

SUPPLEMENTARY INFORMATION. 2

The most reactive amide as a transition state mimic for *cis-trans* interconversion.

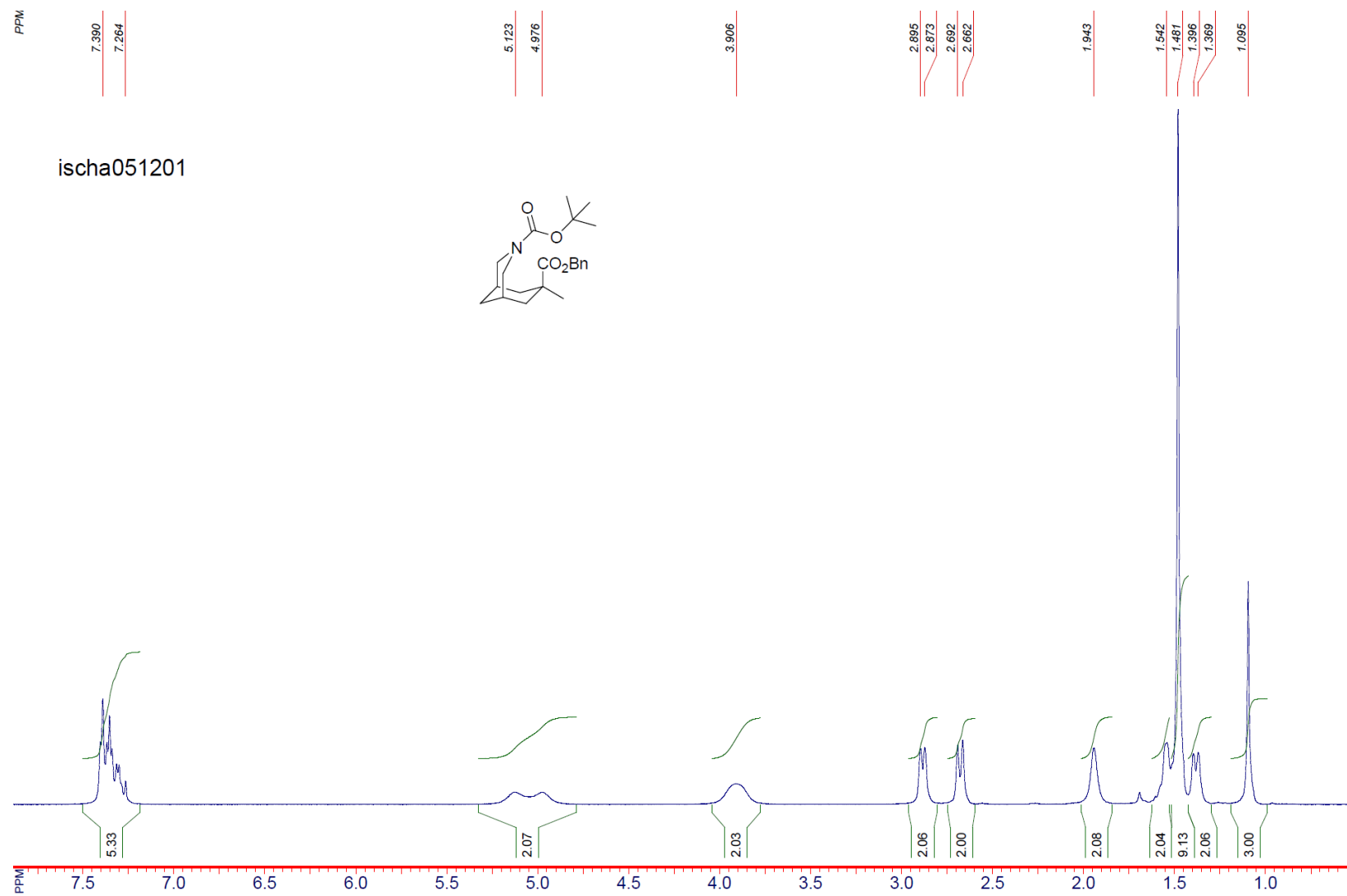
Igor V. Komarov*, Stanislav Yanik, Aleksandr Yu. Ishchenko, John E. Davies, Jonathan M. Goodman, Anthony J. Kirby*

* Corresponding authors. E-mail: ajk1@cam.ac.uk (AJK); ik214@yahoo.com (IVK).

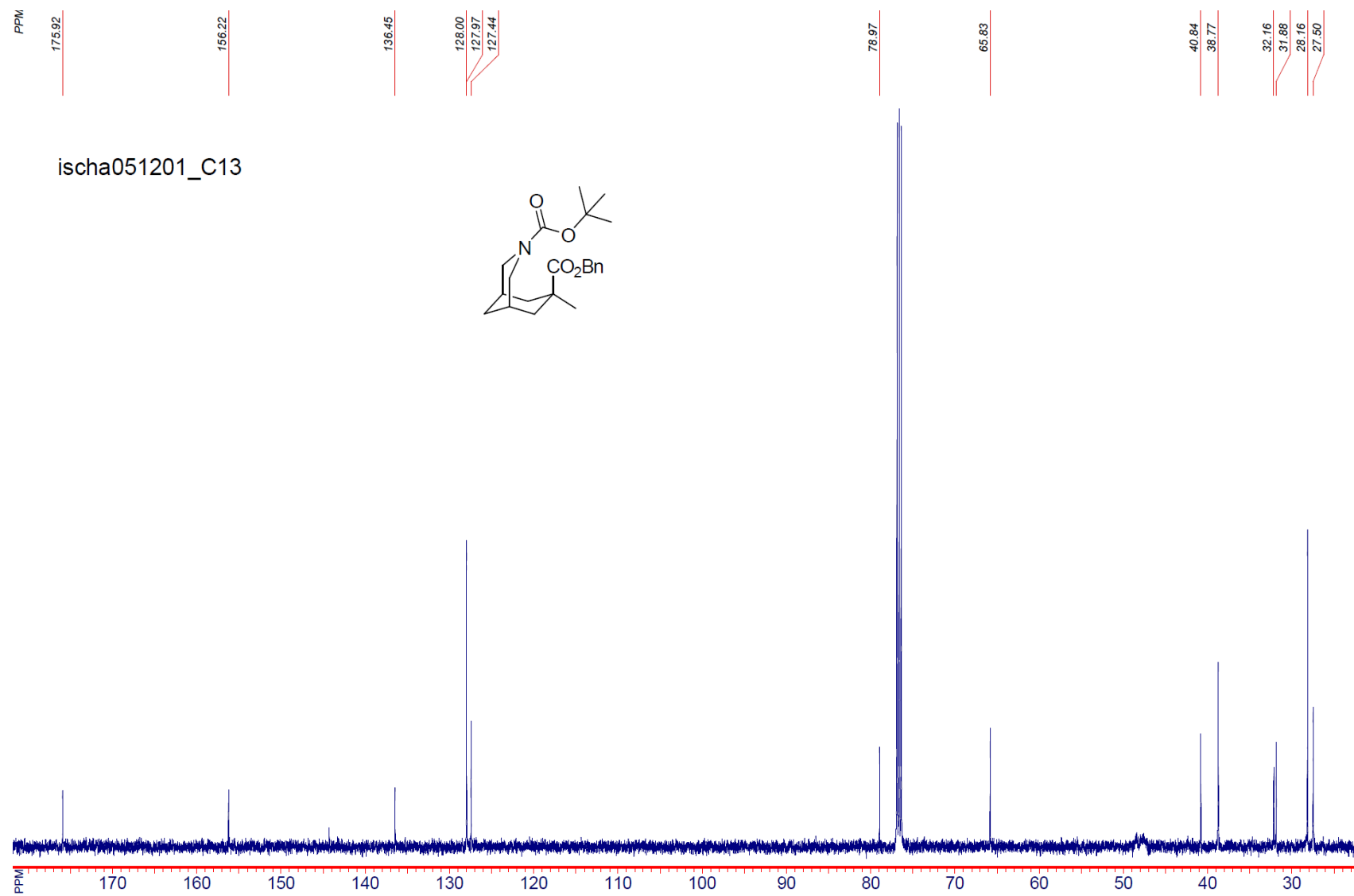
S.5 Spectroscopic Data.

NMR and Mass spectra

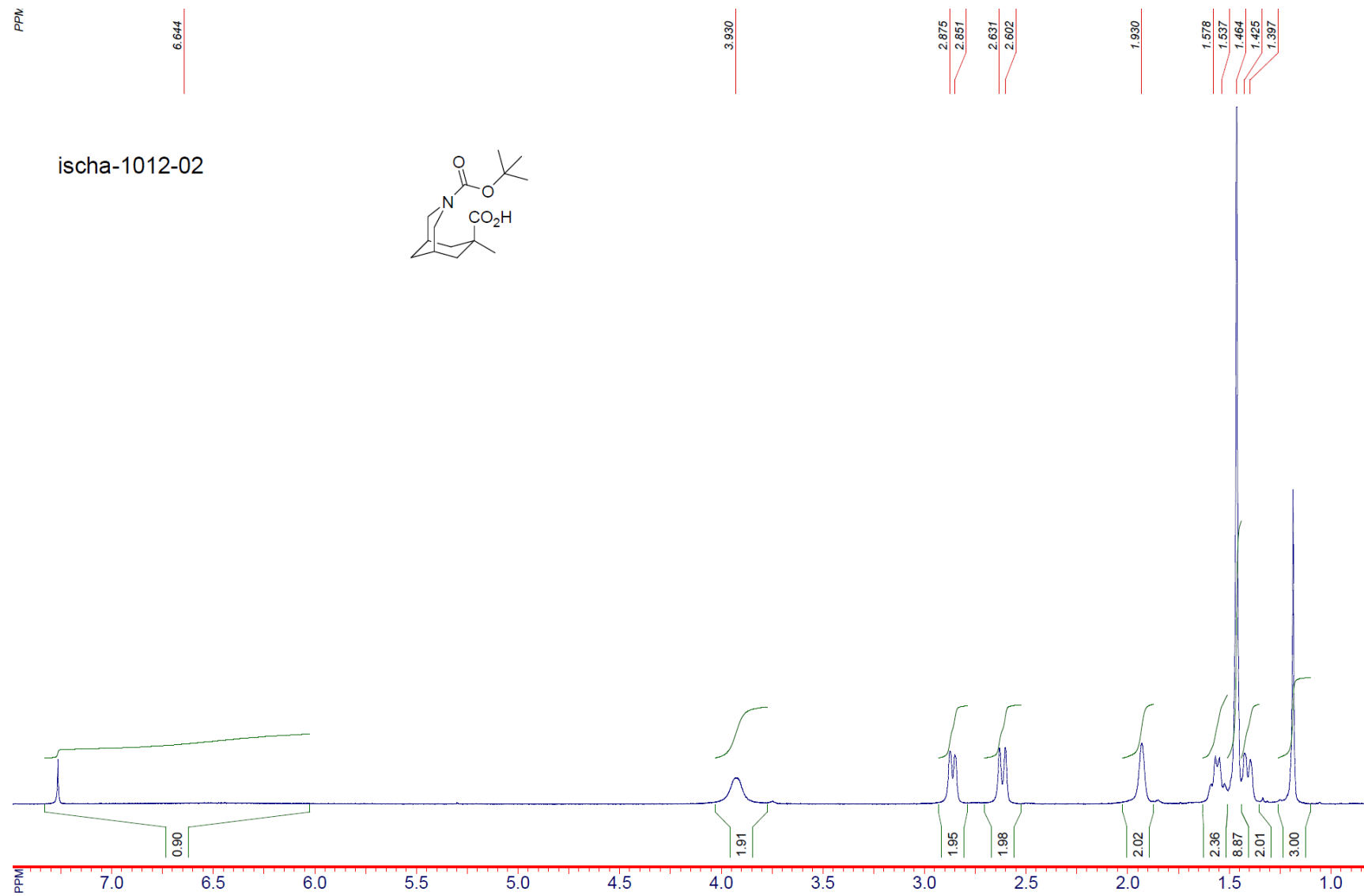
S.45 – S.72



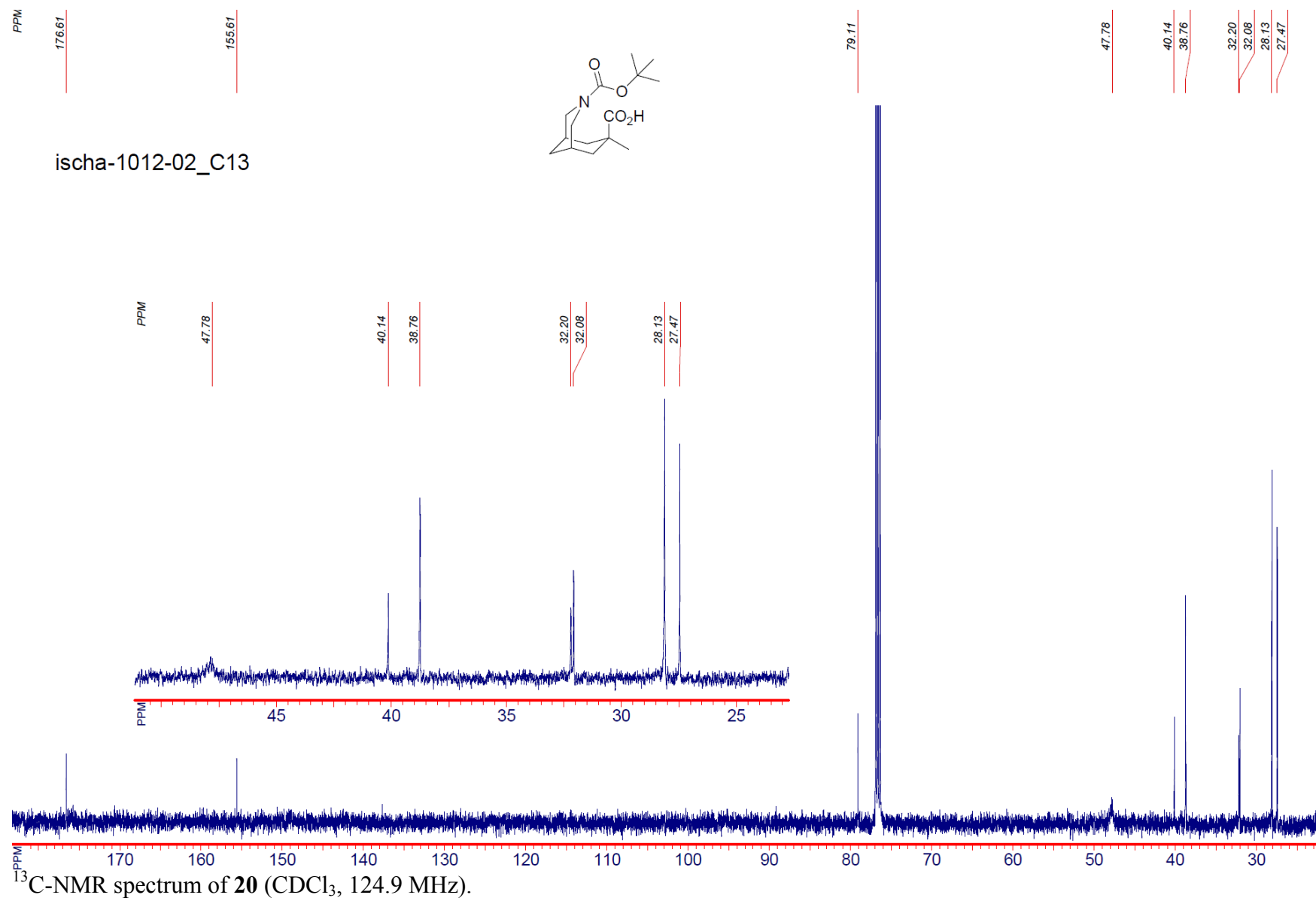
^1H -NMR spectrum of **19** (CDCl_3 , 500 MHz).

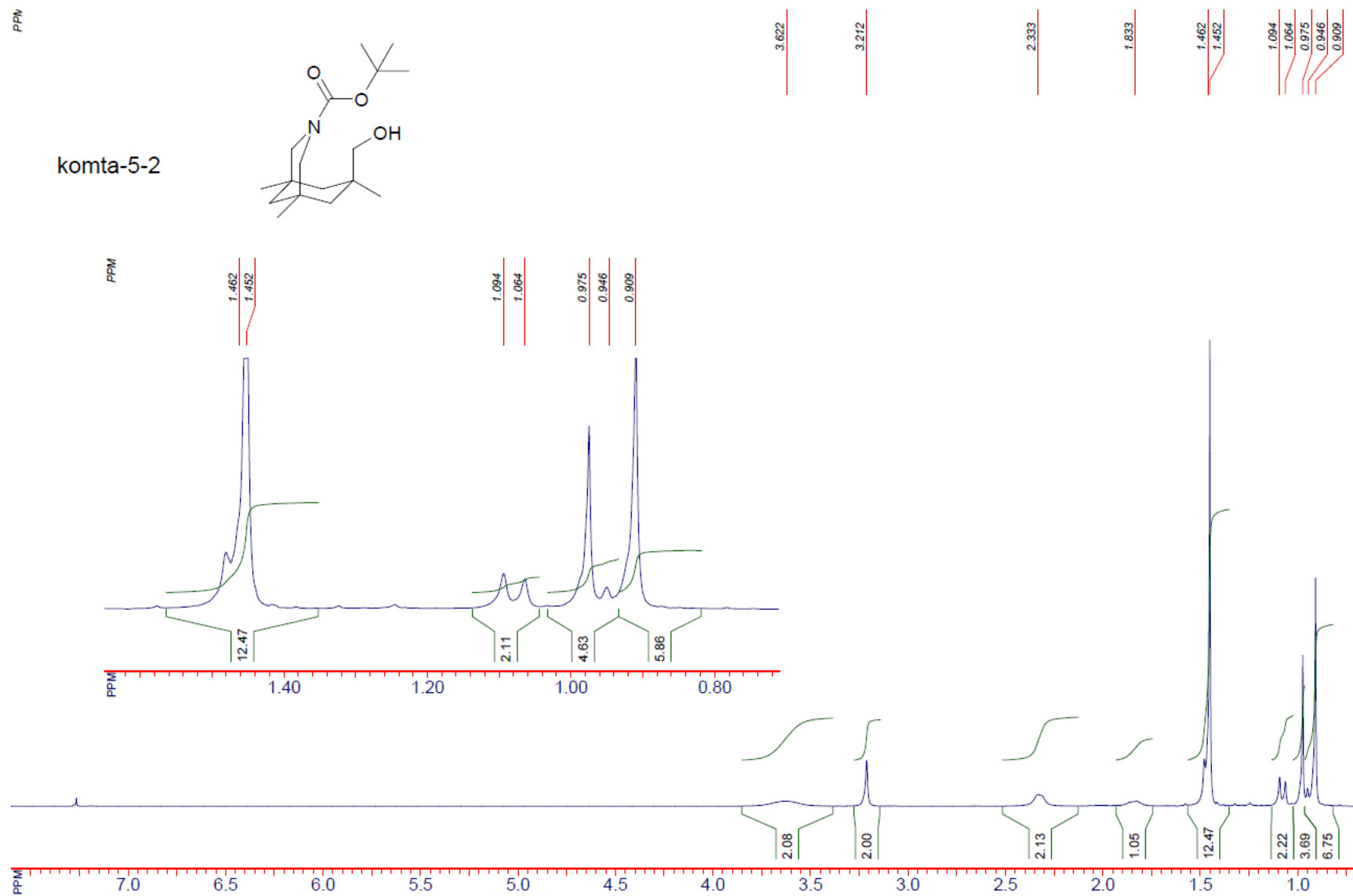


¹³C-NMR spectrum of **19** (CDCl₃, 124.9 MHz).

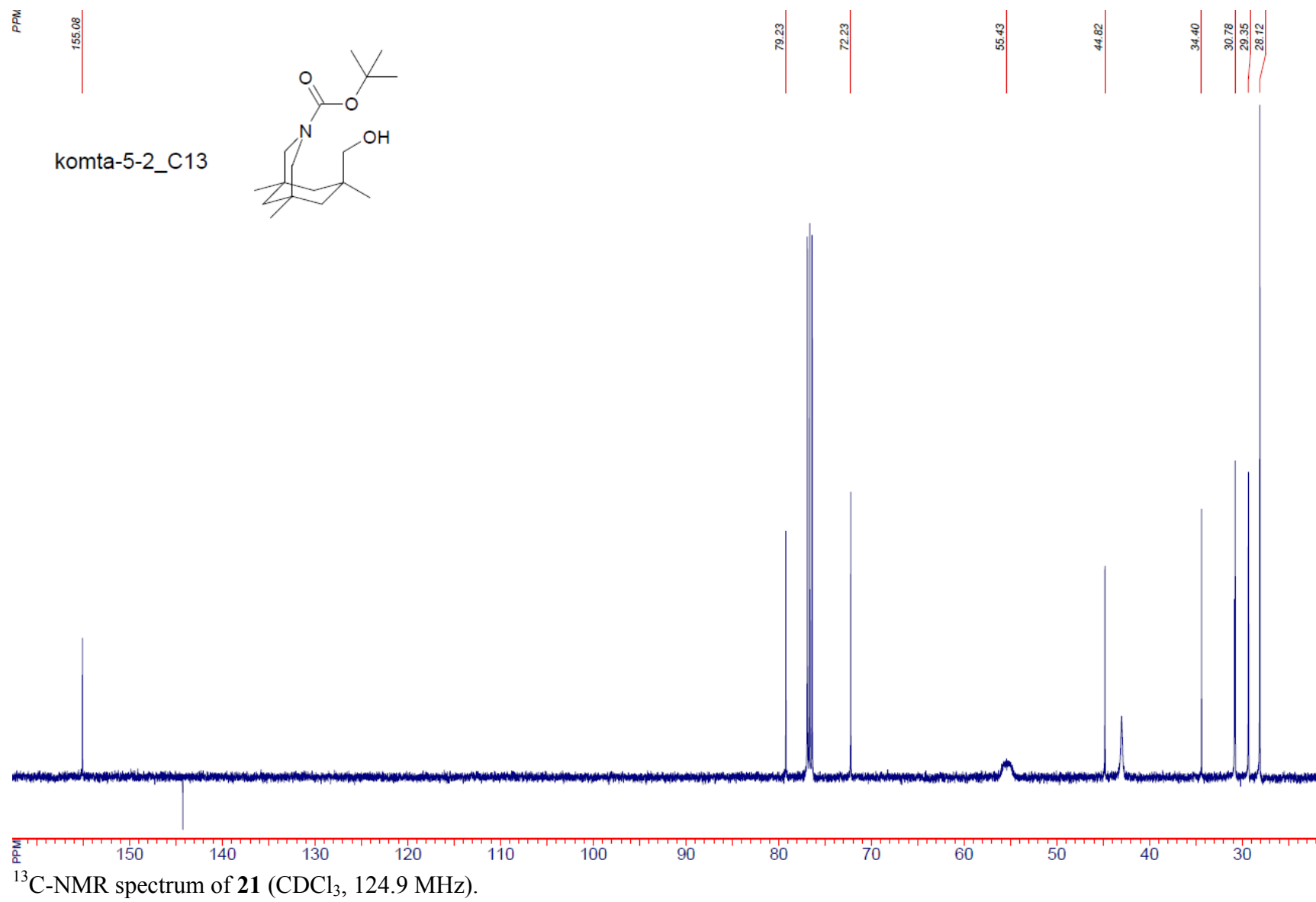


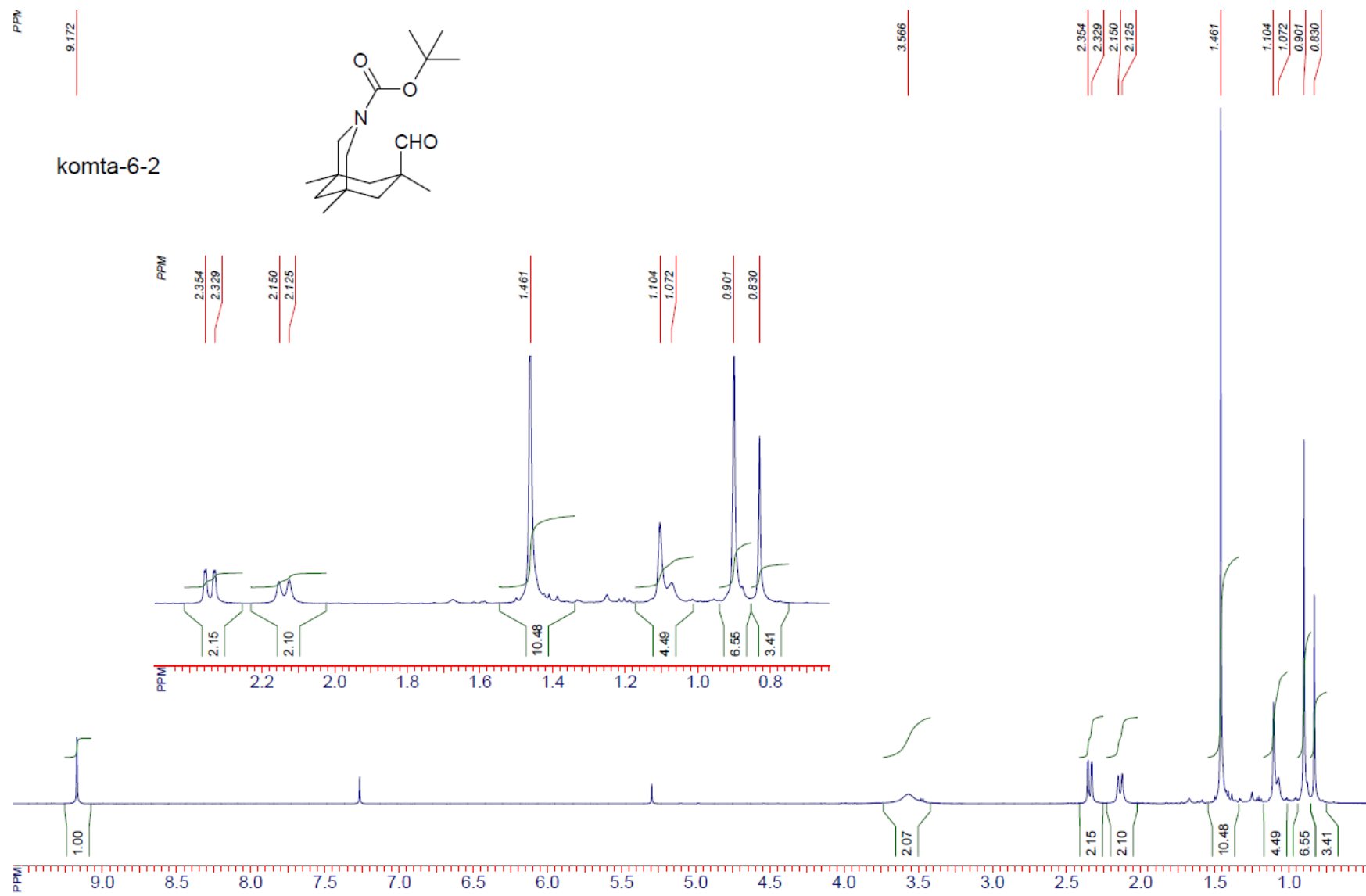
^1H -NMR spectrum of **20** (CDCl_3 , 500 MHz).



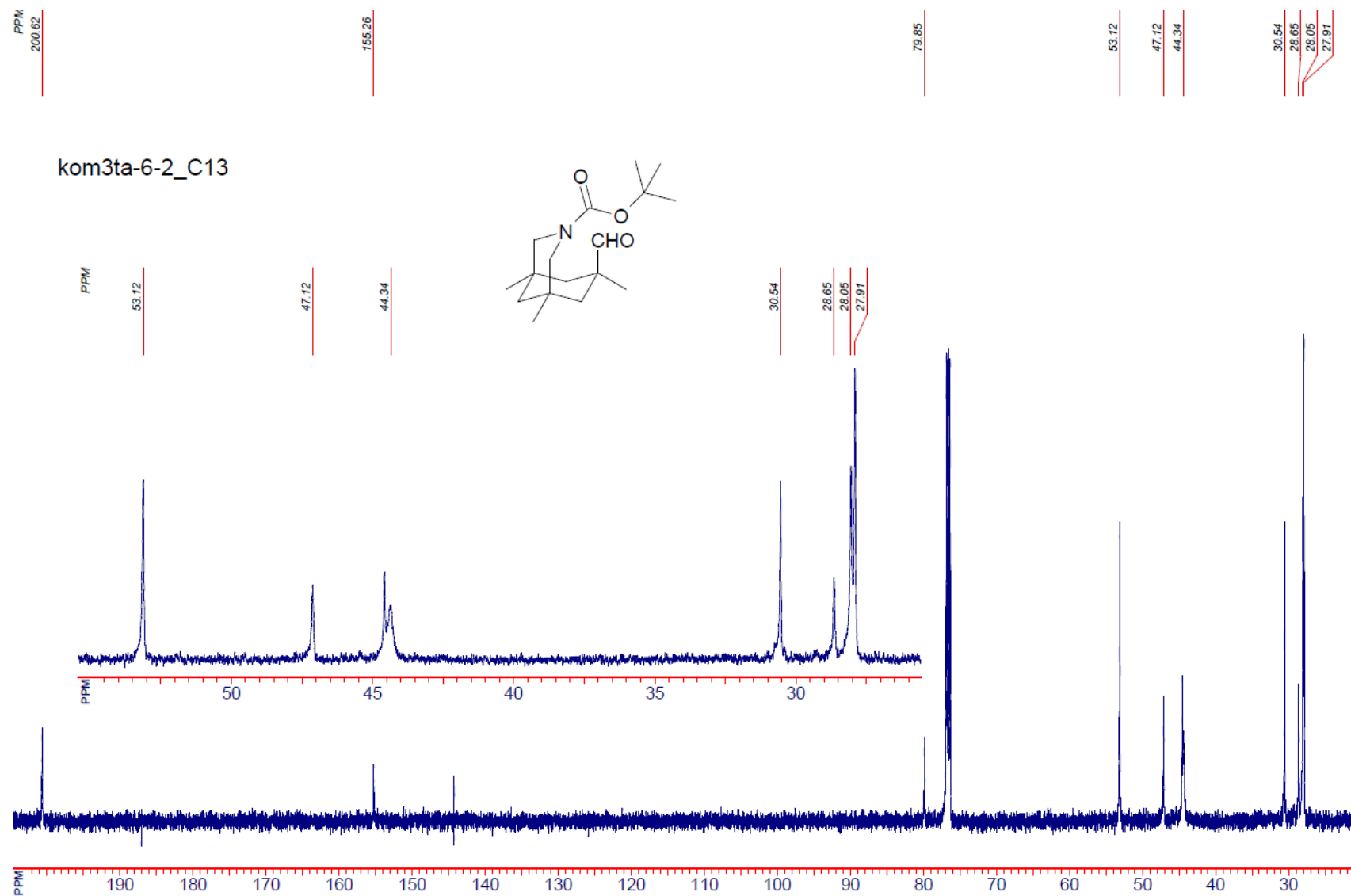


^1H -NMR spectrum of **21** (CDCl_3 , 500 MHz).

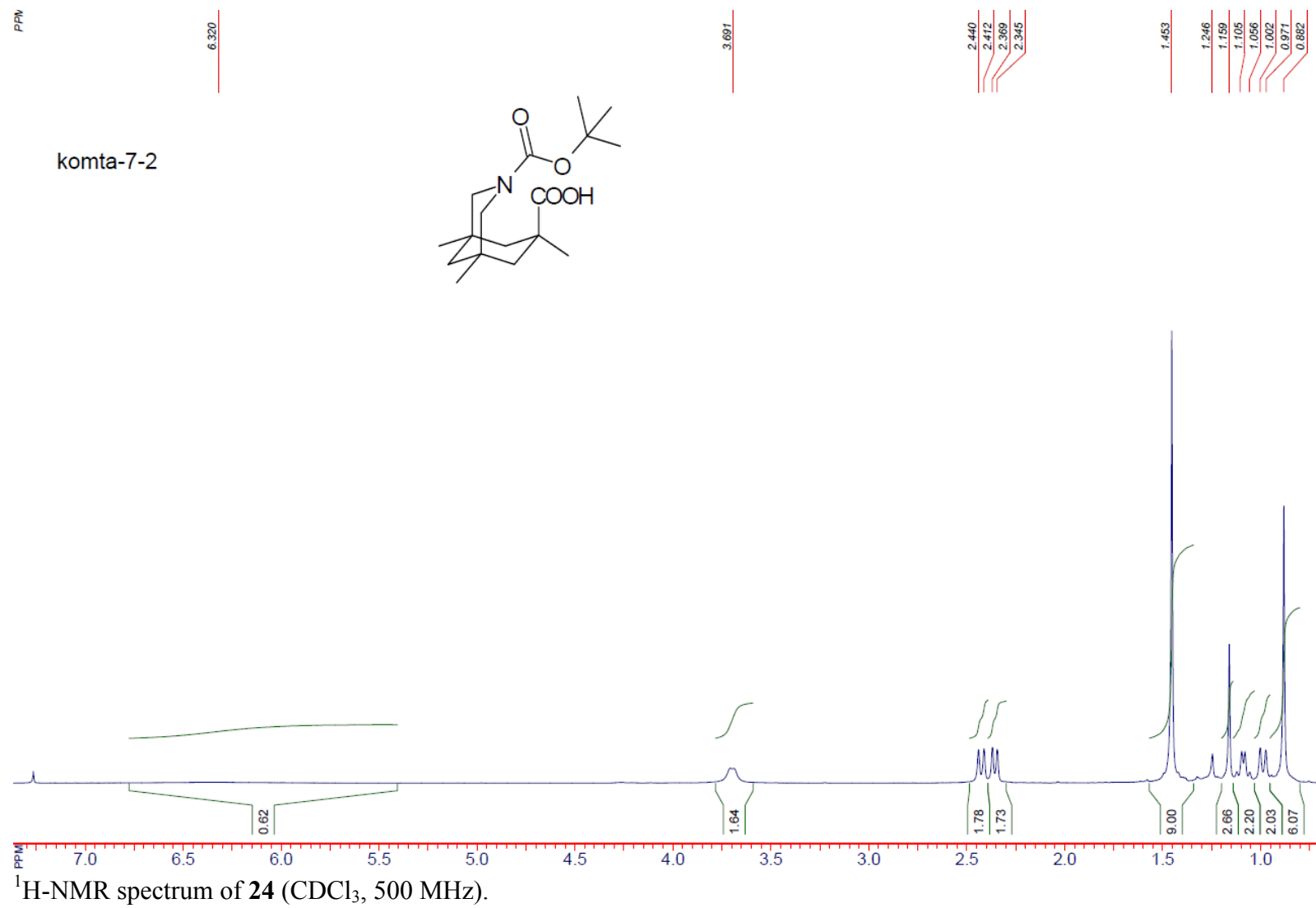


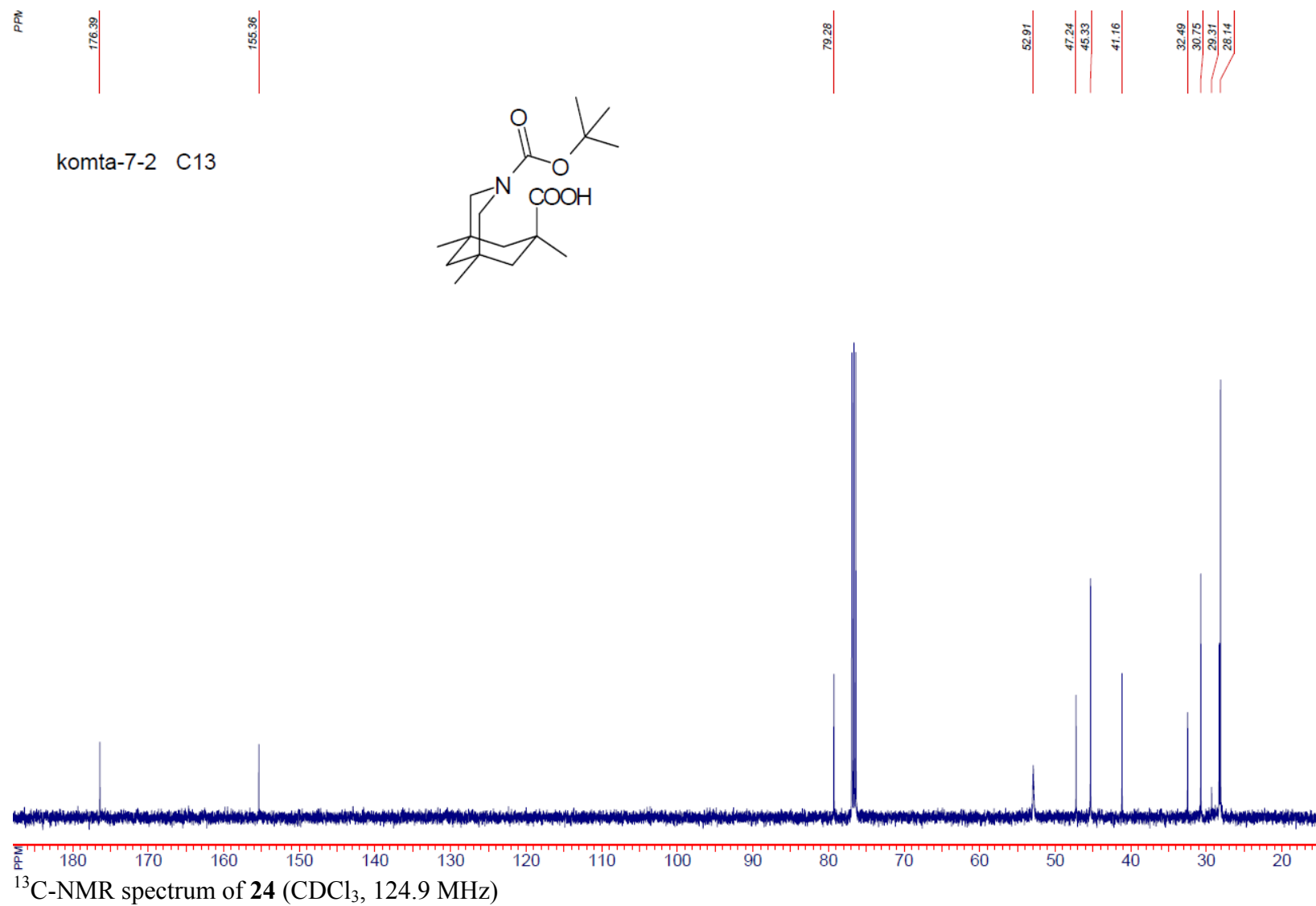


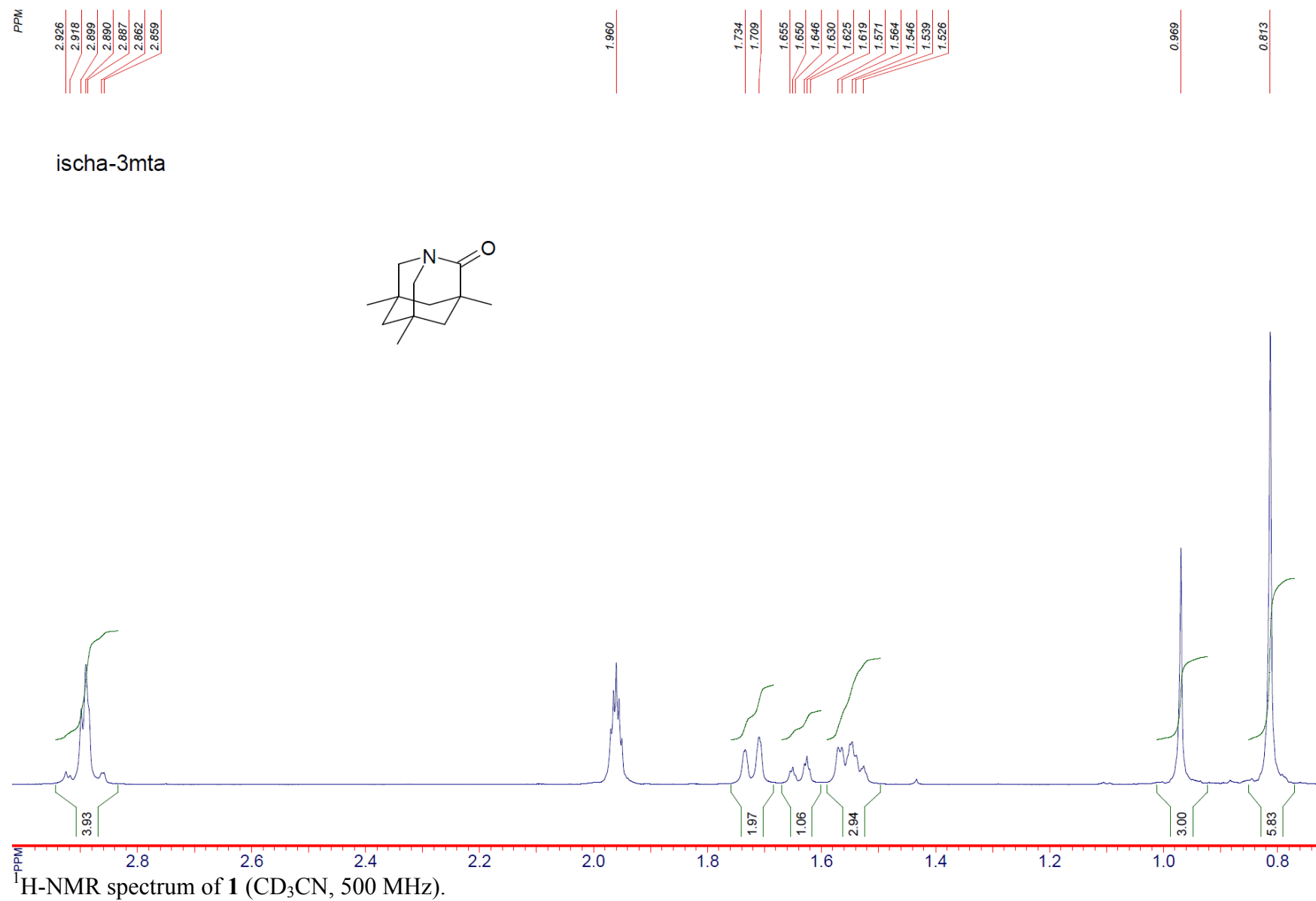
¹H-NMR spectrum of **23** (CDCl₃, 500 MHz).



¹³C-NMR spectrum of **23** (CDCl₃, 124.9 MHz).

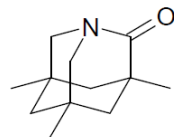






PPM
199.52

ischa-3mta-2352- C13



65.02

51.28

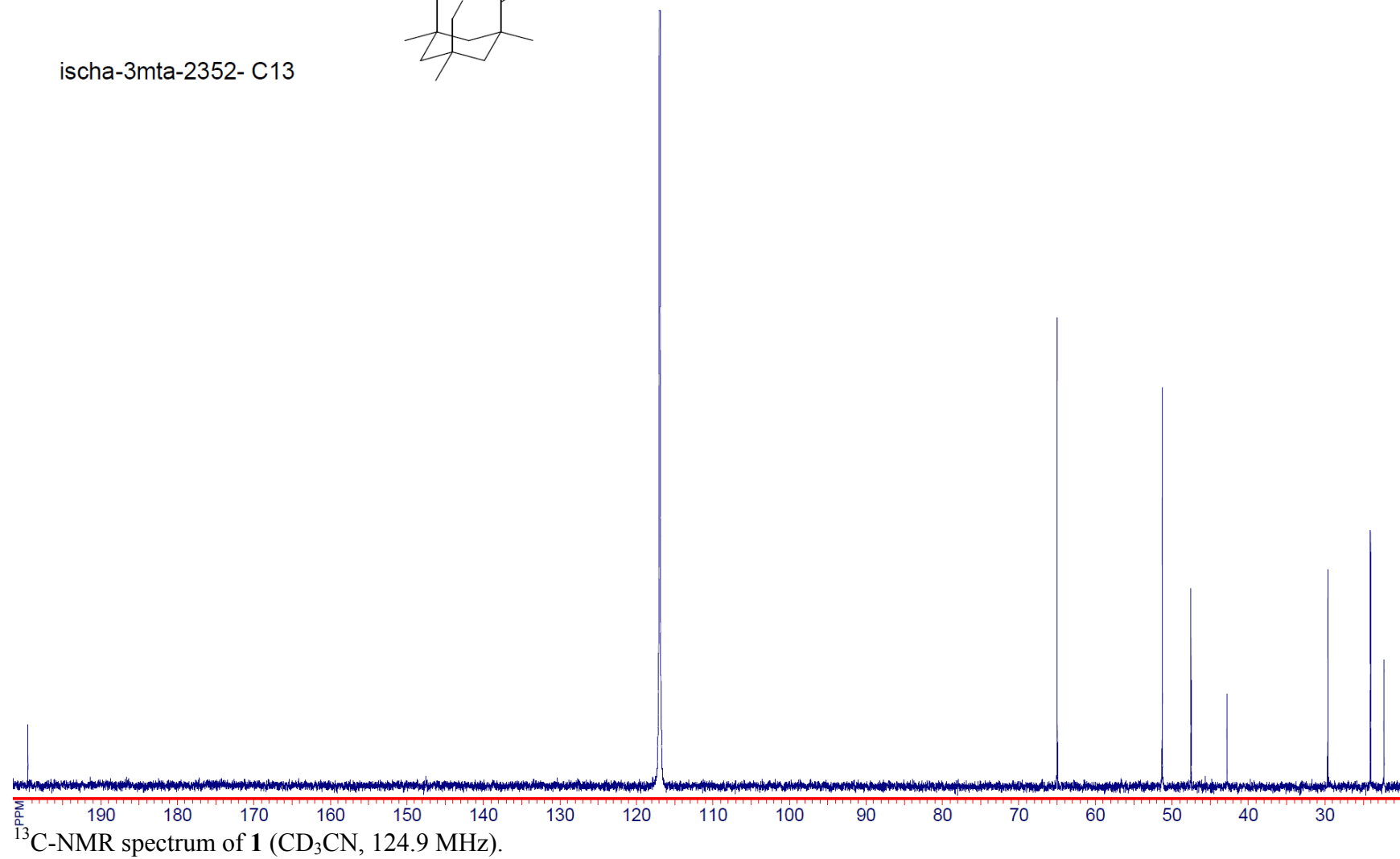
47.54

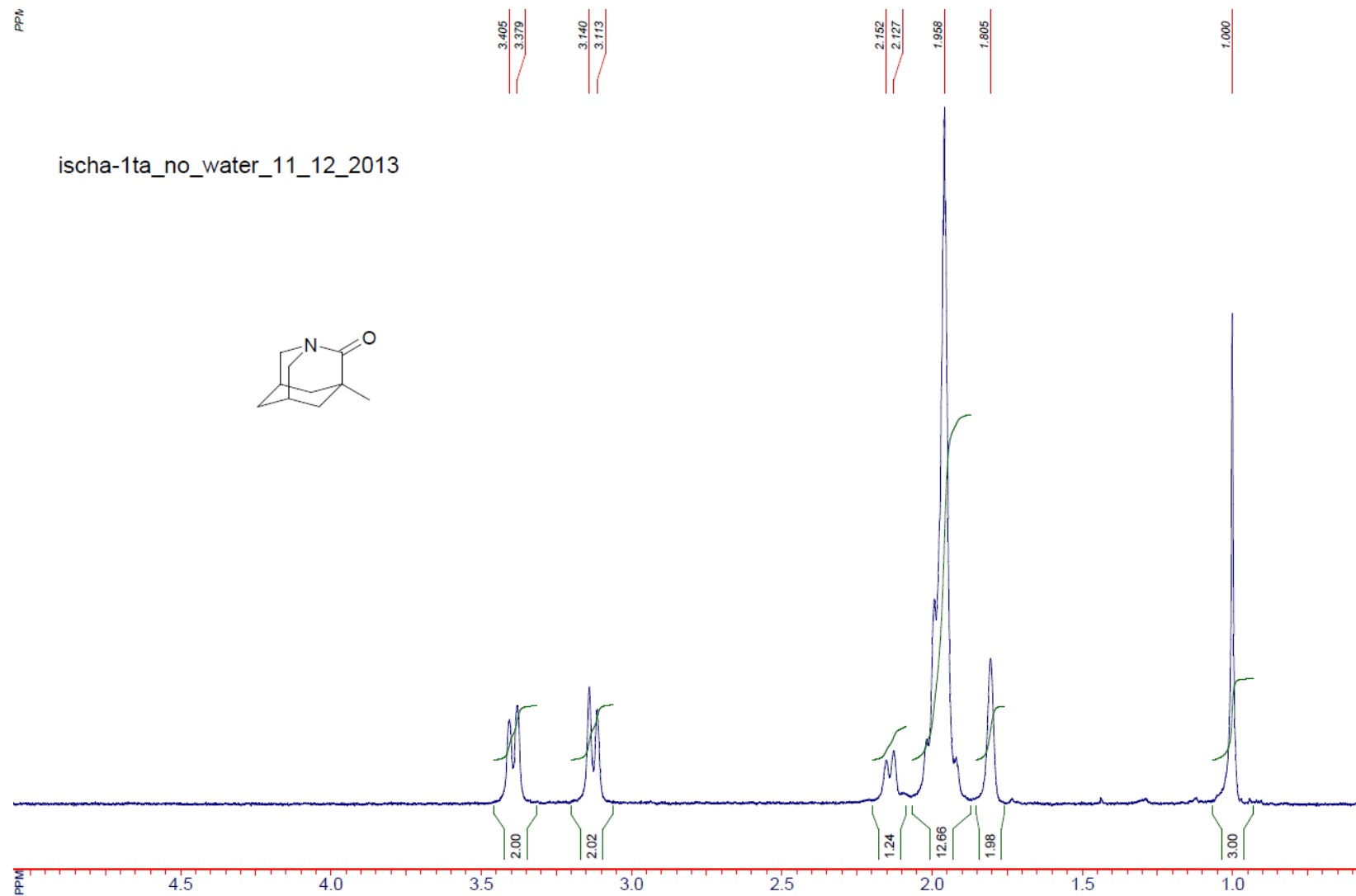
42.82

29.65

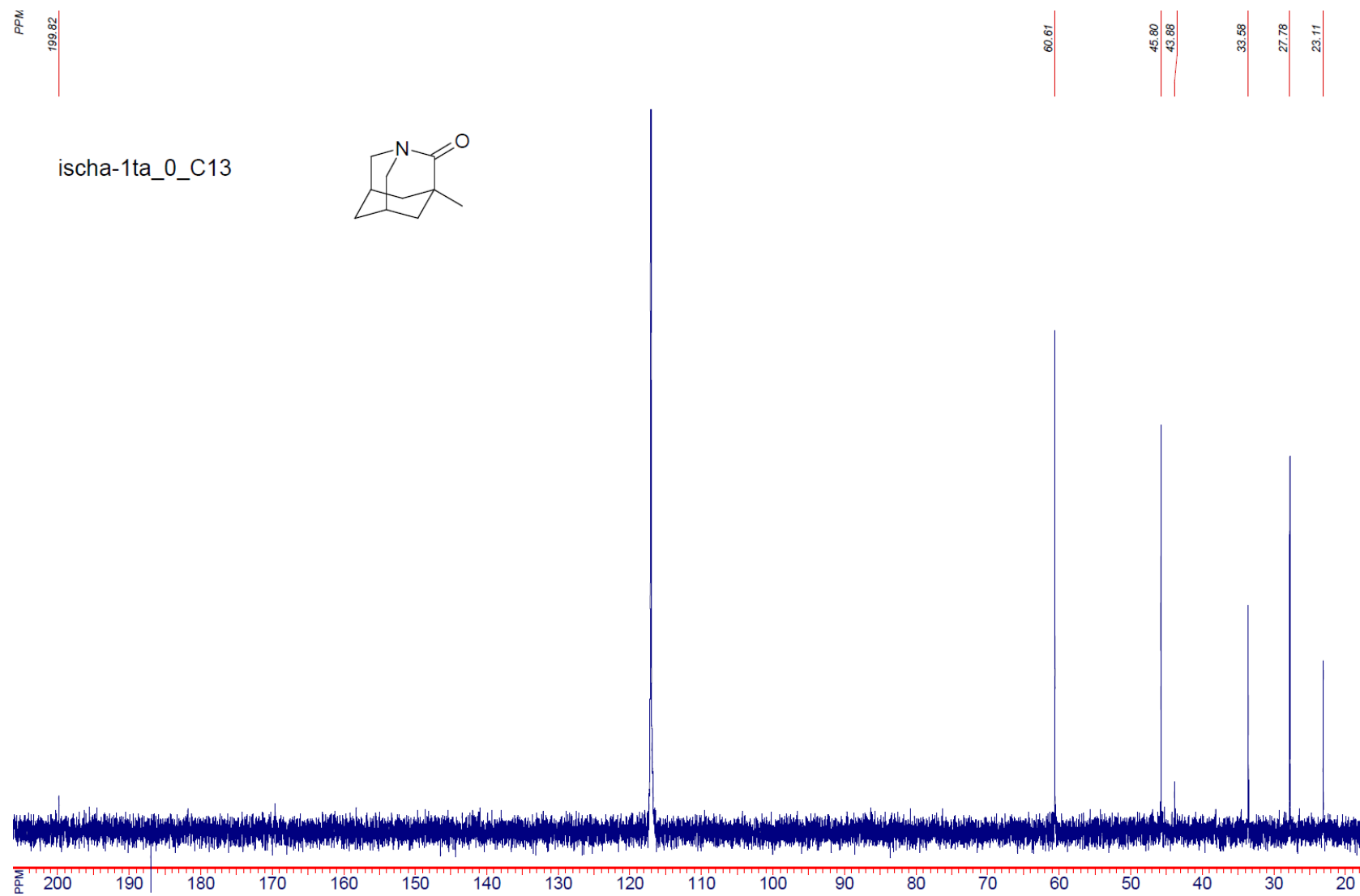
24.07

22.32

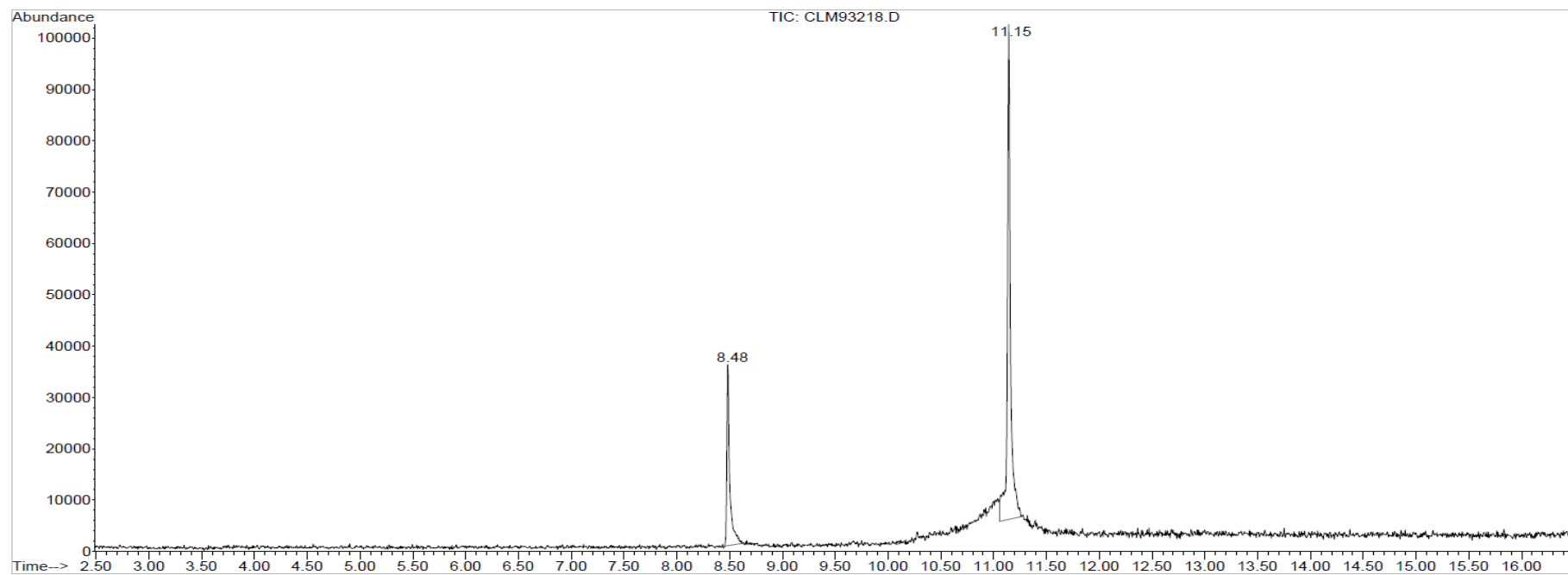


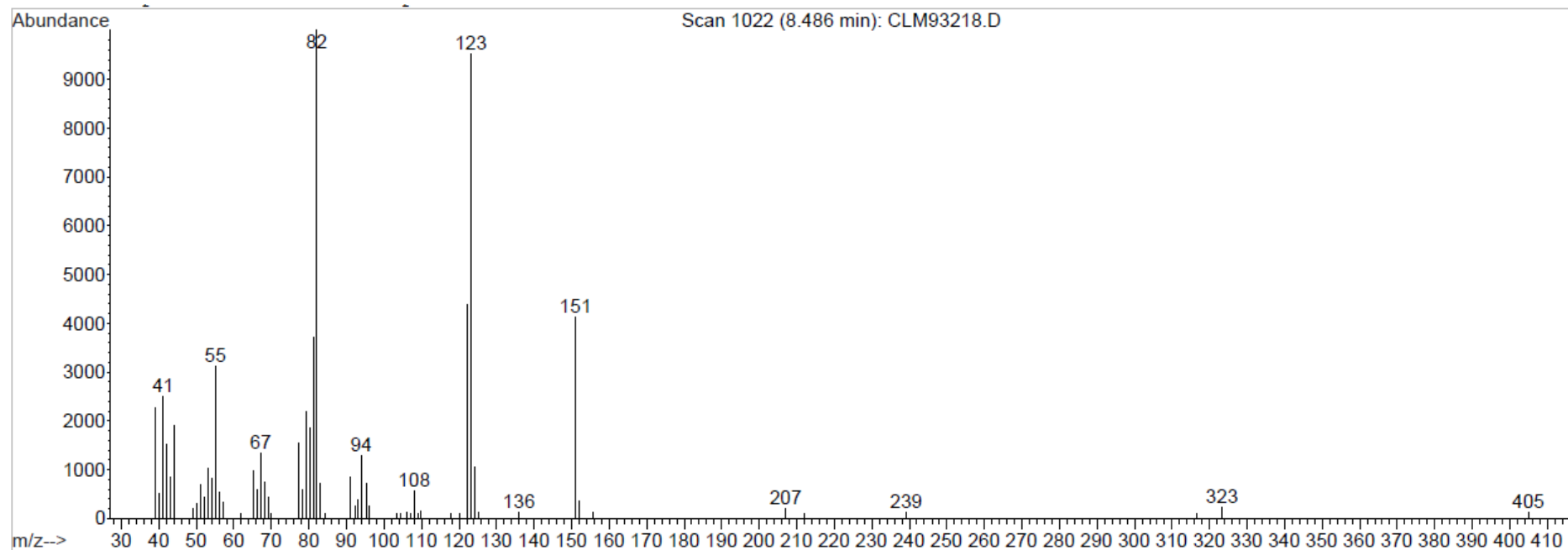


^1H -NMR spectrum of **2** (CD_3CN , 500 MHz).



^{13}C -NMR spectrum of **2** (CD_3CN , 124.9 MHz).

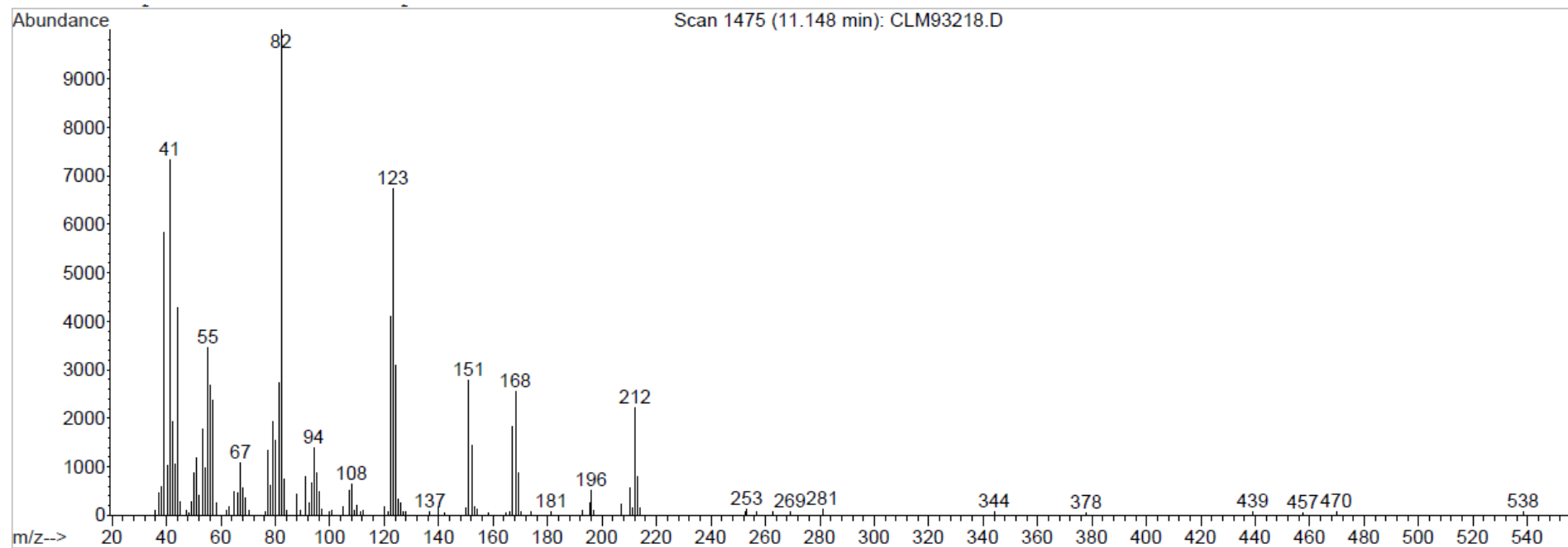




Data File: C:\MSDCHEM\1\DATA\G04_15\CLM93218.D

Sample : CLM93218

Peak Number: 1 at 8.49 min Area: 668961 Area % 25.24

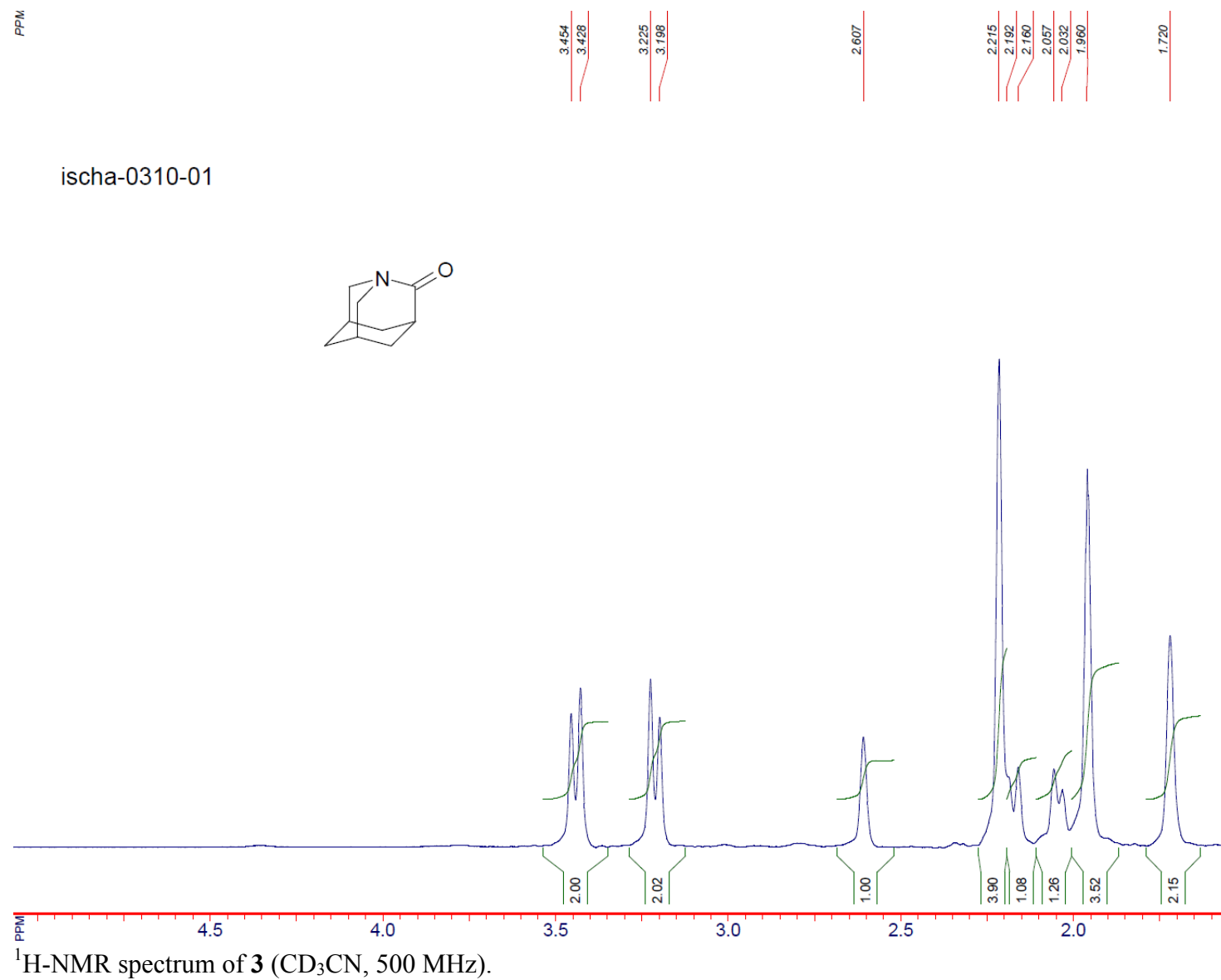


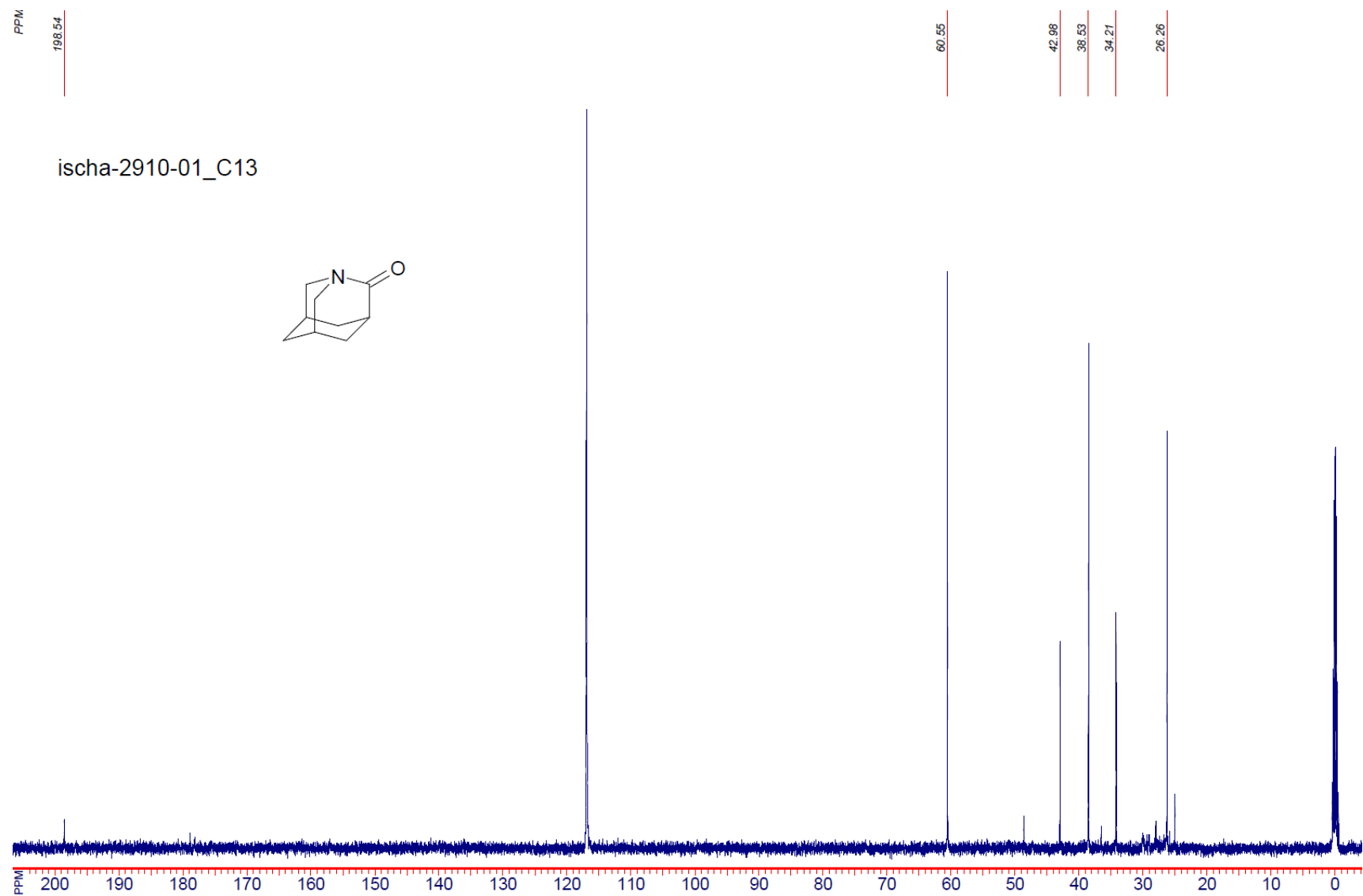
Data File: C:\MSDCHEM\1\DATA\G04_15\CLM93218.D

Sample : CLM93218

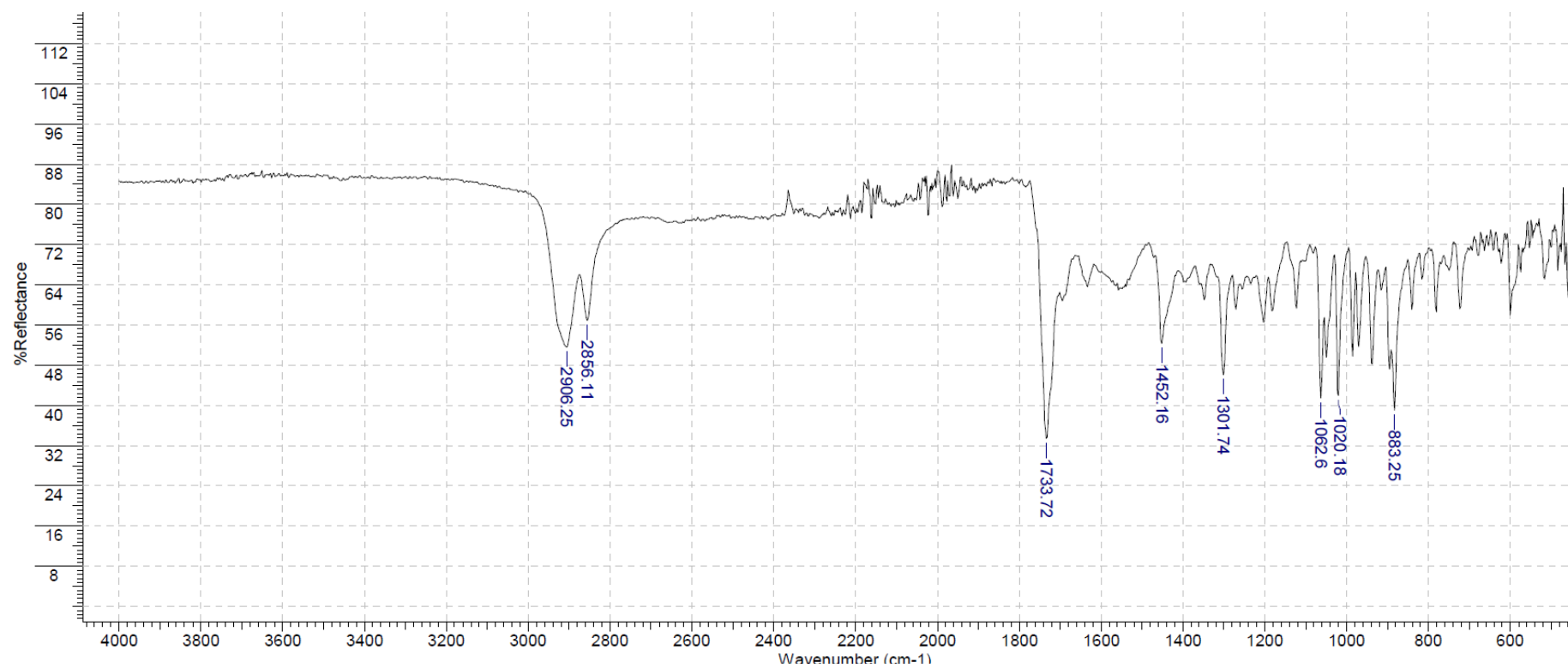
Peak Number: 2 at 11.15 min Area: 1981056 Area % 74.76

GS-MS trace for compound 8.

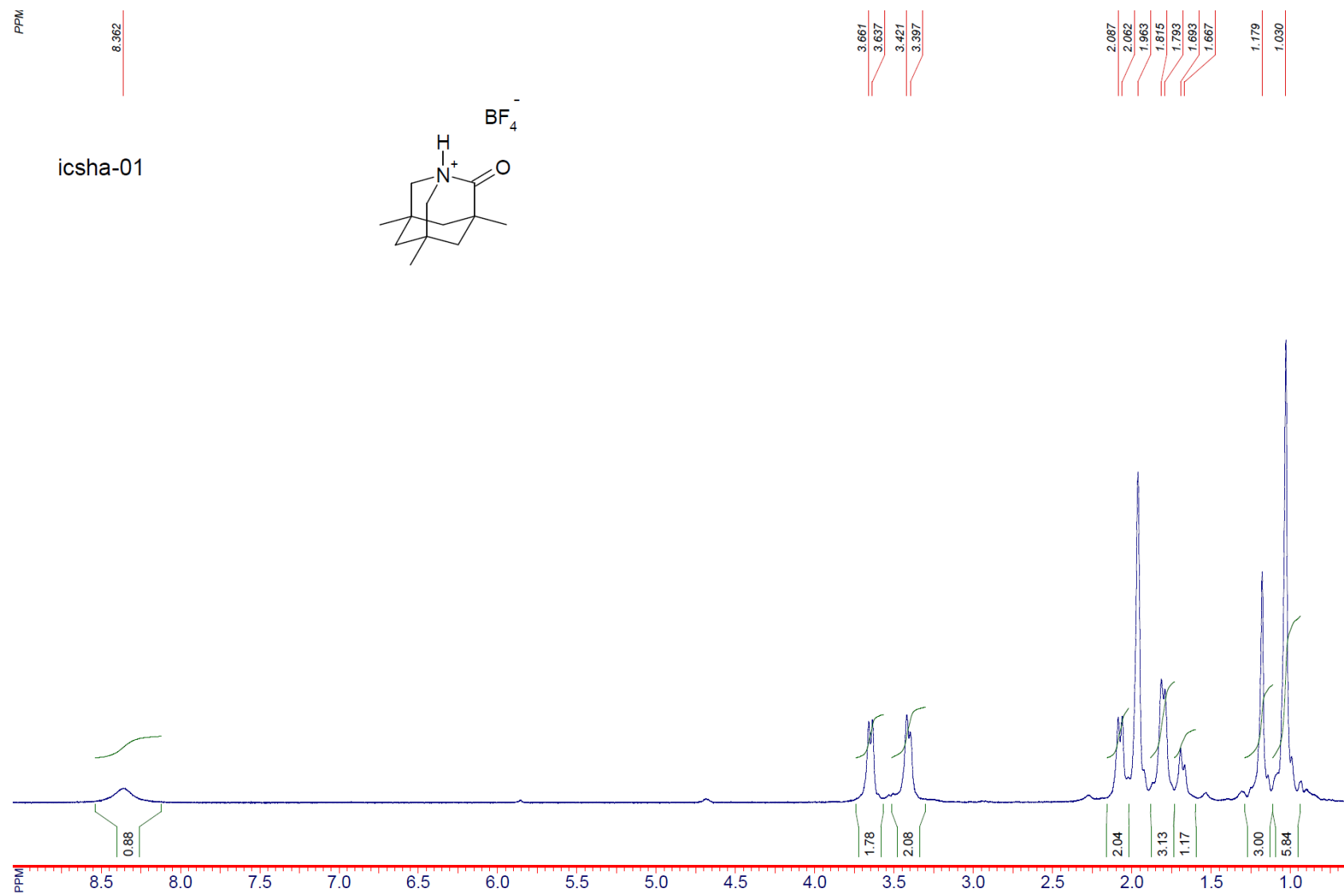




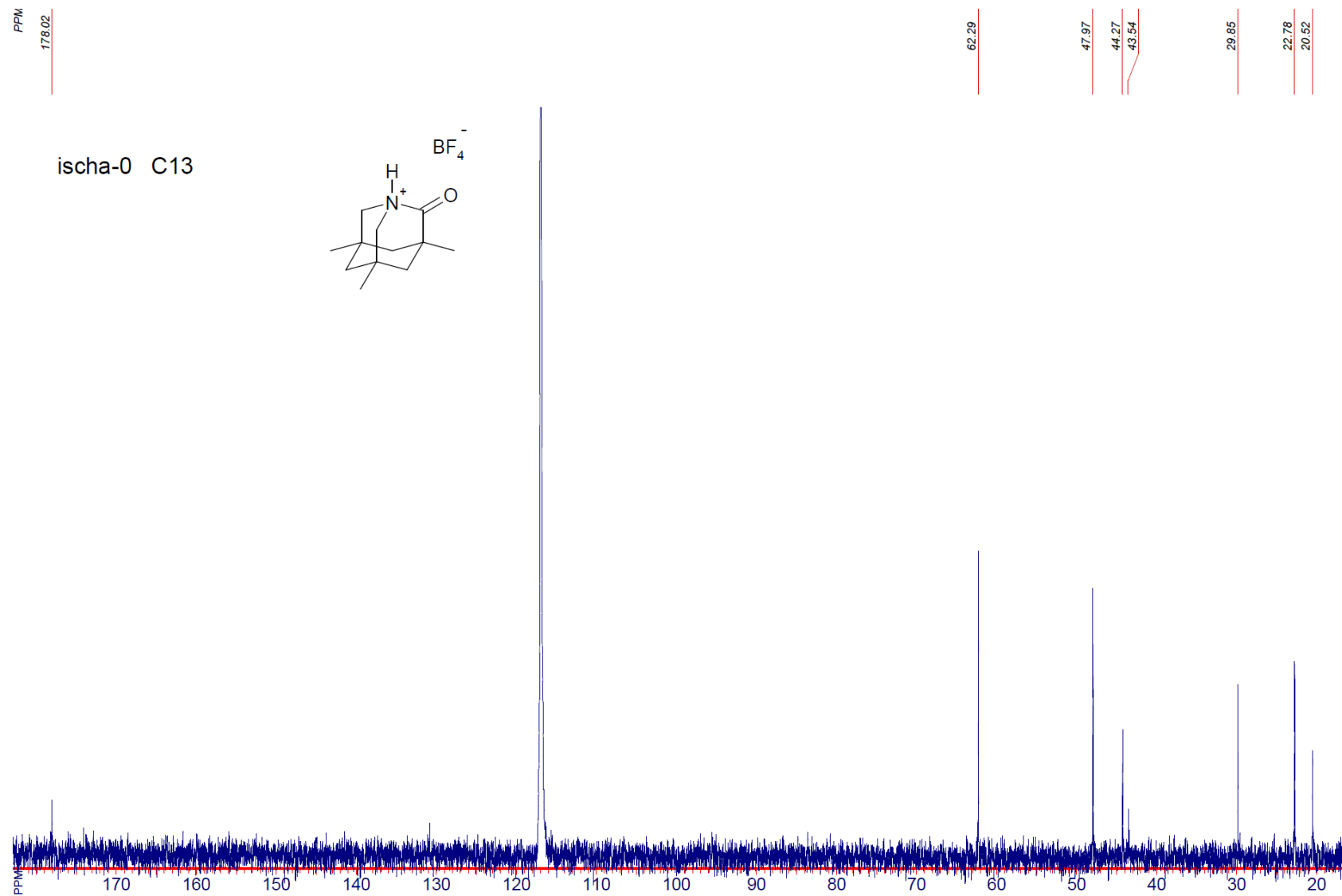
^{13}C -NMR spectrum of **3** (CD_3CN , 124.9 MHz).



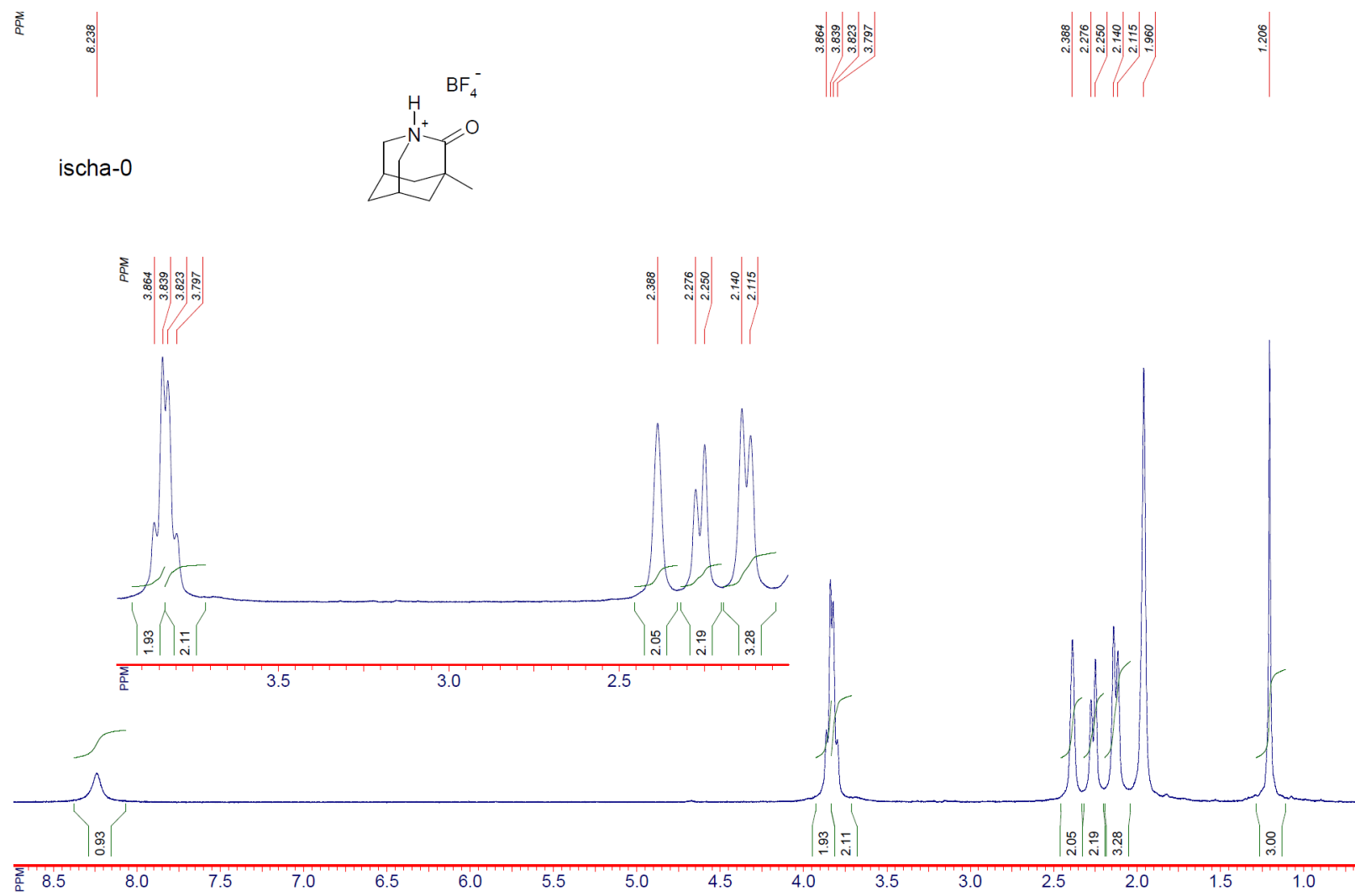
IR spectrum of **3** (Attenuated Total Reflectance (ATR) mode).



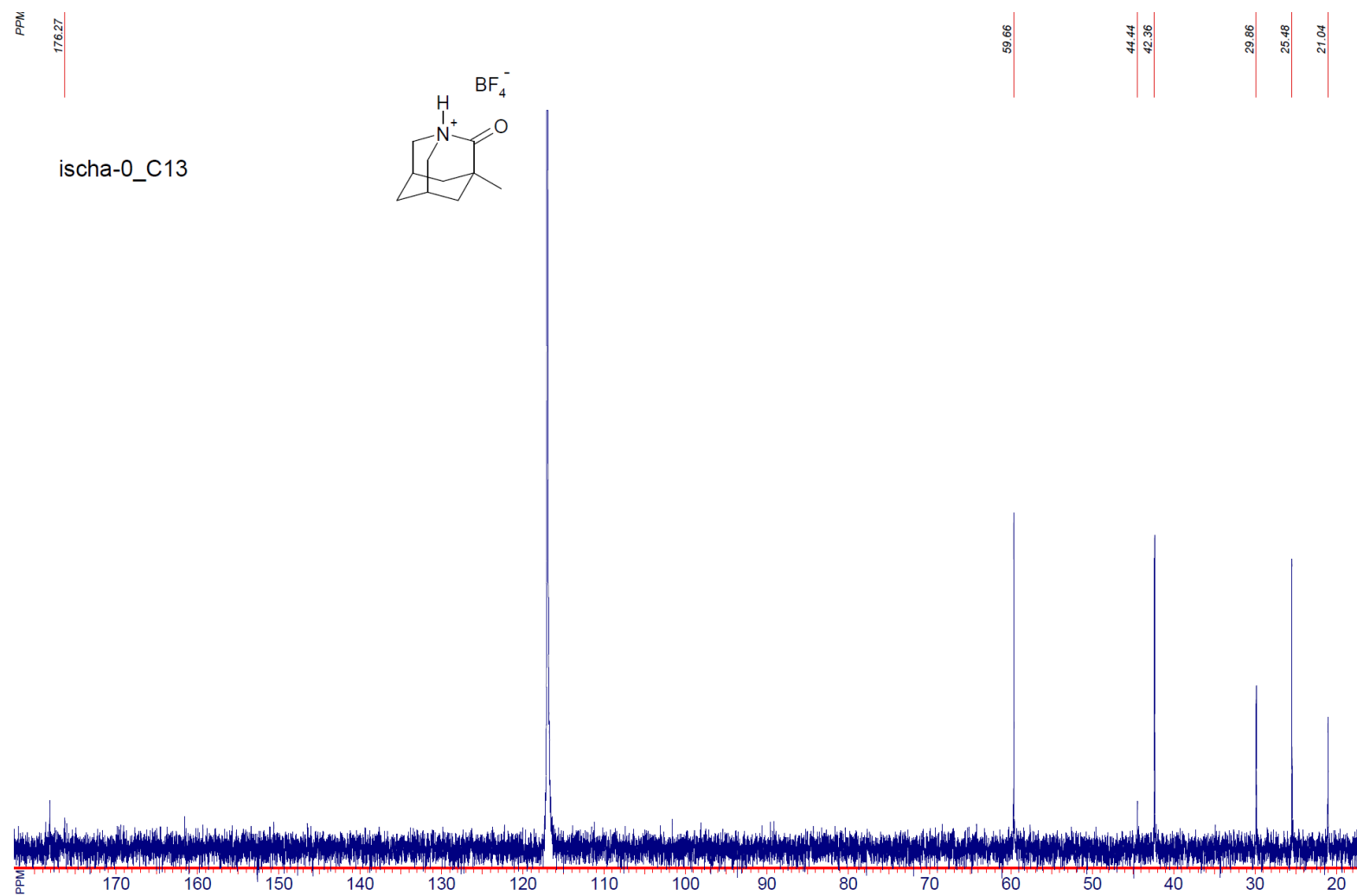
¹H-NMR spectrum of **1**·HBF₄ (CD₃CN, 500 MHz).



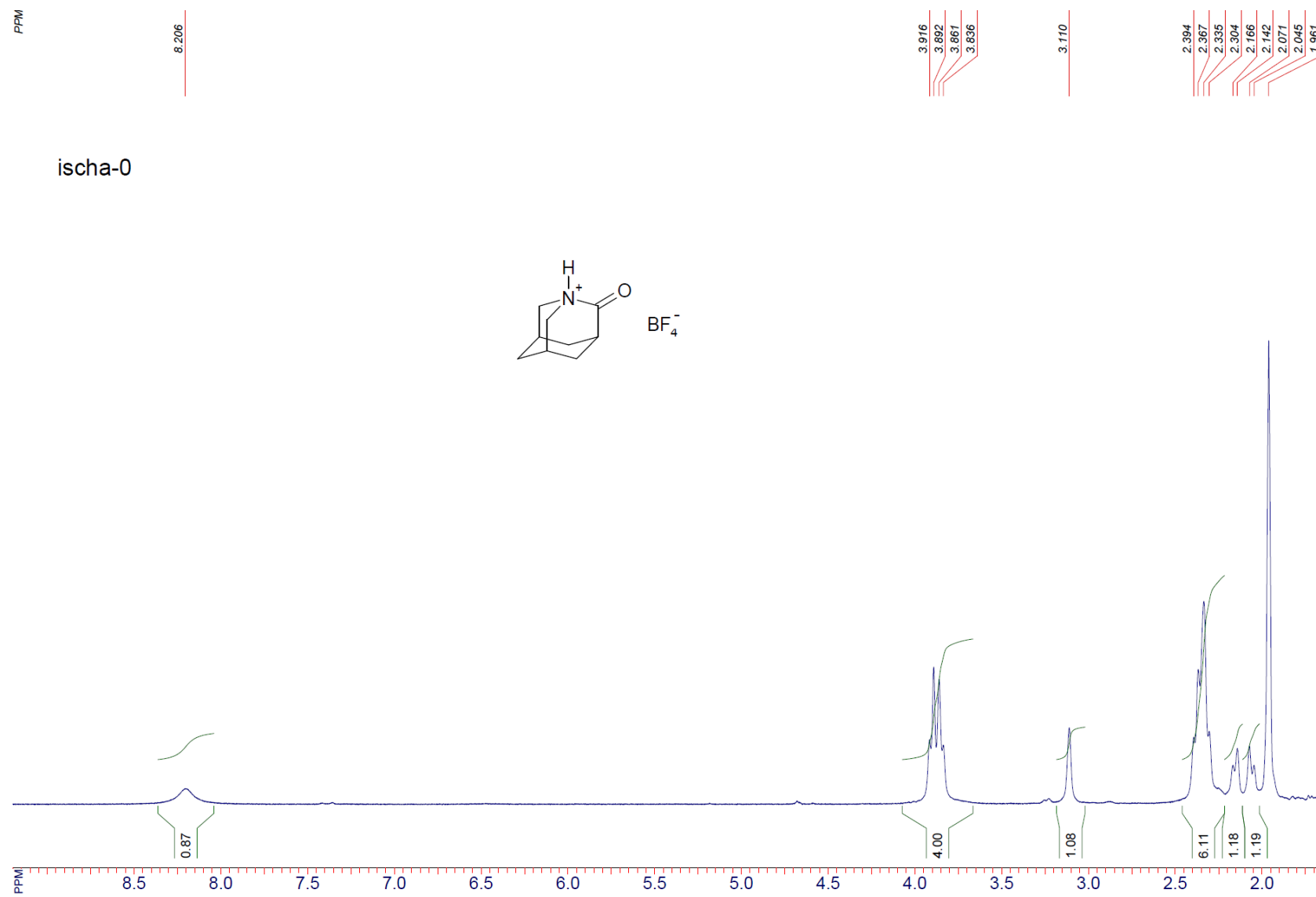
^{13}C -NMR spectrum of **1**· HBF_4 (CD_3CN , 124.9 MHz).



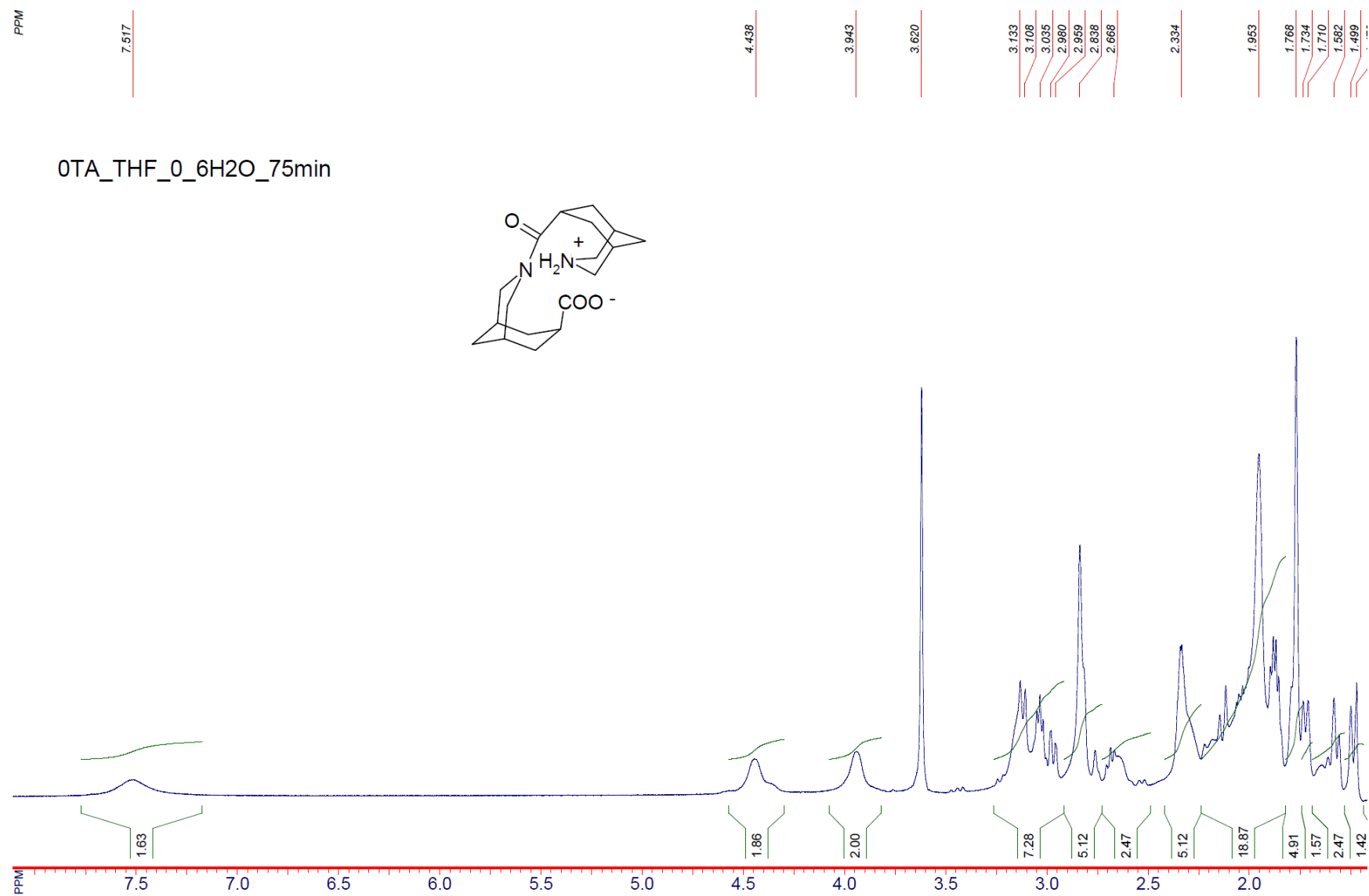
^1H -NMR spectrum of **2**· HBF_4 (CD_3CN , 500 MHz).



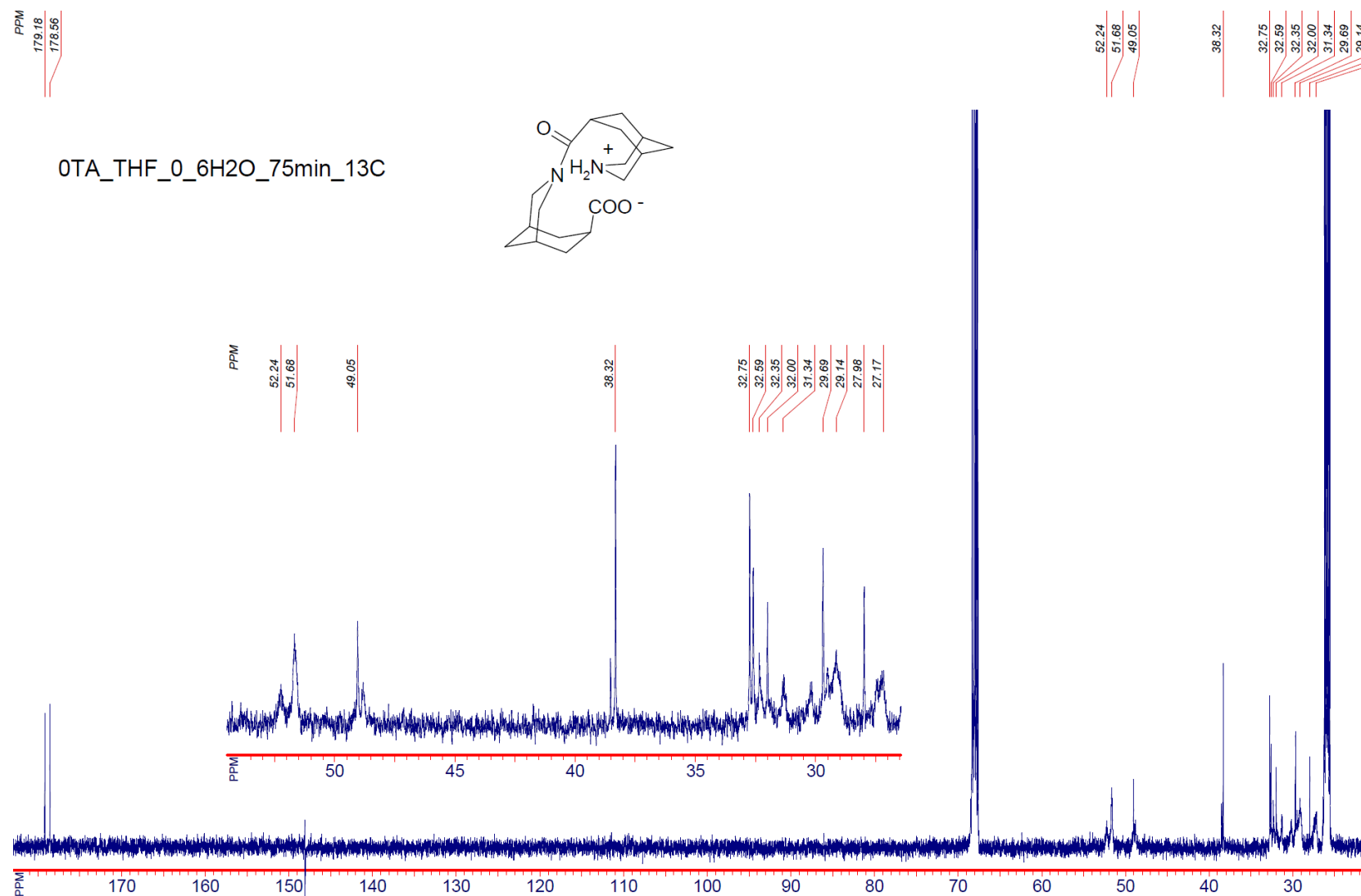
^{13}C -NMR spectrum of **2**· HBF_4 (CD₃CN, 124.9 MHz).



^1H -NMR spectrum of **3**· HBF_4 (CD_3CN , 500 MHz).



^1H -NMR spectrum of the reaction mixture of **3** and 0.6 equiv. of water in THF- d_8 after 75 min of the reaction (500 MHz).



¹³C-NMR spectrum of the reaction mixture of **3** and 0.6 equiv. of water in THF-*d*₈ after 75 min of the reaction (124.9 MHz).