# Access to a Welwitindolinone Core Using Sequential Cycloadditions

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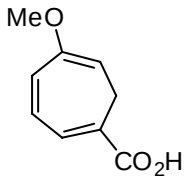
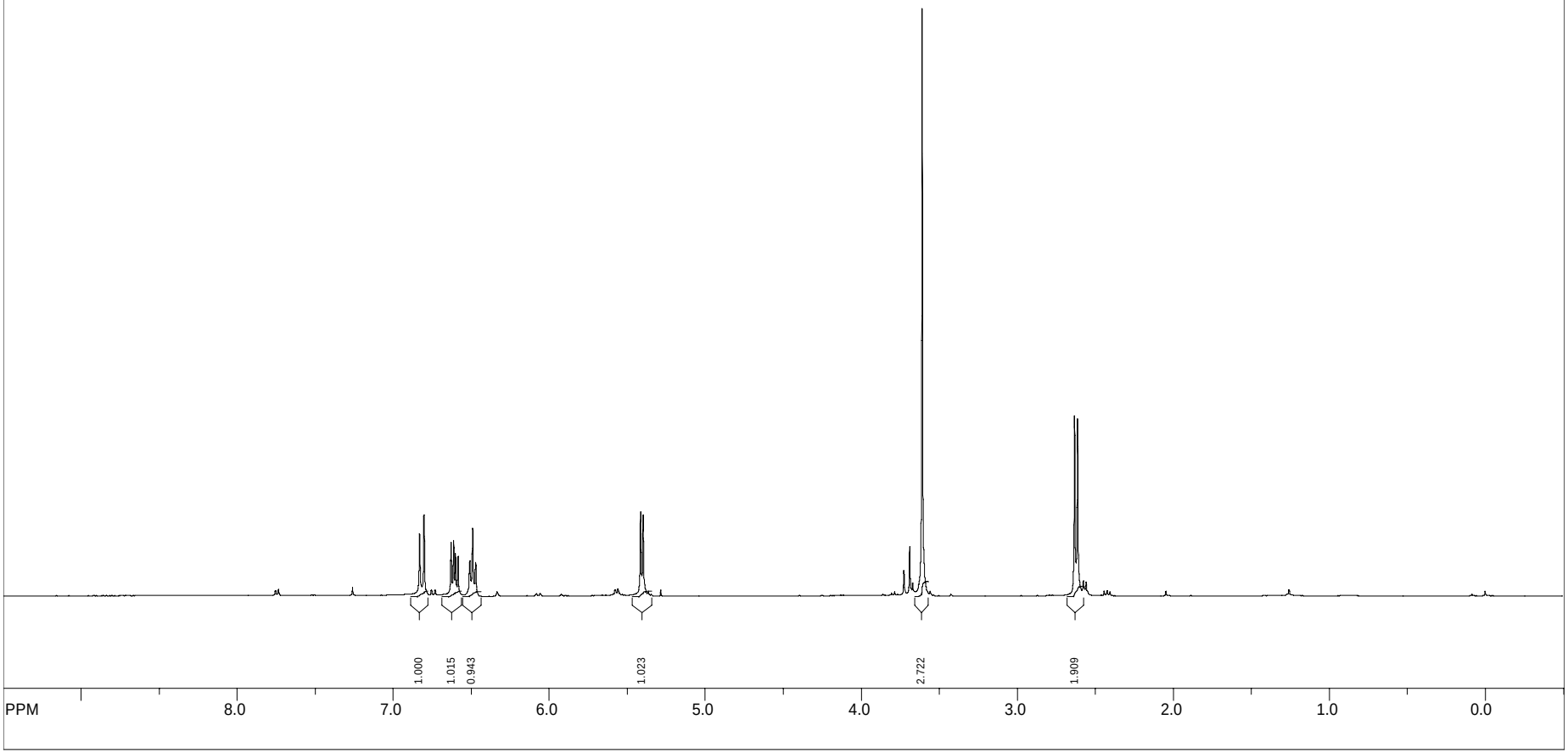
## $^{1}$H and $^{13}$C NMR Spectra

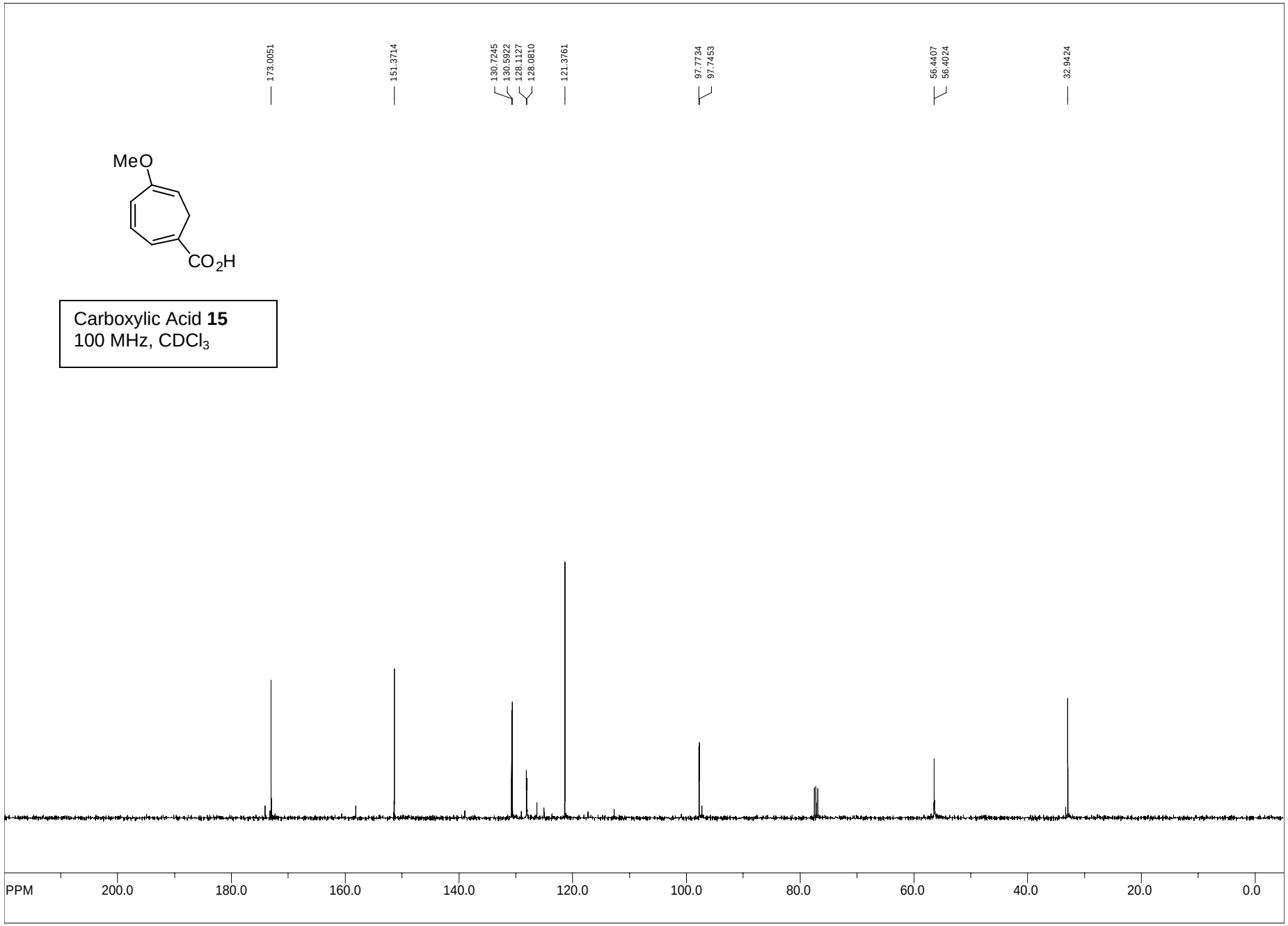



Carboxylic Acid **15**
400 MHz, $CDCl_3$




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Comp Data-3\PJM3-062col.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 399.749384 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022238 ppm = 0.124997 Hz/pt
number of scans: 12

freq. of 0 ppm: 399.747384 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

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transmitter freq.: 100.527090 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.812925 ppm = 0.384468 Hz/pt
number of scans: 120

freq. of 0 ppm: 100.516546 MHz
processed size: 65536 complex points
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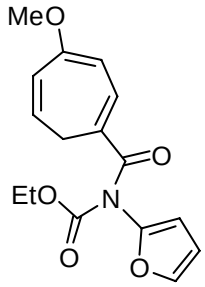
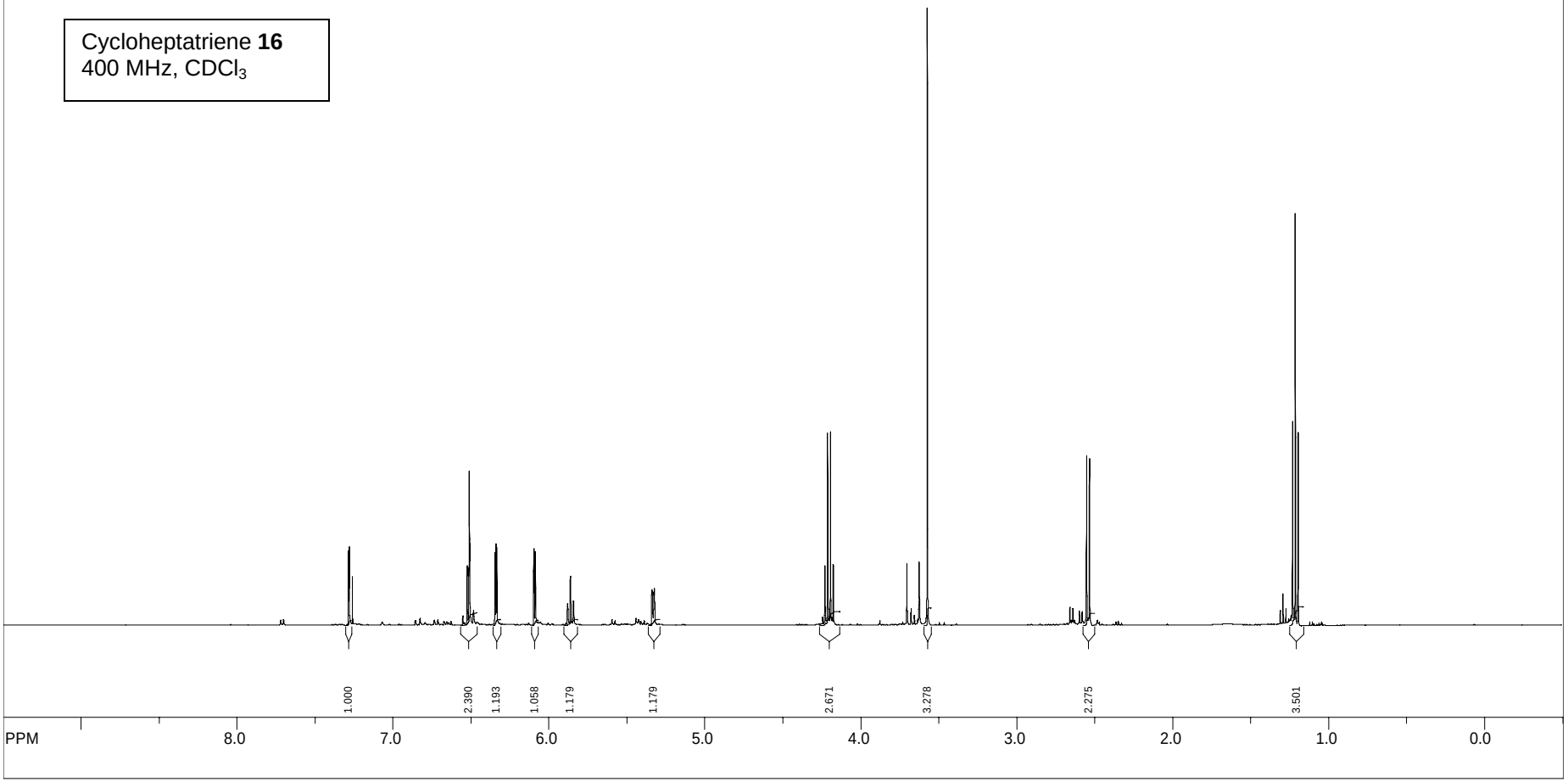



Cycloheptatriene **16**
400 MHz, $CDCl_3$

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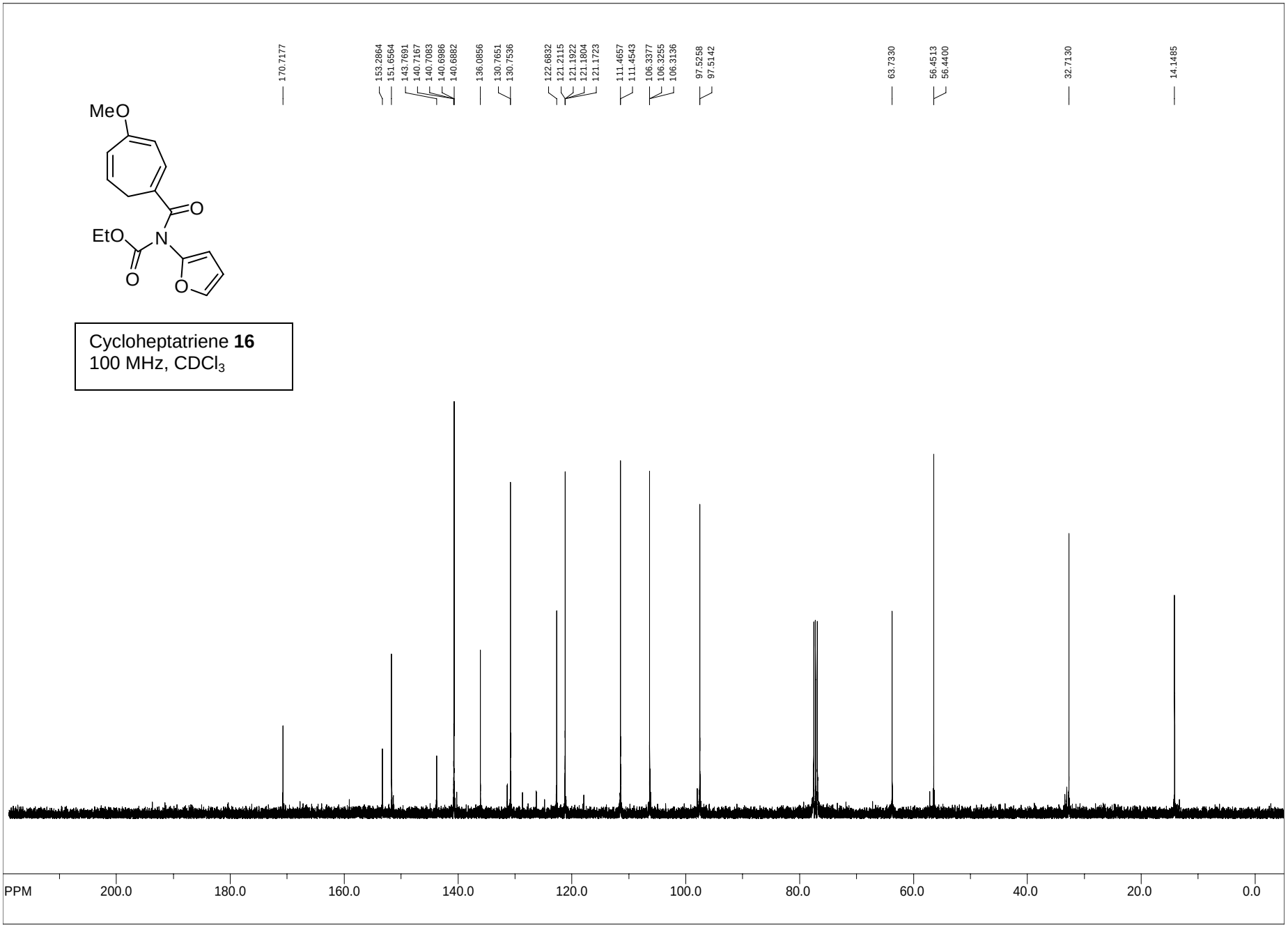
transmitter freq.: 399.749384 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022238 ppm = 0.124997 Hz/pt
number of scans: 8

freq. of 0 ppm: 399.747385 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

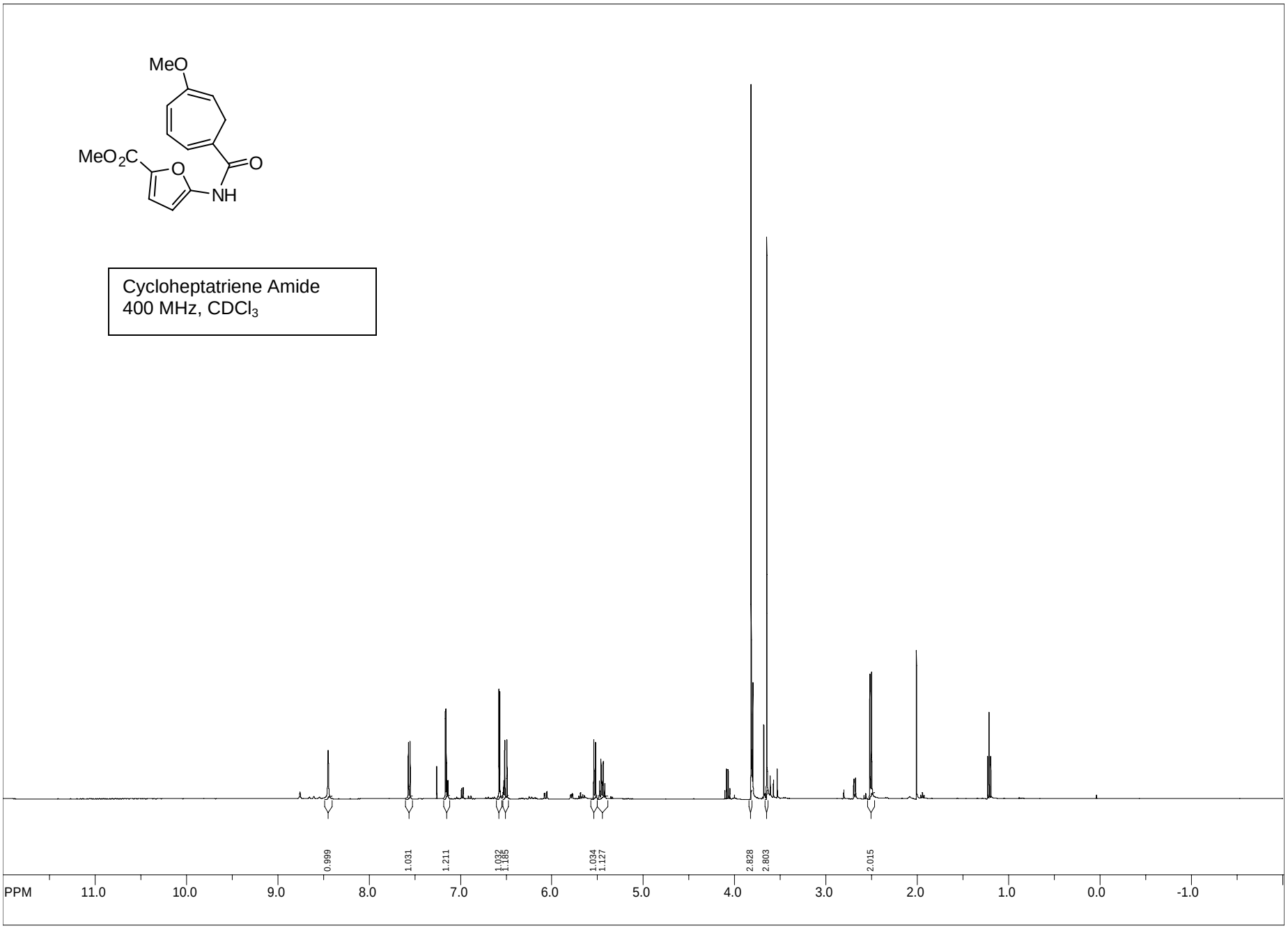
SpinWorks 2.5: 13C OBSERVE




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Comp Data-5\PJM5-022C13.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 100.617627 MHz
time domain size: 59968 points
width: 25000.00 Hz = 248.465411 ppm = 0.416889 Hz/pt
number of scans: 240

freq. of 0 ppm: 100.608109 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

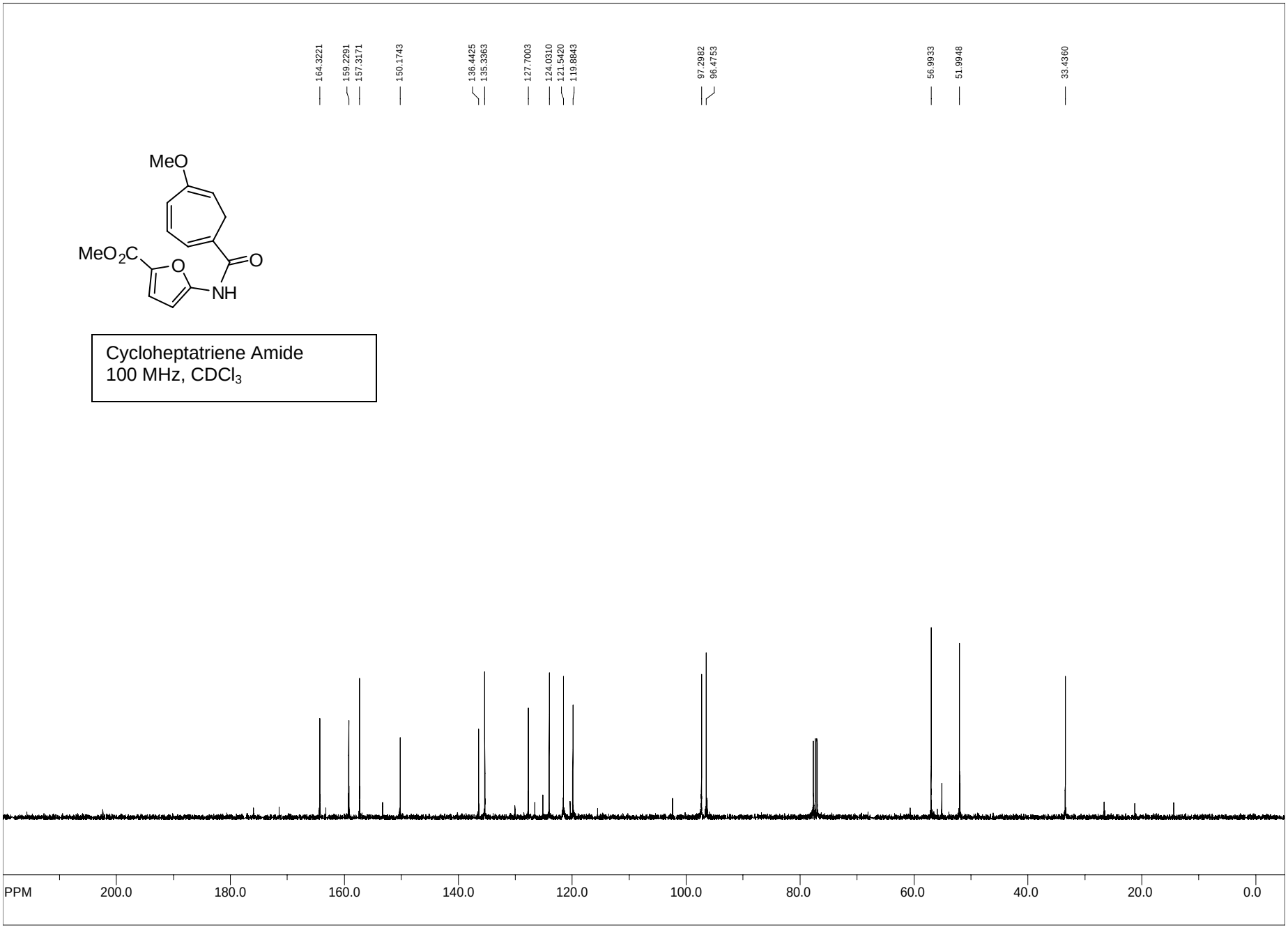
SpinWorks 2.5: Std proton




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Comp Data-5\PJM5-079col.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 399.749384 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022238 ppm = 0.124997 Hz/pt
number of scans: 16

freq. of 0 ppm: 399.747385 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: Std proton

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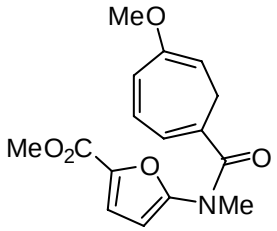
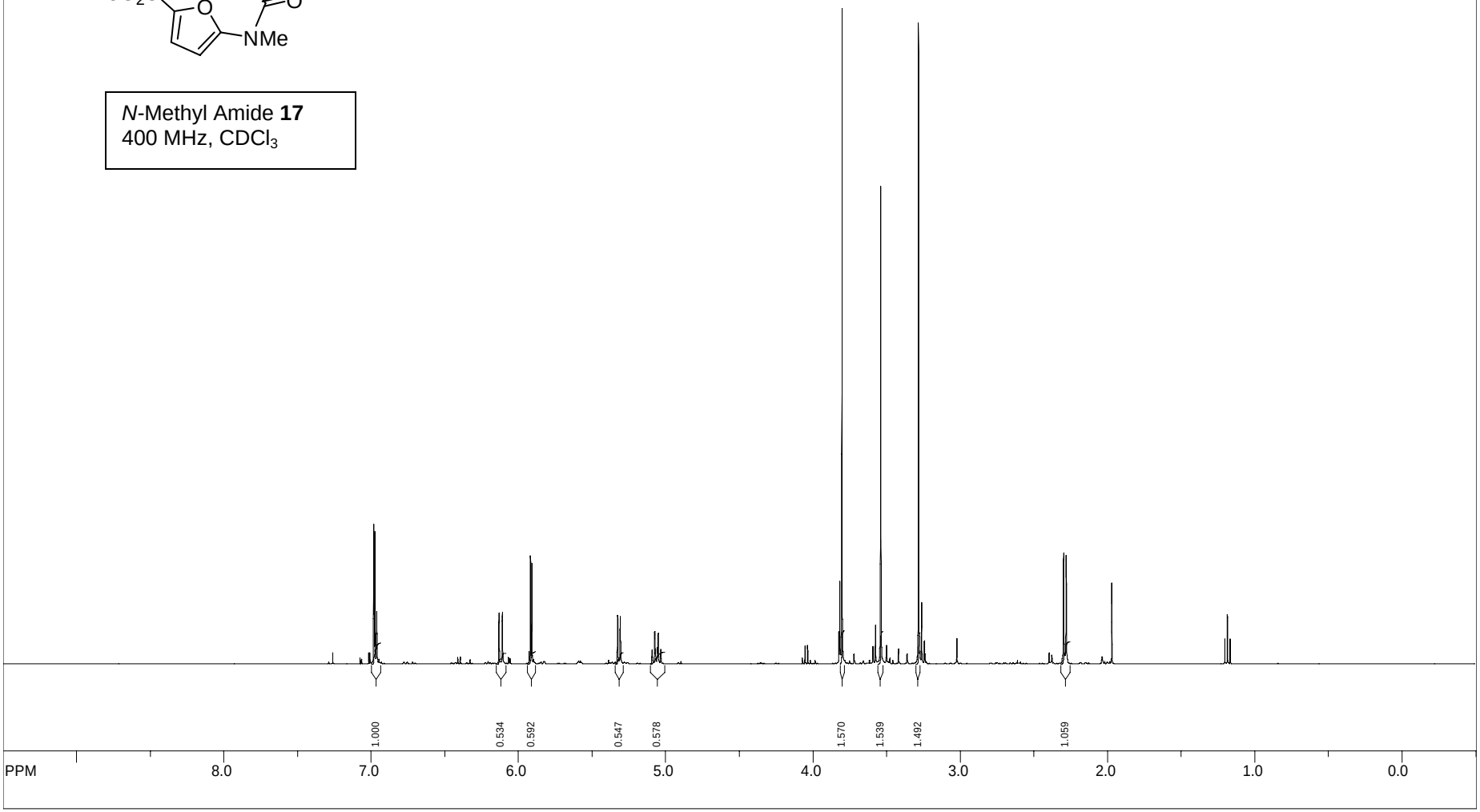
transmitter freq.: 100.527090 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.812925 ppm = 0.384468 Hz/pt
number of scans: 76

freq. of 0 ppm: 100.516536 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000




*N*-Methyl Amide **17**
400 MHz, $CDCl_3$

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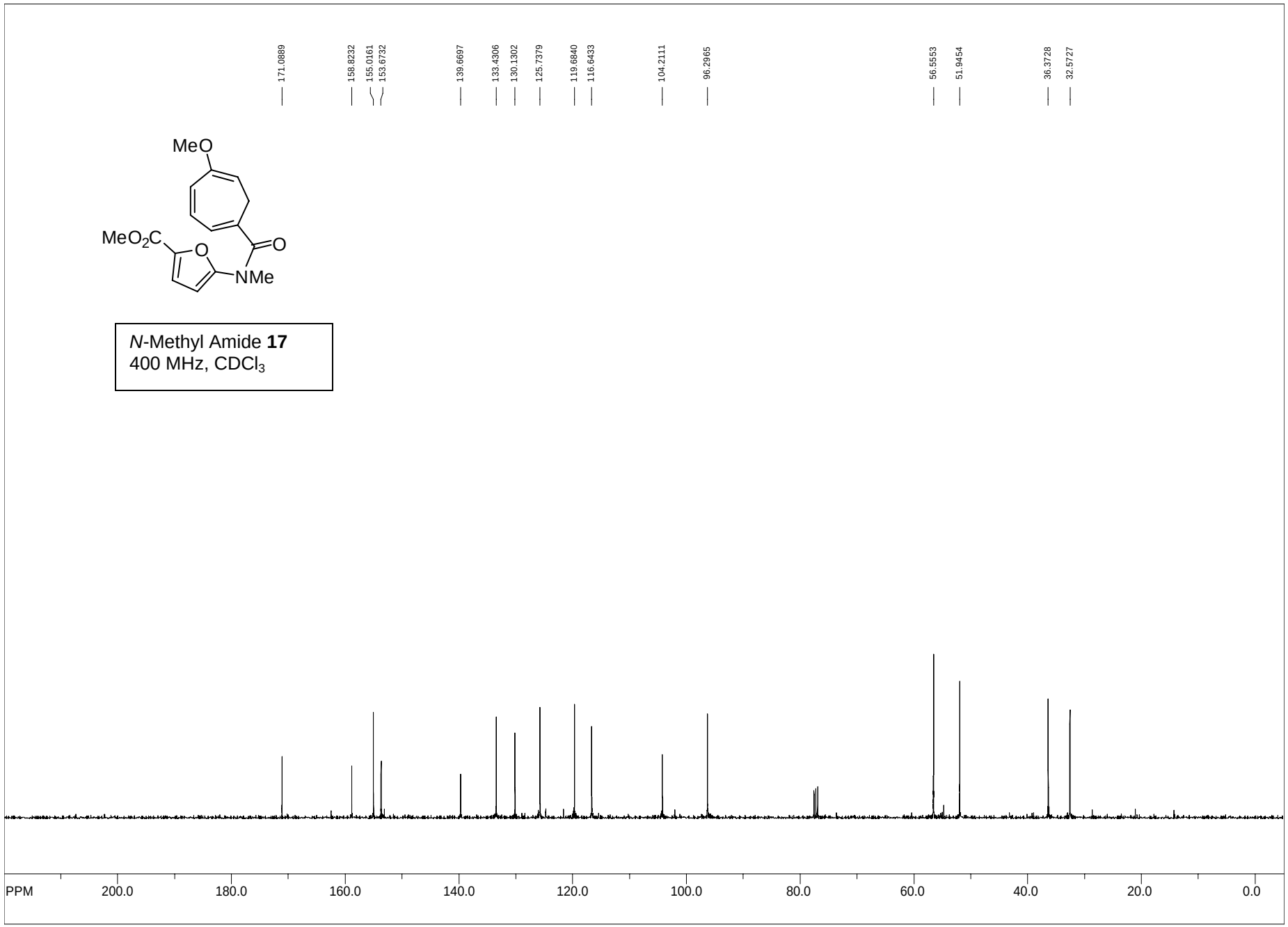
transmitter freq.: 399.749384 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022238 ppm = 0.124997 Hz/pt
number of scans: 4

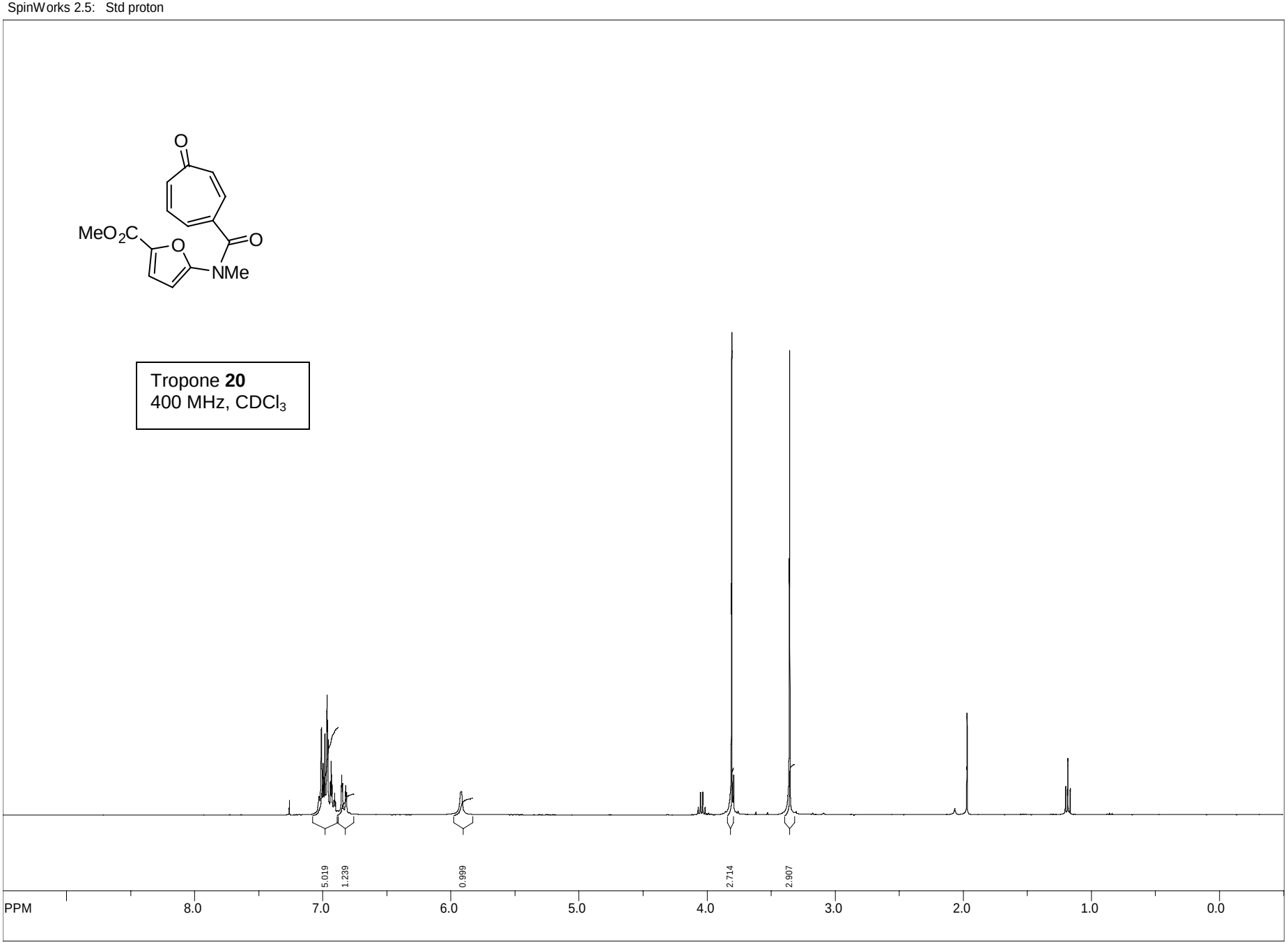
freq. of 0 ppm: 399.747385 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Comp Data-5\PJM5-084C13.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 100.527090 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.812925 ppm = 0.384468 Hz/pt
number of scans: 68

freq. of 0 ppm: 100.516550 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

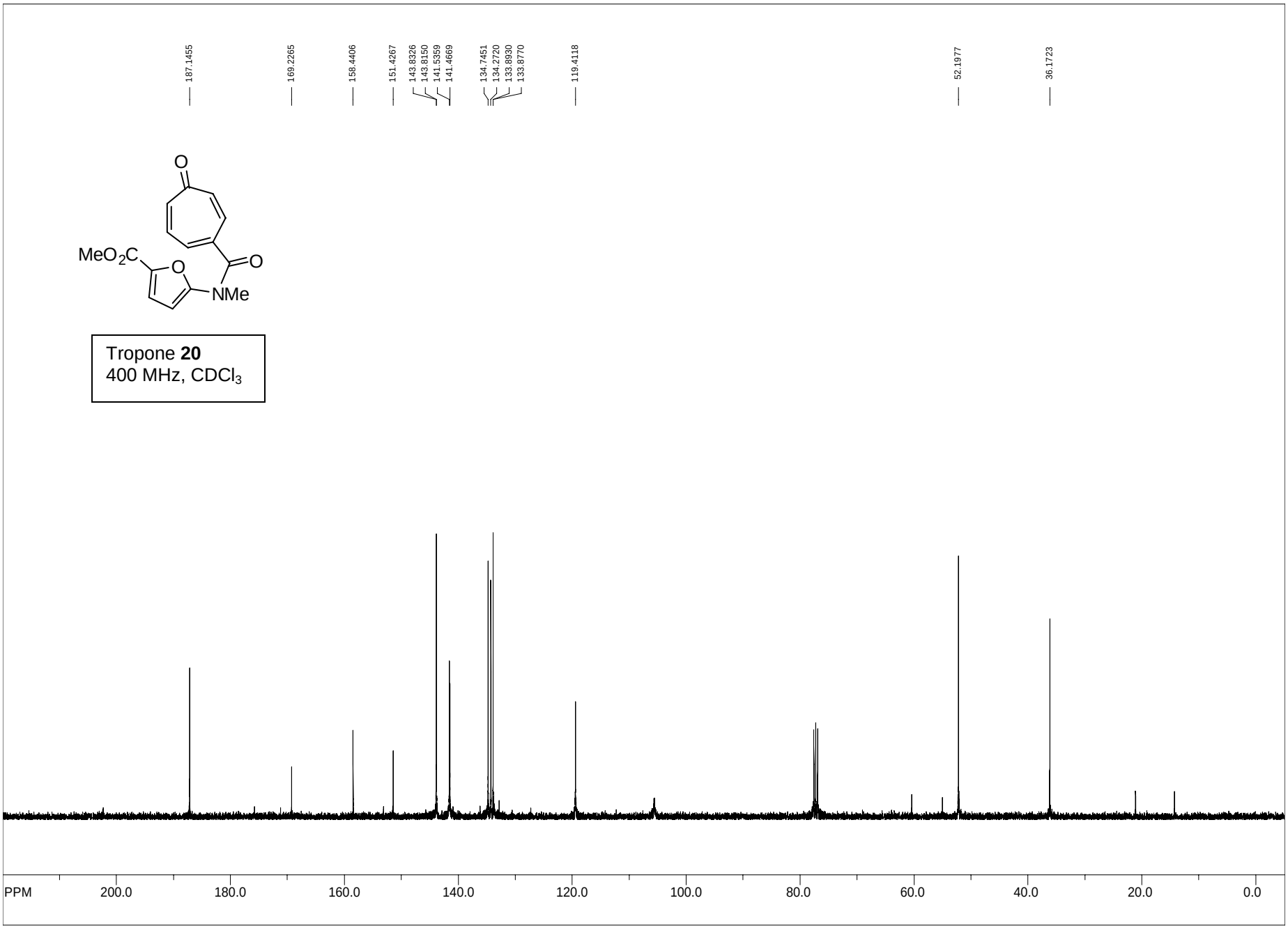
SpinWorks 2.5: Std proton




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Comp Data-5\PJM5-086col.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 399.749384 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022238 ppm = 0.124997 Hz/pt
number of scans: 8

freq. of 0 ppm: 399.747384 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: Std proton

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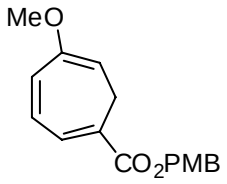
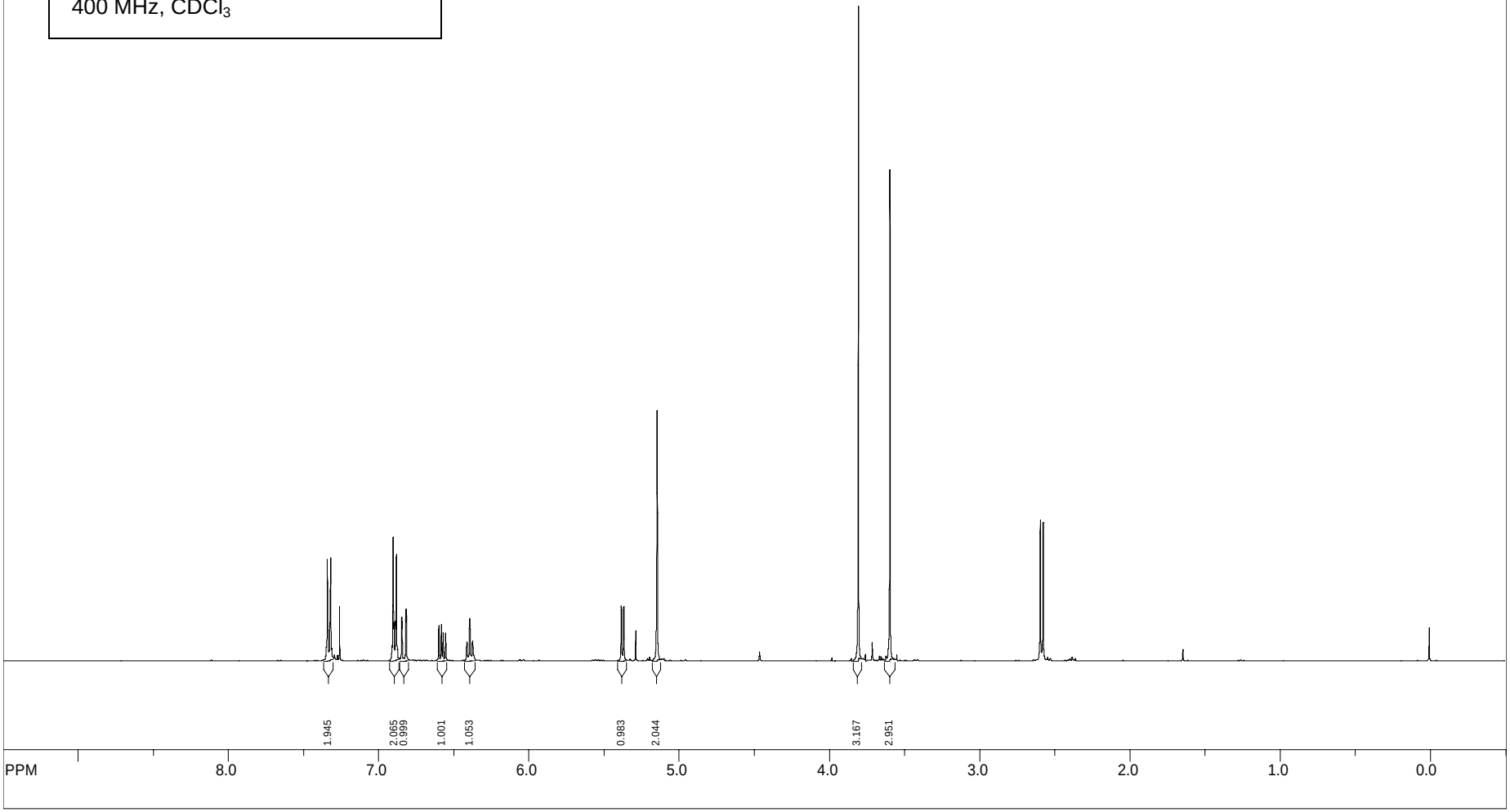
transmitter freq.: 100.527090 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.812925 ppm = 0.384468 Hz/pt
number of scans: 144

freq. of 0 ppm: 100.516549 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

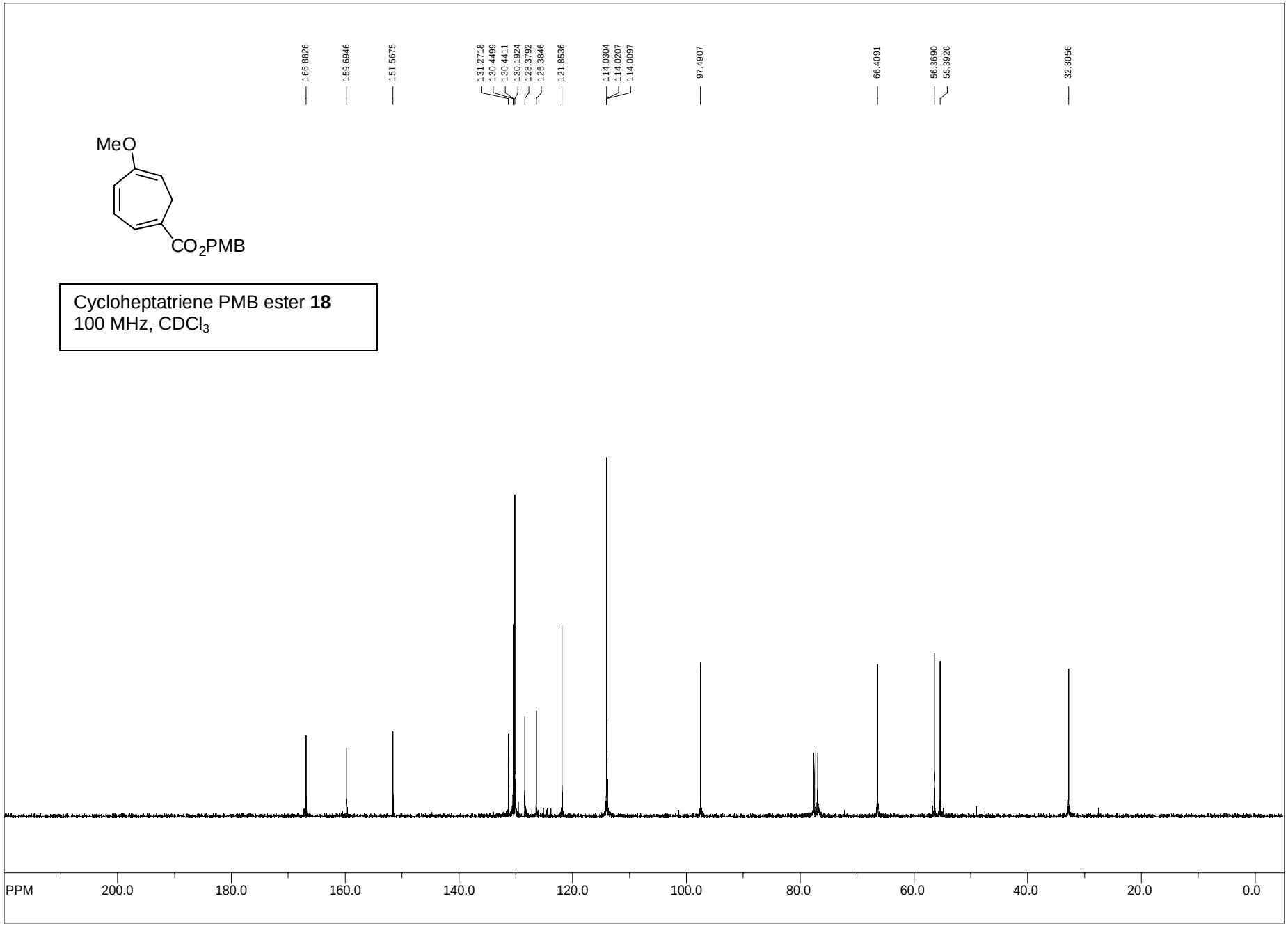



Cycloheptatriene PMB ester **18**
400 MHz, $CDCl_3$




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Comp Data-3\PJM3-079anal.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 399.749384 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022238 ppm = 0.124997 Hz/pt
number of scans: 4

freq. of 0 ppm: 399.747385 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

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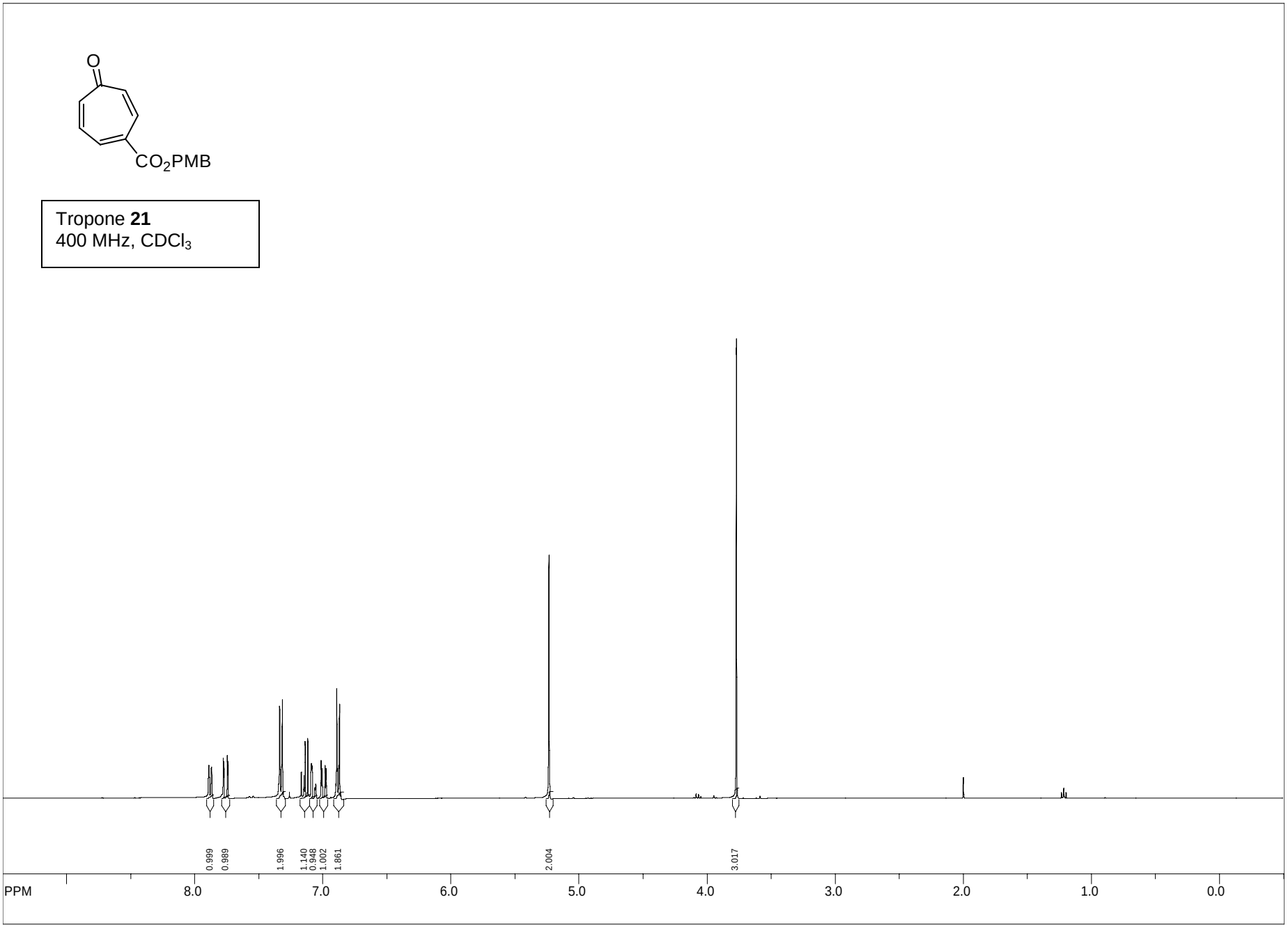
transmitter freq.: 100.522503 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.824051 ppm = 0.384468 Hz/pt
number of scans: 176

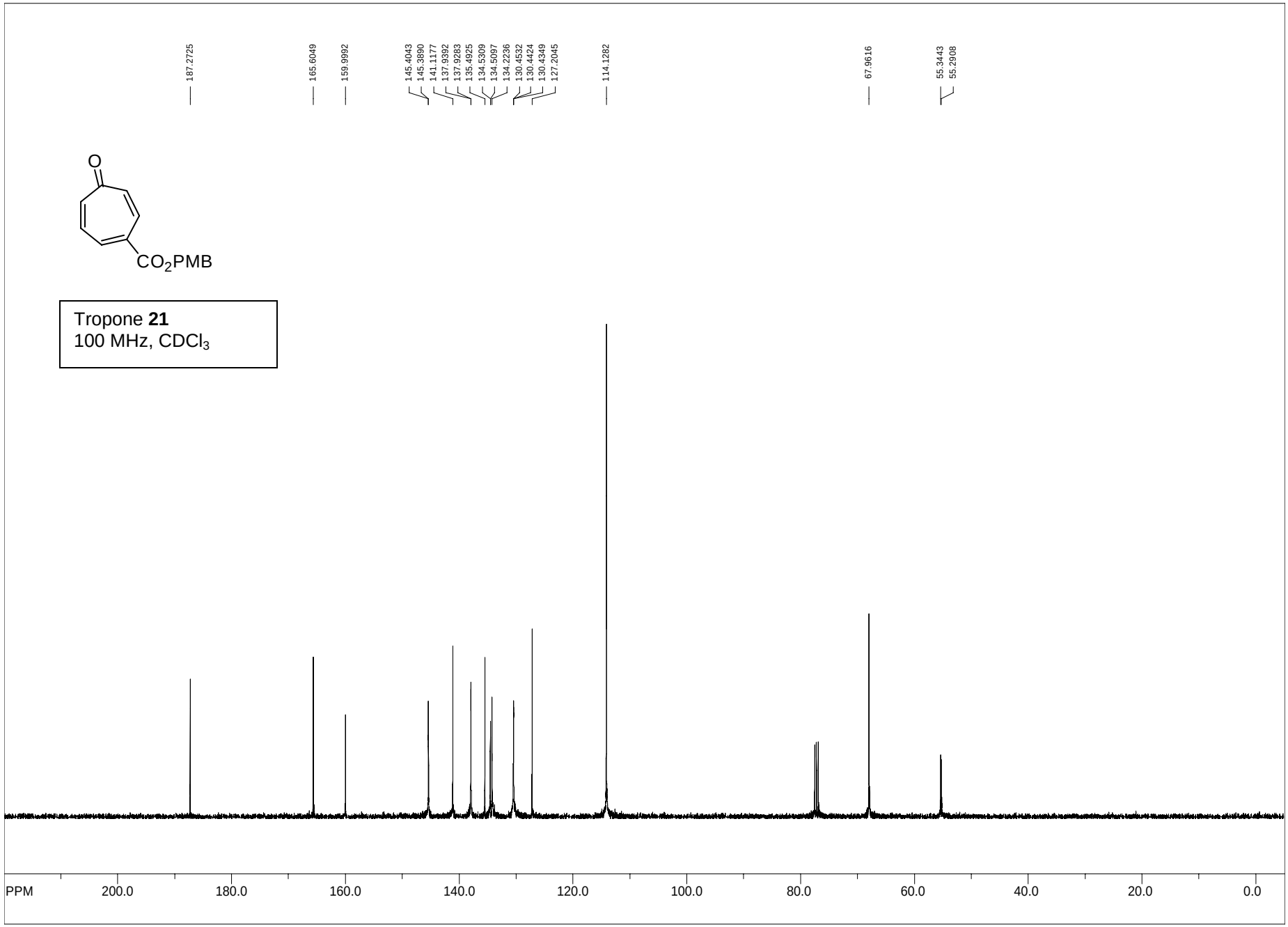
freq. of 0 ppm: 100.511961 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Comp Data-3\PJM3-096anal.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 399.749384 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022238 ppm = 0.124997 Hz/pt
number of scans: 4

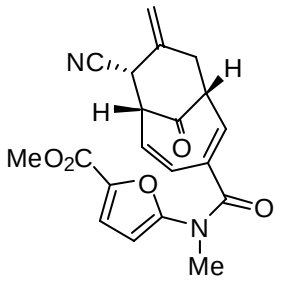
freq. of 0 ppm: 399.747384 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: Std proton

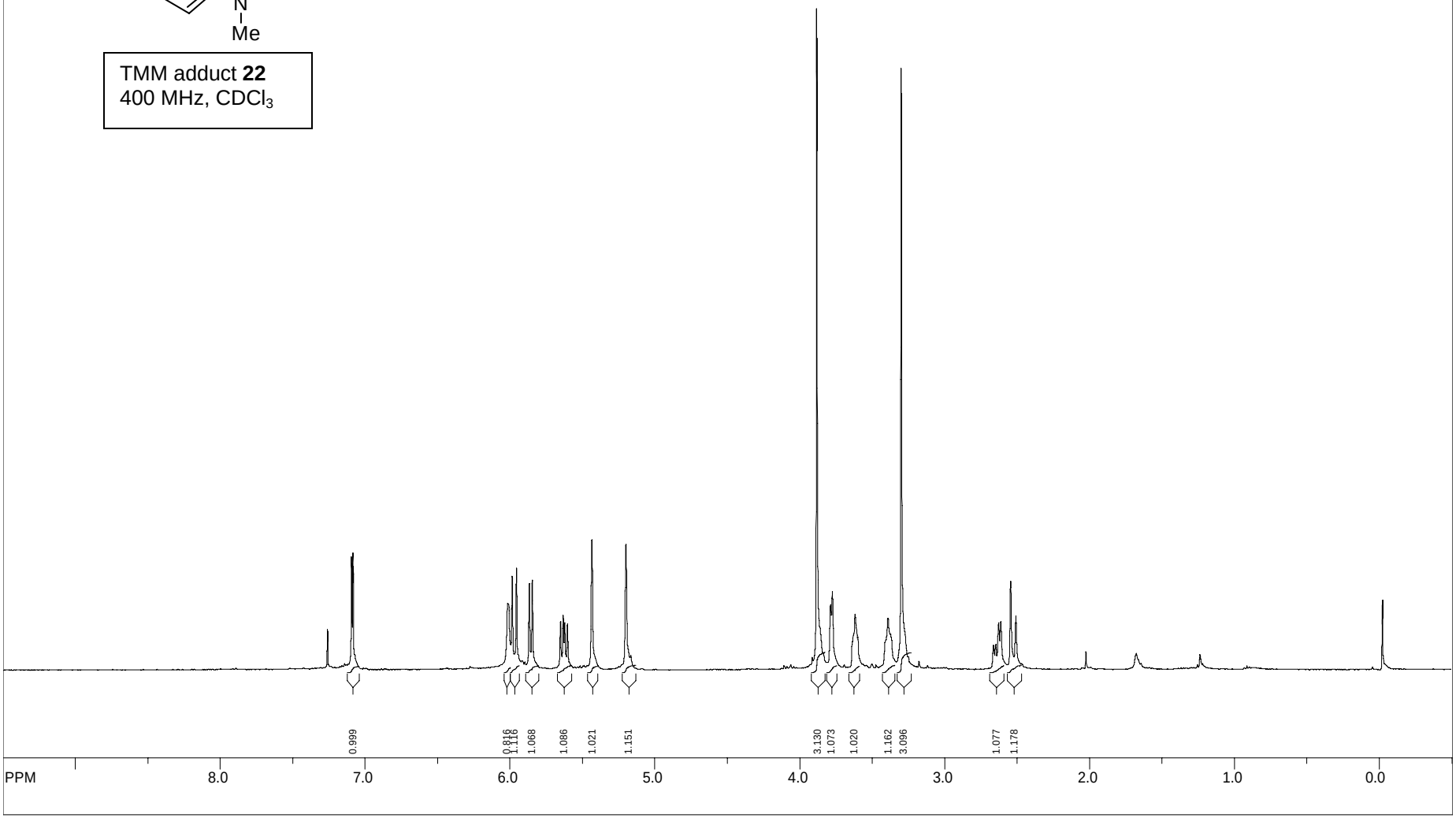



file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Comp Data-3\PJM3-096-13C.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 100.527090 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.812925 ppm = 0.384468 Hz/pt
number of scans: 132

freq. of 0 ppm: 100.516556 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000



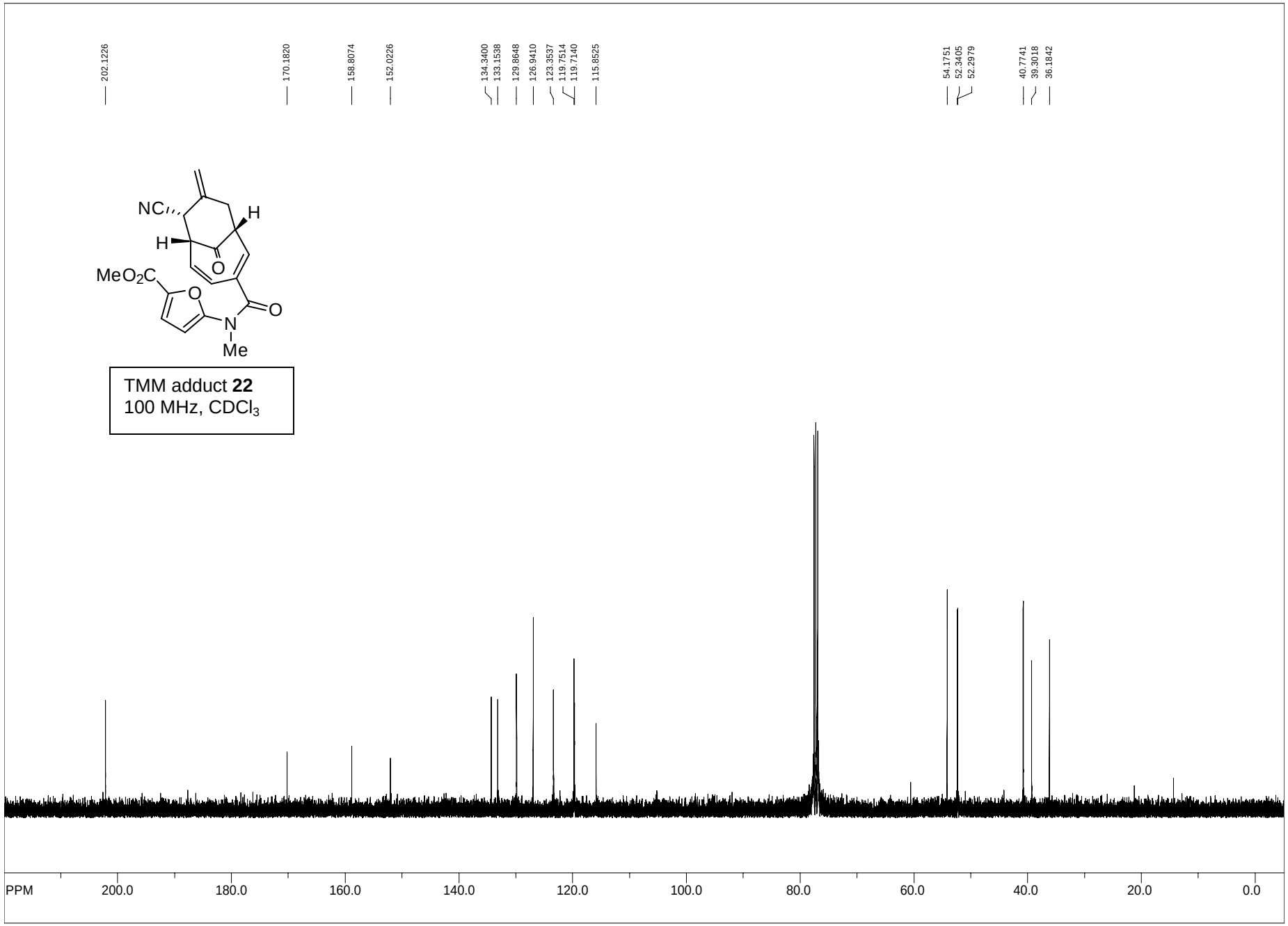

TMM adduct **22**
400 MHz, $CDCl_3$




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 8\PJM8-043anal.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 399.749384 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022238 ppm = 0.124997 Hz/pt
number of scans: 8

freq. of 0 ppm: 399.747385 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: Std proton

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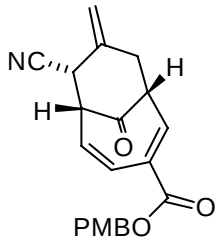
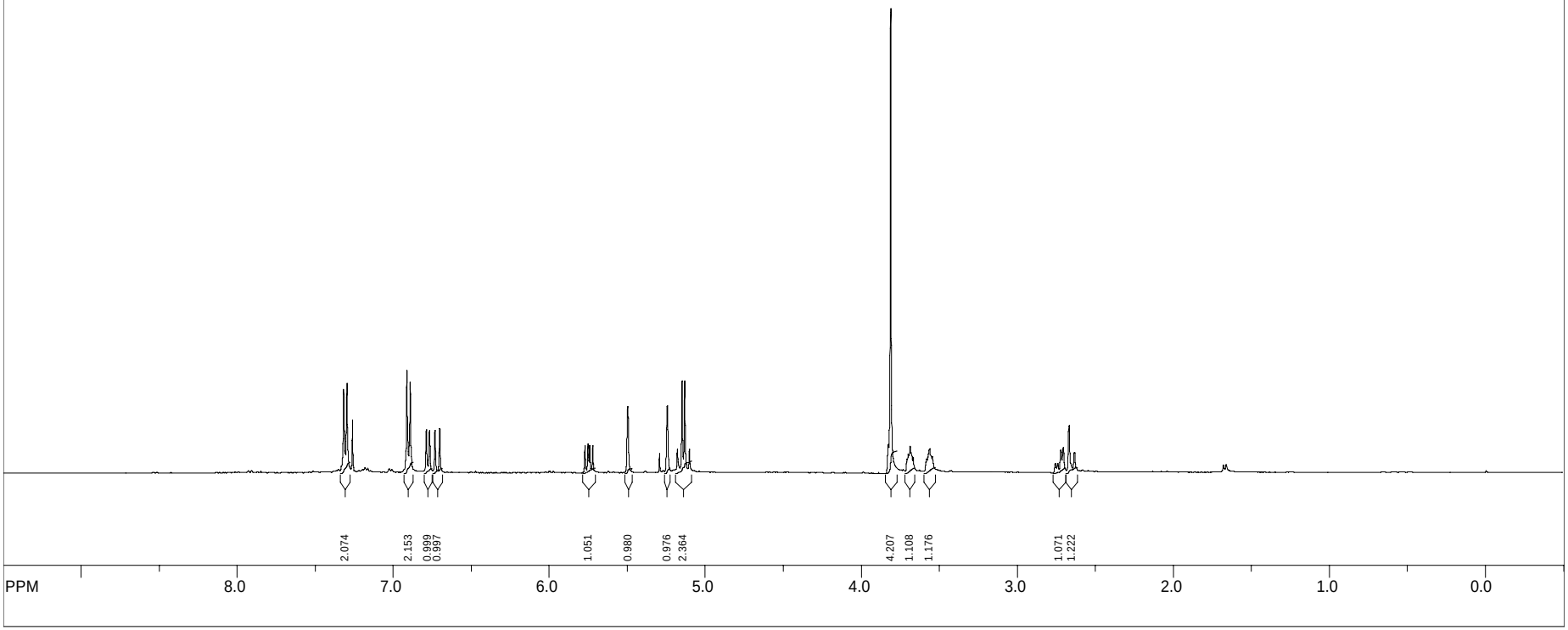
transmitter freq.: 100.527090 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.812925 ppm = 0.384468 Hz/pt
number of scans: 444

freq. of 0 ppm: 100.516539 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000




PMB ester adduct **23**
400 MHz, $CDCl_3$

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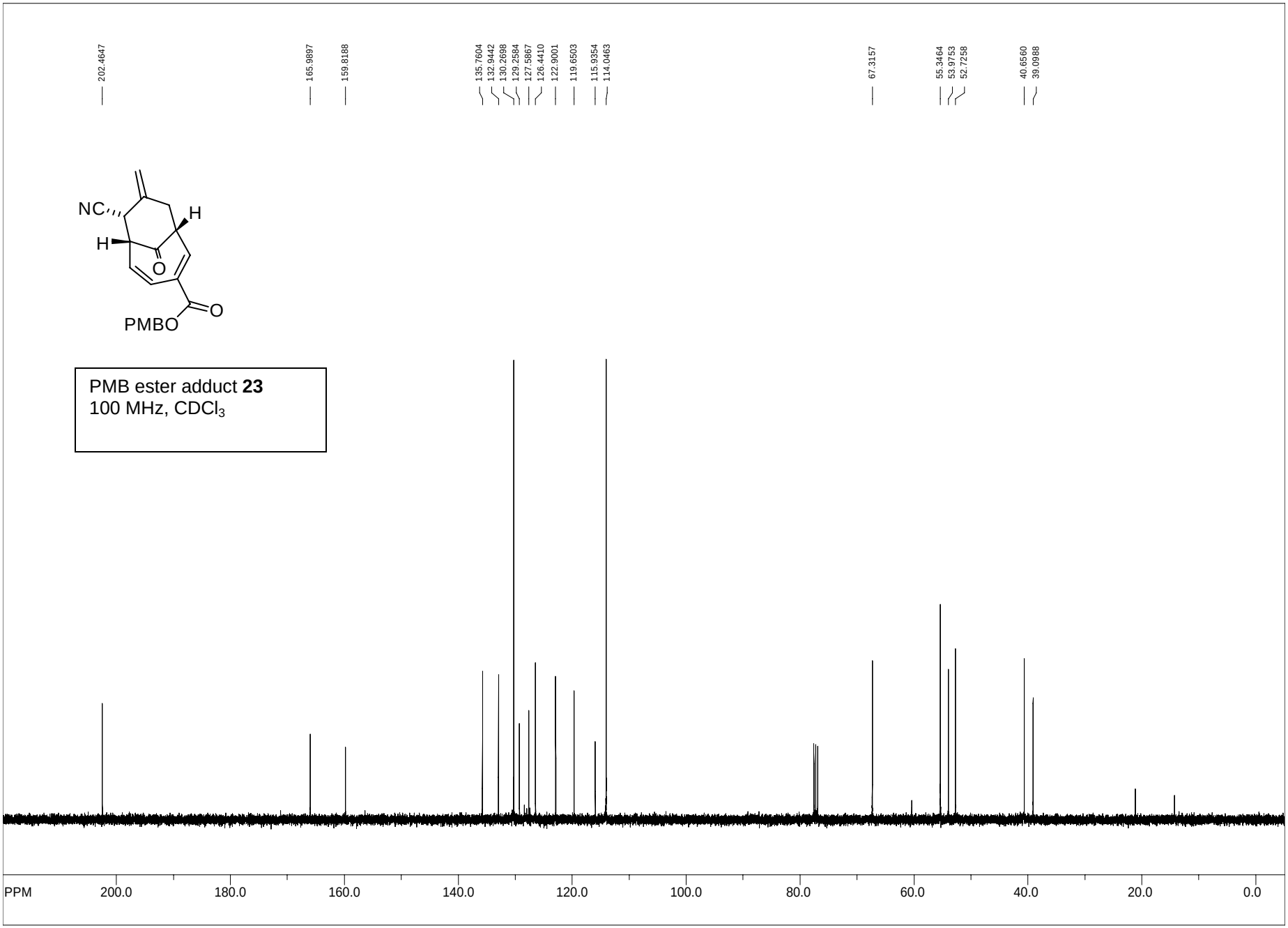
transmitter freq.: 399.731144 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022878 ppm = 0.124997 Hz/pt
number of scans: 16

freq. of 0 ppm: 399.729145 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

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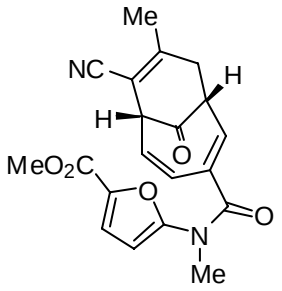
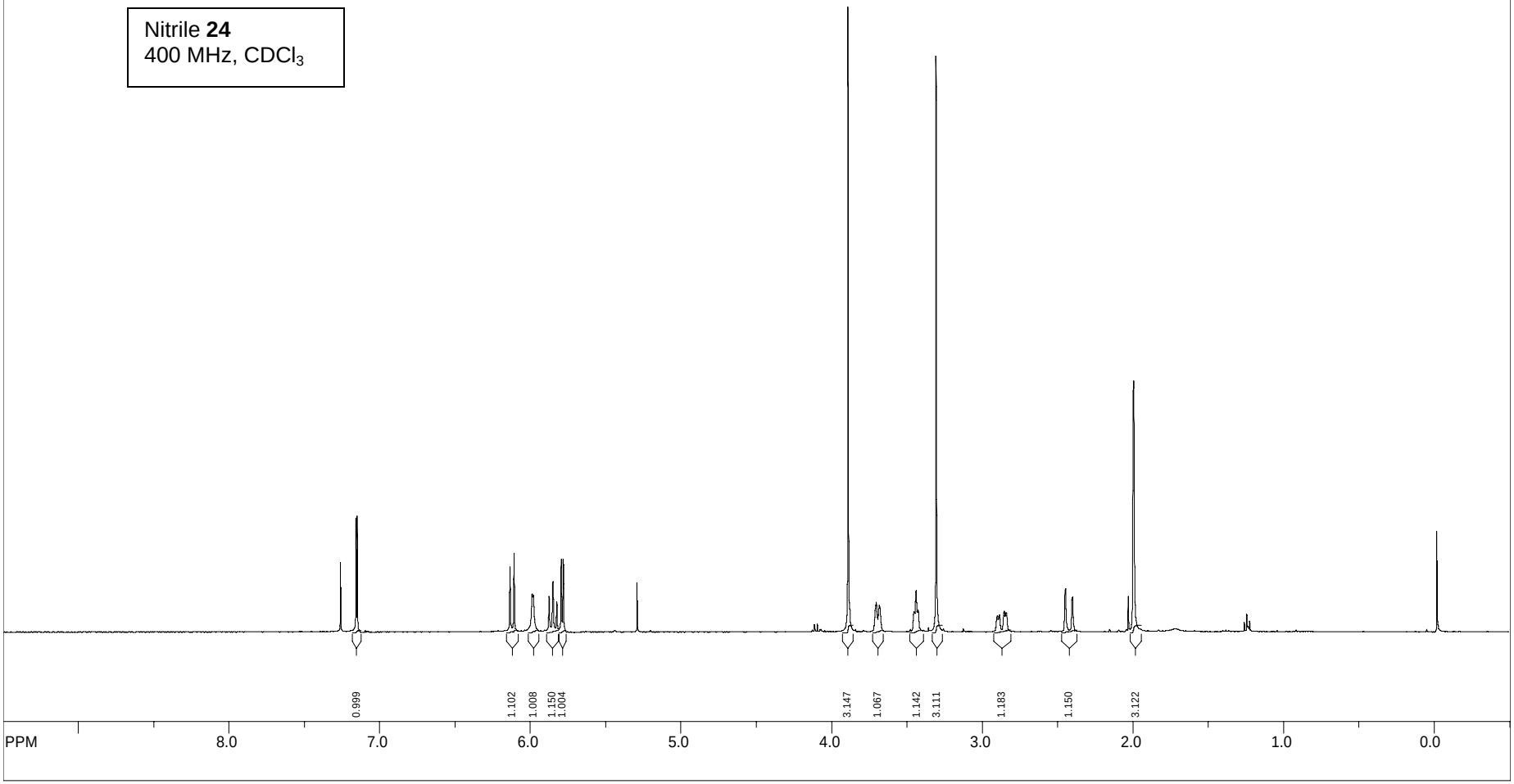
transmitter freq.: 100.522503 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.824051 ppm = 0.384468 Hz/pt
number of scans: 116

freq. of 0 ppm: 100.511969 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: Std proton




Nitrile **24**
400 MHz, $CDCl_3$

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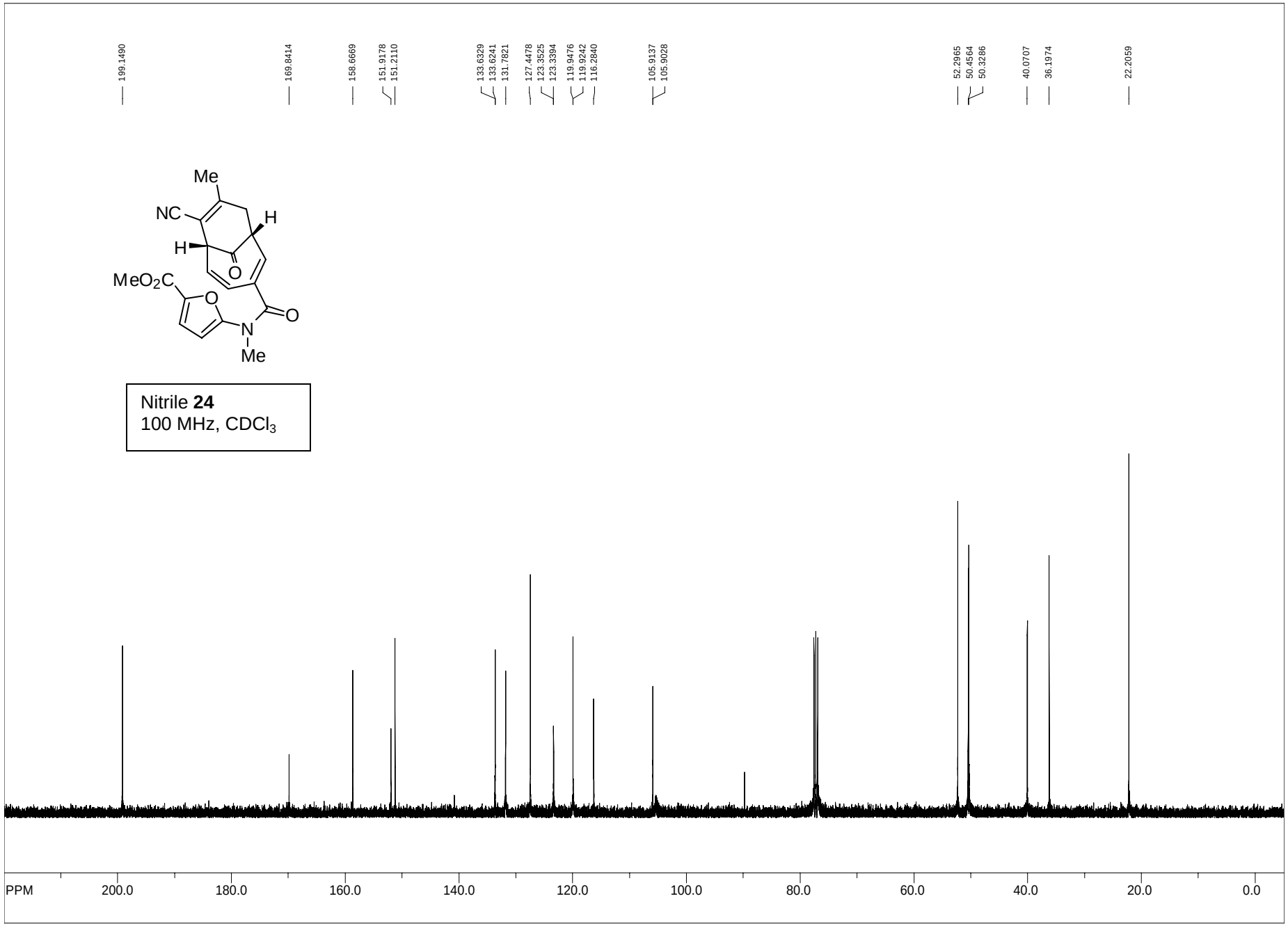
transmitter freq.: 399.749384 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022238 ppm = 0.124997 Hz/pt
number of scans: 4

freq. of 0 ppm: 399.747386 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: Std proton



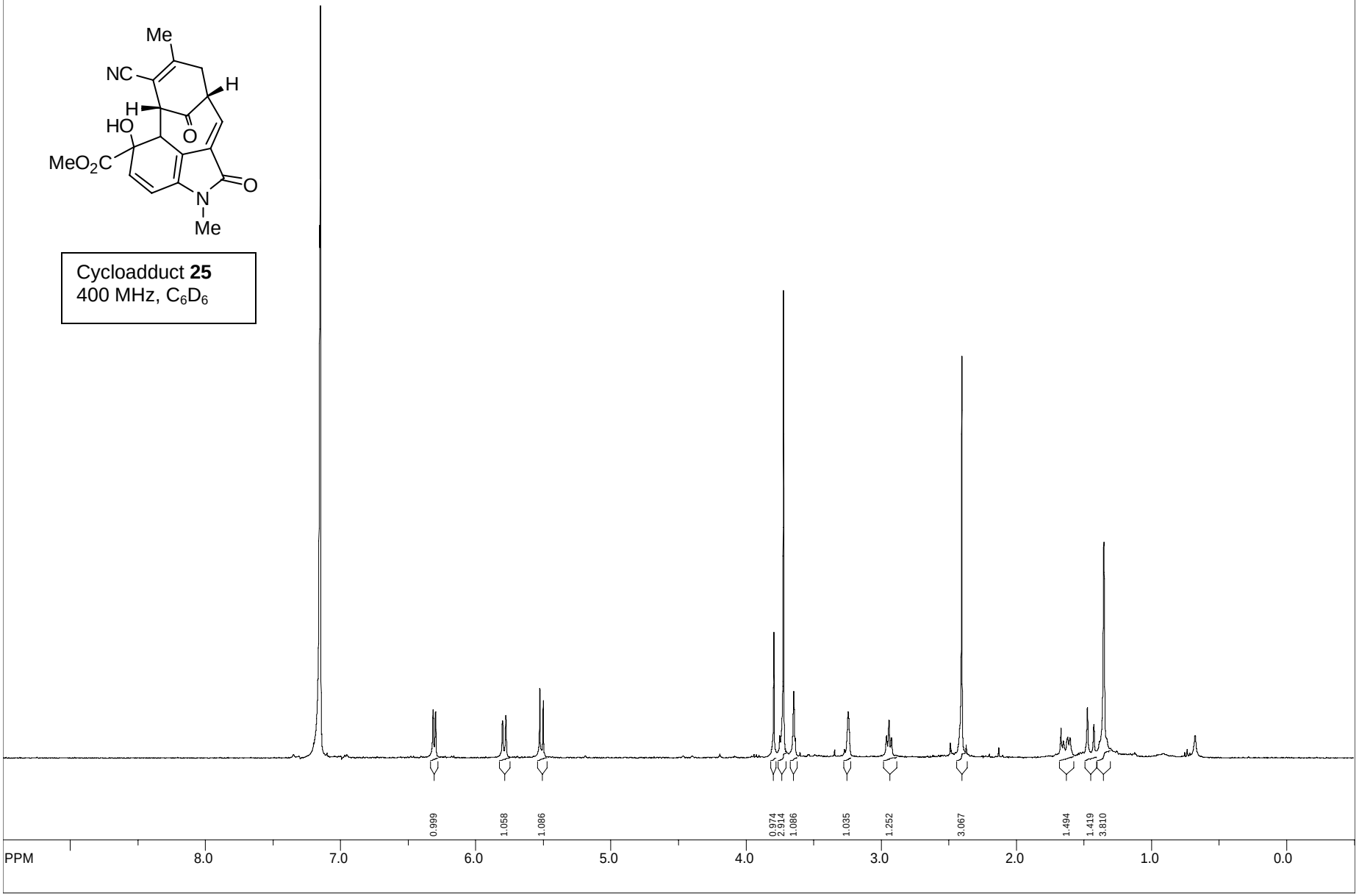

file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 8\PJM8-064C13.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 100.527090 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.812925 ppm = 0.384468 Hz/pt
number of scans: 164

freq. of 0 ppm: 100.516548 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: Std proton

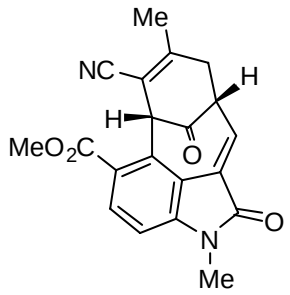



Cycloadduct **25**
400 MHz, $C_6D_6$

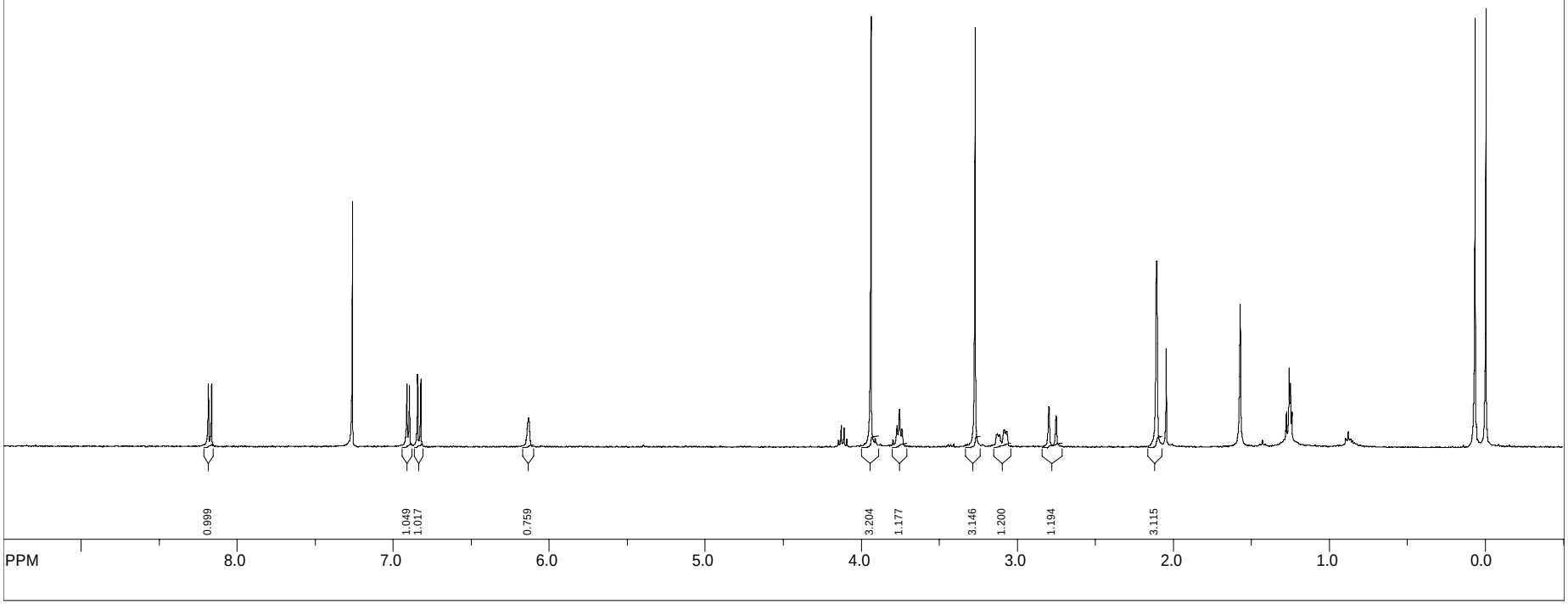



file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 8\PJM8-006column.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 399.749420 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022237 ppm = 0.124997 Hz/pt
number of scans: 8

freq. of 0 ppm: 399.747406 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000



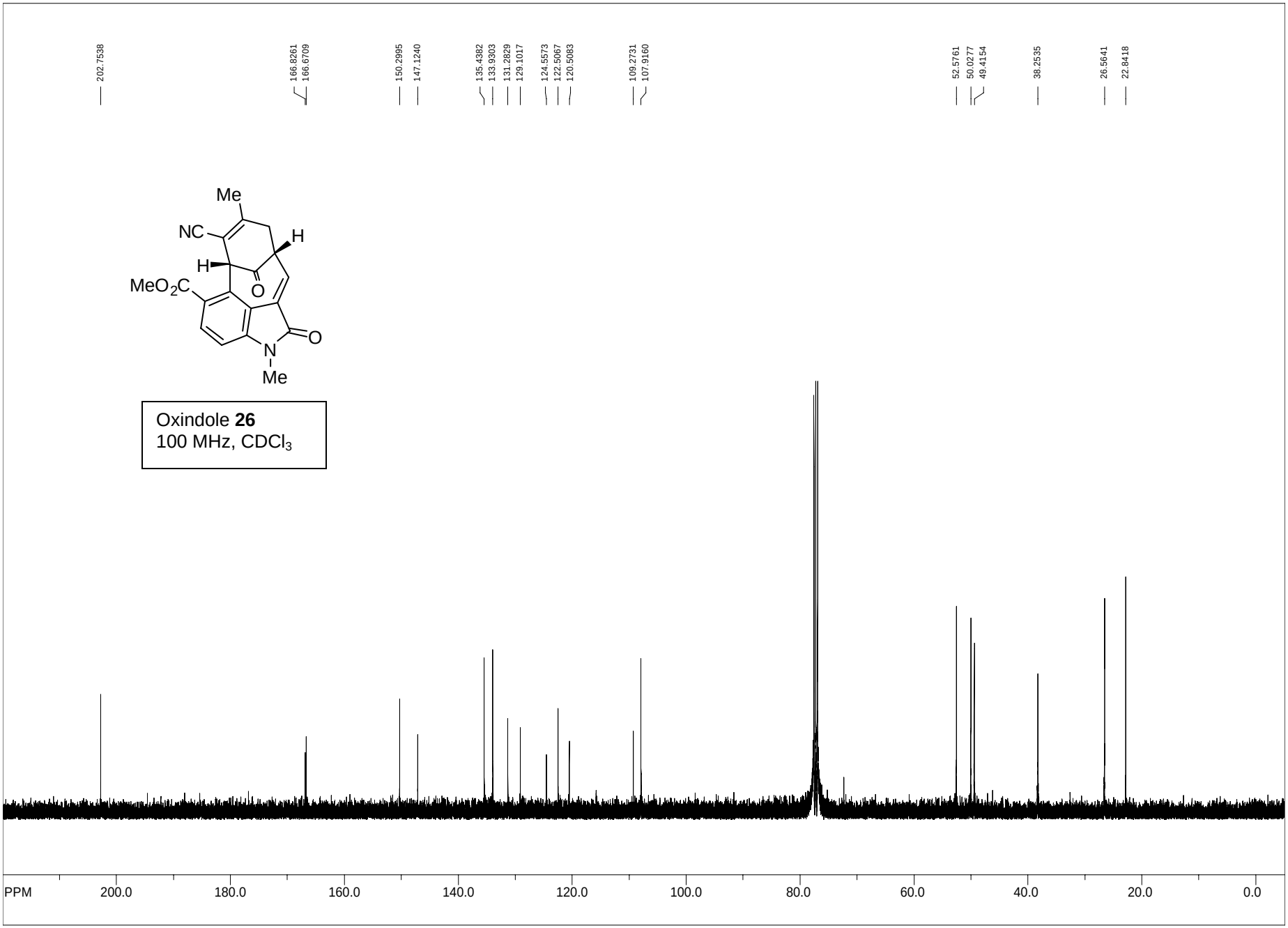

Oxindole **26**
400 MHz, $CDCl_3$




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 8\PJM8-038col.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 400.113556 MHz
time domain size: 40000 points
width: 4997.50 Hz = 12.490207 ppm = 0.124938 Hz/pt
number of scans: 20

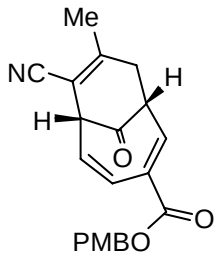
freq. of 0 ppm: 400.111537 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: Std proton

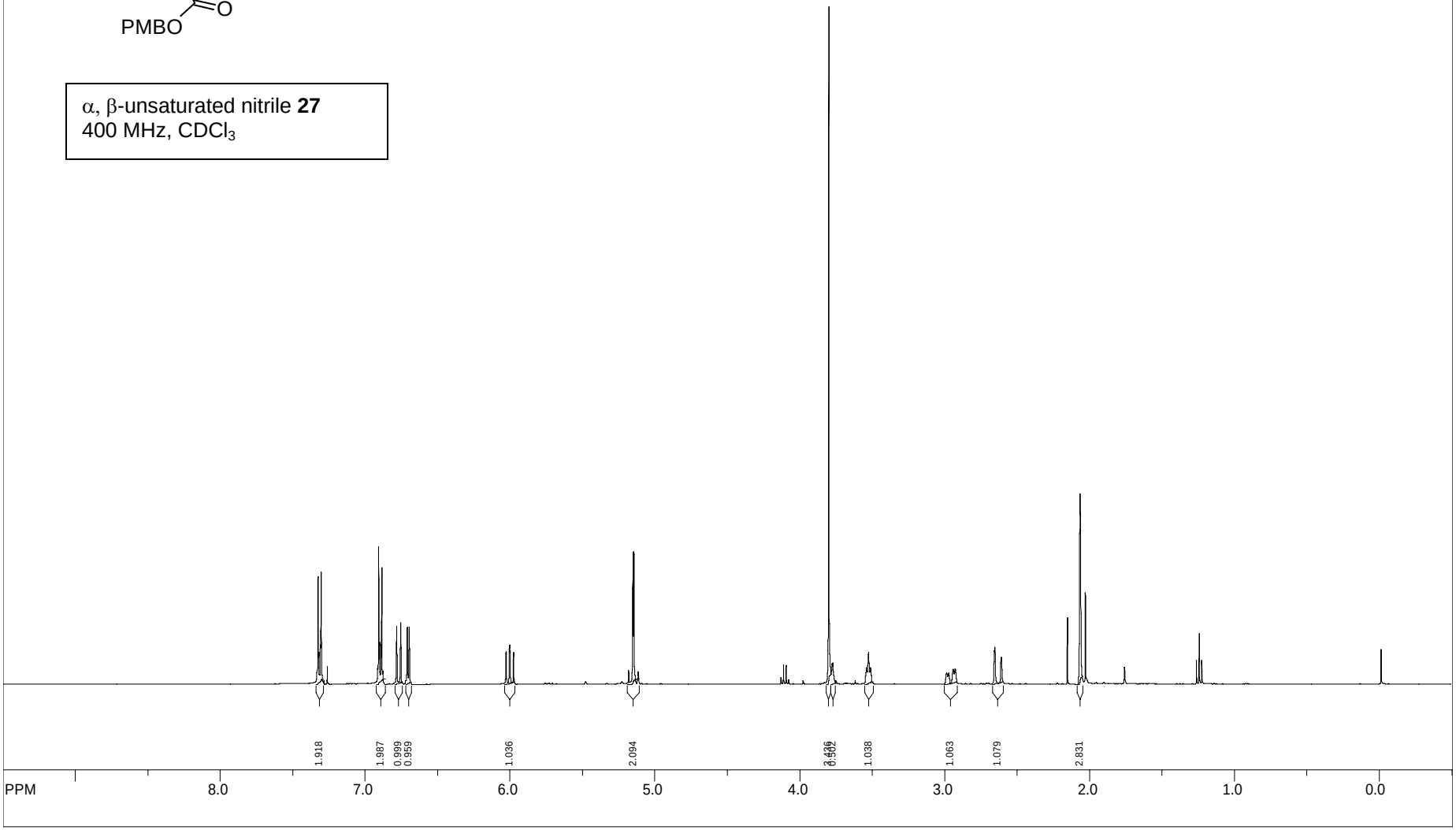



file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 9\PJM9-011C13.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 100.522503 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.824051 ppm = 0.384468 Hz/pt
number of scans: 512

freq. of 0 ppm: 100.511953 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

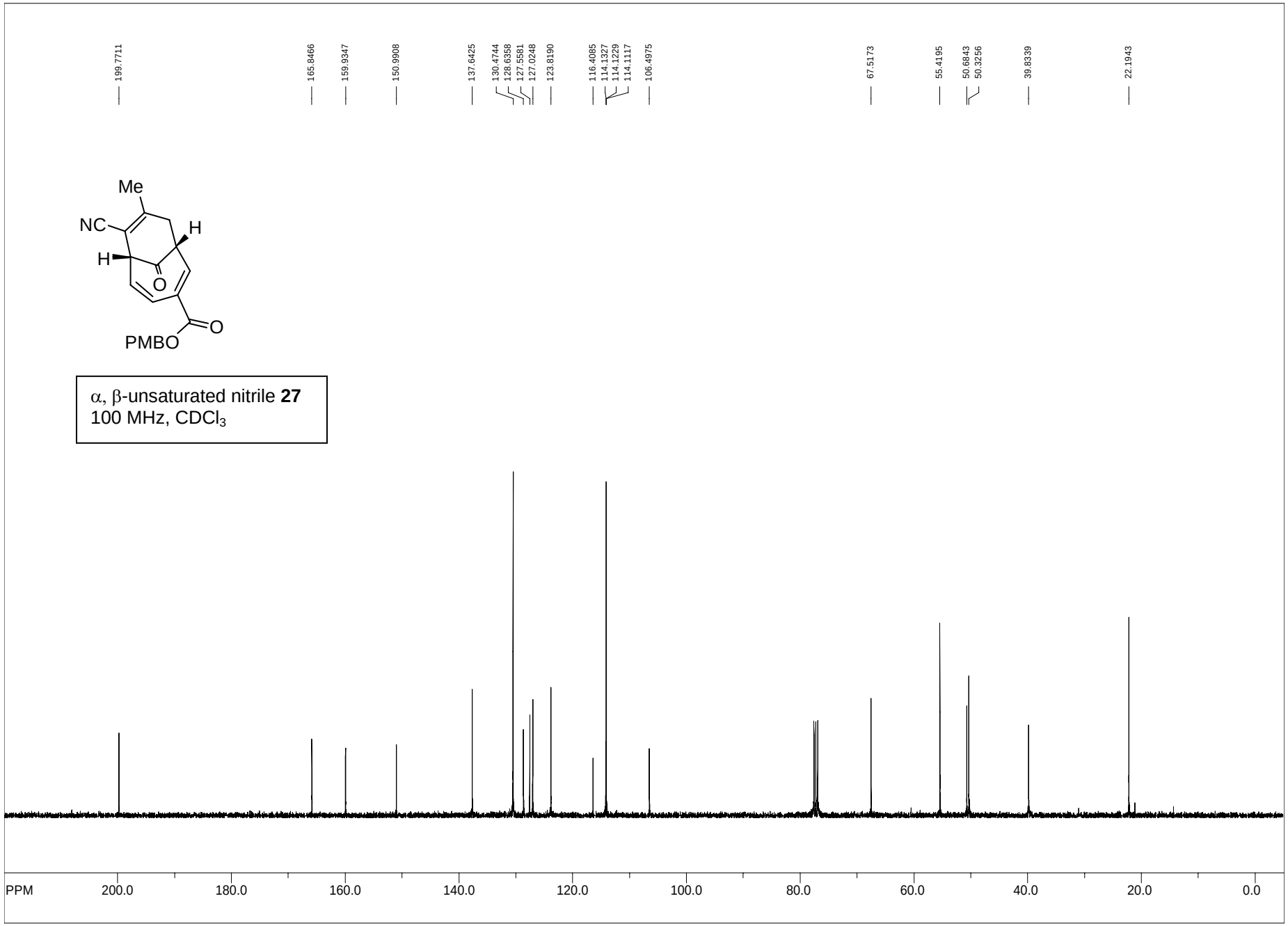



α, β-unsaturated nitrile **27**
400 MHz, $CDCl_3$



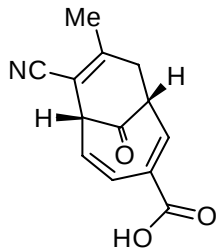

file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 10\PJM10-003anal.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 399.731144 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022878 ppm = 0.124997 Hz/pt
number of scans: 8

freq. of 0 ppm: 399.729144 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

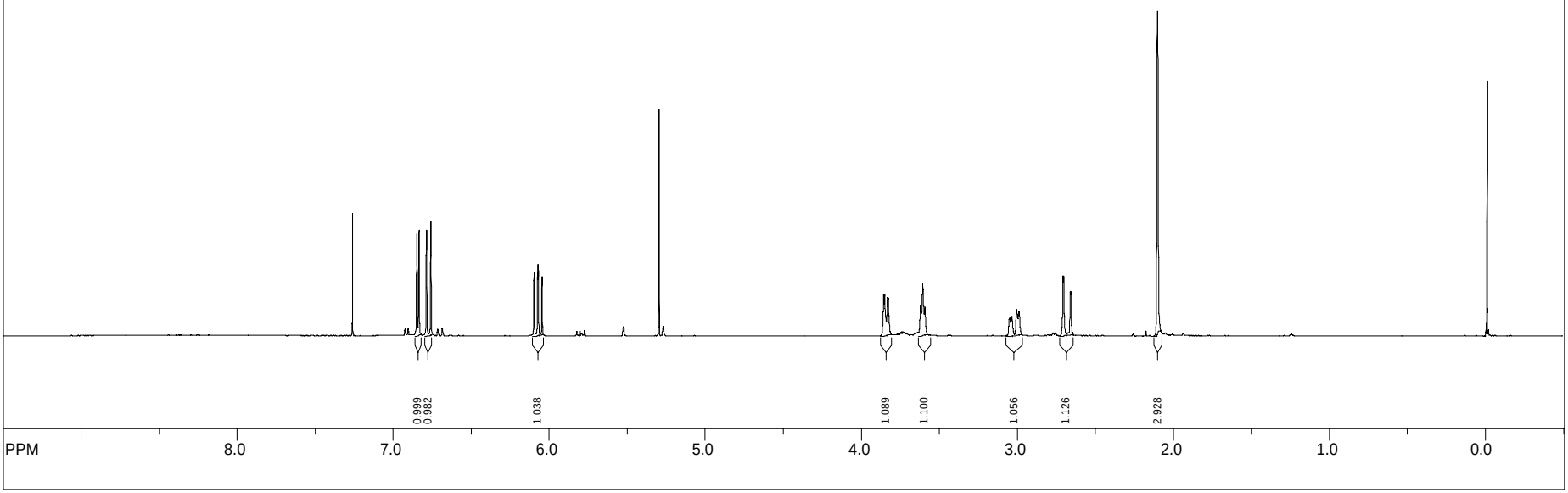



file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 10\PJM10-003-13C.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 100.522503 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.824051 ppm = 0.384468 Hz/pt
number of scans: 116

freq. of 0 ppm: 100.511962 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000



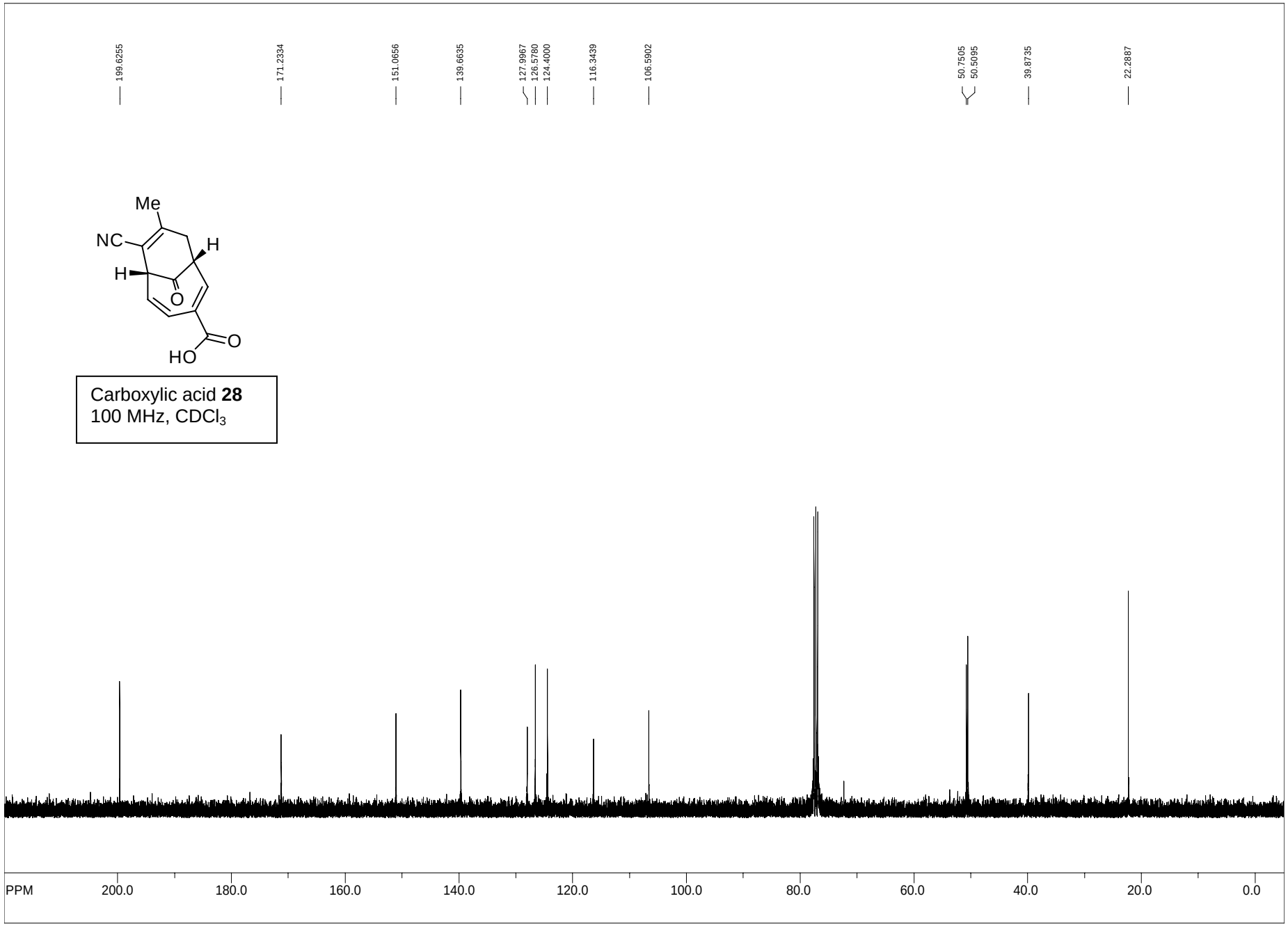

Carboxylic acid **28**
400 MHz, $CDCl_3$




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 10\PJM10-005col.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 399.731144 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022878 ppm = 0.124997 Hz/pt
number of scans: 8

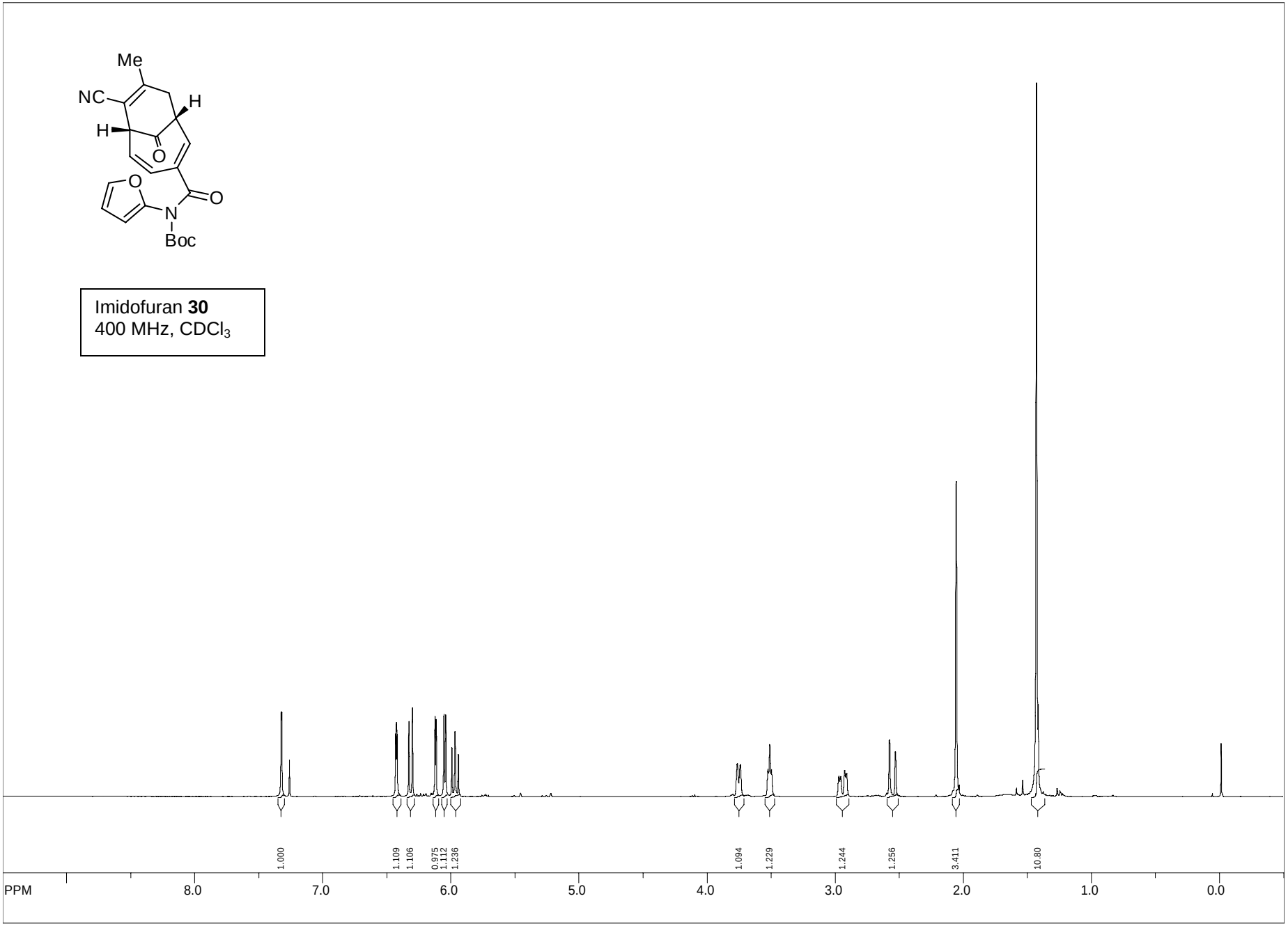
freq. of 0 ppm: 399.729145 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: Std proton



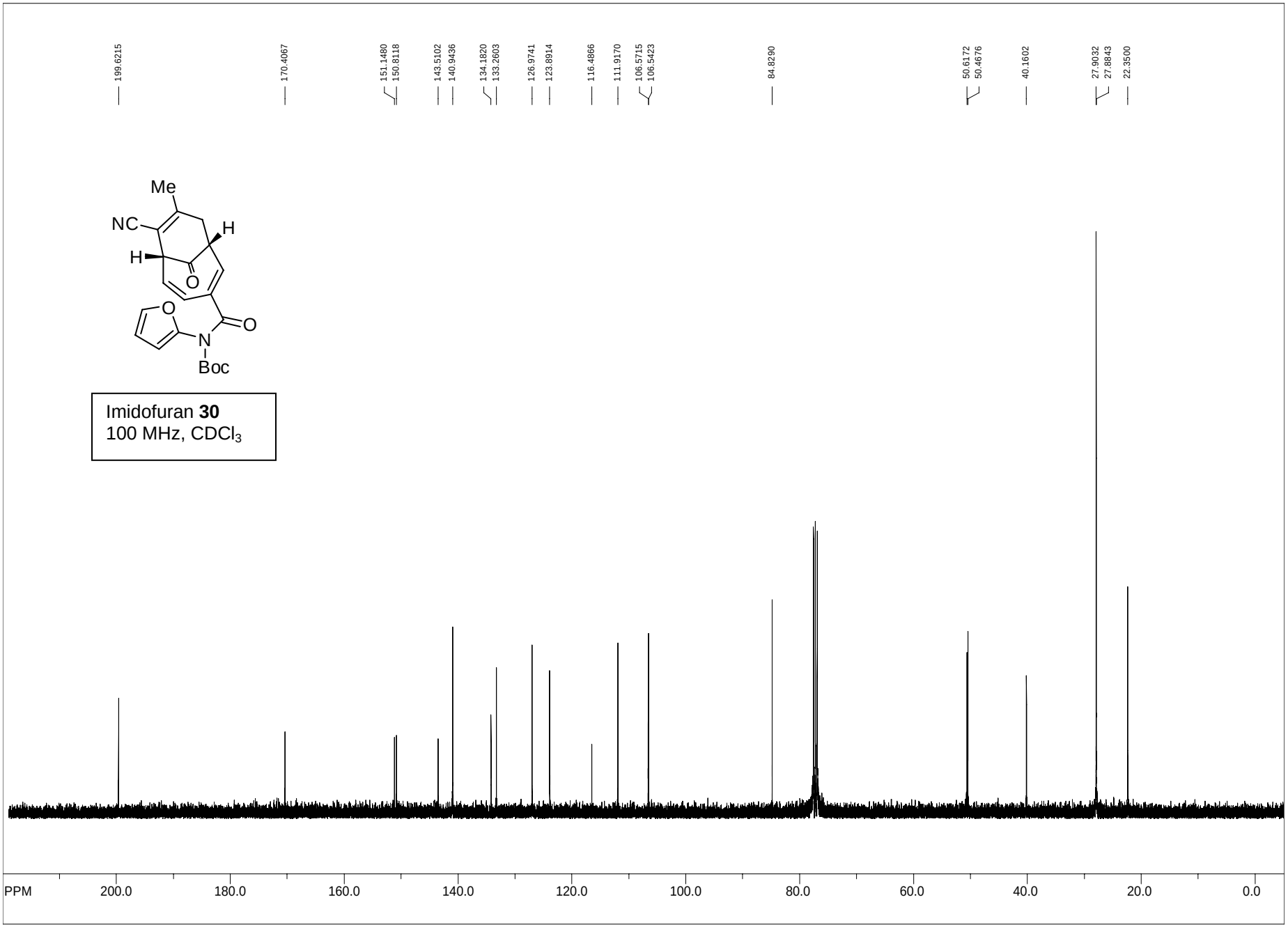

file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 9\PJM9-023C13.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 100.522503 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.824051 ppm = 0.384468 Hz/pt
number of scans: 196

freq. of 0 ppm: 100.511954 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 10\PJM10-012anal.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 400.113556 MHz
time domain size: 40000 points
width: 4997.50 Hz = 12.490207 ppm = 0.124938 Hz/pt
number of scans: 16

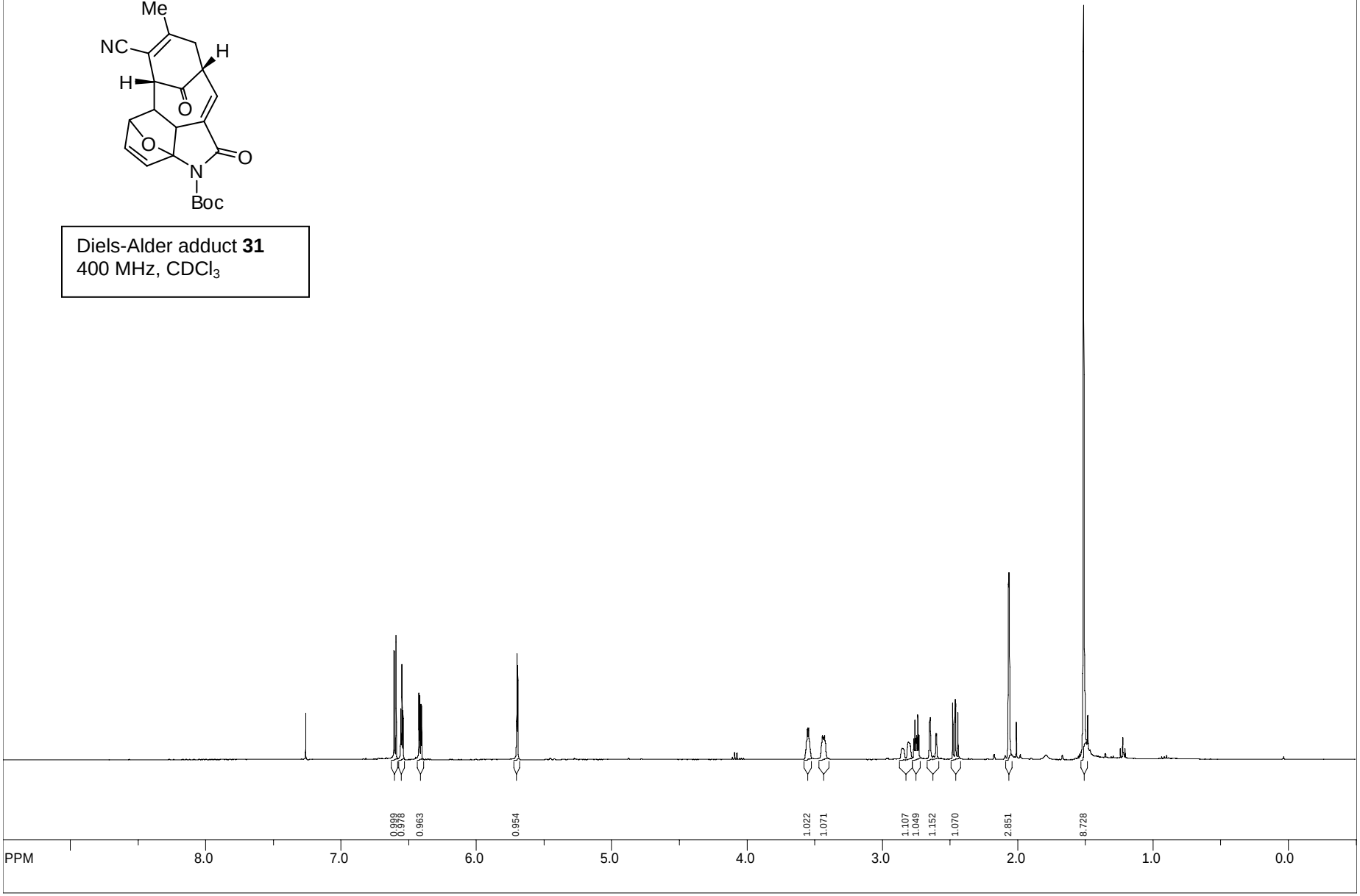
freq. of 0 ppm: 400.111537 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 10\PJM10-012C13.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 100.617627 MHz
time domain size: 59968 points
width: 25000.00 Hz = 248.465411 ppm = 0.416889 Hz/pt
number of scans: 608

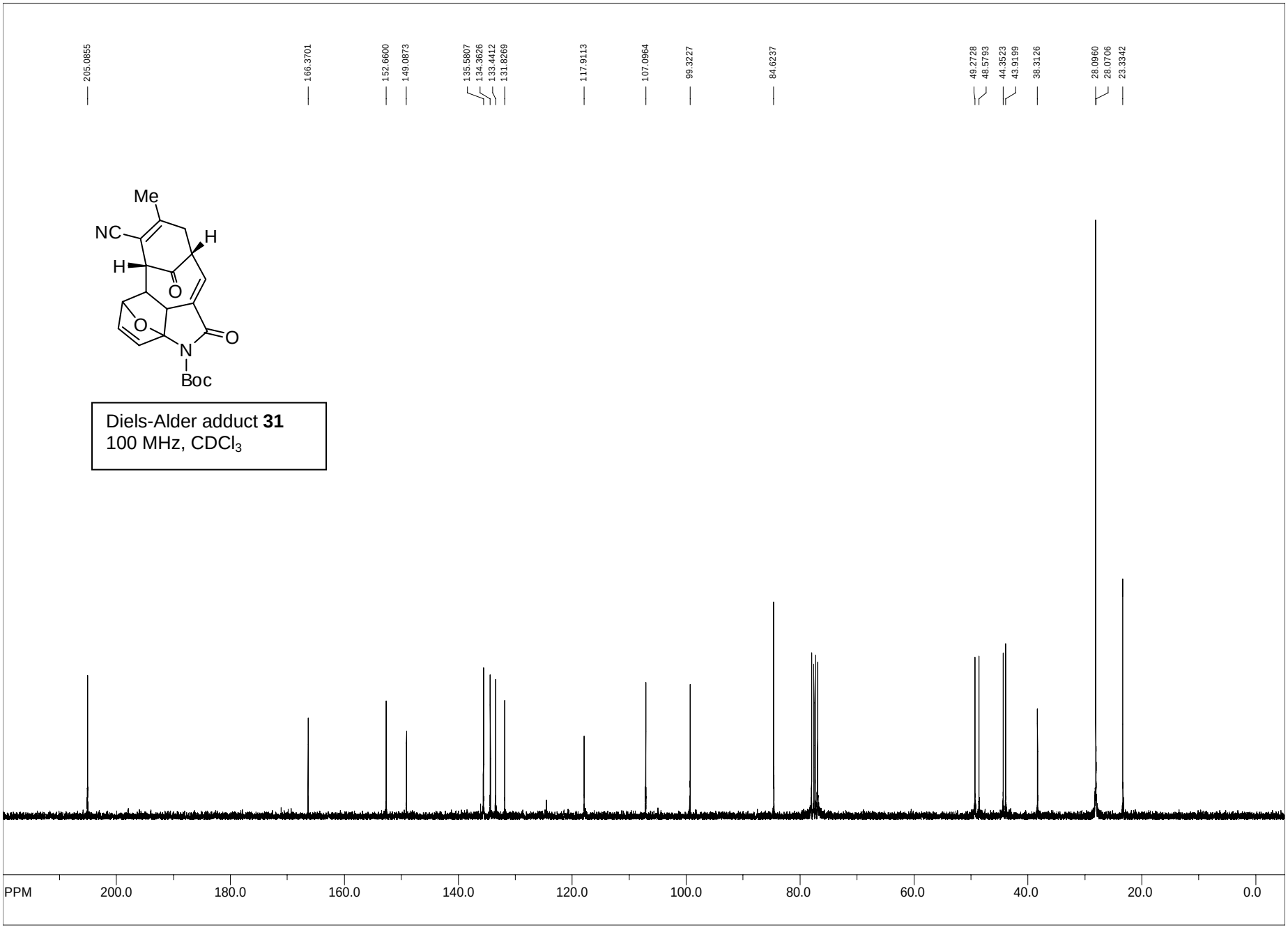
freq. of 0 ppm: 100.608107 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

Diels-Alder adduct **31**
400 MHz, $CDCl_3$



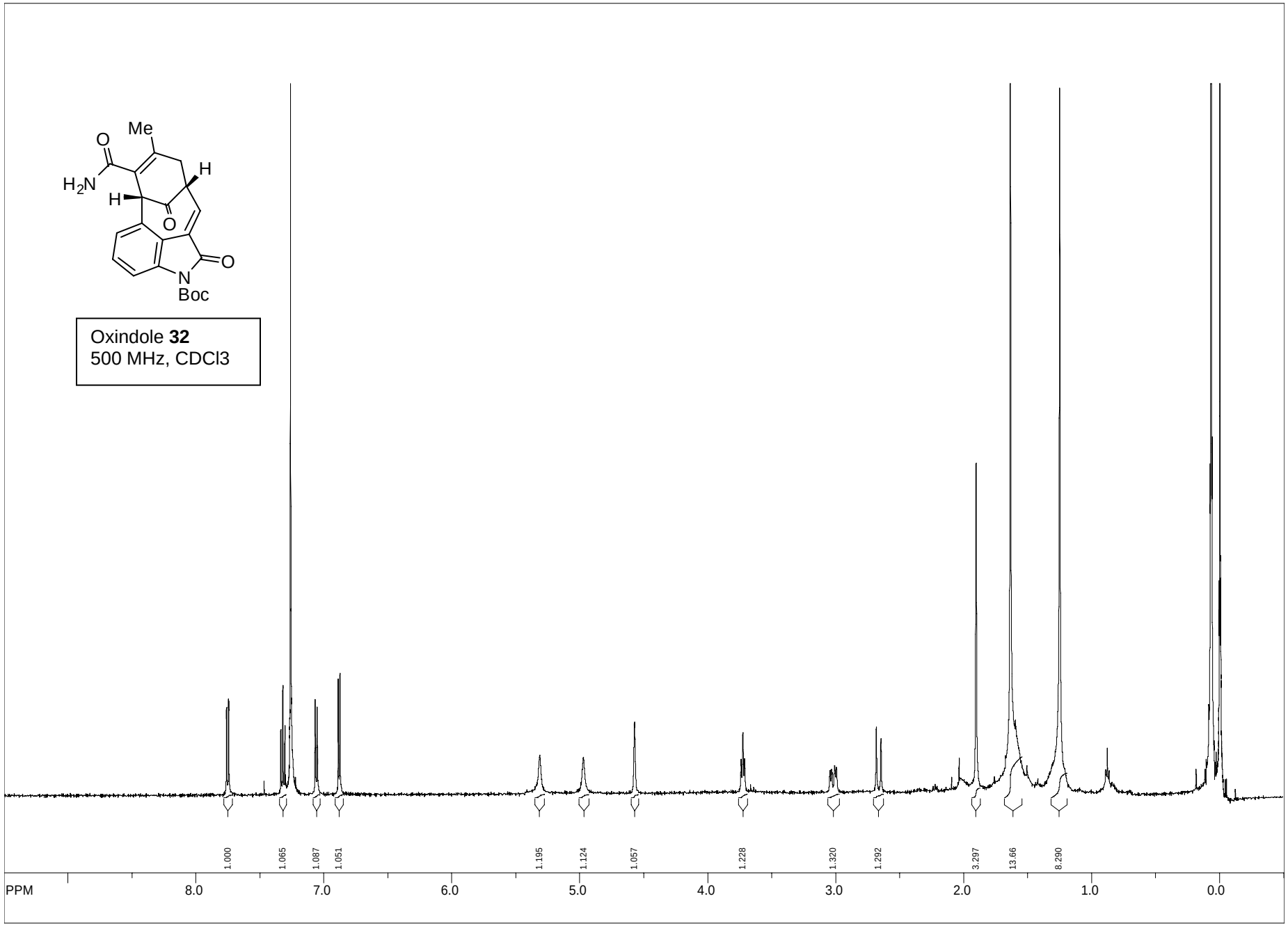

file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 9\PJM9-044anal.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 399.731144 MHz
time domain size: 44844 points
width: 5605.38 Hz = 14.022878 ppm = 0.124997 Hz/pt
number of scans: 8

freq. of 0 ppm: 399.729144 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000



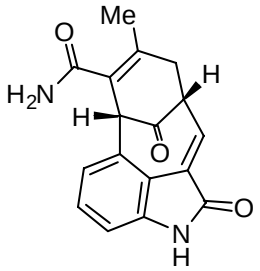

file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 9\PJM9-044C13.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 100.522503 MHz
time domain size: 63750 points
width: 24509.80 Hz = 243.824051 ppm = 0.384468 Hz/pt
number of scans: 128

freq. of 0 ppm: 100.511960 MHz
processed size: 65536 complex points
LB: 0.000 GB: 0.0000

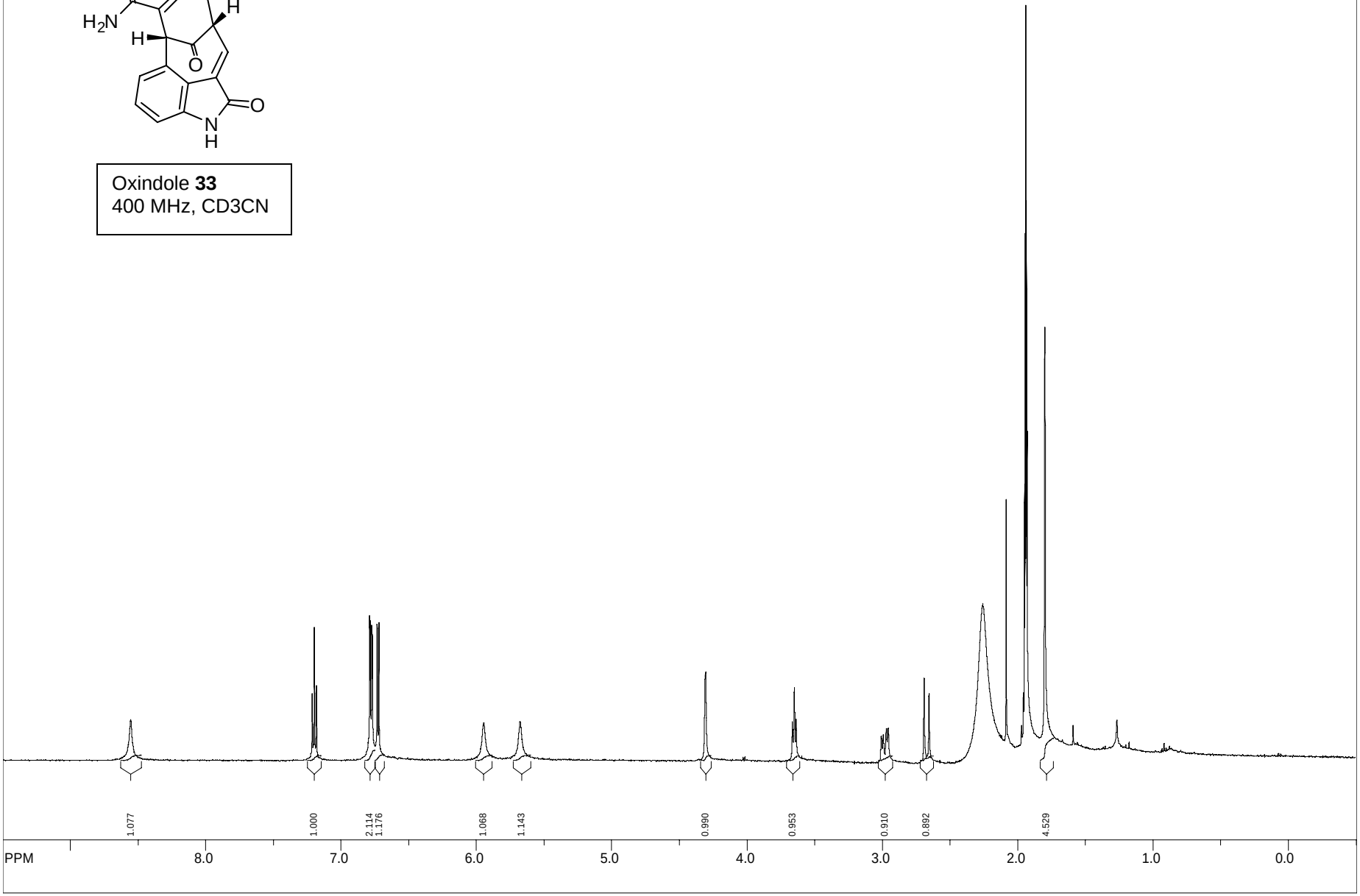



file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 9\PJM9-036.2.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 499.751060 MHz
time domain size: 64000 points
width: 8000.00 Hz = 16.007970 ppm = 0.125000 Hz/pt
number of scans: 84

freq. of 0 ppm: 499.748574 MHz
processed size: 131072 complex points
LB: 0.000 GB: 0.0000

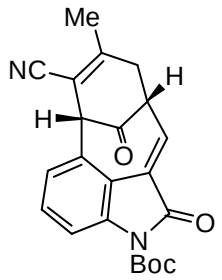



Oxindole **33**
400 MHz, CD3CN

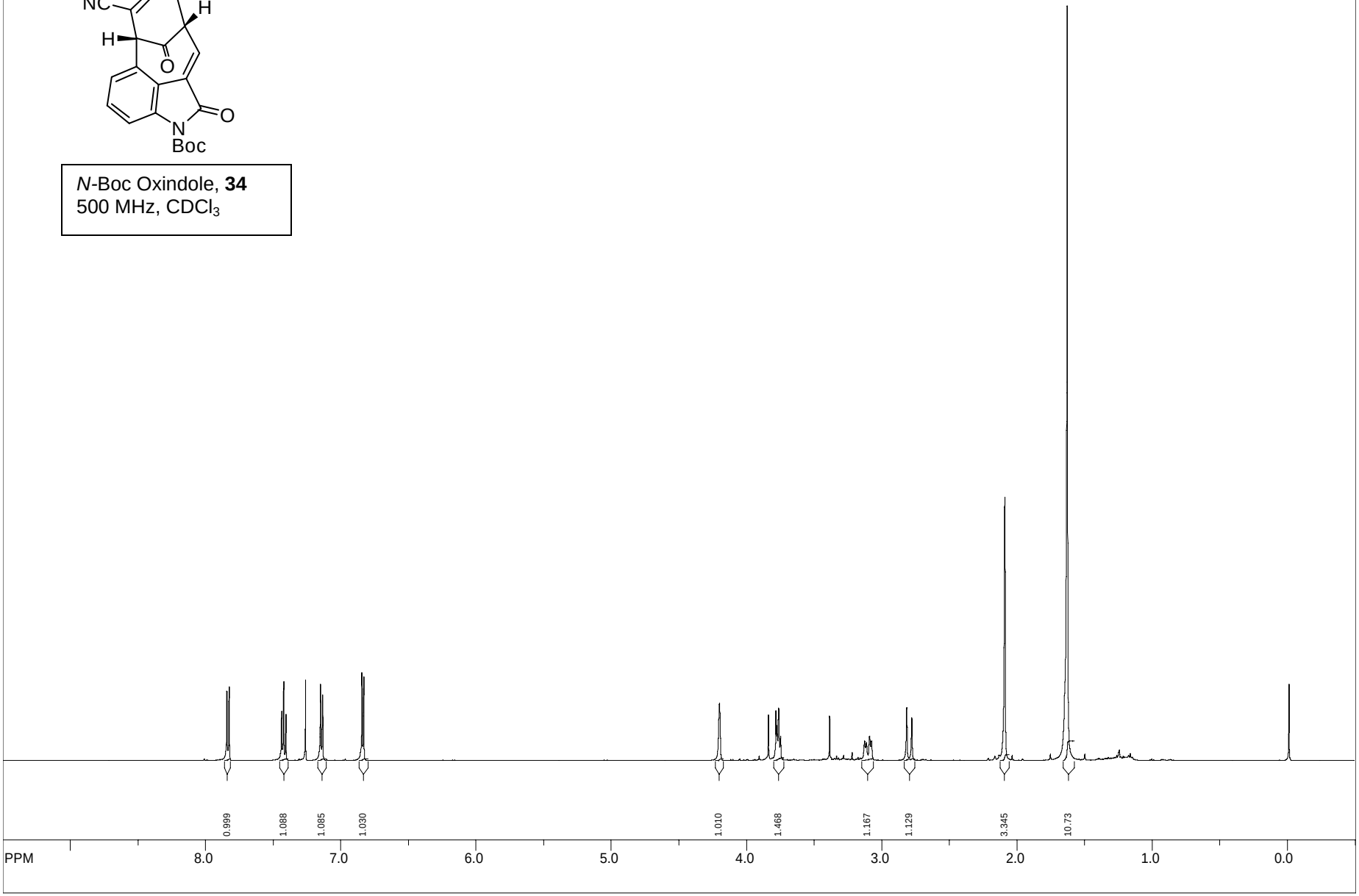



file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 9\PJM9-034CD3CN.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 499.753703 MHz
time domain size: 64000 points
width: 8000.00 Hz = 16.007885 ppm = 0.125000 Hz/pt
number of scans: 60

freq. of 0 ppm: 499.751229 MHz
processed size: 131072 complex points
LB: 0.000 GB: 0.0000



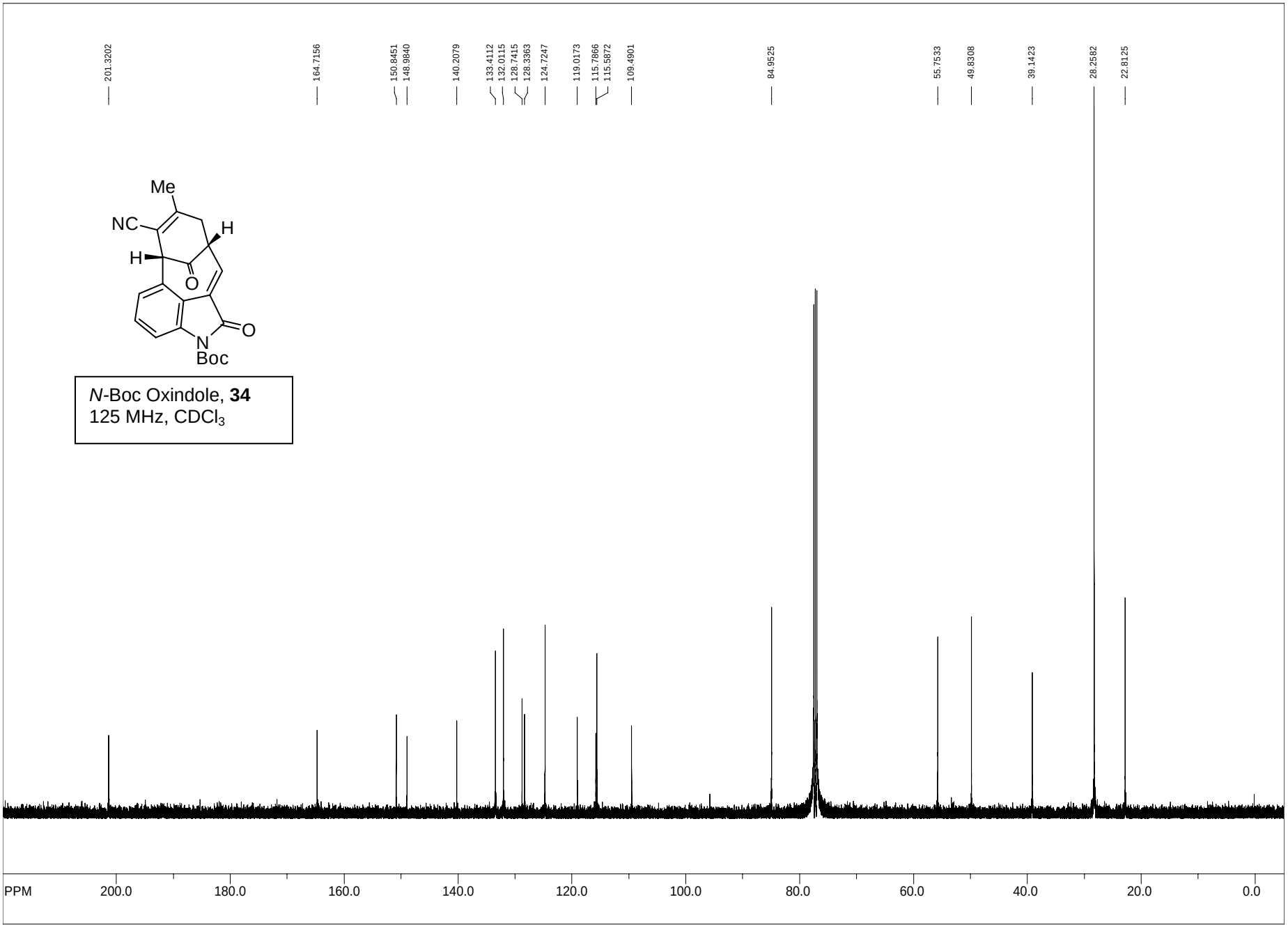

*N*-Boc Oxindole, **34**
500 MHz, $CDCl_3$




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 10\PJM10-034col.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 499.751060 MHz
time domain size: 64000 points
width: 8000.00 Hz = 16.007970 ppm = 0.125000 Hz/pt
number of scans: 8

freq. of 0 ppm: 499.748574 MHz
processed size: 131072 complex points
LB: 0.000 GB: 0.0000

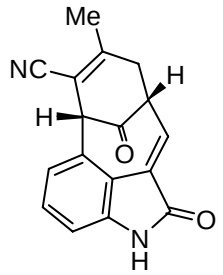
SpinWorks 2.5: C13par



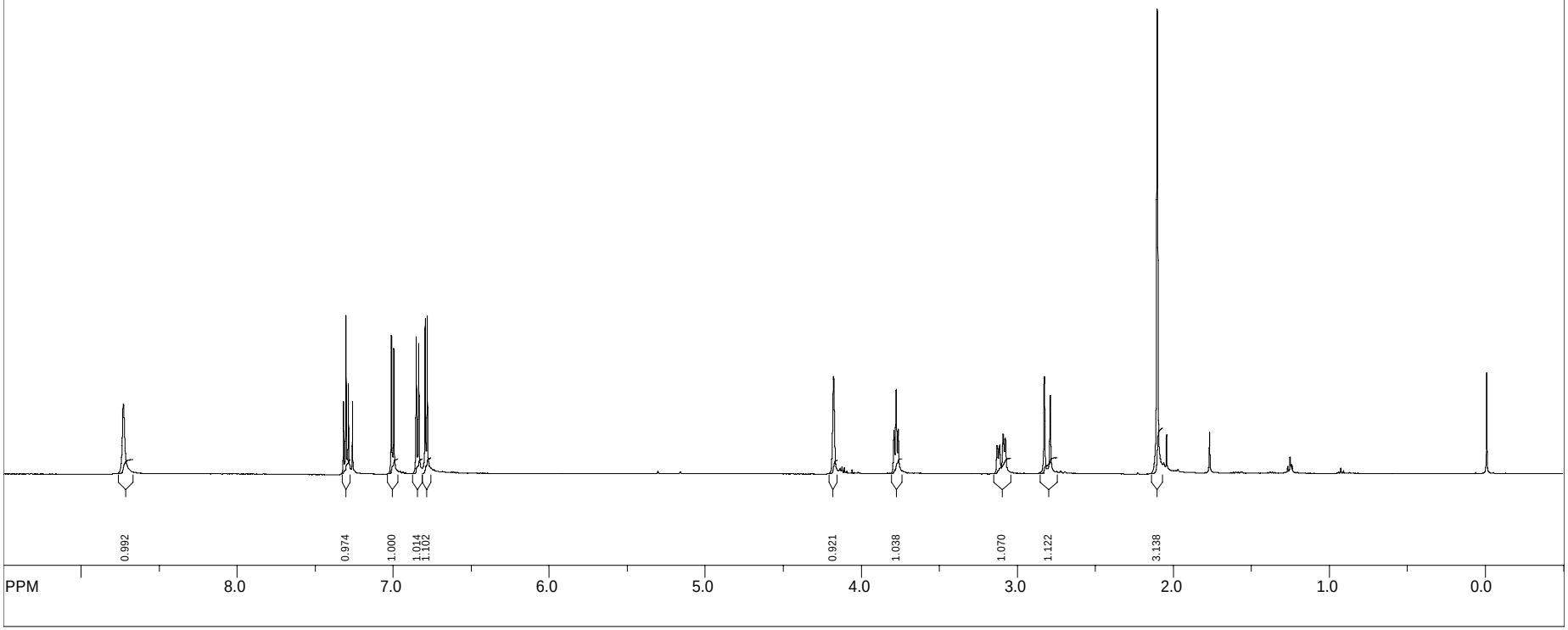

*N*-Boc Oxindole, **34**
125 MHz, $CDCl_3$

file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 10\PJM10-034-C13.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 125.673885 MHz
time domain size: 99016 points
width: 33003.30 Hz = 262.610648 ppm = 0.333313 Hz/pt
number of scans: 308

freq. of 0 ppm: 125.661855 MHz
processed size: 131072 complex points
LB: 0.000 GB: 0.0000



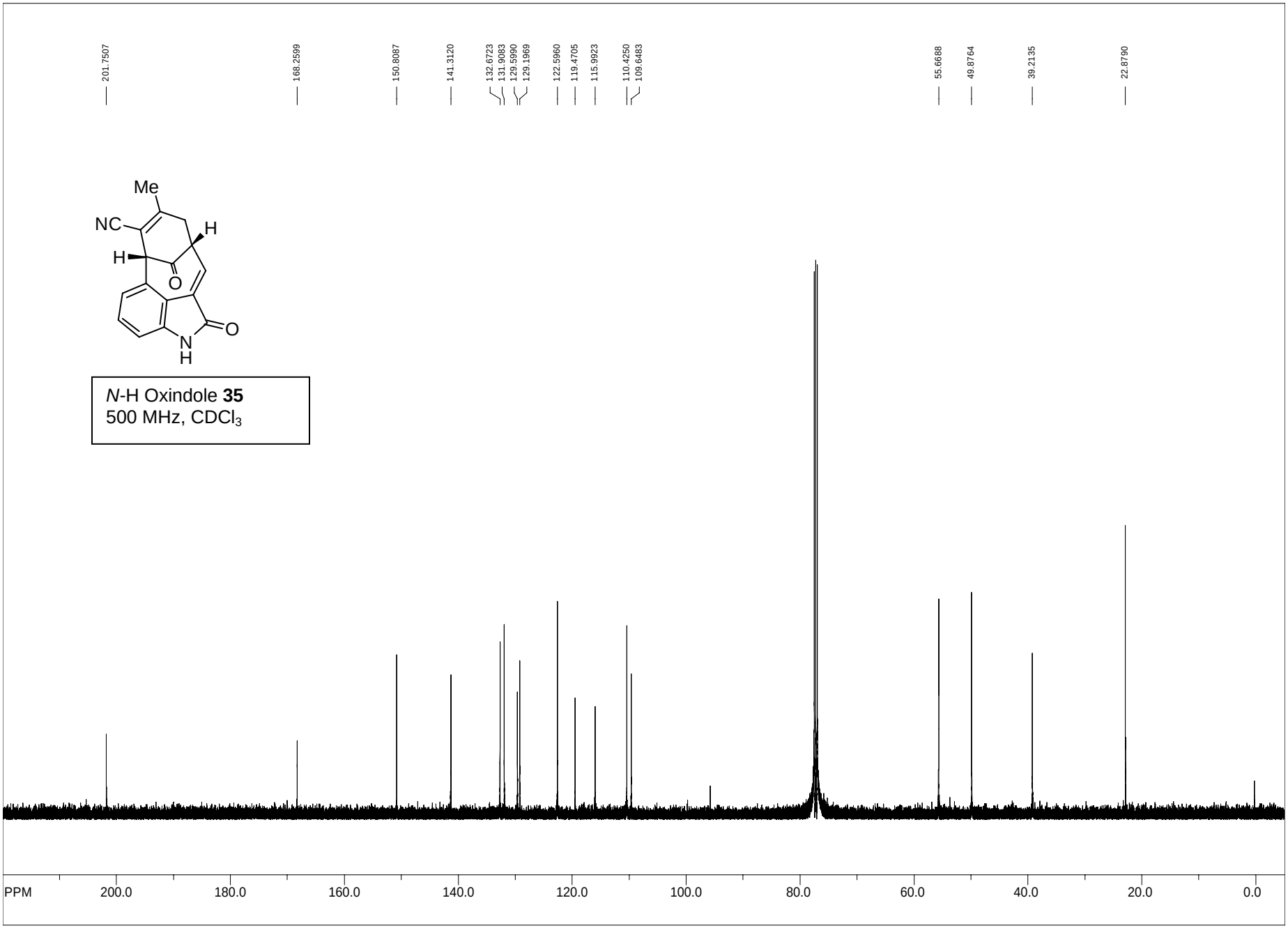

*N*-H Oxindole **35**
500 MHz, $CDCl_3$




file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 10\PJM10-053anal.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 499.751060 MHz
time domain size: 64000 points
width: 8000.00 Hz = 16.007970 ppm = 0.125000 Hz/pt
number of scans: 16

freq. of 0 ppm: 499.748574 MHz
processed size: 131072 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: C13par




*N*-H Oxindole **35**
500 MHz, $CDCl_3$

file: C:\Documents and Settings\Patrick\My Documents\PostDoc Chem\NMR data\Book 10\PJM10-040-C13.fid\fid block# 1 expt: "s2pul"
transmitter freq.: 125.673885 MHz
time domain size: 99016 points
width: 33003.30 Hz = 262.610648 ppm = 0.333313 Hz/pt
number of scans: 604

freq. of 0 ppm: 125.661853 MHz
processed size: 131072 complex points
LB: 0.000 GB: 0.0000