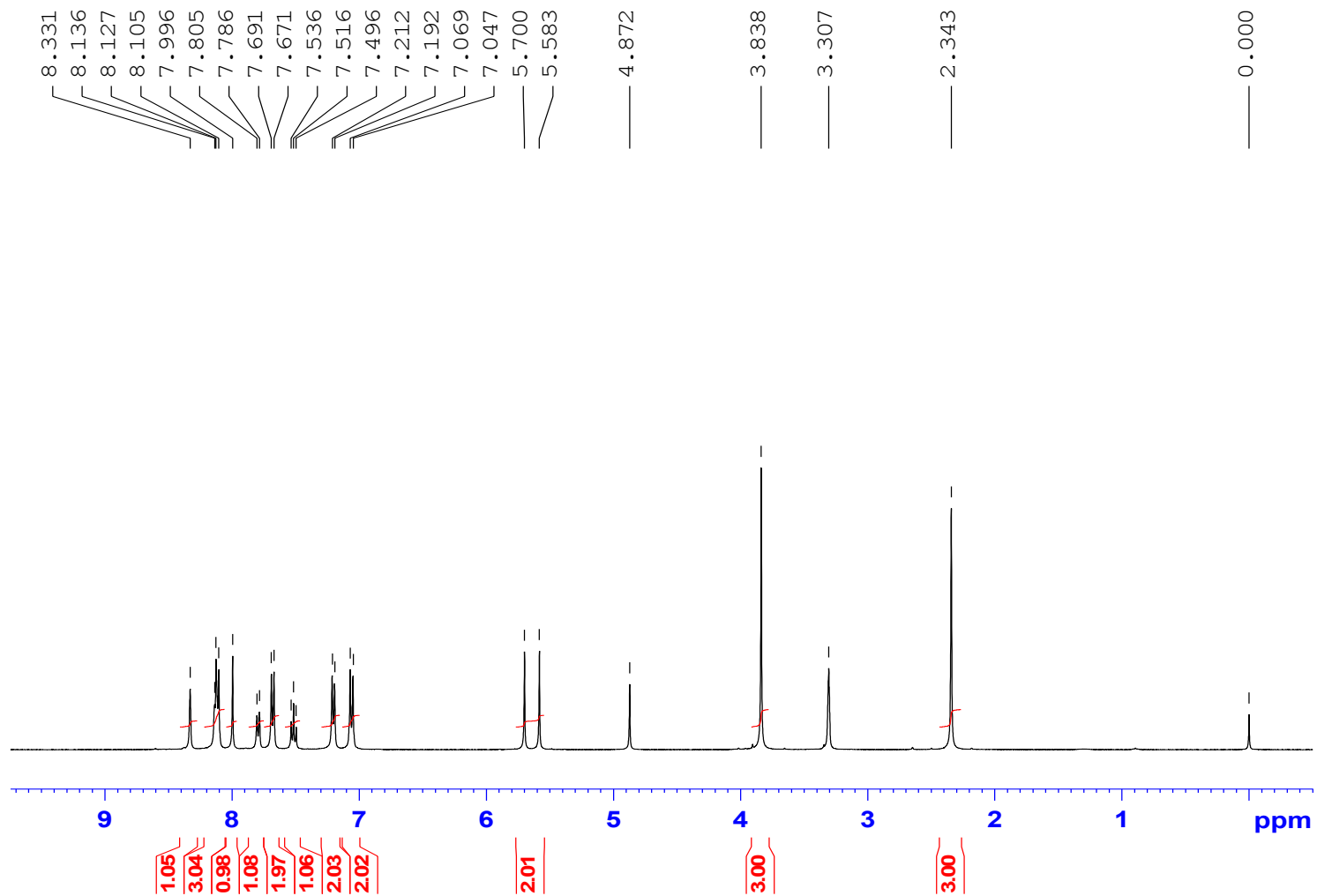
Compound 8a



Compound 8a



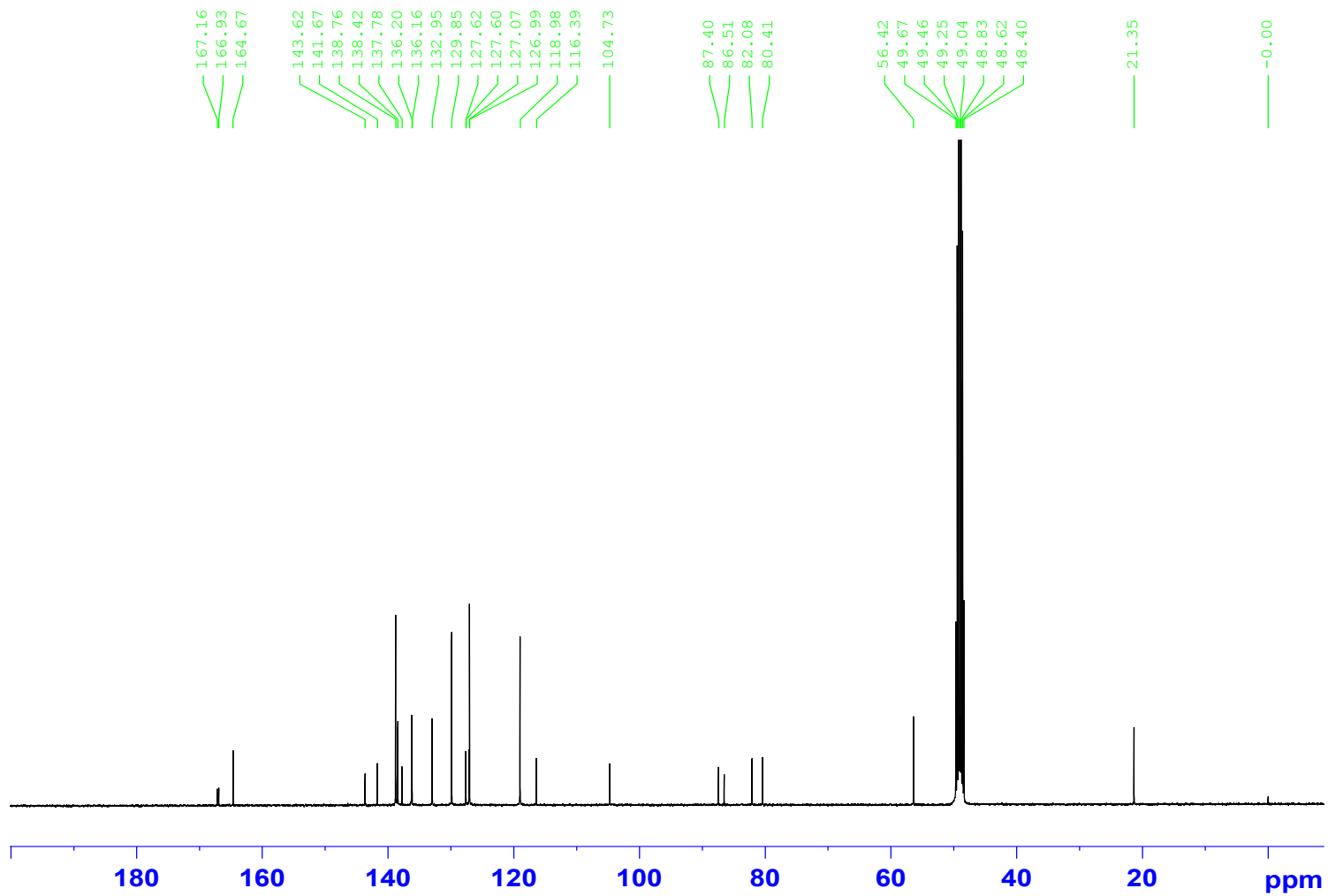
Compound **8b**



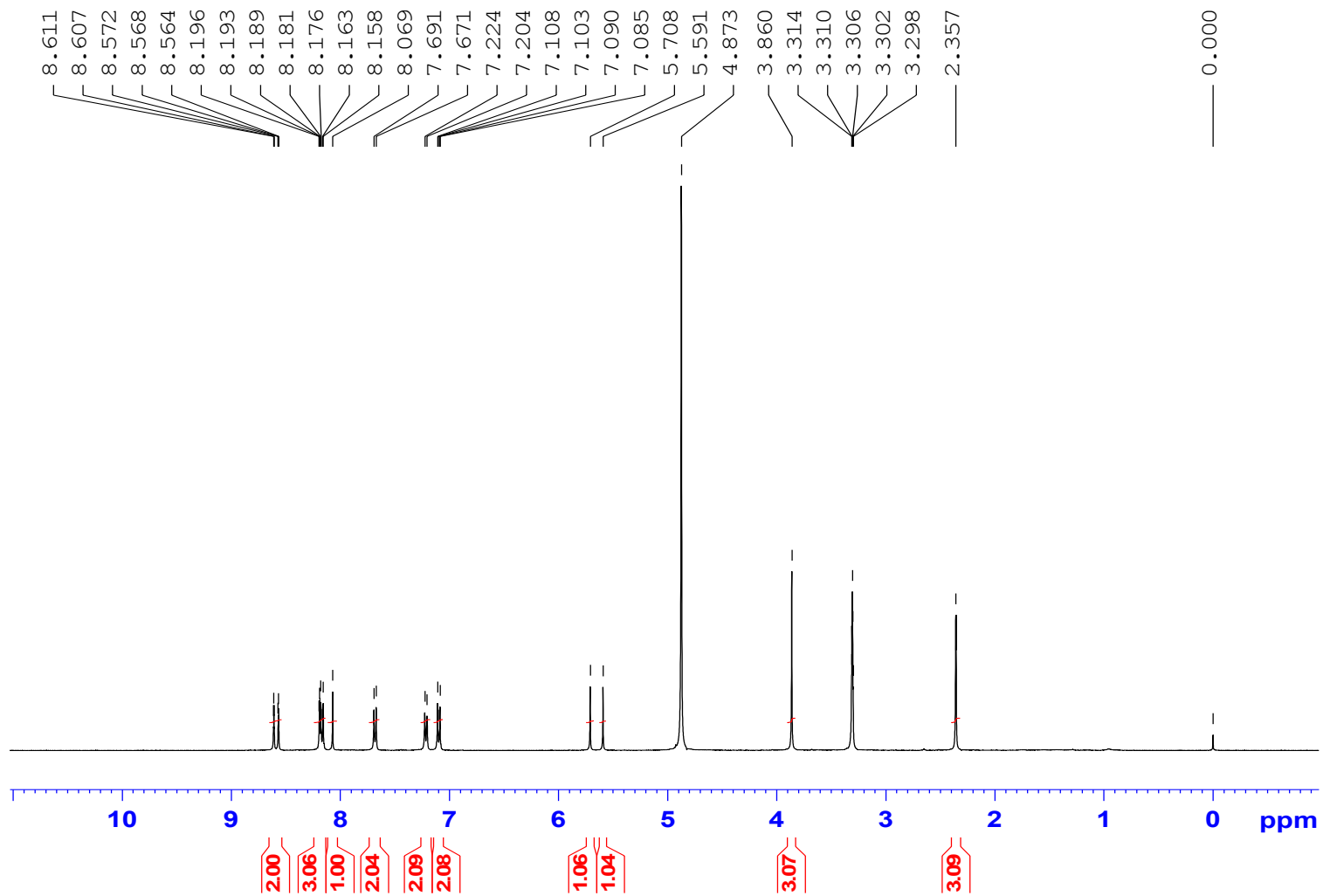
Compound **8b**



Compound **8b**



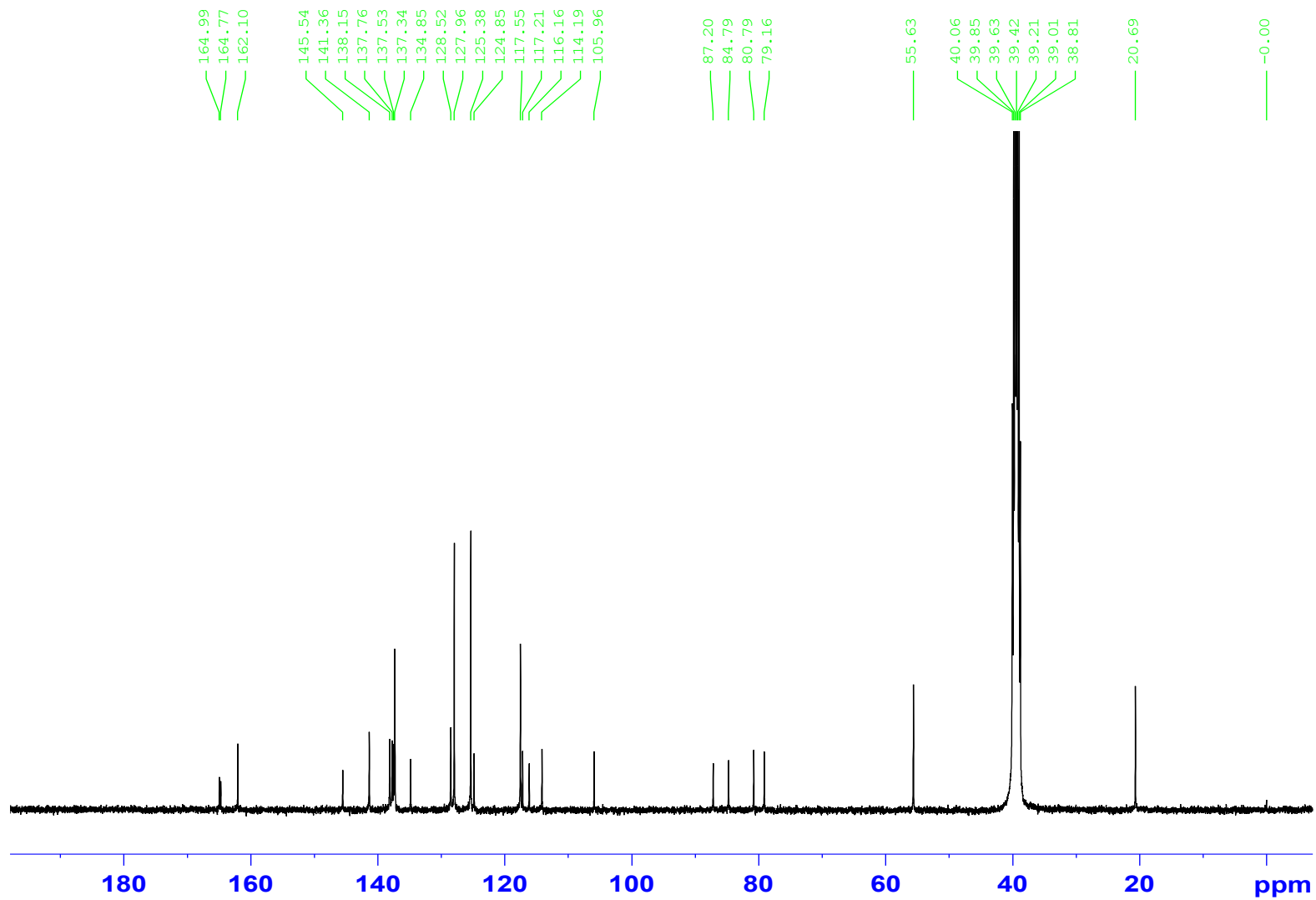
Compound **8c**



Compound **8c**



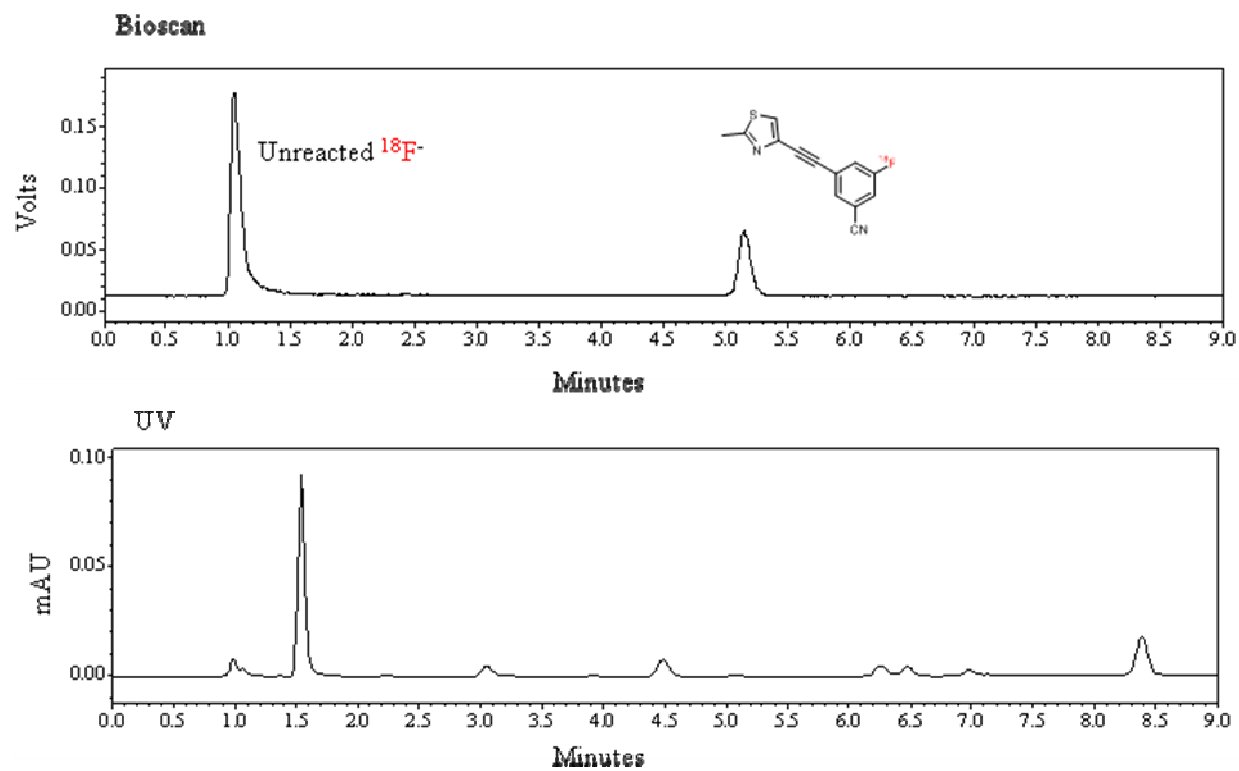
Compound **8c**



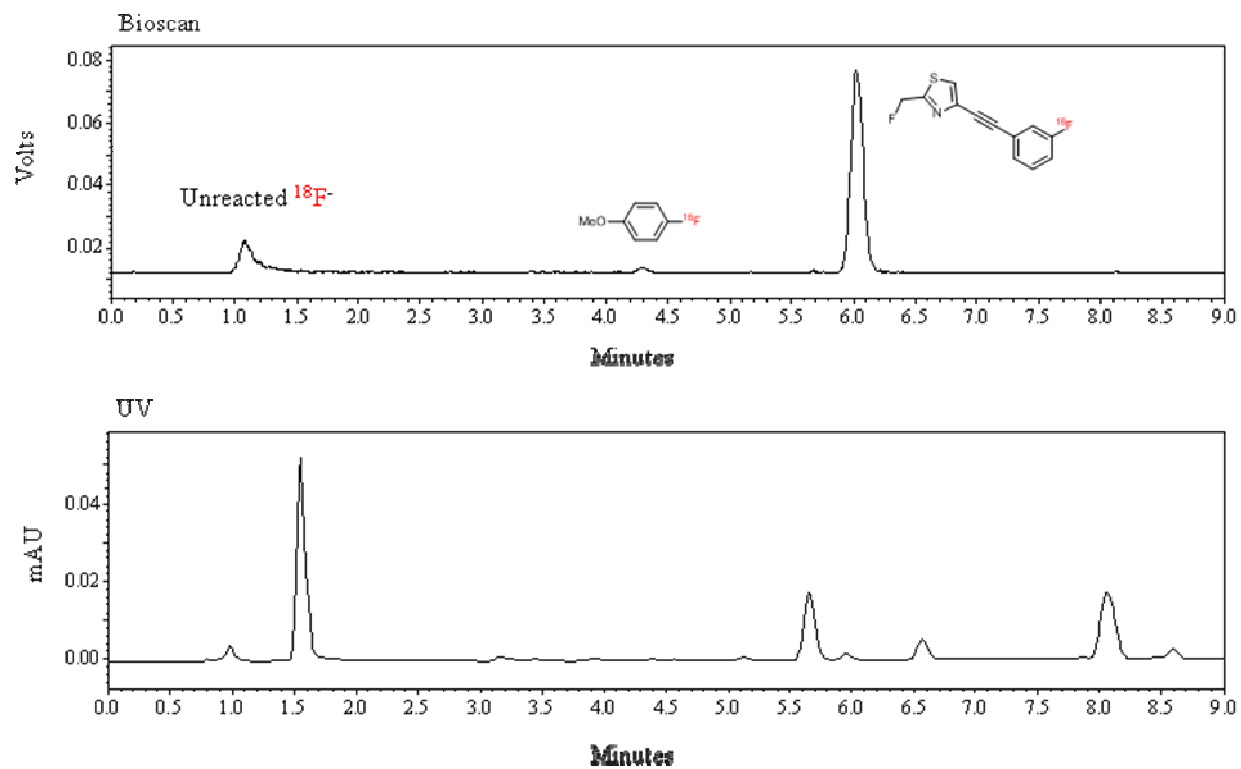
Appendix 2. Selected radio-HPLC chromatograms

2.1. Syntheses of [^{18}F]2a-c in micro-reactor

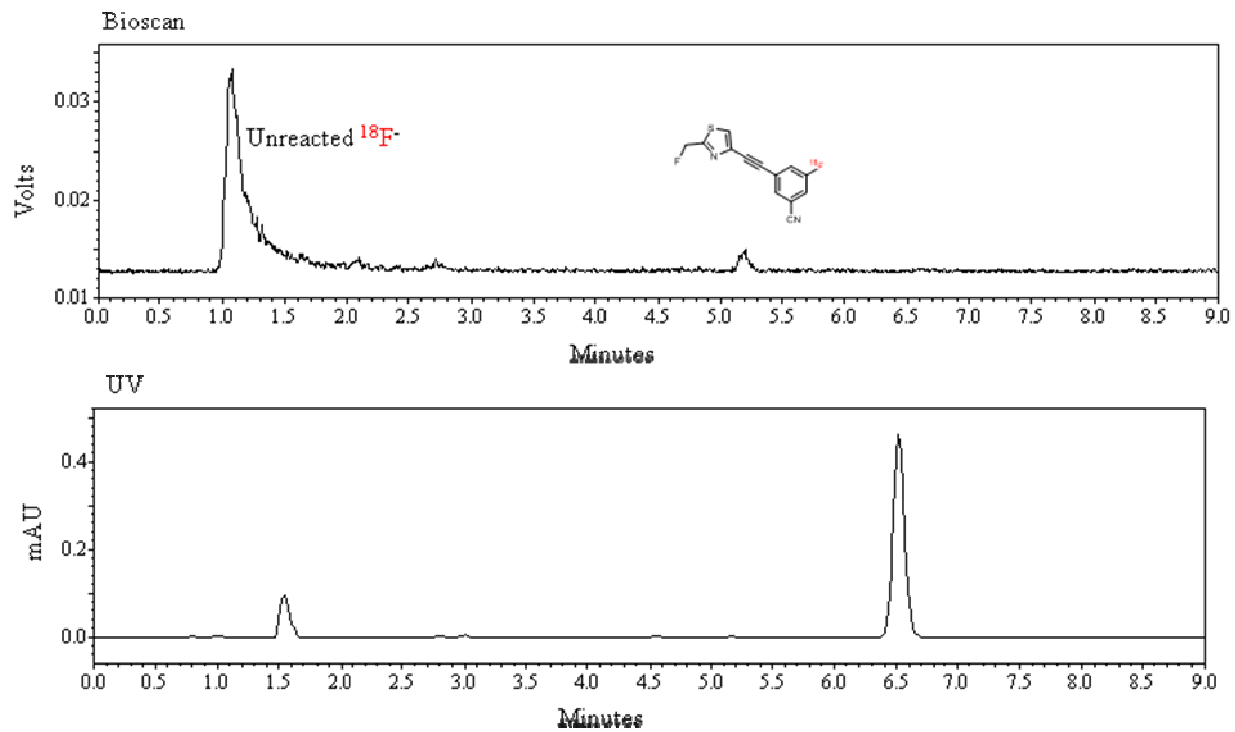
2.1.1. [^{18}F]2a from 8a



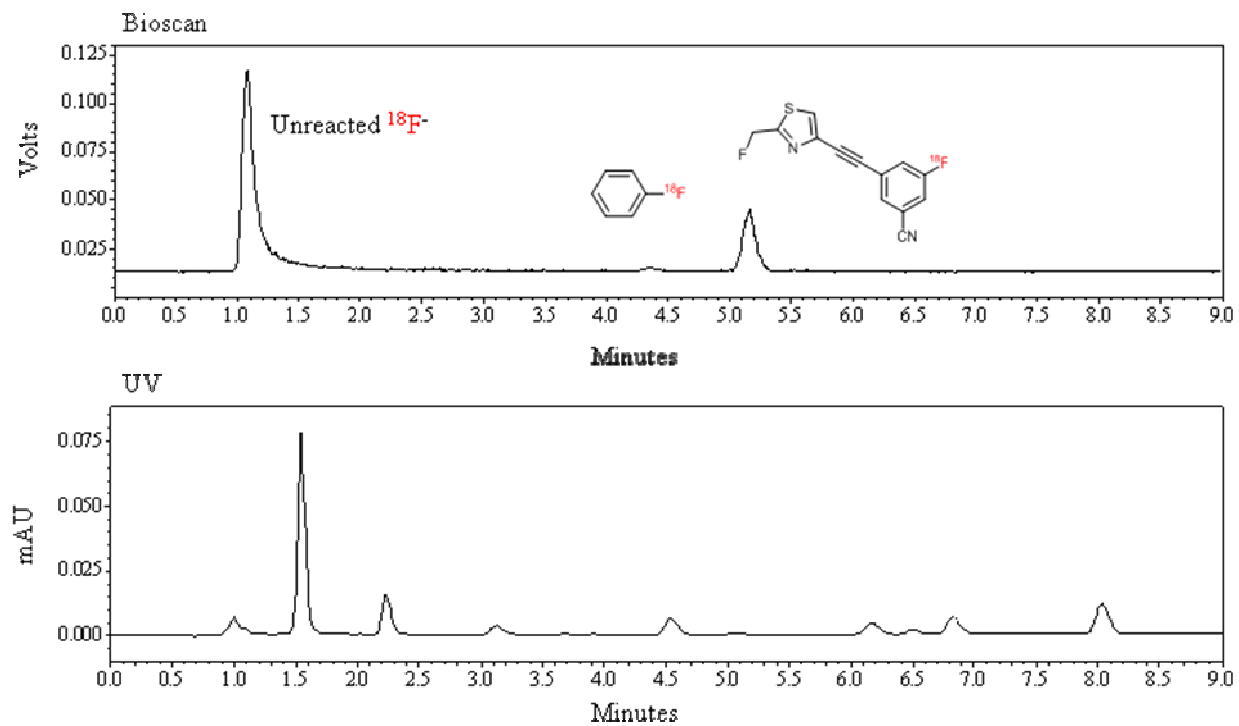
2.1.2. [^{18}F]2b from 8b



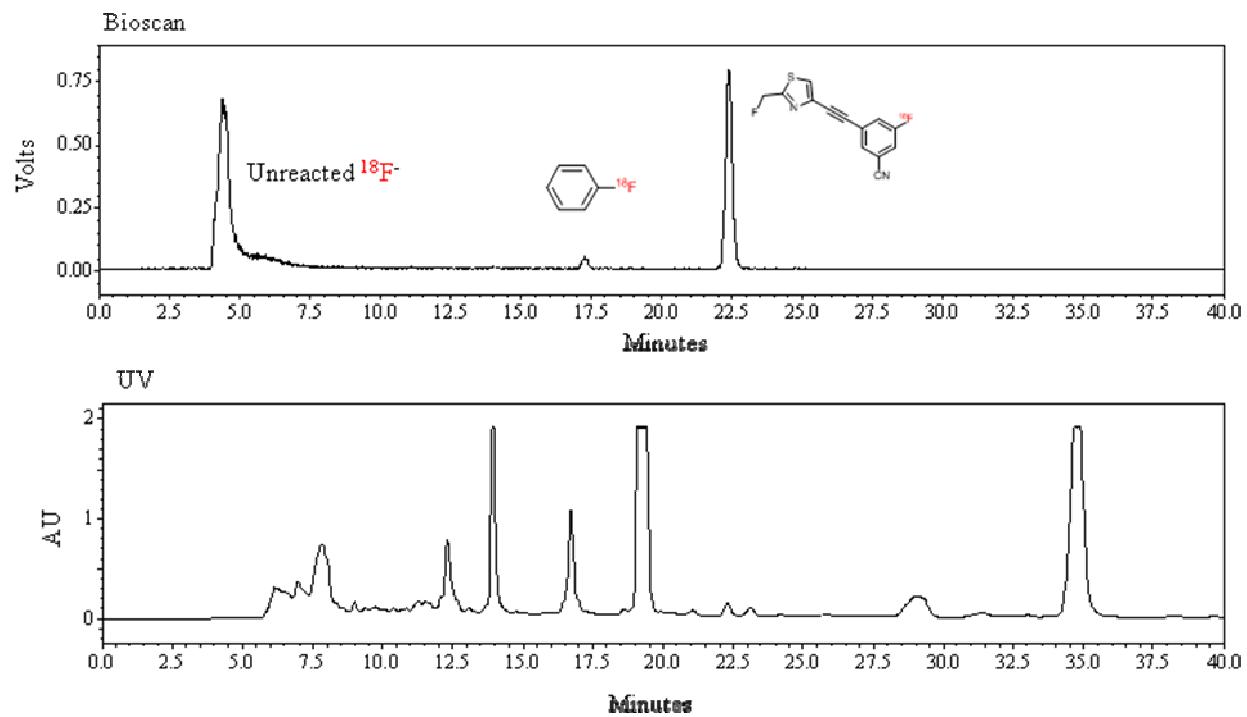
2.1.3. [^{18}F]2c from bromo-precursor 5e



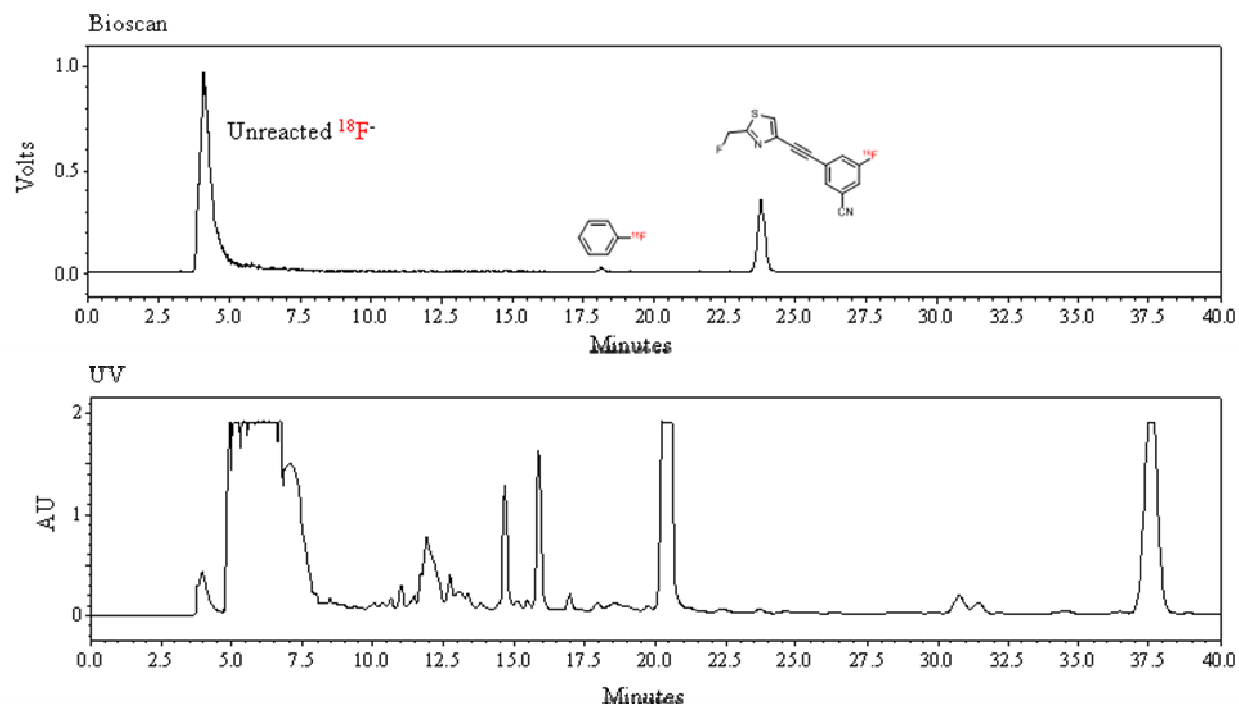
2.1.4. [¹⁸F]2c from 7c



2.2.1. With separate infusion of **7c** and [^{18}F]F $^{-}$ -K $^{+}$ -K 2.2.2 on production activity scale in micro-reactor



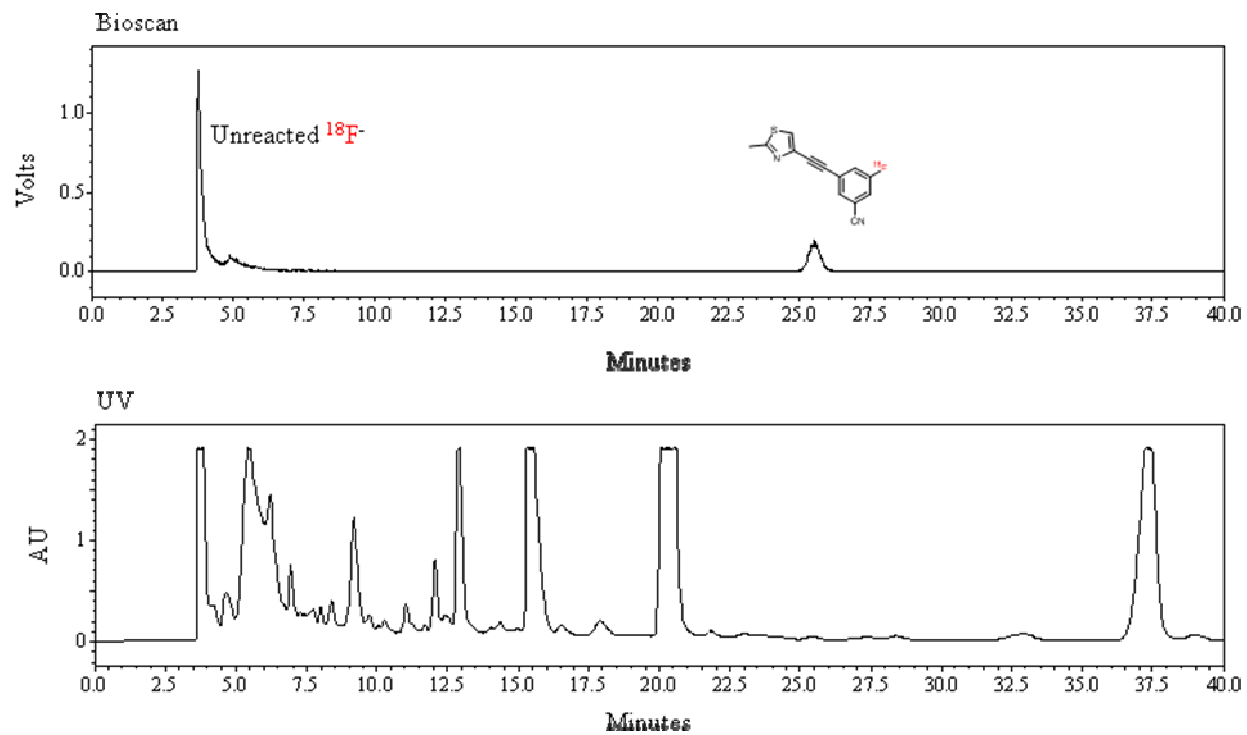
2.2.2. With infusion of premixed **7c** and [^{18}F]F $^{-}$ -K $^{+}$ -K 2.2.2 on production activity scale in micro-reactor



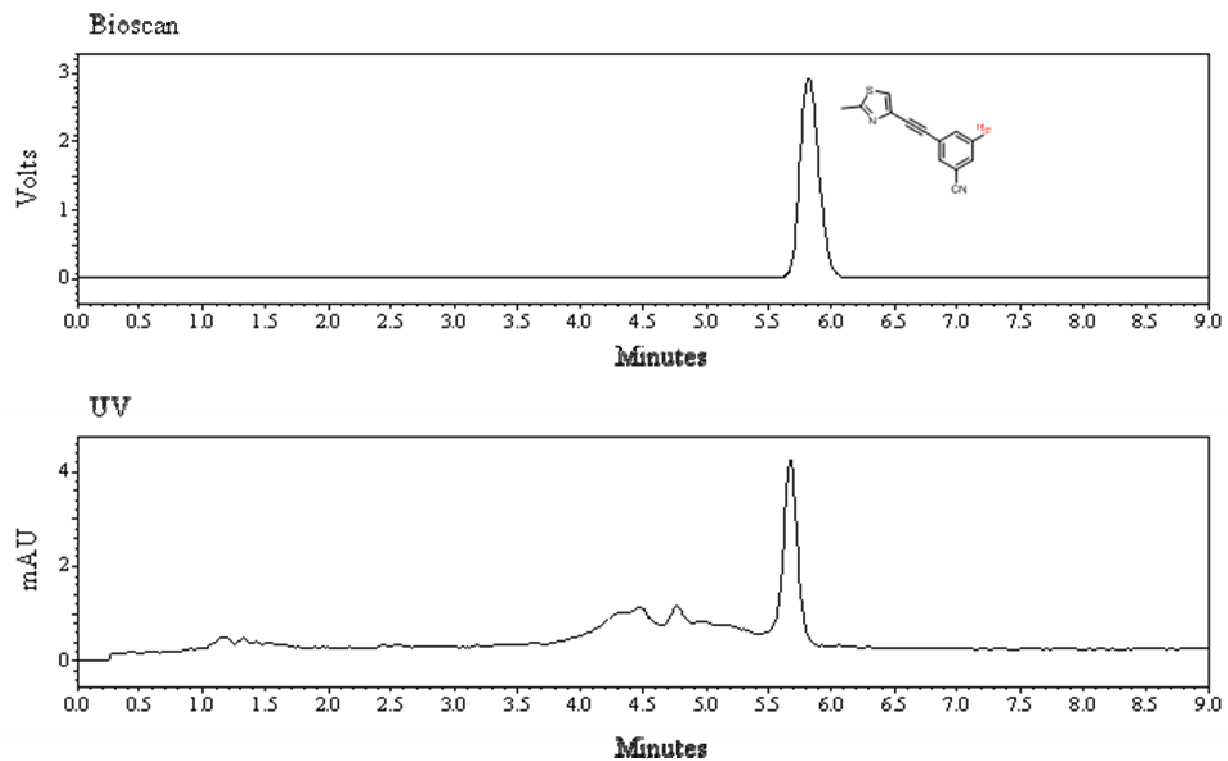
2.3. Syntheses of [^{18}F]2a-c in a Synthia module

2.3.1. [^{18}F]2a from 8a

a. Semi-preparative HPLC chromatogram



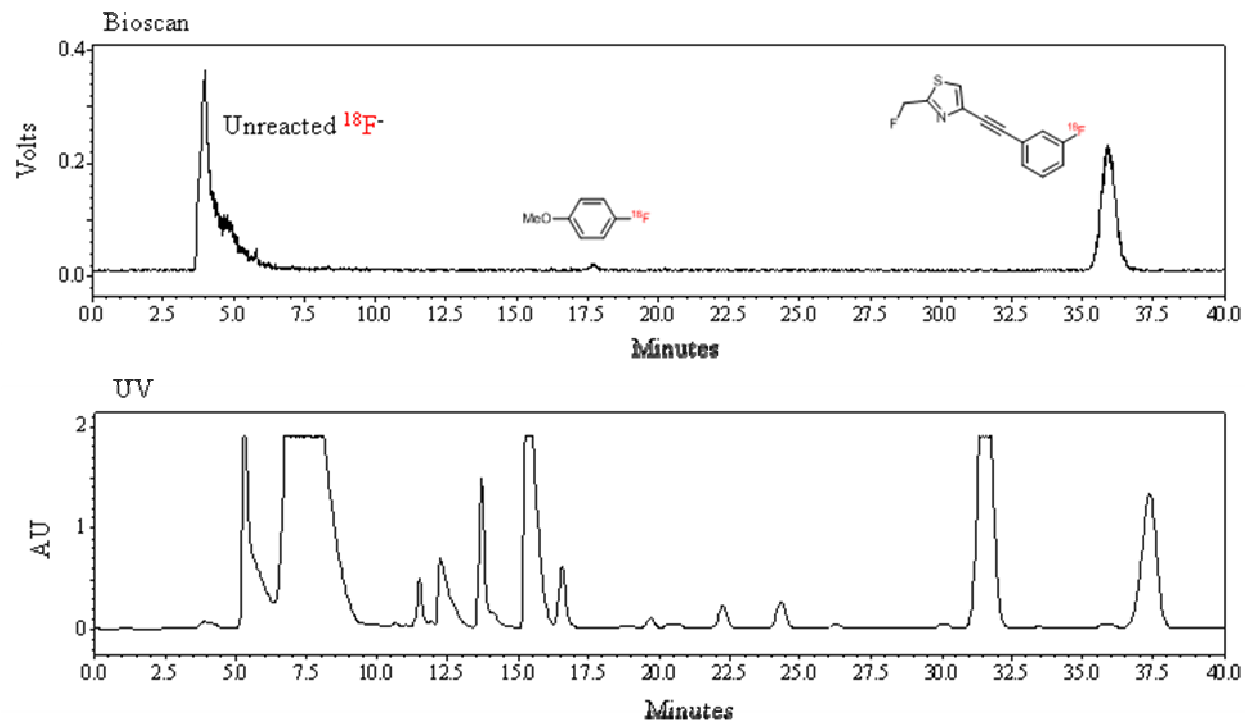
b. Analytical HPLC chromatogram of the [^{18}F]2a for measurement of specific radioactivity



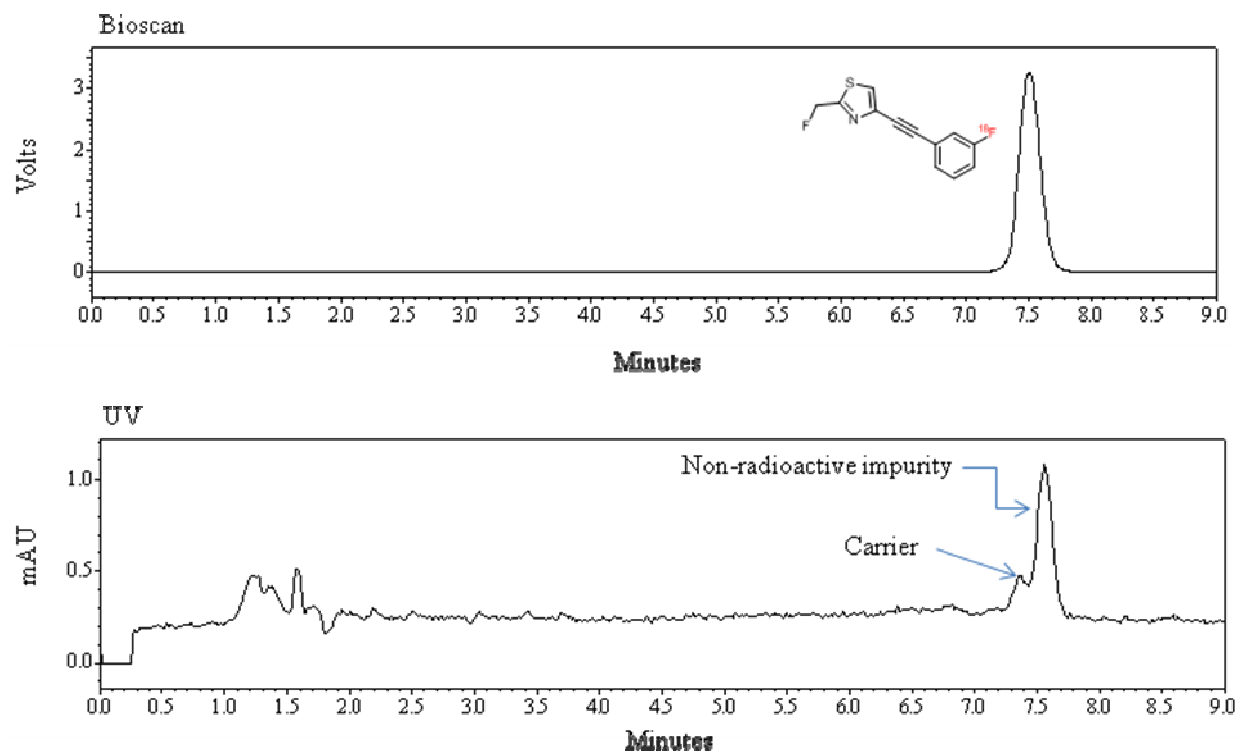
Note: Radio-peaks are ~ 0.2 min behind corresponding UV peaks due to configuration in Bioscan and UV detectors.

2.3.2. [¹⁸F]2b from 8b

a. Semi-preparative HPLC chromatogram

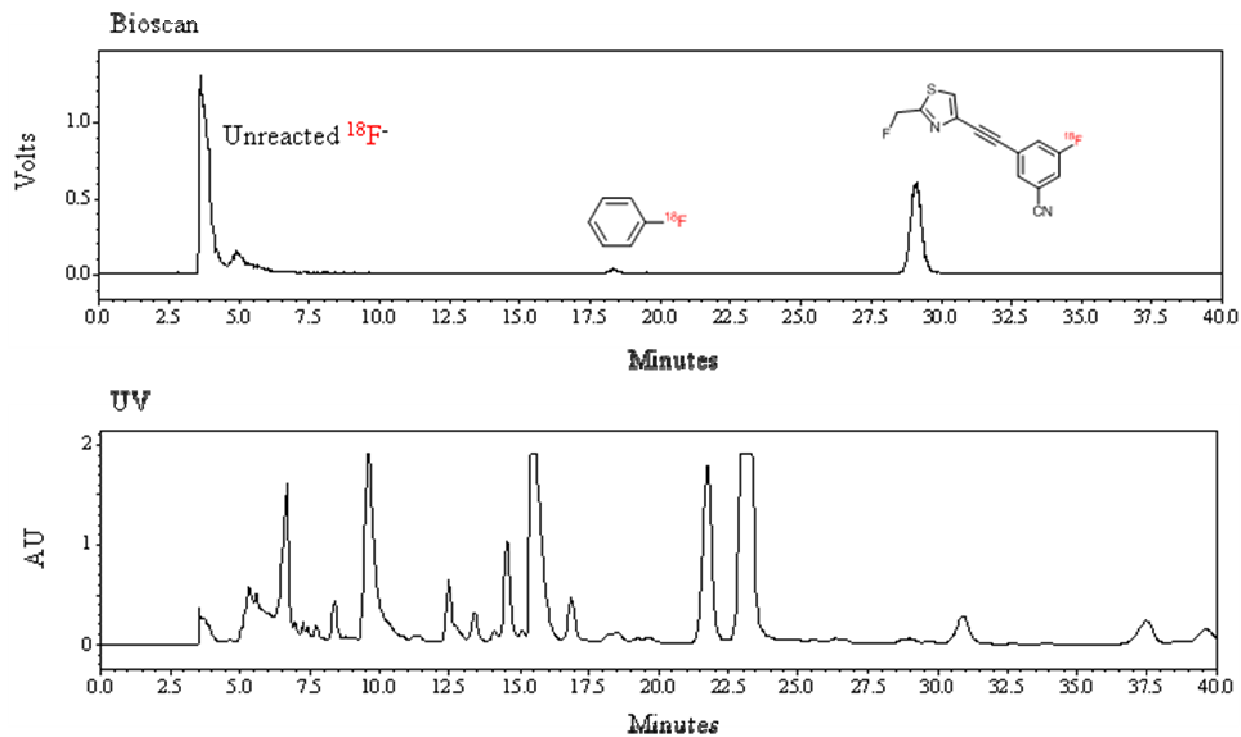


b. Analytical HPLC chromatogram of the [^{18}F]2b



2.3.3. [^{18}F]2c from 7c

a. Semi-preparative HPLC chromatogram



b. Analytical HPLC chromatogram of the [^{18}F]2c

