

## Supplementary material

### Disubstituted 4-chloro-3-nitrophenylthiourea derivatives: antimicrobial and cytotoxic studies

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**<sup>1</sup>H NMR and <sup>13</sup>C NMR spectra of compounds 20-24 and 27-30.**

ANCl-8 w DMSO

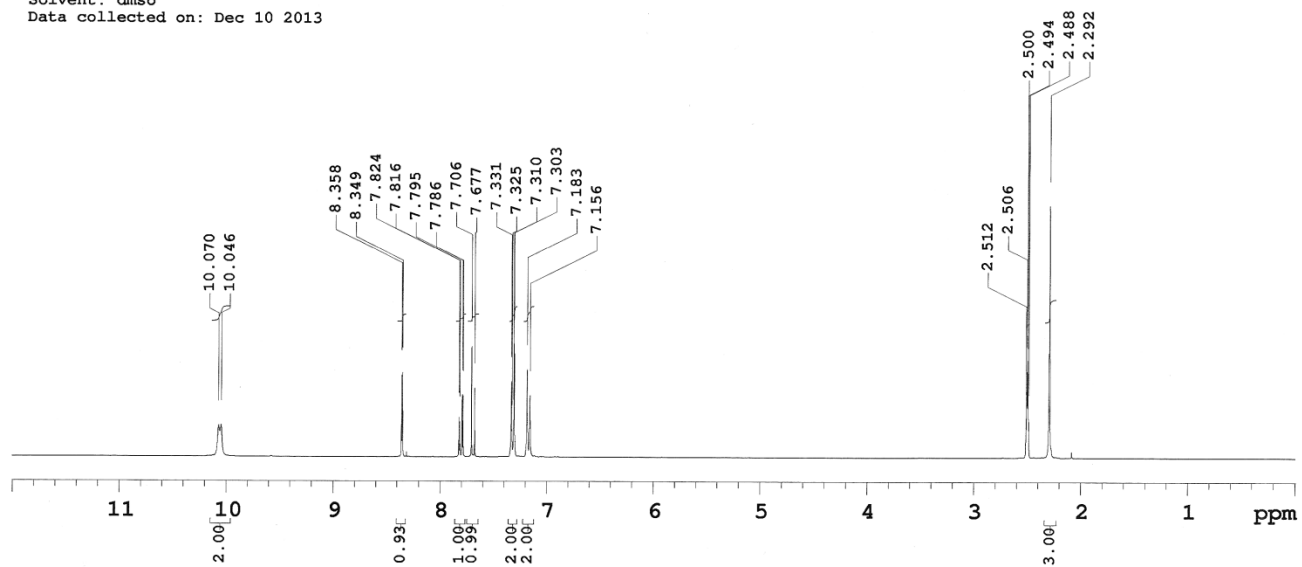
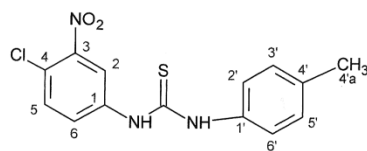
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Data Collected on:  
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Archive directory:

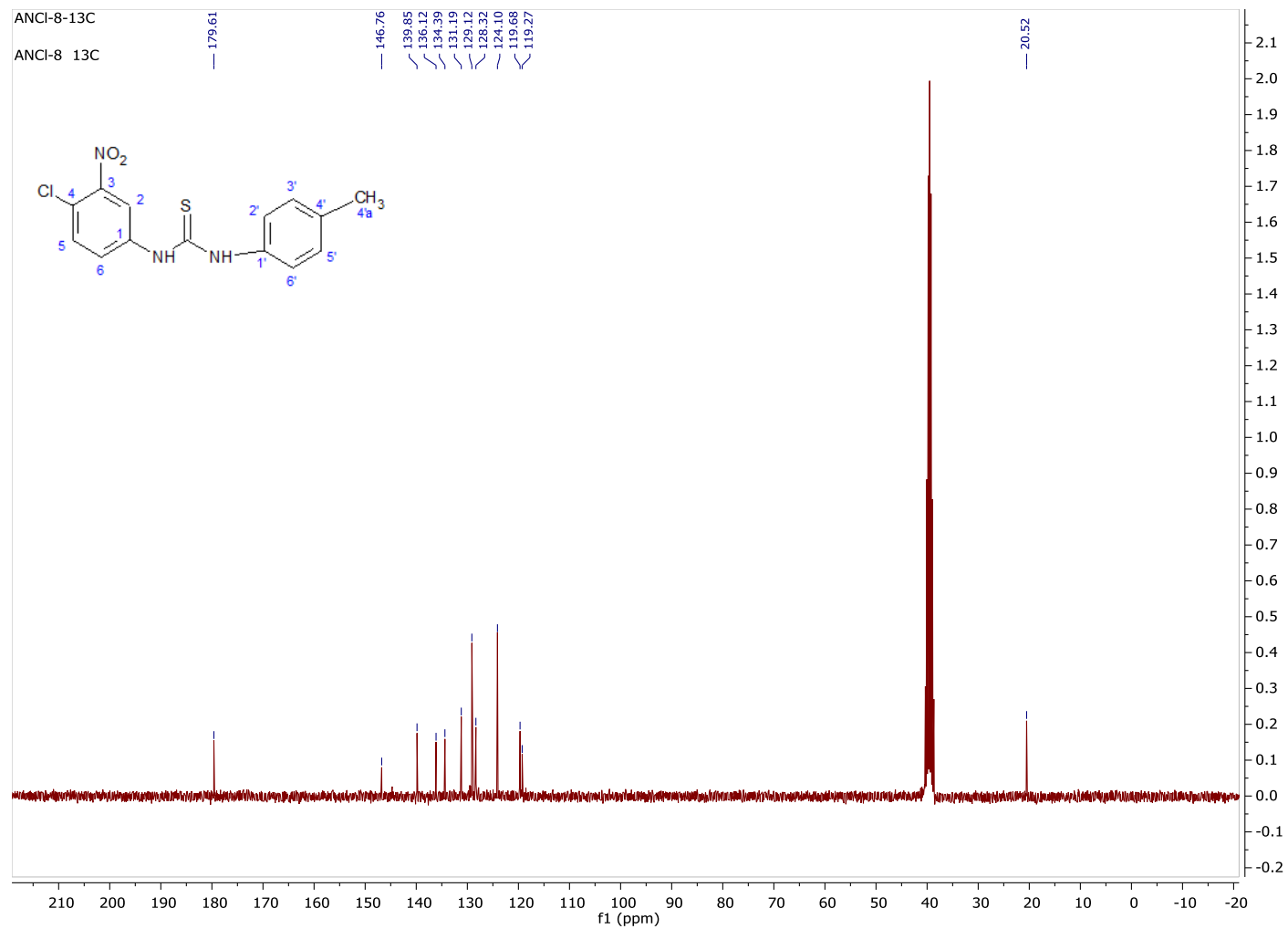
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FidFile: ANCl-8

Pulse Sequence: PROTON (s2pul)  
Solvent: dms0  
Data collected on: Dec 10 2013



Spectrum 1.  $^1\text{H}$  NMR of compd **20** (300 MHz, DMSO- $d_6$ ).



**Spectrum 2.** <sup>13</sup>C NMR of compd **20** (75.4 MHz, DMSO-d<sub>6</sub>).

ANCl-9 w DMSO

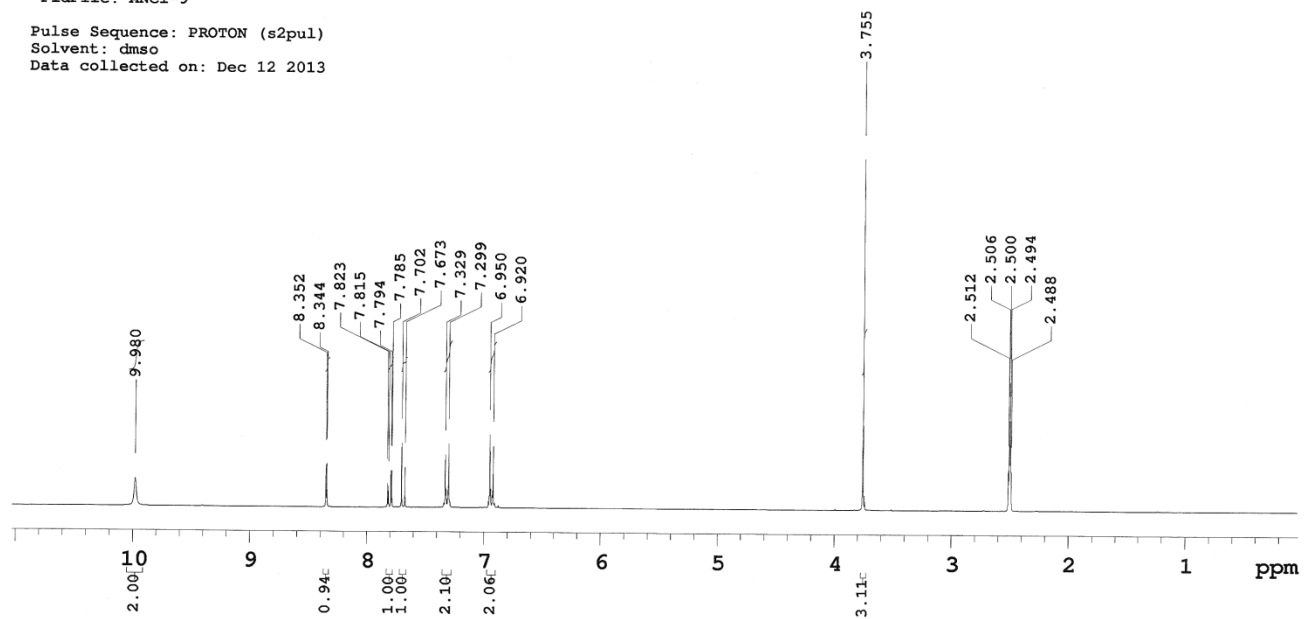
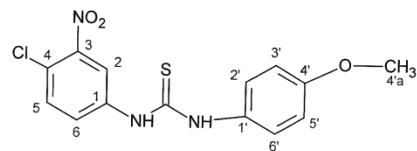
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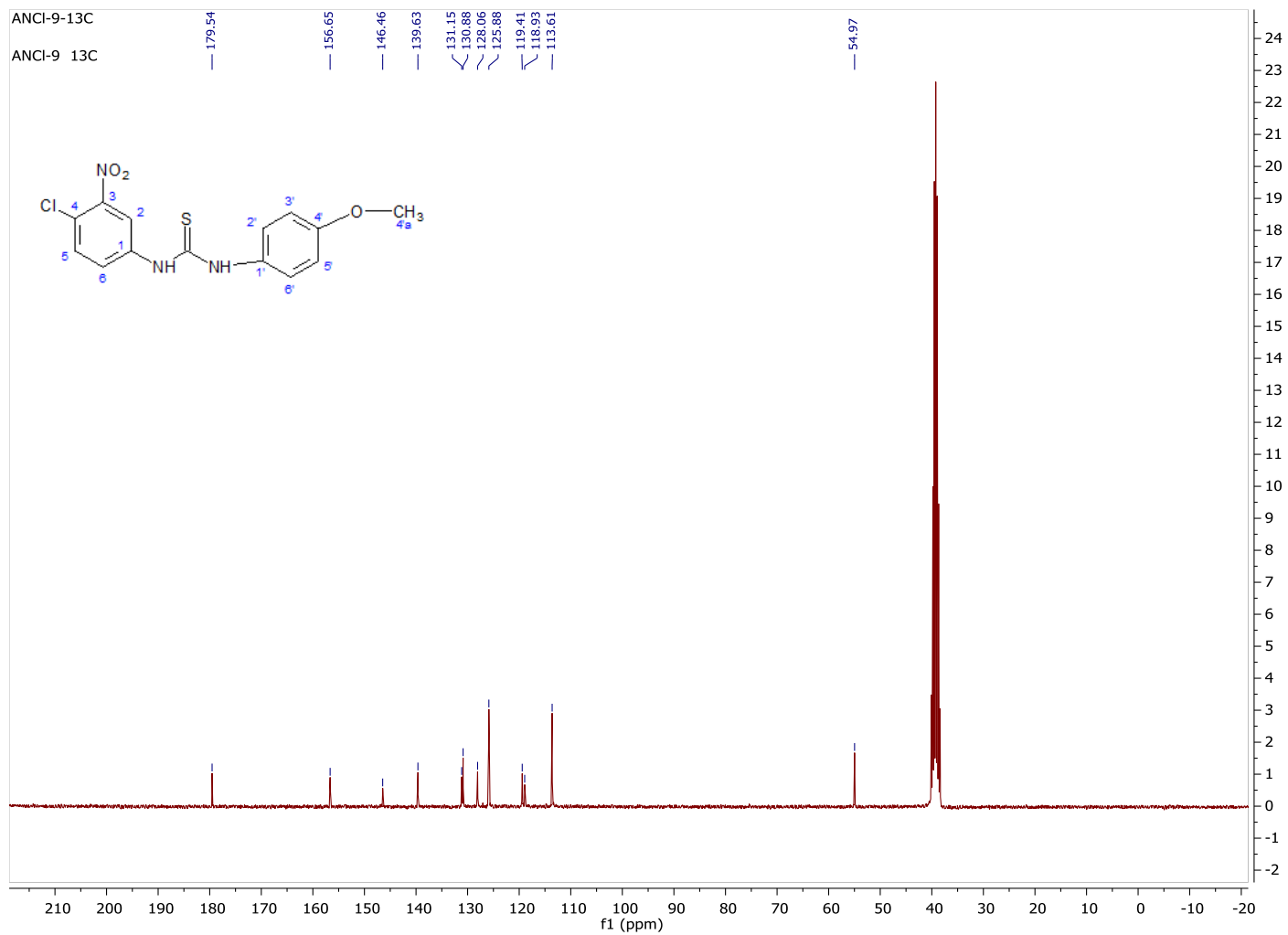
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Solvent: dmsc  
Data collected on: Dec 12 2013

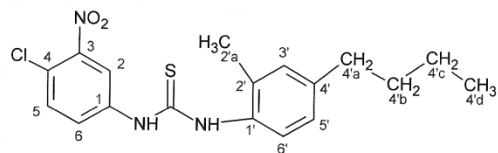


Spectrum 3.  $^1\text{H}$  NMR of compd **21** (300 MHz, DMSO- $d_6$ ).



**Spectrum 4.** <sup>13</sup>C NMR of compd **21** (75.4 MHz, DMSO-d<sub>6</sub>).

ANCL-3 1H



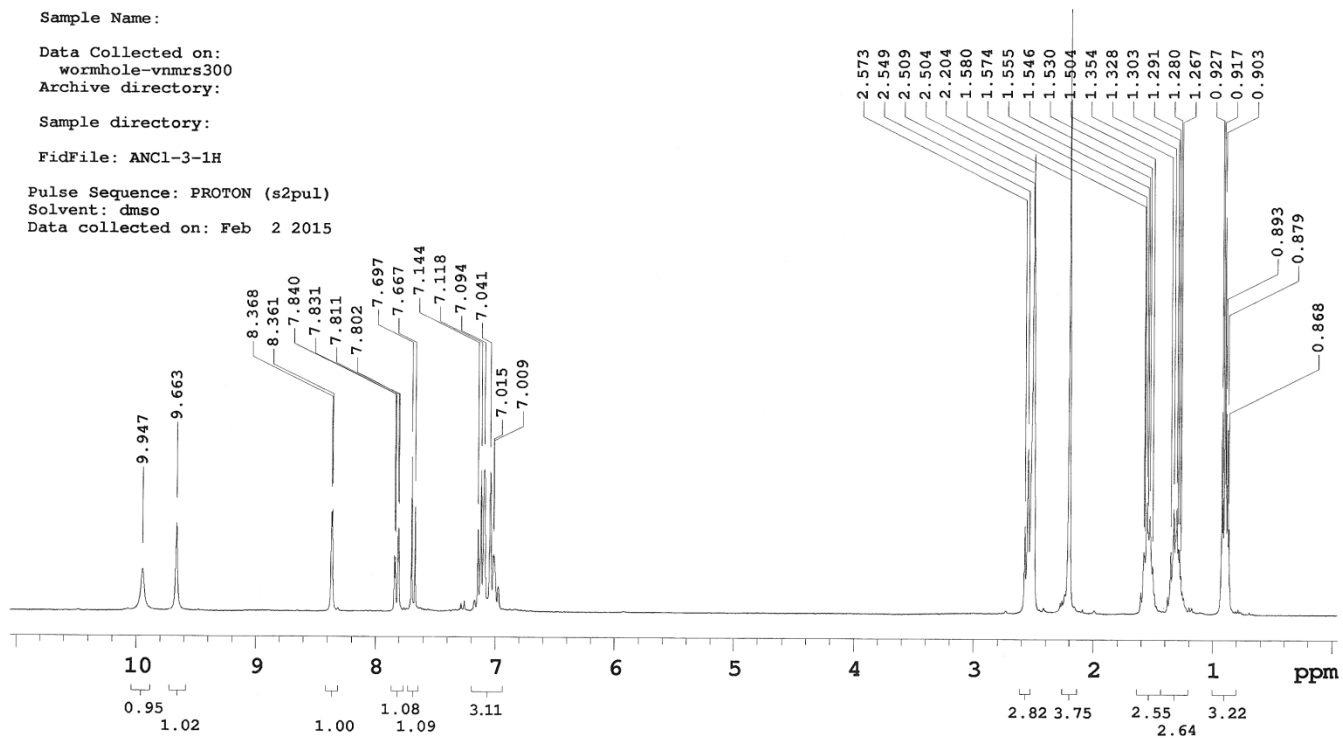
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Data Collected on:  
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Archive directory:

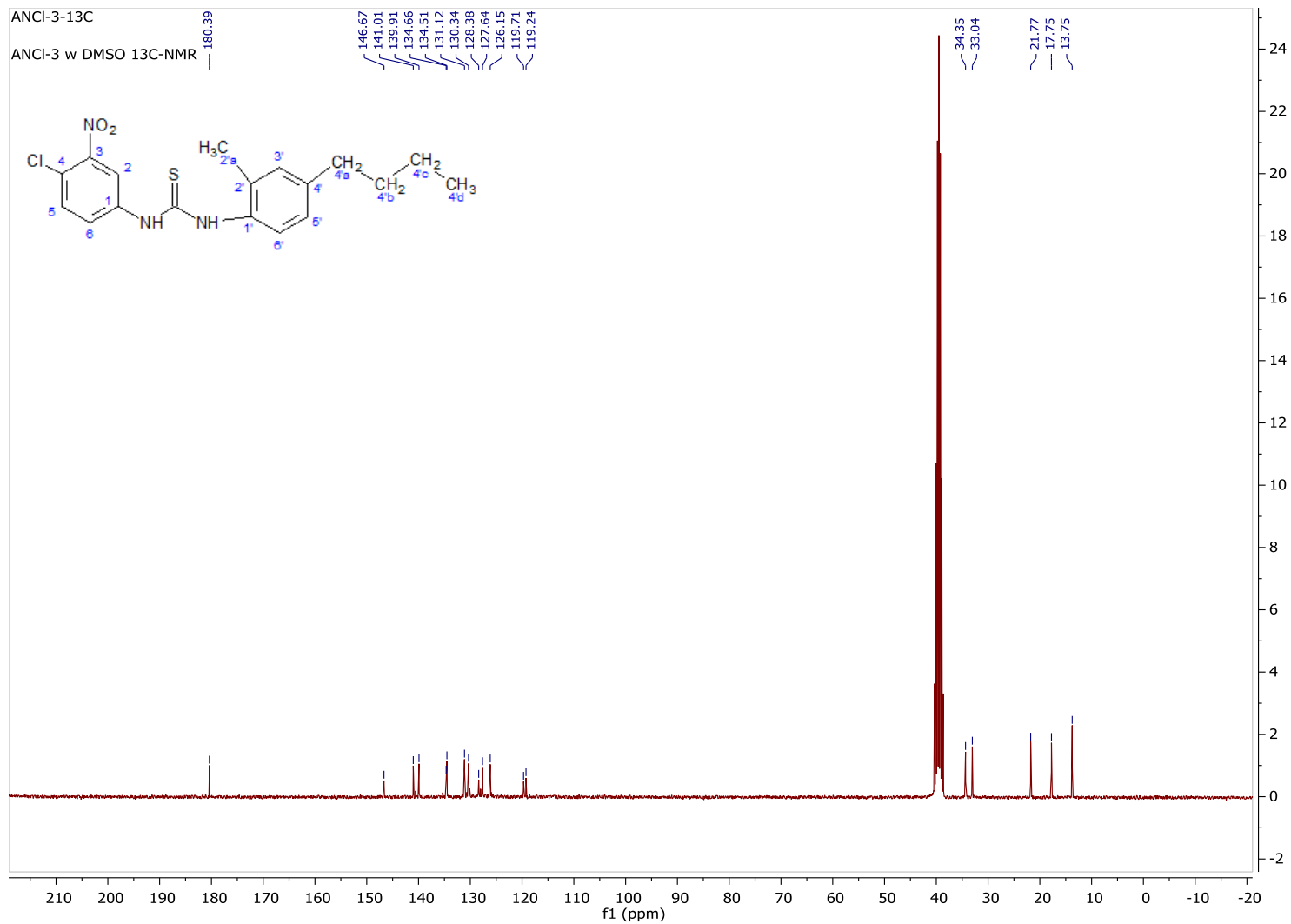
Sample directory:

FidFile: ANCL-3-1H

Pulse Sequence: PROTON (s2pul)  
Solvent: dms0  
Data collected on: Feb 2 2015



Spectrum 5.  $^1\text{H}$  NMR of compd **22** (300 MHz,  $\text{DMSO-d}_6$ ).



**Spectrum 6.**  $^{13}\text{C}$  NMR of compd **22** (75.4 MHz, DMSO- $\text{d}_6$ ).

ANCl-1 w DMSO

Sample Name:

Data Collected on:

wormhole-vnmrs300

Archive directory:

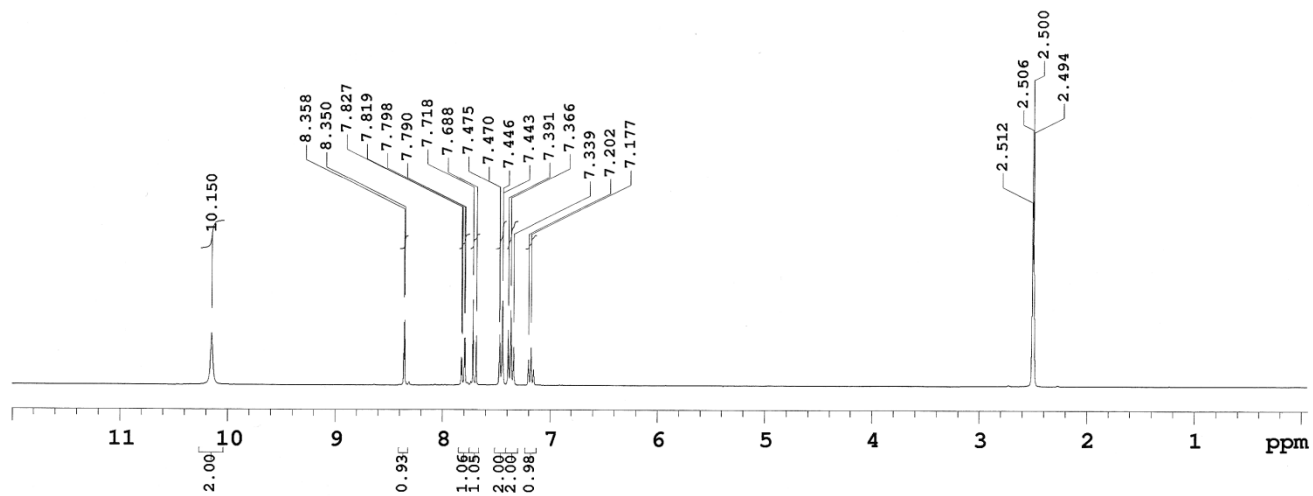
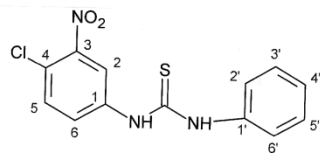
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Pulse Sequence: PROTON (s2pul)

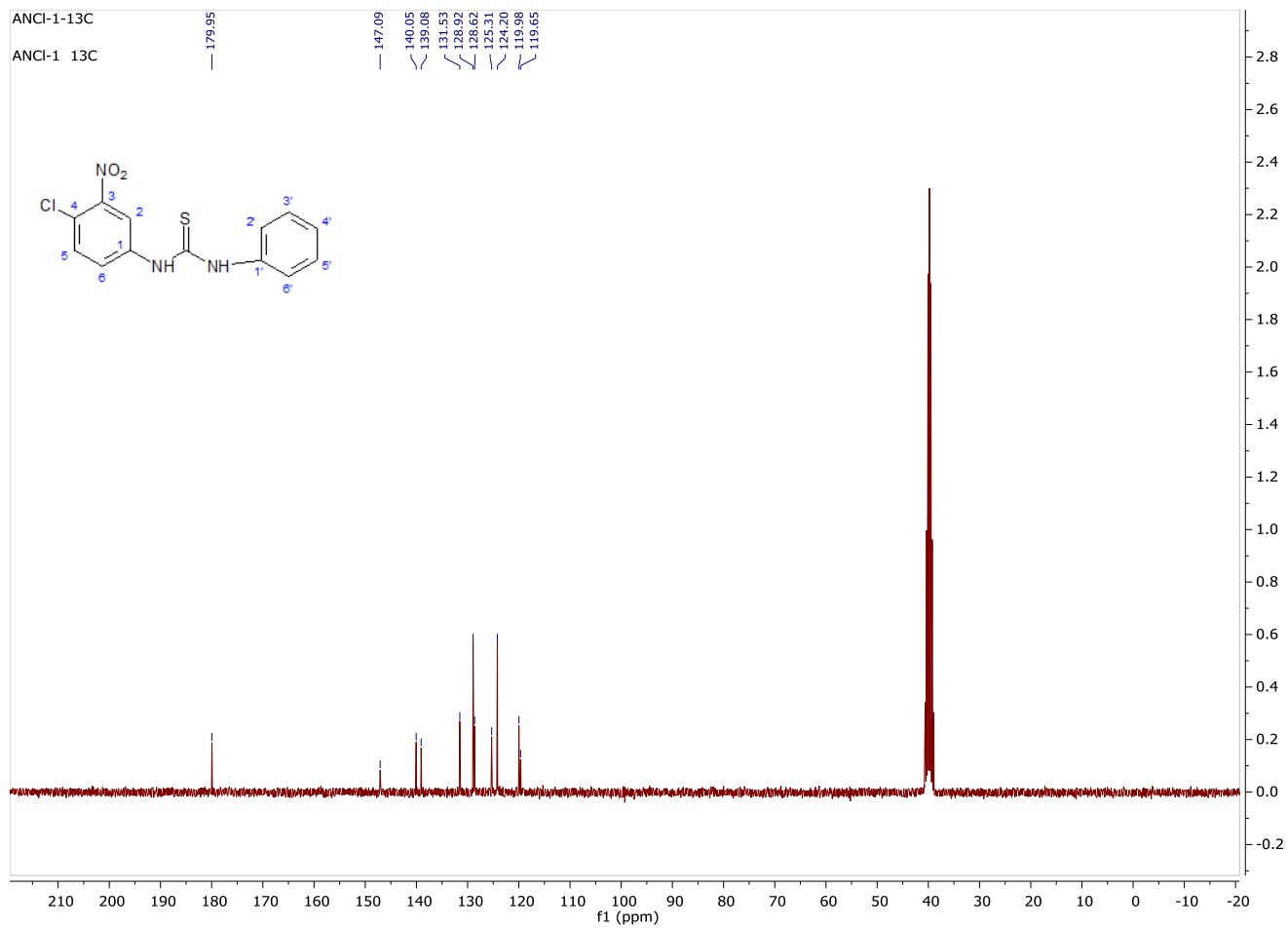
Solvent: dms0

Data collected on: Jun 6 2013



Spectrum 7.  $^1\text{H}$  NMR of compd **23** (300 MHz, DMSO- $d_6$ ).





**Spectrum 8.**  $^{13}\text{C}$  NMR of compd **23** (75.4 MHz,  $\text{DMSO-d}_6$ ).

ANCl-6 w DMSO

Sample Name:

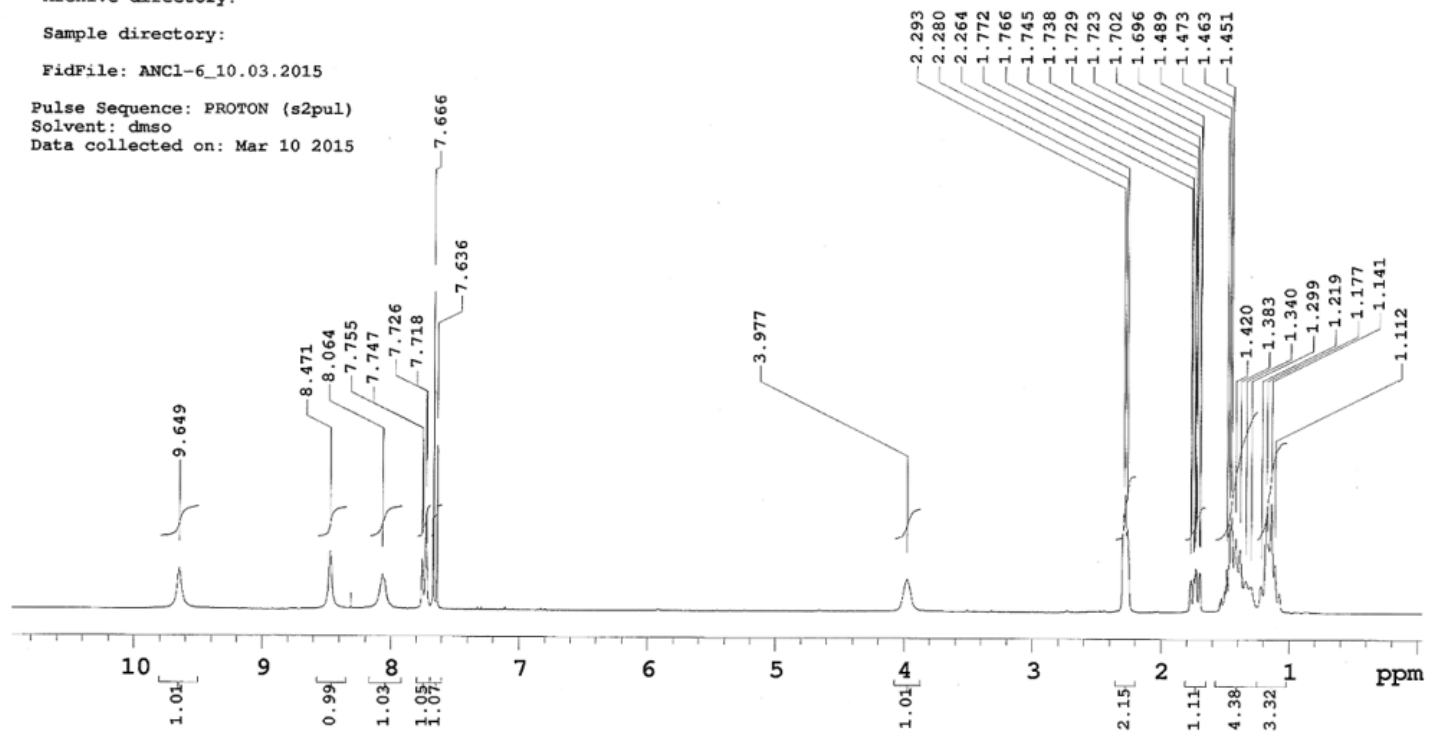
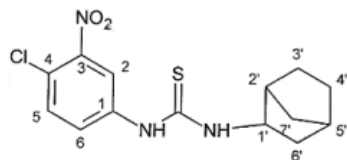
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Archive directory:

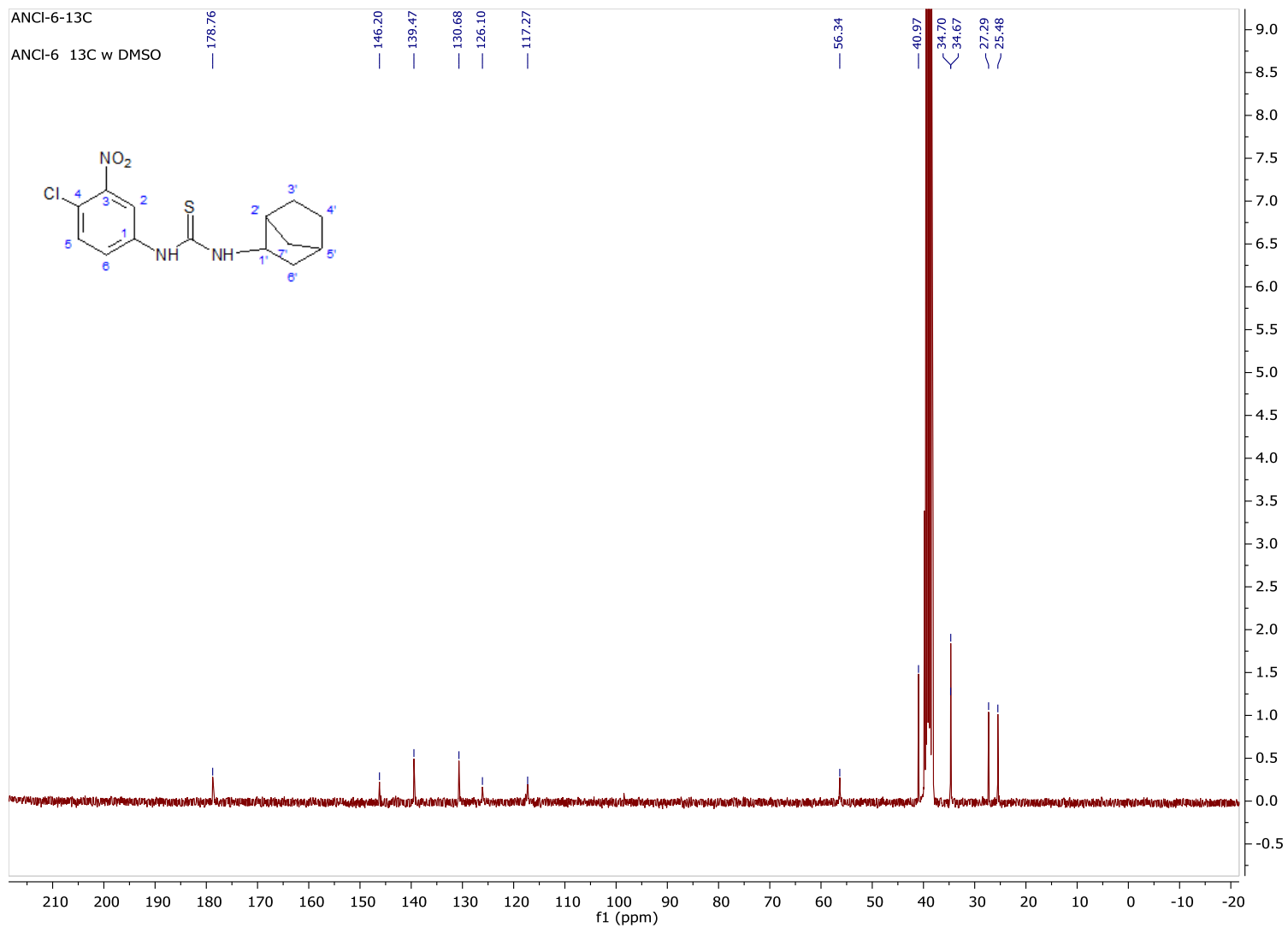
Sample directory:

FidFile: ANCl-6\_10.03.2015

Pulse Sequence: PROTON (s2pul)  
Solvent: dmsd  
Data collected on: Mar 10 2015



Spectrum 9.  $^1\text{H}$  NMR of compd **24** (300 MHz, DMSO- $d_6$ ).



**Spectrum 10.**  $^{13}\text{C}$  NMR of compd 24 (75.4 MHz, DMSO- $\text{d}_6$ ).

ANCl-16 w DMSO

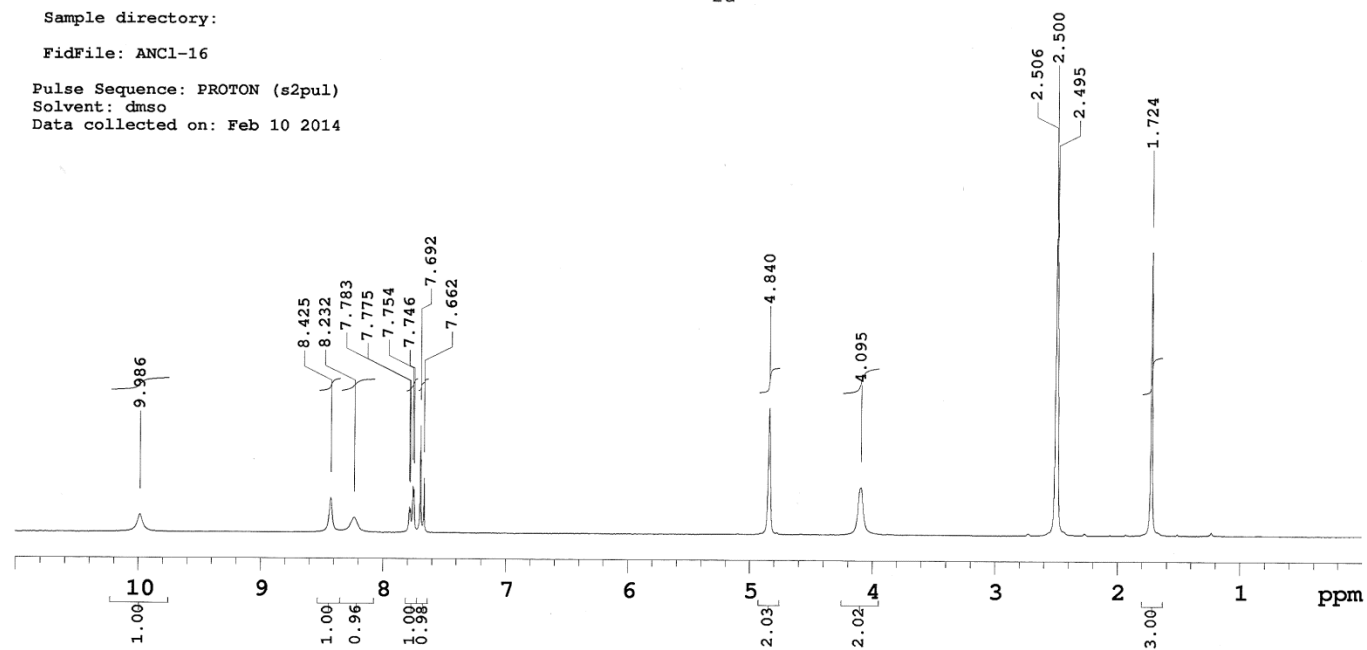
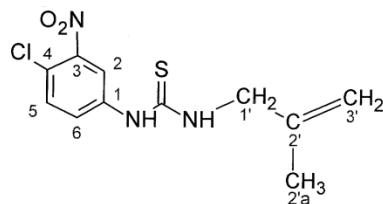
Sample Name:

Data Collected on:  
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Archive directory:

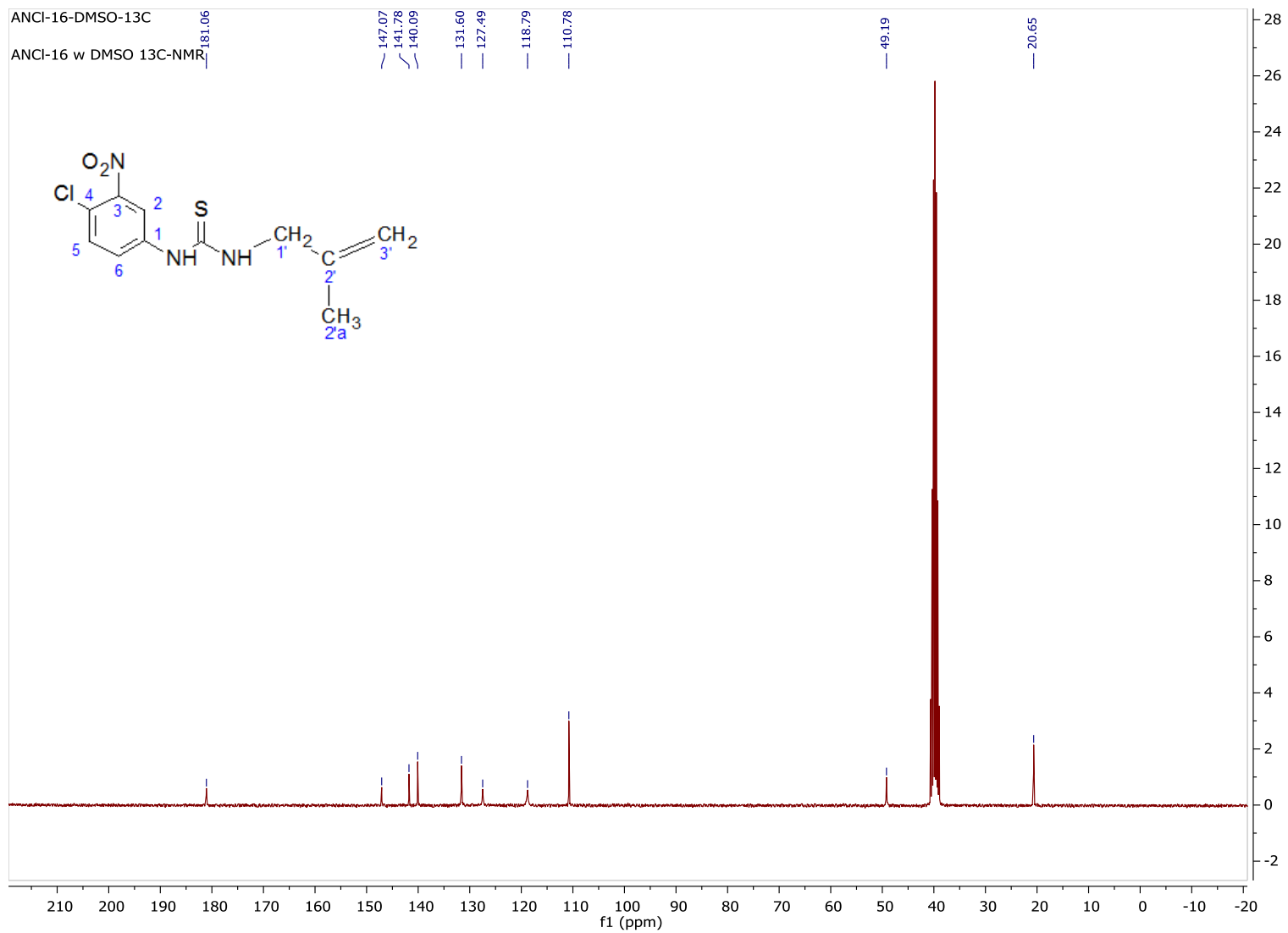
Sample directory:

FidFile: ANCl-16

Pulse Sequence: PROTON (s2pul)  
Solvent: dms0  
Data collected on: Feb 10 2014

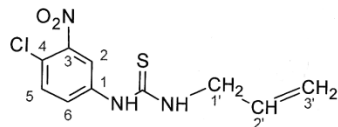


Spectrum 11.  $^1\text{H}$  NMR of compd **27** (300 MHz, DMSO- $d_6$ ).



**Spectrum 12.**  $^{13}\text{C}$  NMR of compd **27** (75.4 MHz, DMSO- $d_6$ ).

ANCl-25 w DMSO



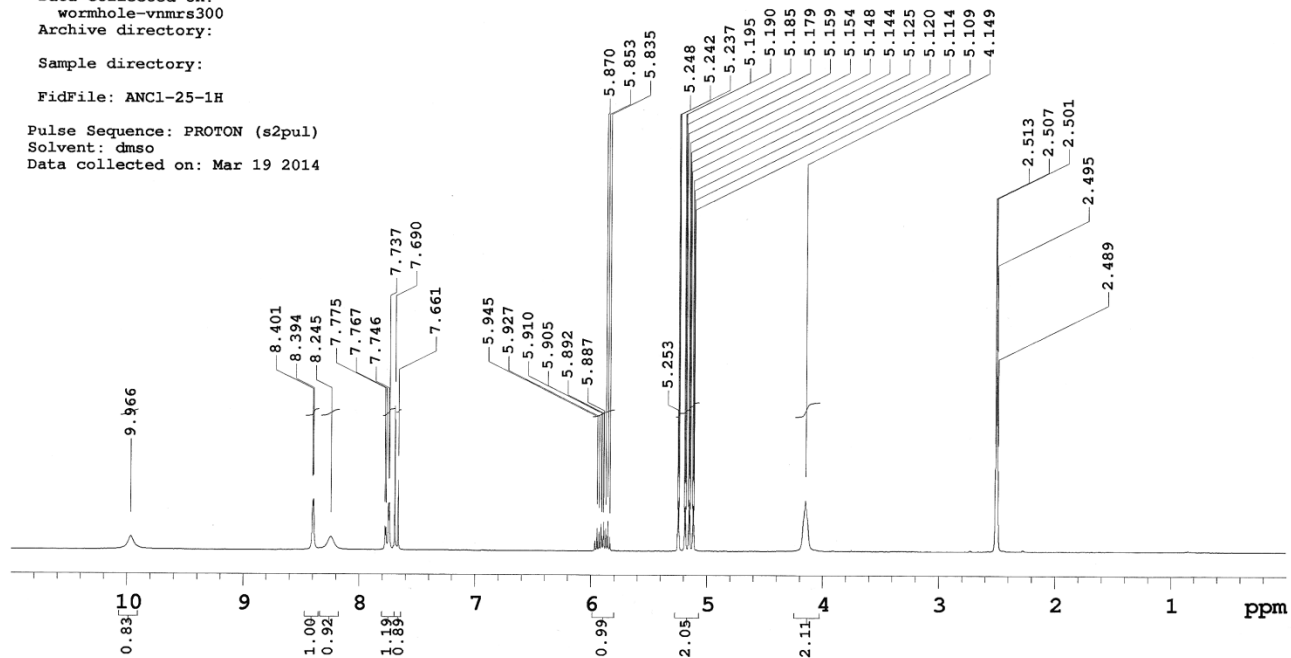
Sample Name:

Data Collected on:  
wormhole-vnmrs300  
Archive directory:

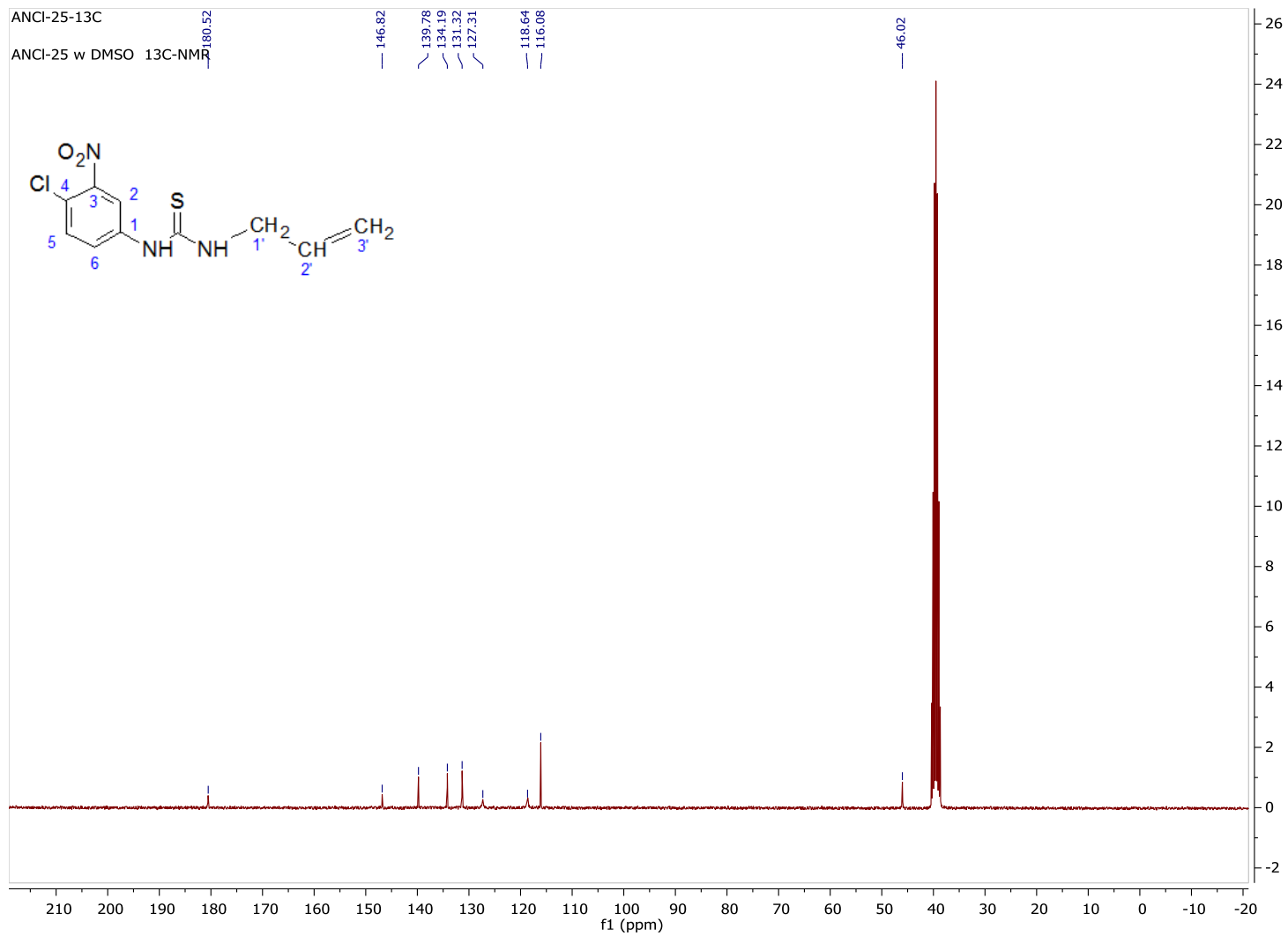
Sample directory:

FidFile: ANCl-25-1H

Pulse Sequence: PROTON (s2pul)  
Solvent: dms0  
Data collected on: Mar 19 2014

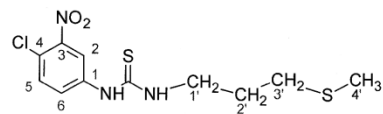


Spectrum 13. <sup>1</sup>H NMR of compd 28 (300 MHz, DMSO-d<sub>6</sub>).



**Spectrum 14.**  $^{13}\text{C}$  NMR of compd **28** (75.4 MHz,  $\text{DMSO-d}_6$ ).

ANCL-18 w DMSO



Sample Name:

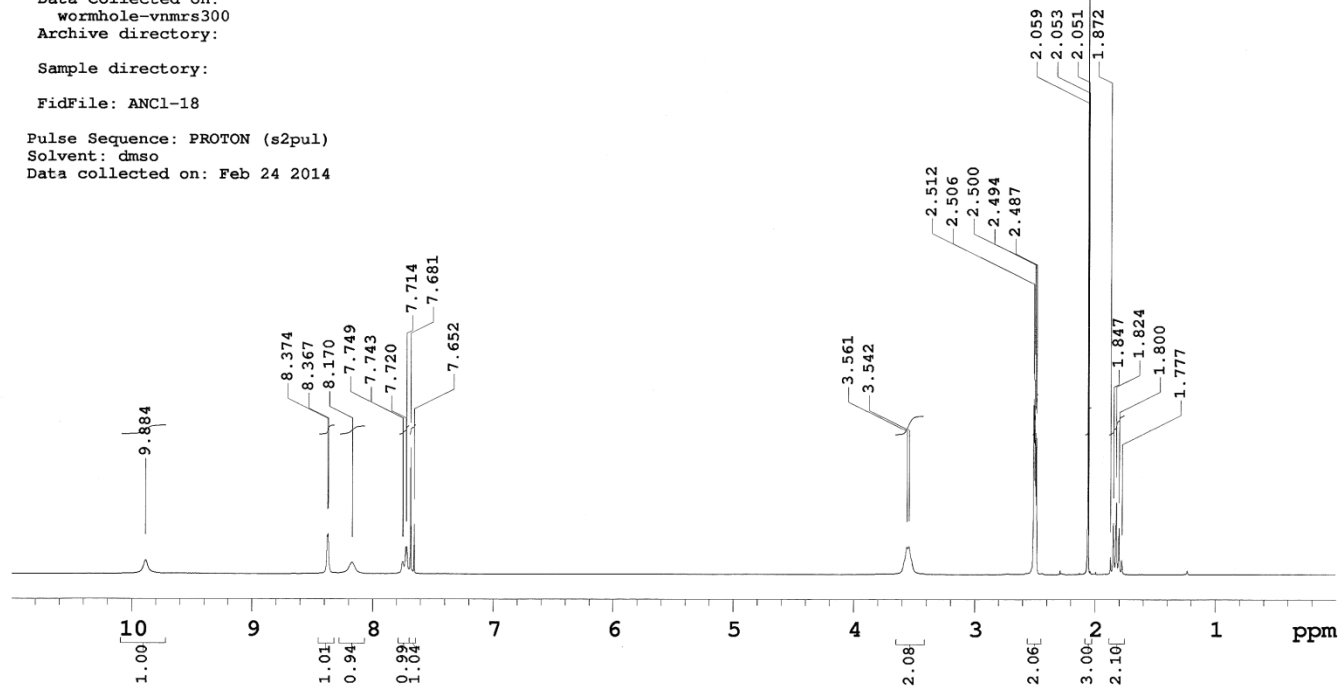
Data Collected on:  
wormhole-vnmrs300

Archive directory:

Sample directory:

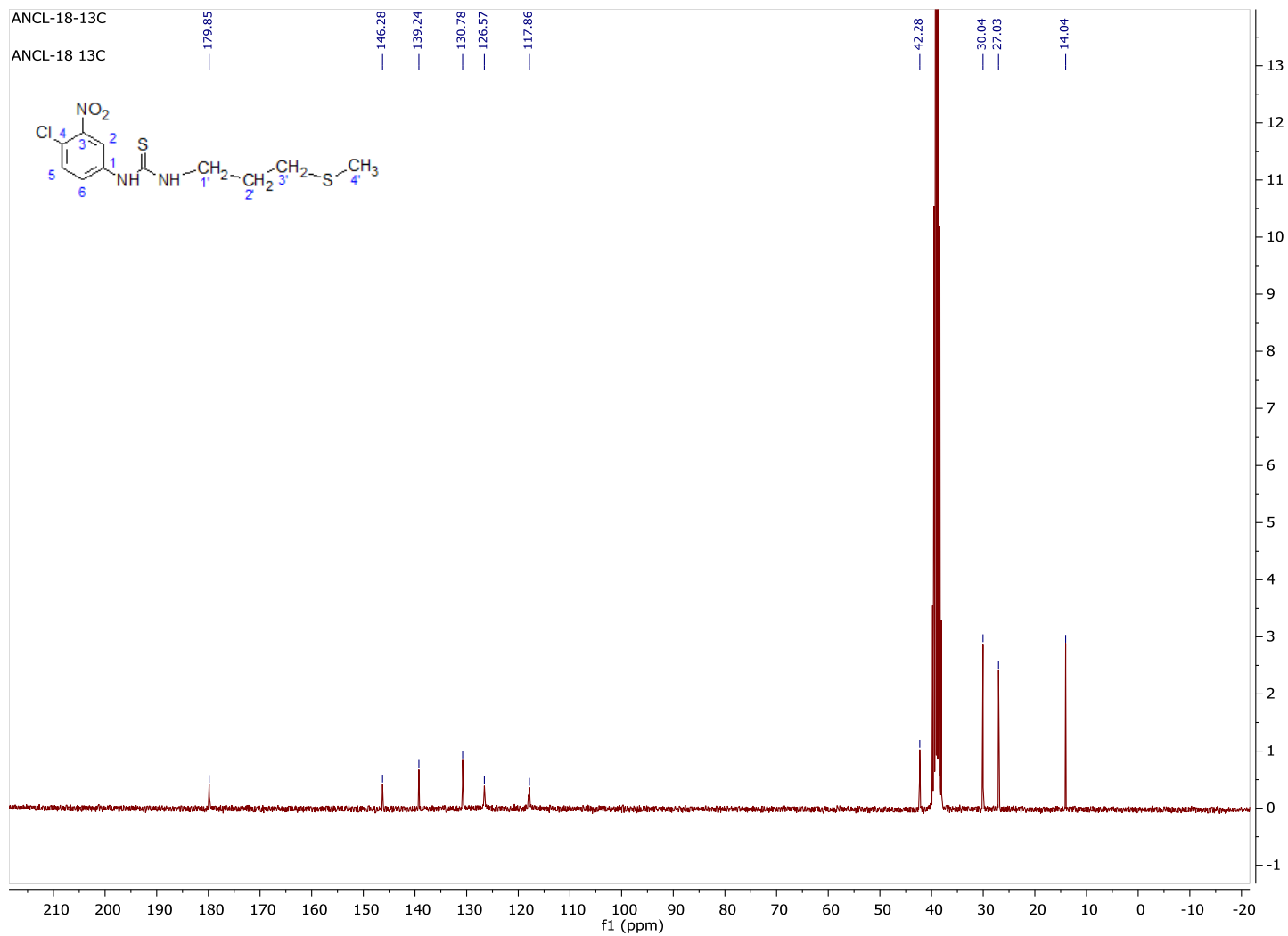
FidFile: ANCL-18

Pulse Sequence: PROTON (s2pul)  
Solvent: dms0  
Data collected on: Feb 24 2014



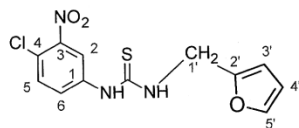
Spectrum 15. <sup>1</sup>H NMR of compd 29 (300 MHz, DMSO-d<sub>6</sub>).





**Spectrum 16.**  $^{13}\text{C}$  NMR of compd **29** (75.4 MHz,  $\text{DMSO-d}_6$ ).

ANCL-17 w DMSO



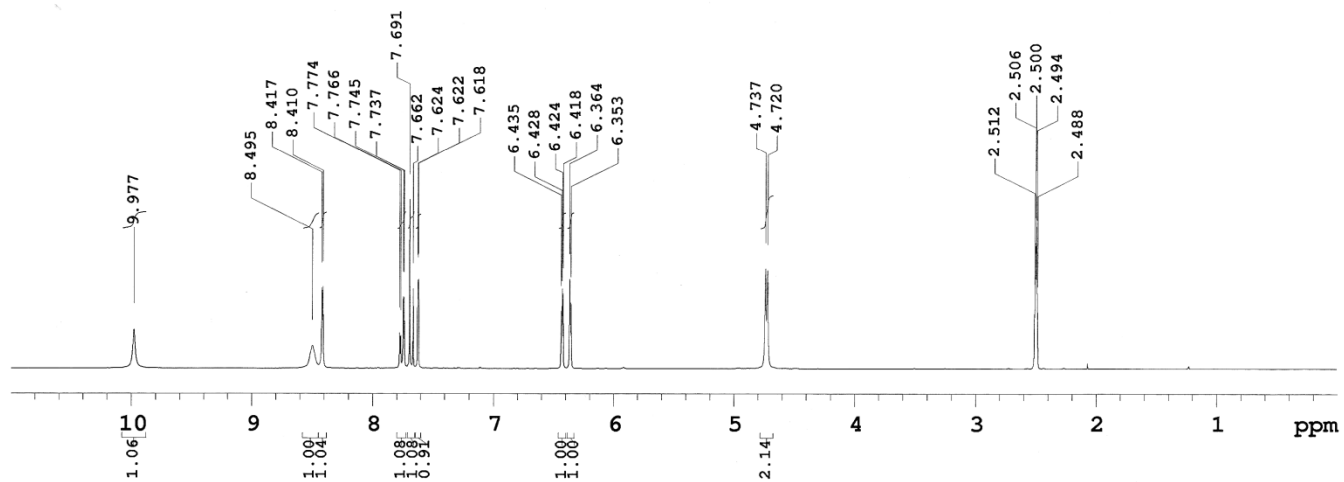
Sample Name:

Data Collected on:  
wormhole-vnmrs300  
Archive directory:

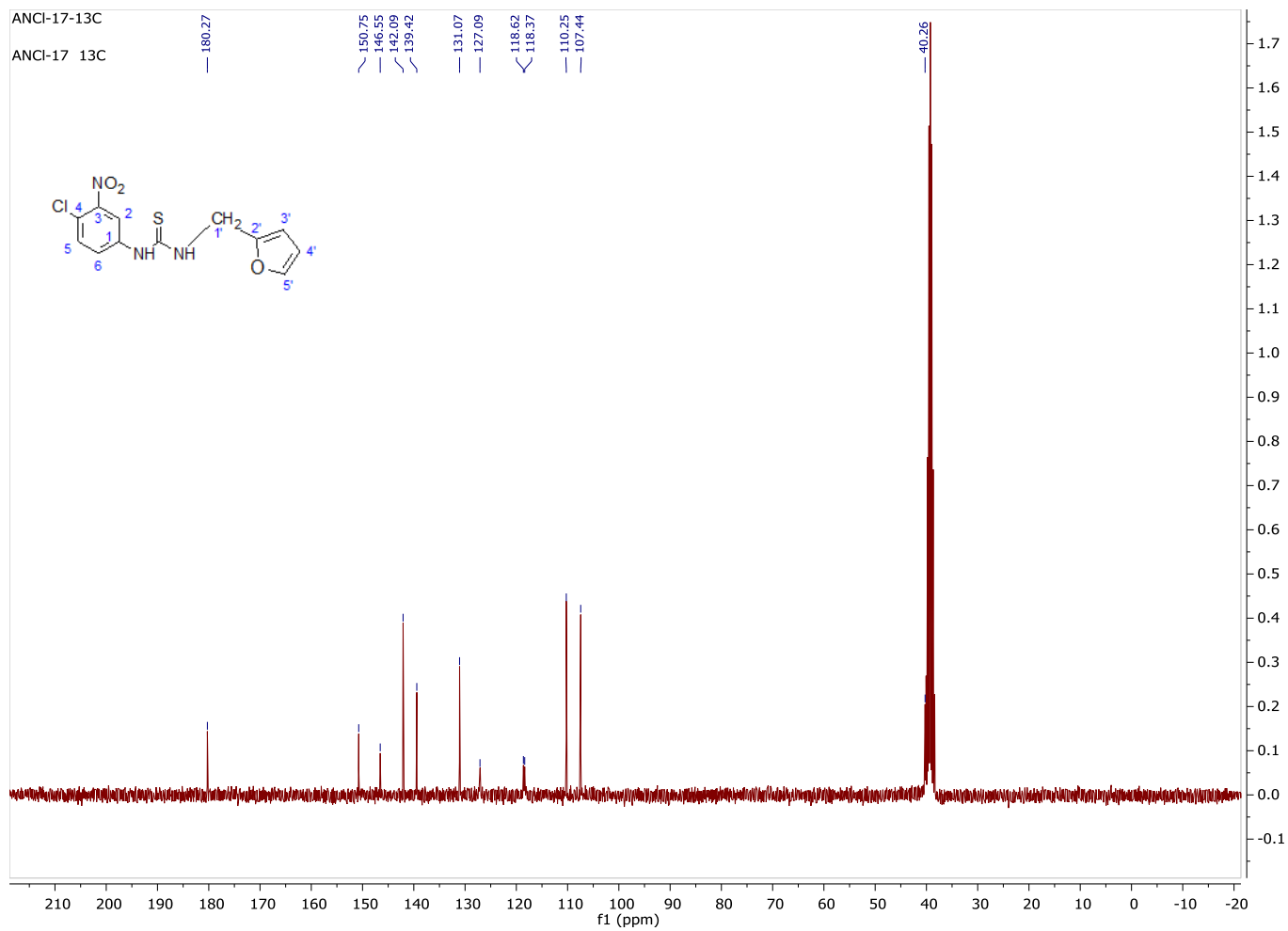
Sample directory:

FidFile: ANCL-17

Pulse Sequence: PROTON (s2pul)  
Solvent: dms0  
Data collected on: Feb 24 2014



Spectrum 17.  $^1\text{H}$  NMR of compd **30** (300 MHz, DMSO- $d_6$ ).



**Spectrum 18.**  $^{13}\text{C}$  NMR of compd **30** (75.4 MHz,  $\text{DMSO-d}_6$ ).