

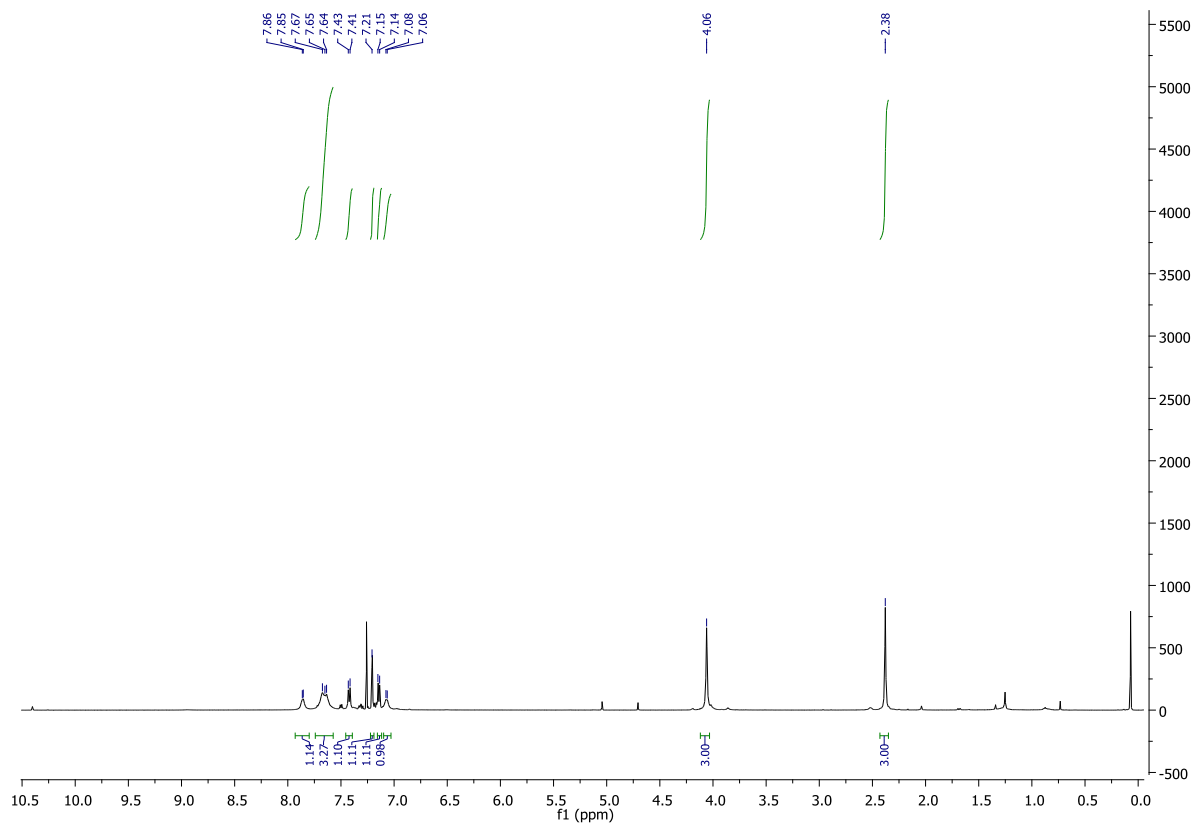
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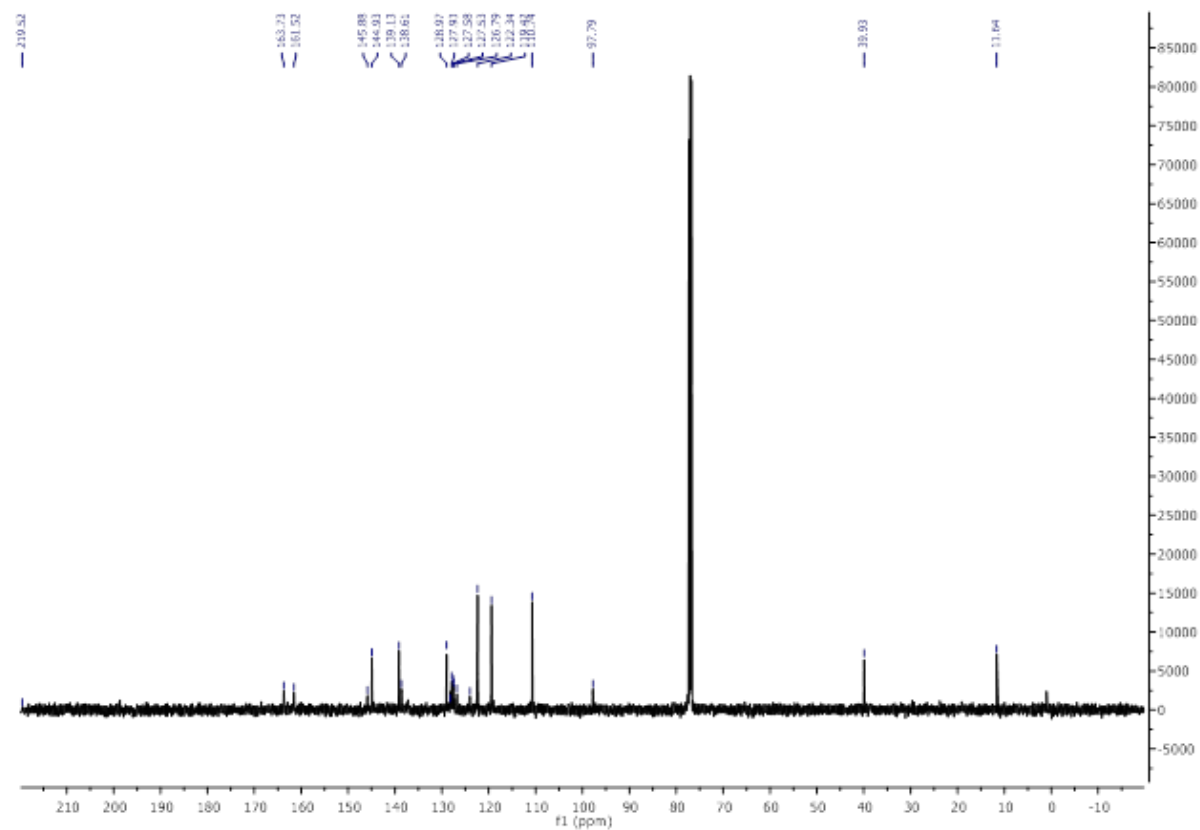
# 1. <sup>1</sup>H, <sup>13</sup>C, IR, and HRMS Spectra

## Compound 18

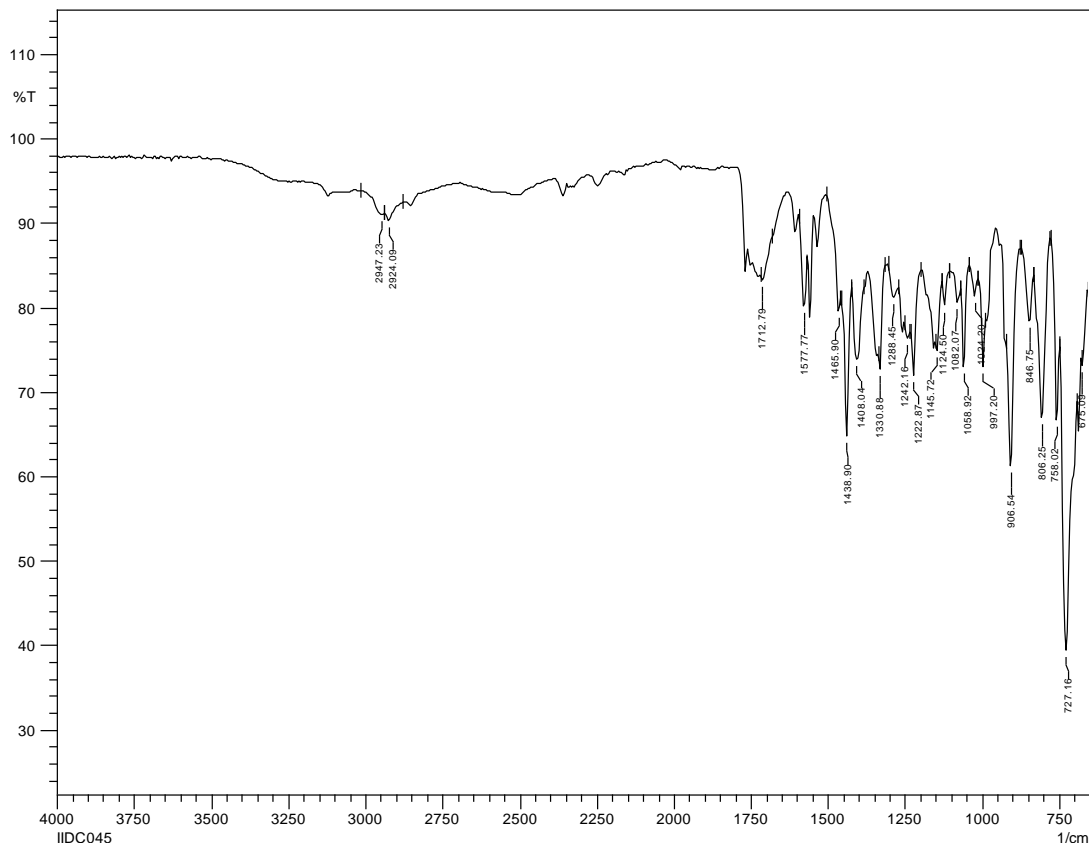
### <sup>1</sup>H NMR



### <sup>13</sup>C NMR



# IR

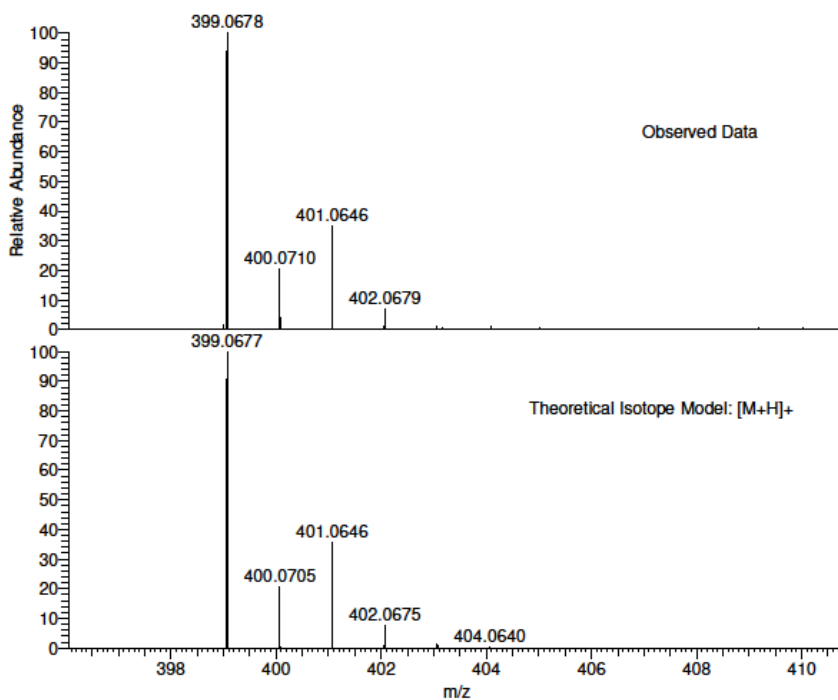


# HRMS

IIDC045 MW=398?  
 C<sub>19</sub>H<sub>15</sub>ClN<sub>4</sub>O<sub>2</sub>S  
 (MeOH)/MeOH + NH<sub>4</sub>OAc

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Diana Castagna  
 21/11/2013 13:06:16

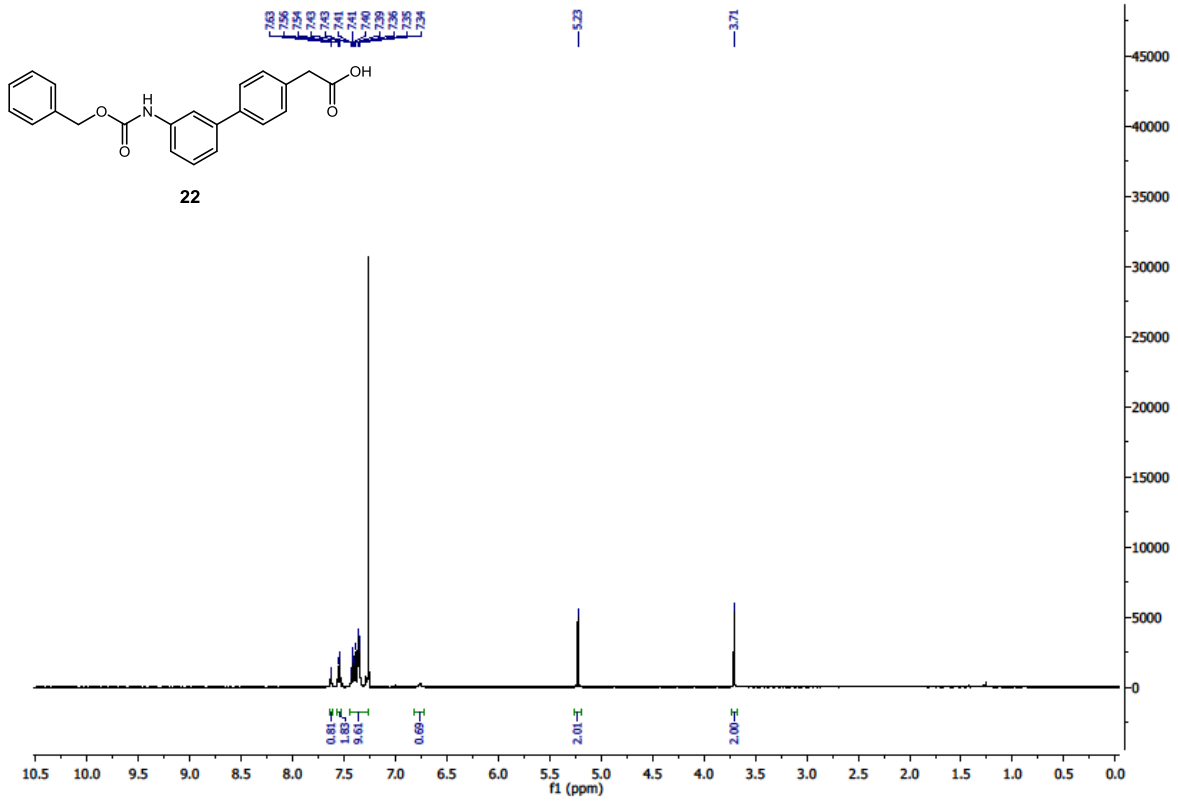


NL:  
 9.99E5  
 STRWAT151-OJ-HNESP#77-  
 97 RT: 1.46-1.74 AV: 20 T:  
 FTMS + p NSI Full ms  
 [200.00-4000.00]

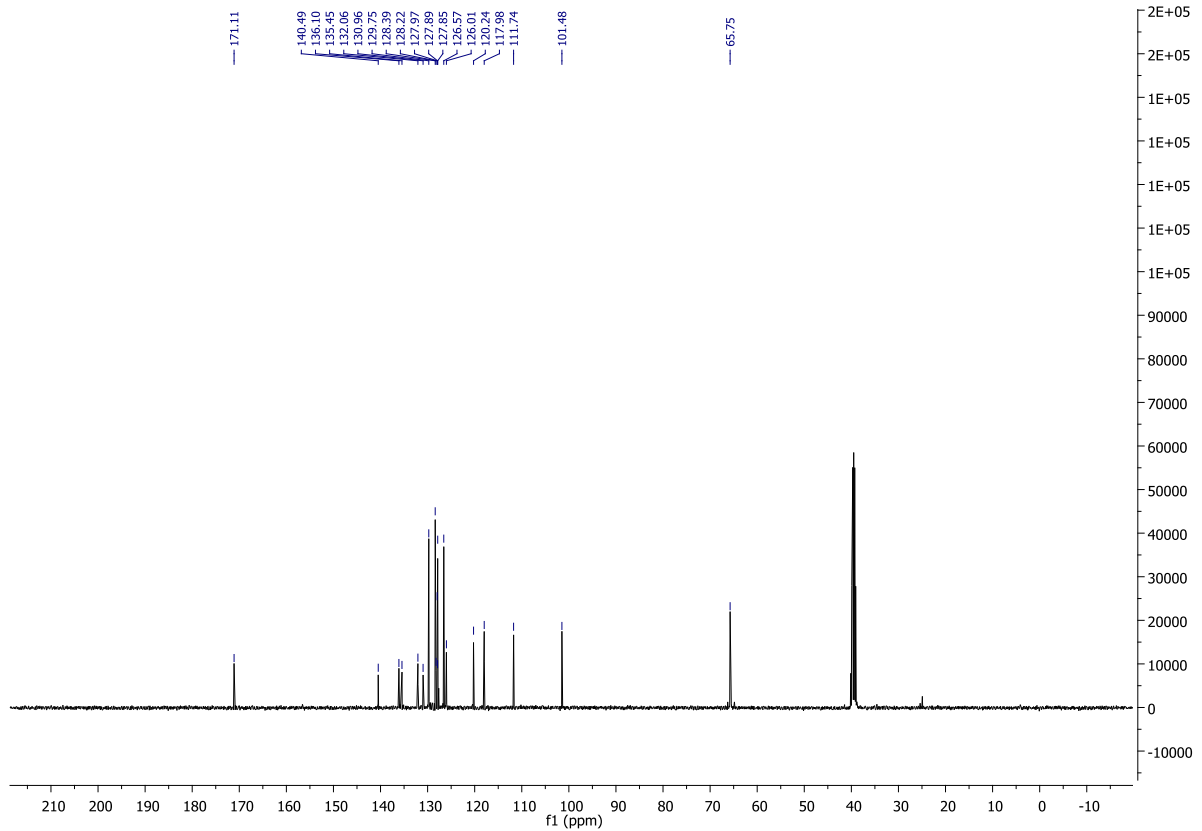
NL:  
 1.35E4  
 C<sub>19</sub>H<sub>15</sub>ClN<sub>4</sub>O<sub>2</sub>SH:  
 C<sub>19</sub>H<sub>16</sub>Cl<sub>1</sub>N<sub>4</sub>O<sub>2</sub>S<sub>1</sub>  
 p (gss, s /p:40) Chrg 1  
 R: 100000 Res .Pwr . @FWHM

# Compound 22

## <sup>1</sup>H NMR

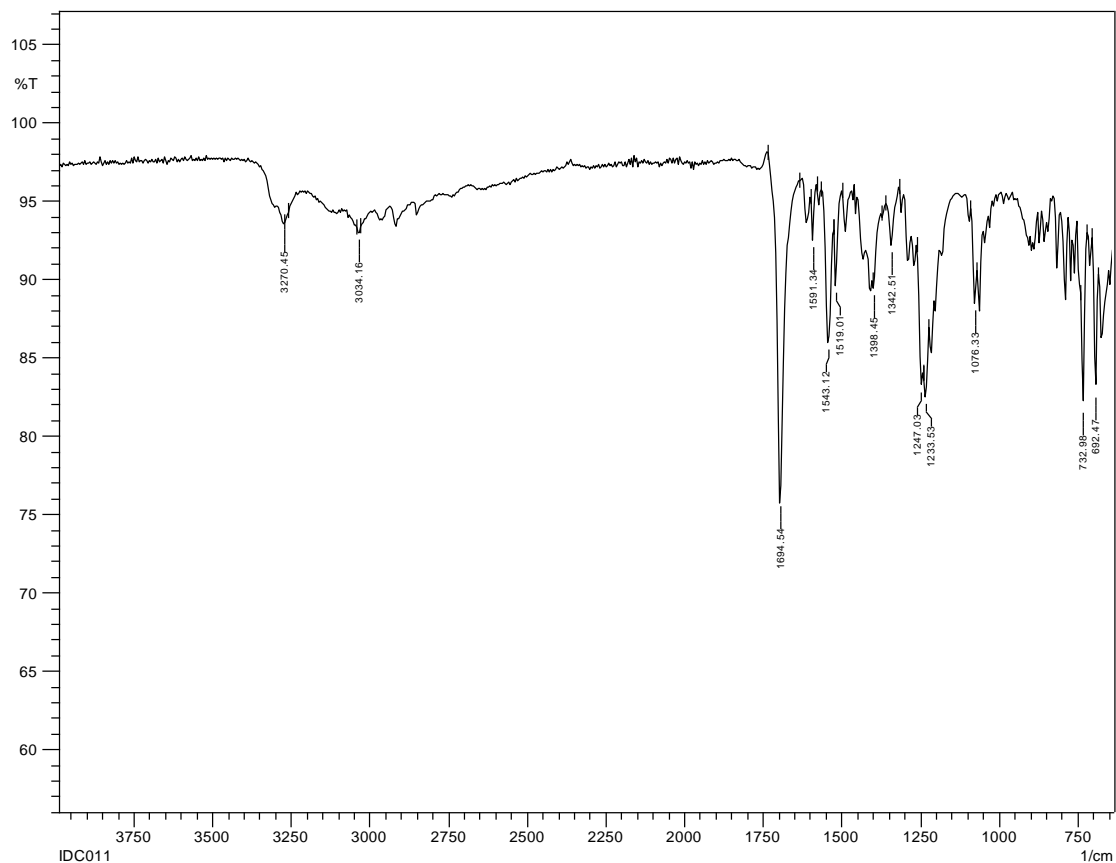


## <sup>13</sup>C NMR of 22





## IR of 22



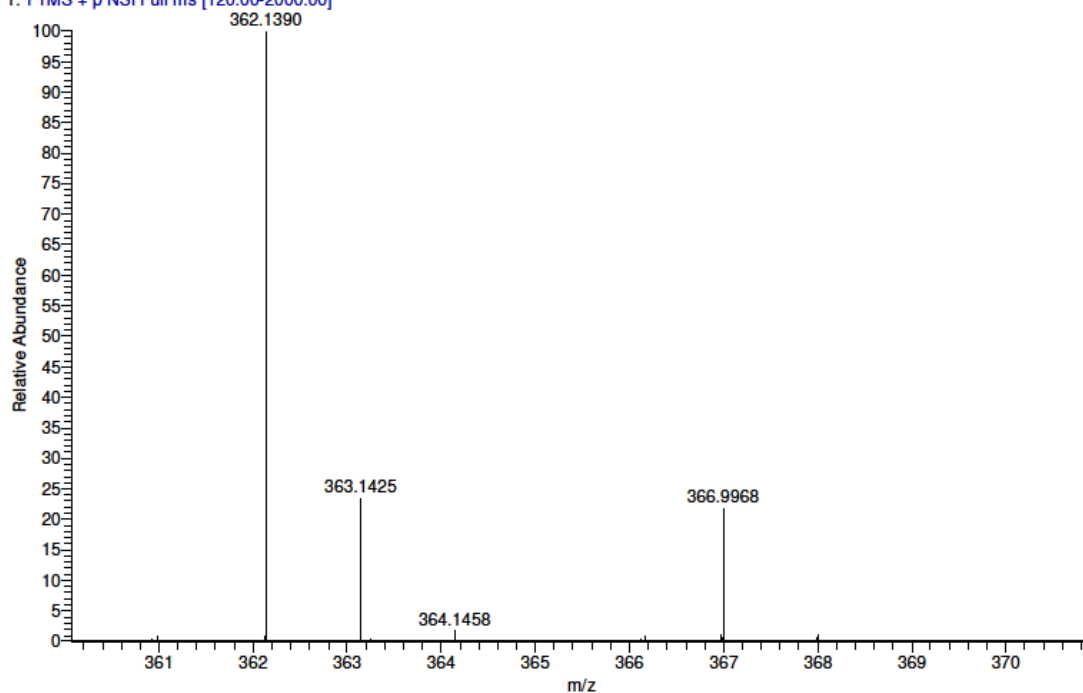
## HRMS of 22

IDC11 MW=361?  
(DCM)/MeOH + NH4OAc

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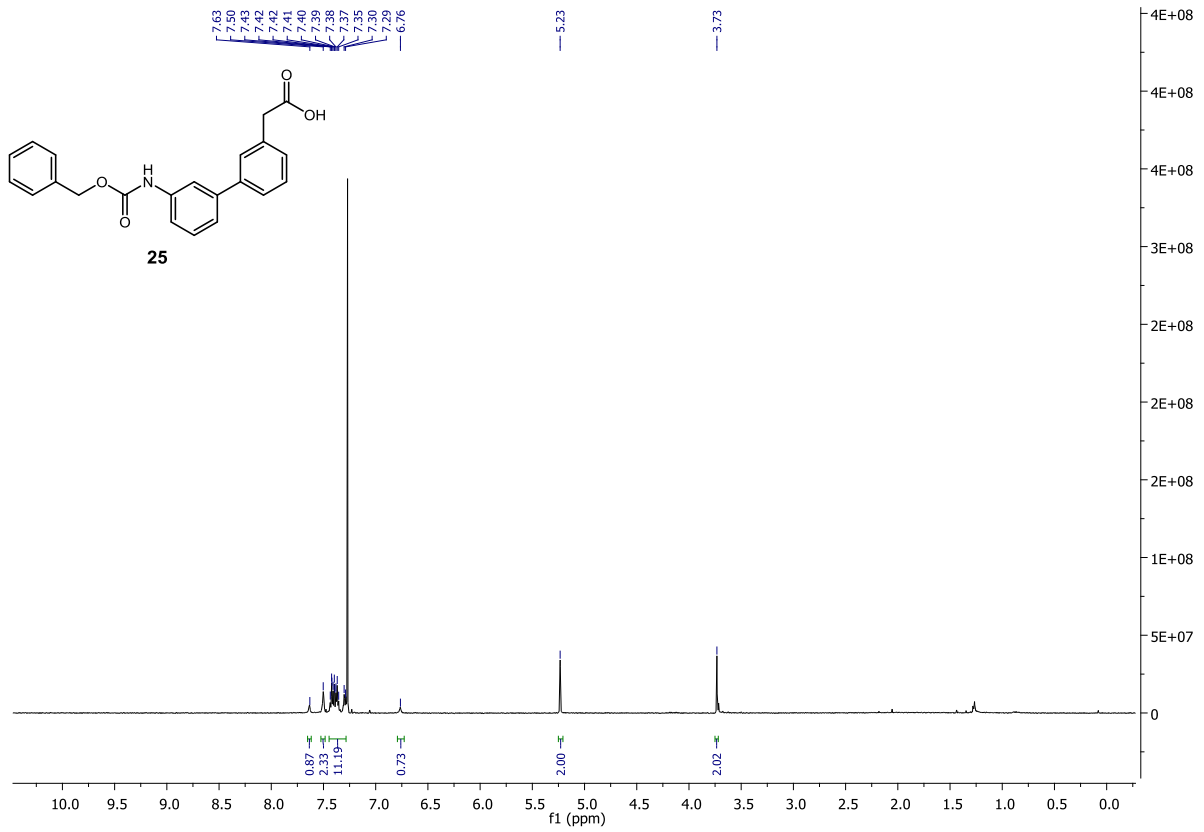
Diana Castagna  
23/05/2013 11:56:06

STRWAT091-OV-HNESP #32-51 RT: 0.74-1.28 AV: 20 SM: 7G NL: 8.96E5  
T: FTMS + p NSI Full ms [120.00-2000.00]

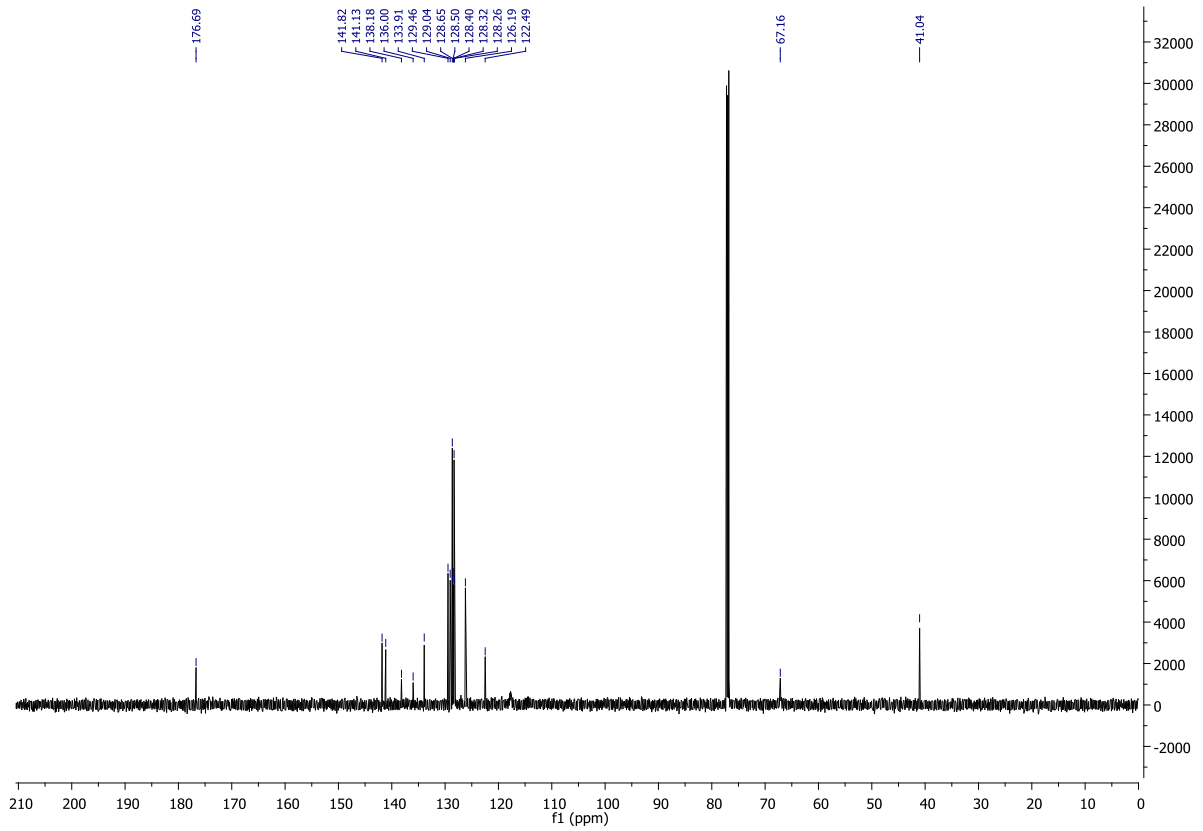


# Compound 25

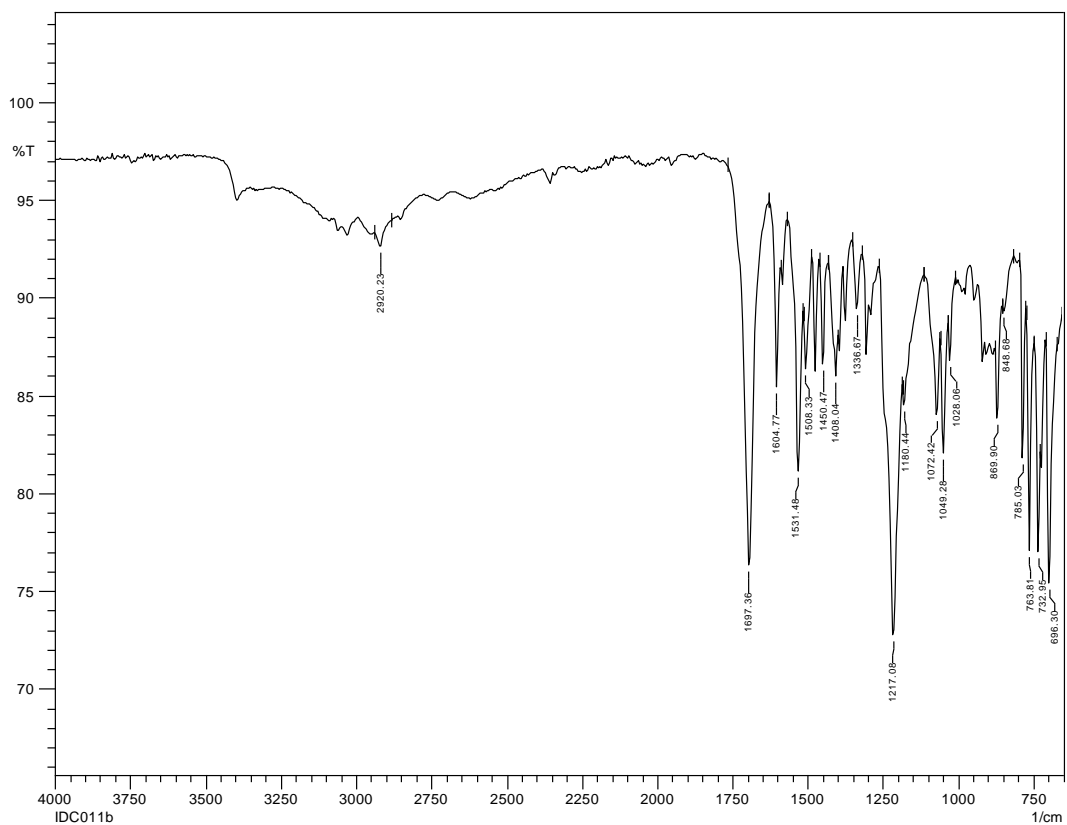
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 25



## IR of 25

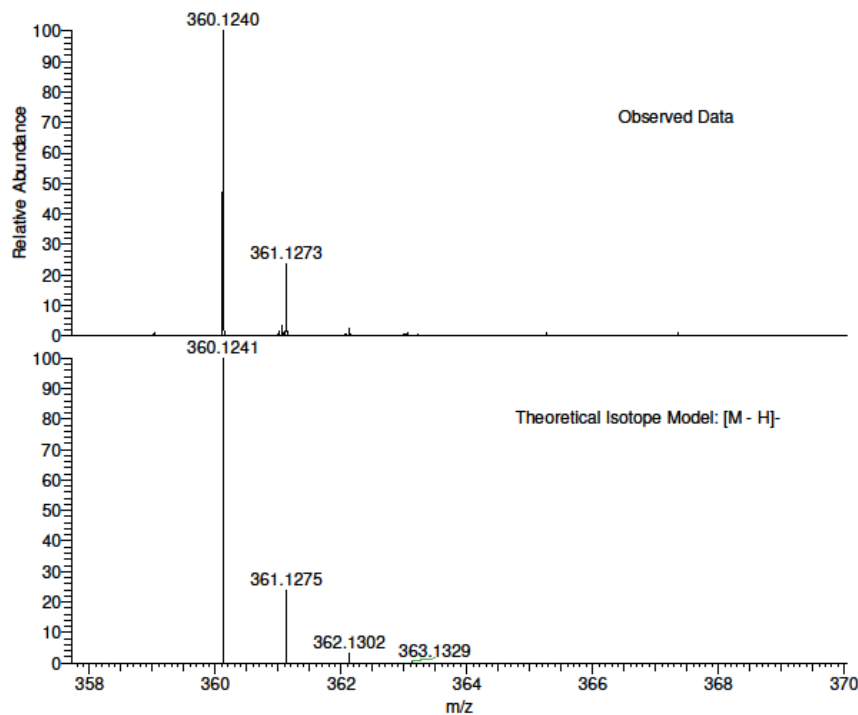


## HRMS of 25

IDC11B MW=361?  
(MeOH)/MeOH+DEA

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09/10/2013 15:13:52

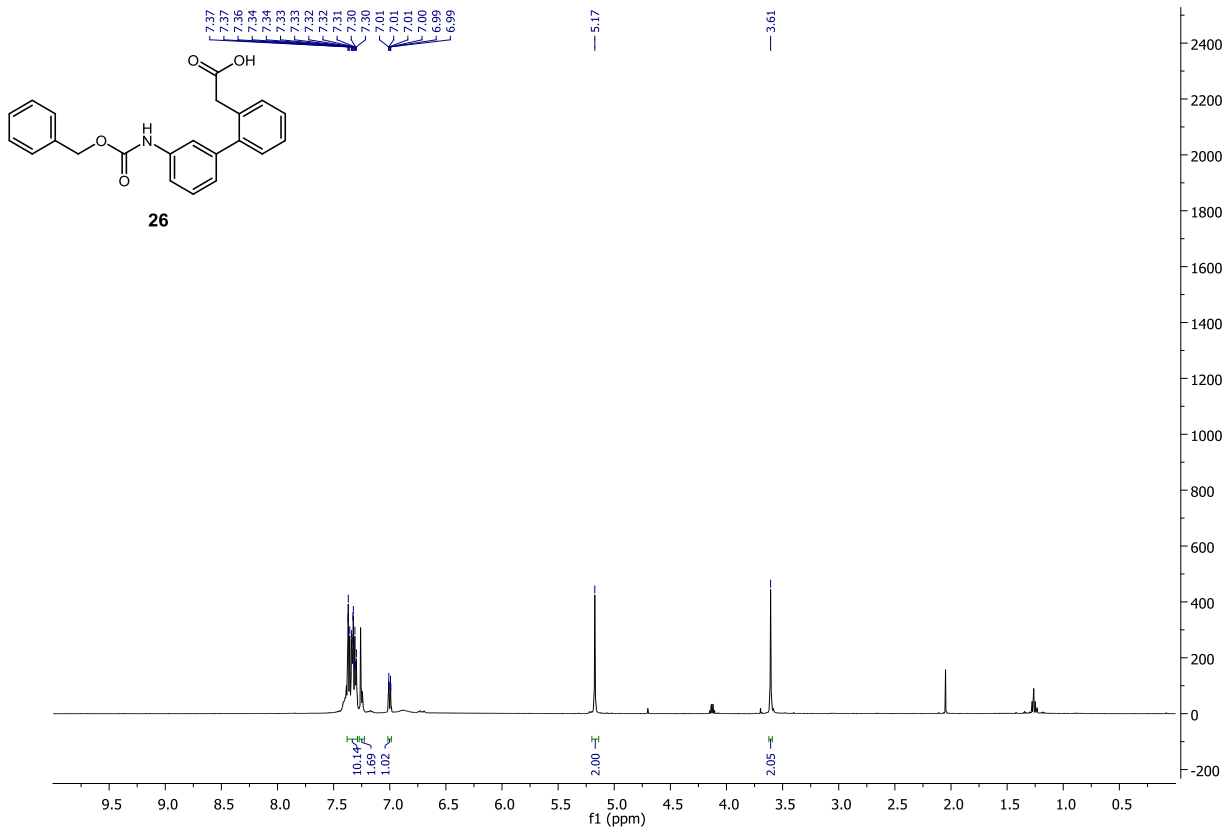


NL:  
2.33E6  
STRWAT120-OJ-HNESN-2#10-  
52 RT: 0.23-1.33 AV: 43 T:  
FTMS - p NSI Full ms  
[150.00-2000.00]

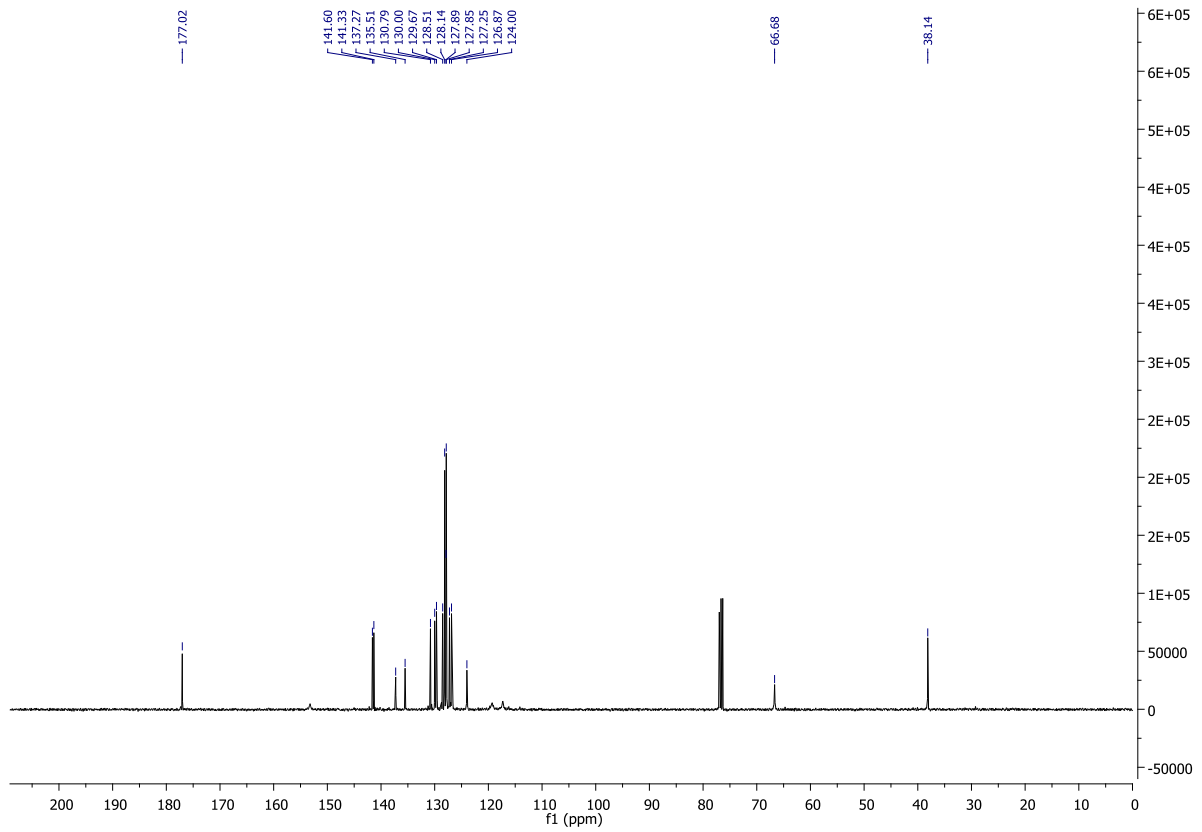
NL:  
1.82E4  
C<sub>22</sub>H<sub>18</sub>NO<sub>4</sub>:  
C<sub>22</sub>H<sub>18</sub>N<sub>1</sub>O<sub>4</sub>  
p (gss, s /p:40) Chrg -1  
R: 100000 Res .Pwr . @FWHM

# Compound 26

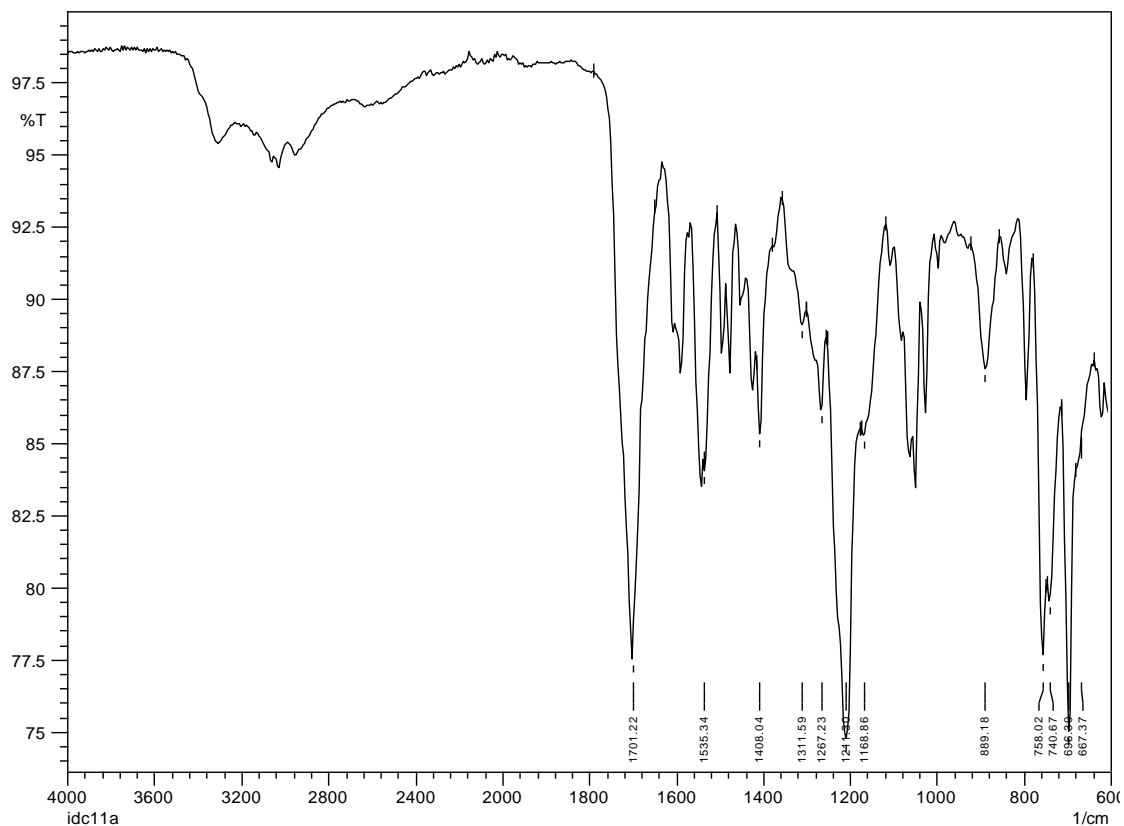
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 26



## IR of 26

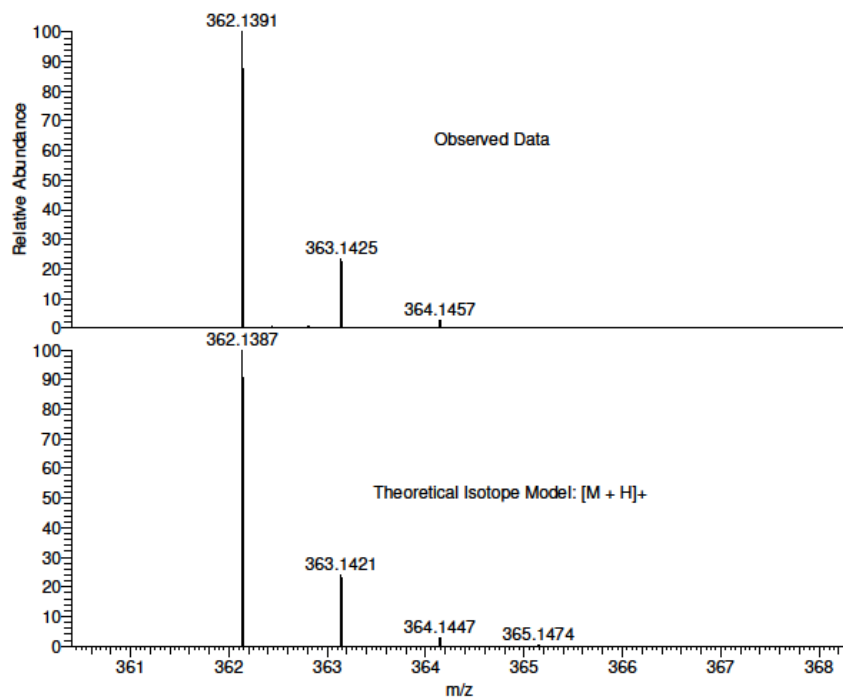


## HRMS of 26

IDC11a MW=361?  
C<sub>22</sub>H<sub>19</sub>NO<sub>4</sub>  
(DCM)/MeOH + NH<sub>4</sub>OAc

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02/09/2014 10:10:44

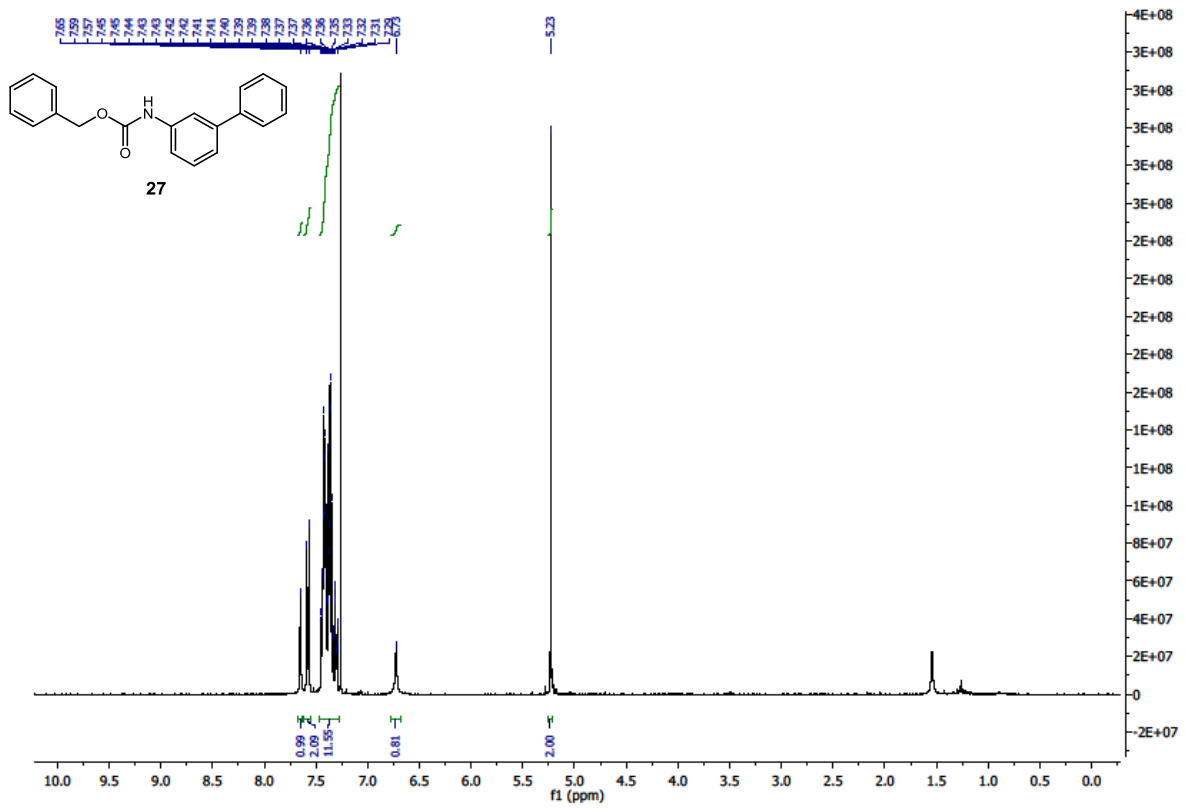


NL:  
5.31E6  
STRWAT321-OA-HNESP#28-  
45 RT: 0.66-1.05 AV: 16 T:  
FTMS + p NSI Full ms  
[140.00-1935.00]

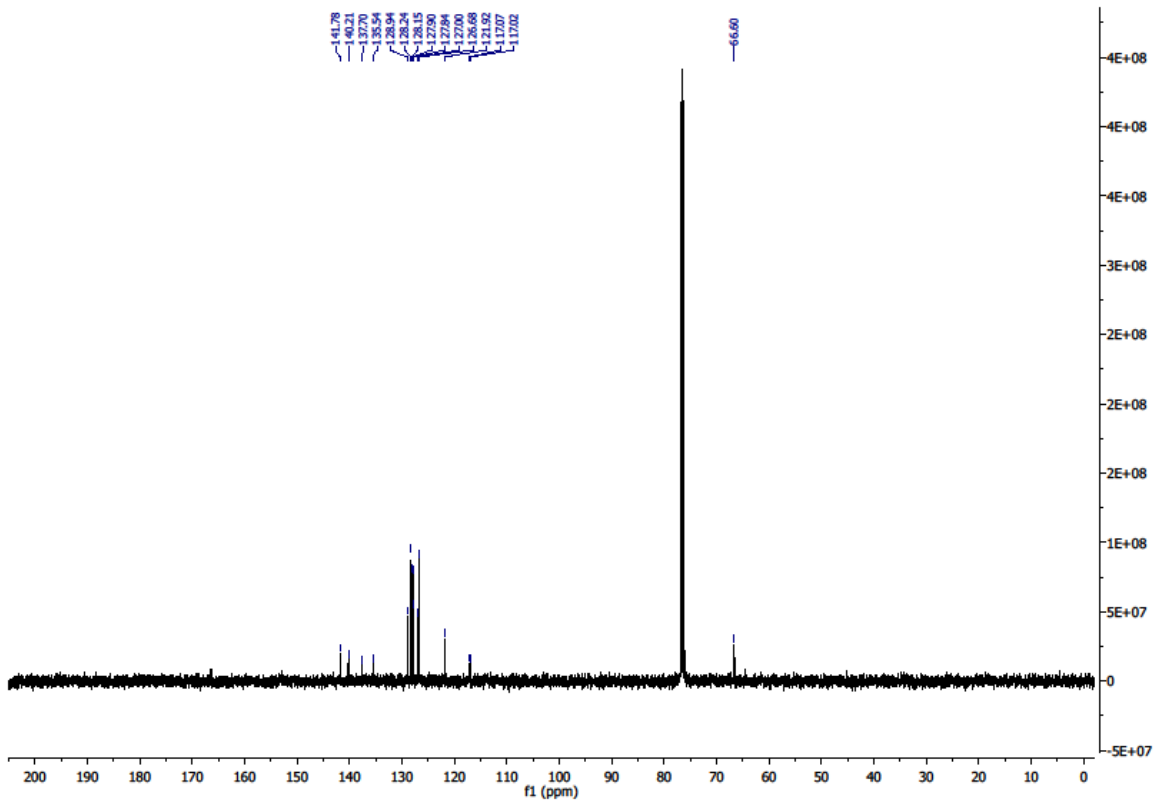
NL:  
1.82E4  
C<sub>22</sub>H<sub>19</sub>NO<sub>4</sub> H:  
C<sub>22</sub>H<sub>20</sub>N<sub>1</sub>O<sub>4</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 27

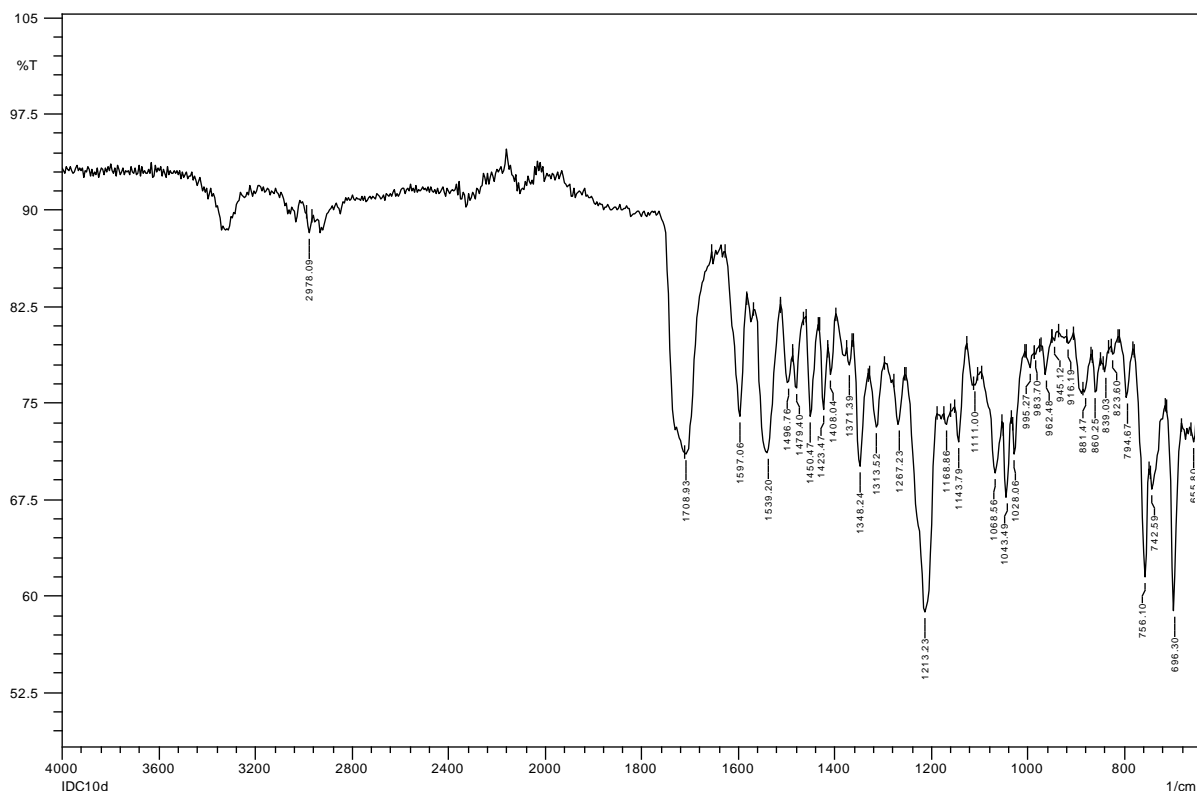
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 27



## IR of 27

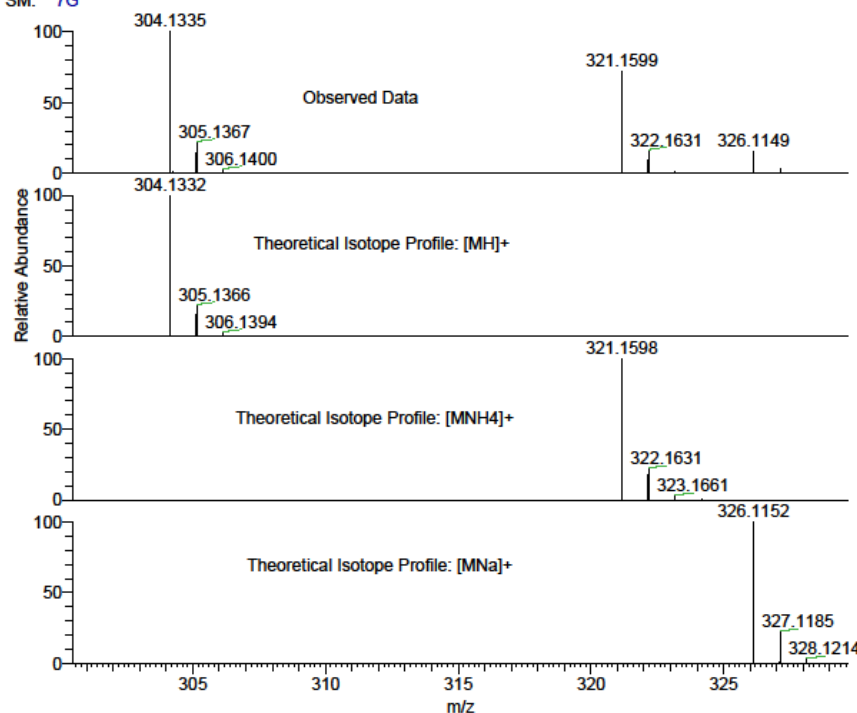


## HRMS of 27

IDC10D MW=303?  
(MeOH)/MeOH + NH4OAc  
SM: 7G

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02/07/2013 18:25:14



NL:  
2.79E7  
STRWAT105-OJ-HNESP#32-  
53 RT: 0.72-1.29 AV: 21 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

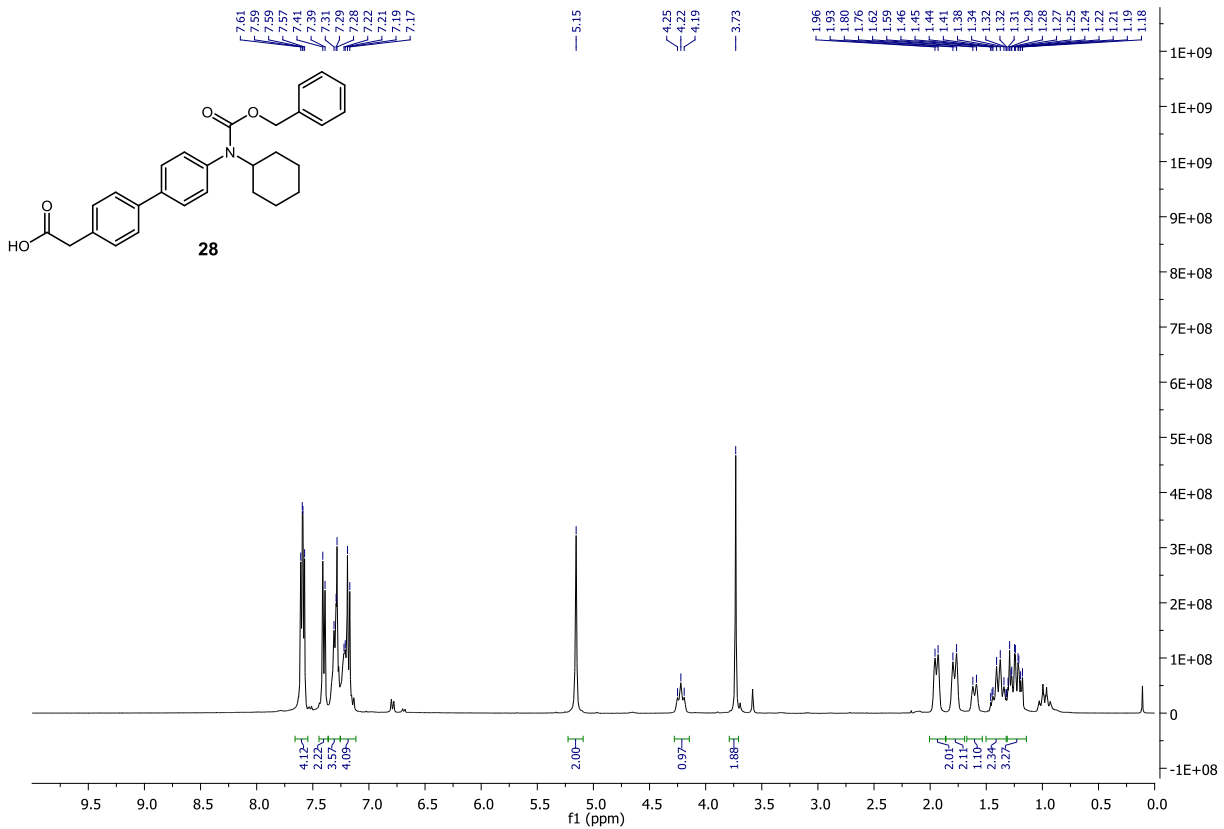
NL:  
1.87E4  
C<sub>20</sub>H<sub>17</sub>NO<sub>2</sub>H:  
C<sub>20</sub>H<sub>18</sub>N<sub>1</sub>O<sub>2</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

NL:  
1.86E4  
C<sub>20</sub>H<sub>17</sub>NO<sub>2</sub>NH<sub>4</sub>:  
C<sub>20</sub>H<sub>21</sub>N<sub>2</sub>O<sub>2</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

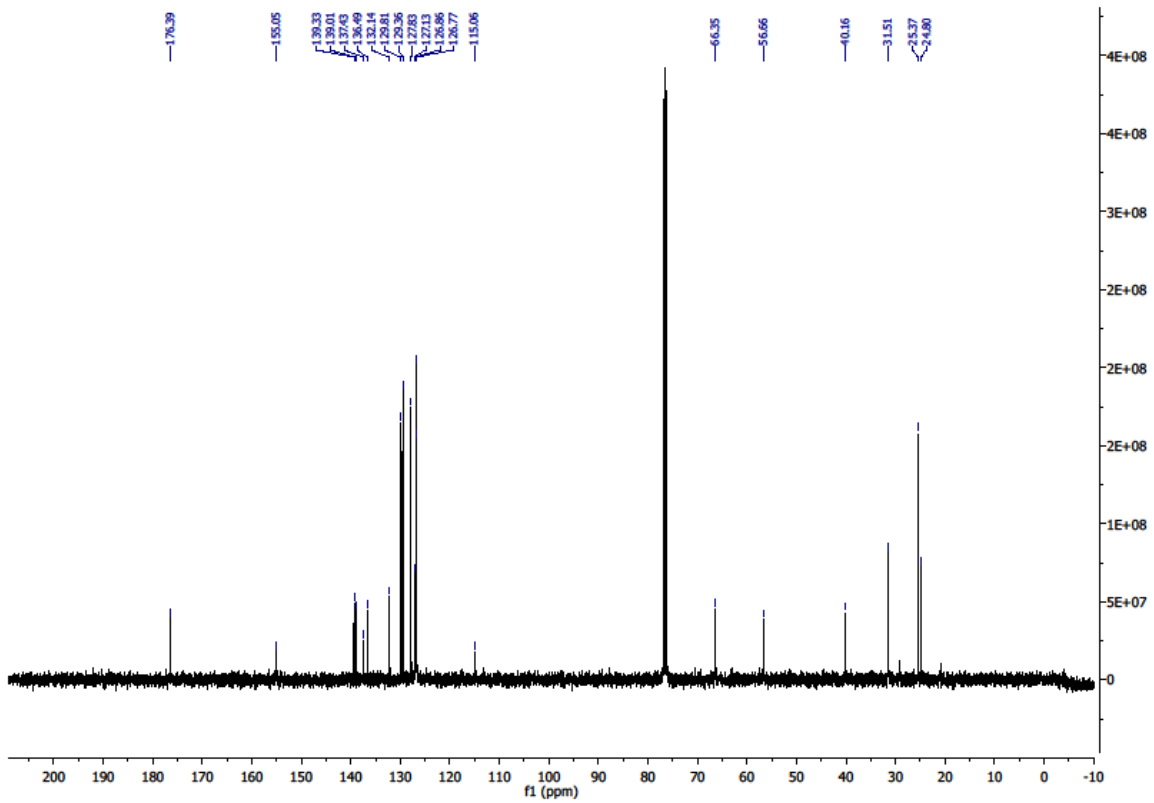
NL:  
1.87E4  
C<sub>20</sub>H<sub>17</sub>NO<sub>2</sub>Na:  
C<sub>20</sub>H<sub>17</sub>N<sub>1</sub>O<sub>2</sub>Na<sub>1</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 28

## <sup>1</sup>H NMR

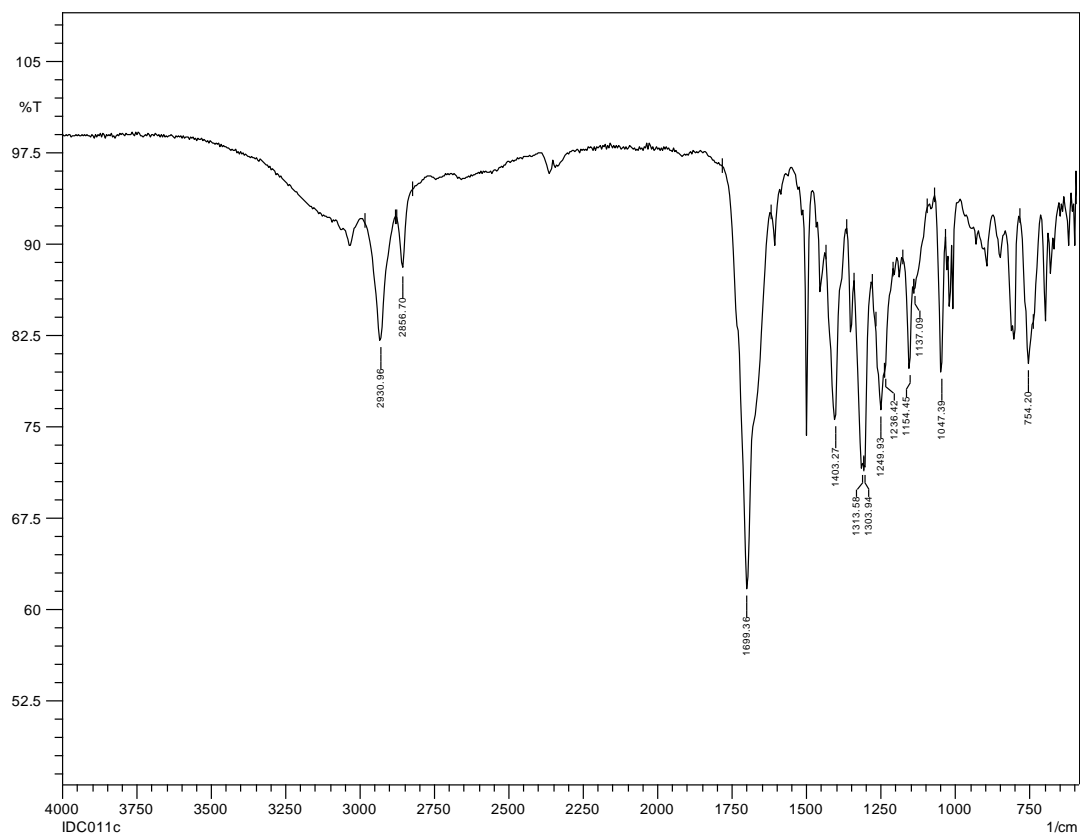


## <sup>13</sup>C NMR of 28





## IR of 28



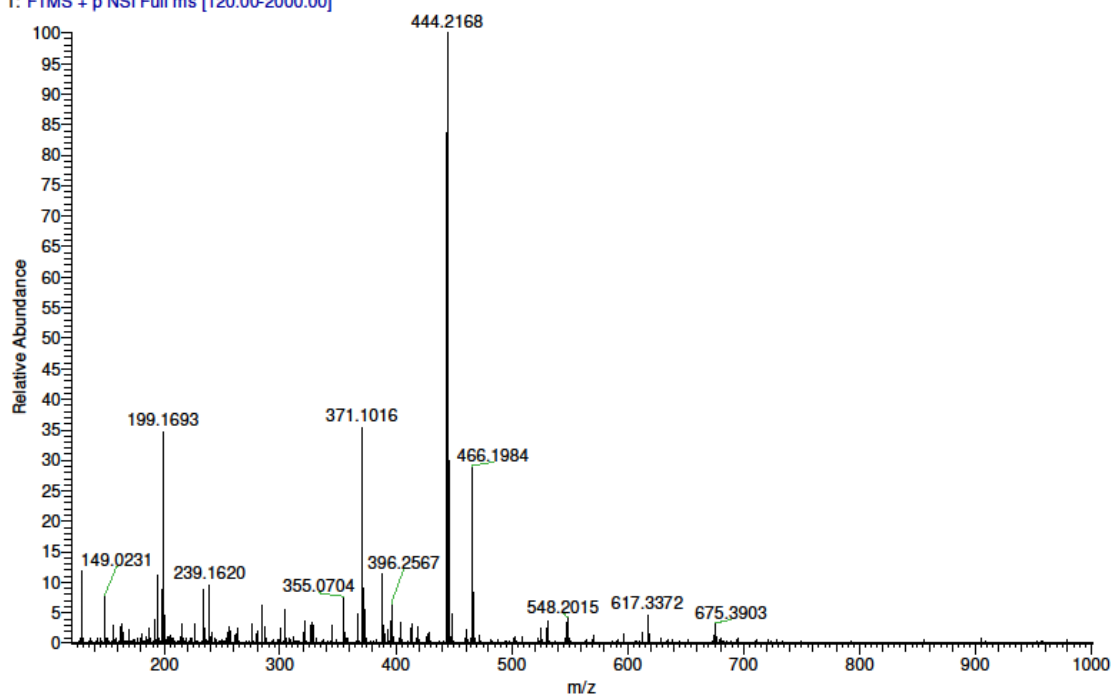
## HRMS of 28

IDC11C MW=361?  
(DCM)/MeOH + NH4OAc

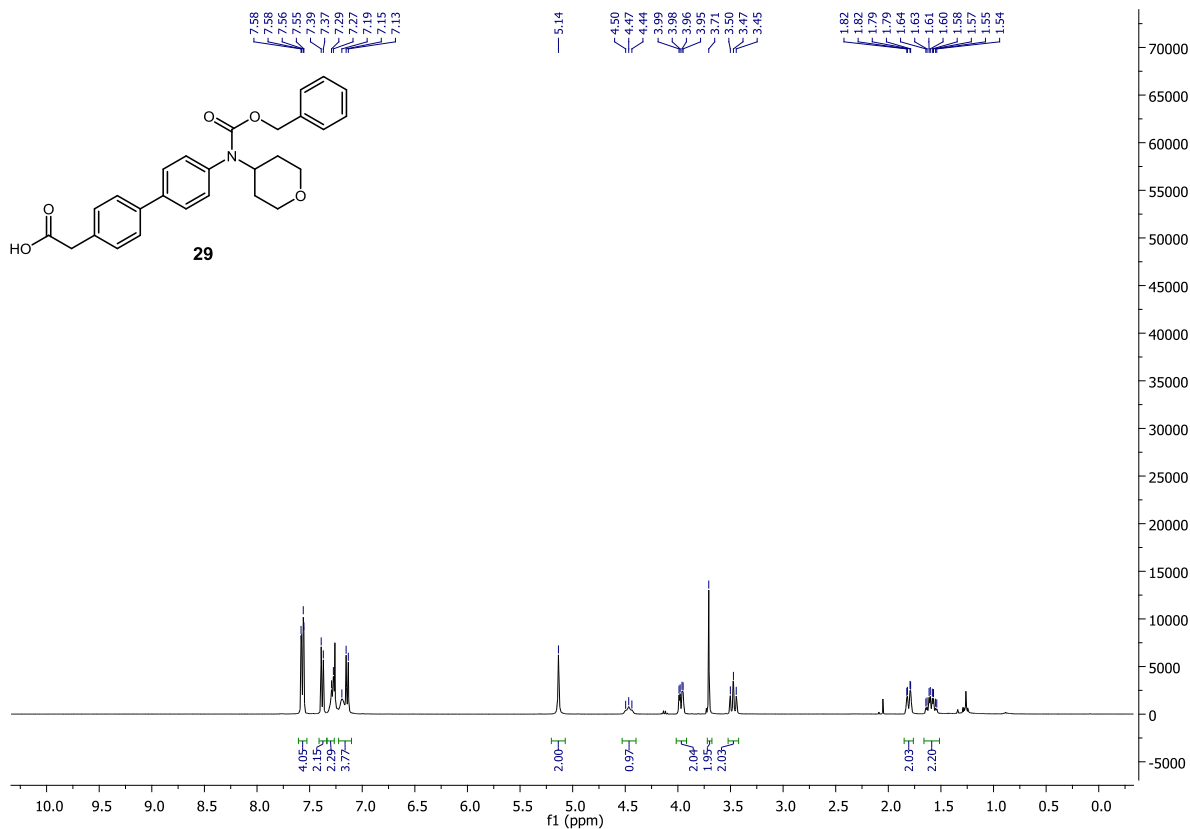
EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
23/05/2013 11:52:42

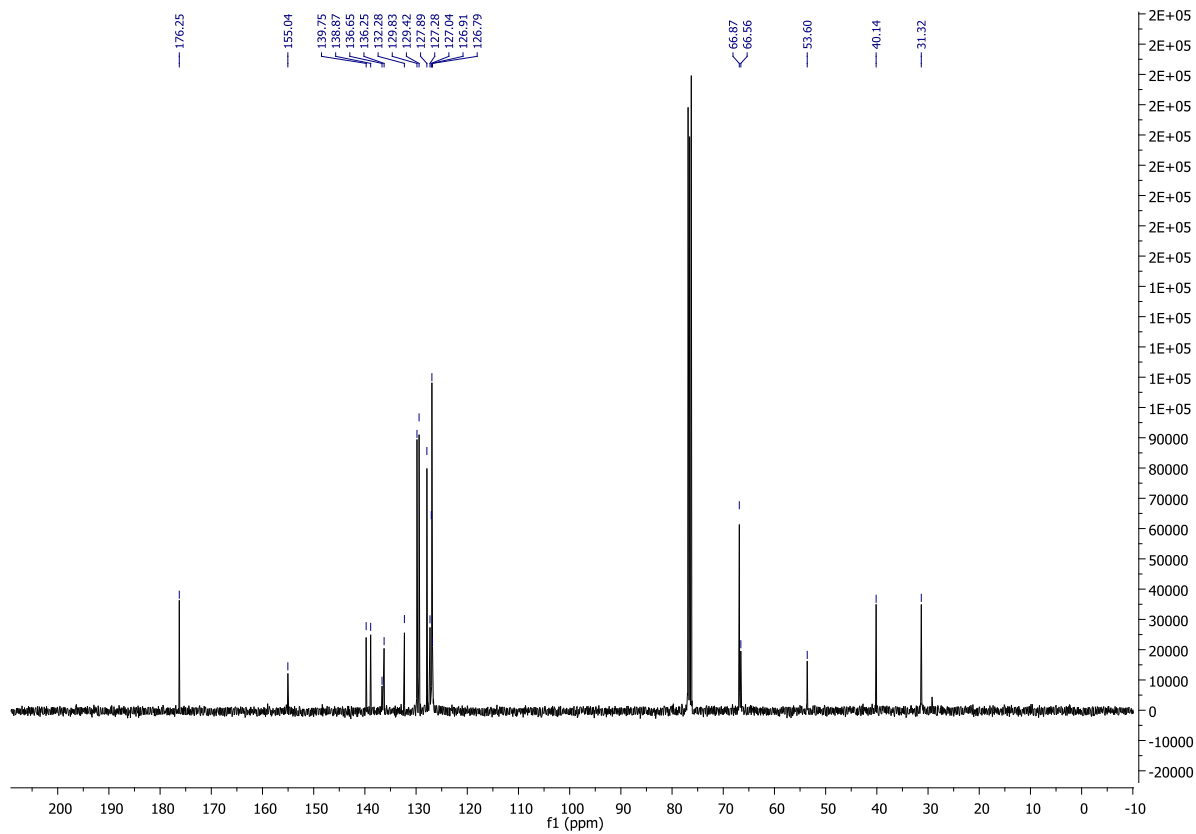
STRWAT090-OV-HNESP #36-46 RT: 0.86-1.15 AV: 11 SM: 7G NL: 1.90E6  
T: FTMS + p NSI Full ms [120.00-2000.00]



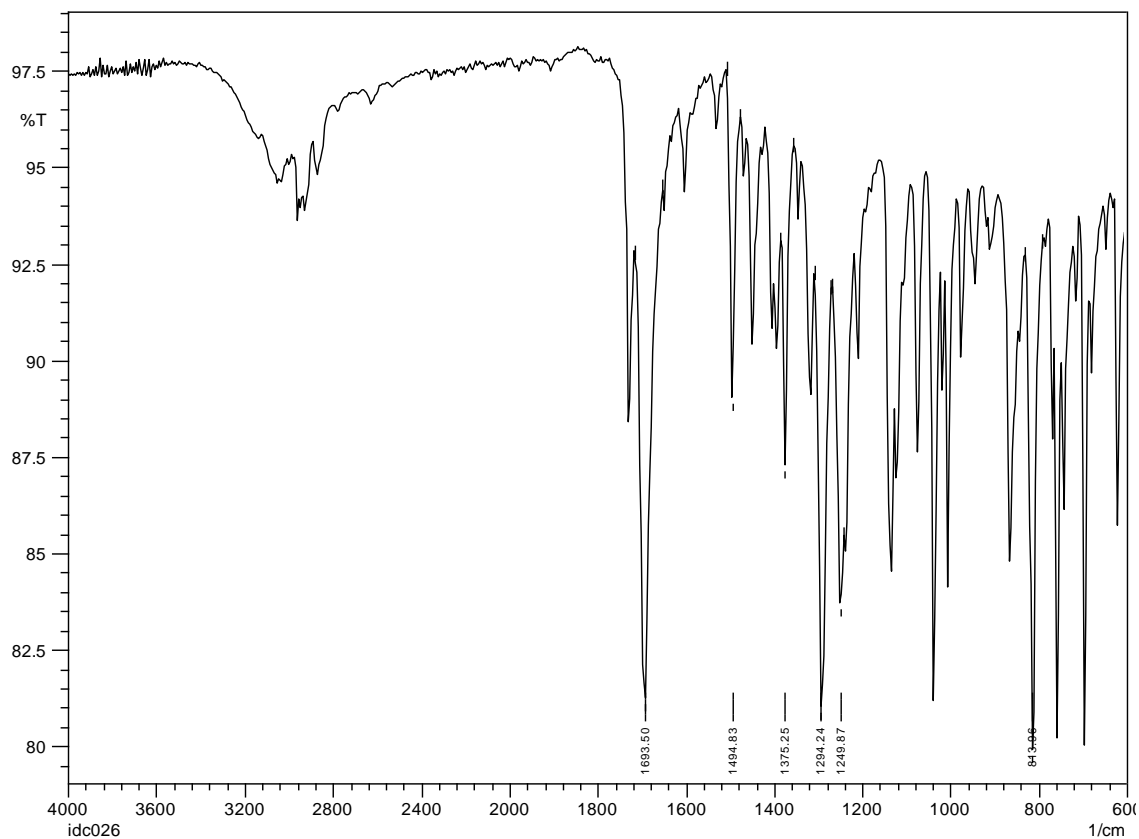
**Compound 29**  
**<sup>1</sup>H NMR**



**<sup>13</sup>C NMR of 29**



## IR of 29

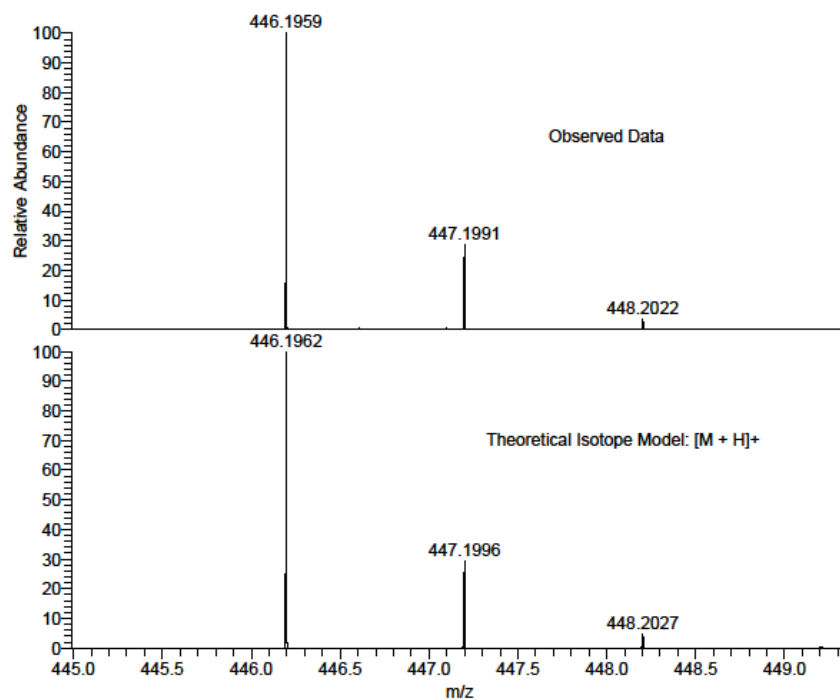


## HRMS of 29

IDC026 MW=443?  
C<sub>28</sub>H<sub>29</sub>NO<sub>4</sub>  
(MeOH)/MeOH + NH<sub>4</sub>OAc

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Diana Castagna  
25/07/2014 11:33:58

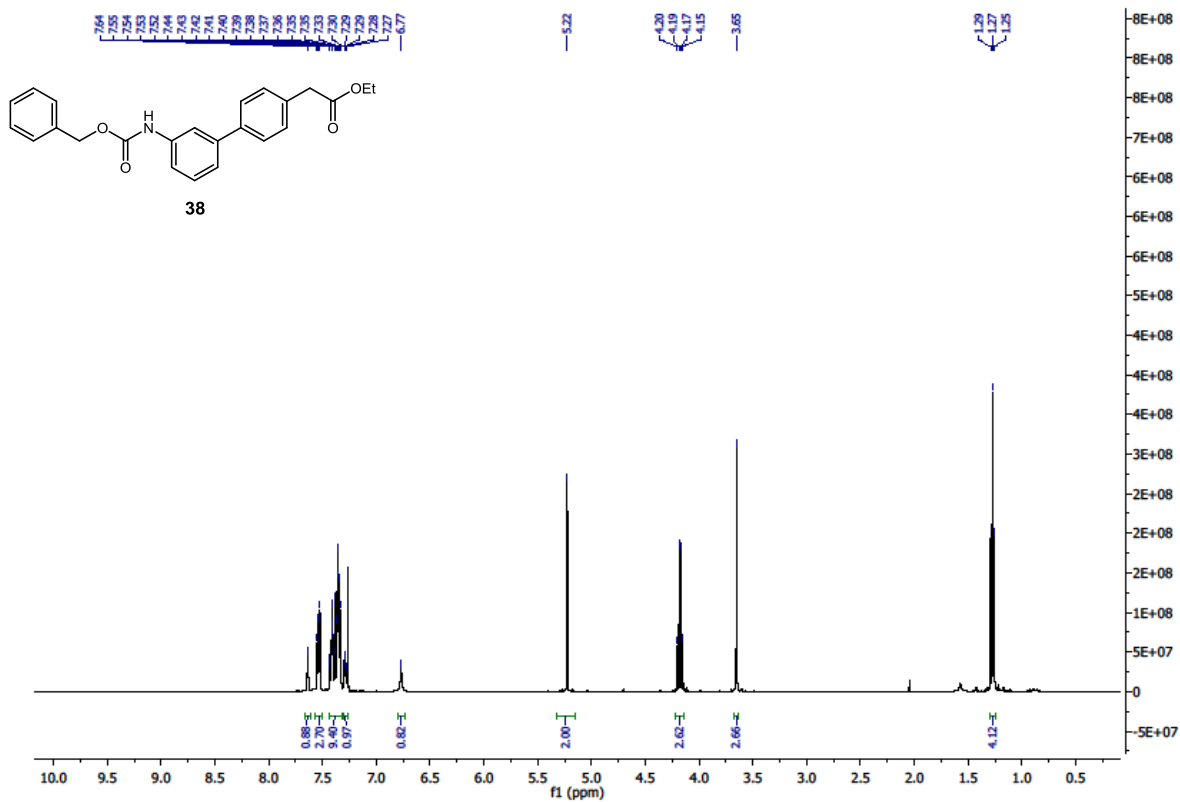


NL:  
1.59E7  
STRWAT289-OE-HNESP#33-  
42 RT: 0.71-0.96 AV: 10 T:  
FTMS + p NSI Full ms  
[140.00-1935.00]

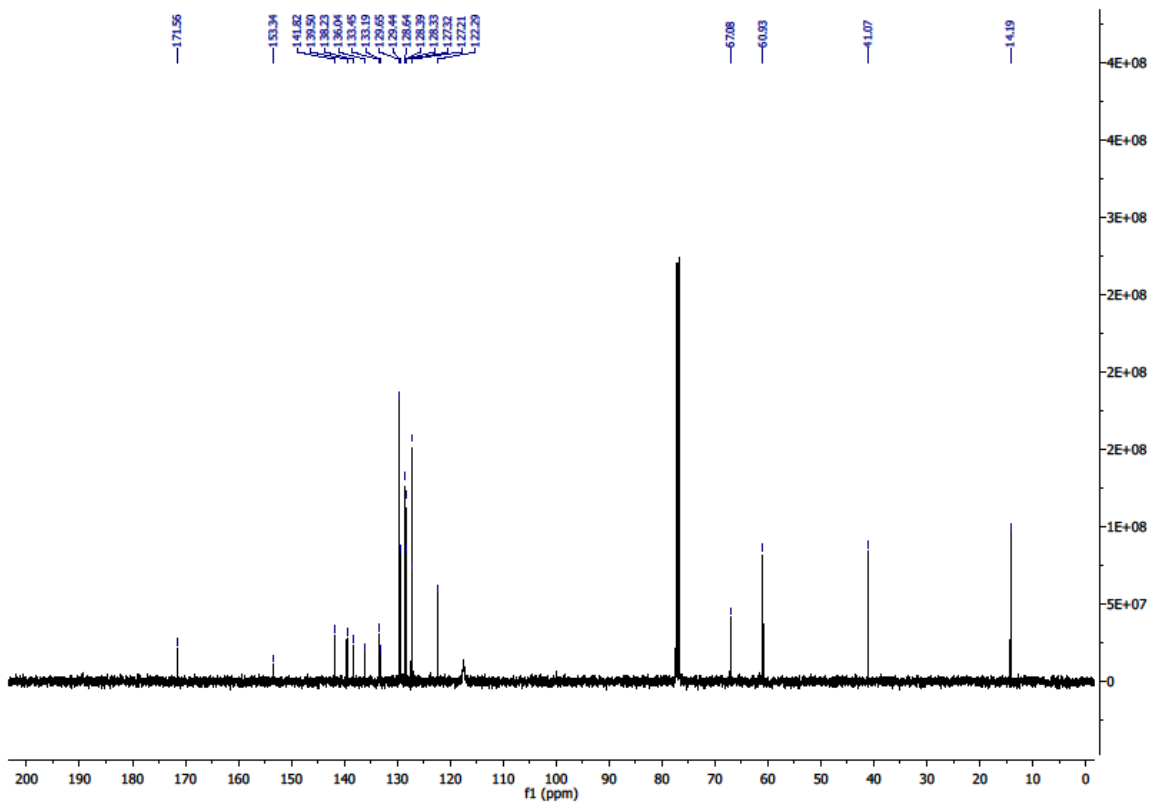
NL:  
1.72E4  
C<sub>27</sub> H<sub>27</sub> NO<sub>5</sub> H:  
C<sub>27</sub> H<sub>28</sub> N<sub>1</sub> O<sub>5</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 38

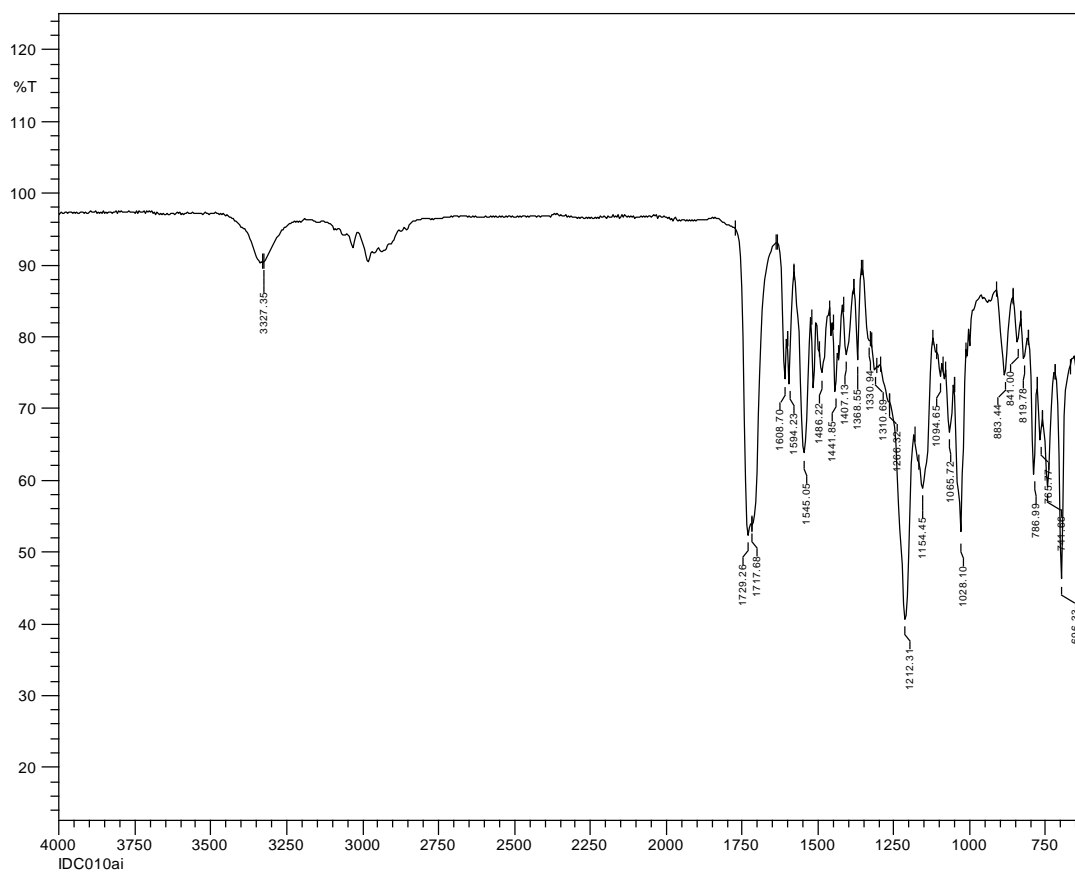
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 38



## IR of 38

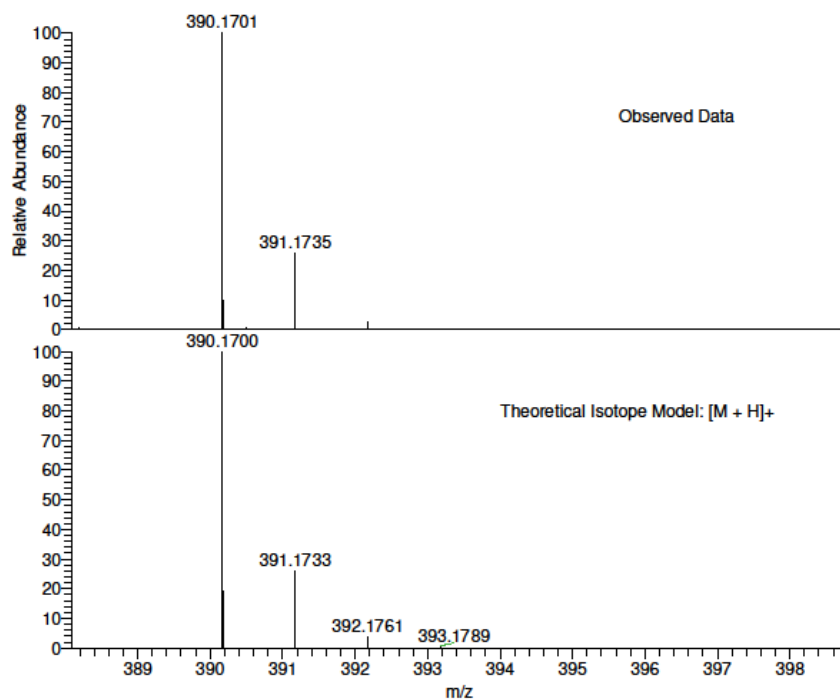


## HRMS of 38

IDC10a MW=389?  
C<sub>24</sub>H<sub>23</sub>NO<sub>4</sub>  
(MeOH)/MeOH + NH<sub>4</sub>OAc

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Dr AJB Watson  
24/10/2013 17:16:26

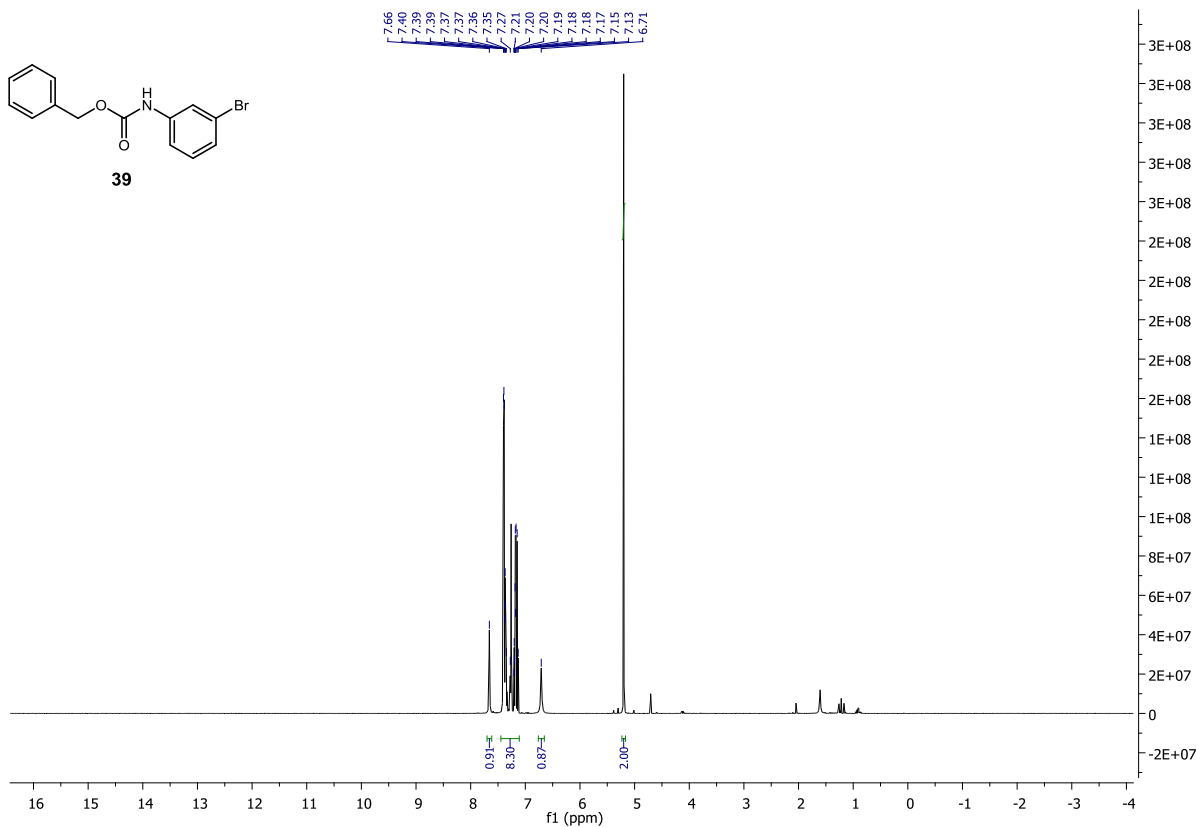


NL:  
2.10E7  
STRWAT138-OS-HNESP#29-  
48 RT: 0.66-1.14 AV: 18 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

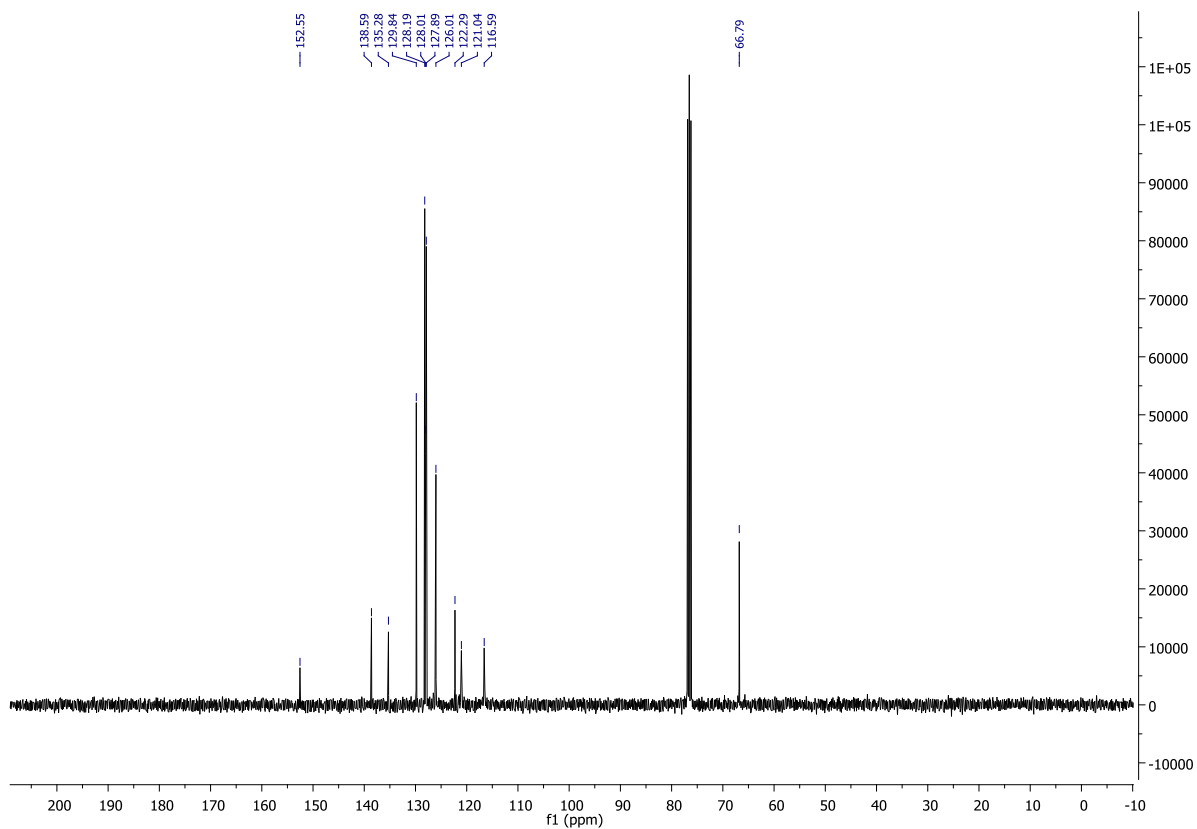
NL:  
1.78E4  
C<sub>24</sub>H<sub>23</sub>NO<sub>4</sub>H:  
C<sub>24</sub>H<sub>24</sub>N<sub>1</sub>O<sub>4</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 39

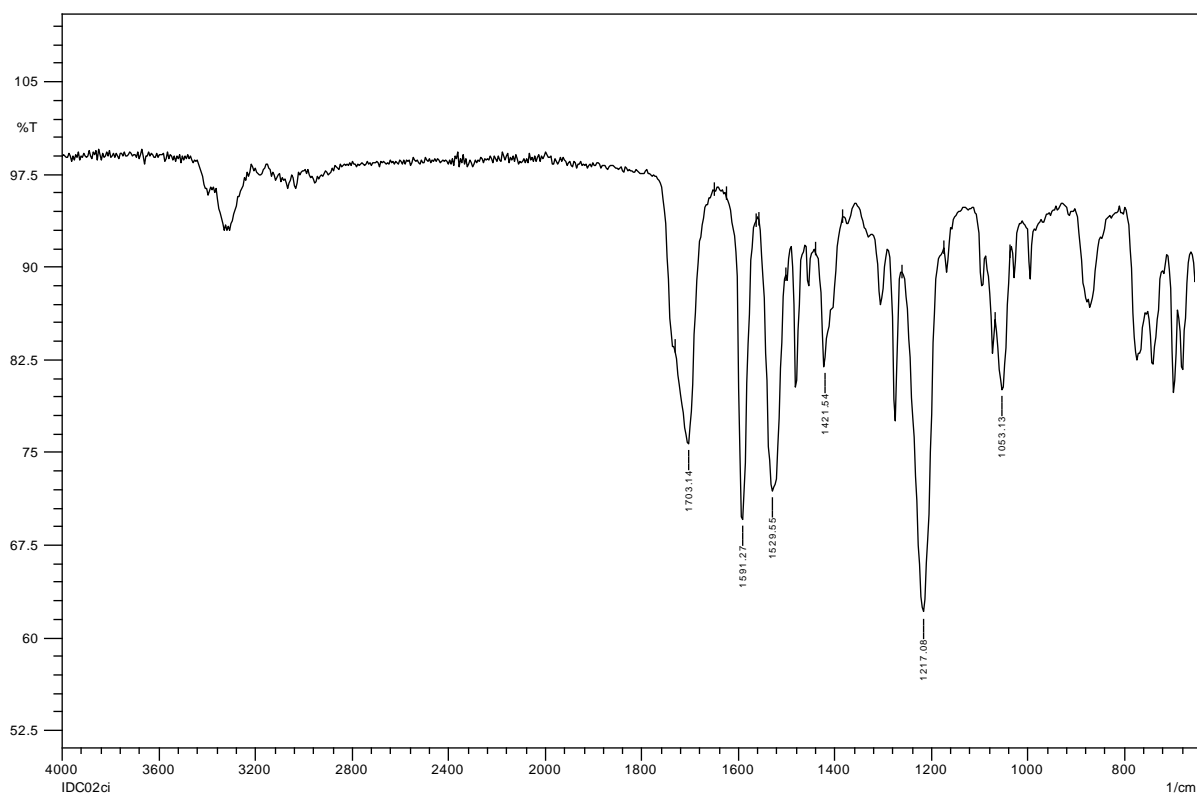
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 39



## IR of 39

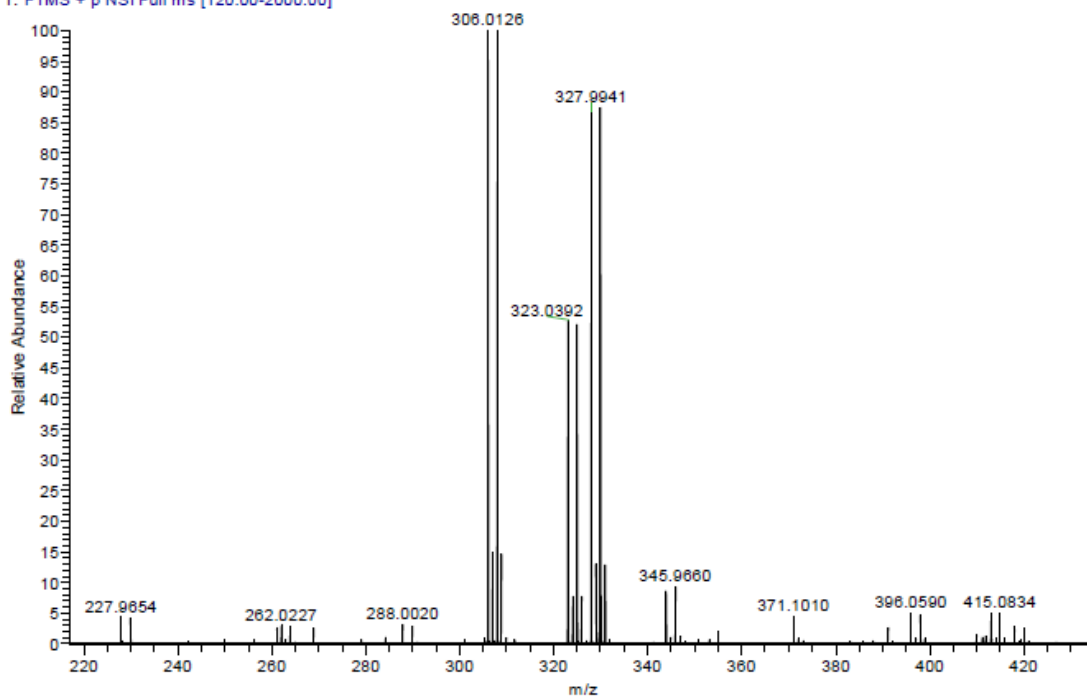


## HRMS of 39

IDC021 MW=305?  
(DCM)/MeOH + NH4OAc  
STRWAT024-OV-HNESP #10-23 RT: 0.20-0.57 AV: 14 SM: 7G NL: 2.05E7  
T: FTMS + p NSI Full ms [120.00-2000.00]

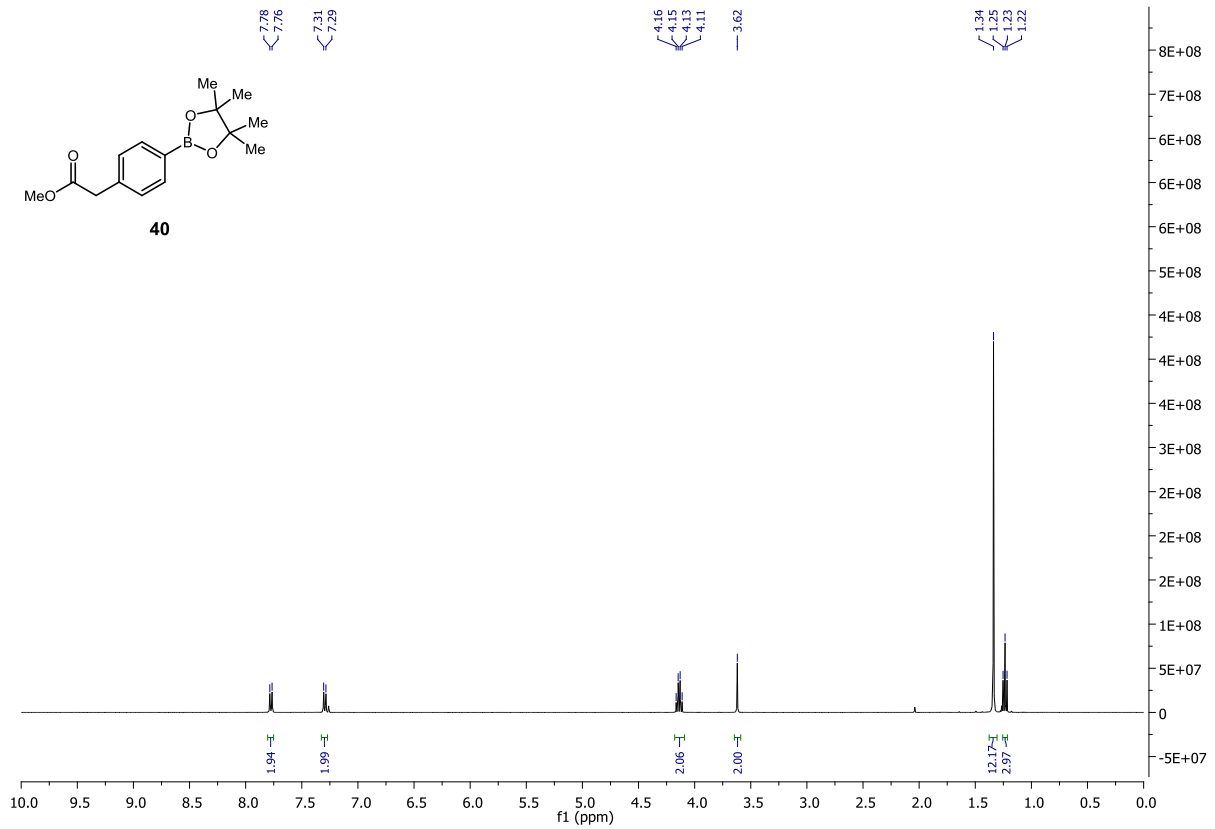
EPSRC National Centre Swansea  
LTQ Orbitrap XL

Diana Castagna  
05/12/2012 14:57:00

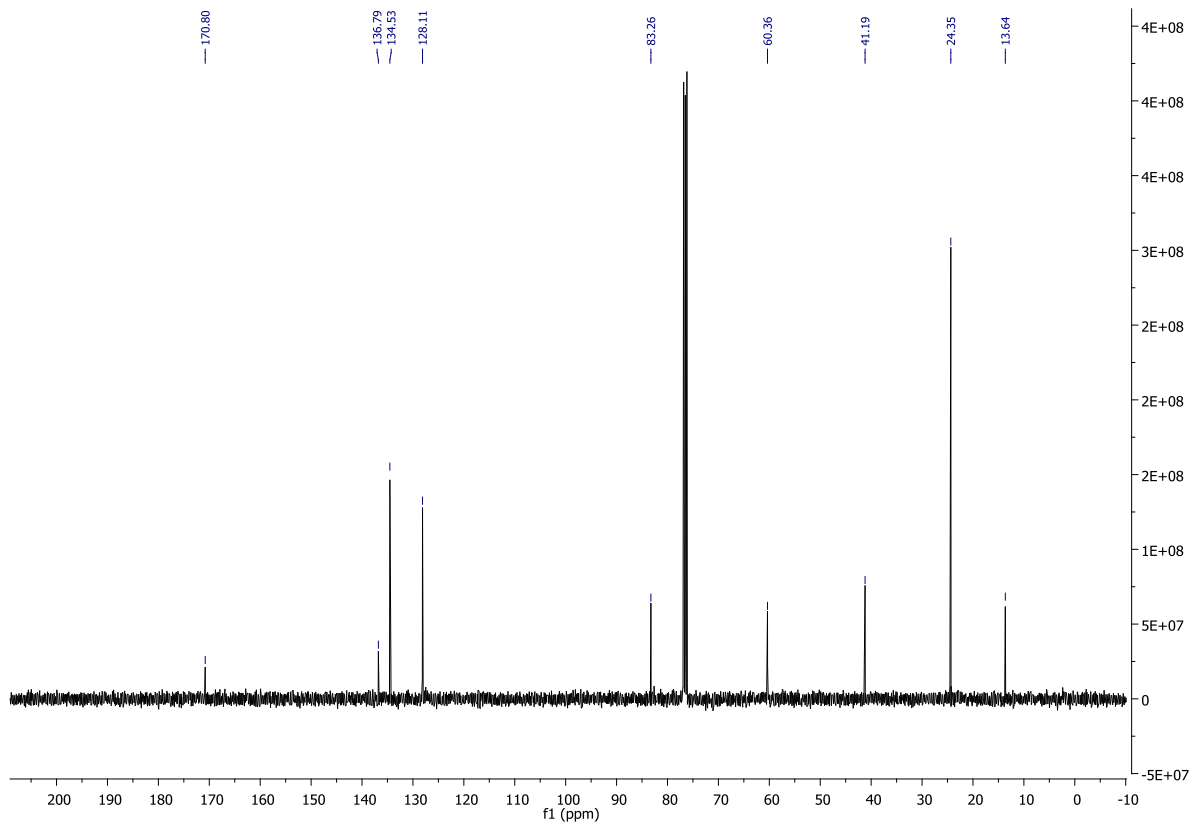


# Compound 40

## <sup>1</sup>H NMR

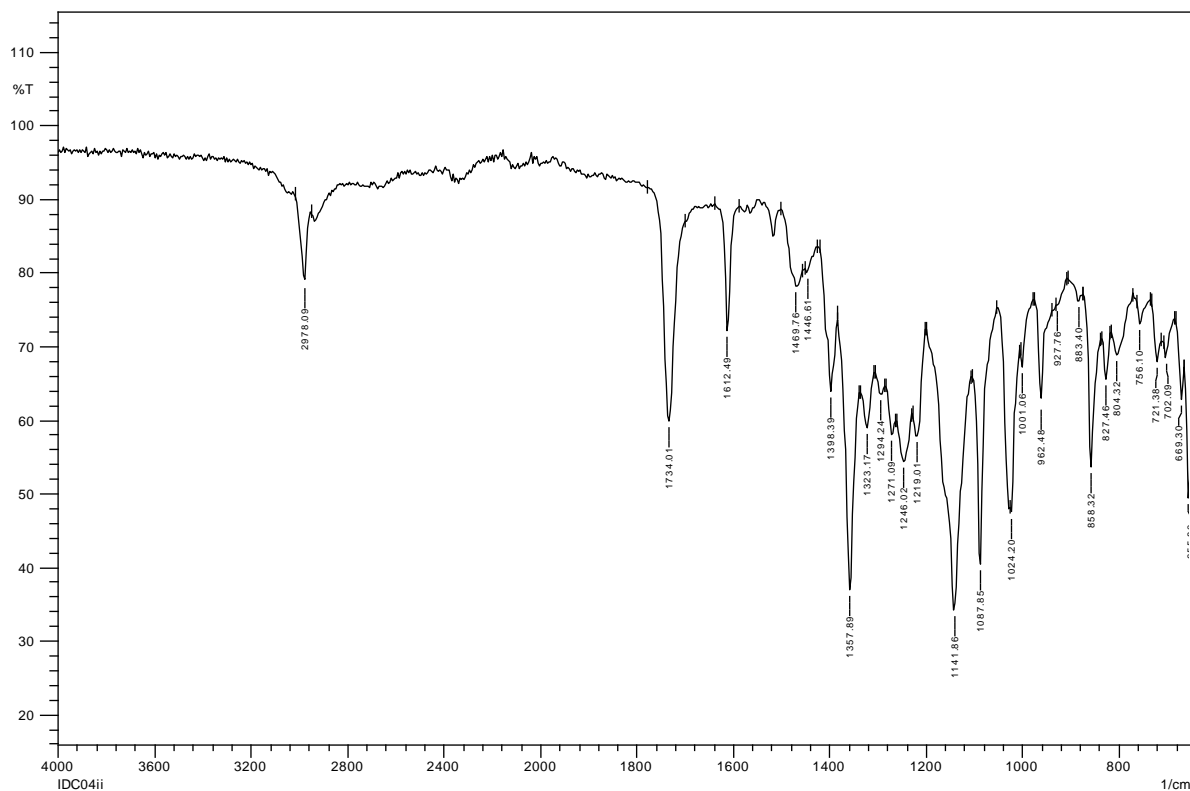


## <sup>13</sup>C NMR of 40





## IR of 40



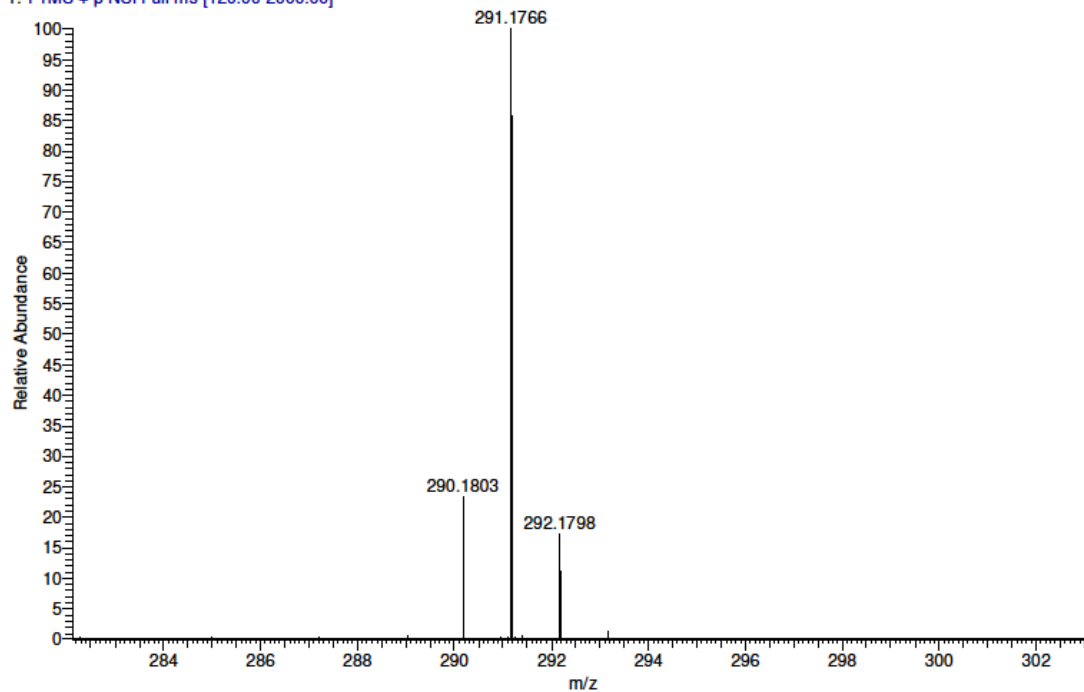
## HRMS of 40

IDC04ii MW=290?  
(DCM)/MeOH + NH4OAc

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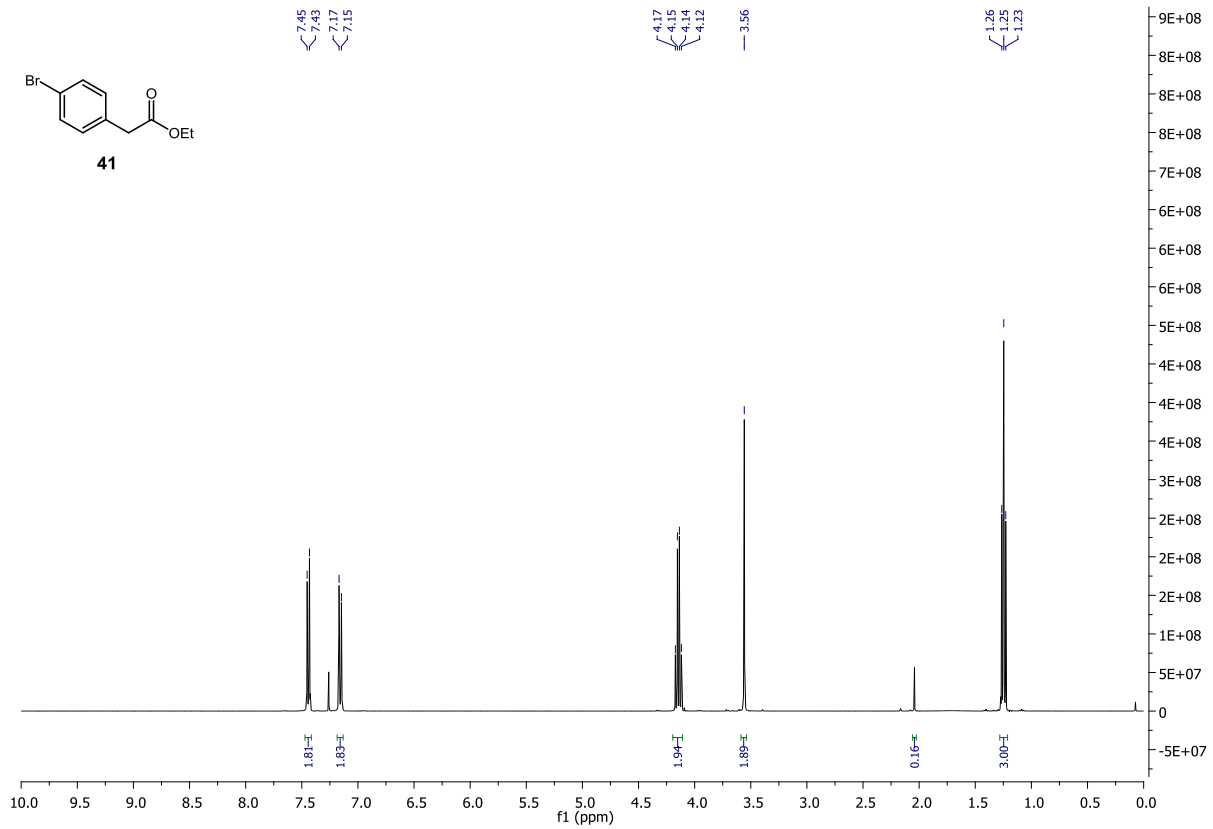
Diana Castagna  
23/05/2013 12:06:22

STRWAT094-OV-HNESP #36-50 RT: 0.82-1.22 AV: 15 SM: 7G NL: 1.10E7  
T: FTMS + p NSI Full ms [120.00-2000.00]

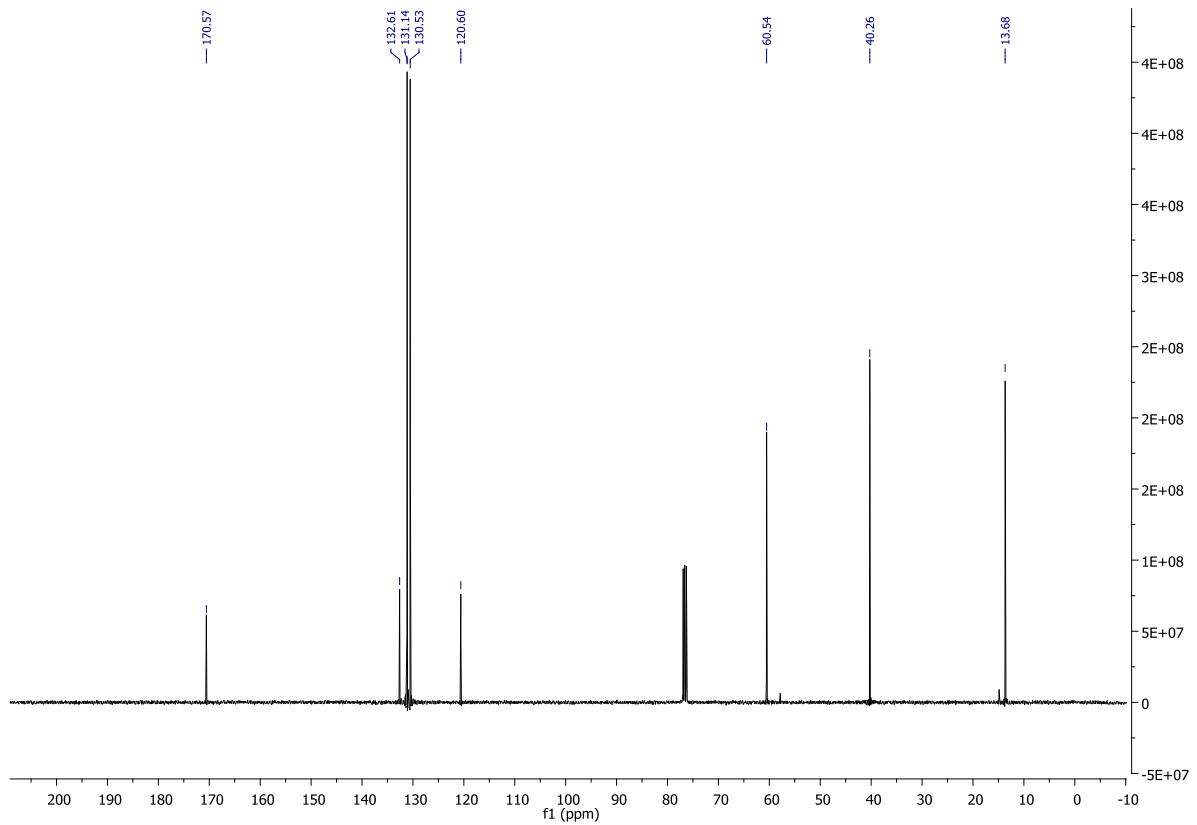


# Compound 41

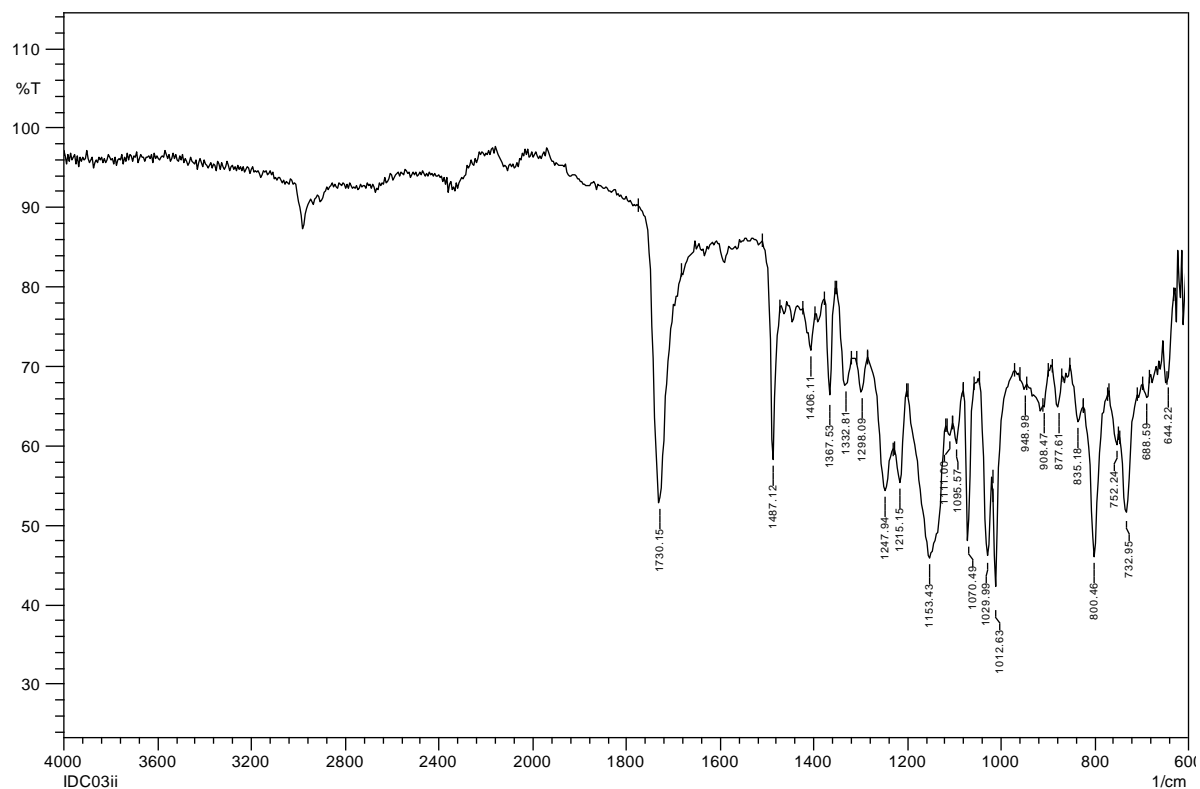
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 41



## IR of 41

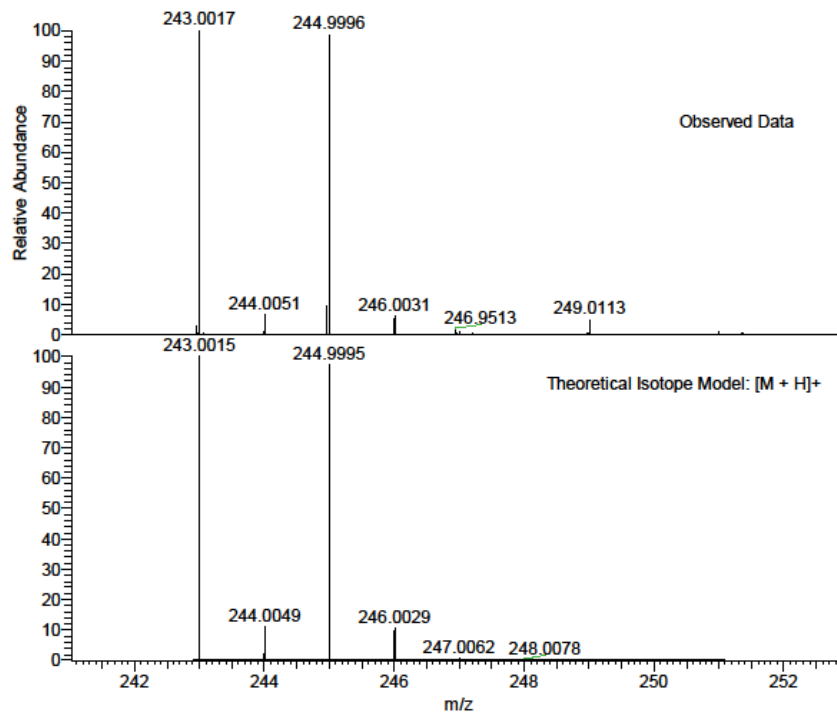


## HRMS of 41

IDC03ii MW=243?  
(DCM)/MeOH + NH4OAc

EPSRC National Centre Swansea  
LTQ Orbitrap XL

Diana Castagna  
05/03/2013 12:51:06

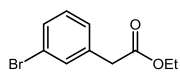


NL:  
4.51E5  
STRWAT059-OJ-HNESP#28-  
49 RT: 0.71-1.28 AV: 22 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

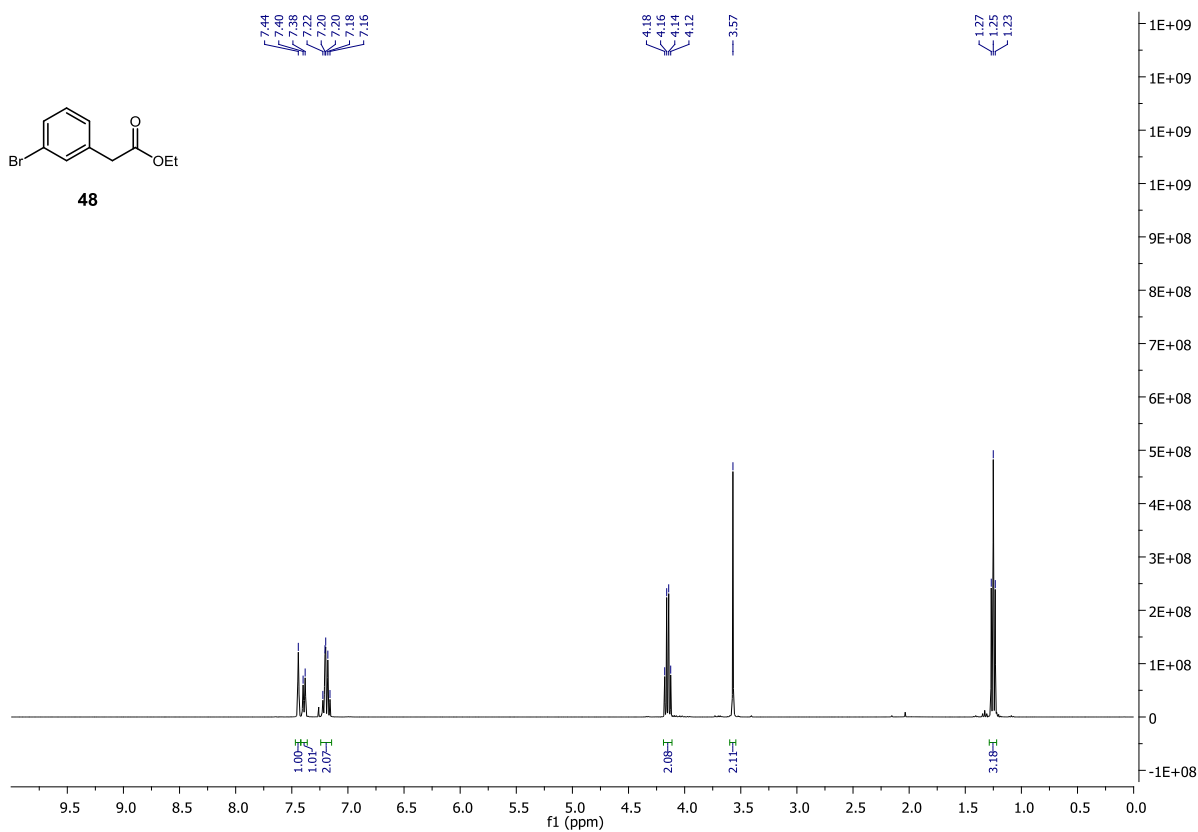
NL:  
1.06E4  
C<sub>10</sub>H<sub>11</sub>O<sub>2</sub>BrH:  
C<sub>10</sub>H<sub>12</sub>O<sub>2</sub>Br<sub>1</sub>  
p (gss, s/p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 48

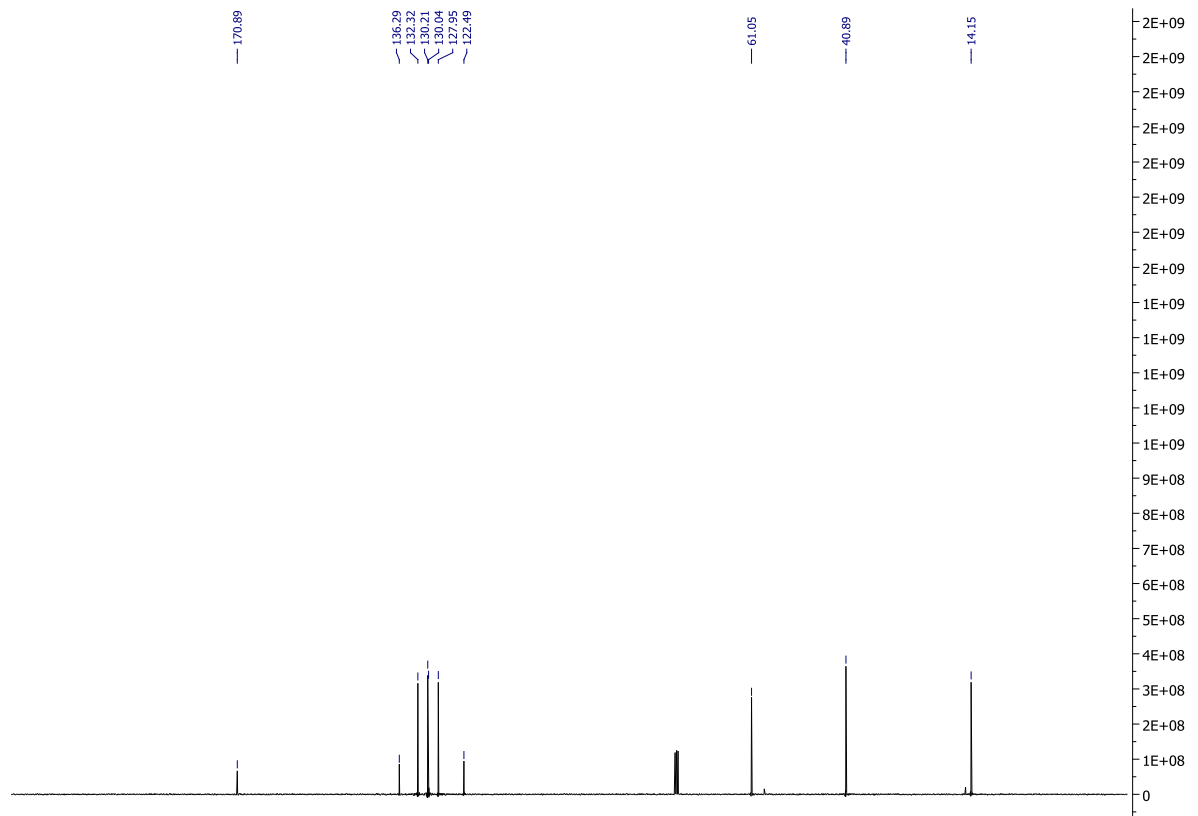
## <sup>1</sup>H NMR



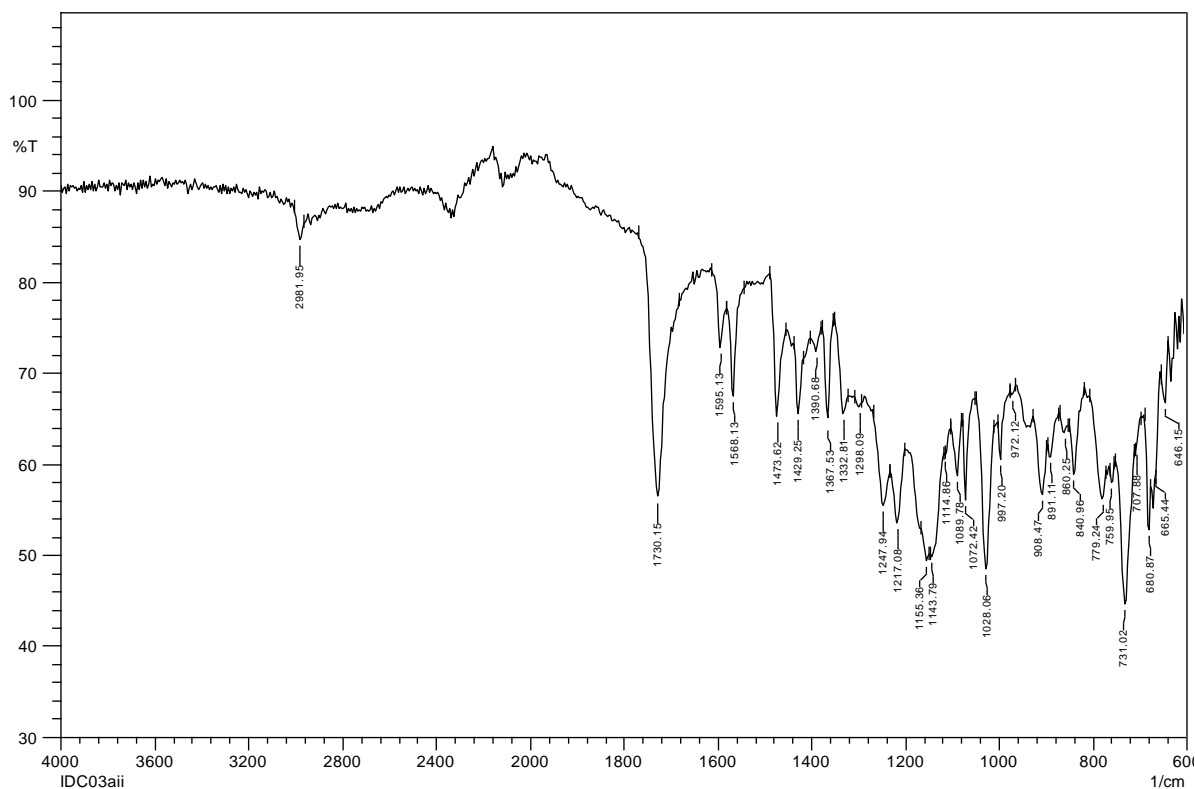
48



## <sup>13</sup>C NMR of 48



## IR of 48

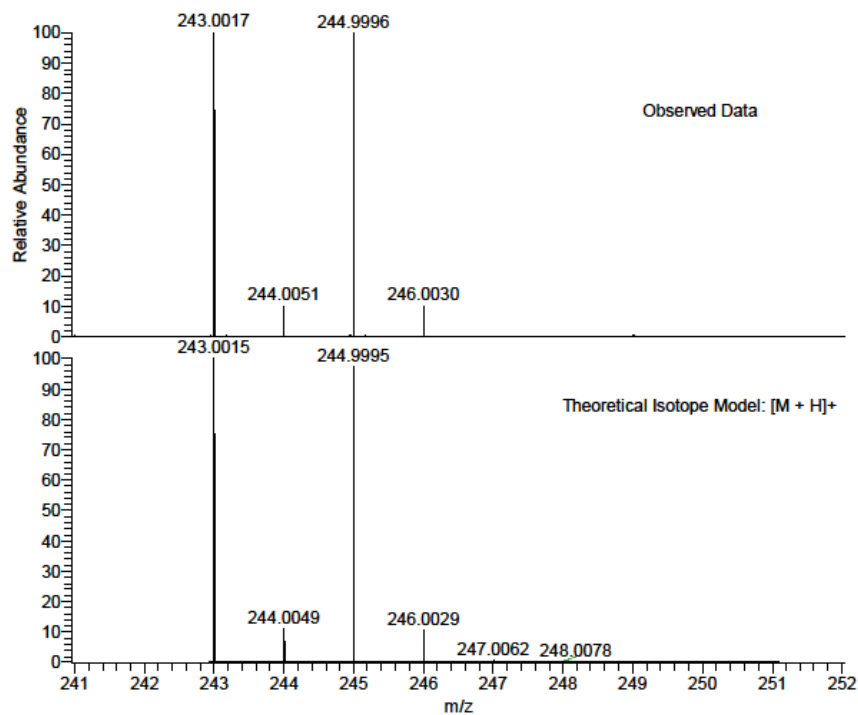


## HRMS of 48

IDC03aii MW=243?  
(DCM)/MeOH + NH4OAc

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Diana Castagna  
05/03/2013 12:47:37

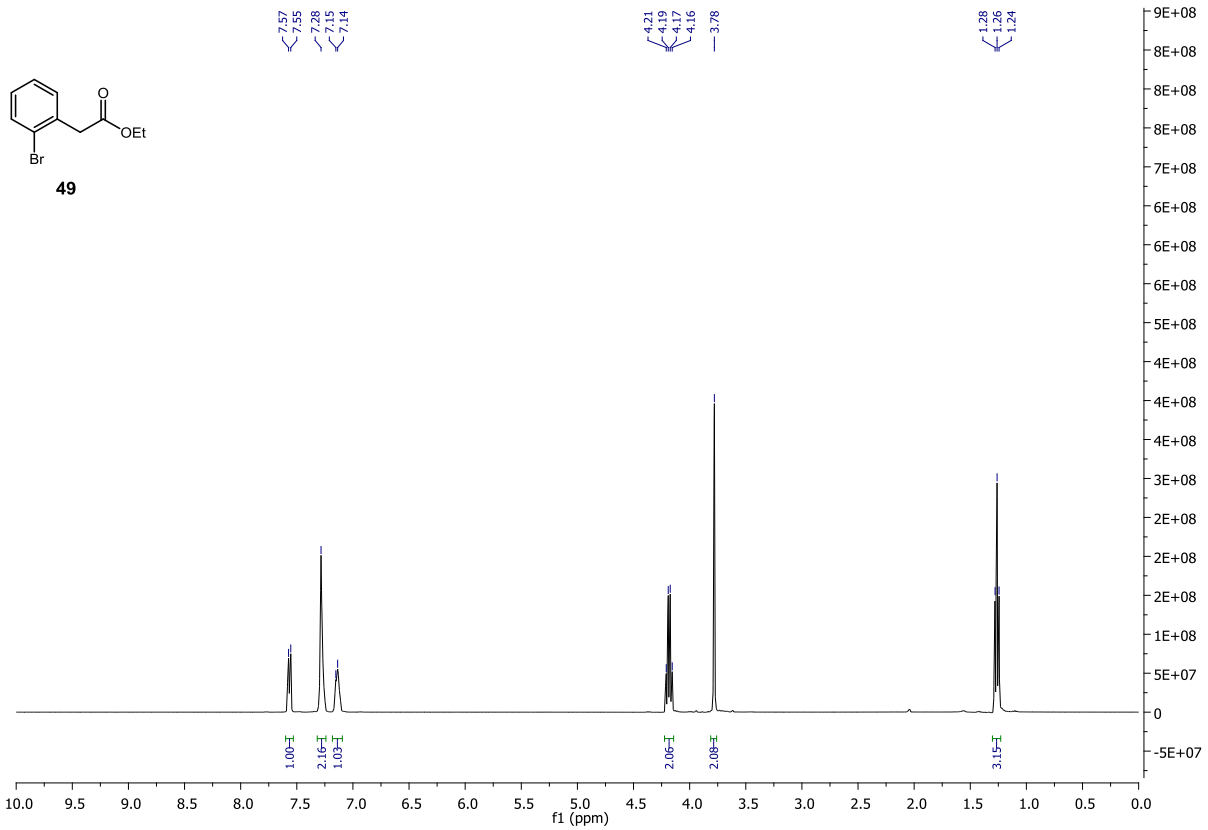


NL:  
1.36E6  
STRWAT058-OJ-HNESP#28-  
52 RT: 0.71-1.28 AV: 22 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

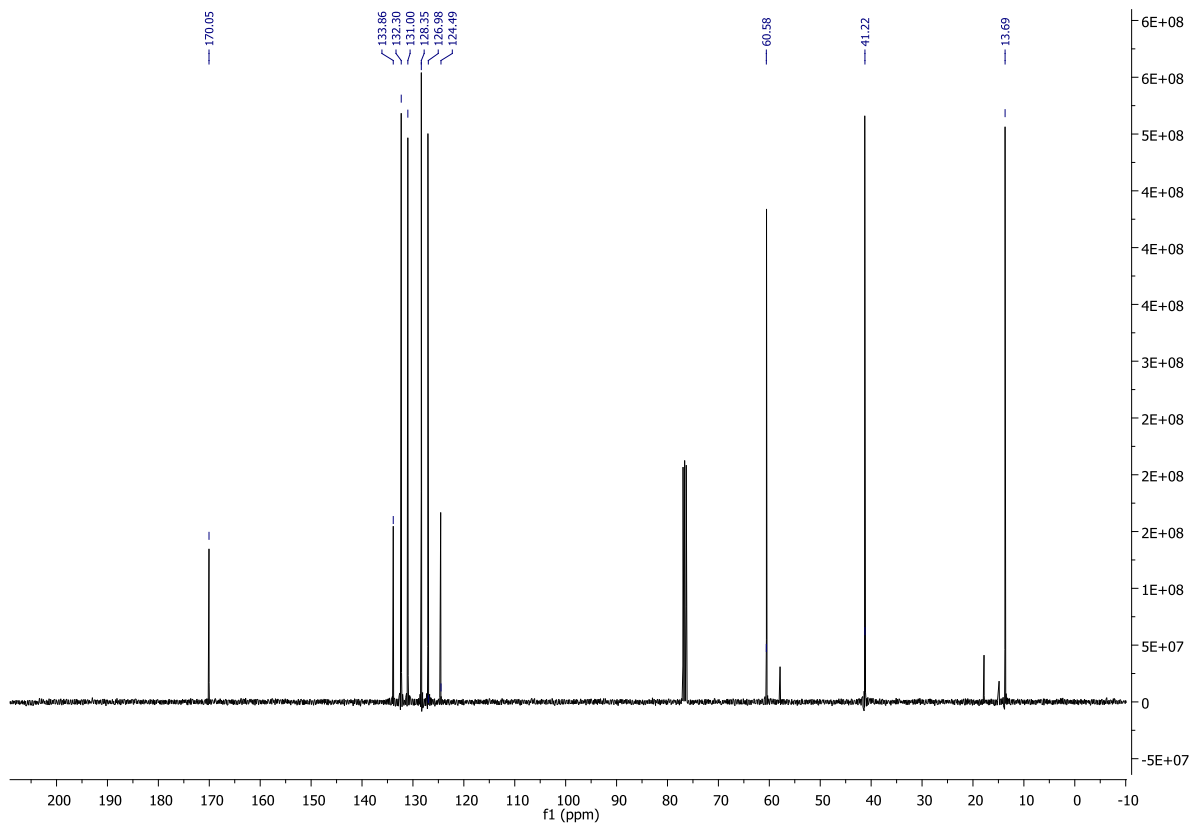
NL:  
1.06E4  
C<sub>10</sub>H<sub>11</sub>O<sub>2</sub>BrH:  
C<sub>10</sub>H<sub>12</sub>O<sub>2</sub>Br<sub>1</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 49

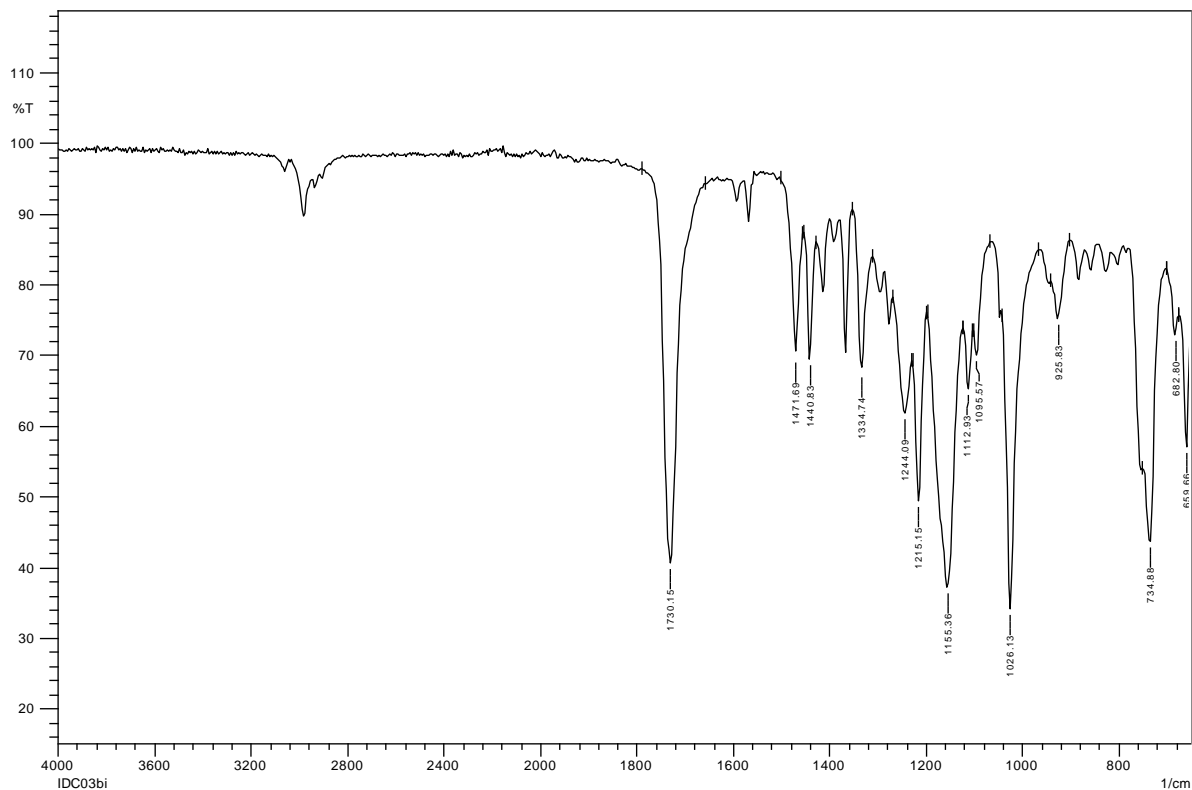
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 49



## IR of 49

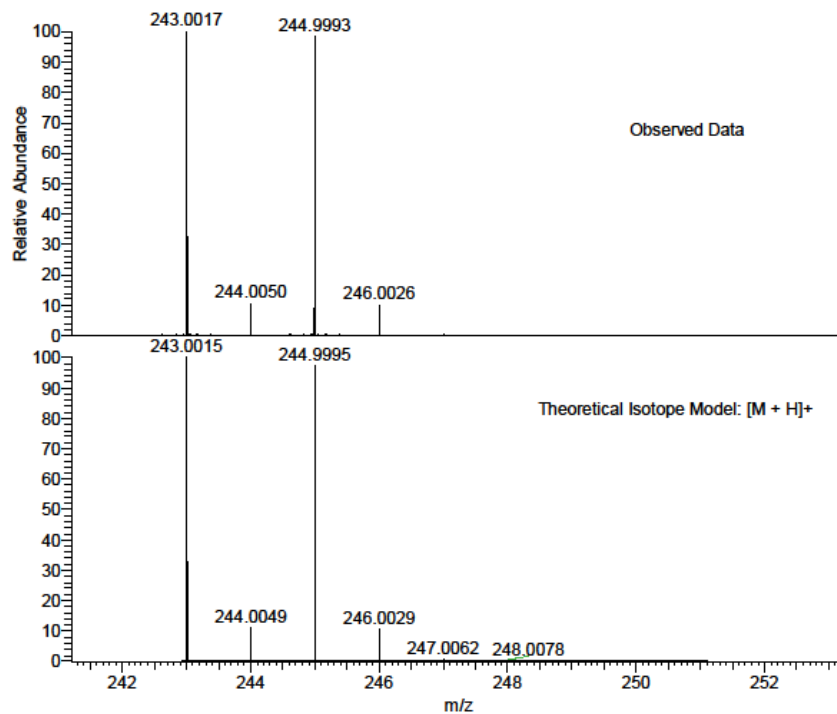


## HRMS of 49

IDC03bii MW=243?  
(DCM)MeOH + NH4OAc

EPSRC National Centre Swansea  
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Diana Castagna  
05/03/2013 12:44:11

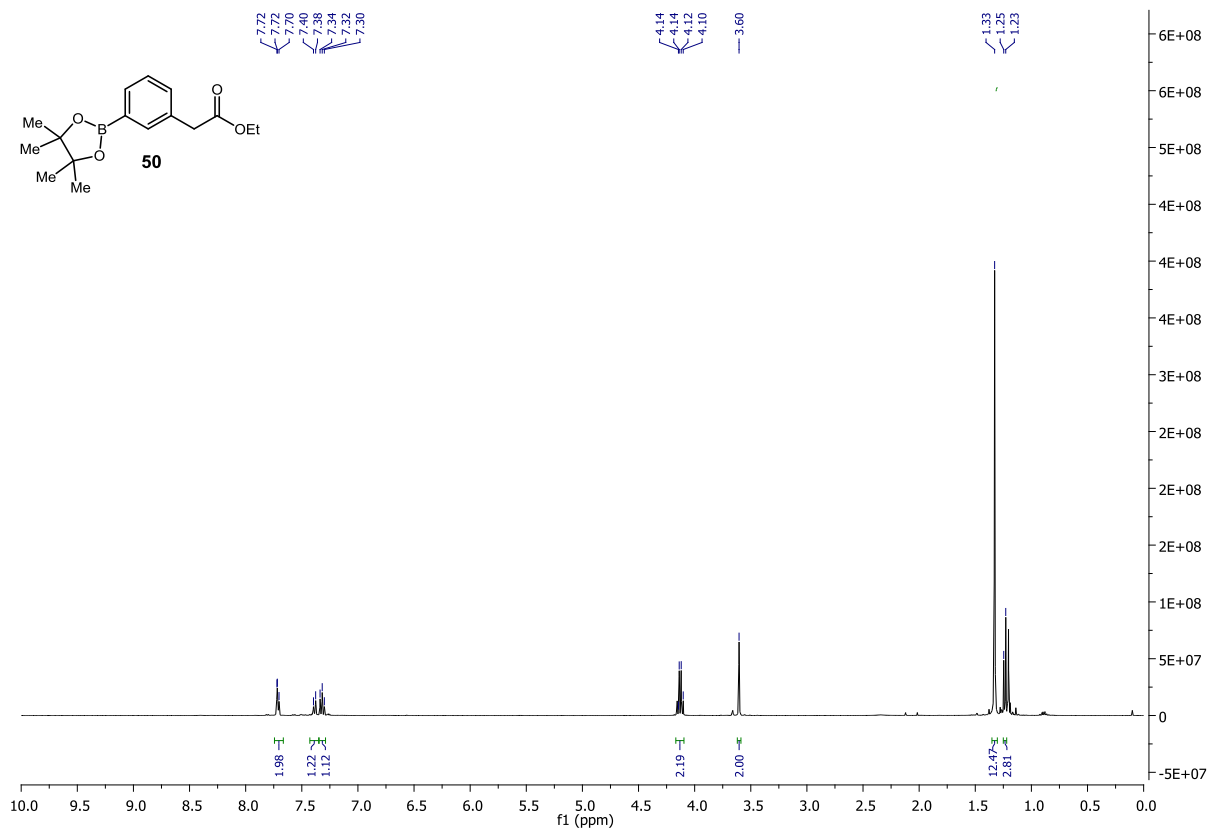


NL:  
1.70E7  
STRWAT057-OJ-HNESP#29-  
52 RT: 0.71-1.27 AV: 21 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

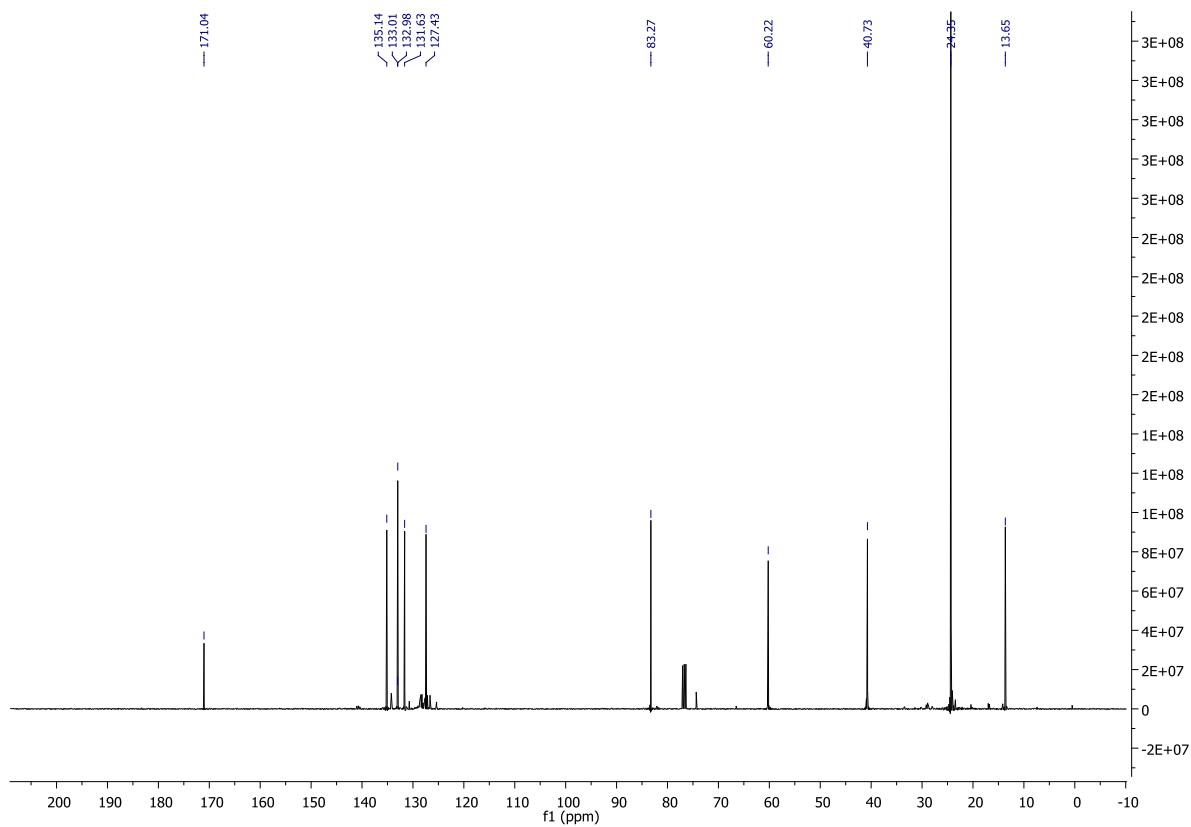
NL:  
1.06E4  
C<sub>10</sub>H<sub>11</sub>O<sub>2</sub>BrH:  
C<sub>10</sub>H<sub>12</sub>O<sub>2</sub>Br<sub>1</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 50

## <sup>1</sup>H NMR

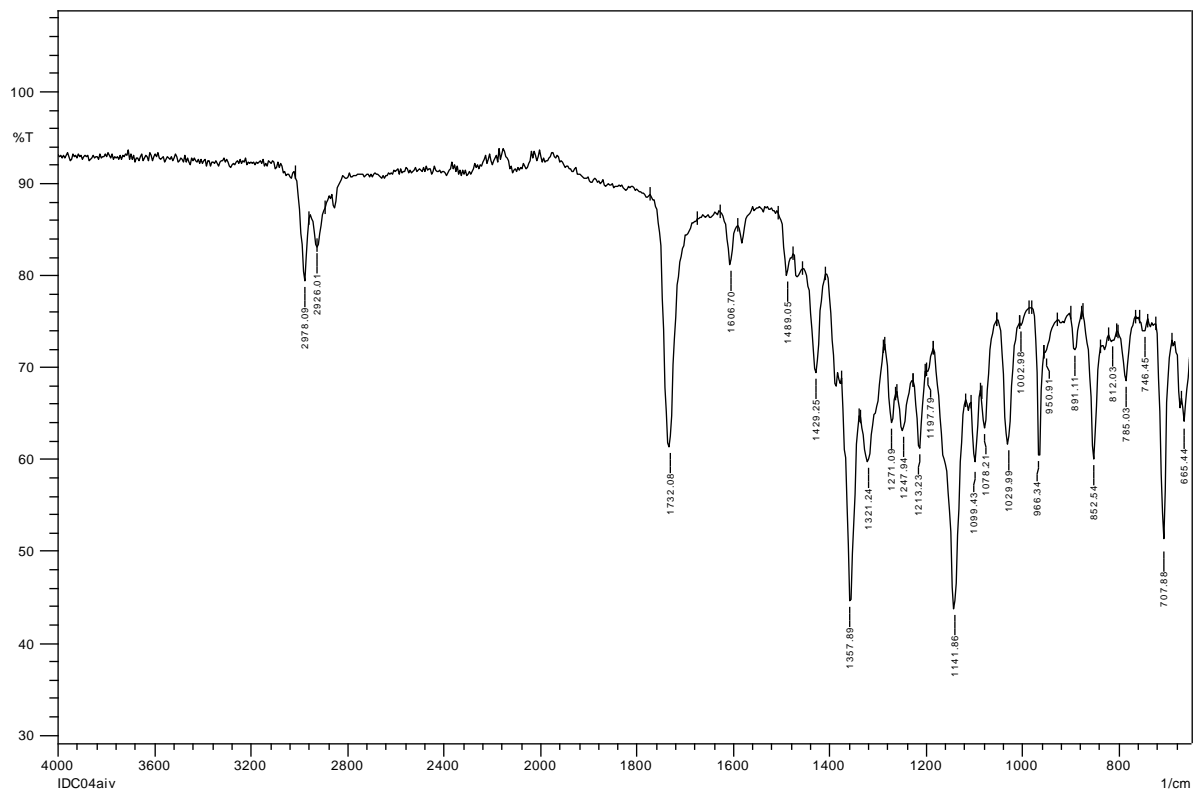


## <sup>13</sup>C NMR of 50

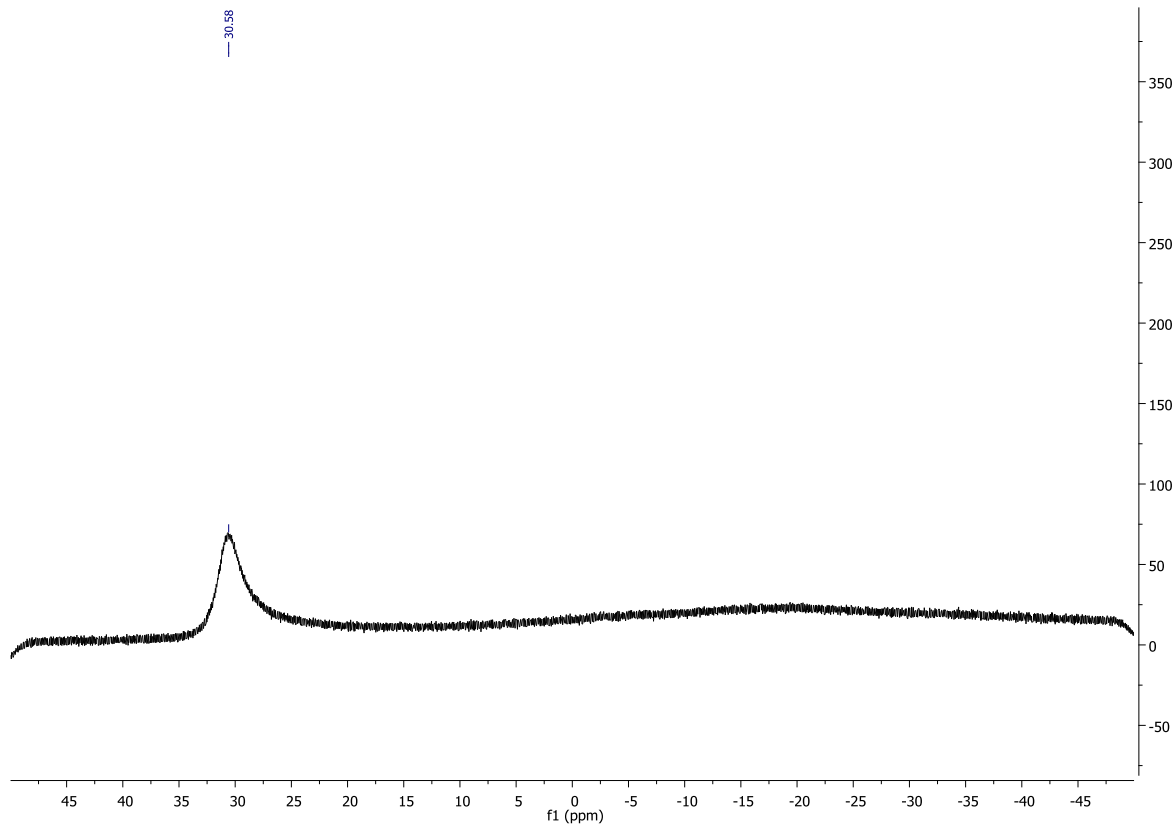




### IR of 50



### <sup>1</sup>B NMR of 50



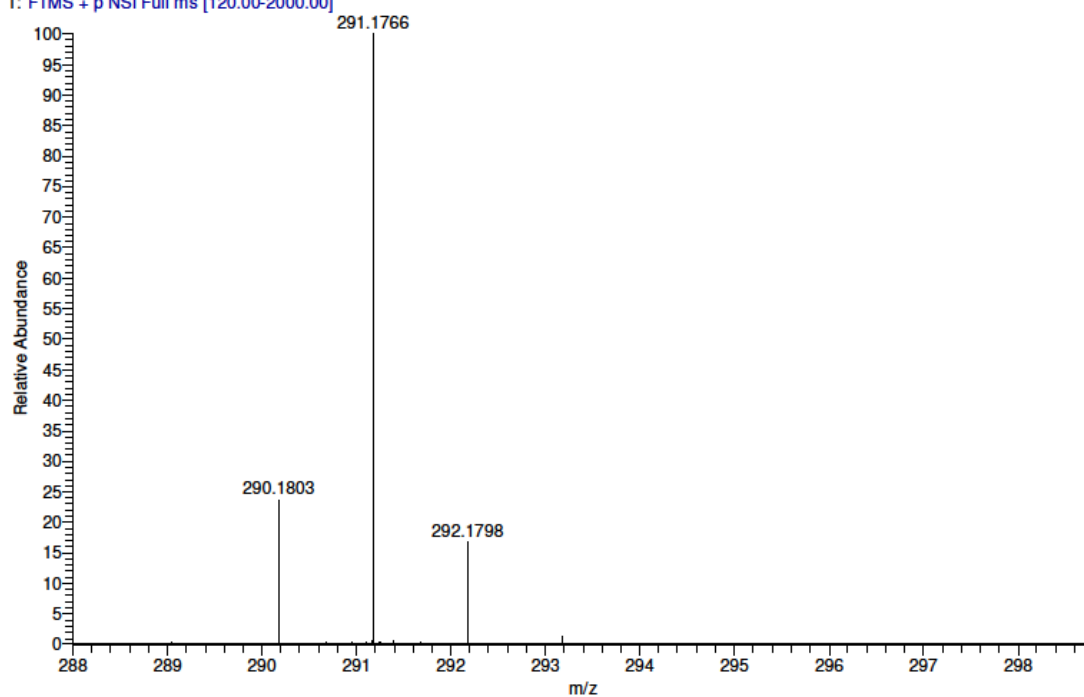
# HRMS of 50

IIDC04aiv MW=290?  
(DCM)/MeOH + NH4OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

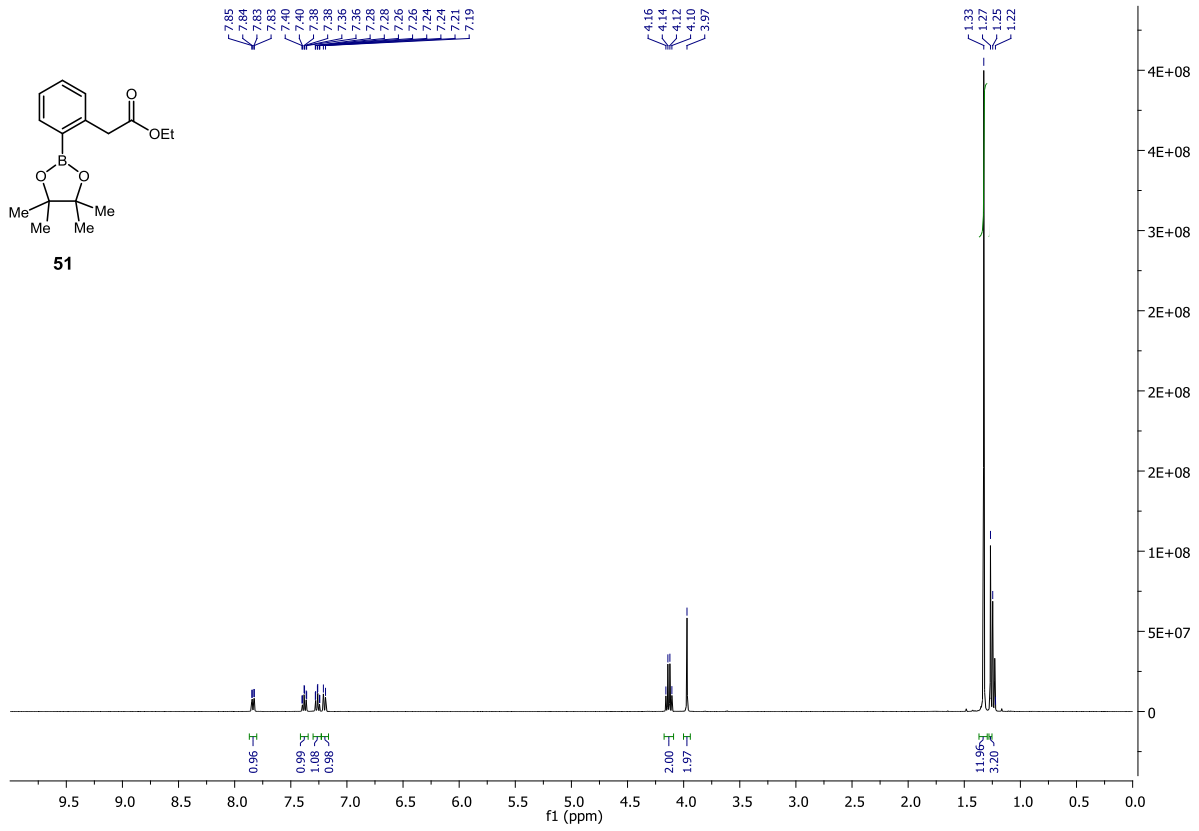
Diana Castagna  
23/05/2013 12:02:57

STRWAT093-OV-HNESP #36-47 RT: 0.85-1.16 AV: 12 SM: 7G NL: 7.68E6  
T: FTMS + p NSI Full ms [120.00-2000.00]

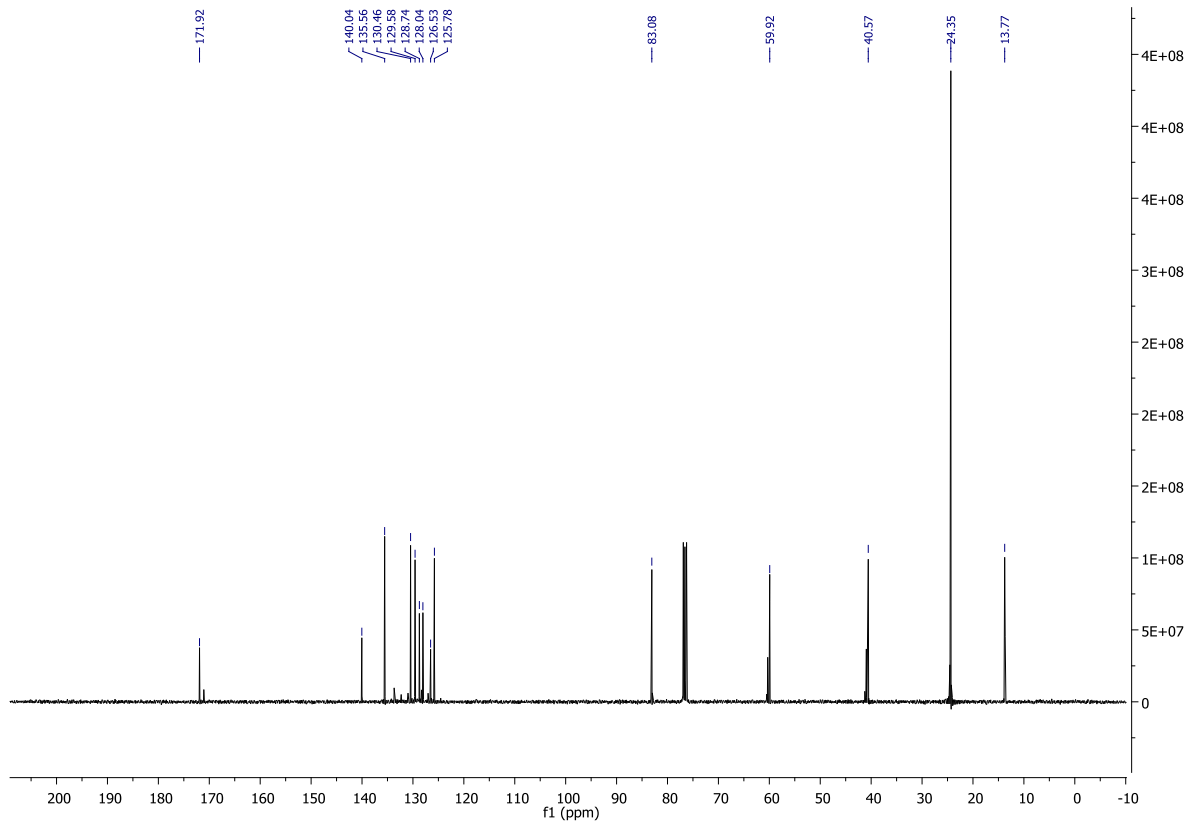


# Compound 51

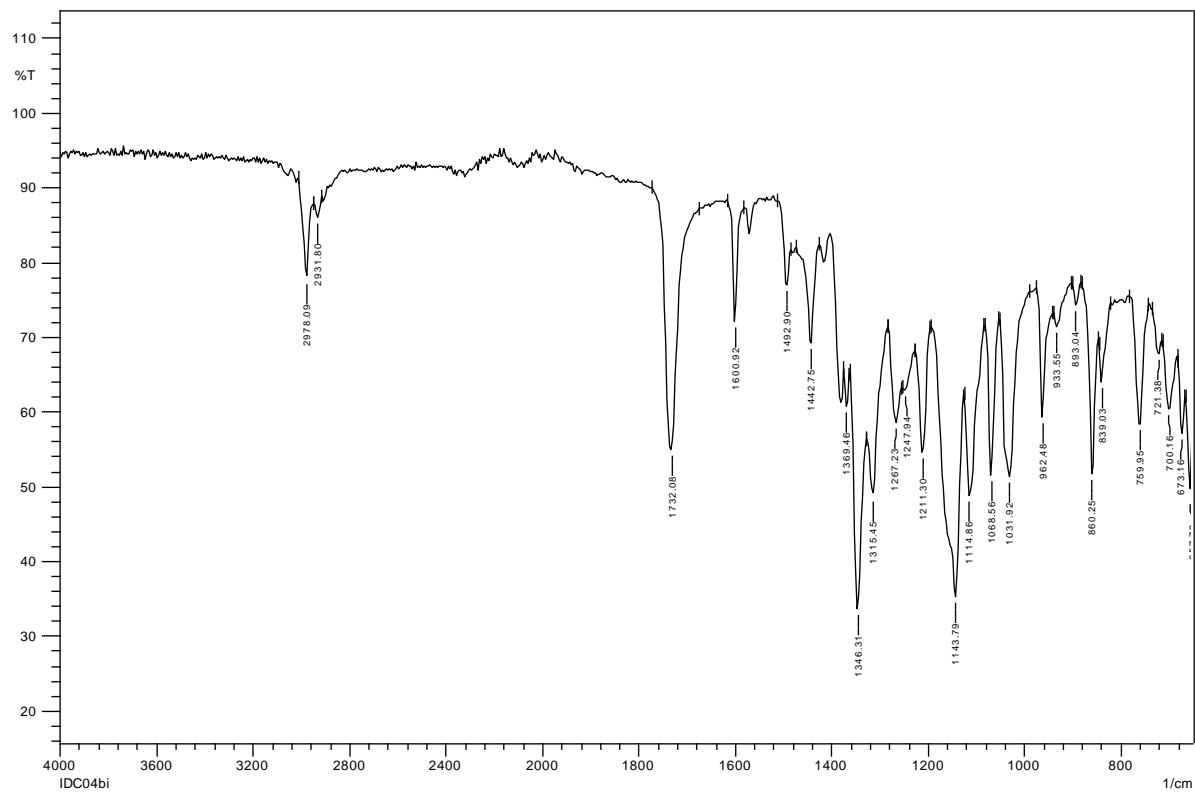
## <sup>1</sup>H NMR



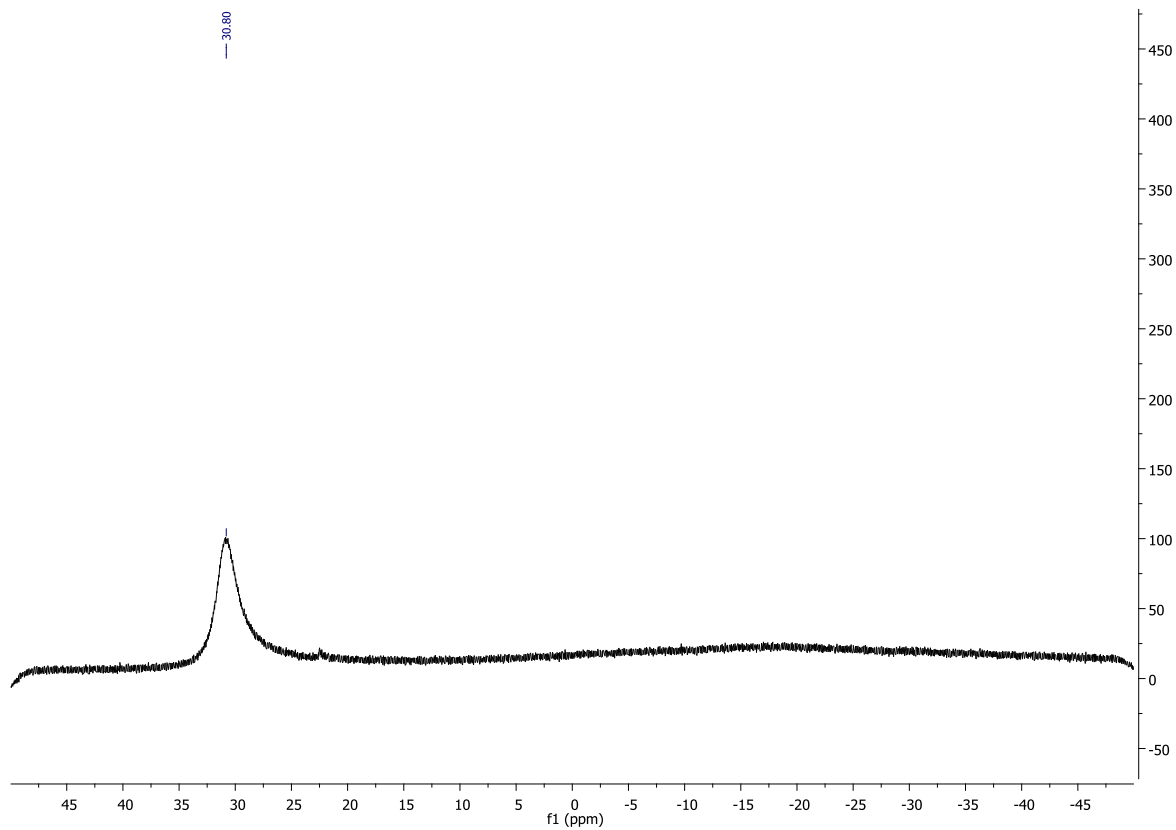
## <sup>13</sup>C NMR of 51



### IR of 51



### <sup>1</sup>B NMR of 51



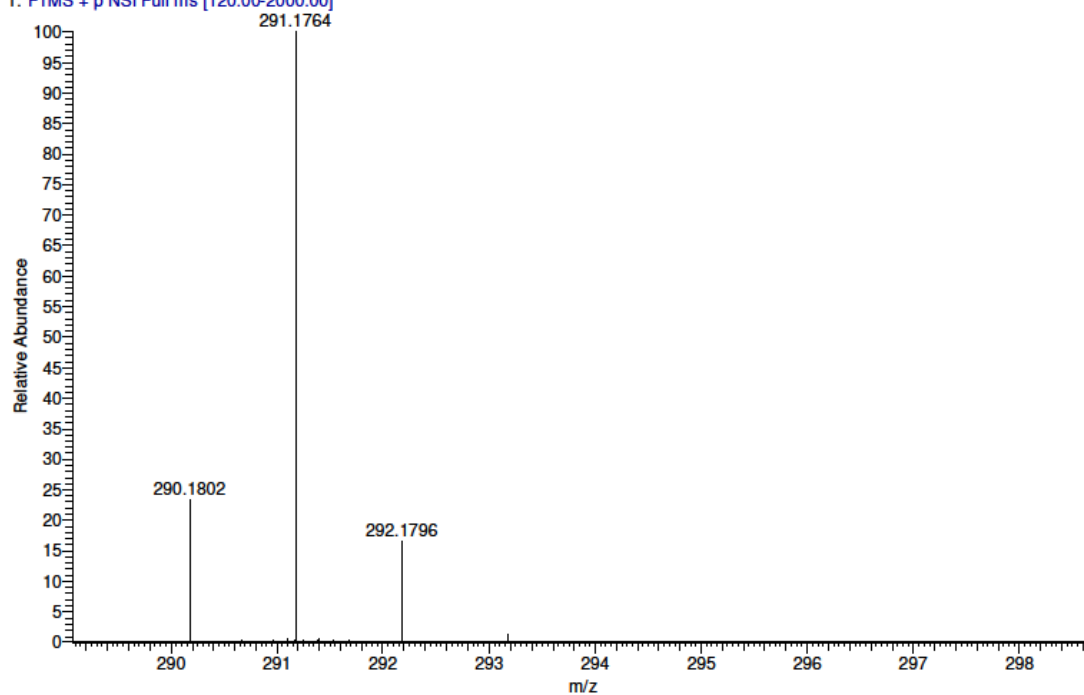
# HRMS of 51

IDC04bi MW=290?  
(DCM)/MeOH + NH4OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

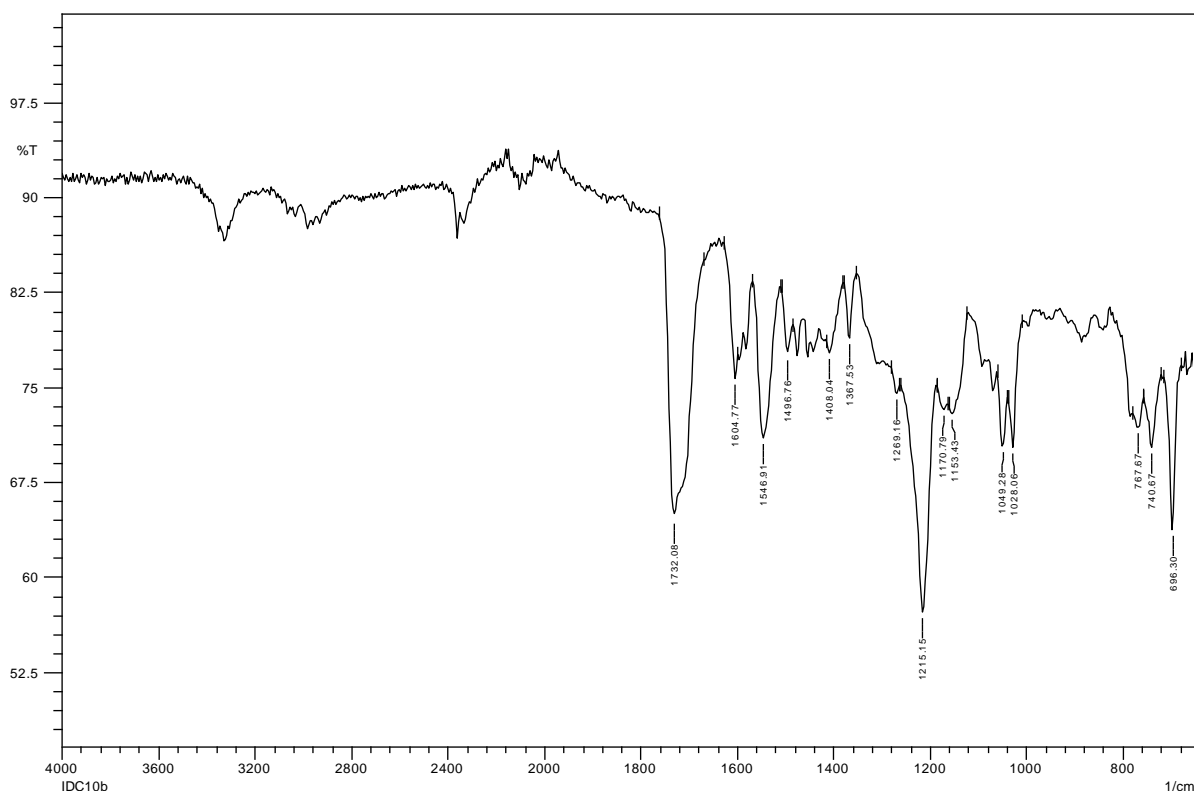
Diana Castagna  
23/05/2013 11:59:32

STRWAT092-OV-HNESP #34-51 RT: 0.78-1.25 AV: 18 SM: 7G NL: 1.40E8  
T: FTMS + p NSI Full ms [120.00-2000.00]





## IR of 52

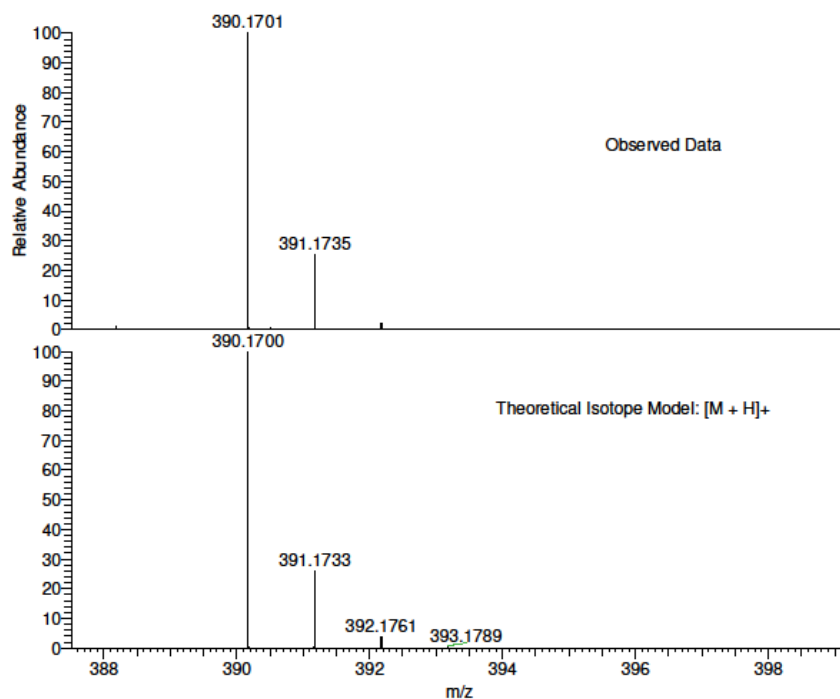


## HRMS of 52

IDC10b MW=389?  
C<sub>24</sub>H<sub>23</sub>NO<sub>4</sub>  
(MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Dr AJB Watson  
24/10/2013 17:13:46

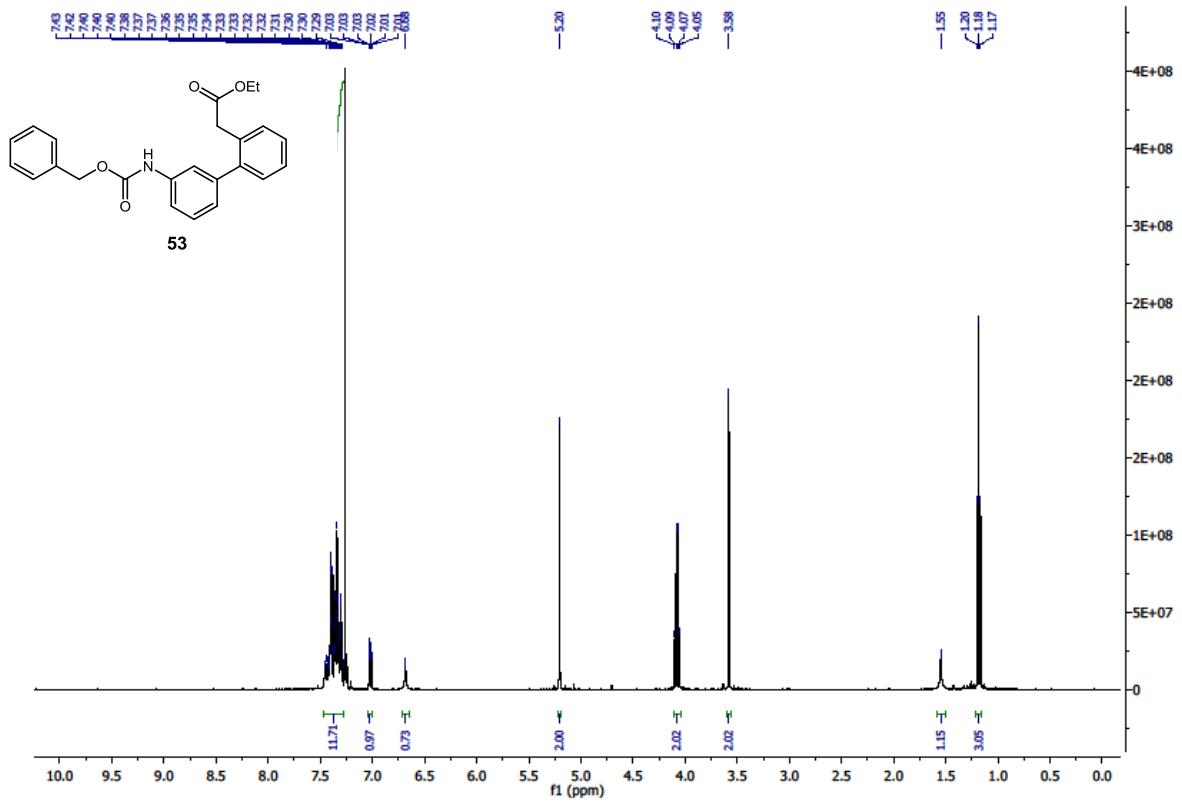


NL:  
1.45E7  
STRWAT137-OS-HNESP#27-  
41 RT: 0.66-1.02 AV: 15 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

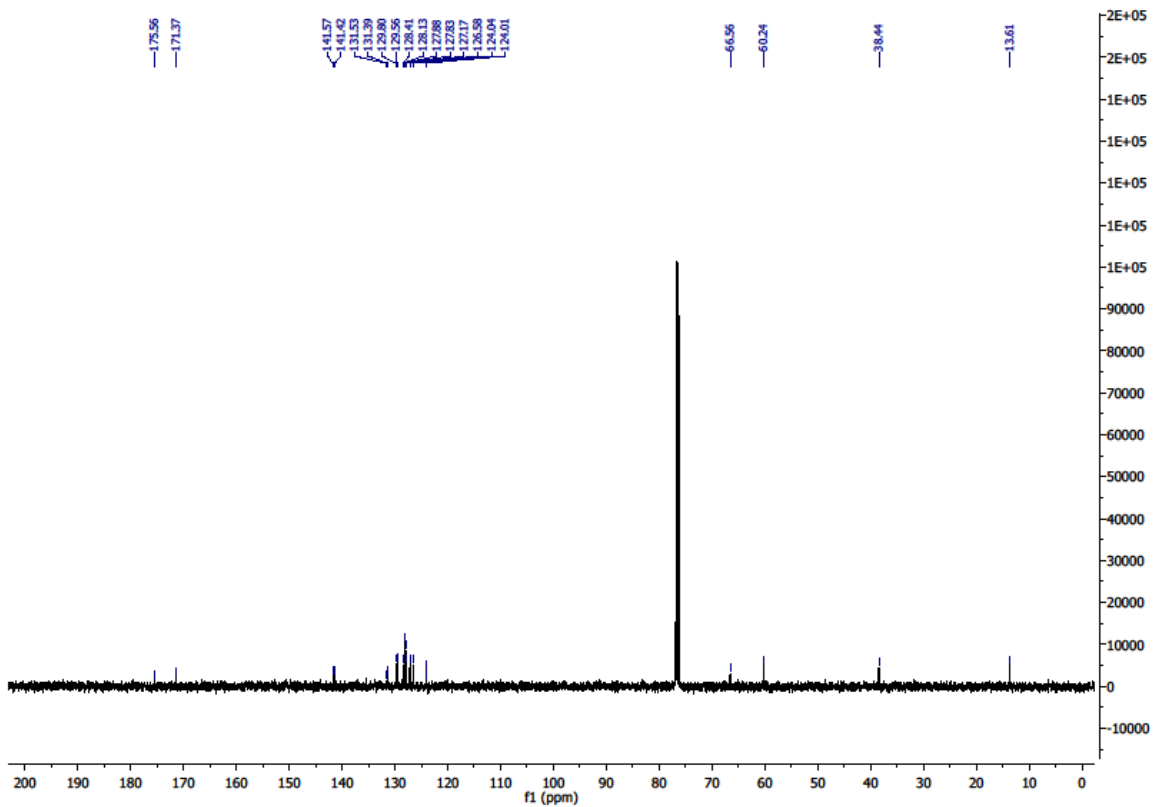
NL:  
1.78E4  
C<sub>24</sub>H<sub>23</sub>NO<sub>4</sub>H:  
C<sub>24</sub>H<sub>24</sub>N<sub>1</sub>O<sub>4</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 53

## <sup>1</sup>H NMR

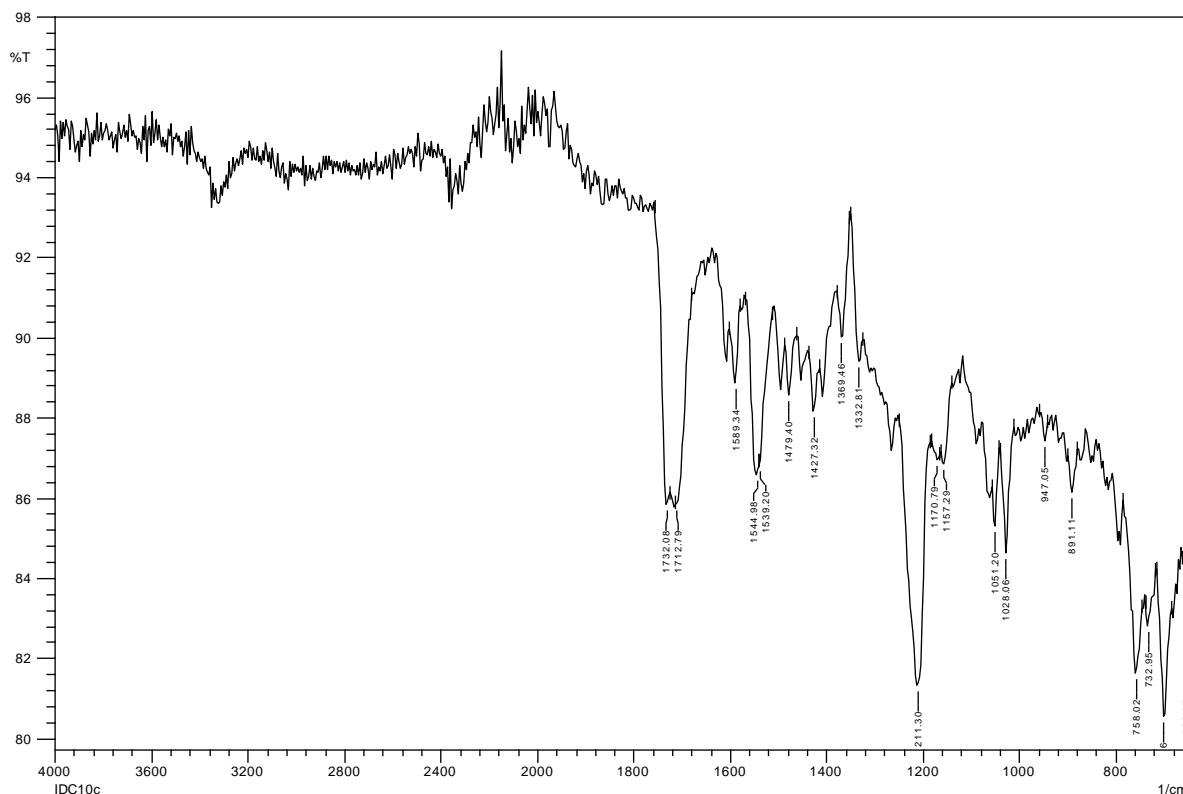


## <sup>13</sup>C NMR of 53





## IR of 53

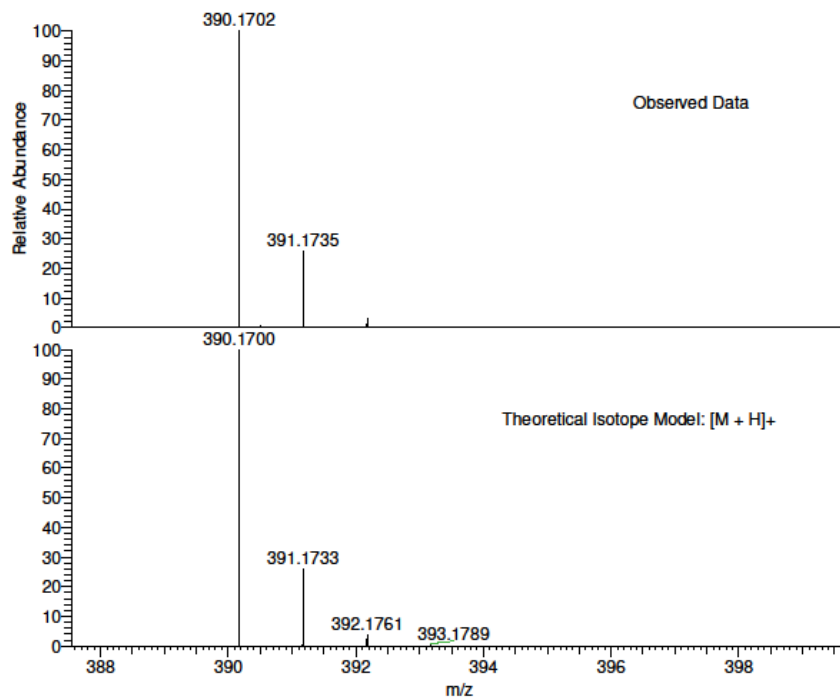


## HRMS of 53

IDC10c MW=389?  
C<sub>24</sub>H<sub>23</sub>NO<sub>4</sub>  
(MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Dr AJB Watson  
24/10/2013 17:11:05

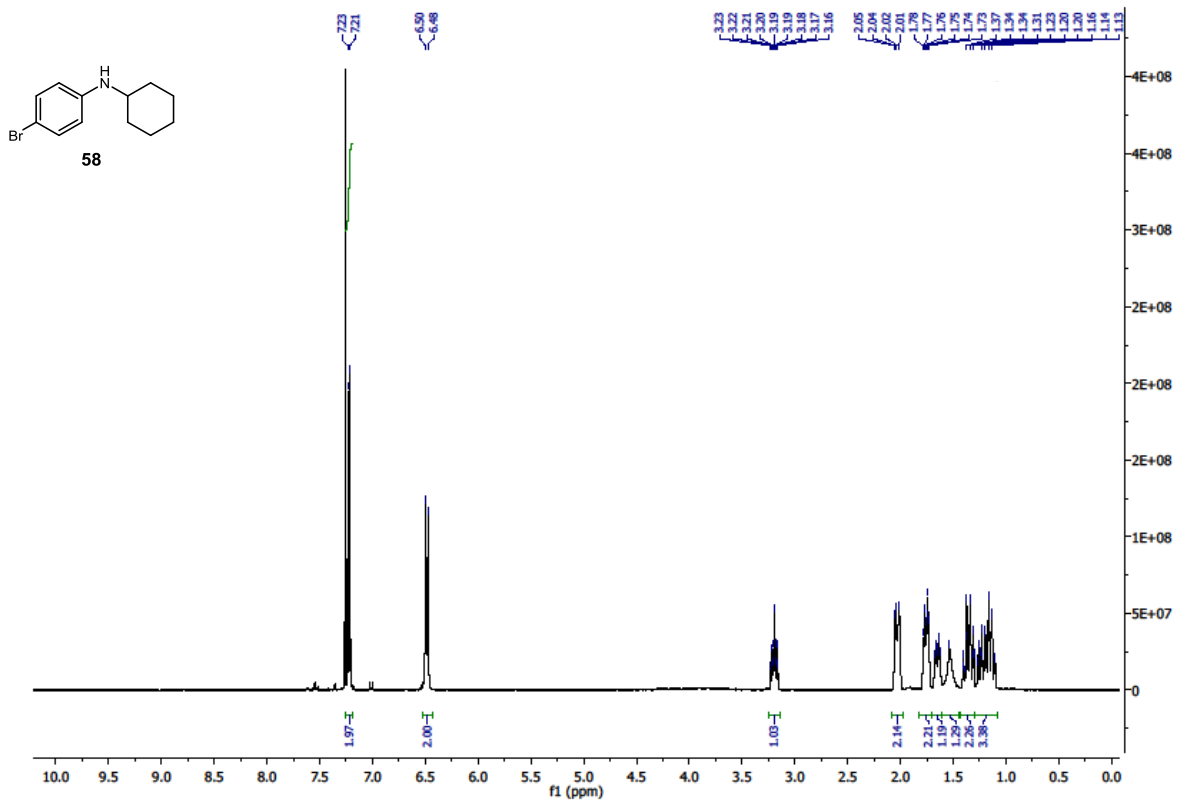


NL:  
5.03E7  
STRWAT135-OS-HNESP#29-  
48 RT: 0.66-1.14 AV: 18 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

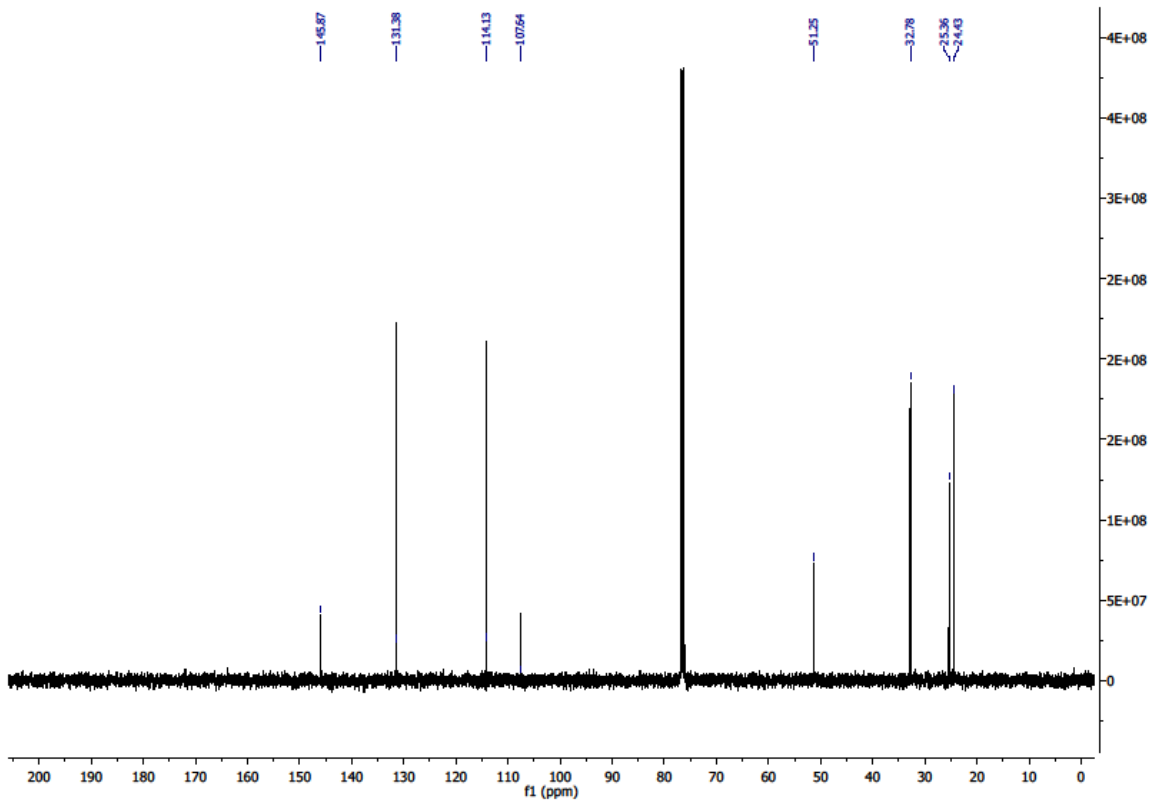
NL:  
1.78E4  
C<sub>24</sub>H<sub>23</sub>NO<sub>4</sub>H:  
C<sub>24</sub>H<sub>24</sub>N<sub>1</sub>O<sub>4</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 58

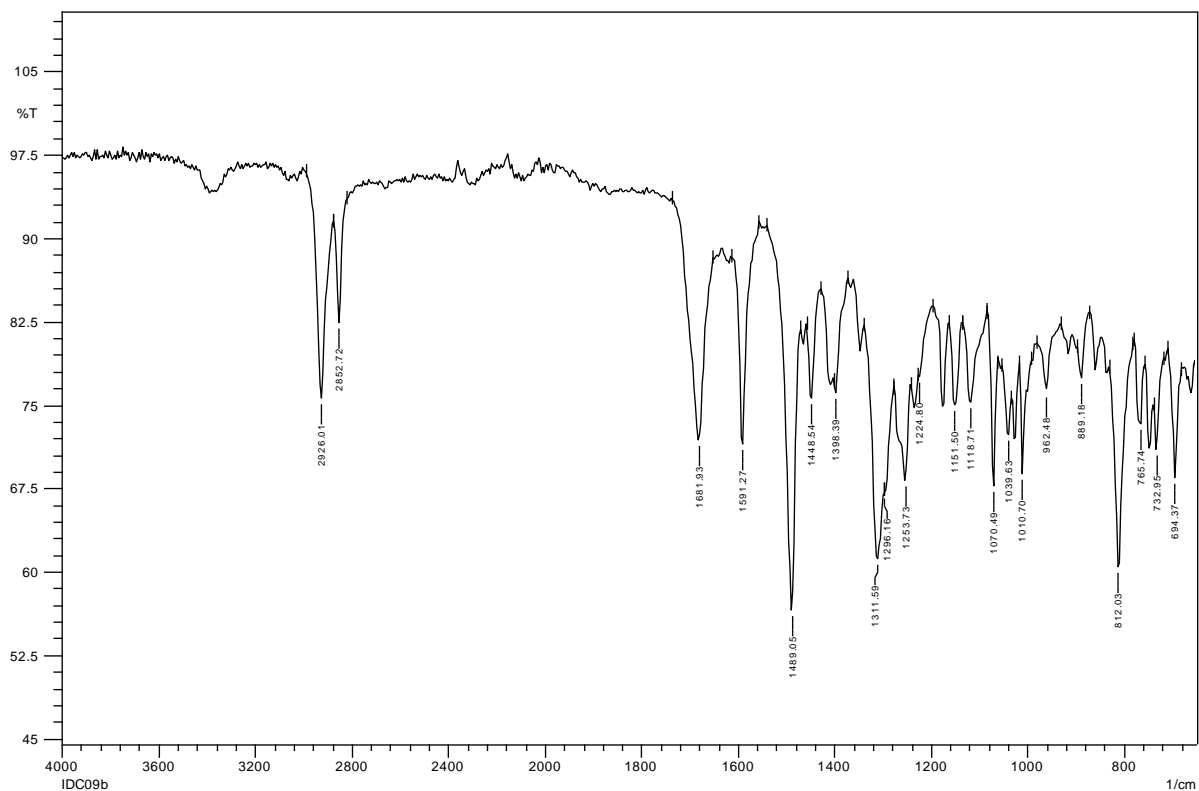
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 58



## IR of 58



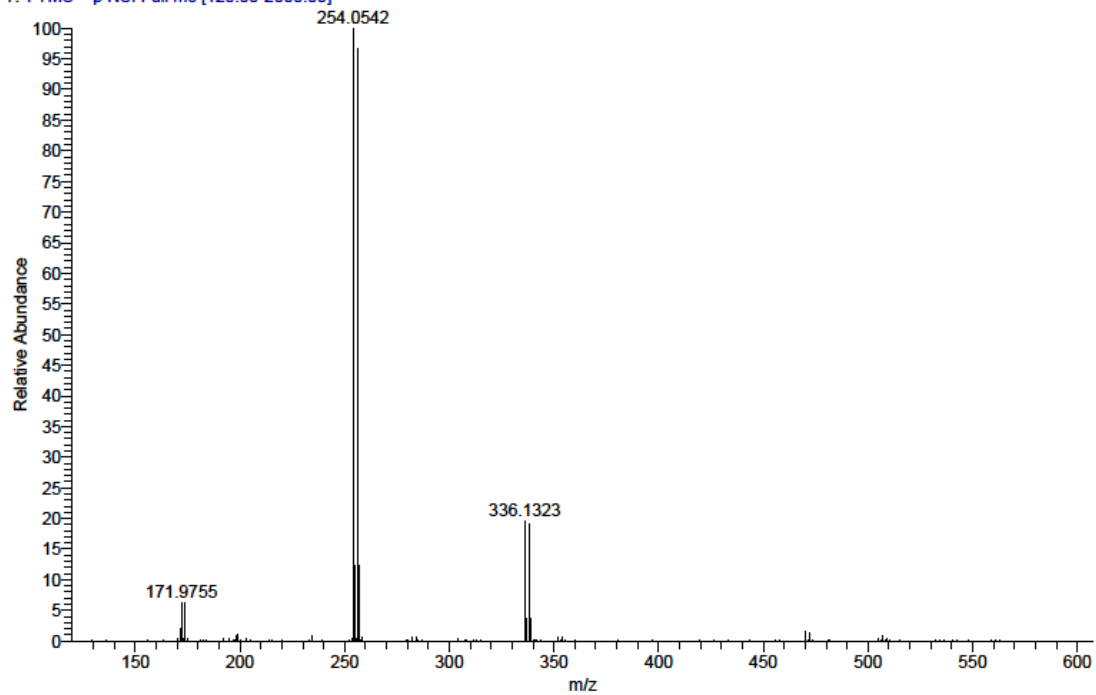
## HRMS of 58

IDC09C MW=254?  
(MeOH)/MeOH + NH4OAc

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LTQ Orbitrap XL

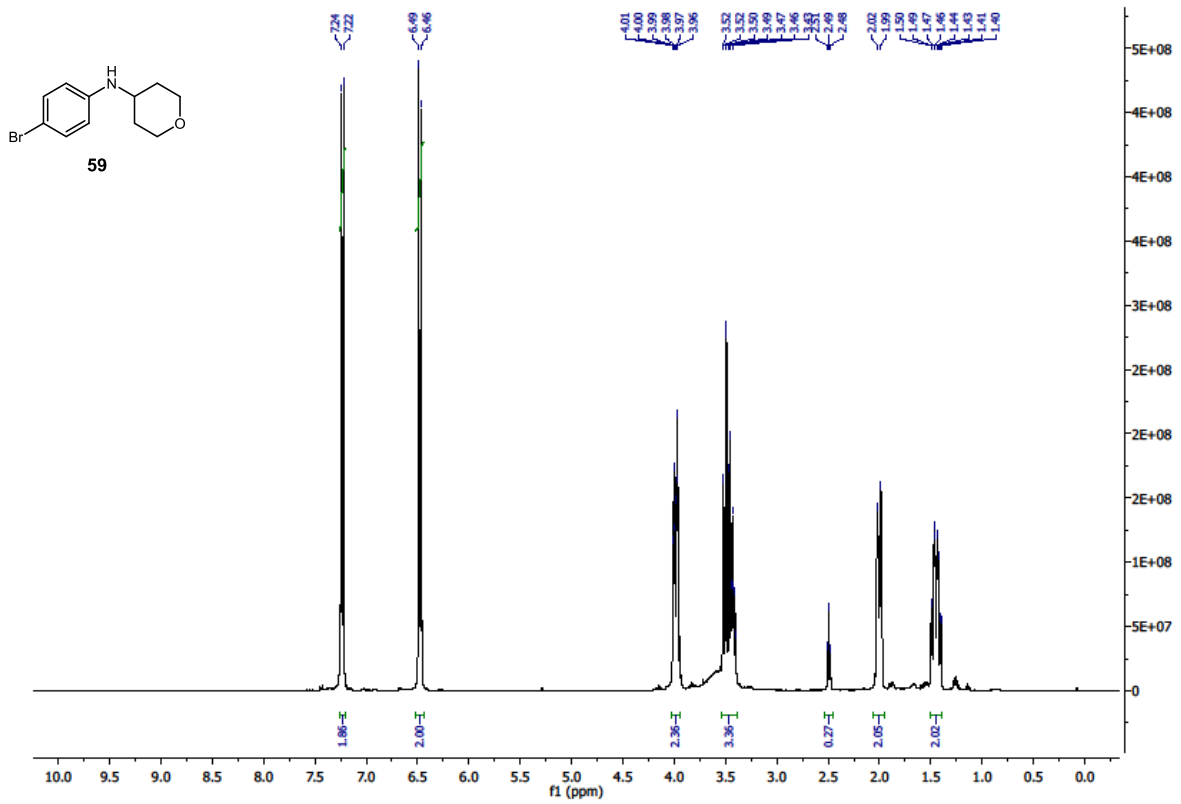
Diana Castagna  
02/07/2013 18:31:18

STRWAT107-OJ-HNESP #33-52 RT: 0.75-1.28 AV: 20 SM: 7G NL: 5.62E7  
T: FTMS + p NSI Full ms [120.00-2000.00]

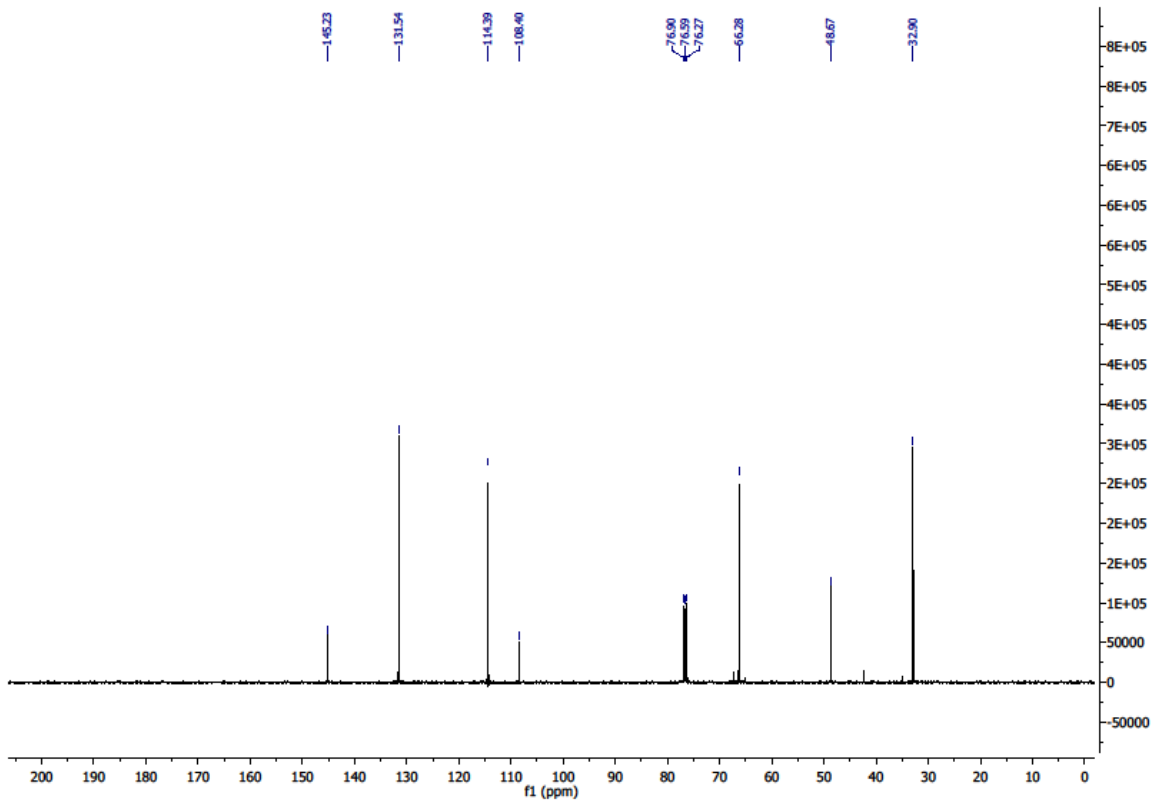


# Compound 59

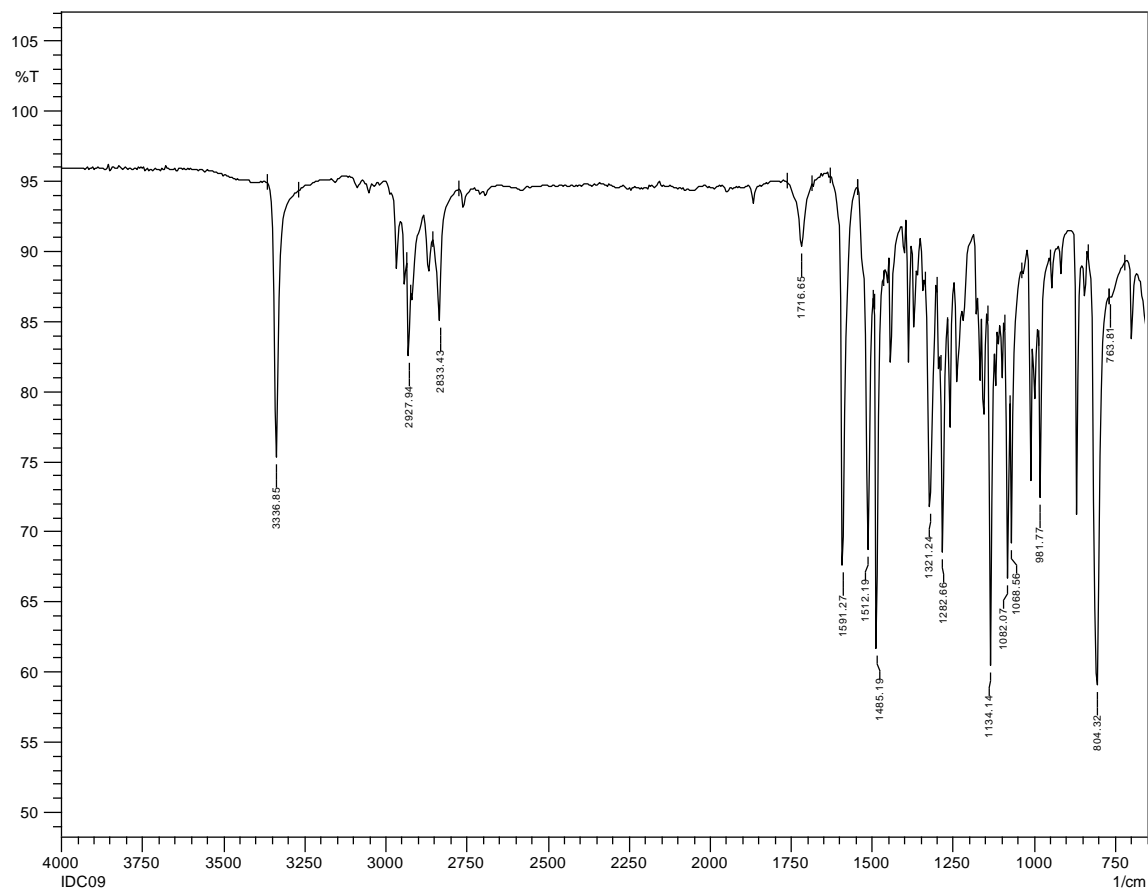
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 59



## IR of 59

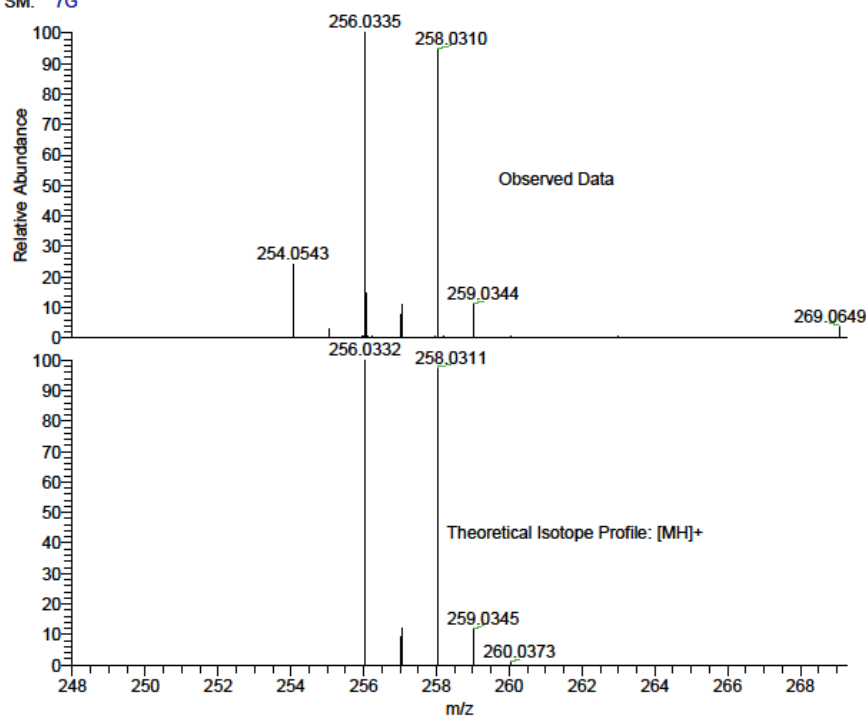


## HRMS of 59

IDC09 MW=256?  
(MeOH)/MeOH + NH4OAc  
SM: 7G

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LTQ Orbitrap XL

Diana Castagna  
02/07/2013 18:37:23

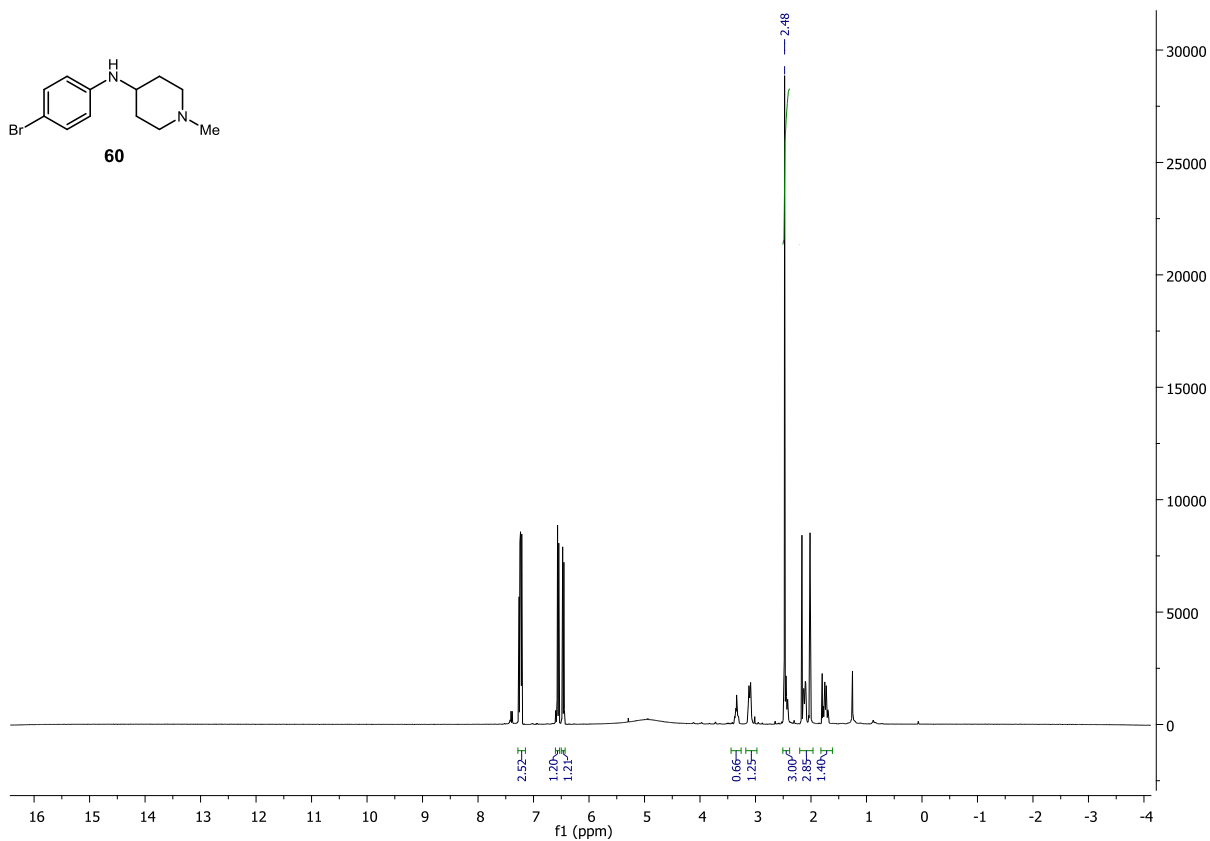
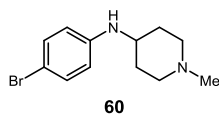


NL:  
8.11E6  
STRWAT109-OJ-HNESP#30-  
54 RT: 0.71-1.28 AV: 22 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

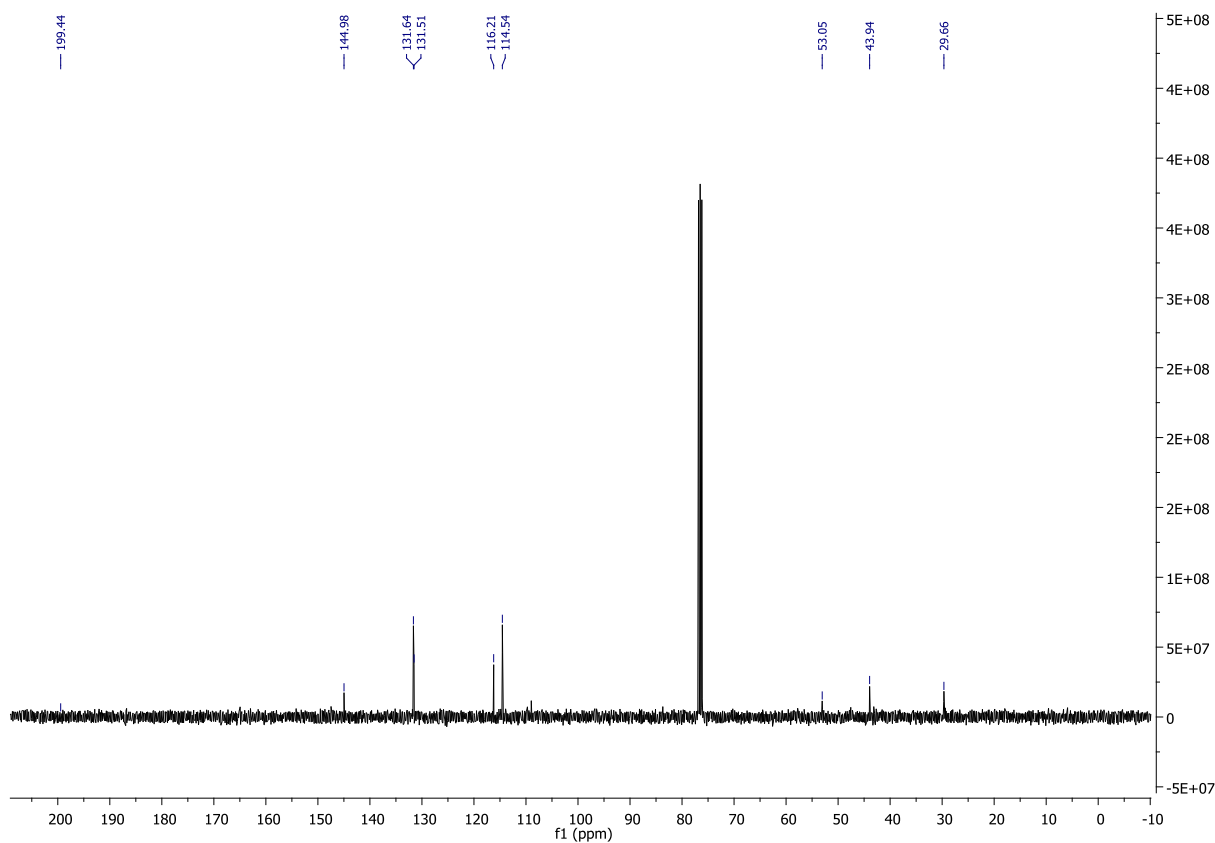
NL:  
1.05E4  
C<sub>11</sub>H<sub>14</sub>BrNOH:  
C<sub>11</sub>H<sub>15</sub>BrN<sub>1</sub>O<sub>1</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 60

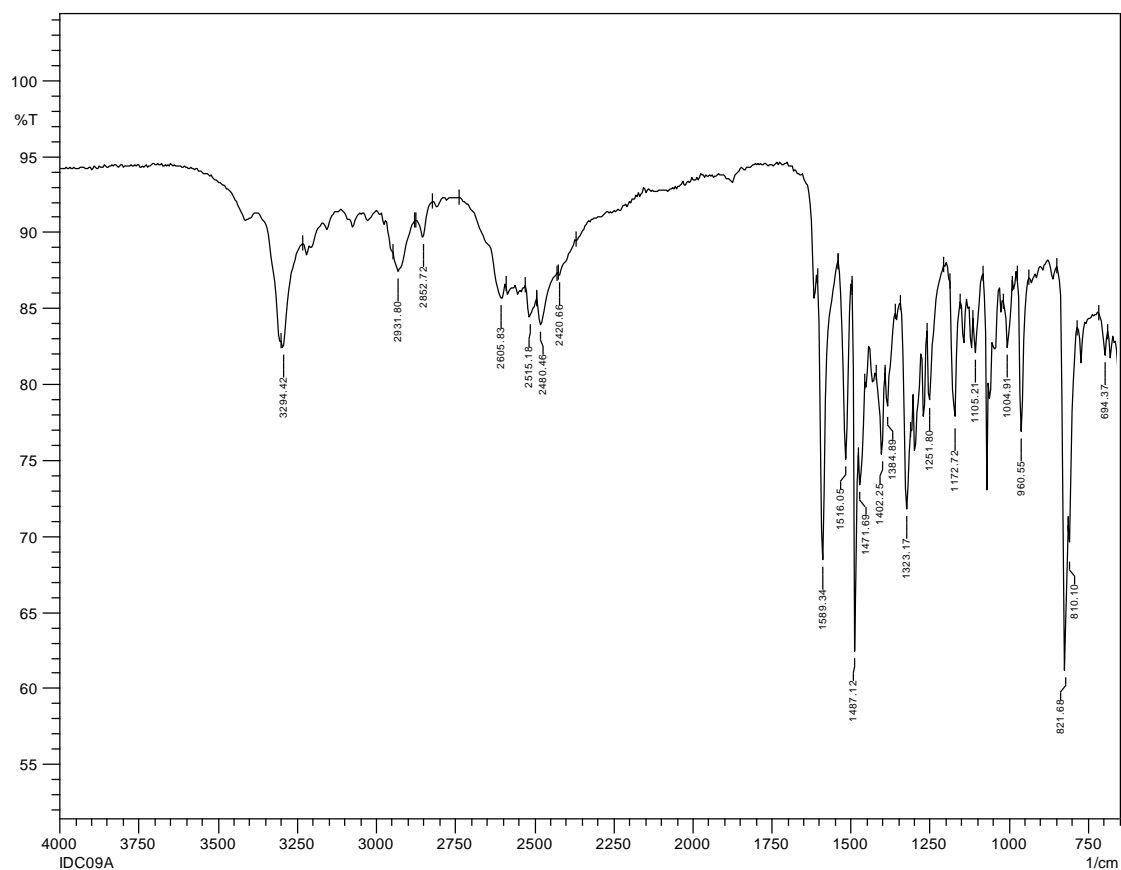
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 60



## IR of 60

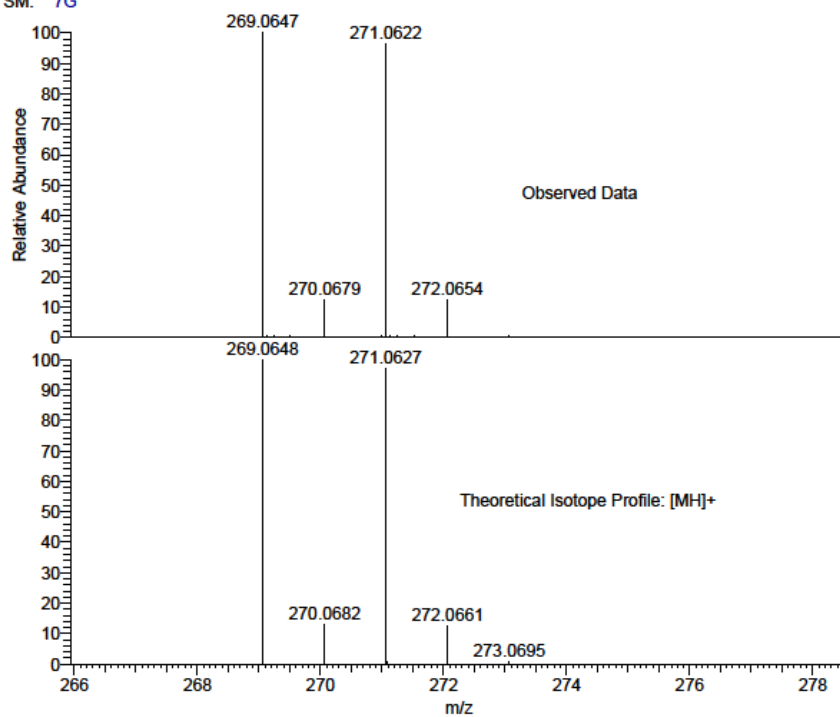


## HRMS of 60

IDC09A MW=269?  
(MeOH)/MeOH + NH4OAc  
SM: 7G

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Diana Castagna  
02/07/2013 18:34:20

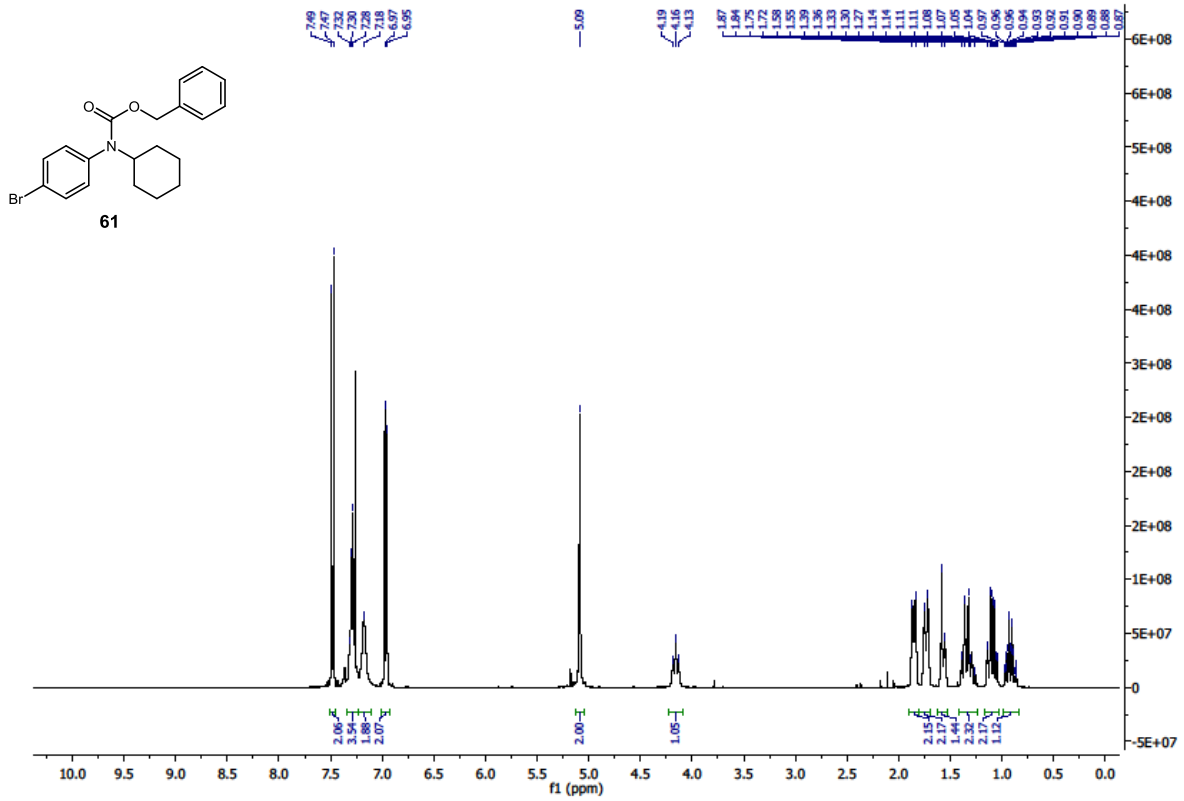


NL:  
7.75E7  
STRWAT108-OJ-HNESP#33-  
53 RT: 0.75-1.28 AV: 20 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

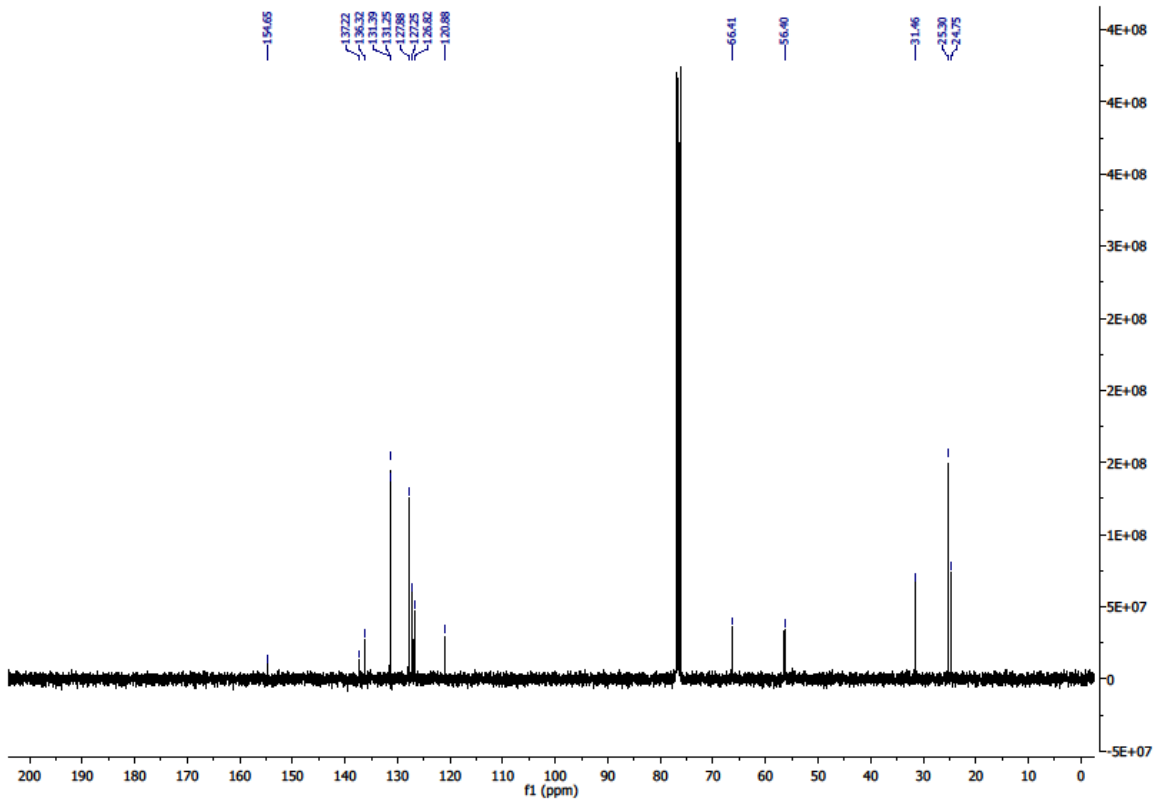
NL:  
1.04E4  
C<sub>12</sub>H<sub>17</sub>BrN<sub>2</sub>H:  
C<sub>12</sub>H<sub>18</sub>Br<sub>1</sub>N<sub>2</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 61

## <sup>1</sup>H NMR

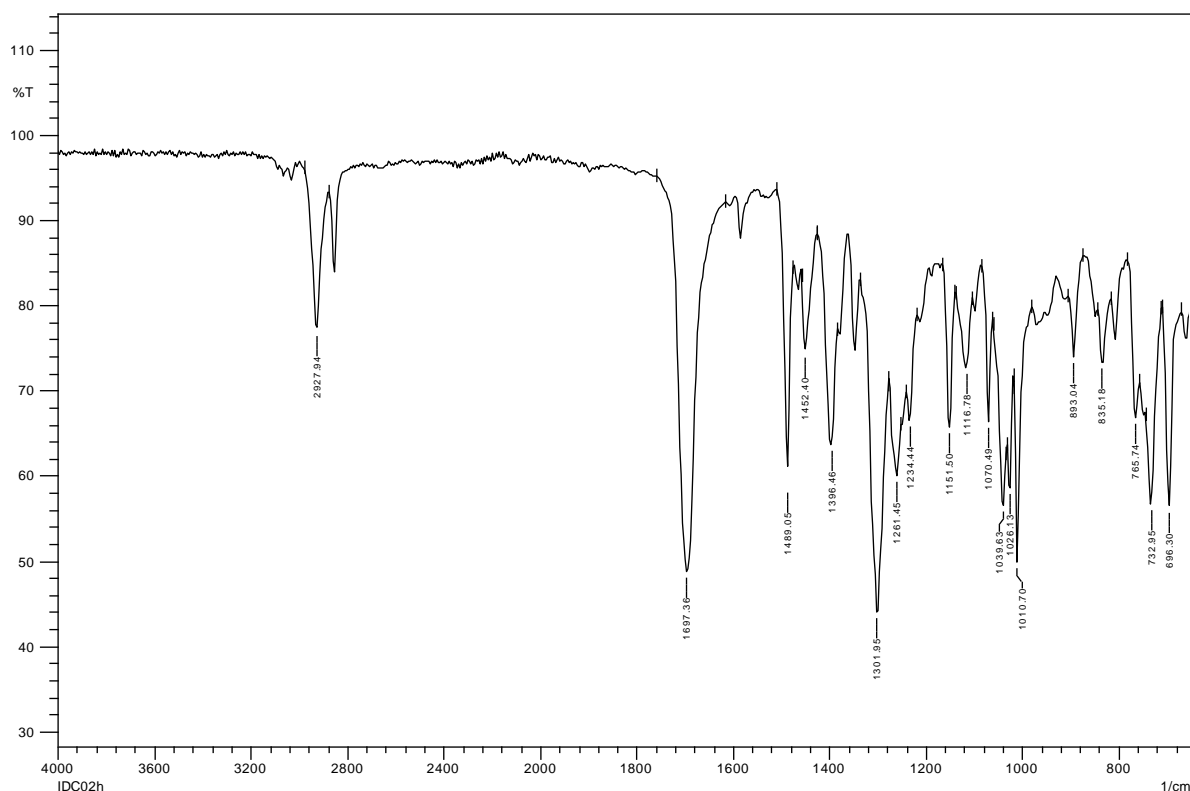


## <sup>13</sup>C NMR of 61





# IR of 61

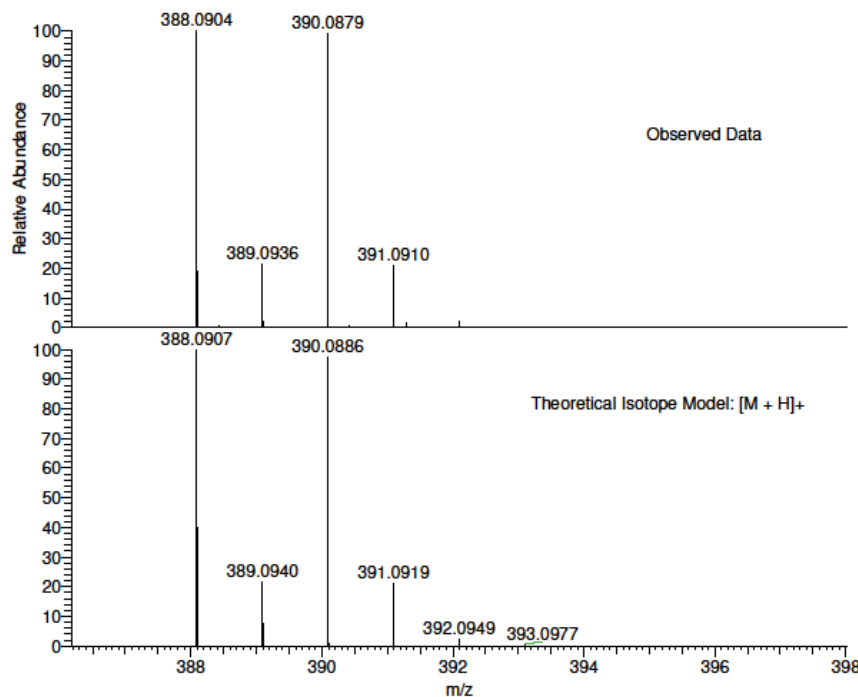


# HRMS of 61

IDC02h MW=388?  
C<sub>20</sub>H<sub>22</sub>BrNO<sub>2</sub>  
(MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Dr AJB Watson  
24/10/2013 17:19:06

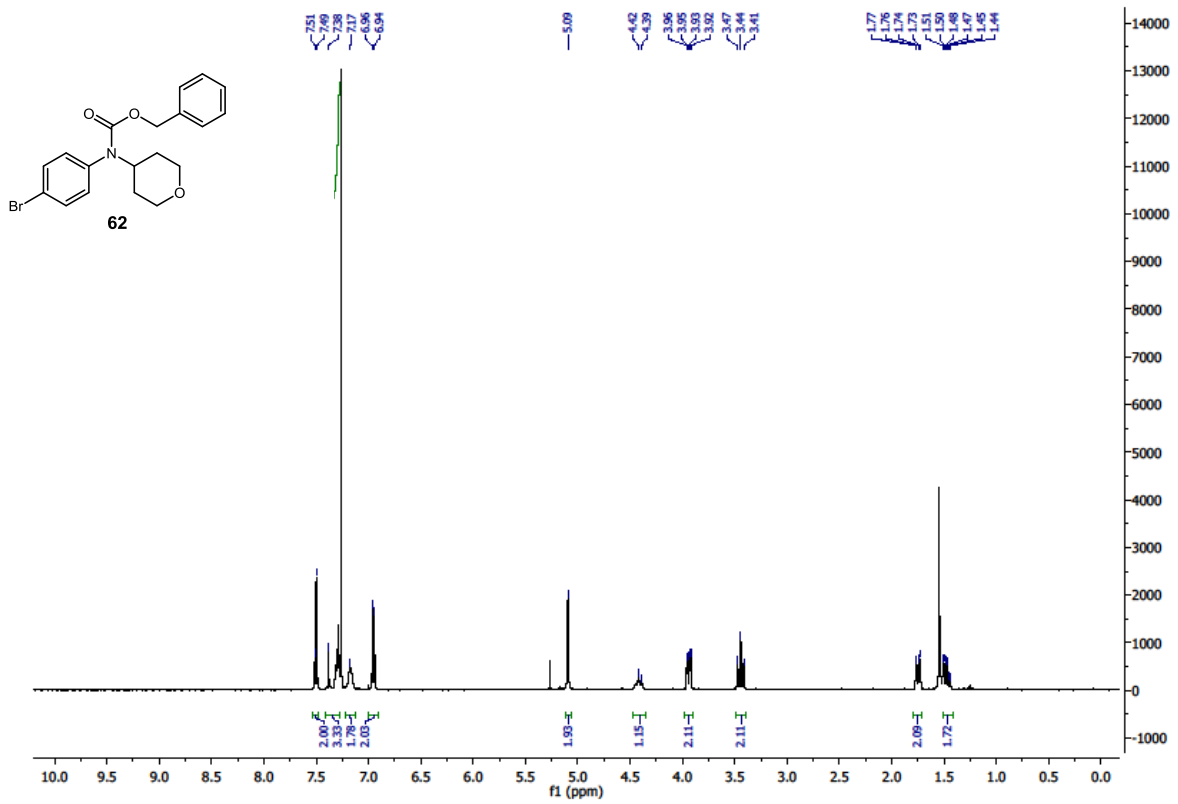


NL:  
4.01E7  
STRWAT139-OS-HNESP#7-24  
RT: 0.11-0.53 AV: 17 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

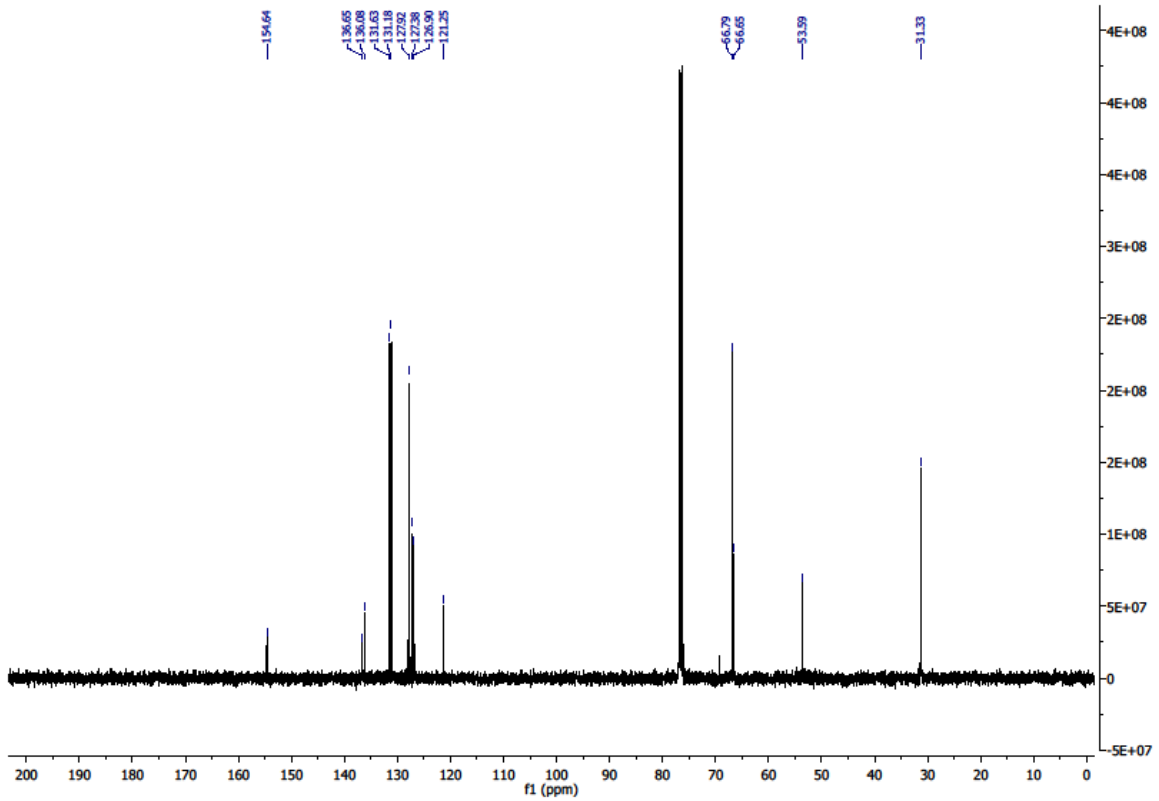
NL:  
9.49E3  
C<sub>20</sub>H<sub>22</sub>BrNO<sub>2</sub>H:  
C<sub>20</sub>H<sub>23</sub>BrN<sub>1</sub>O<sub>2</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 62

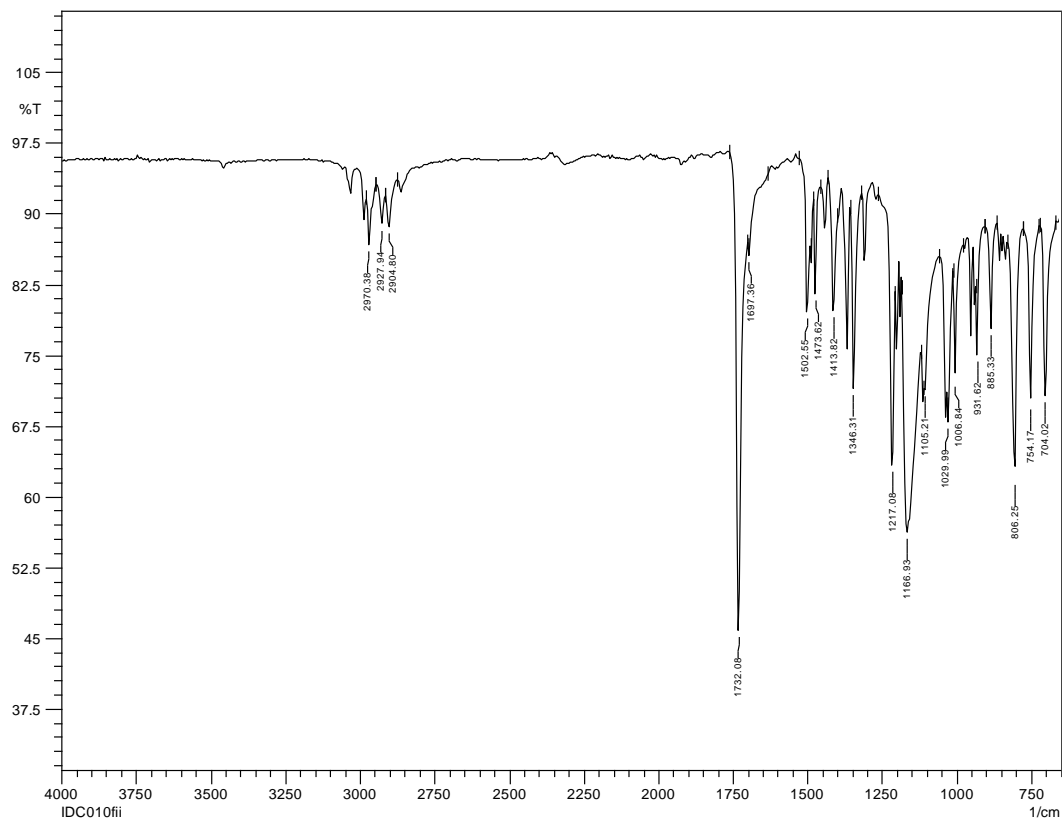
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 62



## IR of 62

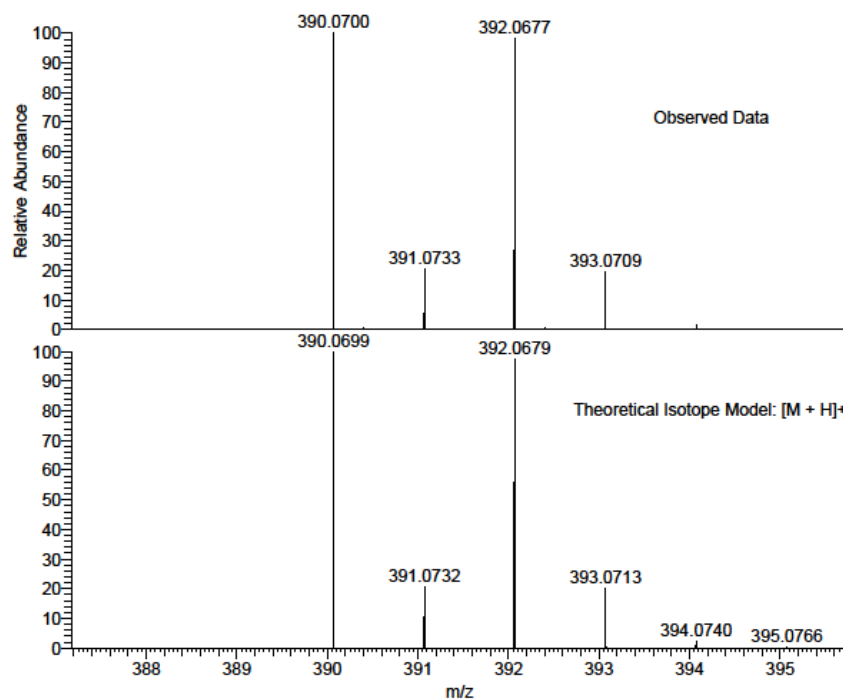


## HRMS of 62

IDC PYRAN MW=390?  
C<sub>19</sub>H<sub>20</sub>BrNO<sub>3</sub>  
(MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
08/07/2014 08:13:50

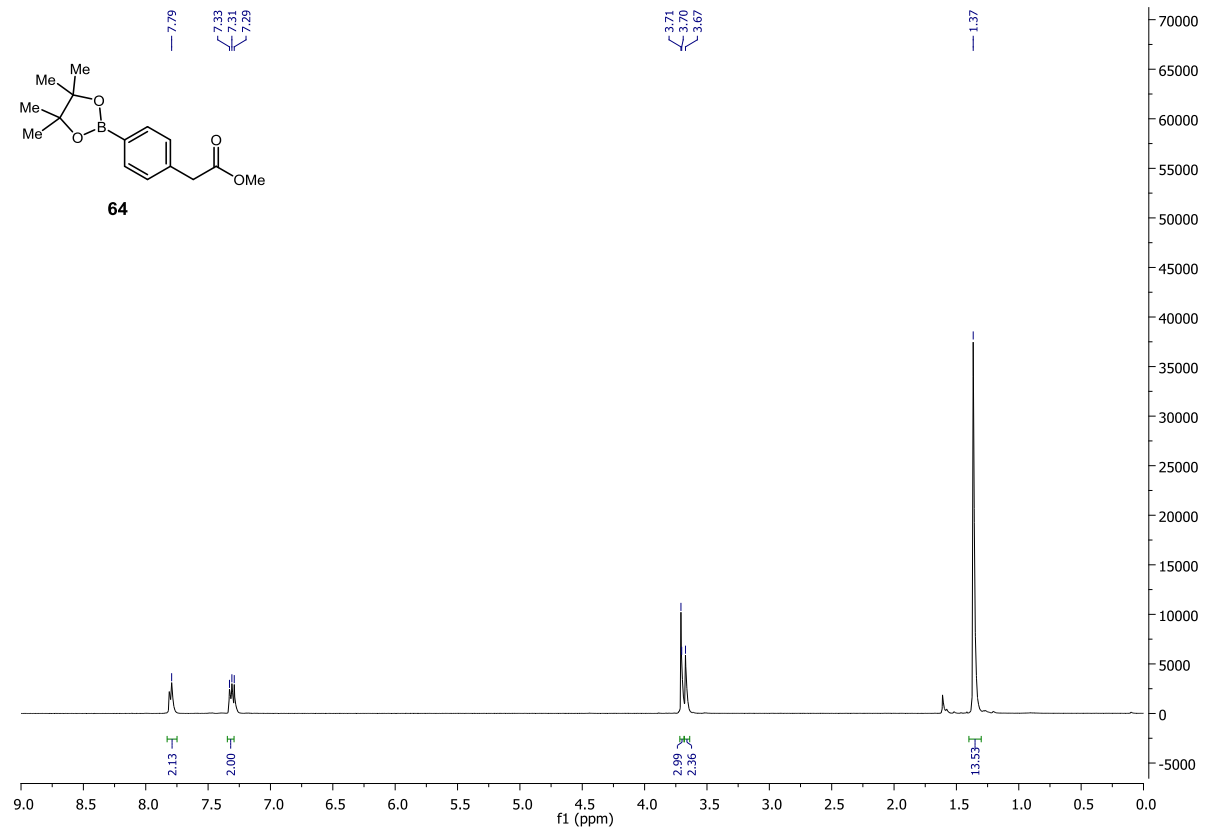


NL:  
4.74E7  
STRWAT288-OA-HNESP#31-  
45 RT: 0.66-1.05 AV: 15 T:  
FTMS + p NSI Full ms  
[140.00-1935.00]

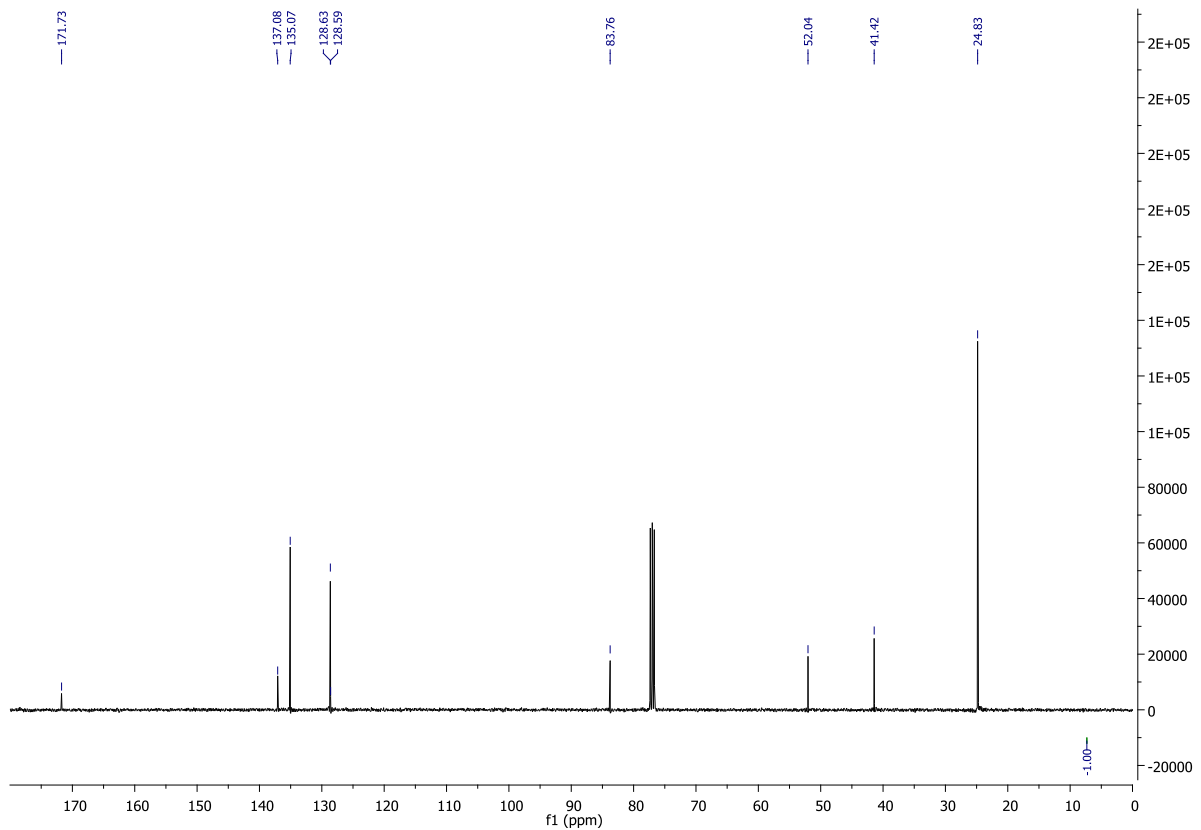
NL:  
9.57E3  
C<sub>19</sub>H<sub>20</sub>BrNO<sub>3</sub>H:  
C<sub>19</sub>H<sub>21</sub>BrN<sub>1</sub>O<sub>3</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 64

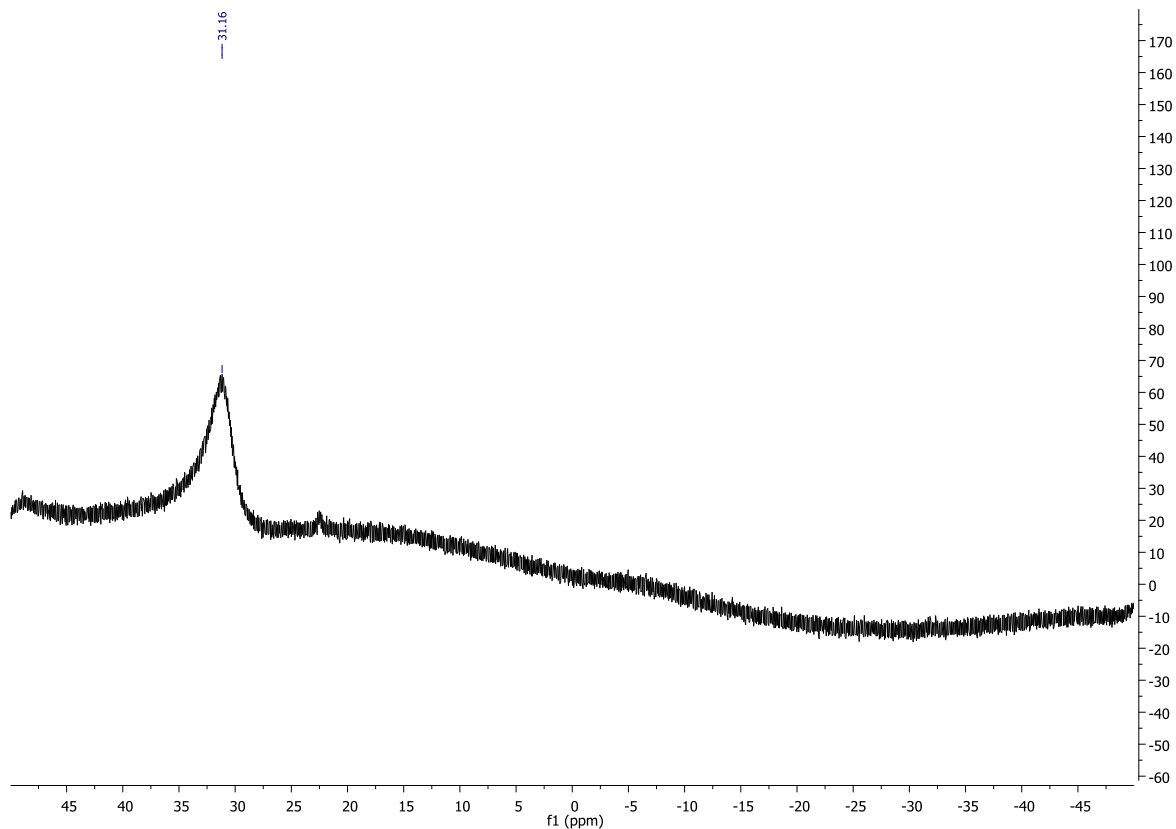
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 64



# <sup>1</sup>B NMR of 64

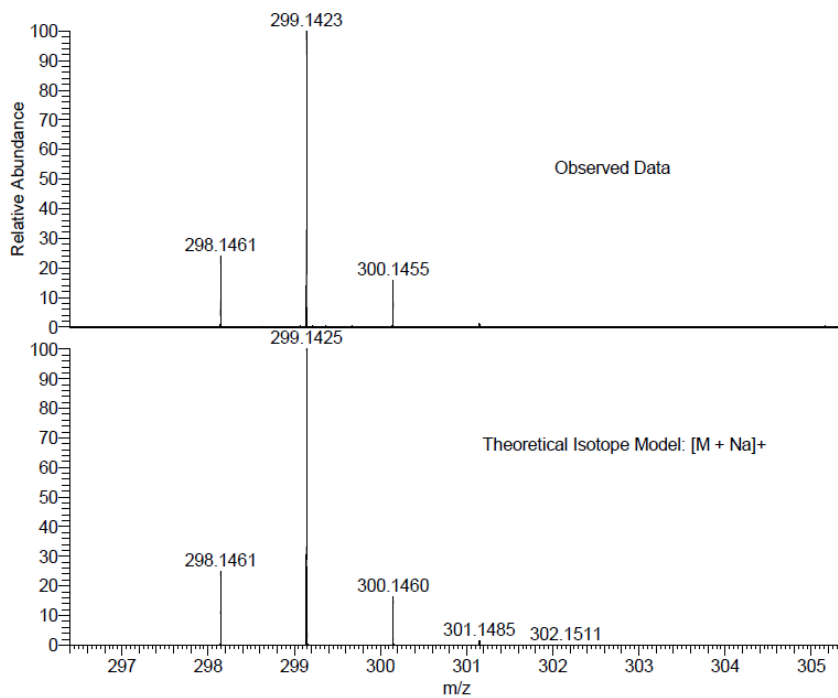


# HRMS of 64

CS6-A1 MW=276?  
C<sub>15</sub>H<sub>21</sub>BO<sub>4</sub>  
(MeCN)/MeCN

EPSRC National Facility Swansea  
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Diana Castagna  
27/02/2014 11:43:15

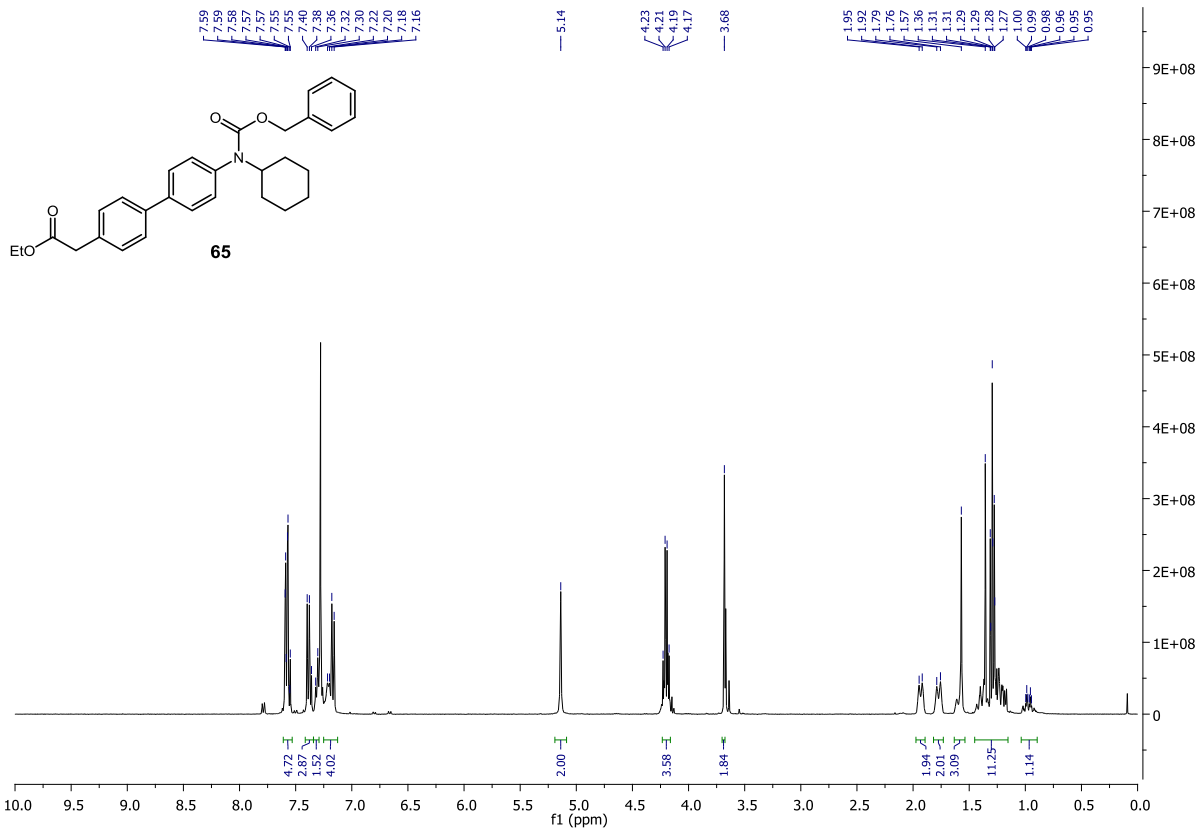


NL:  
3.75E7  
STRWAT182-OC-HNESP#12-  
19 RT: 0.22-0.43 AV: 8 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

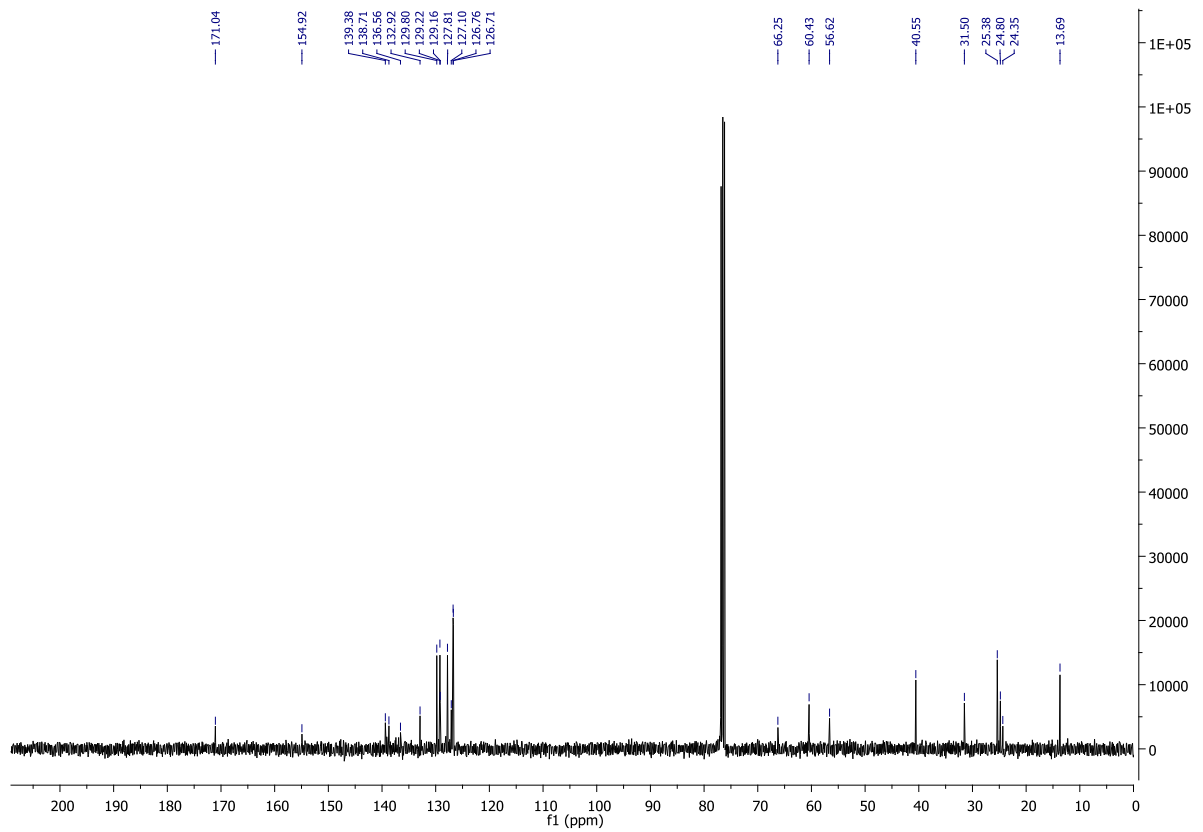
NL:  
1.58E4  
C<sub>15</sub>H<sub>21</sub>BO<sub>4</sub>Na:  
C<sub>15</sub>H<sub>21</sub>B<sub>1</sub>O<sub>4</sub>Na<sub>1</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 65

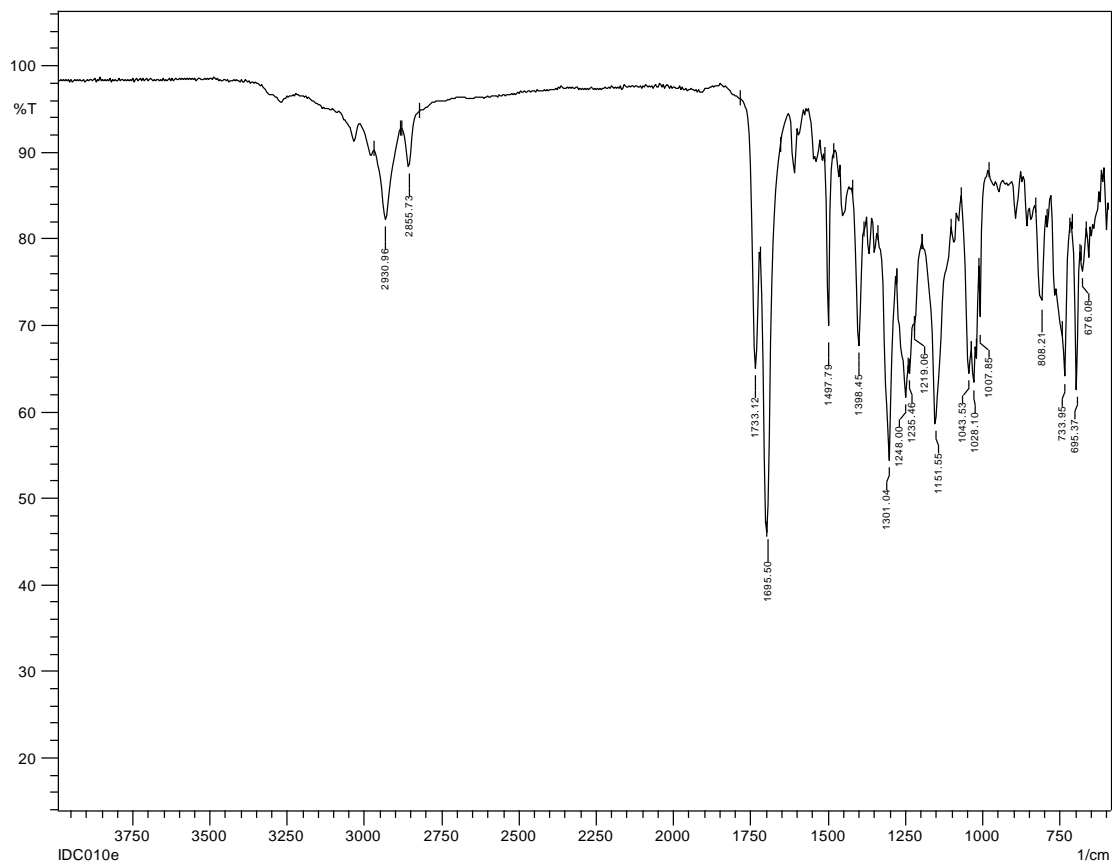
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 65



## IR of 65

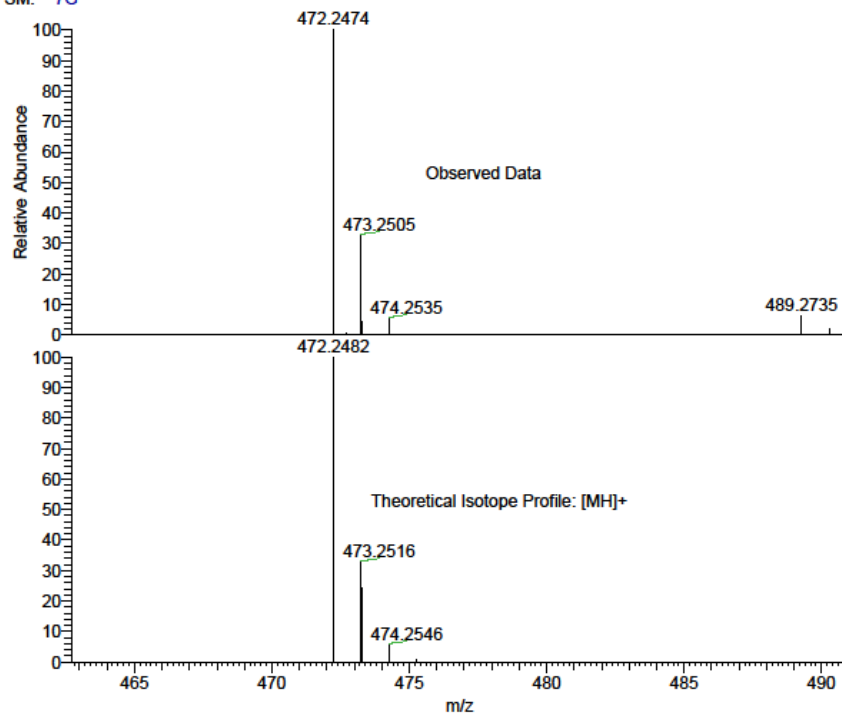


## HRMS of 65

IDC10E MW=471?  
(MeOH)/MeOH + NH4OAc  
SM: 7G

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
02/07/2013 18:28:16

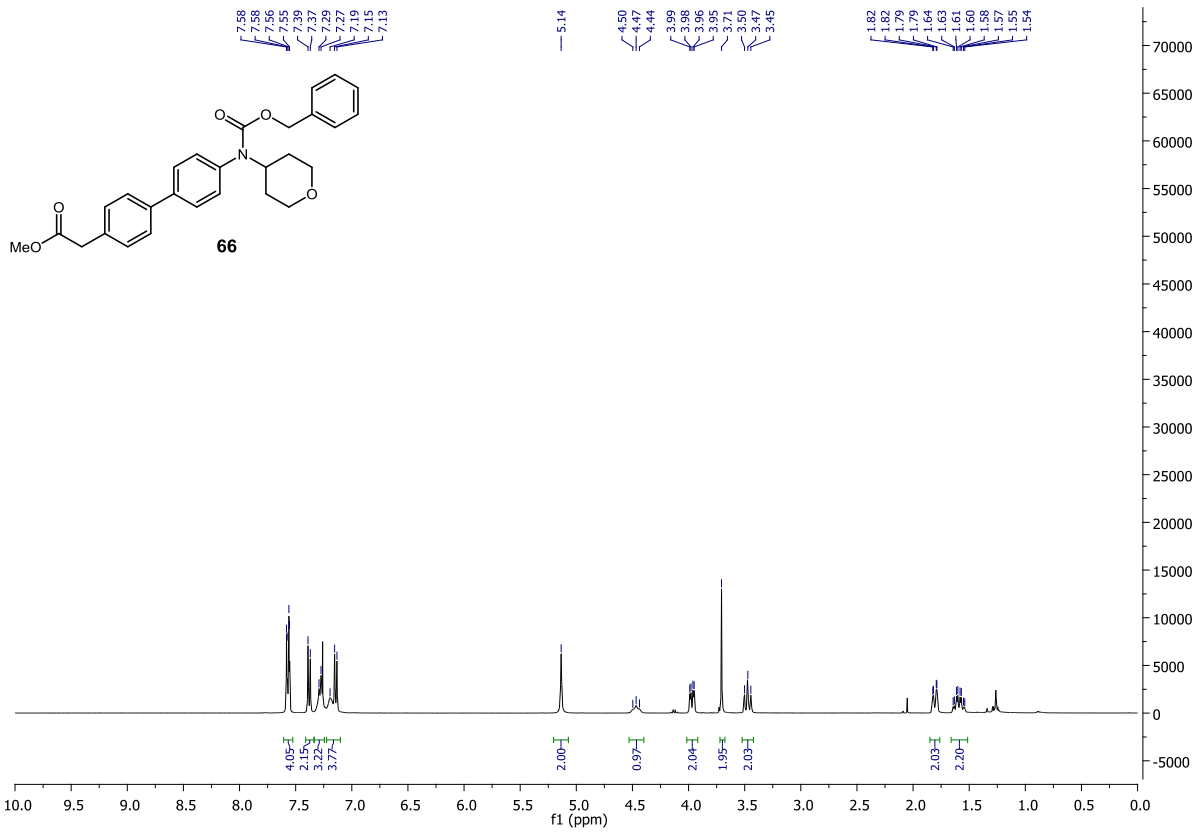


NL:  
5.24E7  
STRWAT106-OJ-HNESP#33-  
53 RT: 0.75-1.28 AV: 20 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

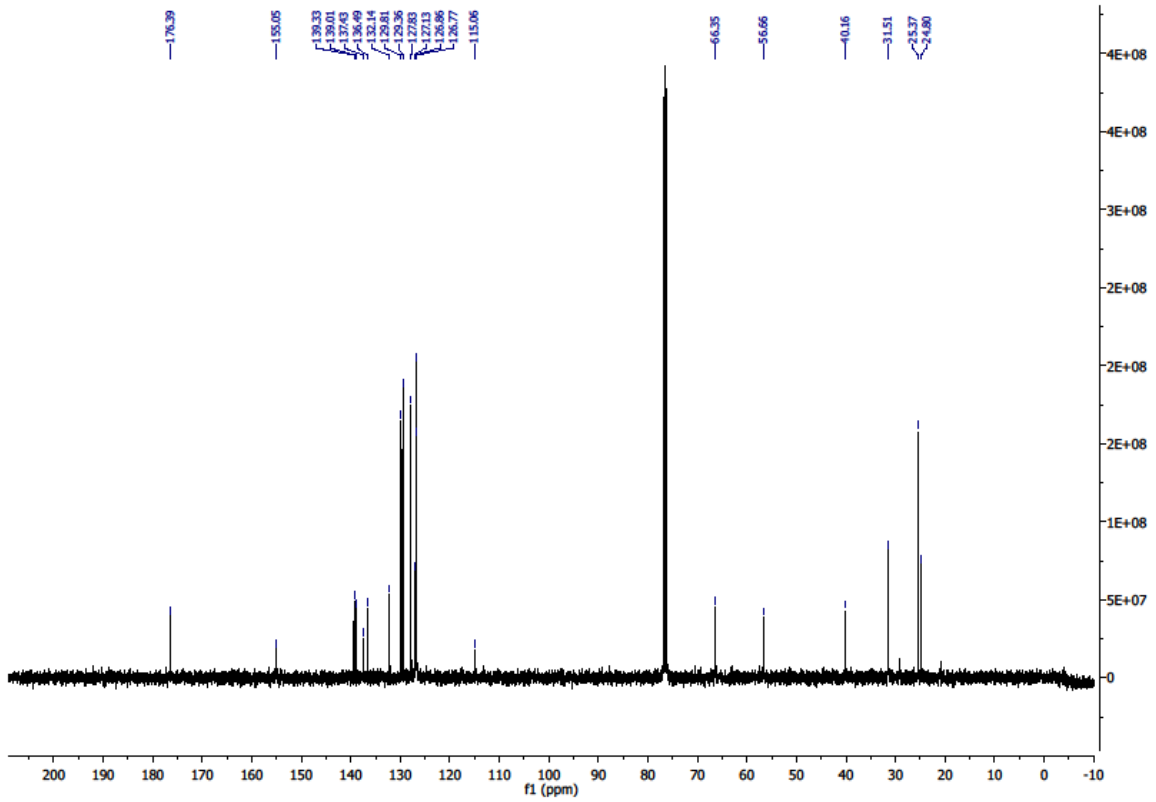
NL:  
1.67E4  
C<sub>30</sub>H<sub>33</sub>NO<sub>4</sub>H:  
C<sub>30</sub>H<sub>34</sub>N<sub>1</sub>O<sub>4</sub>  
p (qss, s /p:40) Chrg 1  
R: 100000 Res .Pwr .@FWHM

# Compound 66

## <sup>1</sup>H NMR

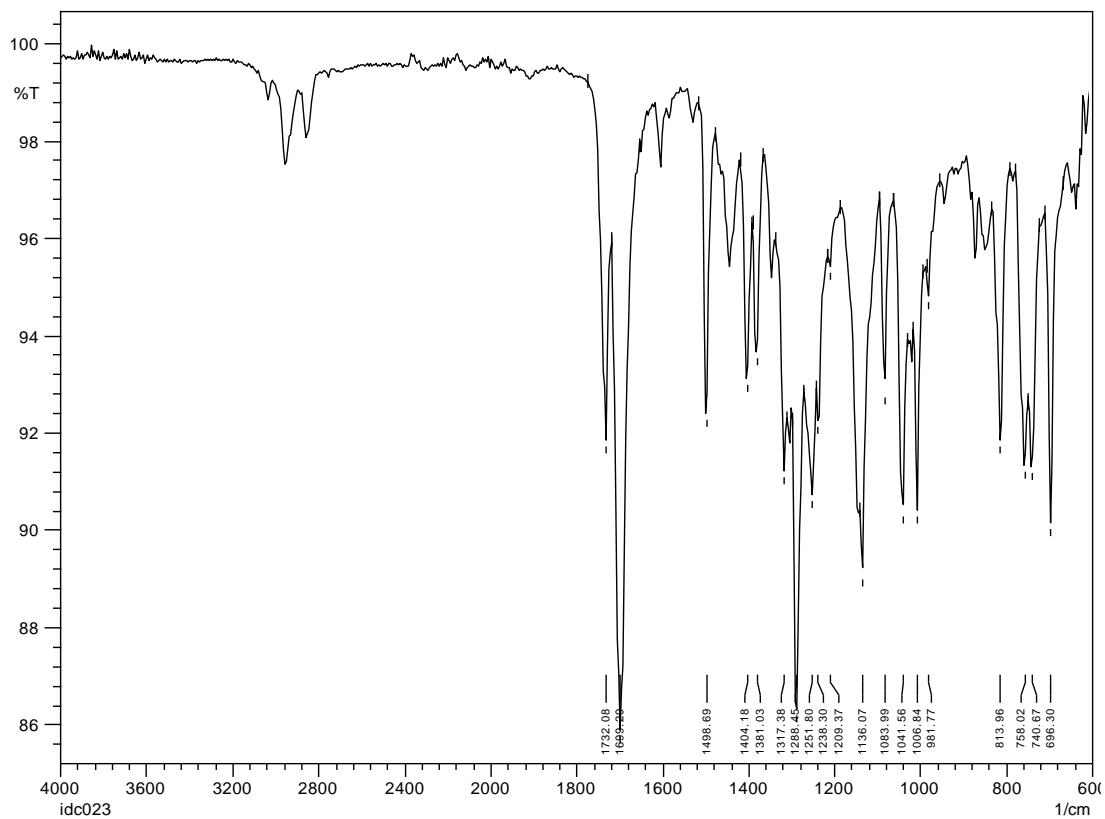


## <sup>13</sup>C NMR of 66





## IR of 66

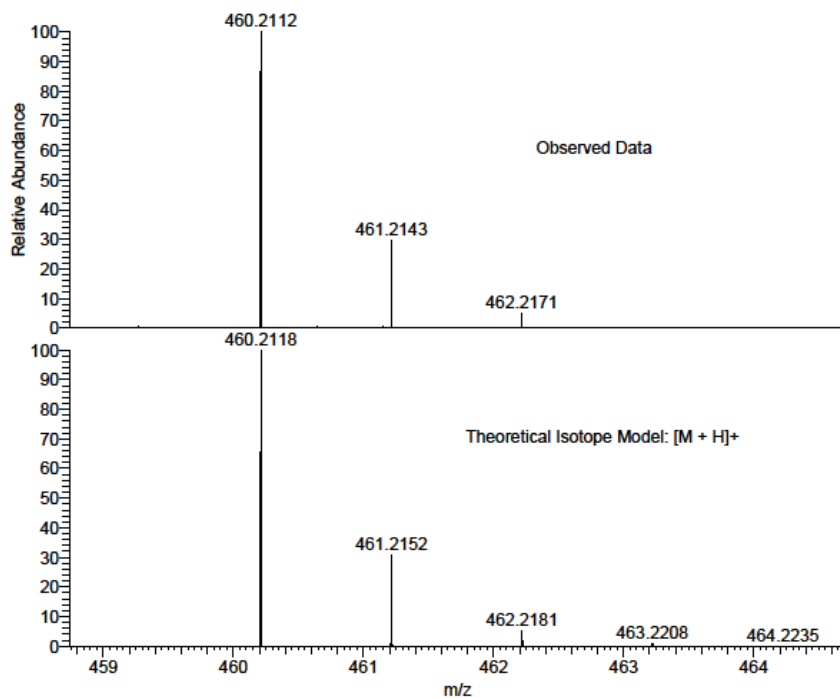


## HRMS of 66

IDC023 MW=459?  
C<sub>28</sub>H<sub>29</sub>NO<sub>5</sub>  
(MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
08/07/2014 08:16:39

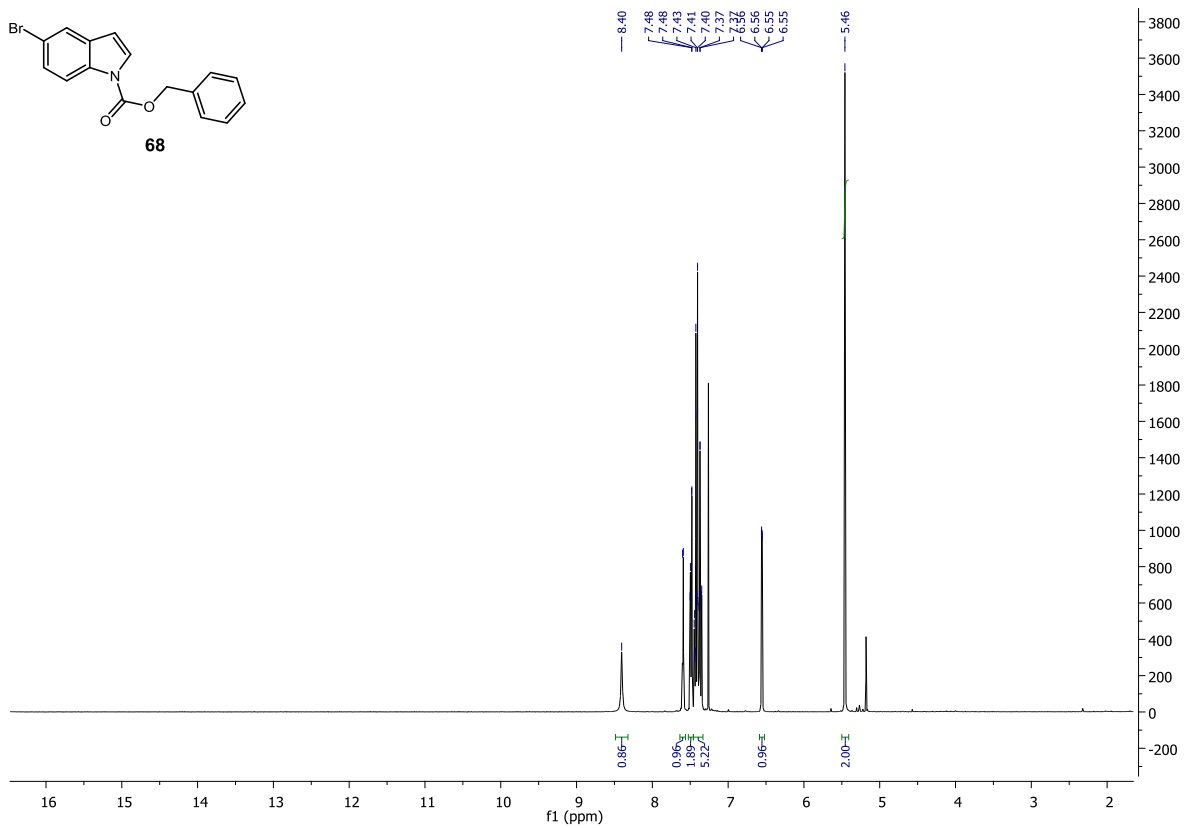
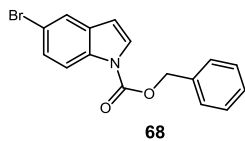


NL:  
6.51E7  
STRWAT290-OA-HNESP#37-  
41 RT: 0.83-0.94 AV: 5 T:  
FTMS + p NSI Full ms  
[140.00-1935.00]

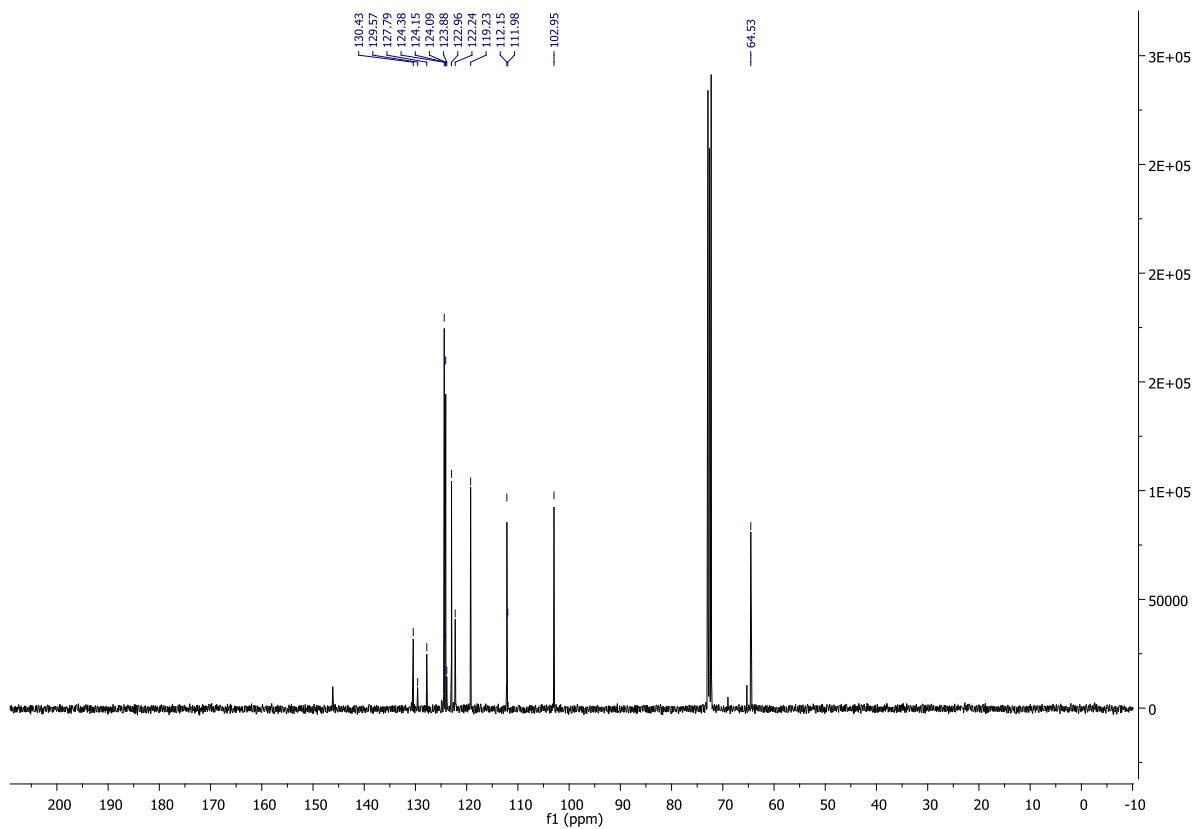
NL:  
1.70E4  
C<sub>28</sub>H<sub>29</sub>NO<sub>5</sub>H:  
C<sub>28</sub>H<sub>30</sub>N<sub>1</sub>O<sub>5</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr. @FWHM

# Compound 68

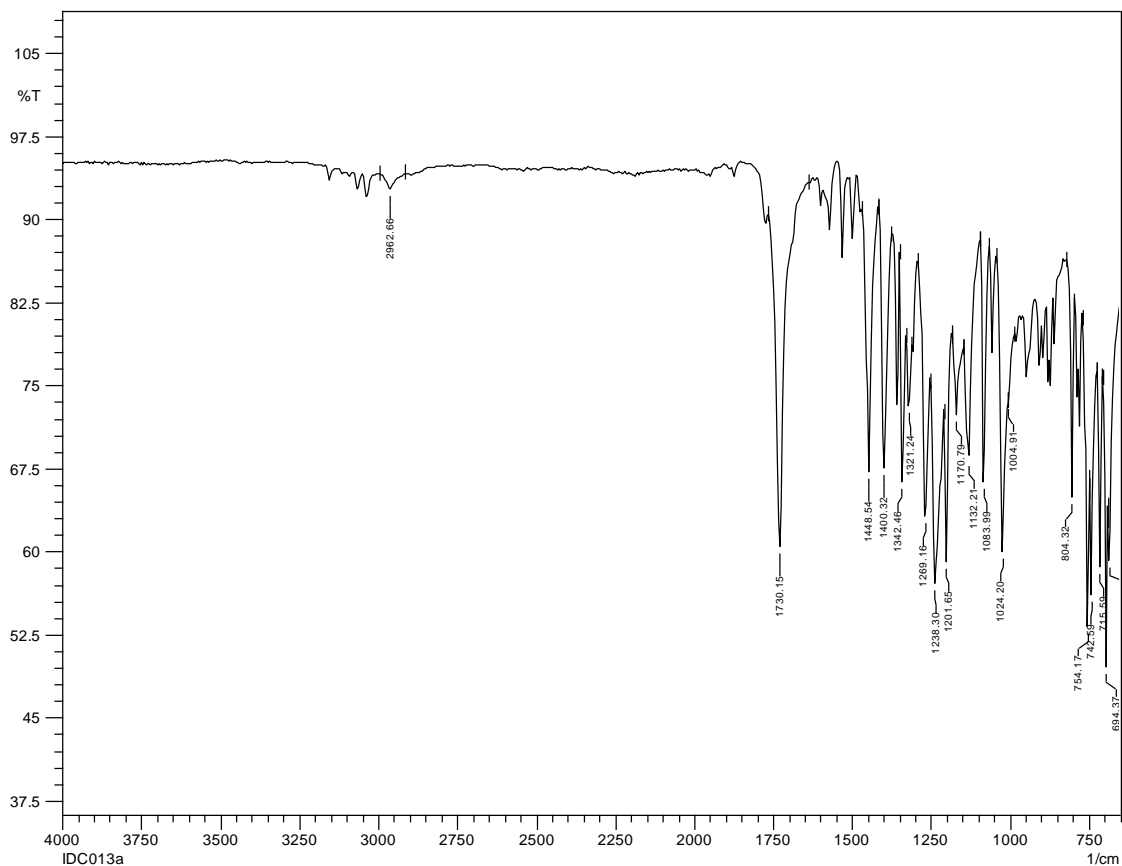
## <sup>1</sup>H NMR



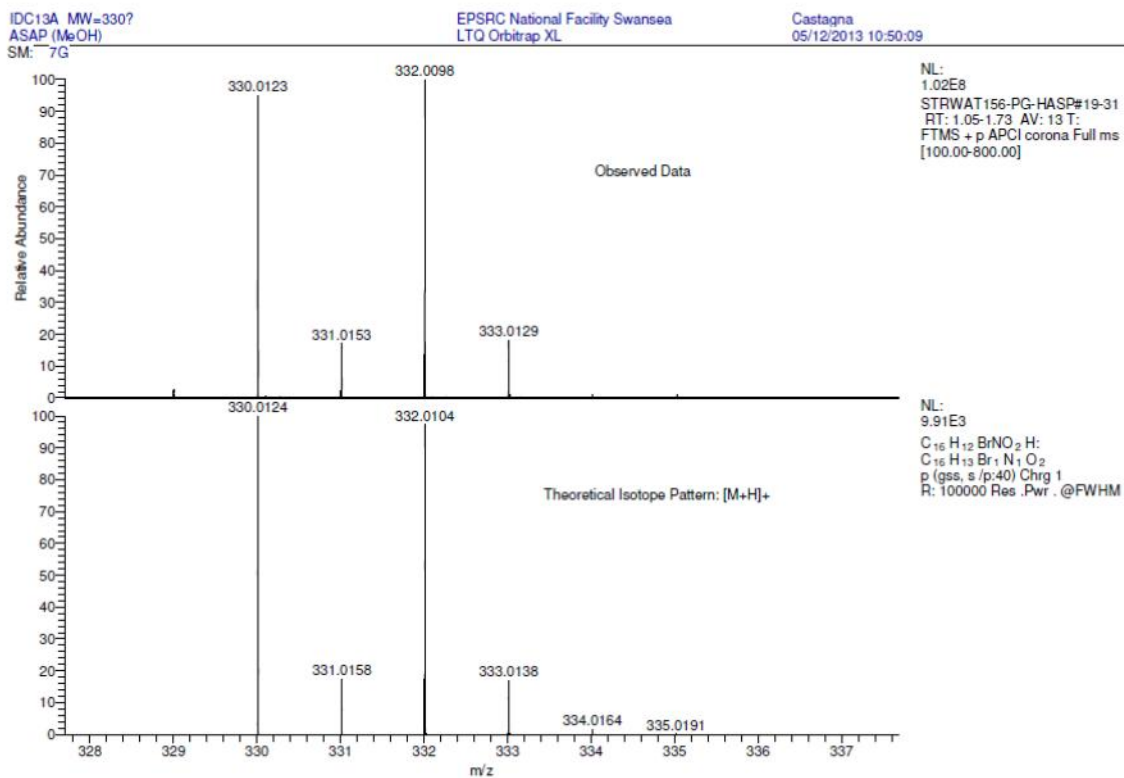
## <sup>13</sup>C NMR of 68



## IR of 68

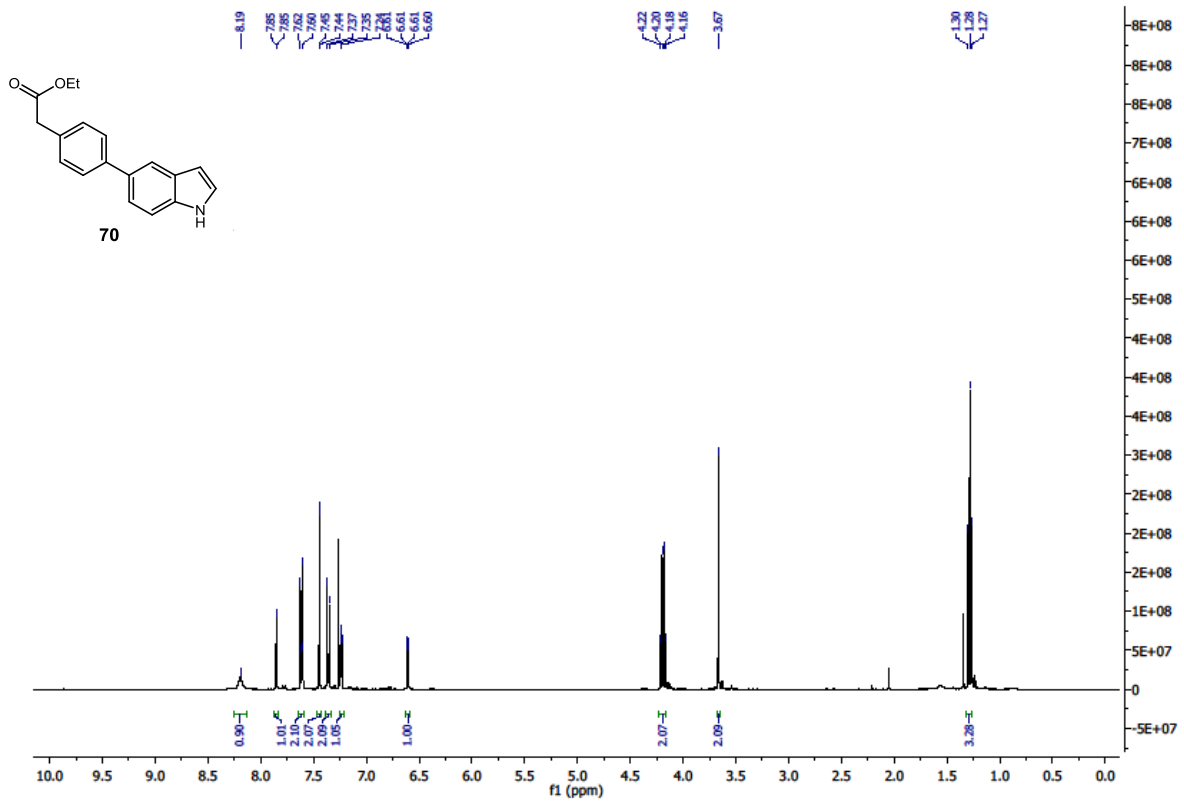


## HRMS of 68

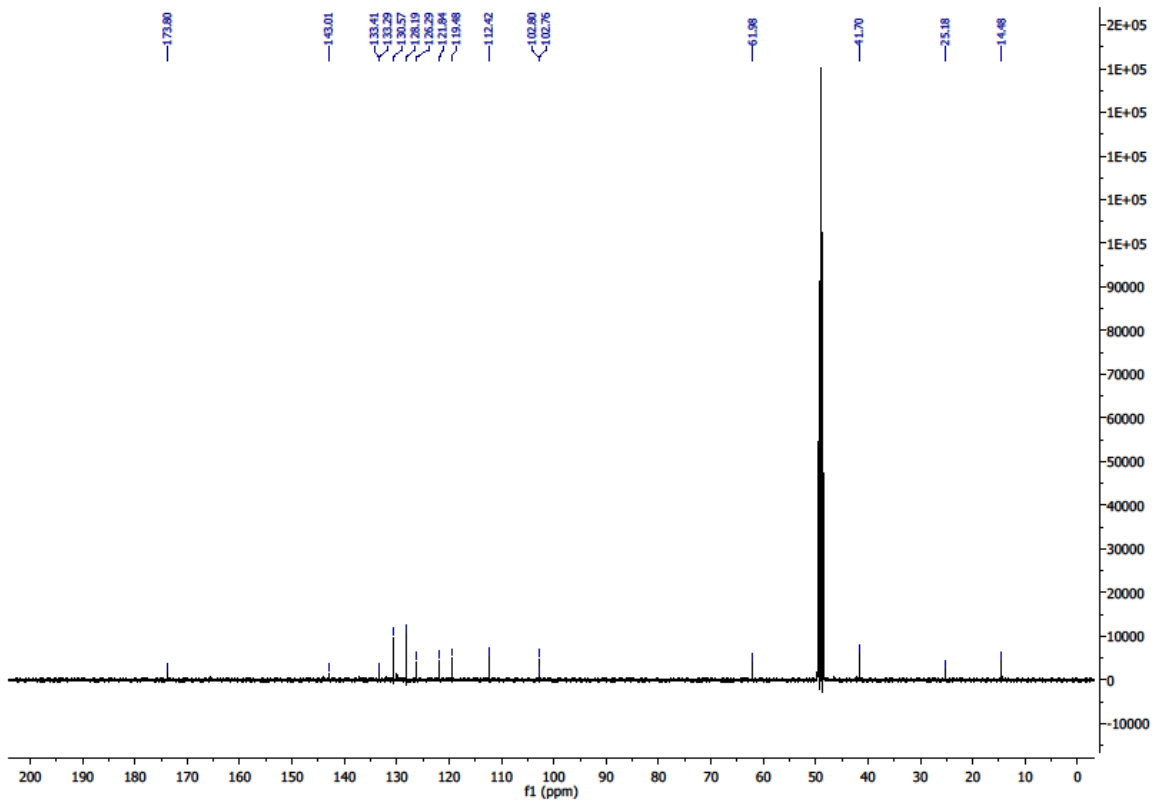


# Compound 70

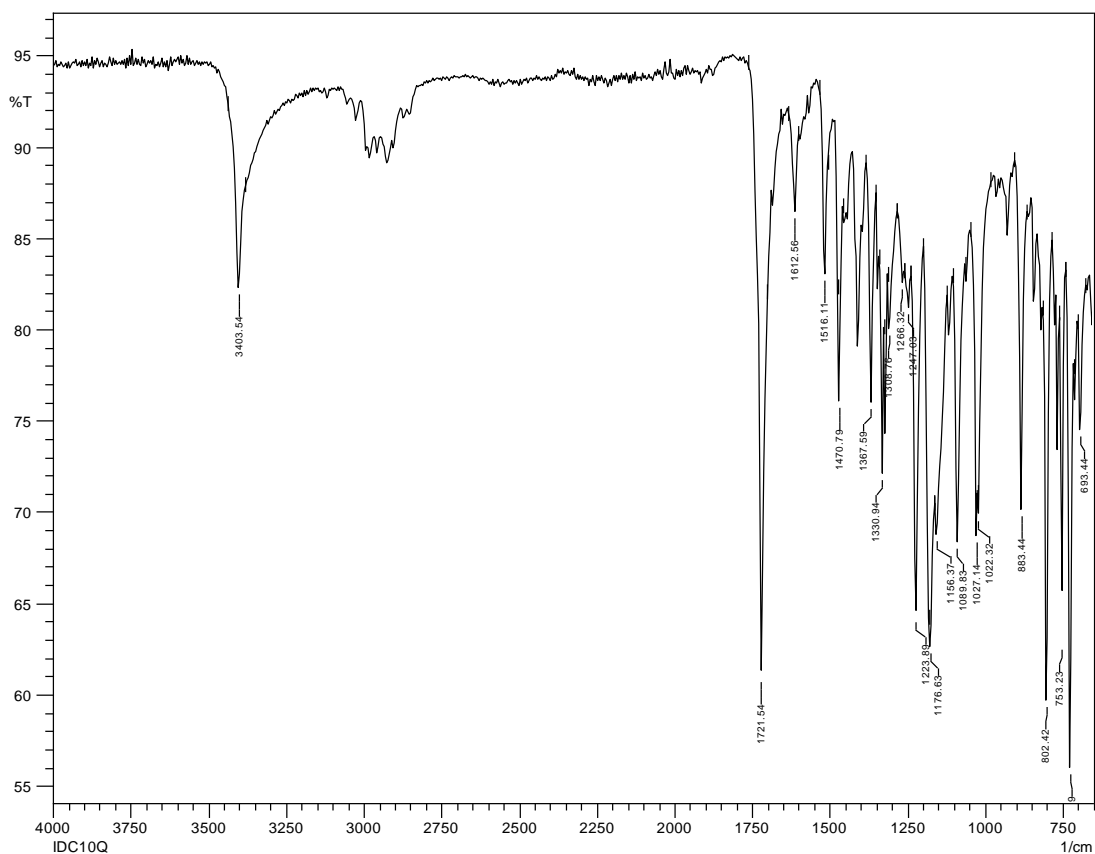
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 70



## IR of 70

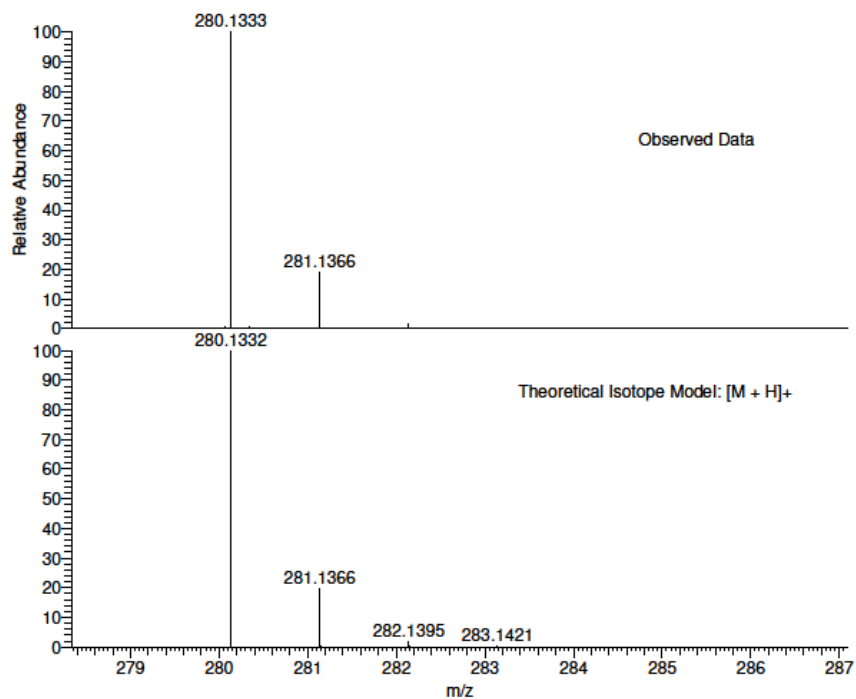


## HRMS of 70

IDC10qi MW=278?  
C<sub>18</sub>H<sub>17</sub>NO<sub>2</sub>  
(MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
22/08/2013 17:06:29

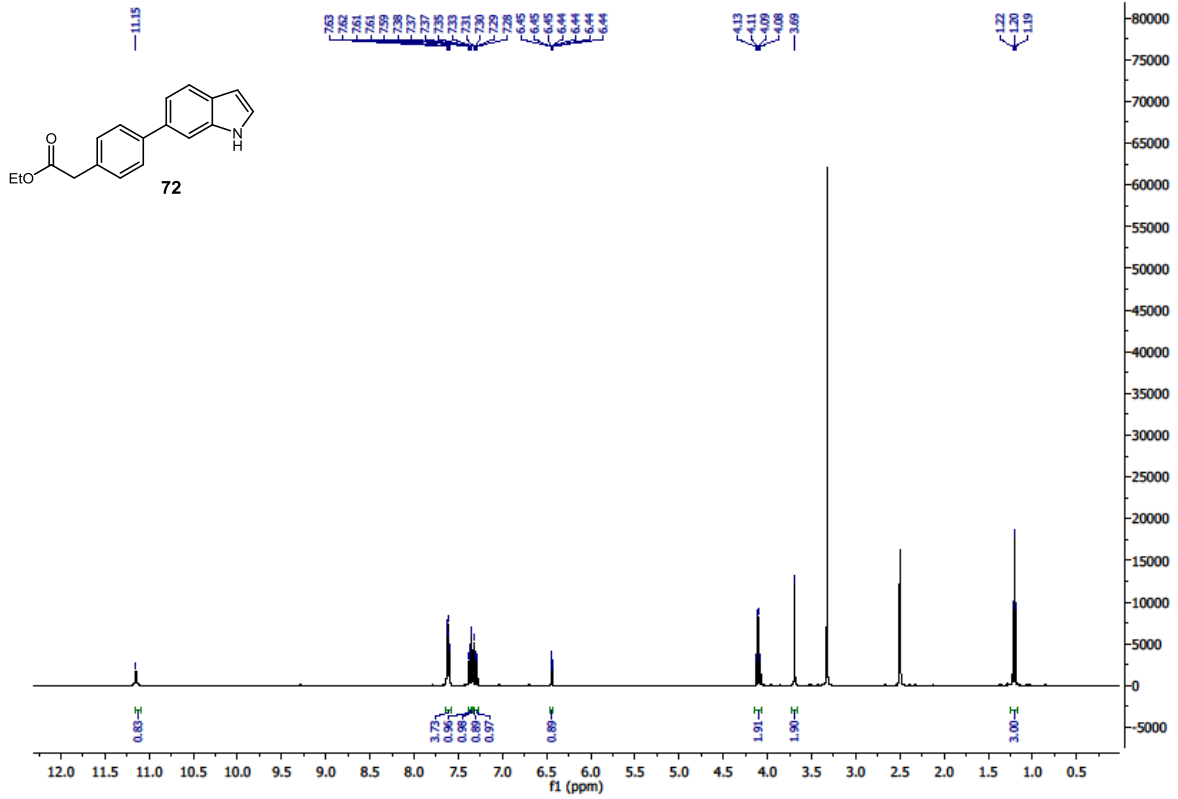


NL:  
4.80E7  
STRWAT112-OJ-HNESP#30-  
49 RT: 0.66-1.14 AV: 18 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

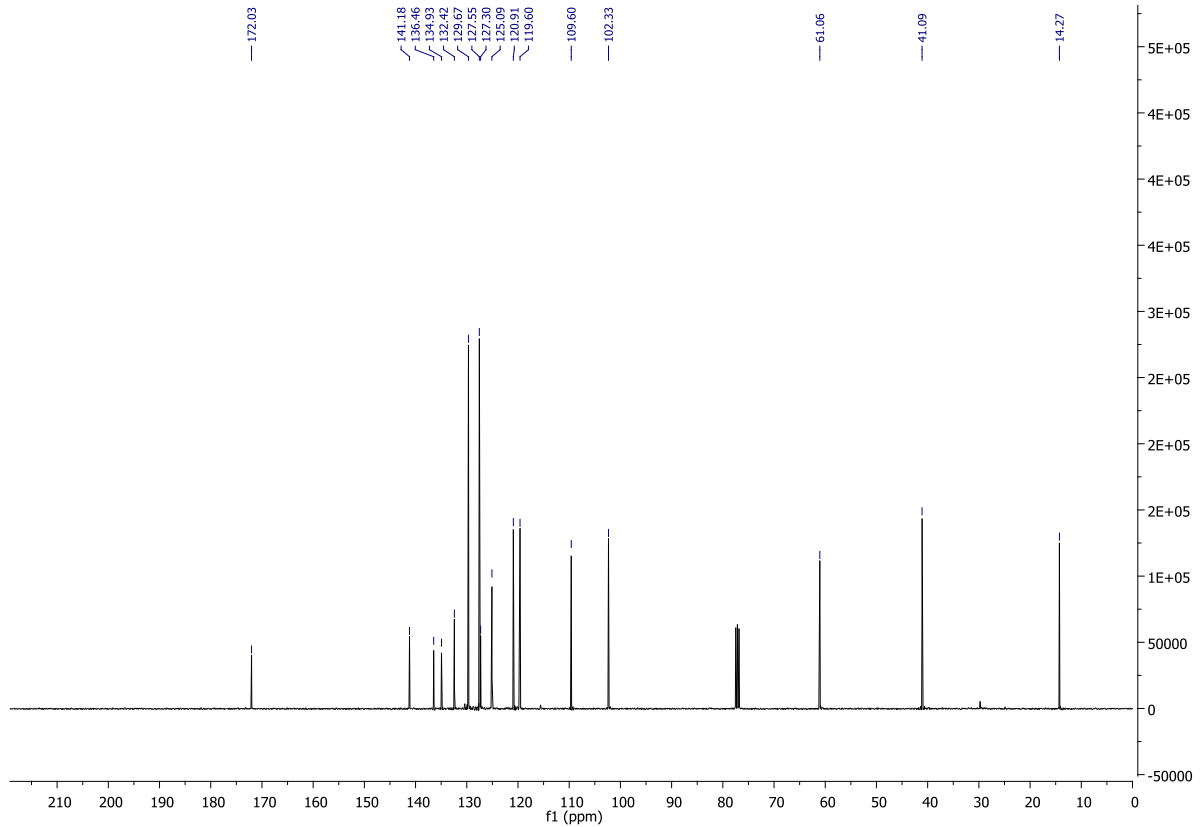
NL:  
1.91E4  
C<sub>18</sub>H<sub>17</sub>NO<sub>2</sub>H:  
C<sub>18</sub>H<sub>18</sub>N<sub>1</sub>O<sub>2</sub>  
p (gss, s/p:40) Chrg 1  
R: 100000 Res.Pwr. @FWHM

# Compound 72

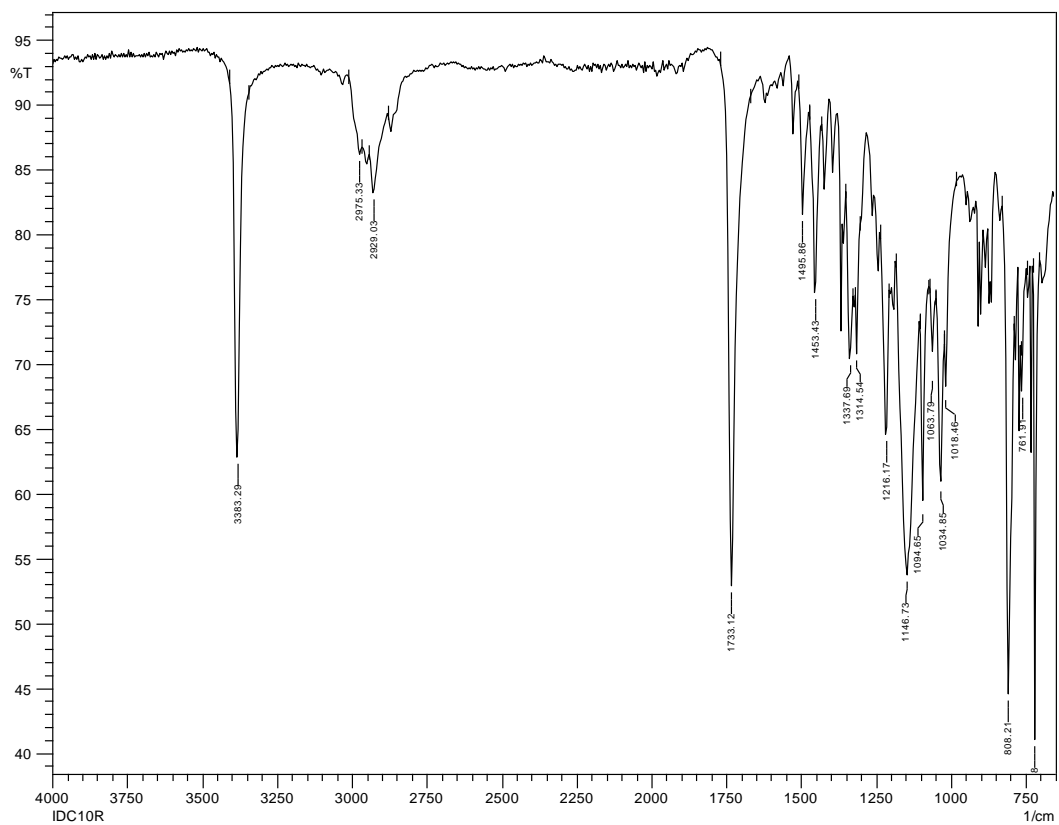
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 72



## IR of 72



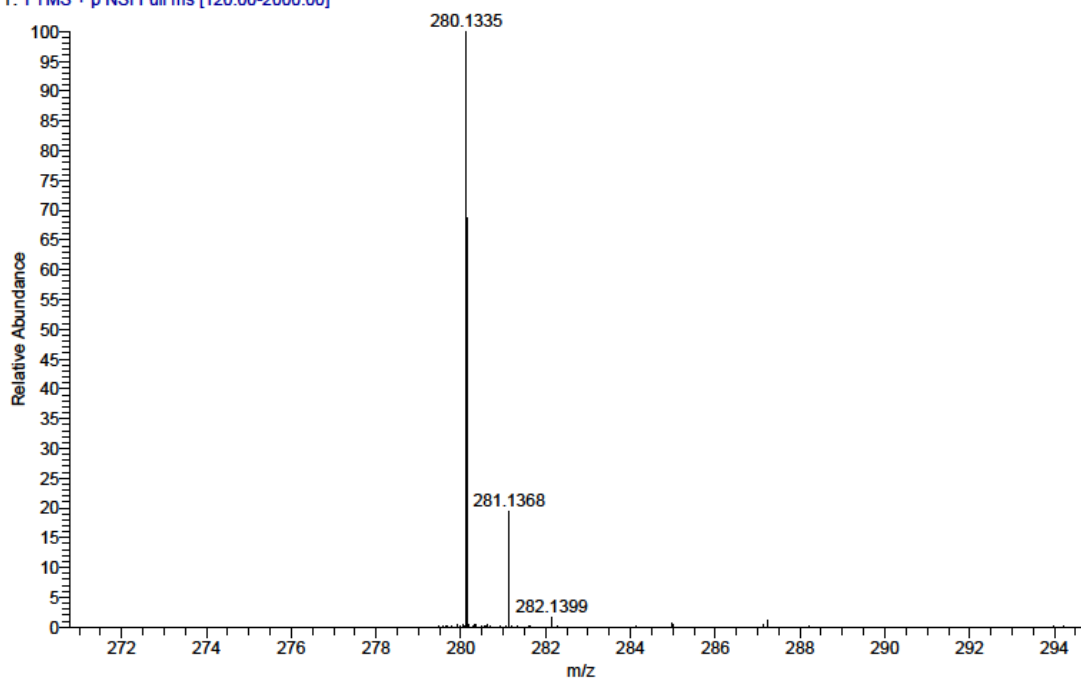
## HRMS of 72

IDC10r MW=279?  
C18H17NO2  
(MeOH)/MeOH + NH4OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

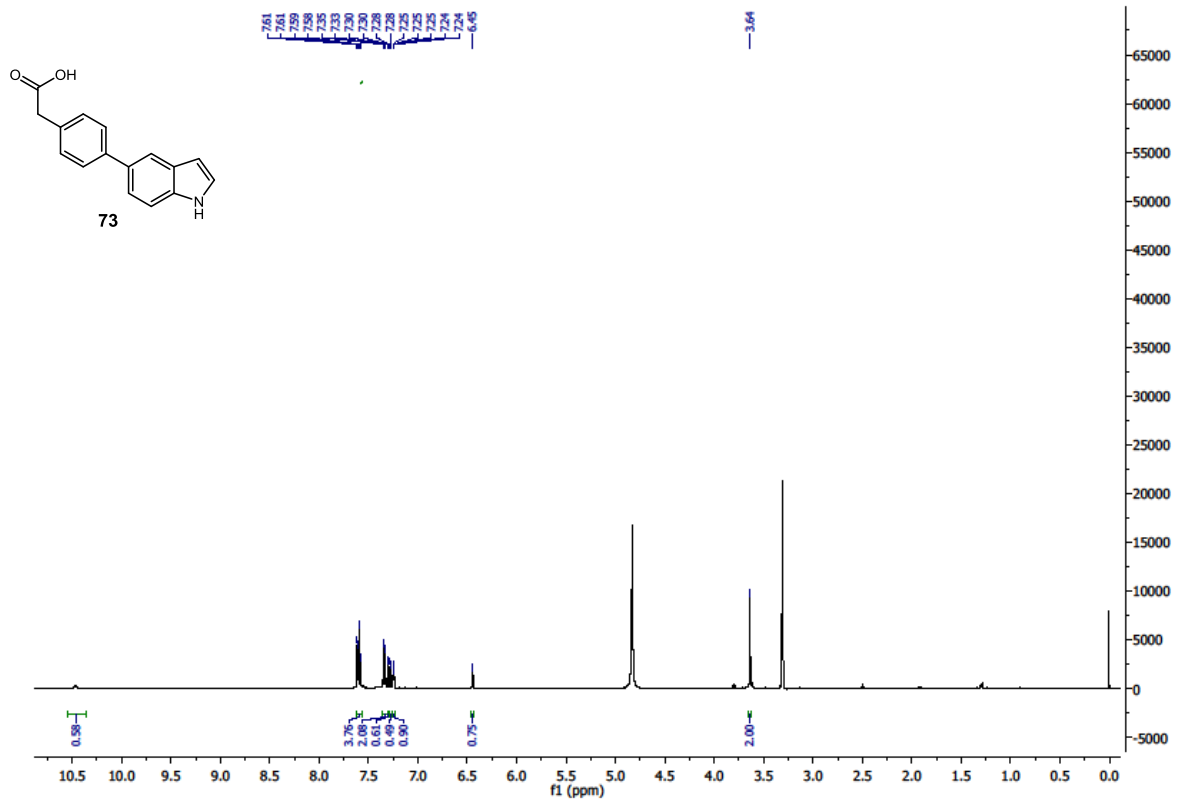
Diana Castagna  
11/10/2013 14:45:56

STRWAT122-OJ-HNESP #30-67 RT: 0.70-1.13 AV: 16 SM: 7G NL: 1.18E7  
T: FTMS + p NSI Full ms [120.00-2000.00]

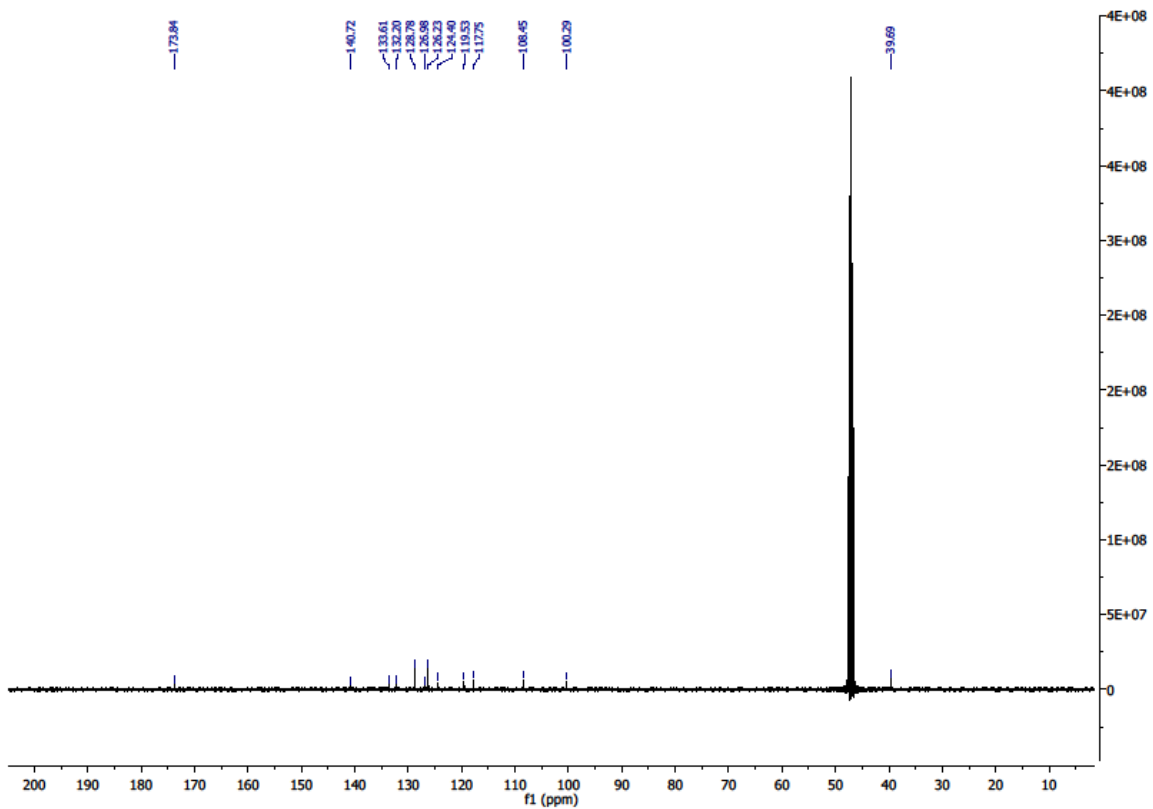


# Compound 73

## <sup>1</sup>H NMR

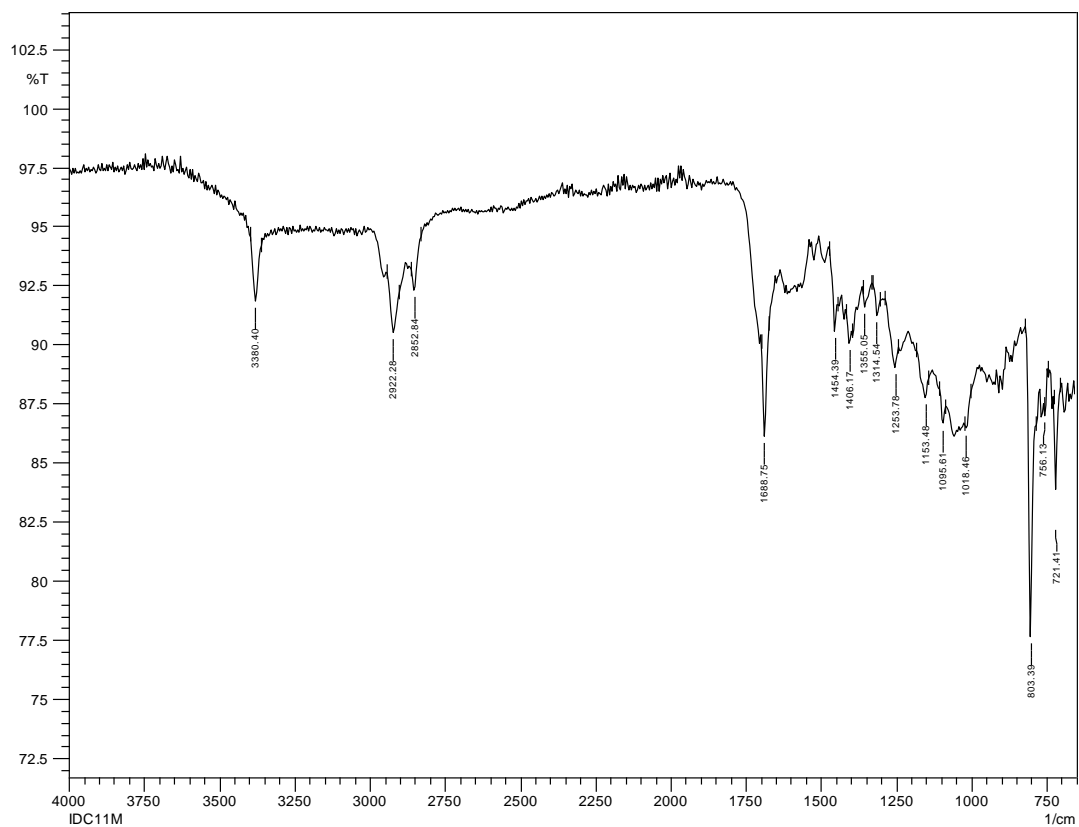


## <sup>13</sup>C NMR of 73





## IR of 73

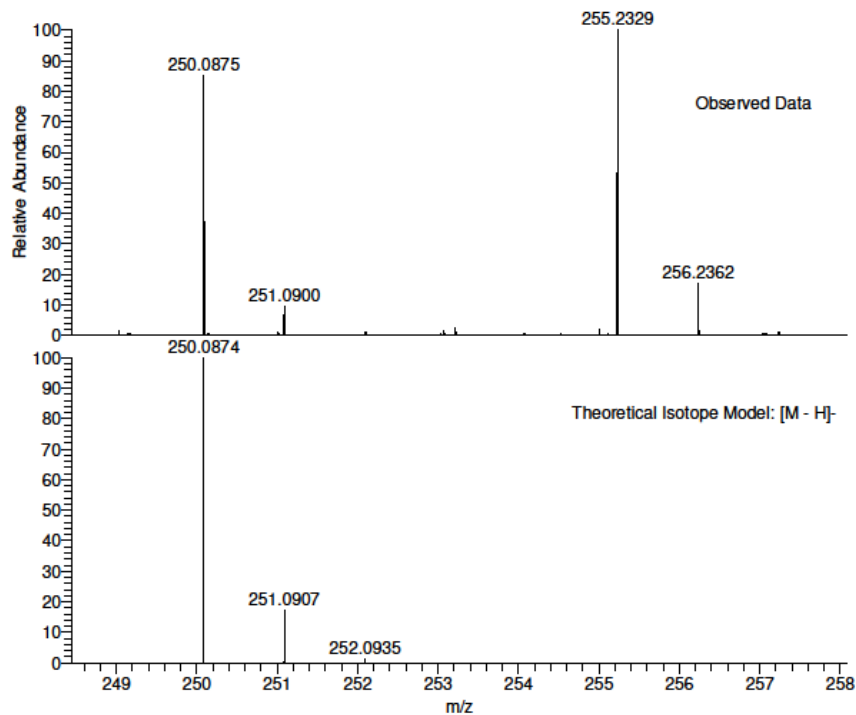


## HRMS of 73

IDC11M MW=251?  
(MeOH)/MeOH+DEA

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
09/10/2013 15:19:07

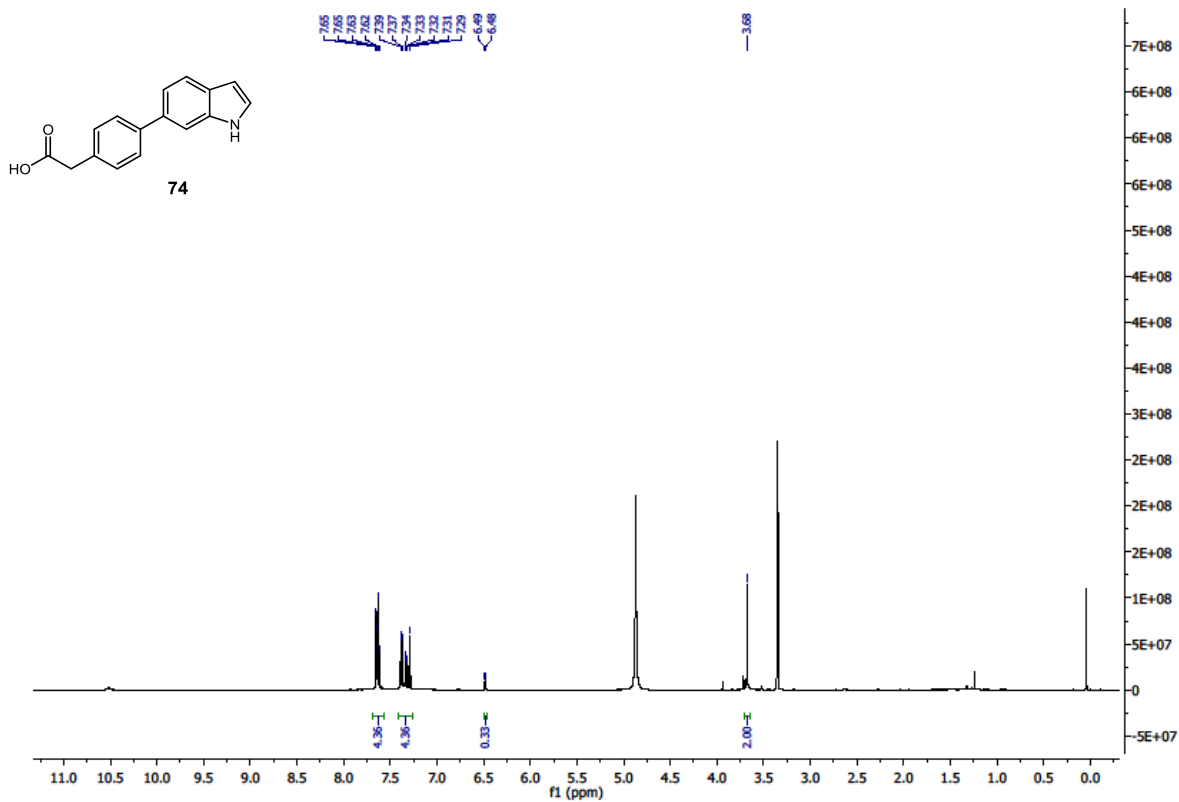


NL:  
2.47E6  
STRWAT121-OJ-HNESN-2#16-  
158 RT: 0.39-4.00 AV: 143 T:  
FTMS - p NSI Full ms  
[150.00-2000.00]

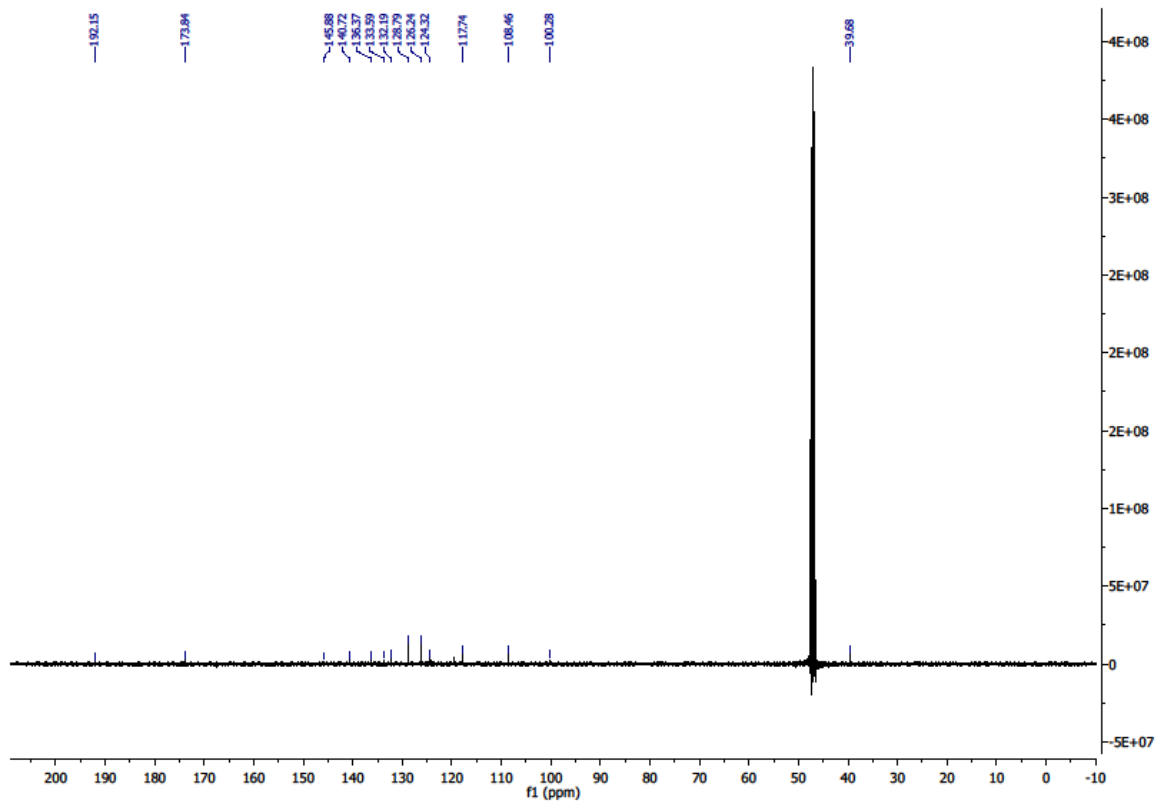
NL:  
1.96E4  
C<sub>16</sub>H<sub>12</sub>NO<sub>2</sub>  
C<sub>16</sub>H<sub>12</sub>N<sub>1</sub>O<sub>2</sub>  
p (gss, s /p:40) Chrg -1  
R: 100000 Res .Pwr . @FWHM

# Compound 74

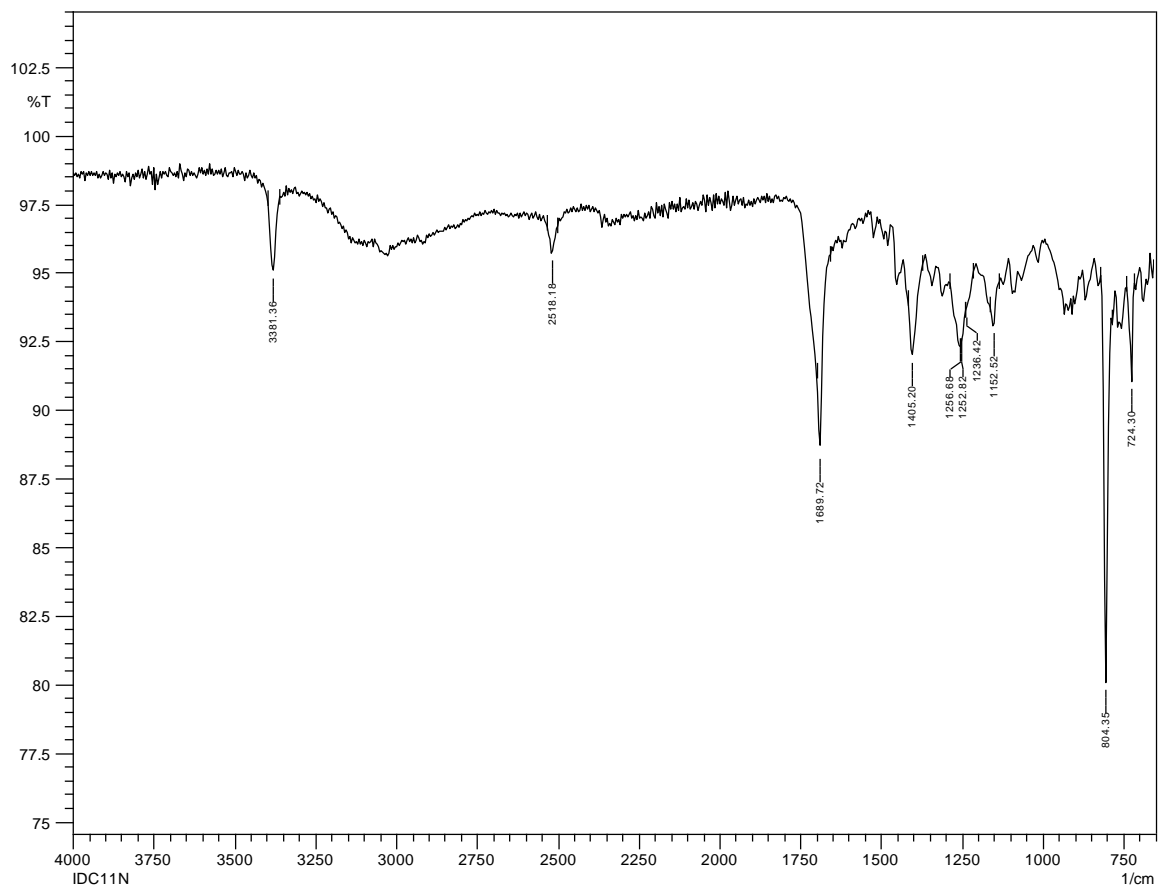
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 74



## IR of 74

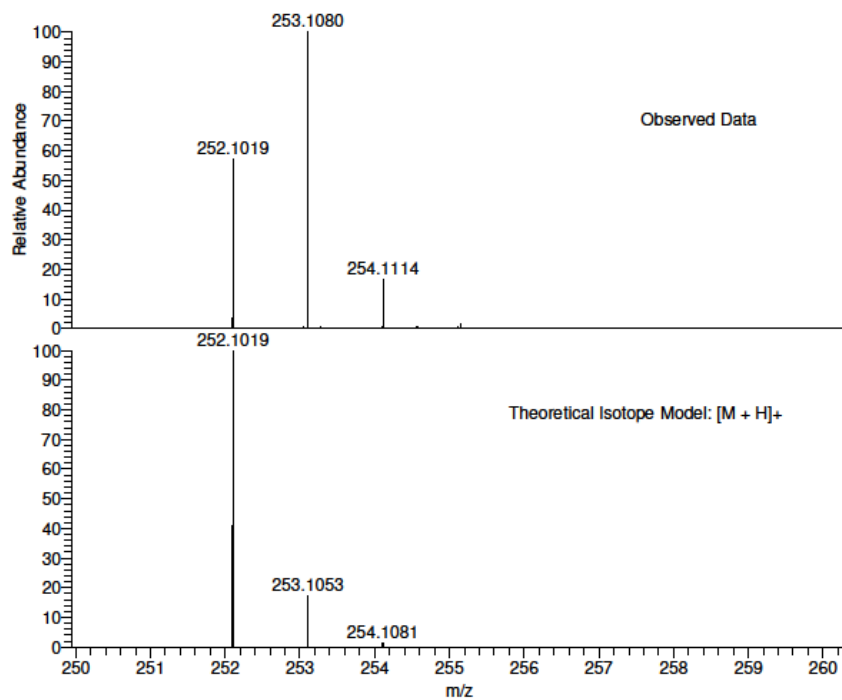


## HRMS of 74

IDC11N MW=251?  
C<sub>16</sub>H<sub>13</sub>NO<sub>2</sub>  
(MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
22/08/2013 17:01:06

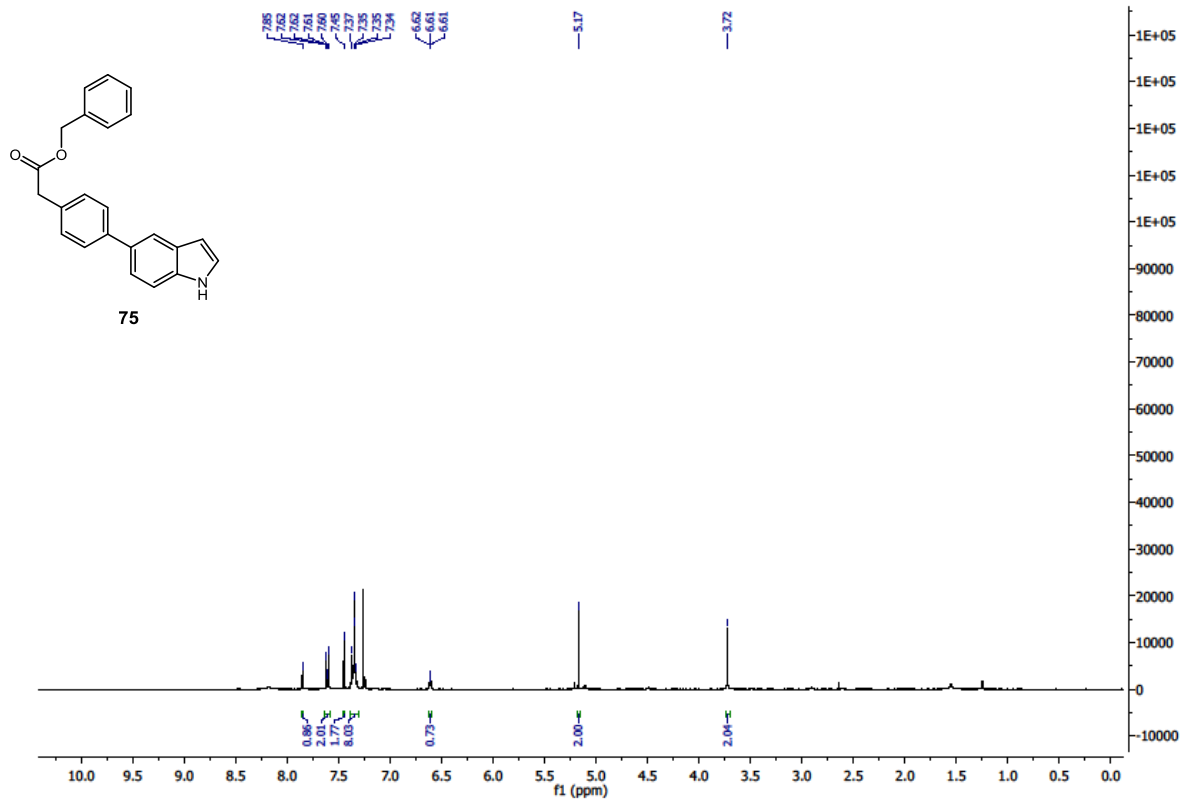


NL:  
4.48E6  
STRWAT110-OJ-HNESP#9-21  
RT: 0.16-0.50 AV: 13 T:  
FTMS + p NSI Full ms  
[120.00-2000.00]

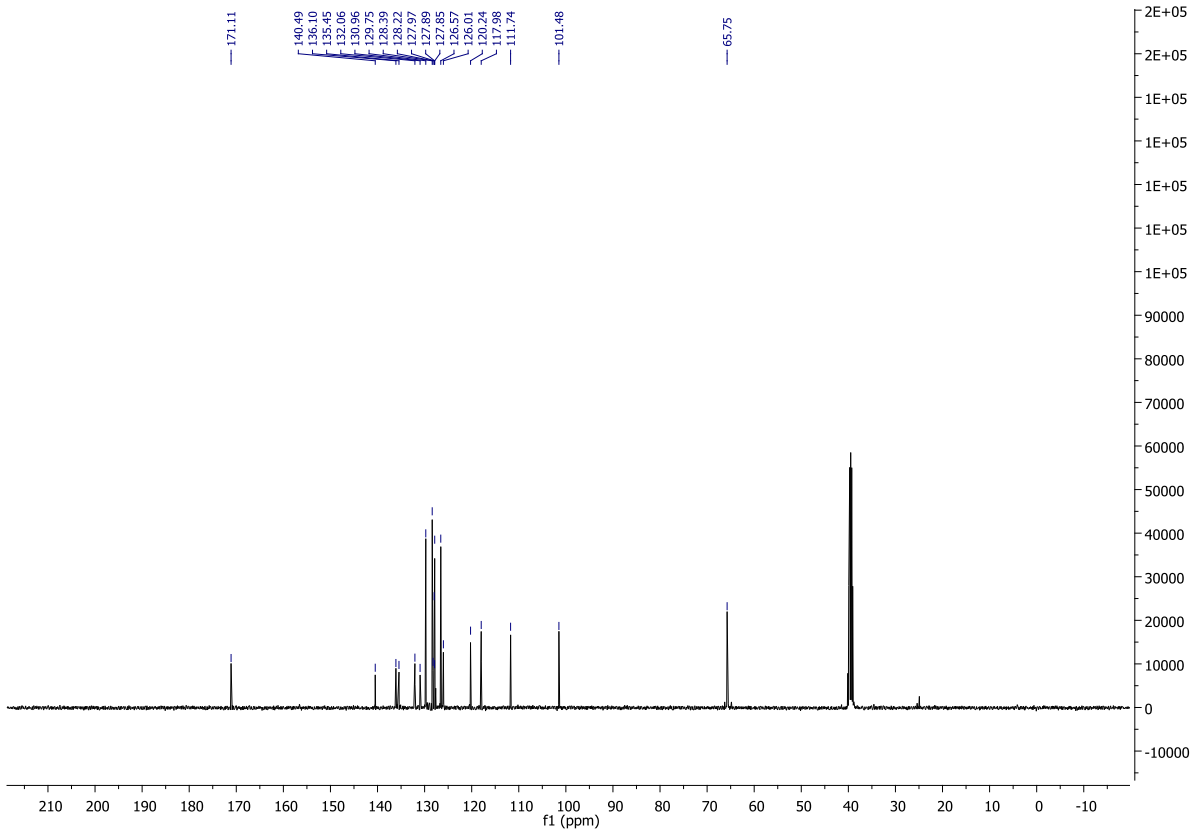
NL:  
1.96E4  
C<sub>16</sub>H<sub>13</sub>NO<sub>2</sub>H:  
C<sub>16</sub>H<sub>14</sub>N<sub>1</sub>O<sub>2</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 75

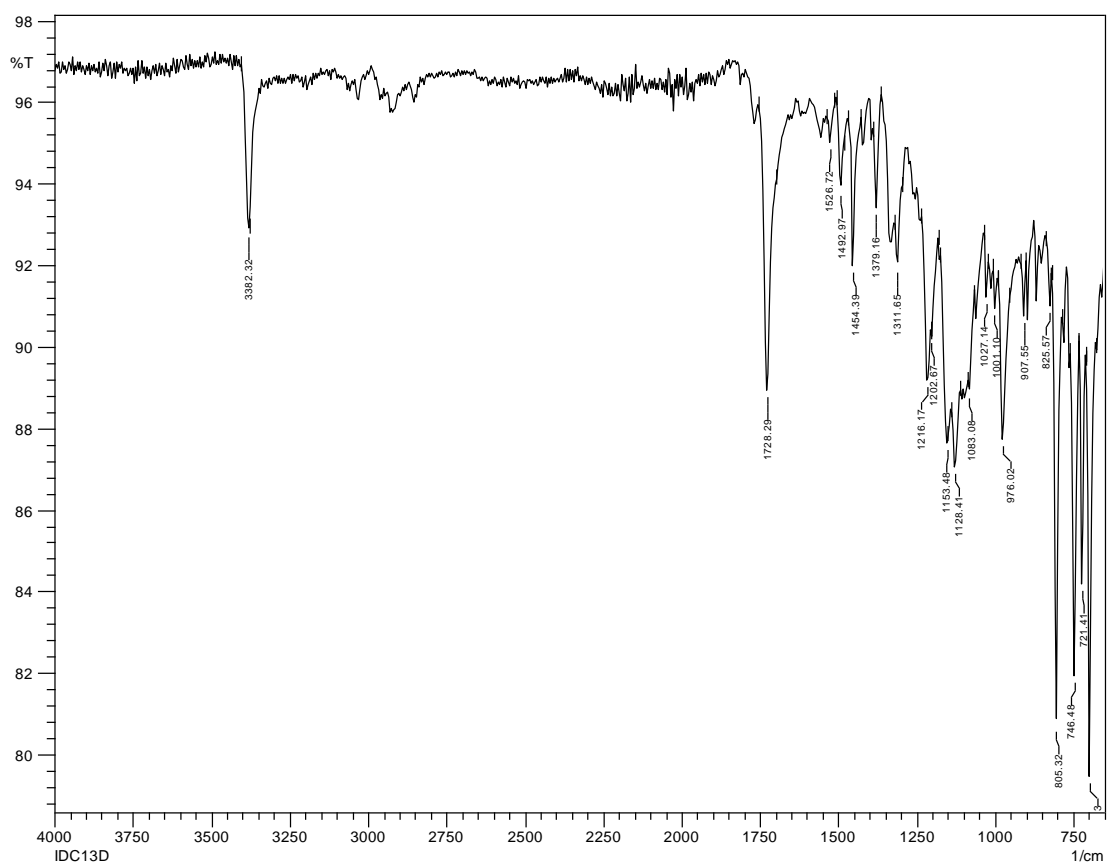
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 75



## IR of 75



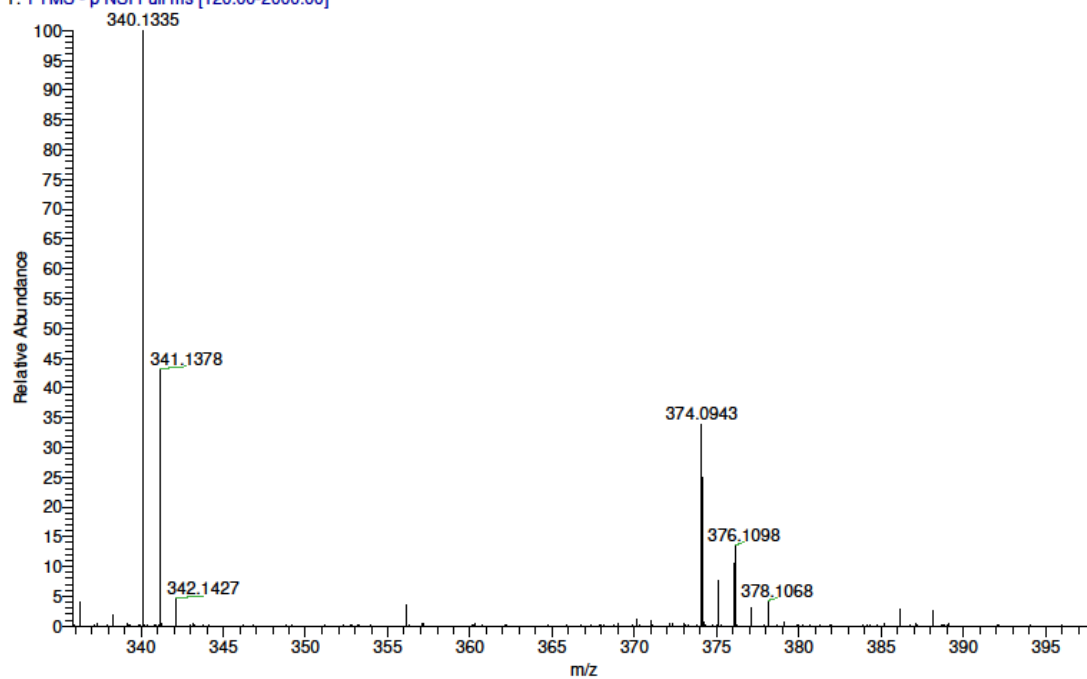
## HRMS of 75

IDC13D MW=385?  
C24H19N04  
(DCM)/MeOH + DEA

EPSRC National Facility Swansea  
LTQ Orbitrap XL

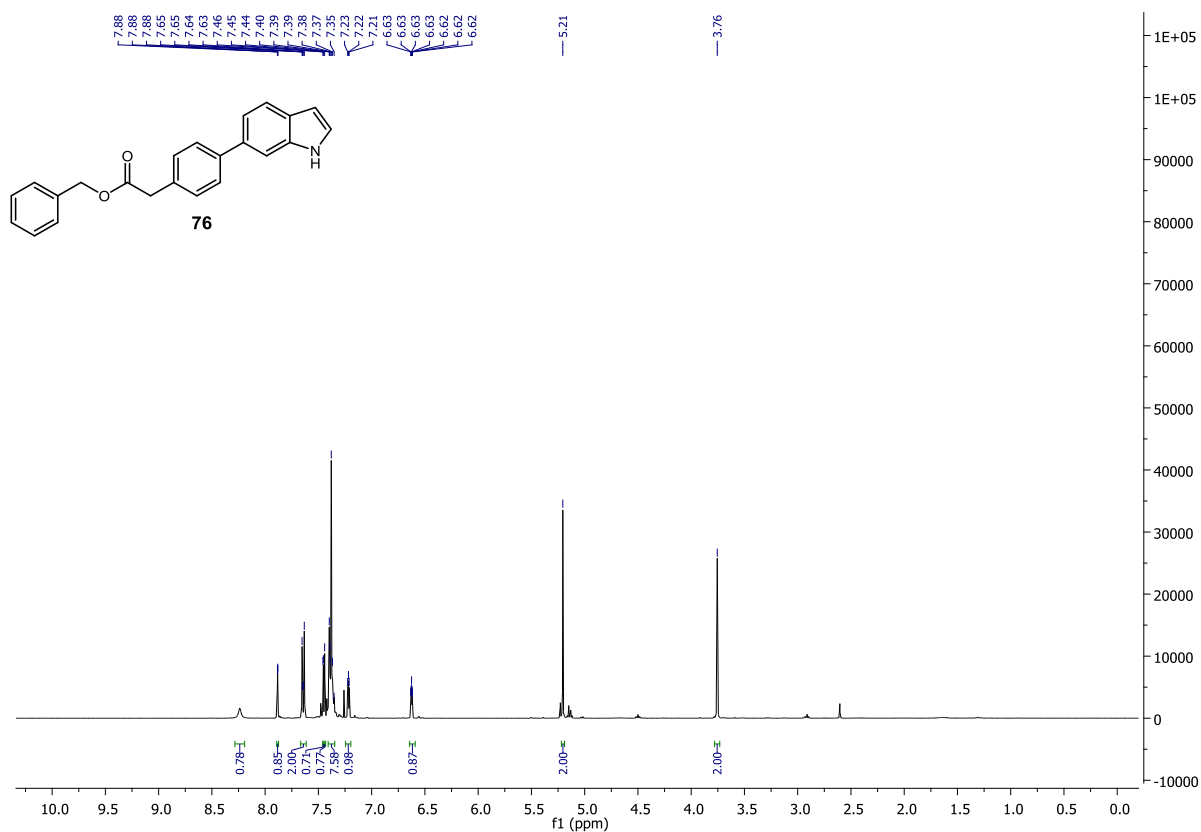
Diana Castagna  
16/11/2013 12:23:37

STRWAT145-OC-HNESN #2-5 RT: 0.27-0.54 AV: 4 NL: 1.27E6  
T: FTMS - p NSI Full ms [120.00-2000.00]

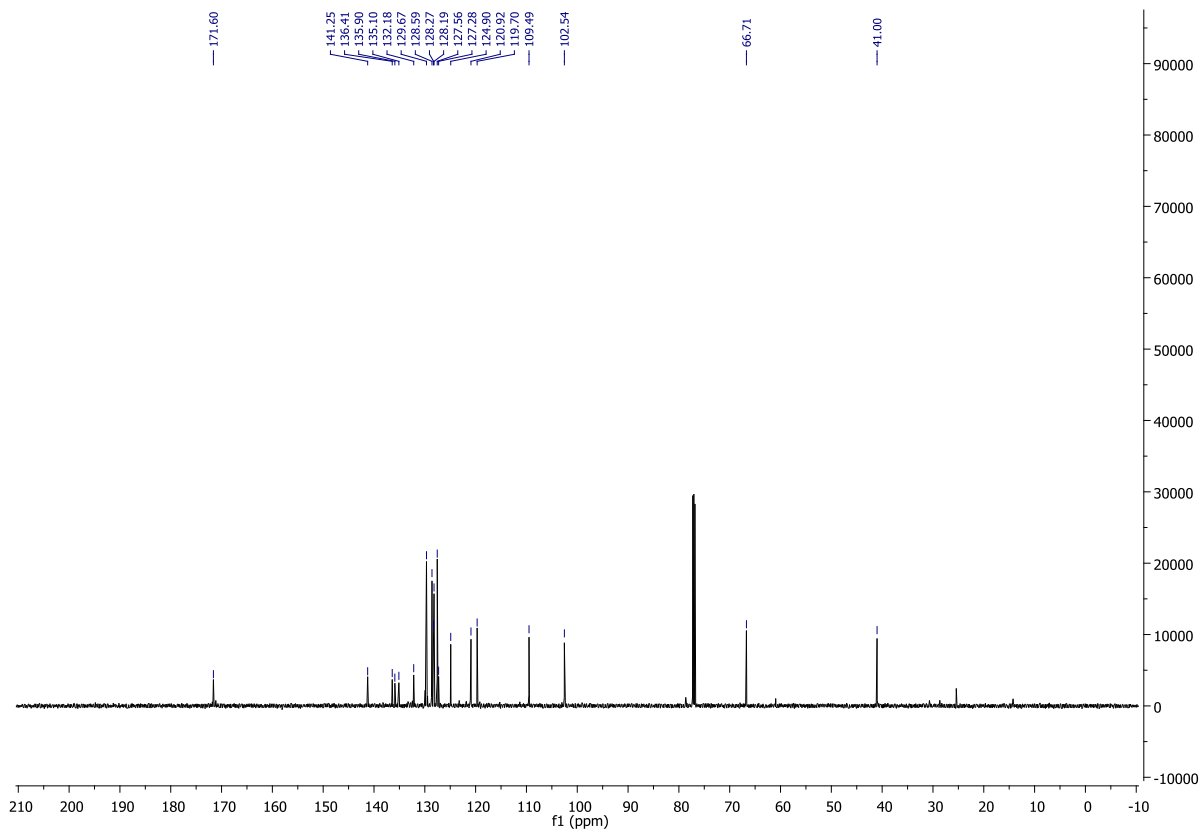


# Compound 76

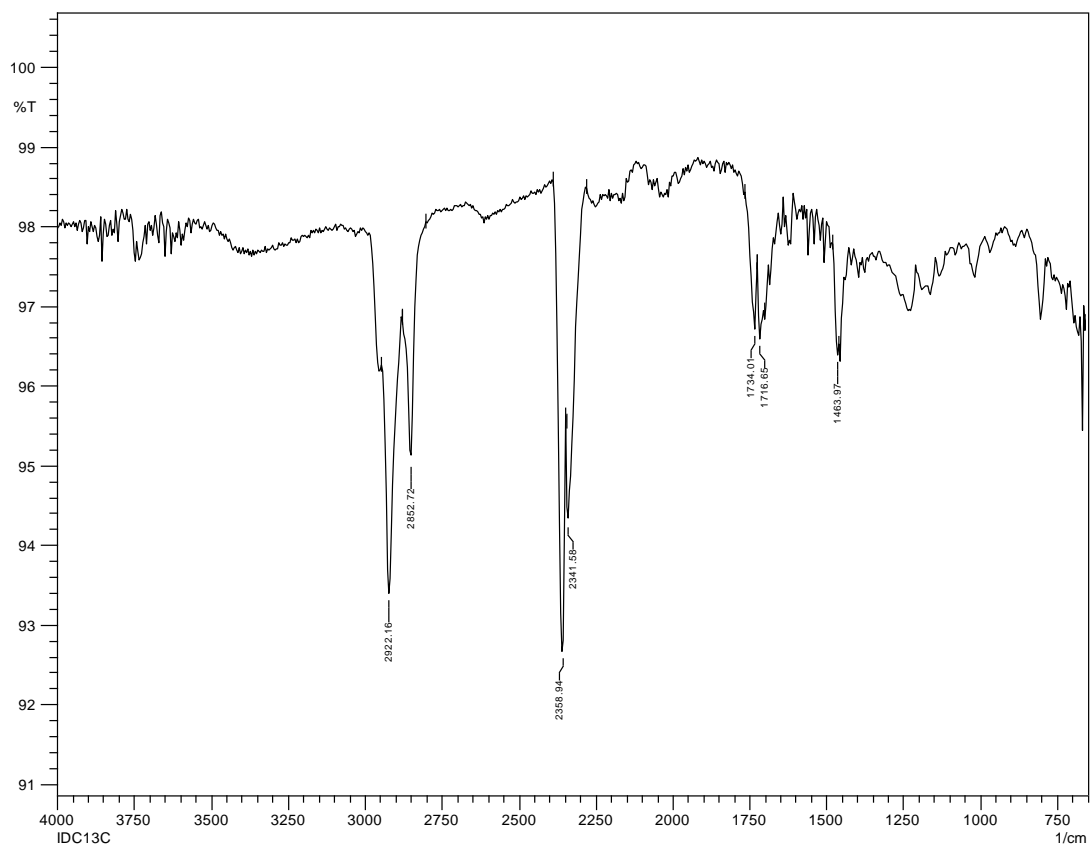
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 76



## IR of 76



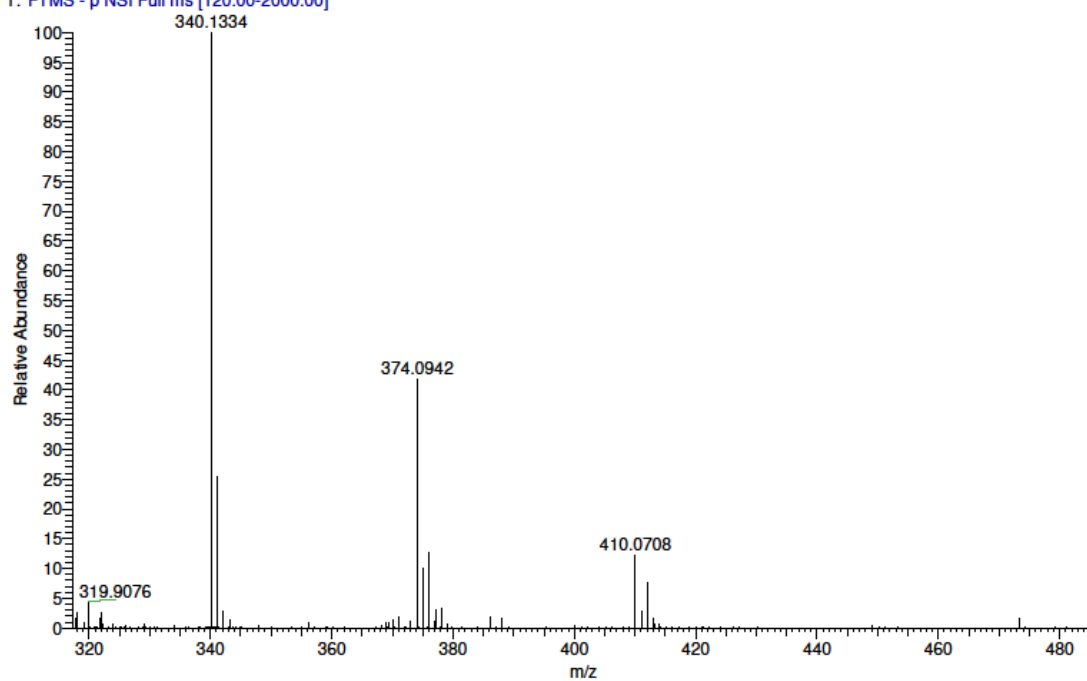
## HRMS of 76

IDC13C MW=385?  
C24H19N04  
(DCM)/MeOH + DEA

EPSRC National Facility Swansea  
LTQ Orbitrap XL

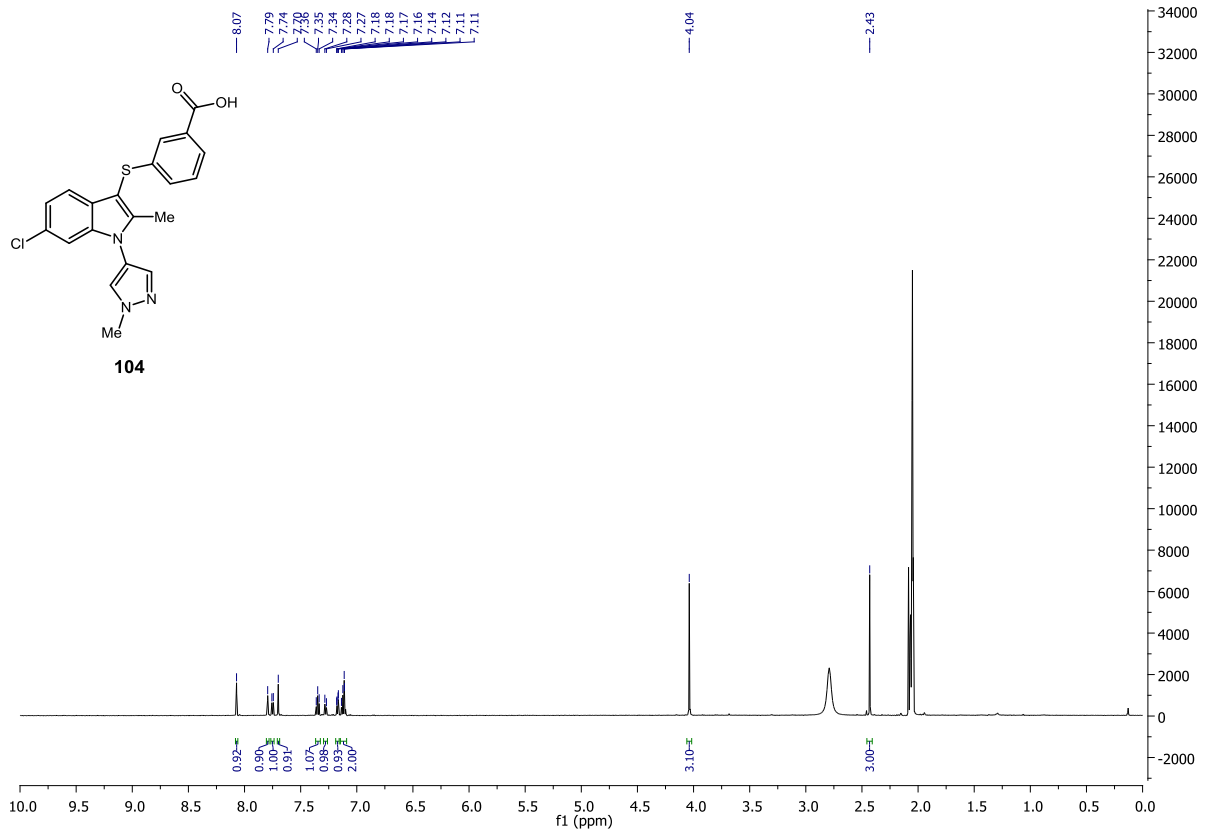
Diana Castagna  
16/11/2013 12:26:45

STRWAT146-OC-HNESN #2-5 RT: 0.27-0.53 AV: 4 NL: 4.00E6  
T: FTMS - p NSI Full ms [120.00-2000.00]

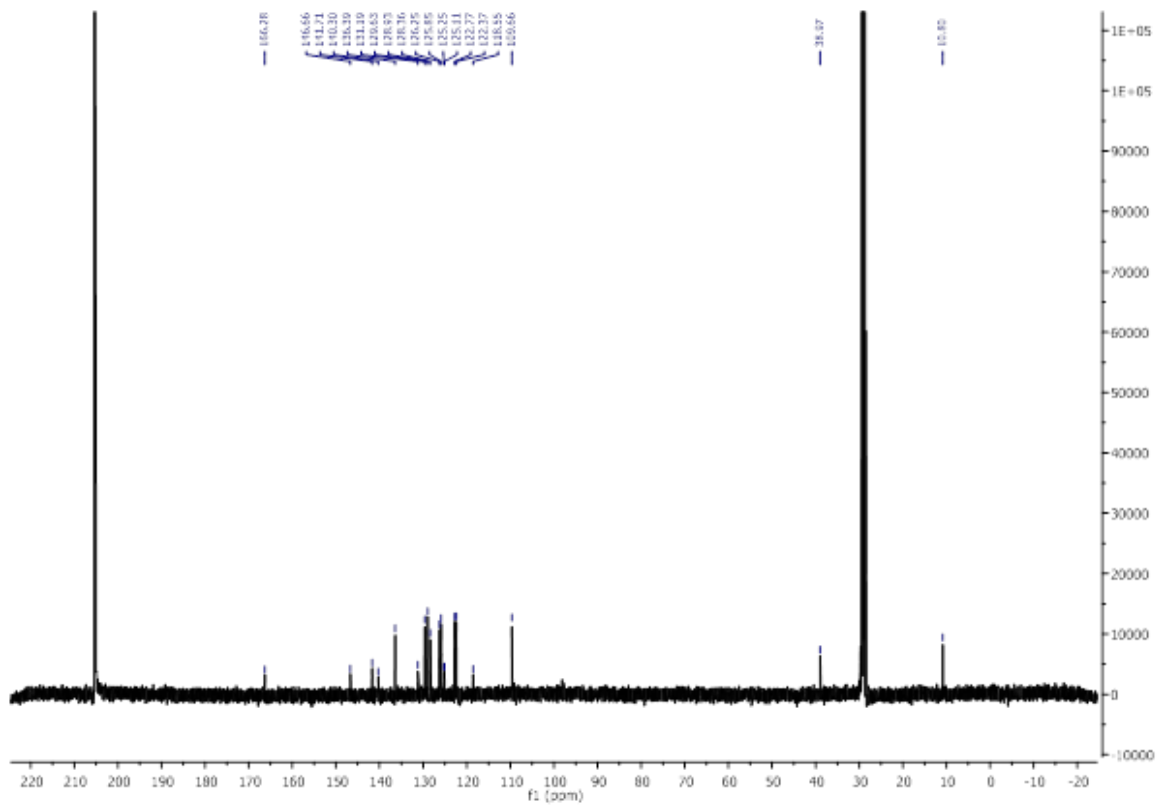


# Compound 104

## <sup>1</sup>H NMR

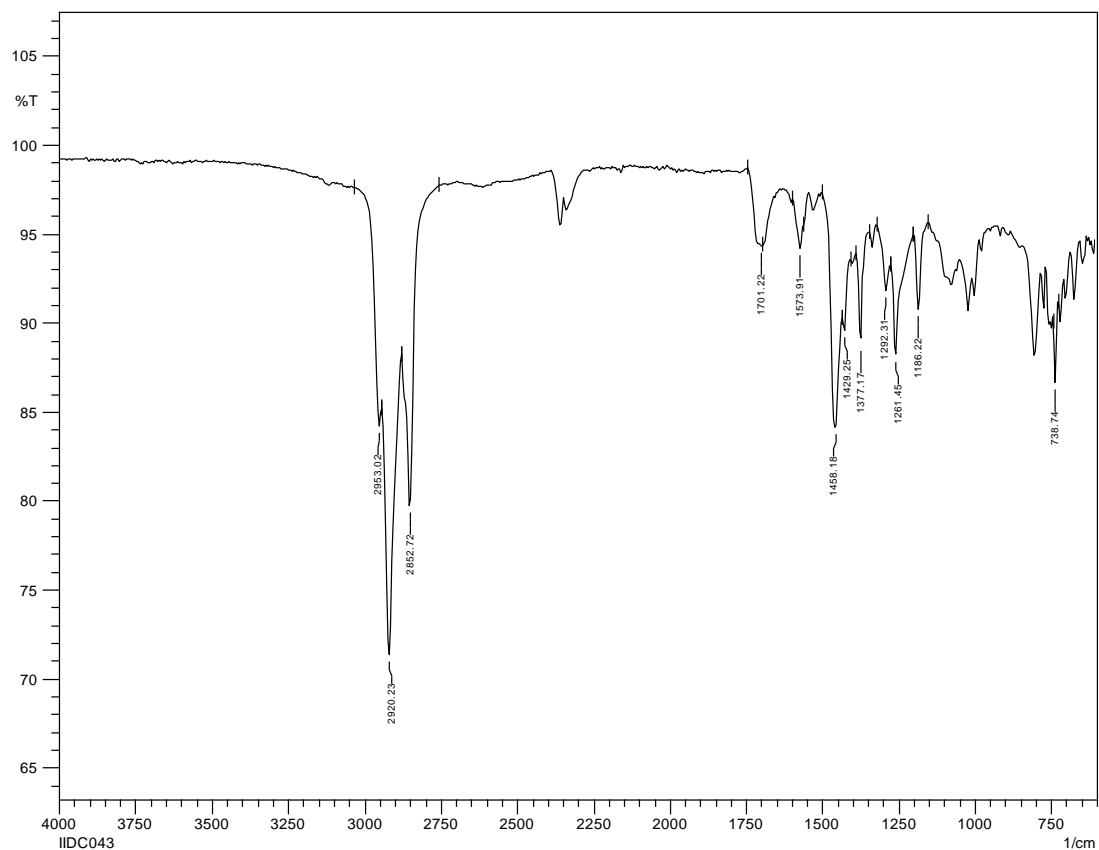


## <sup>13</sup>C NMR of 104





## IR of 104

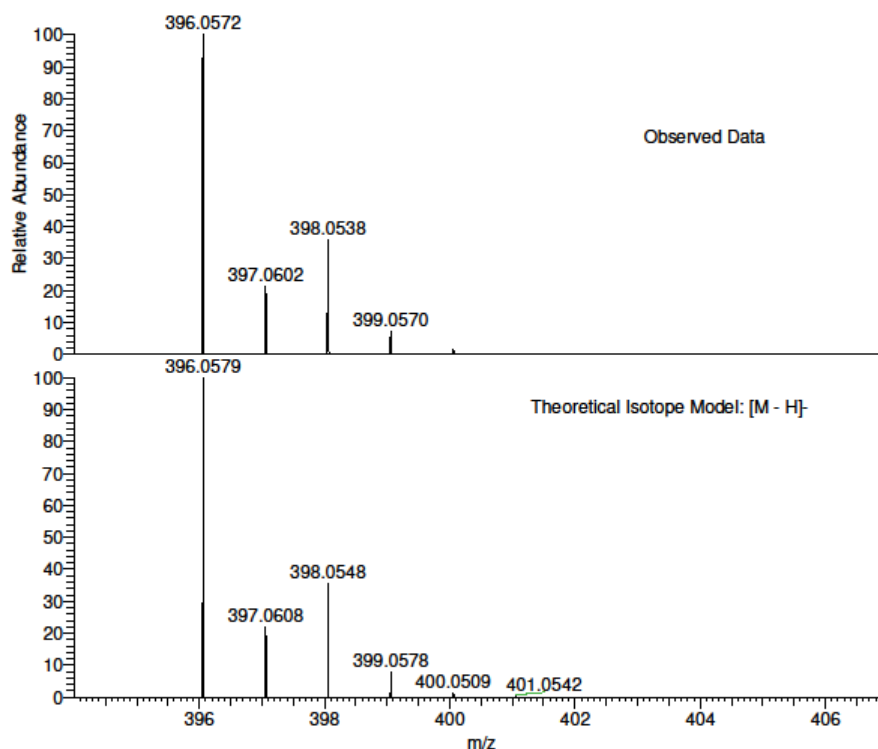


## HRMS of 104

IIDC043 MW=397?  
(MeOH)/MeOH + DEA

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
09/10/2013 12:54:09

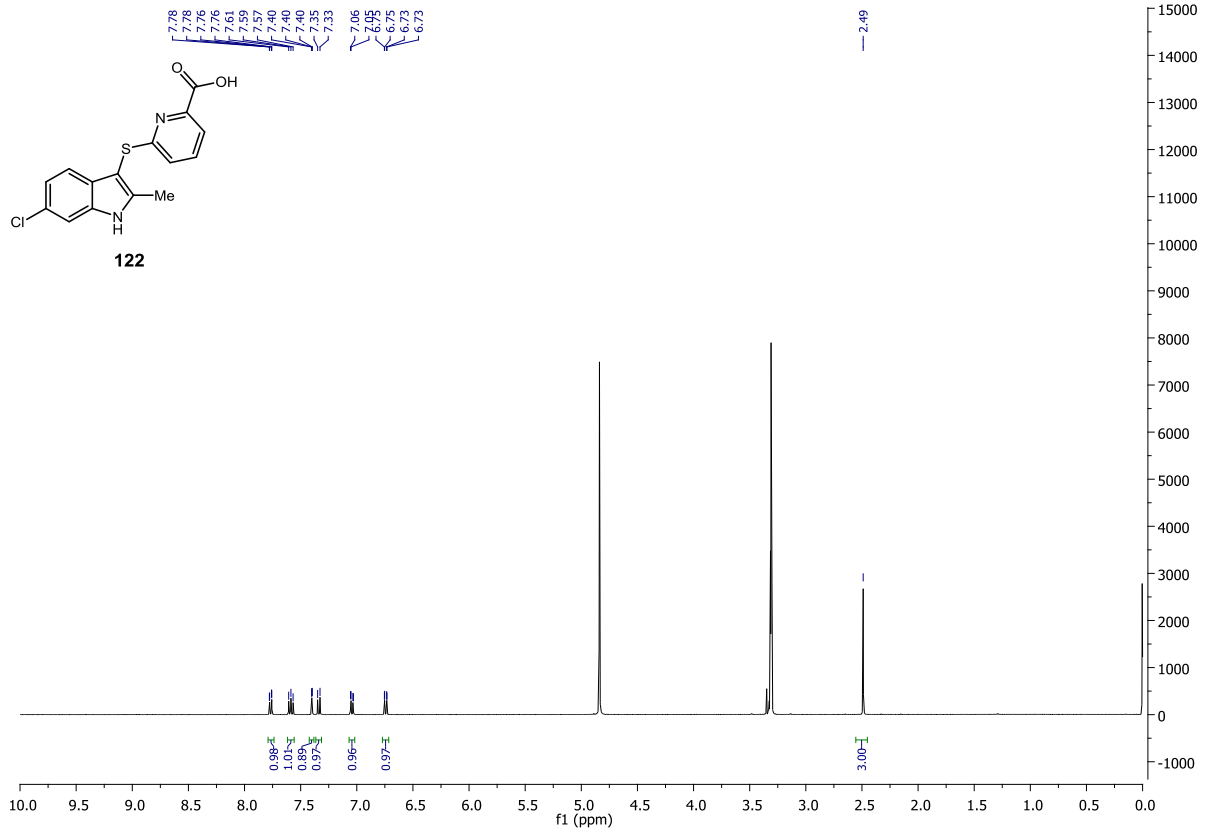


NL:  
5.90E7  
STRWAT114-OJ-HNESN-3#1-  
25 RT: 0.01-0.59 AV: 25 T:  
FTMS - p NSI Full ms  
[150.00-2000.00]

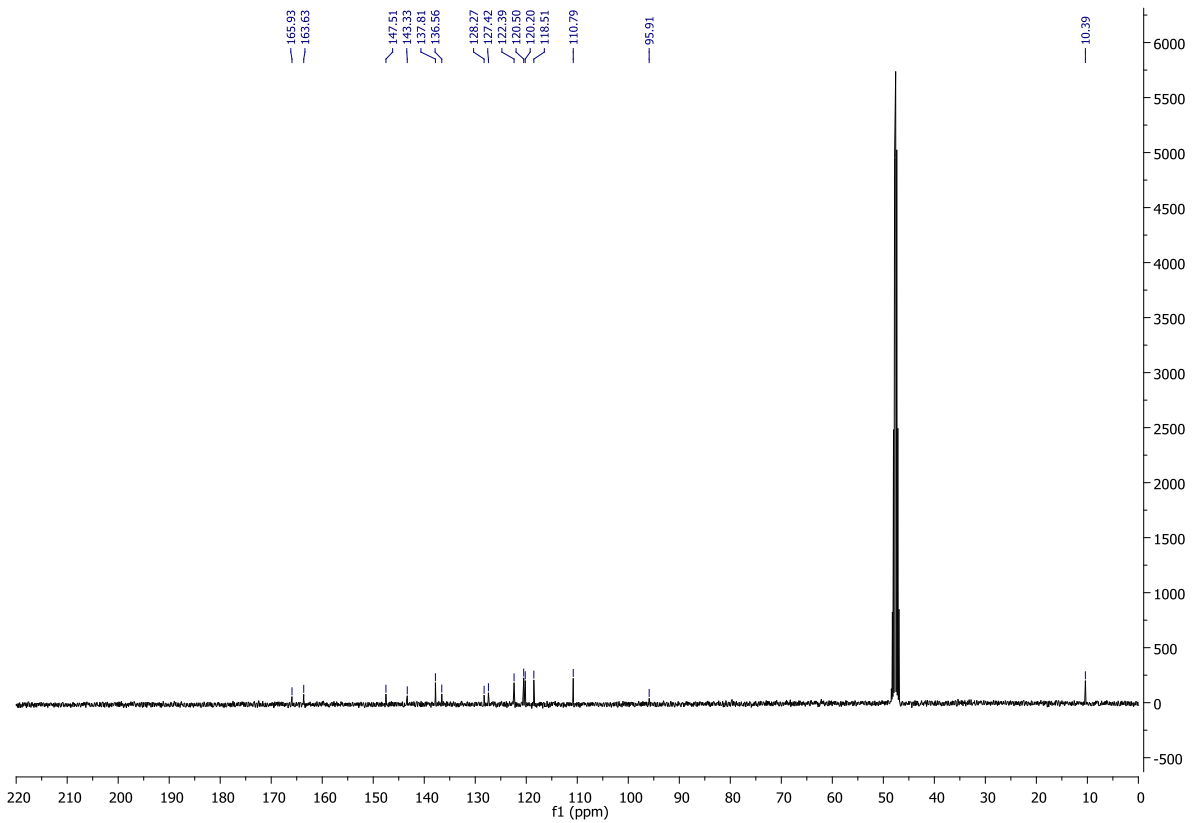
NL:  
1.34E4  
C<sub>20</sub>H<sub>15</sub>ClN<sub>3</sub>O<sub>2</sub>S:  
C<sub>20</sub>H<sub>15</sub>Cl<sub>1</sub>N<sub>3</sub>O<sub>2</sub>S<sub>1</sub>  
p (gss, s /p:40) Chrg -1  
R: 100000 Res .Pwr . @FWHM

# Compound 122

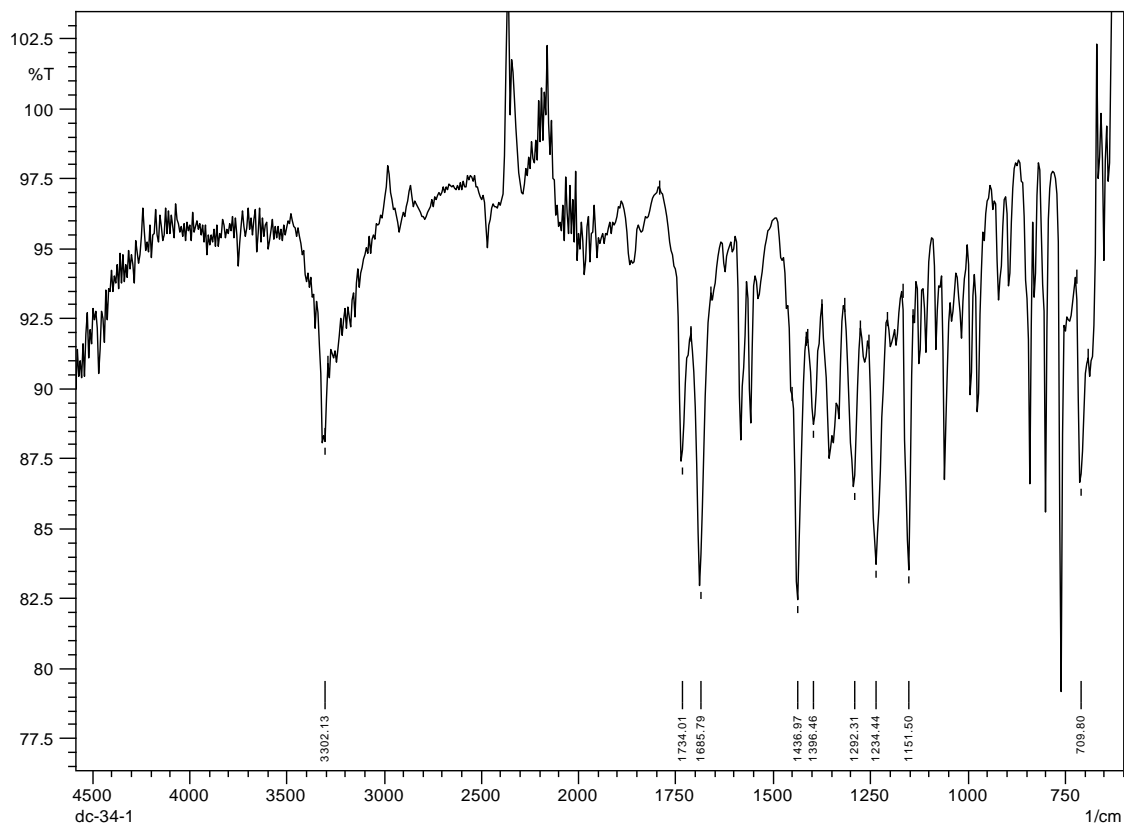
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 122



## IR of 122

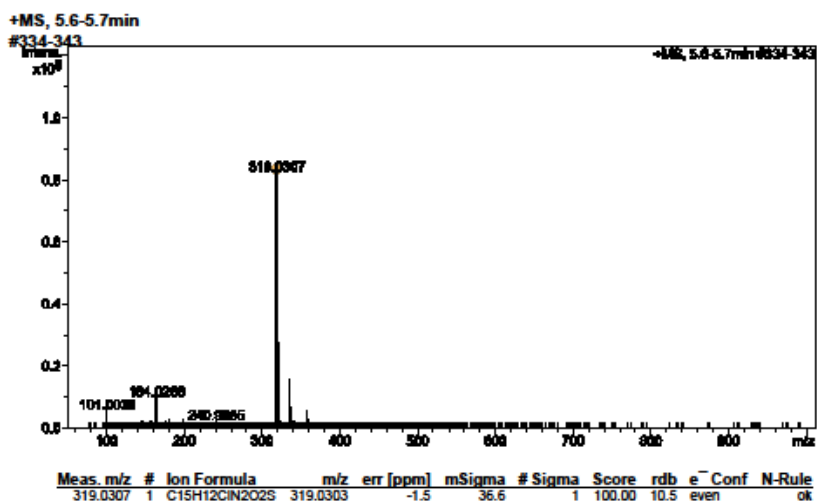


## HRMS of 122

### Bruker maXis Impact: LC-MS SmartFormula Report

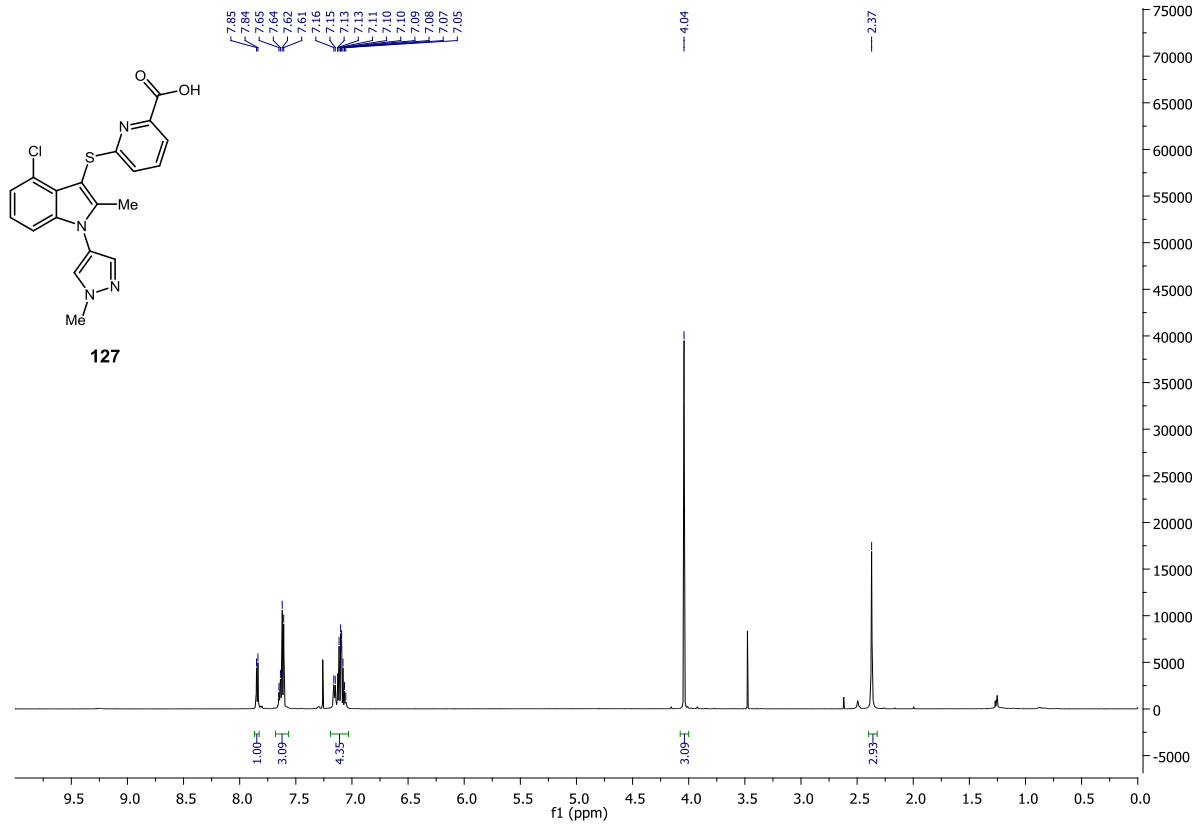
<b>Analysis Info</b>		Acquisition Date	07/10/2014 06:24:35
Analysis Name	C:\Data\Data\N34272-34-1_1-A,3_01_961.d	Operator	Spectroscopy
Method	lcms pos 50-1000.m	Instrument / Ser	maXis impact 282001.0
Sample Name	N34272-34-1	Comment	0101

<b>Acquisition Parameter</b>			
Source Type	ESI	Scan Begin	50 m/z
Ion Polarity	Positive	Scan End	1000 m/z

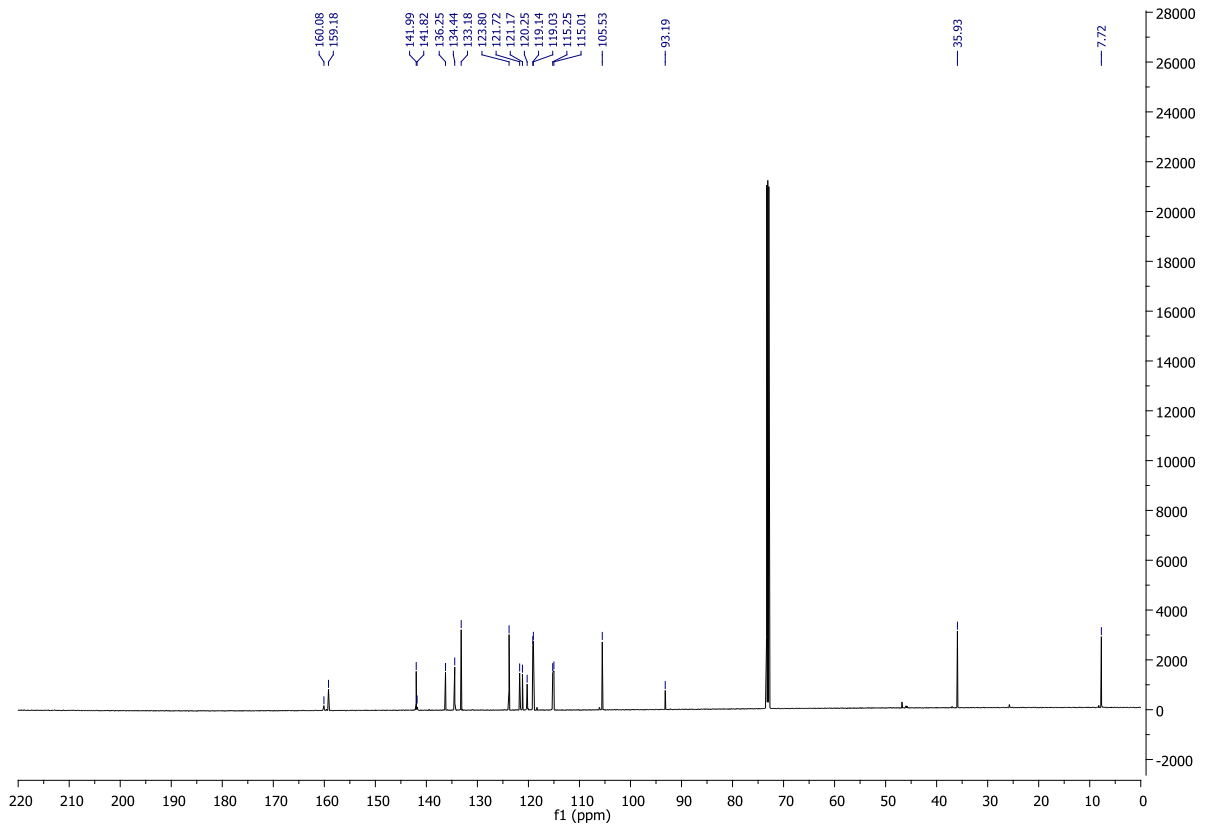


# Compound 127

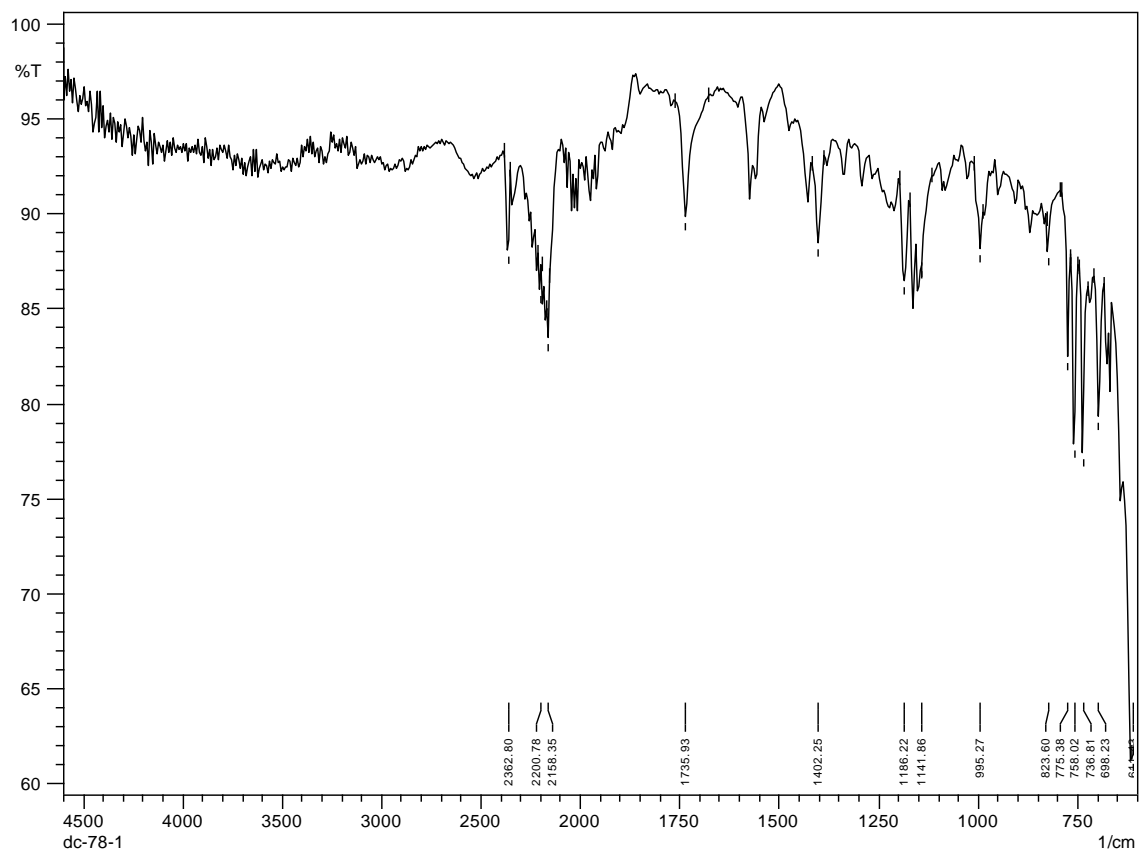
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 127

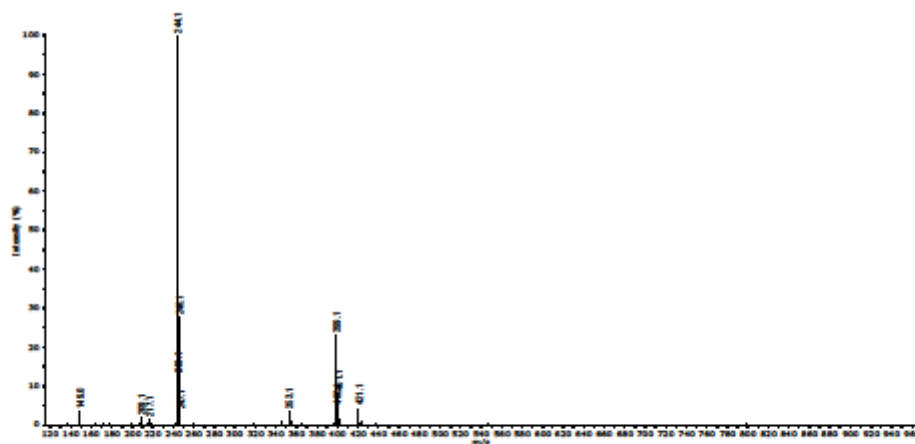


# IR of 127

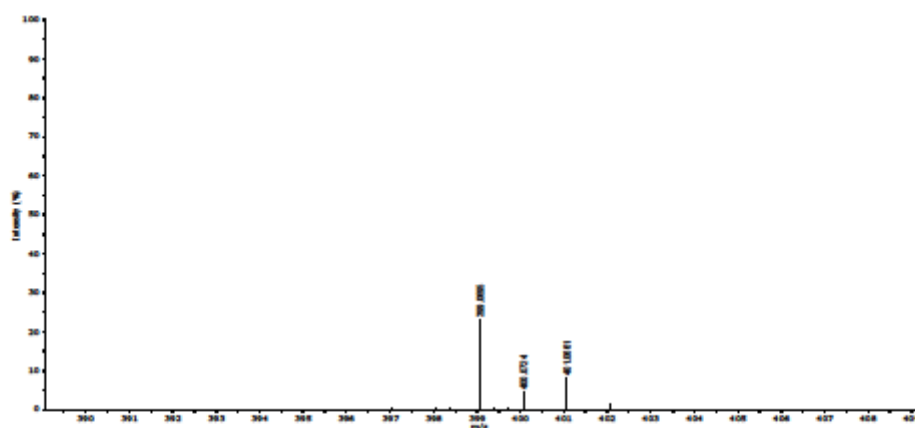


# HRMS of 127

Spectrum RT 4.84, Peak [1], Target Mass 399.0677



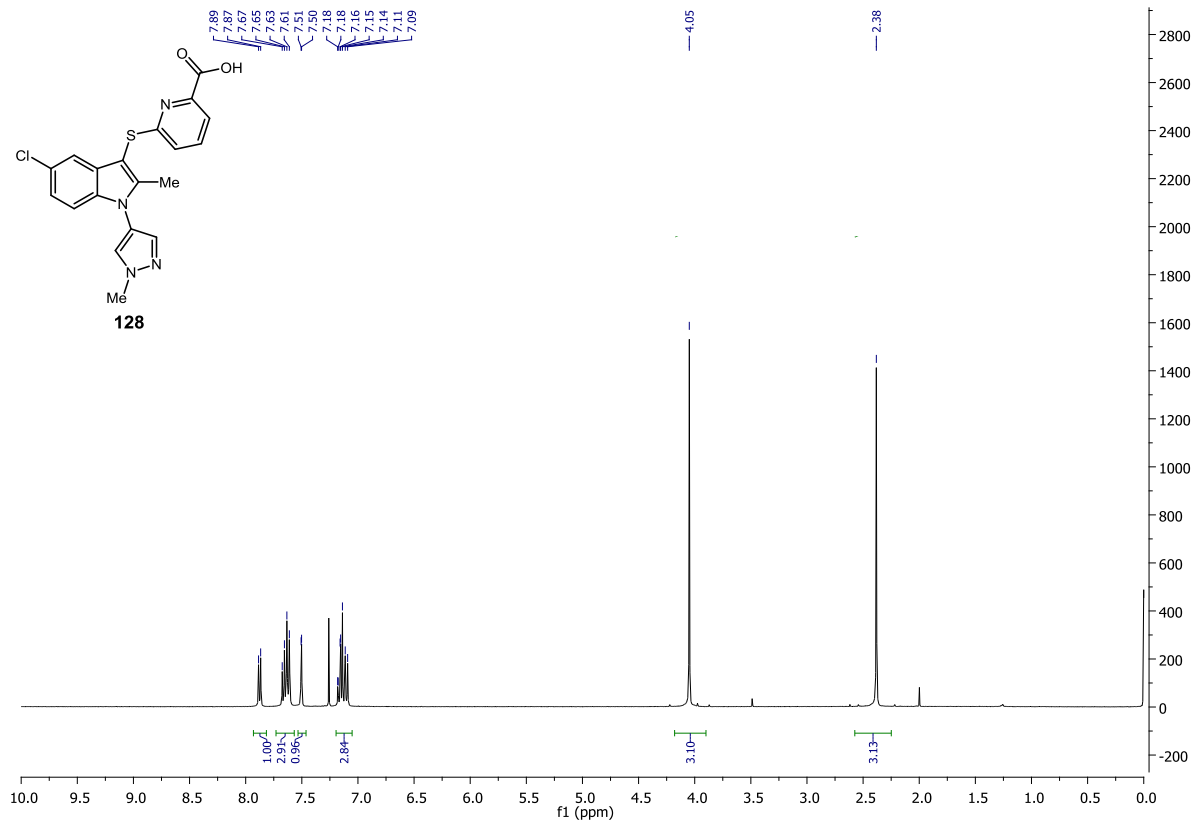
Expanded Spectrum RT 4.84, Peak [1], Target Mass 399.0677



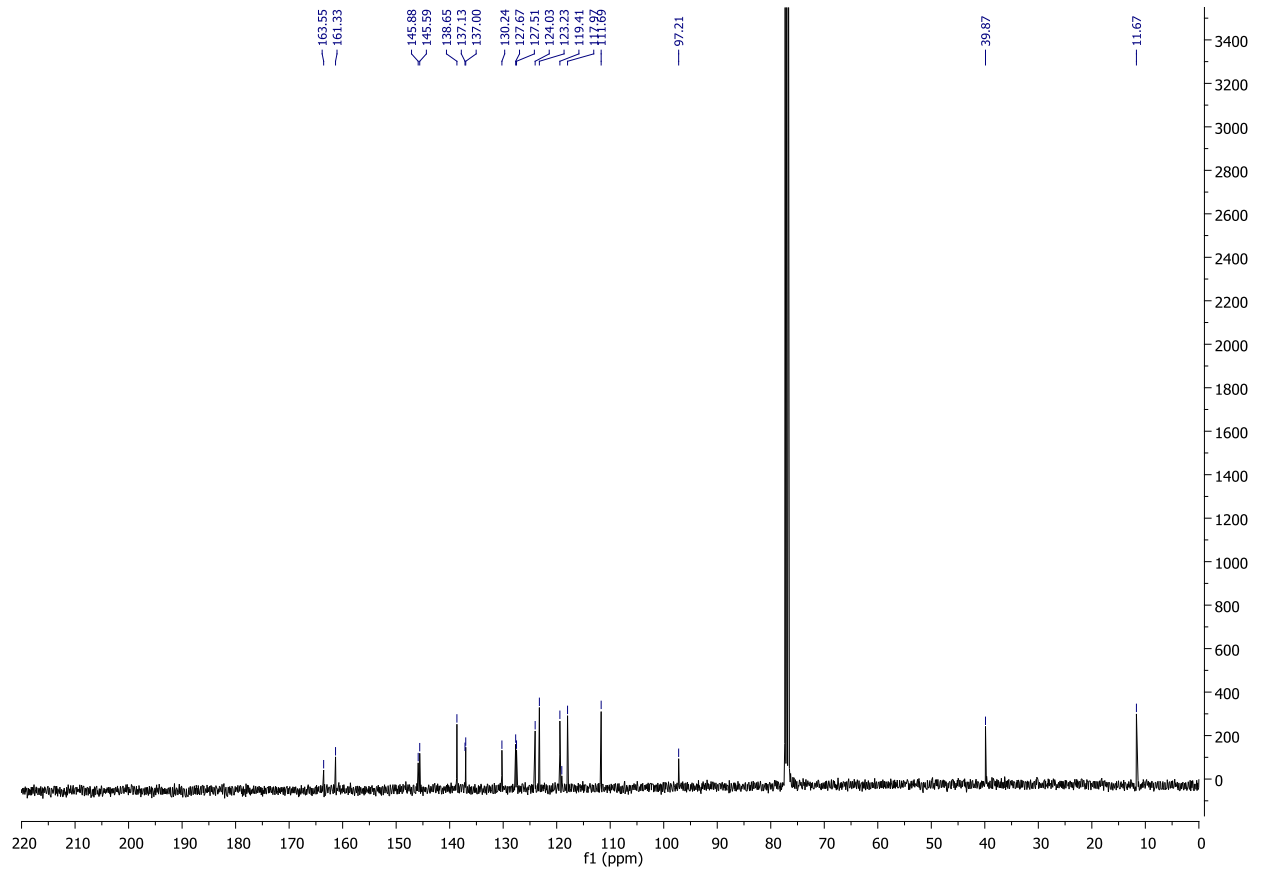
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
399.0680	399.0677	0.3	0.8	C <sub>19</sub> H <sub>16</sub> ClN <sub>4</sub> O <sub>2</sub> S

# Compound 128

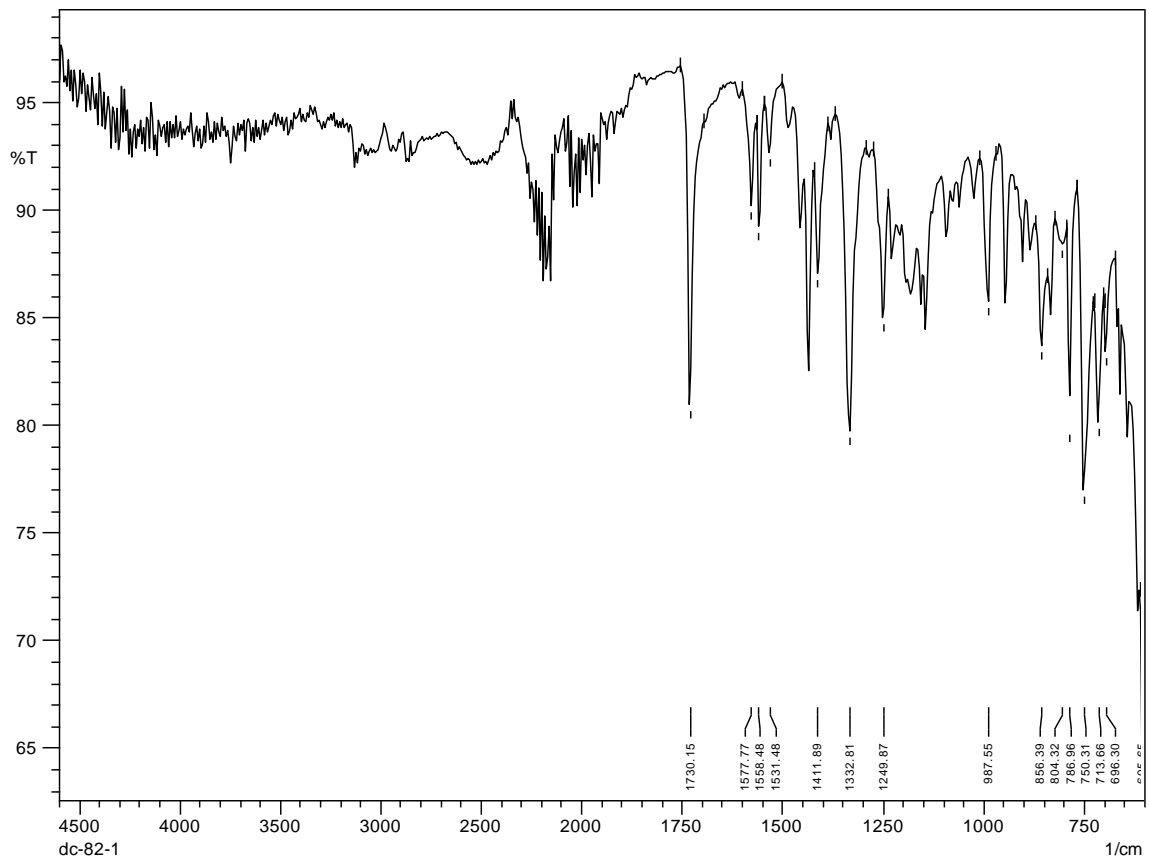
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 128



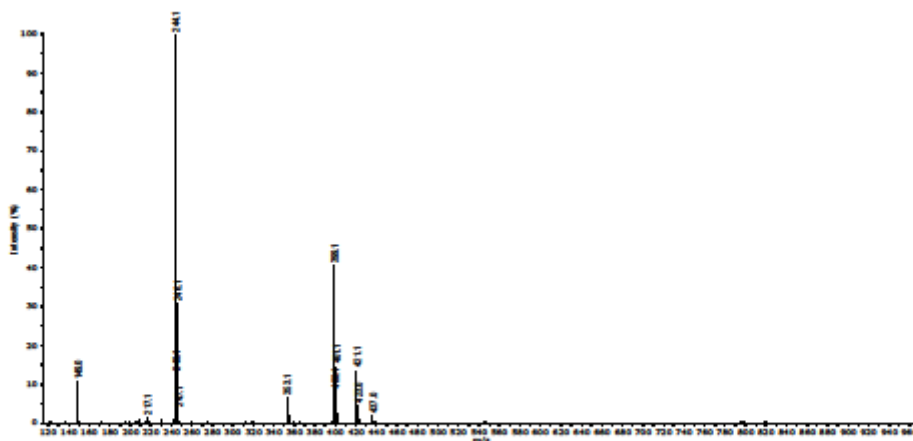
# IR of 128



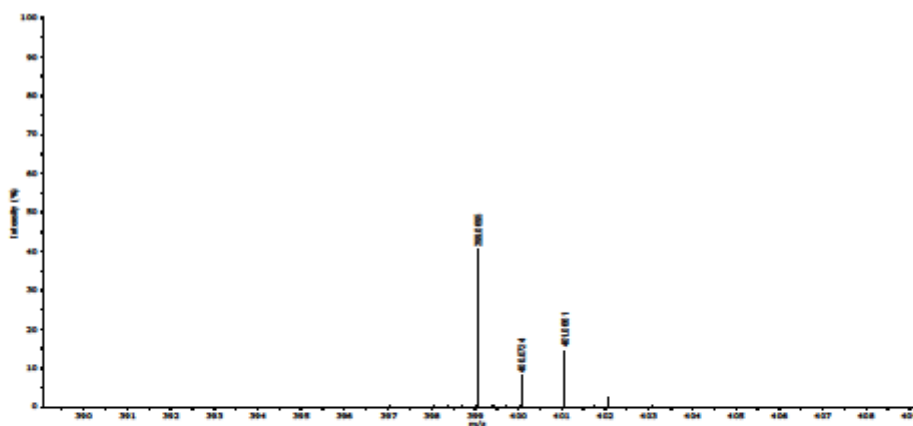


# HRMS of 128

Spectrum RT 5.09, Peak [1], Target Mass 399.0677



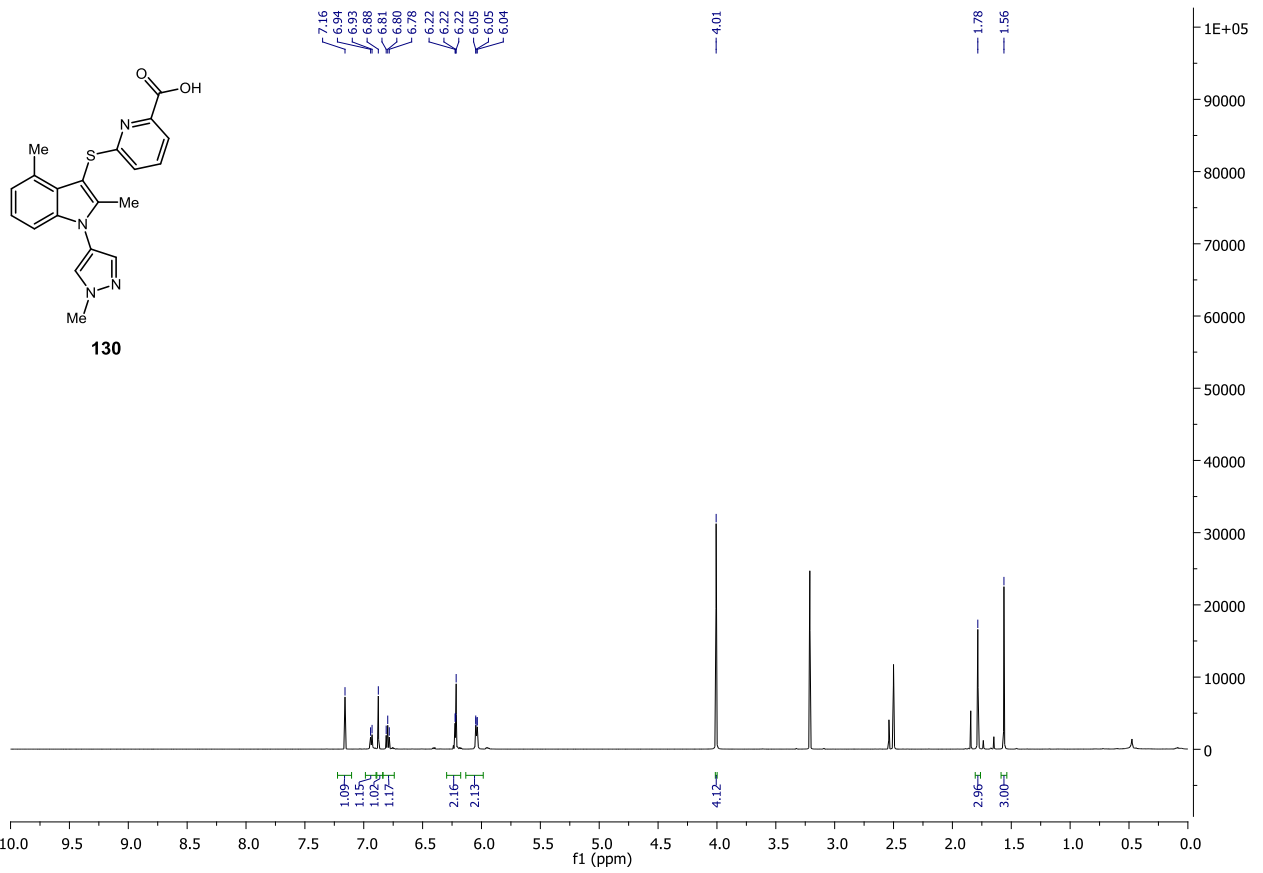
Expanded Spectrum RT 5.09, Peak [1], Target Mass 399.0677



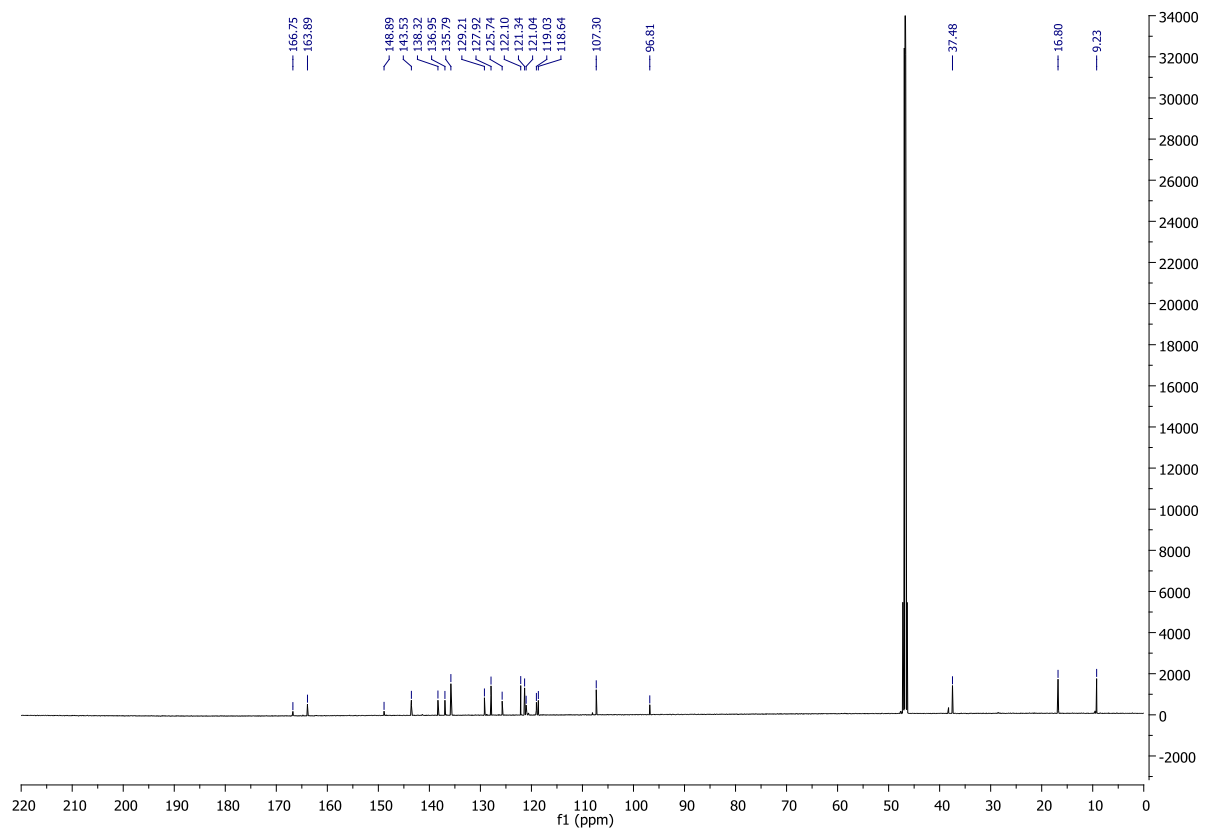
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
399.0680	399.0677	0.3	0.8	C <sub>19</sub> H <sub>16</sub> ClN <sub>4</sub> O <sub>2</sub> S

# Compound 130

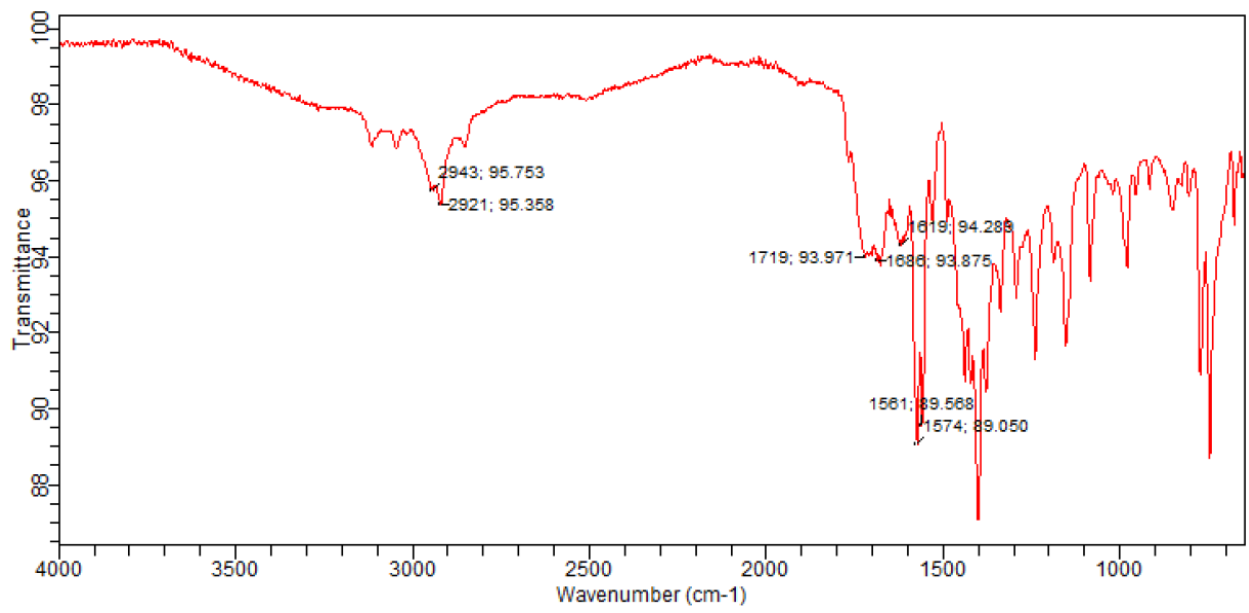
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 130

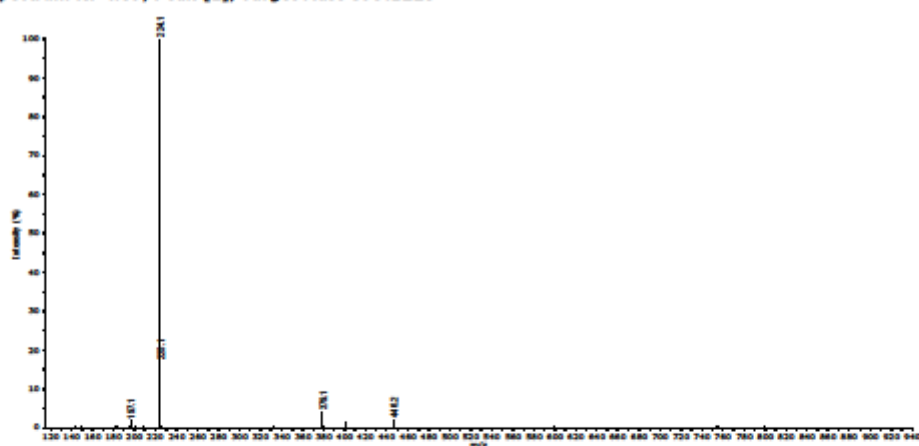


# IR of 130

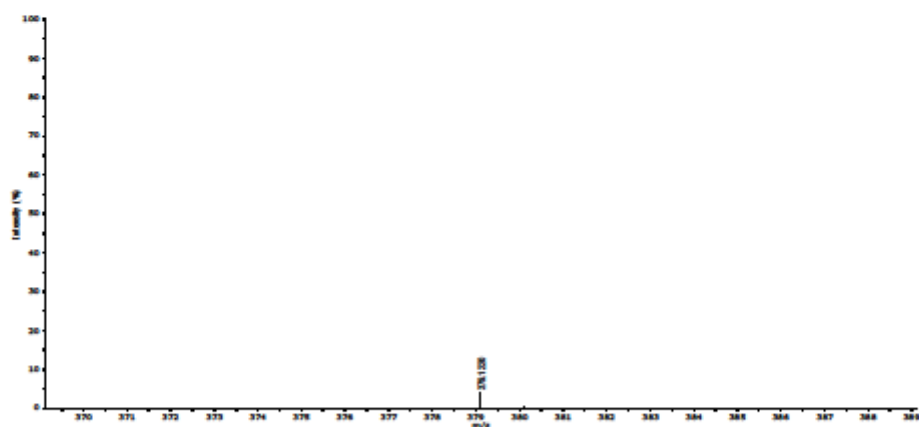


## HRMS of 130

Spectrum RT 4.87, Peak [1], Target Mass 379.1223



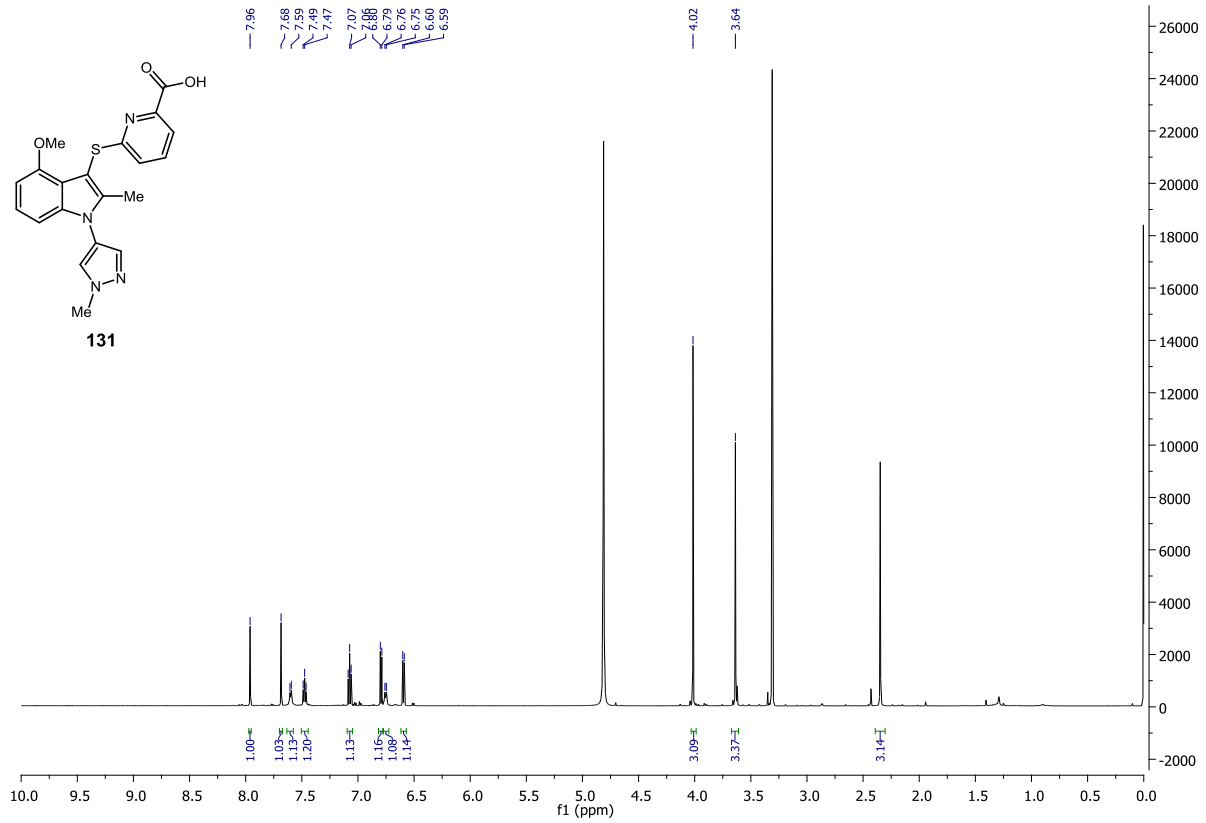
Expanded Spectrum RT 4.87, Peak [1], Target Mass 379.1223



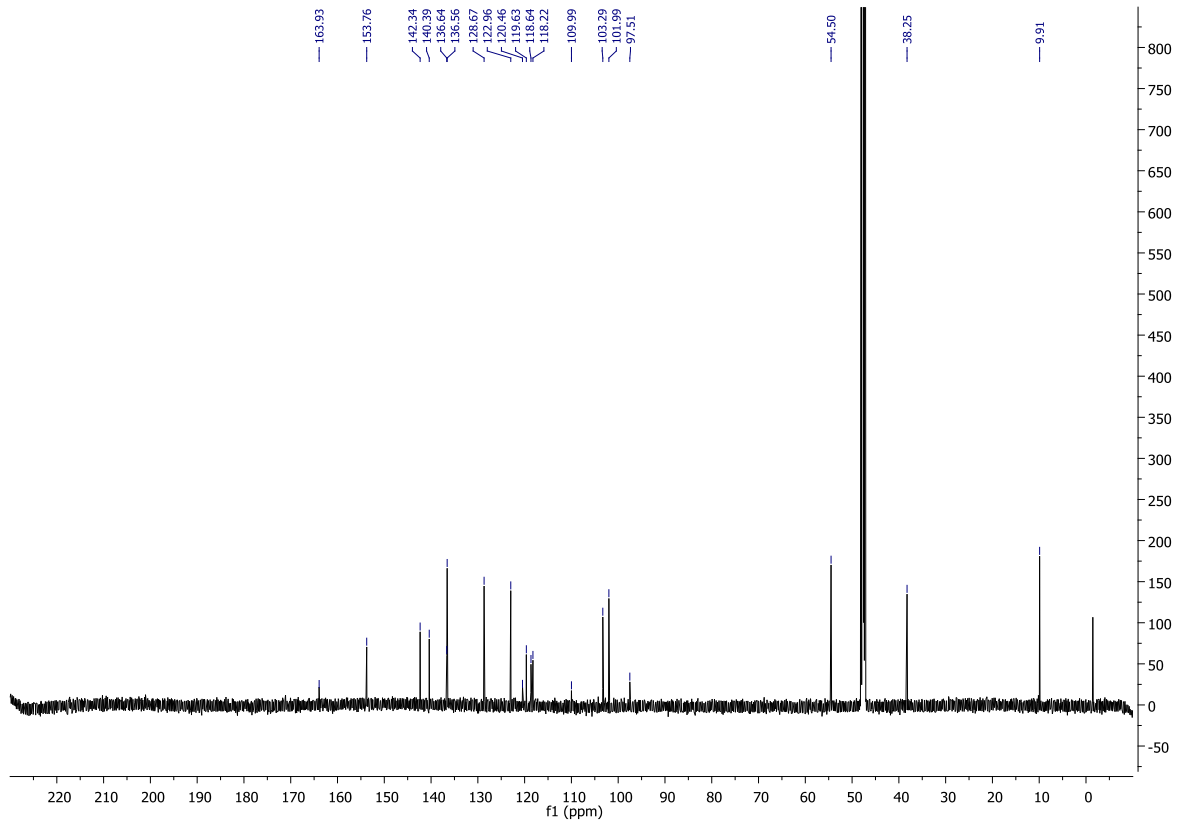
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
379.1220	379.1223	-0.3	-0.8	C <sub>20</sub> H <sub>19</sub> N <sub>4</sub> O <sub>2</sub> S

# Compound 131

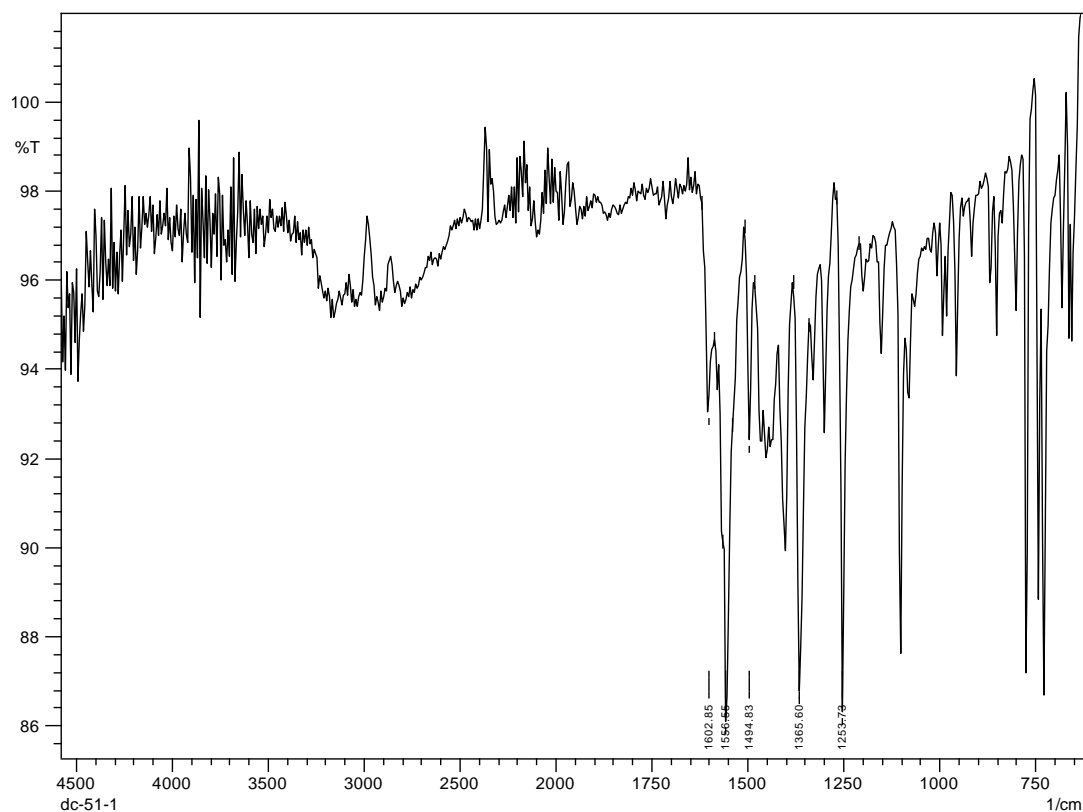
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 131



## IR of 131

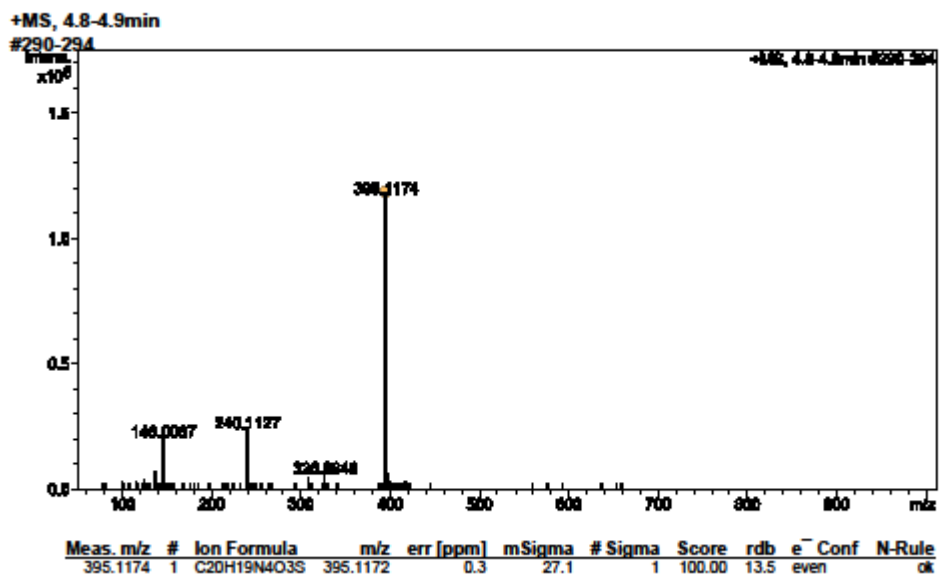


## HRMS of 131

### Bruker maXis Impact: LC-MS SmartFormula Report

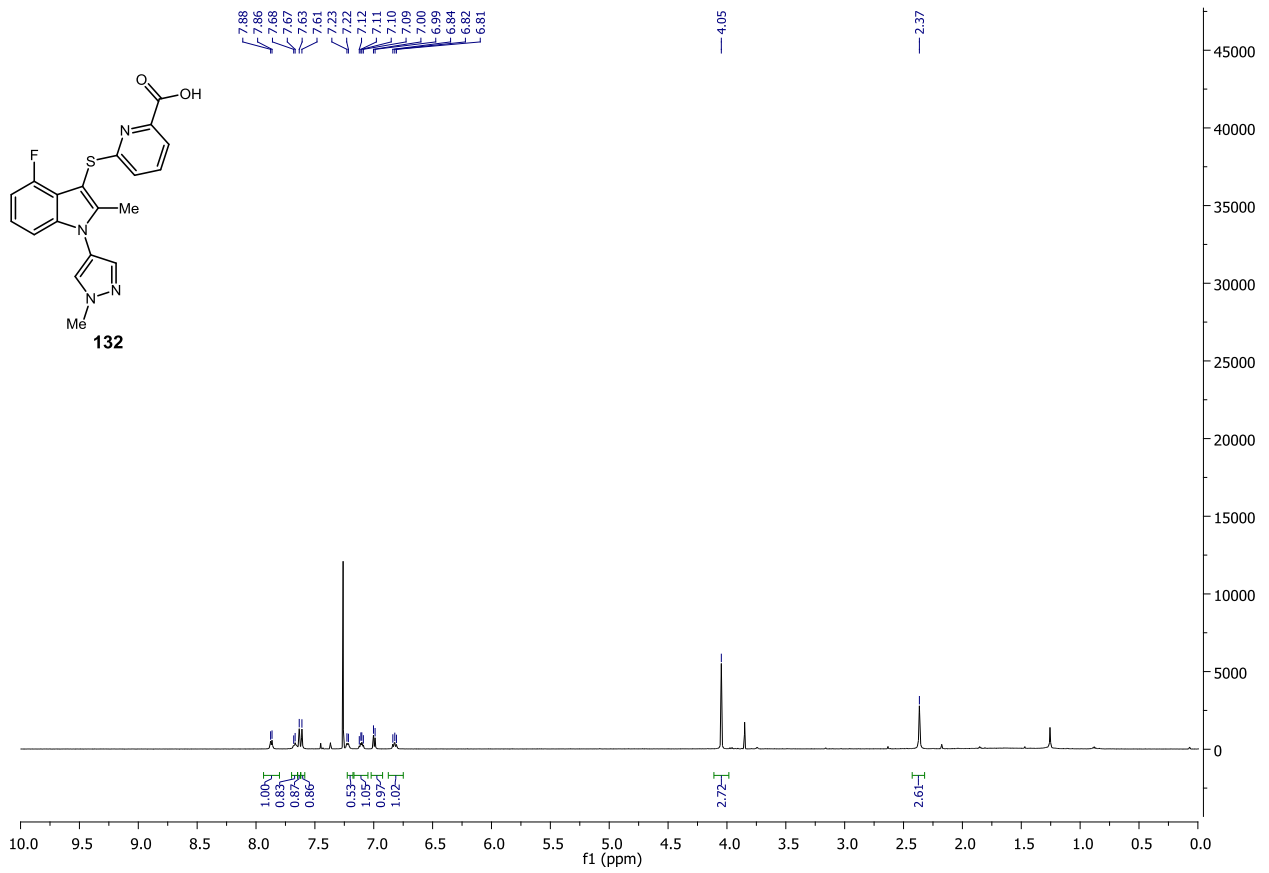
<b>Analysis Info</b>	Acquisition Date 24/10/2014 16:01:28
Analysis Name C:\Data\Data\N34272-64-8_1-A,9_01_1123.d	Operator Spectroscopy
Method lcms pos 50-1000.m	Instrument / Ser maXis impact 282001.0
Sample Name N34272-64-8	Comment 0101

<b>Acquisition Parameter</b>			
Source Type	ESI	Scan Begin	50 m/z
Ion Polarity	Positive	Scan End	1000 m/z

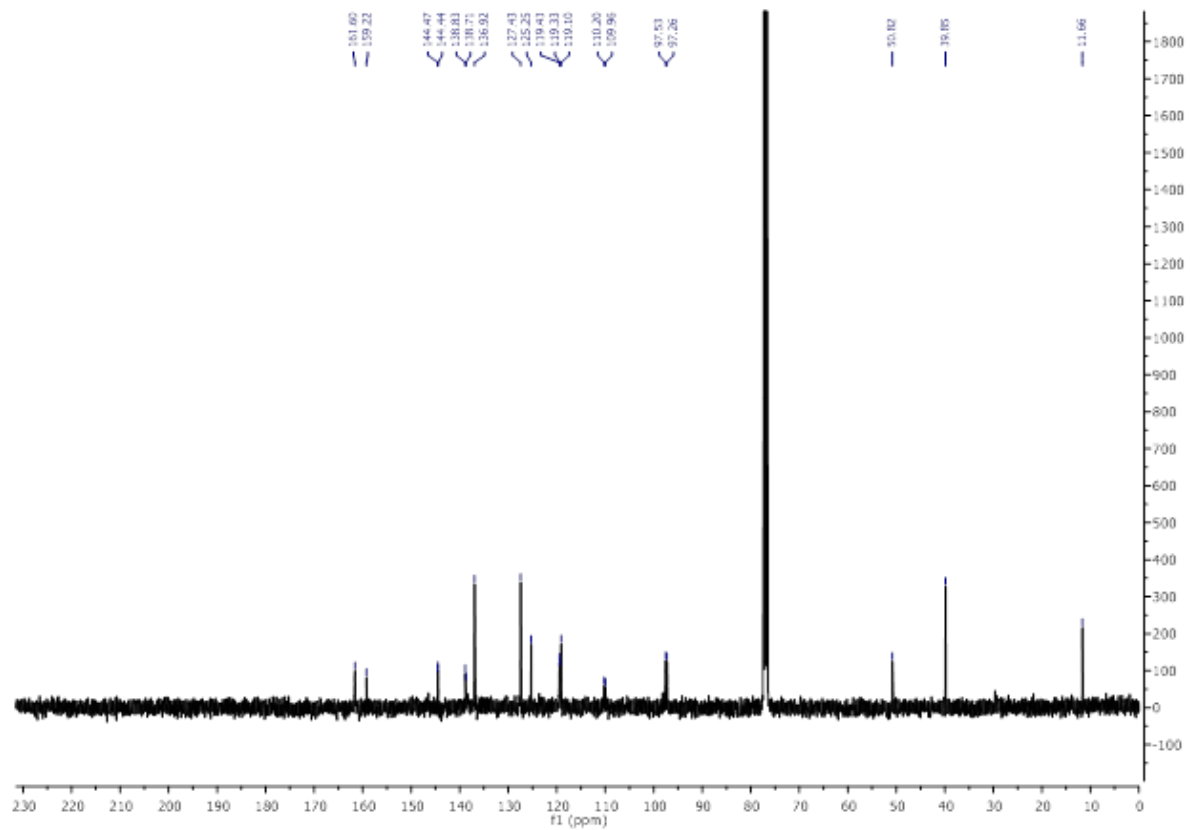


# Compound 132

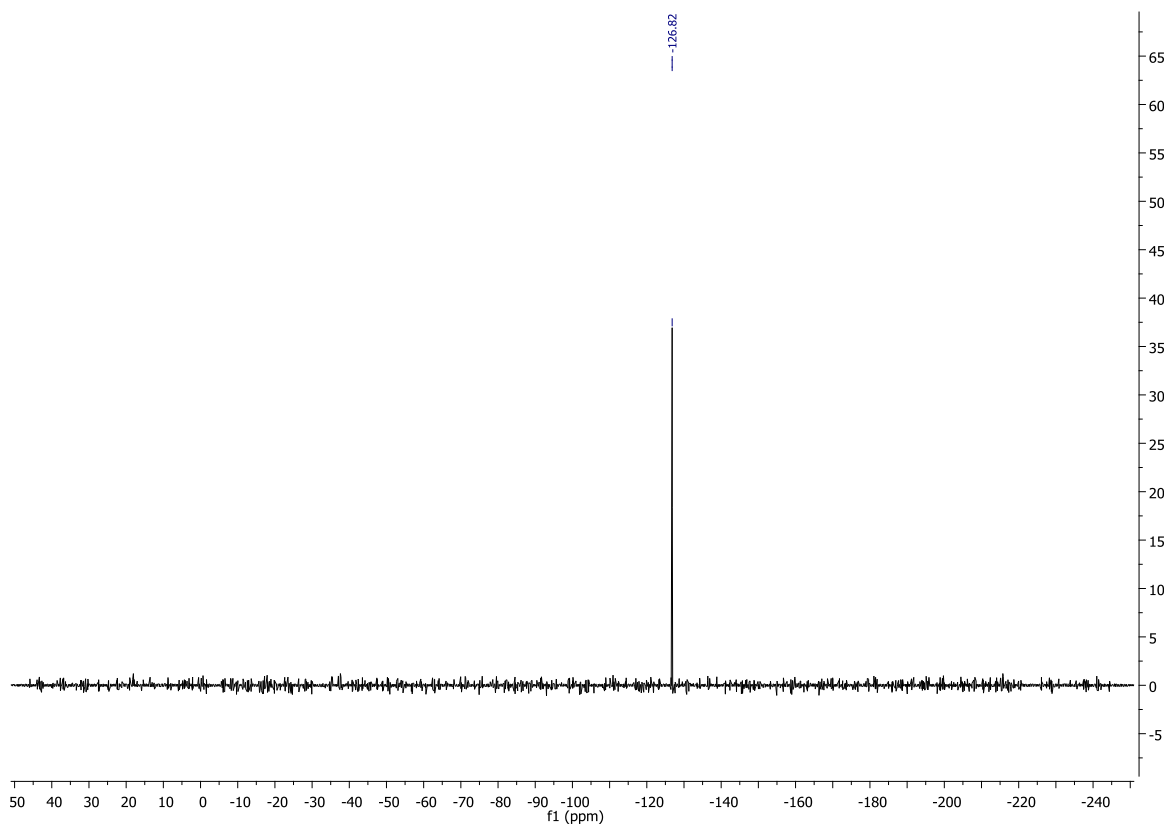
## <sup>1</sup>H NMR



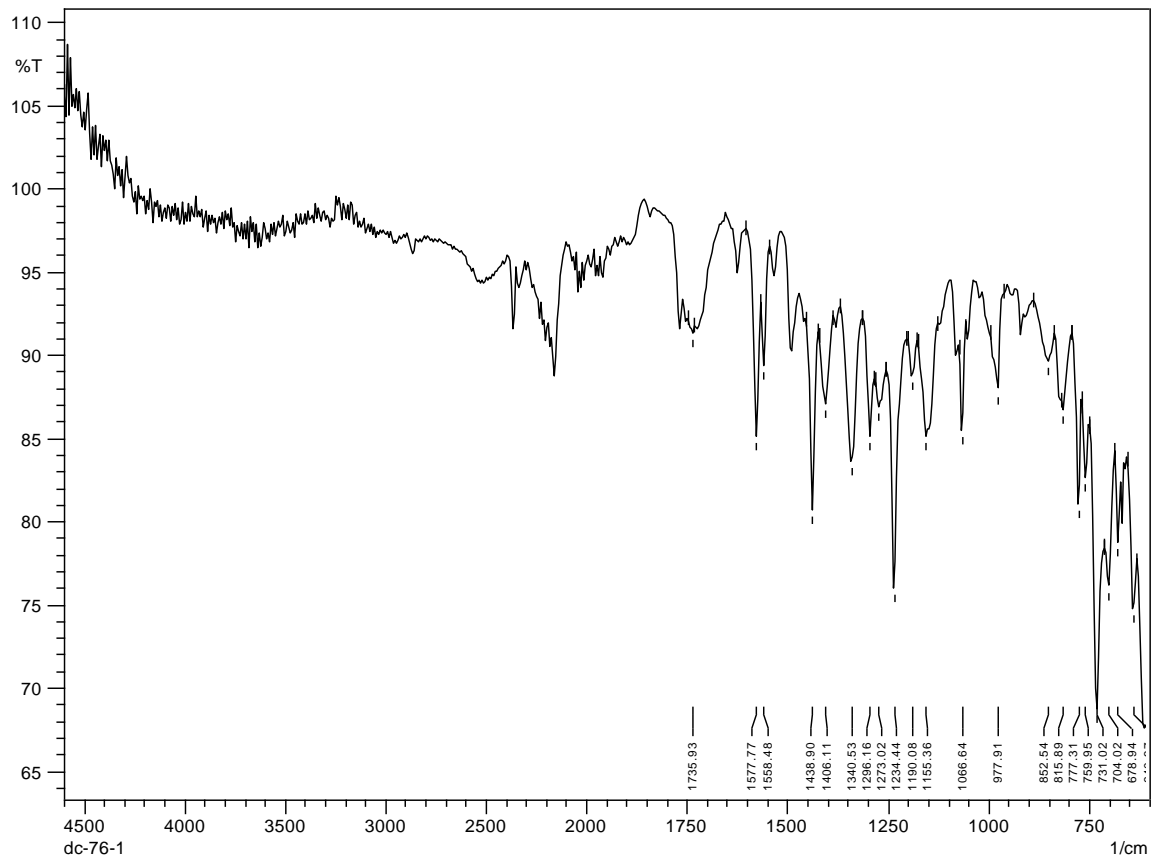
## <sup>13</sup>C NMR of 132



# <sup>19</sup>F NMR of 132



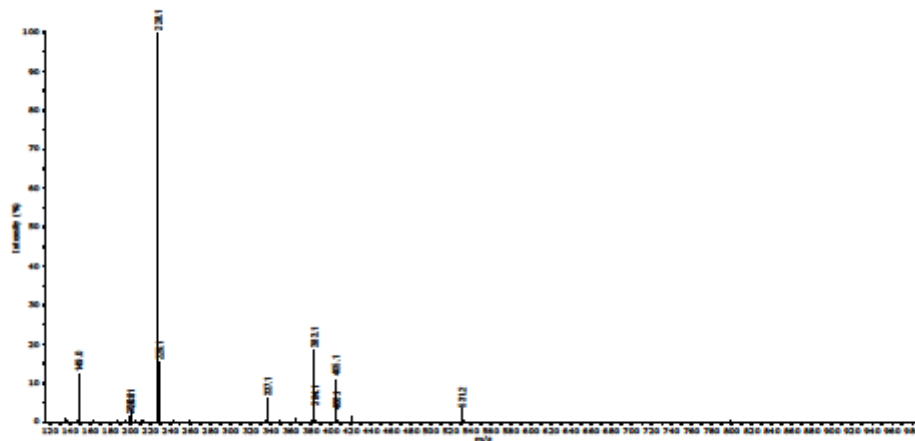
# IR of 132



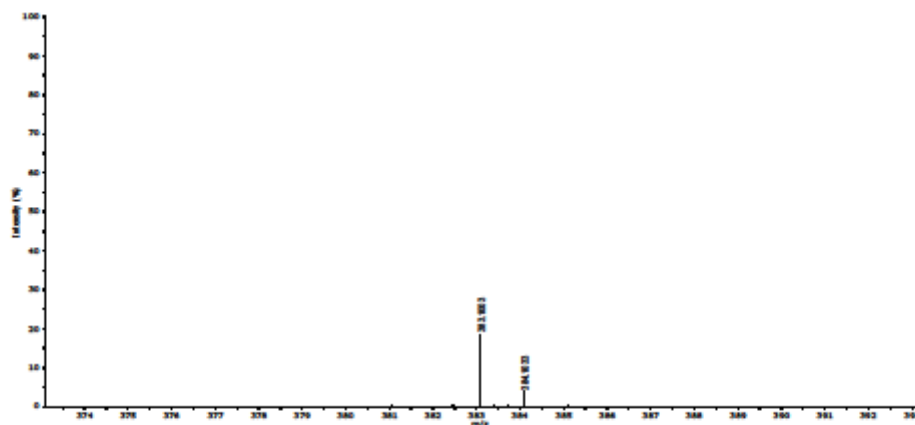


# HRMS of 132

Spectrum RT 4.61, Peak [1], Target Mass 383.0973



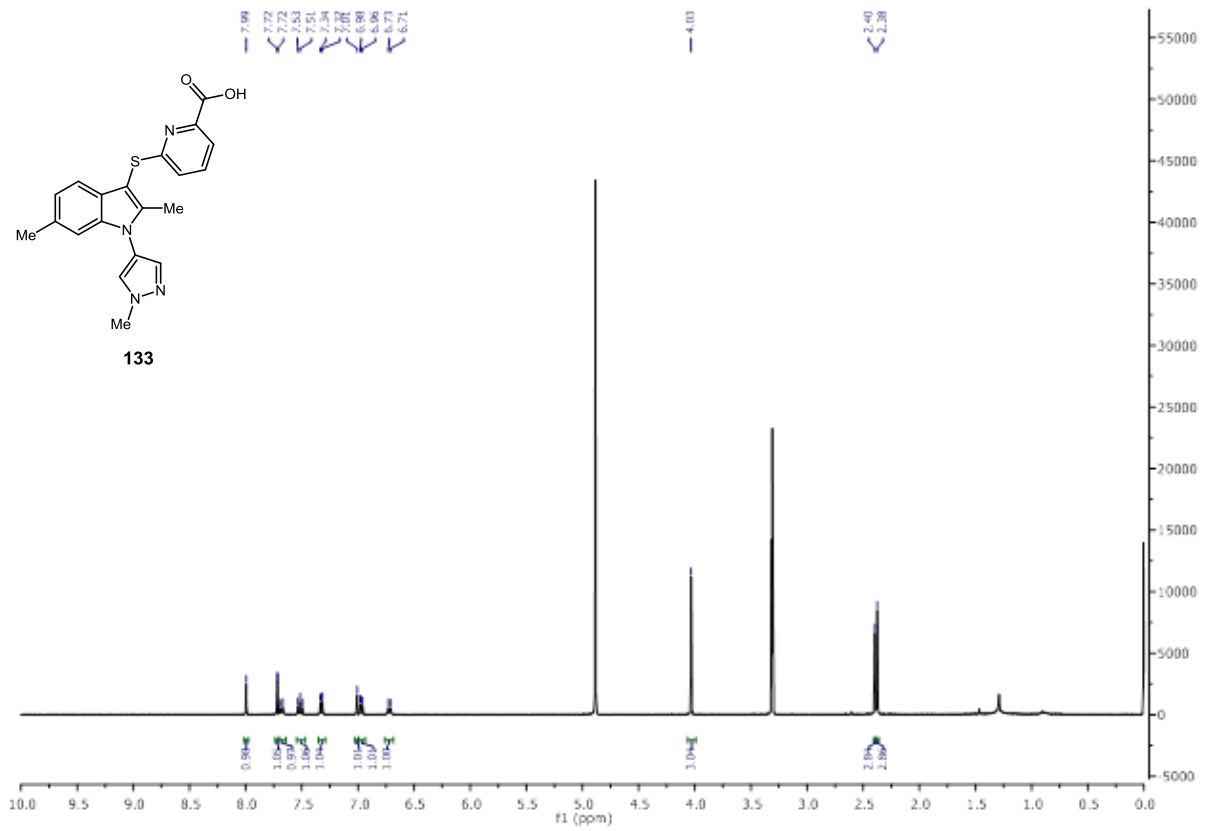
Expanded Spectrum RT 4.61, Peak [1], Target Mass 383.0973



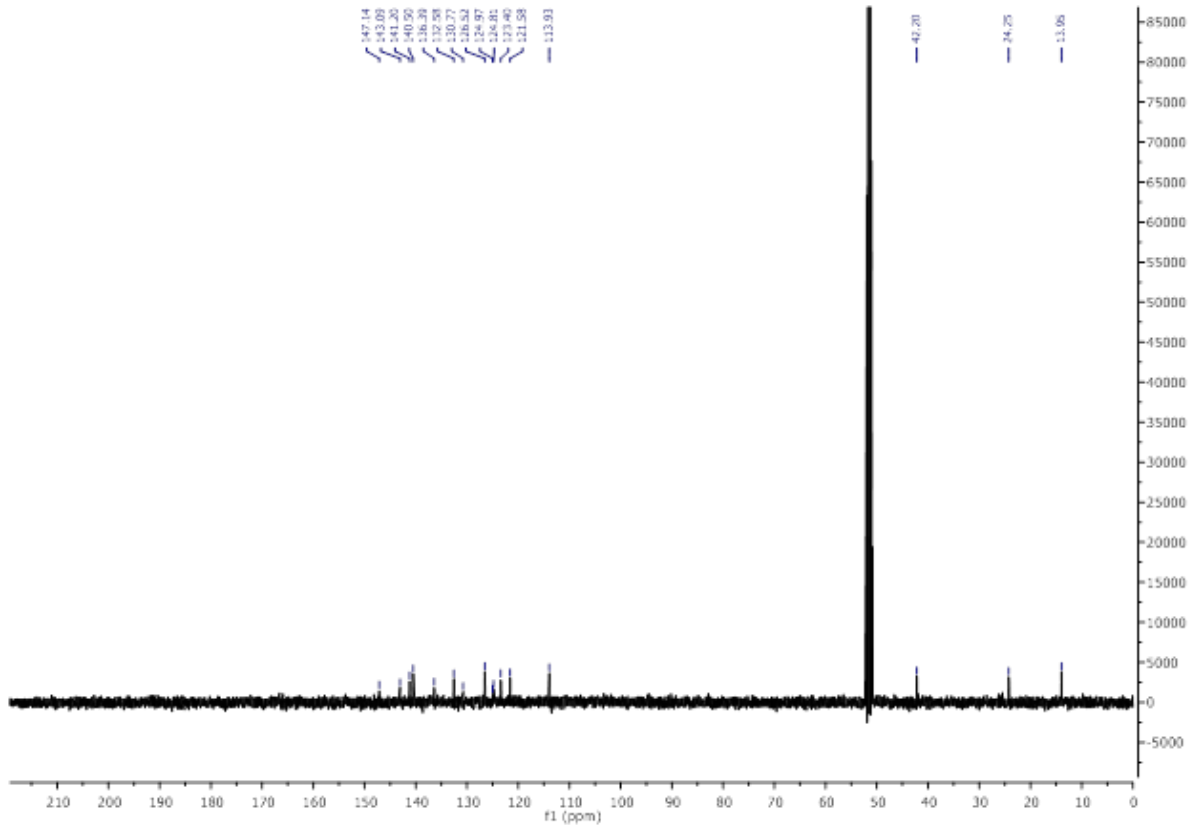
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
383.0975	383.0973	0.2	0.6	C <sub>19</sub> H <sub>16</sub> FN <sub>4</sub> O <sub>2</sub> S

# Compound 133

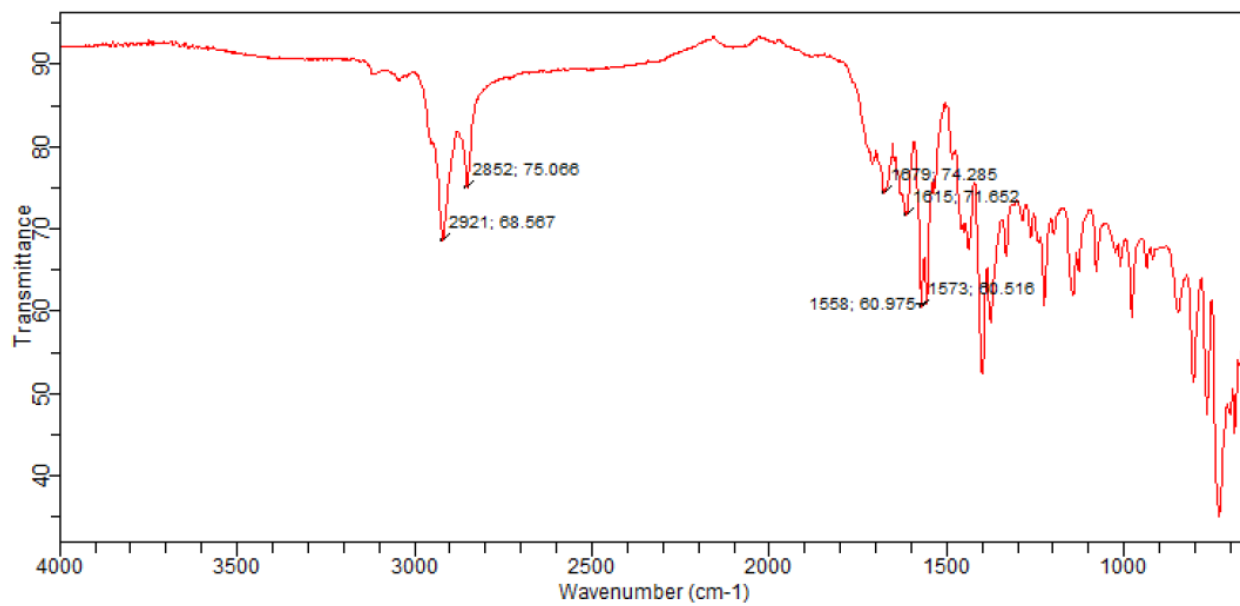
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 133

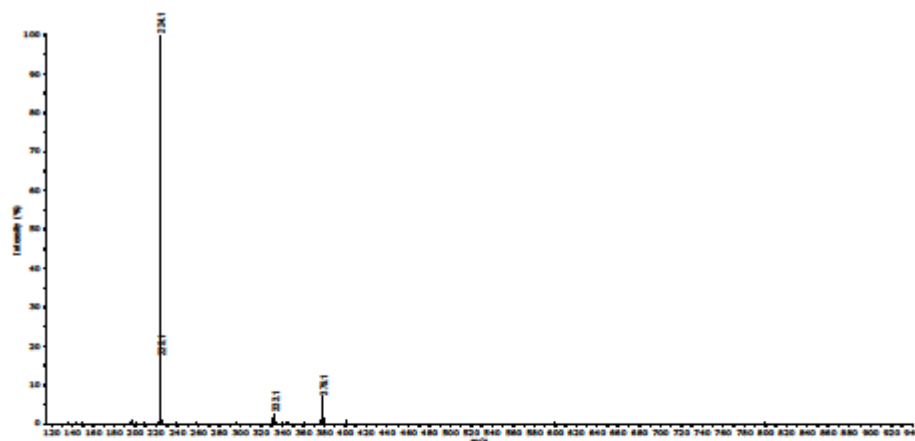


### IR of 133

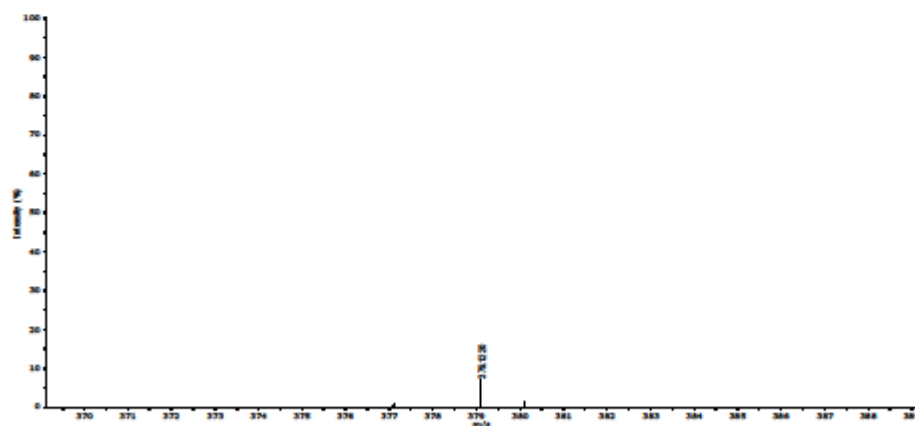


# HRMS of 133

Spectrum RT 4.95, Peak [1], Target Mass 379.1223



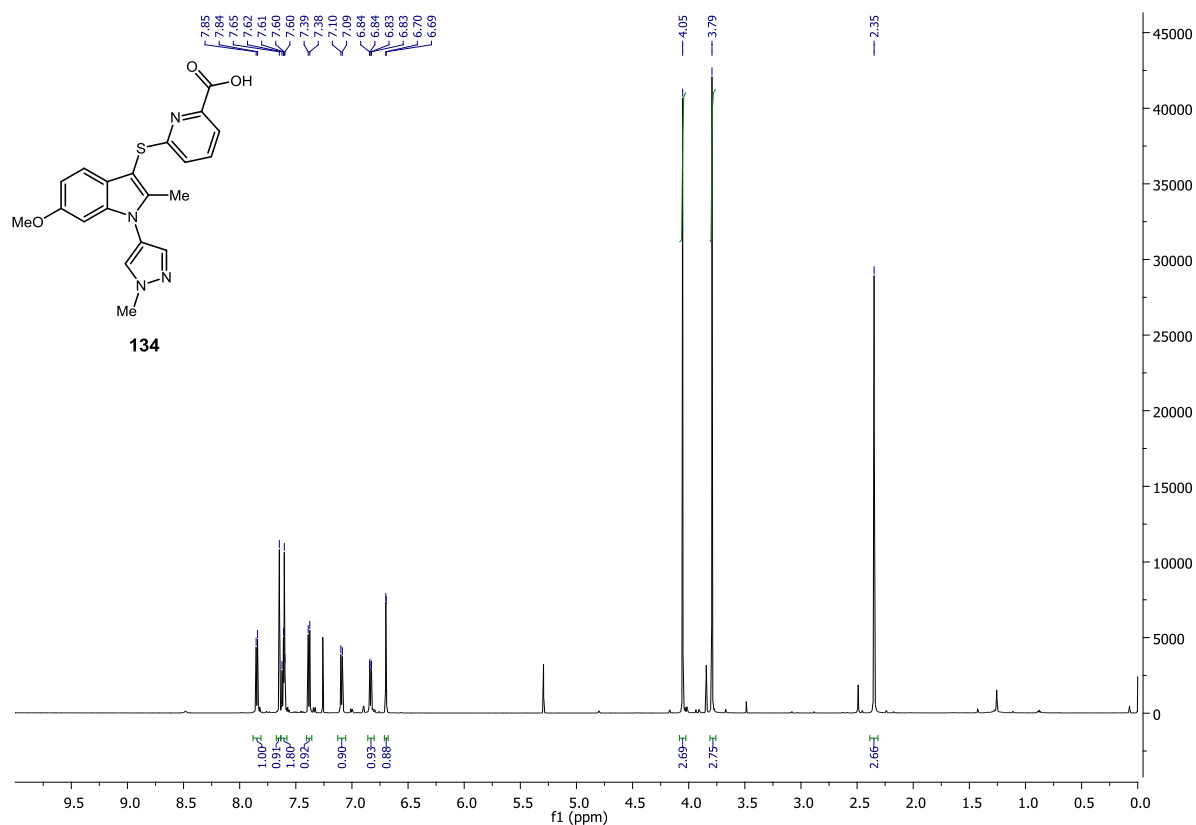
Expanded Spectrum RT 4.95, Peak [1], Target Mass 379.1223



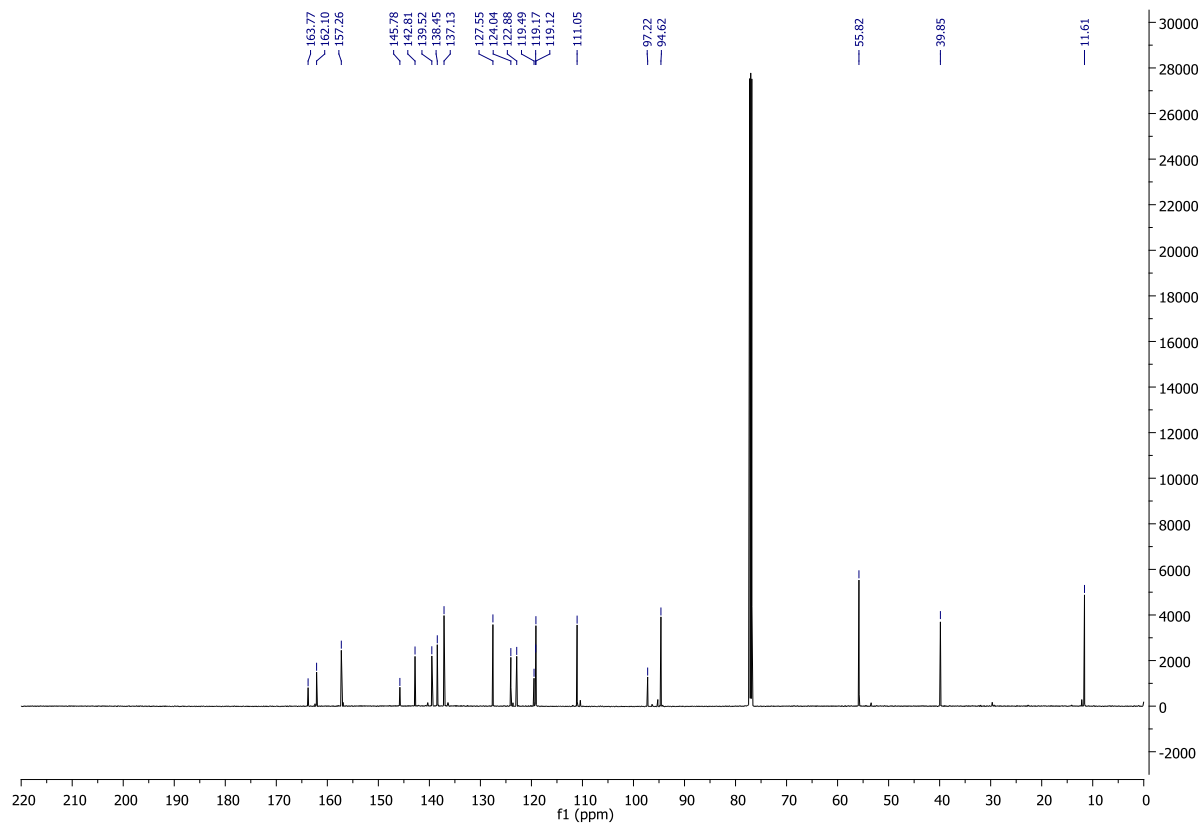
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
379.1220	379.1223	-0.3	-0.8	C <sub>20</sub> H <sub>19</sub> N <sub>4</sub> O <sub>2</sub> S

# Compound 134

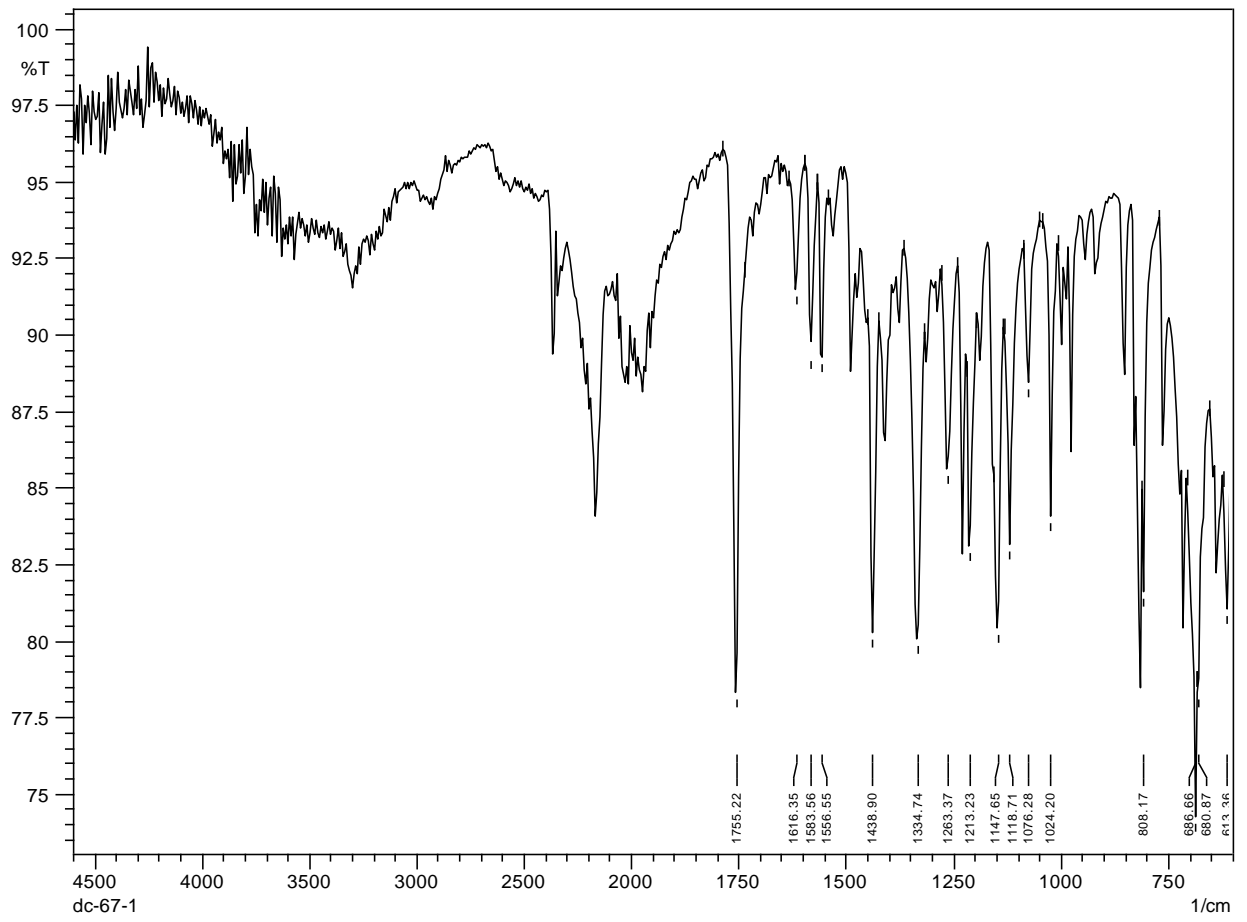
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 134

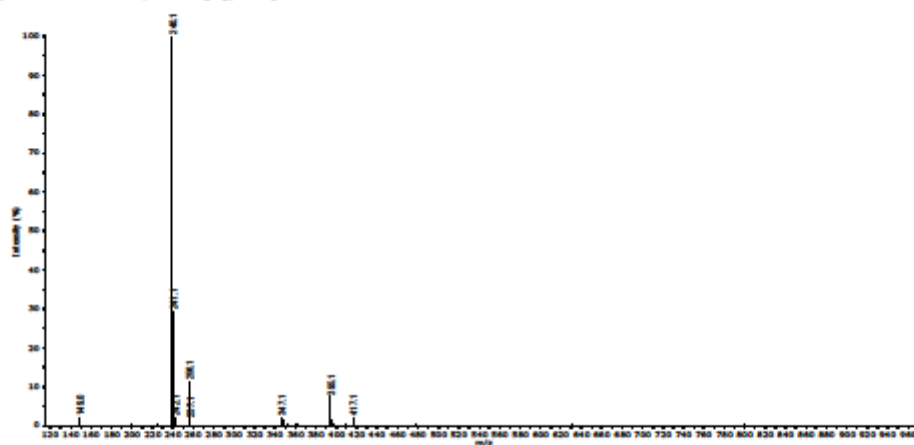


# IR of 134

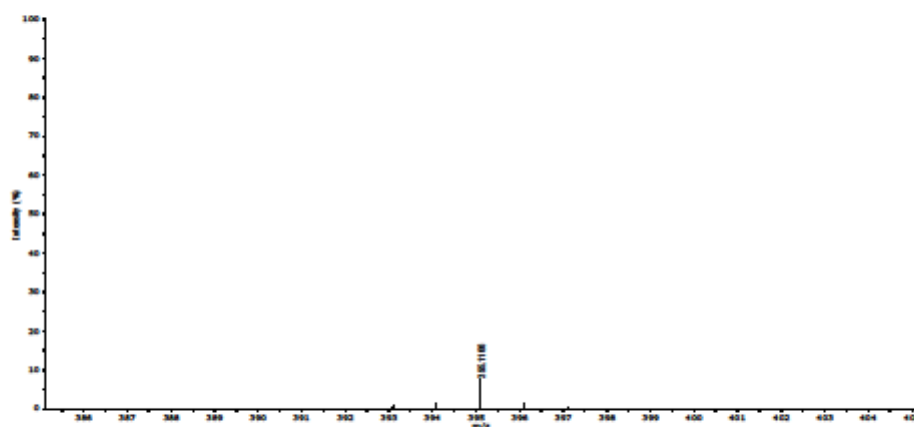


# HRMS of 134

Spectrum RT 4.59, Peak [1], Target Mass 395.1172



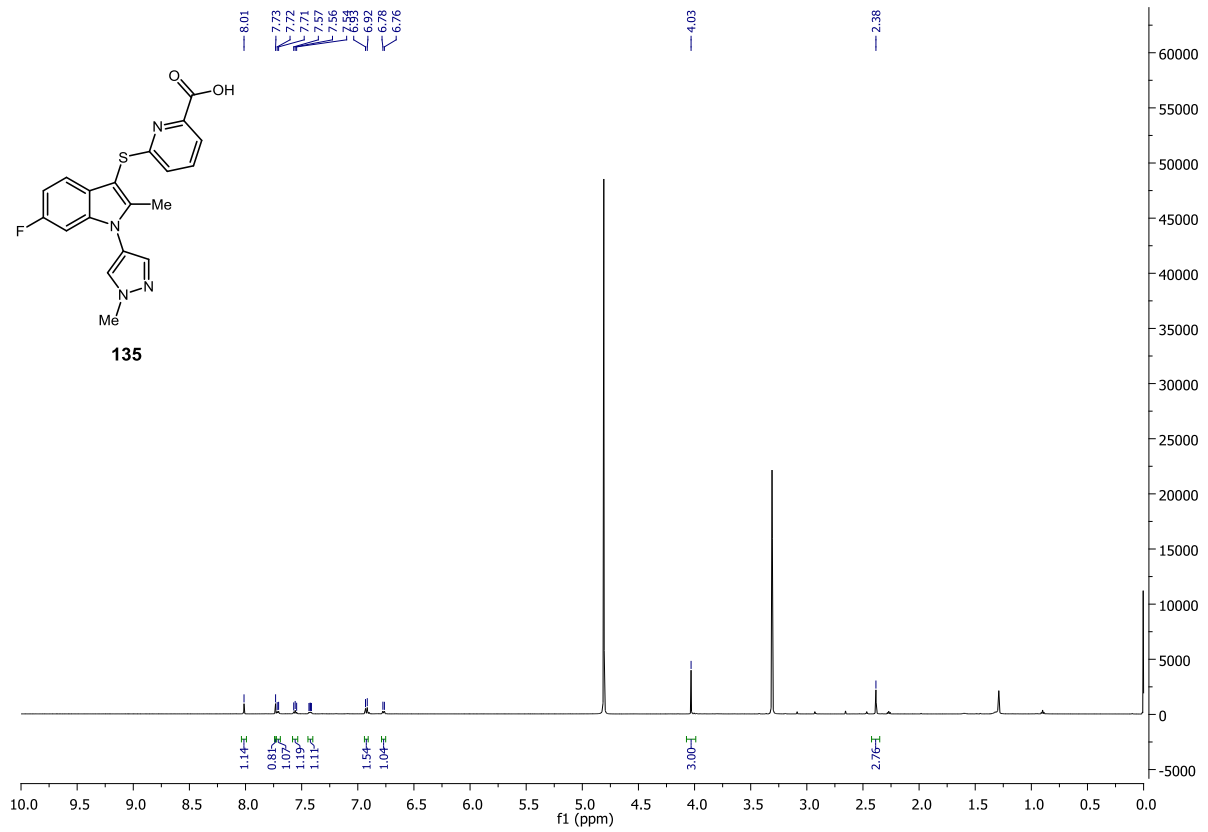
Expanded Spectrum RT 4.59, Peak [1], Target Mass 395.1172



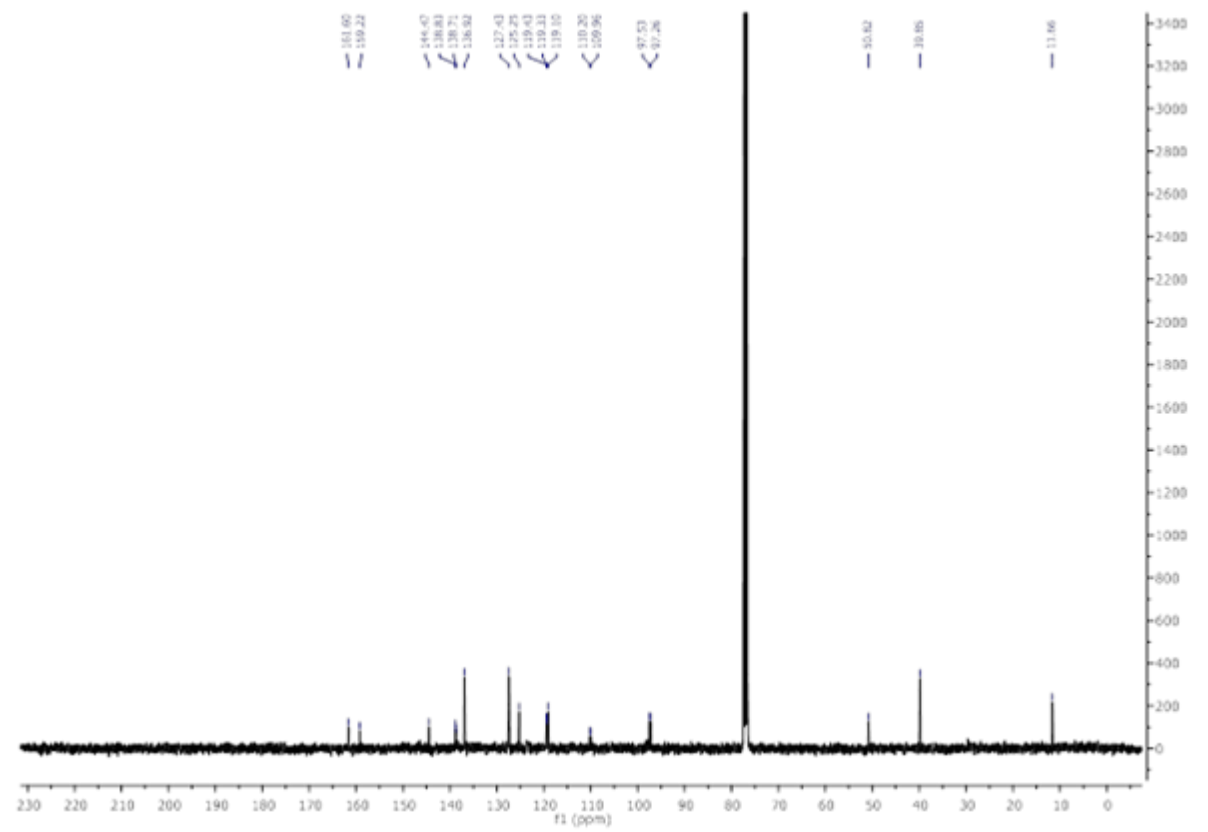
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
395.1173	395.1172	0.1	0.2	C <sub>20</sub> H <sub>19</sub> N <sub>4</sub> O <sub>3</sub> S

# Compound 135

## <sup>1</sup>H NMR

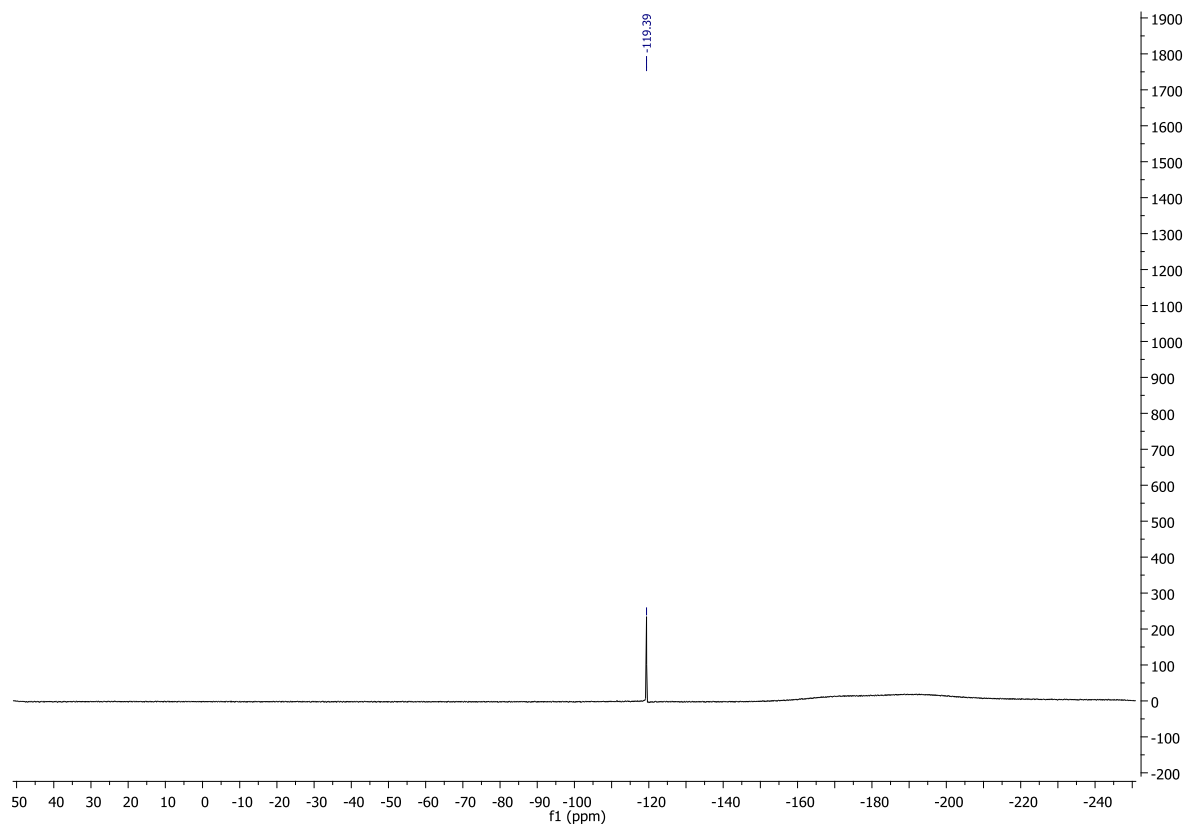


## <sup>13</sup>C NMR of 135

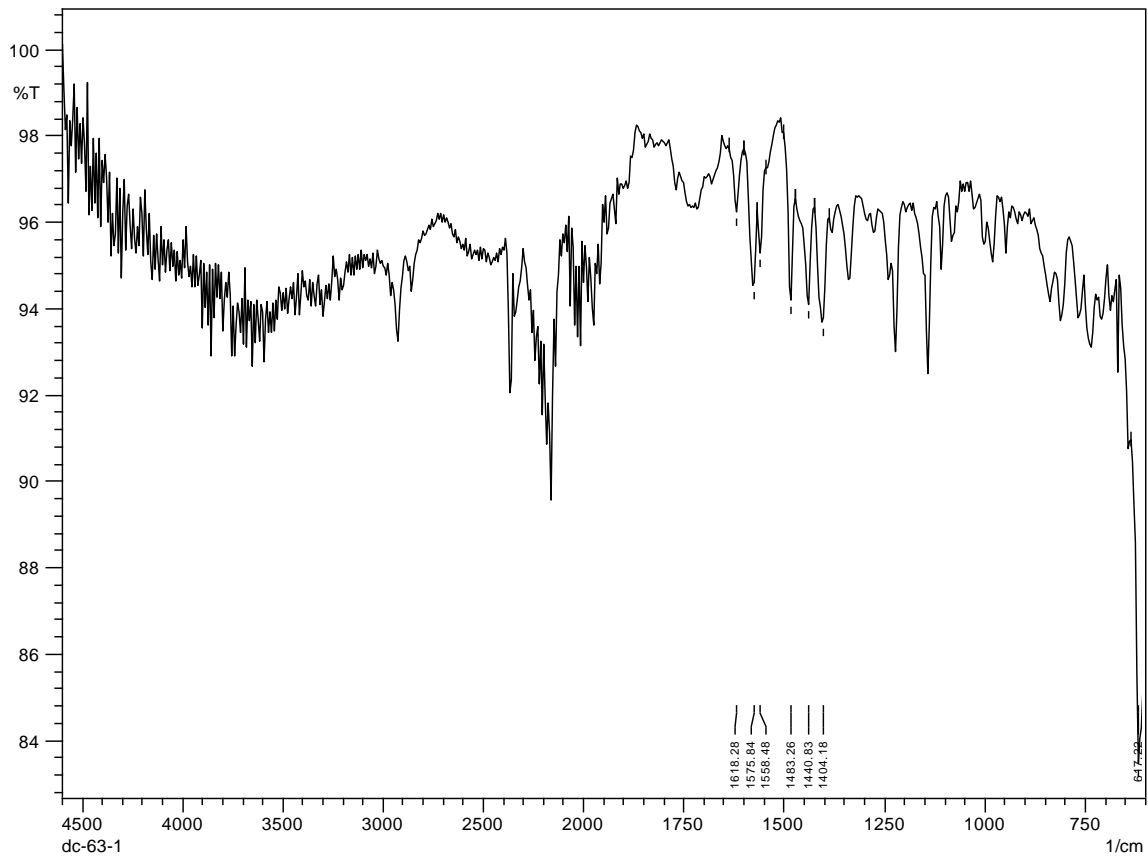




# <sup>19</sup>F NMR of 135



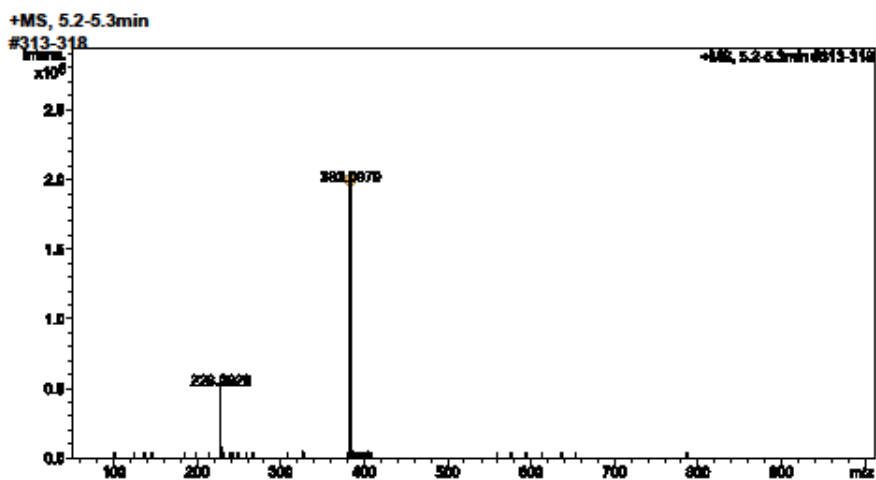
# IR of 135



Bruker maXis Impact: LC-MS SmartFormula Report

<b>Analysis Info</b>		Acquisition Date	24/10/2014 14:56:54
Analysis Name	C:\Data\Data\N34272-64-2_1-A,3_01_1117.d	Operator	Spectroscopy
Method	lcms pos 50-1000.m	Instrument / Ser	maXis impact 282001.0
Sample Name	N34272-64-2		0101
Comment			

<b>Acquisition Parameter</b>			
Source Type	ESI	Scan Begin	50 m/z
Ion Polarity	Positive	Scan End	1000 m/z

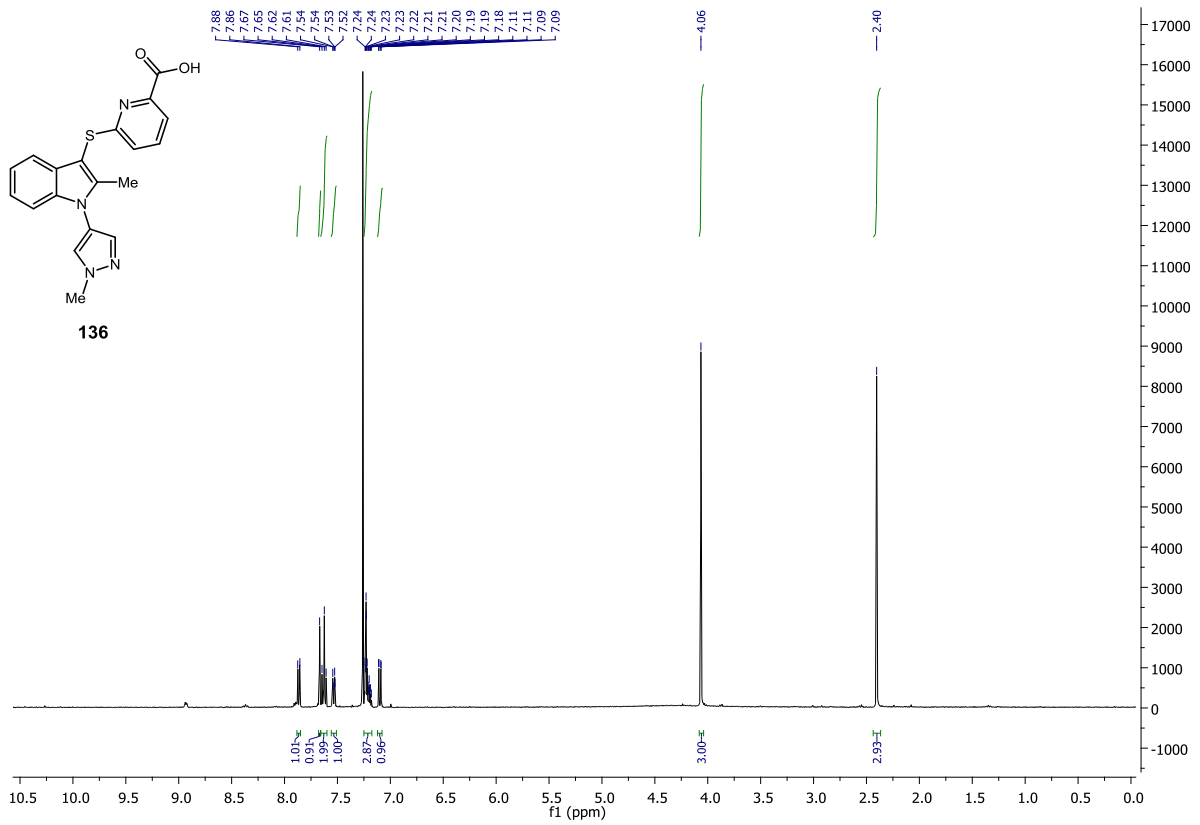


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdb	e <sup>-</sup> Conf	N-Rule
383.0979	1	C19H16FN4O2S	383.0973	1.6	19.3	1	100.00	13.5	even	ok

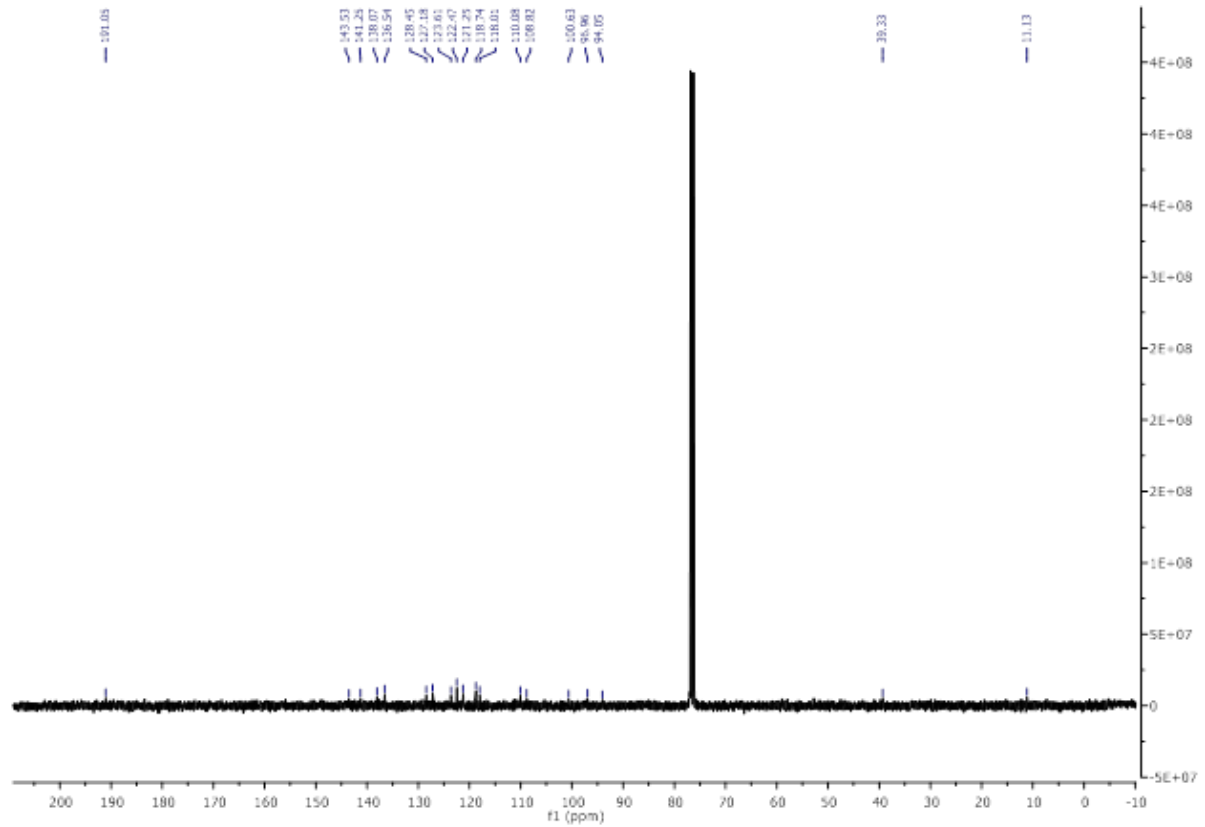
Measured mass should be within ±5 ppm of target mass

# Compound 136

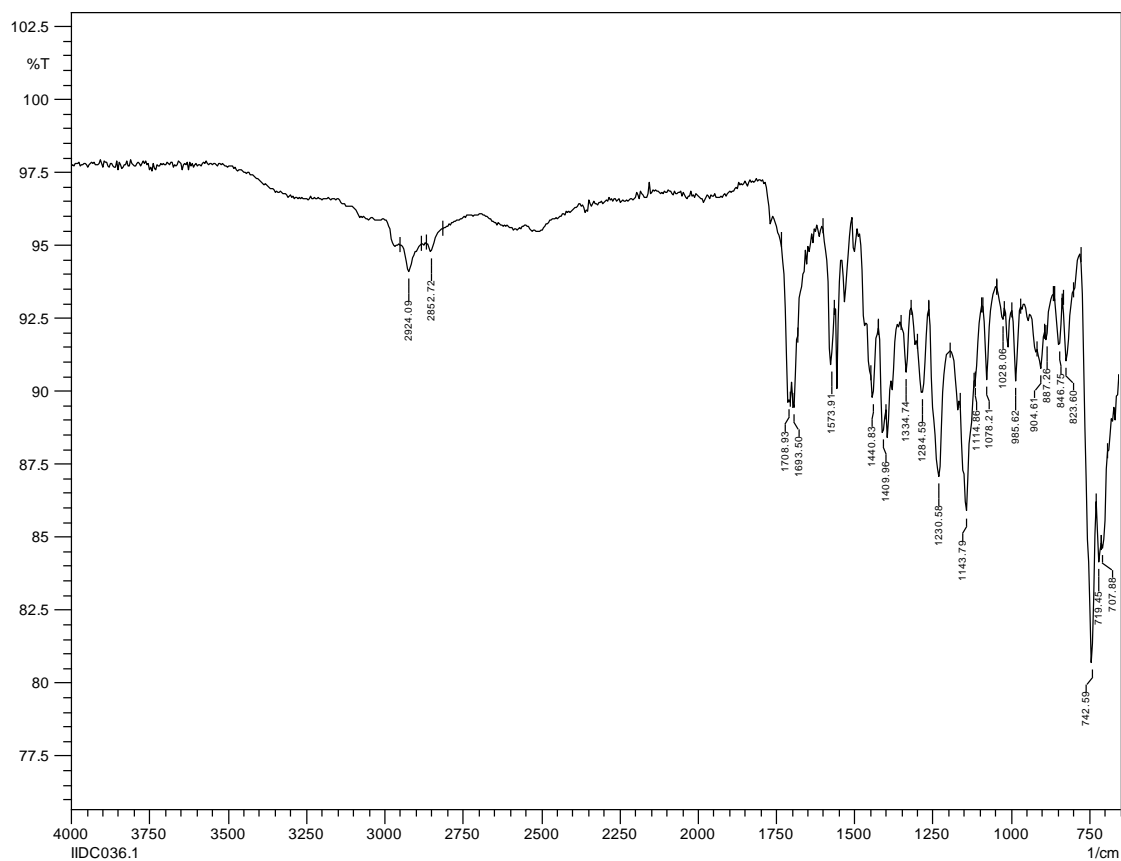
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 136



# IR of 136

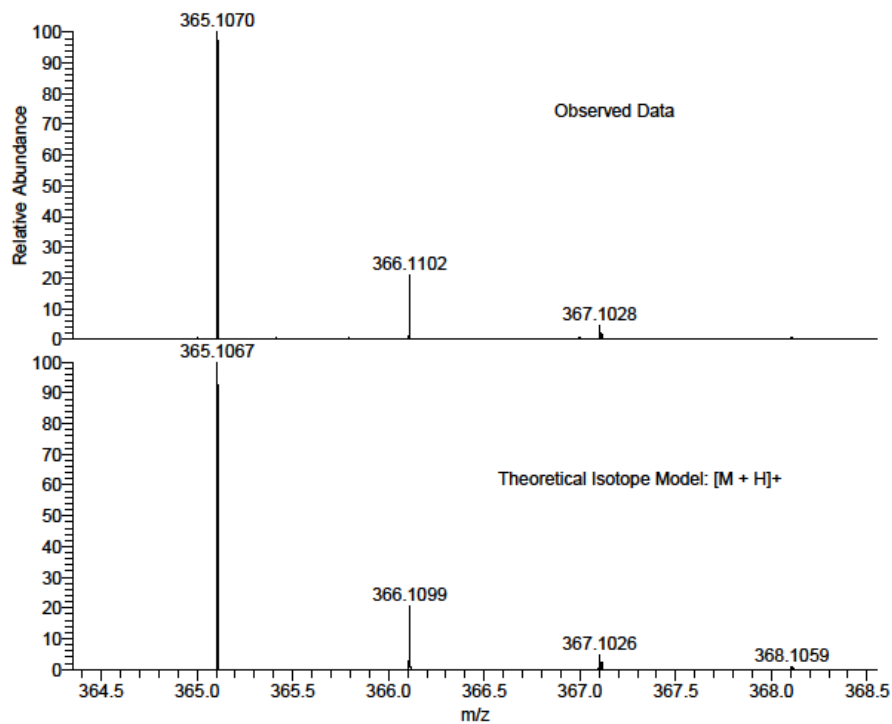


# HRMS of 136

IIDC036 MW=364?  
 C<sub>19</sub>H<sub>16</sub>N<sub>4</sub>O<sub>2</sub>S  
 (MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
 LTQ Orbitrap XL

Diana Castagna  
 05/08/2014 13:25:55

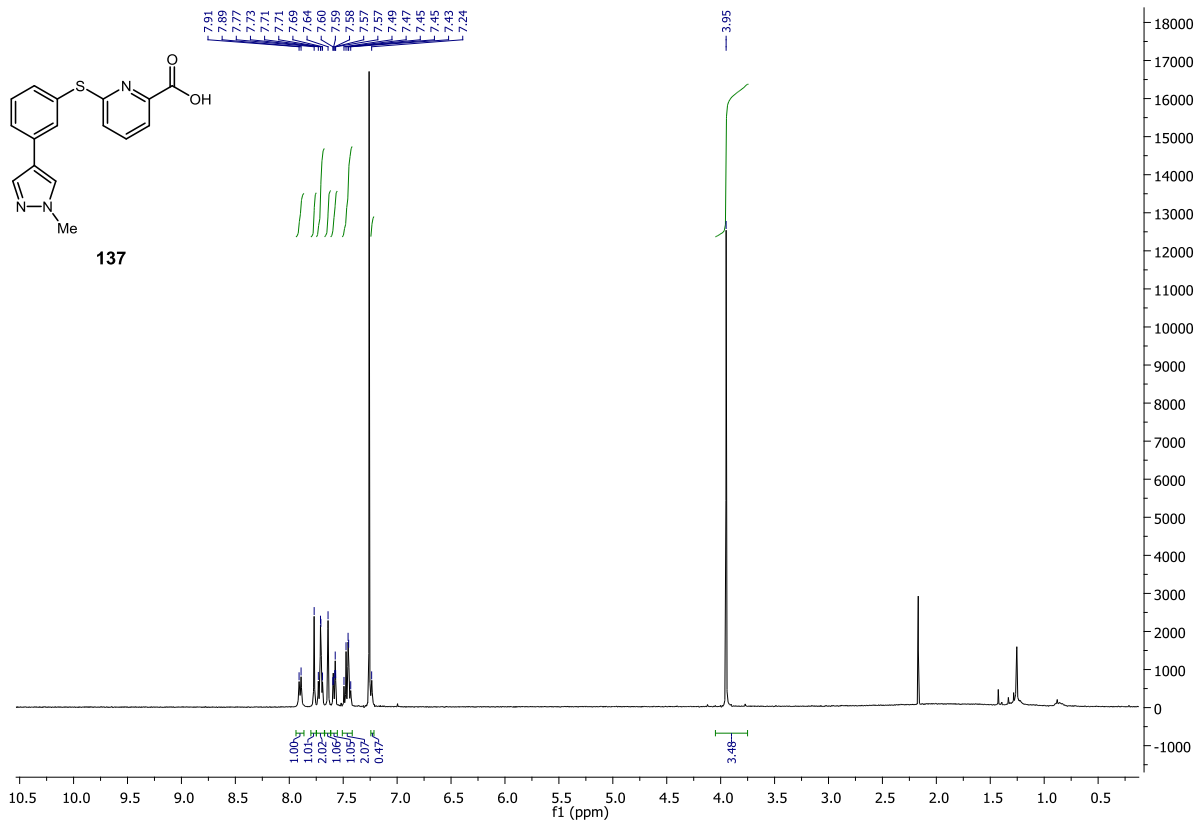


NL:  
 4.43E6  
 STRWAT302-OE-HNESP#36-  
 40 RT: 0.83-0.94 AV: 5 T:  
 FTMS + p NSI Full ms  
 [140.00-1935.00]

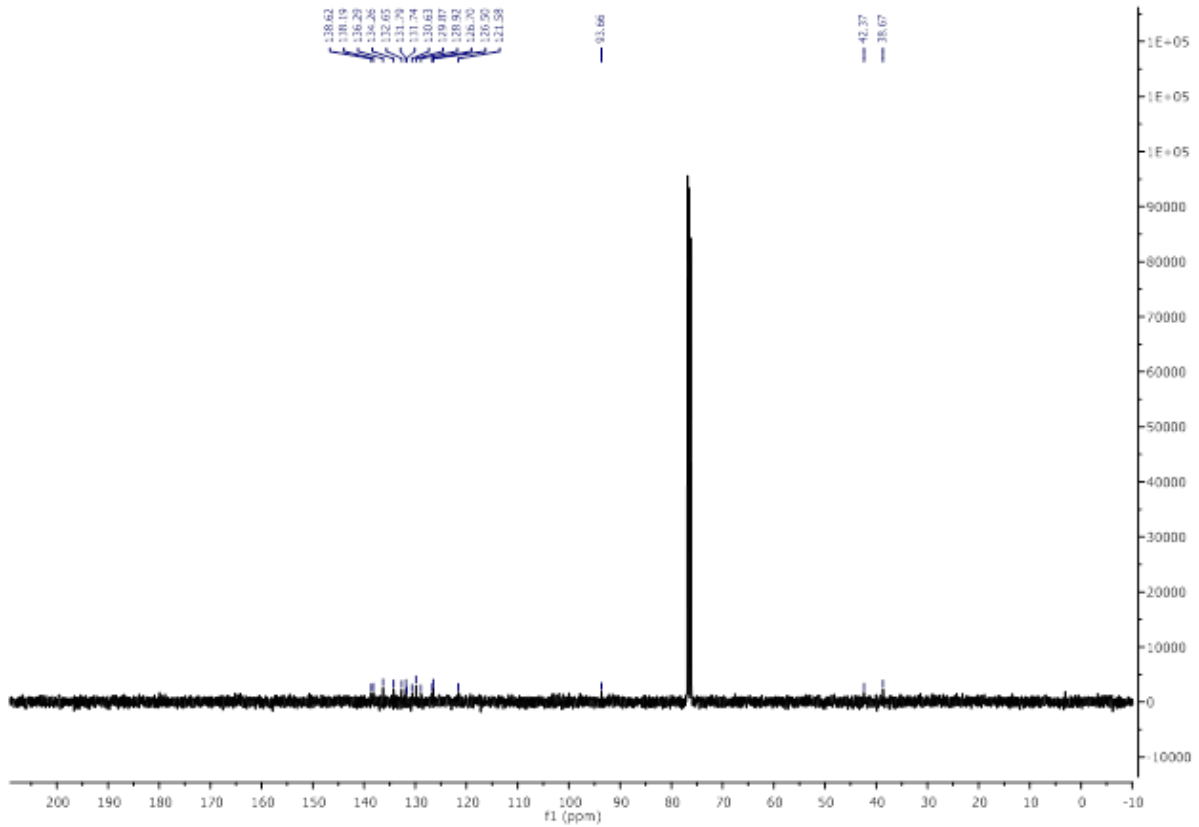
NL:  
 1.78E4  
 C<sub>19</sub> H<sub>16</sub> N<sub>4</sub> O<sub>2</sub> SH:  
 C<sub>19</sub> H<sub>17</sub> N<sub>4</sub> O<sub>2</sub> S<sub>1</sub>  
 p (gss, s /p:40) Chrg 1  
 R: 100000 Res. Pwr. @FWHM

# Compound 137

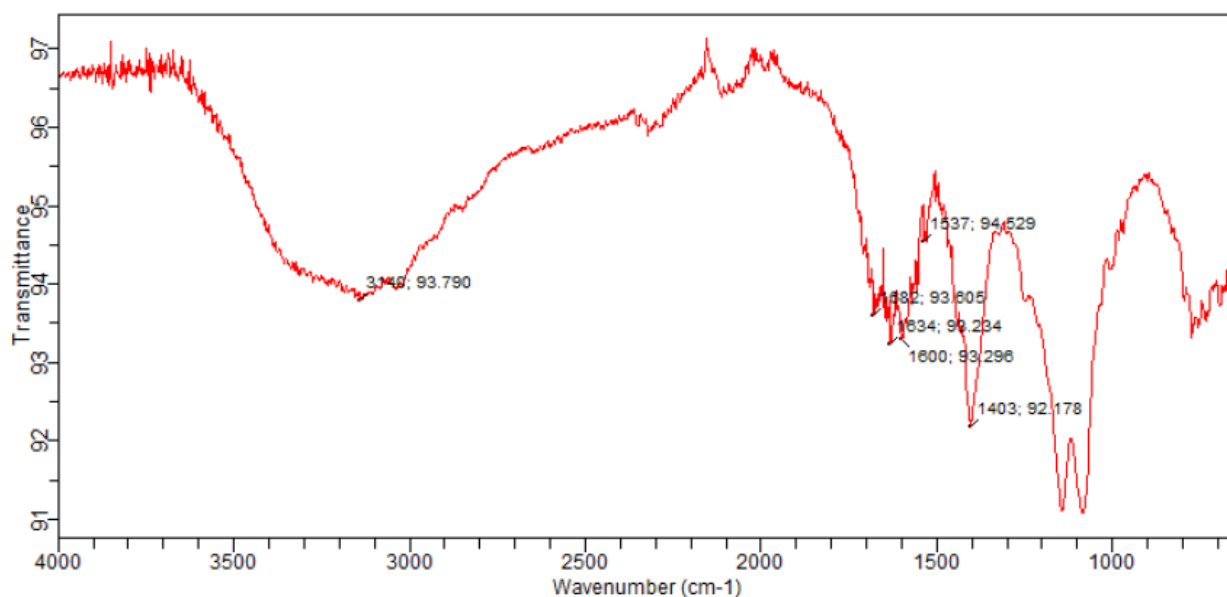
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 137



## IR of 137

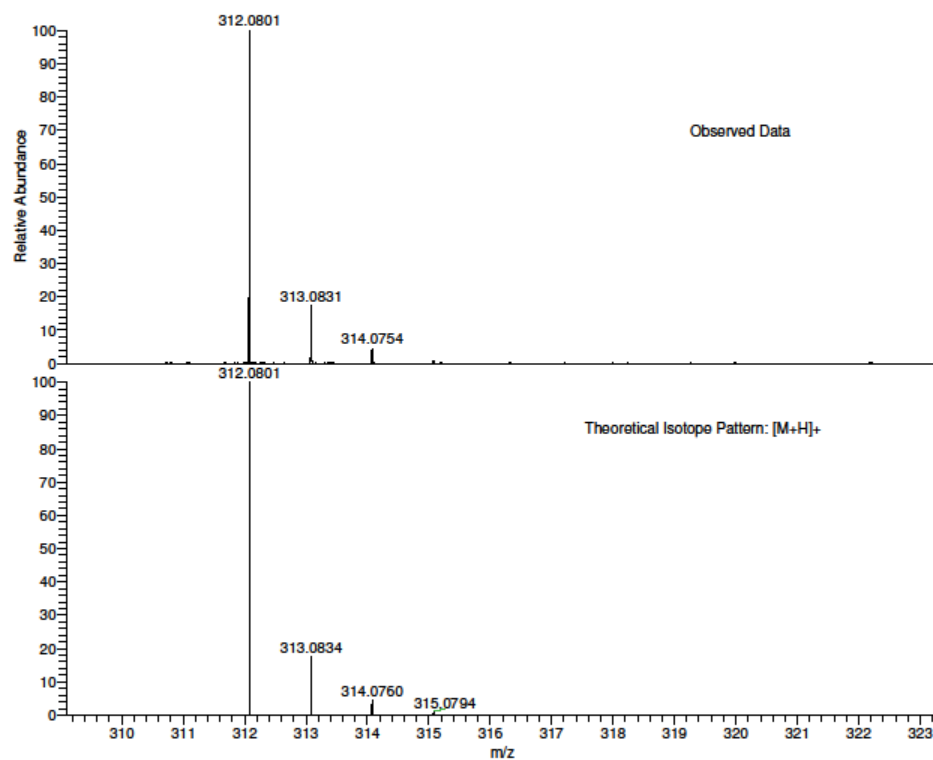


## HRMS of 137

IIDC042 MW=311?  
ASAP (MeOH)

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
26/11/2013 12:17:06

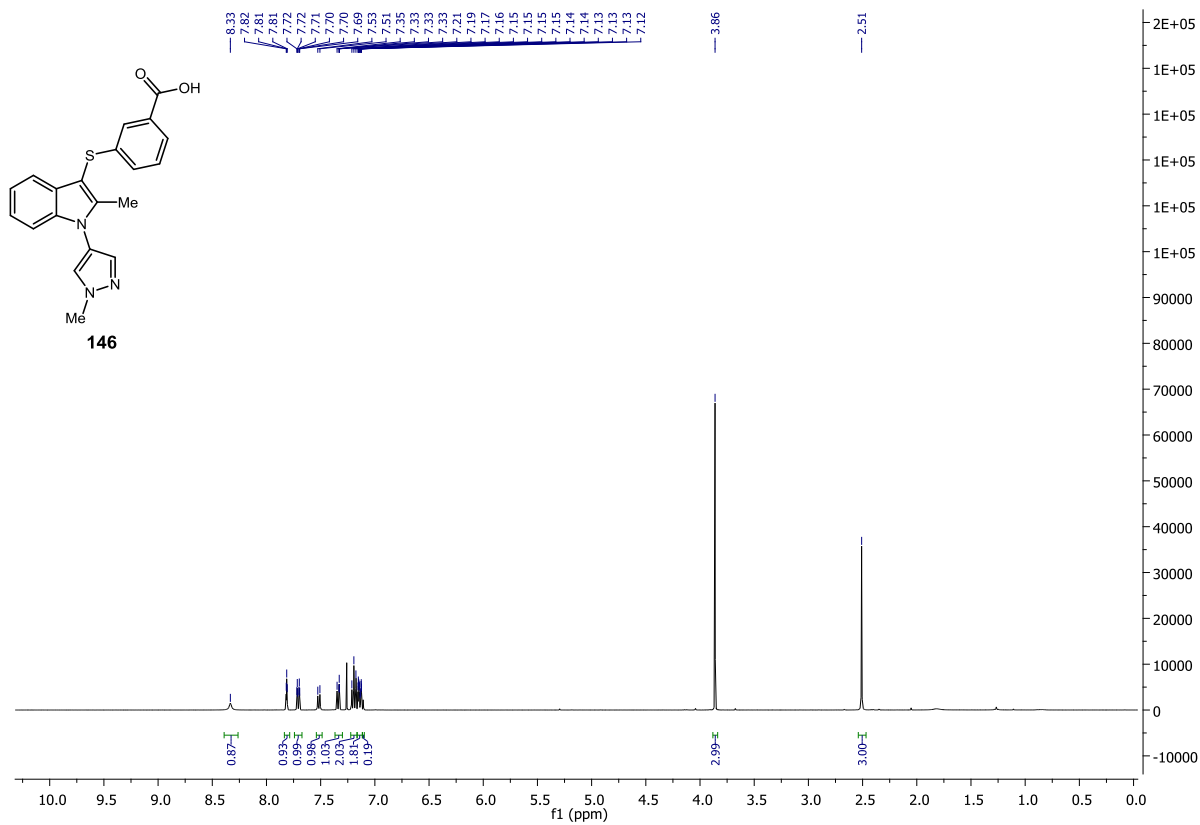


NL:  
6.87E7  
STRWAT149-PJ-HASP#154-  
211 RT: 2.62-3.55 AV: 58 T:  
FTMS + pAPCI corona Full ms  
[100.00-1000.00]

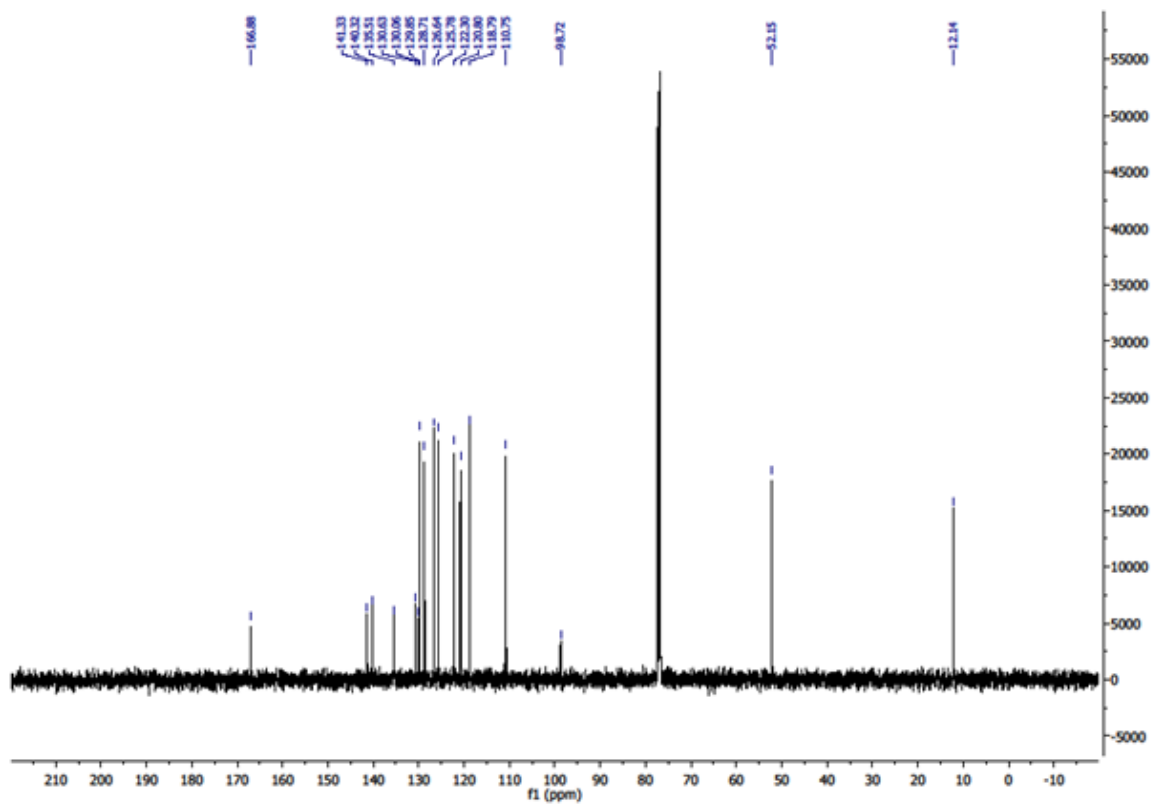
NL:  
1.84E4  
C<sub>16</sub>H<sub>13</sub>N<sub>3</sub>O<sub>2</sub>SH:  
C<sub>15</sub>H<sub>14</sub>N<sub>3</sub>O<sub>2</sub>S<sub>1</sub>  
p (gss, s/p:40) Chrg 1  
R: 100000 Res .Pwr .@FWHM

# Compound 146

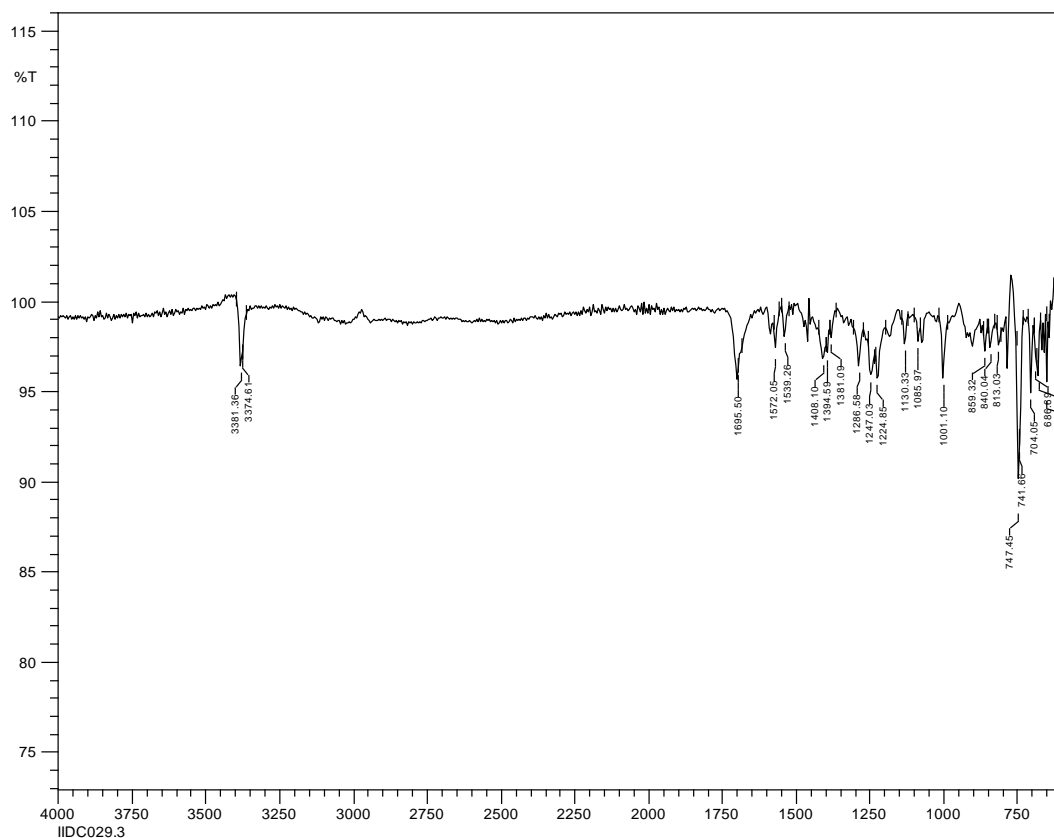
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 146



# IR of 146

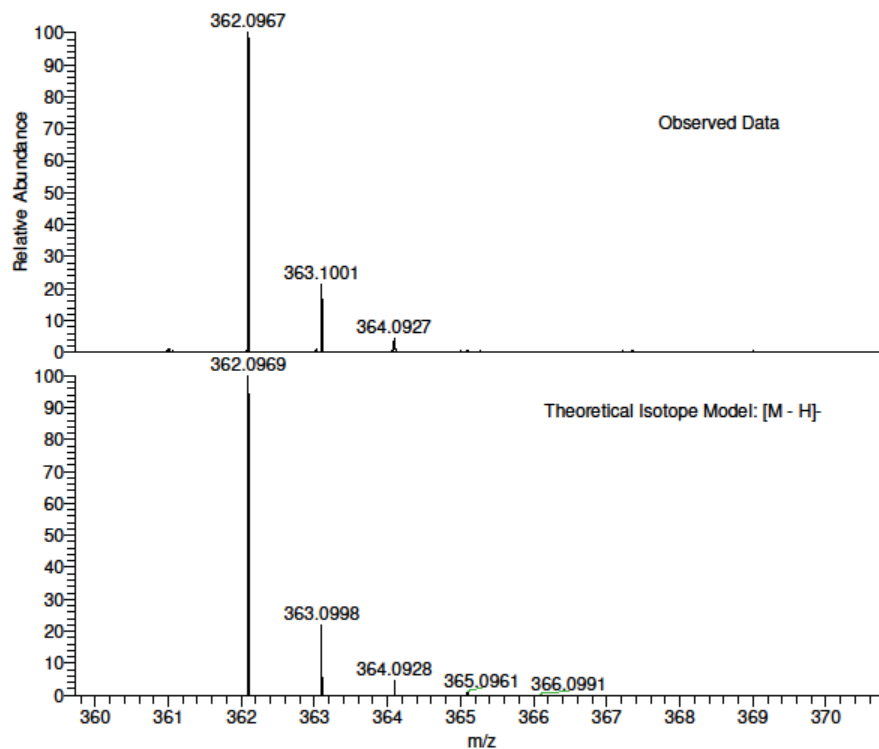


# HRMS of 146

IIDC029.3B MW=363?  
(MeOH)/MeOH+DEA

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
09/10/2013 15:03:27



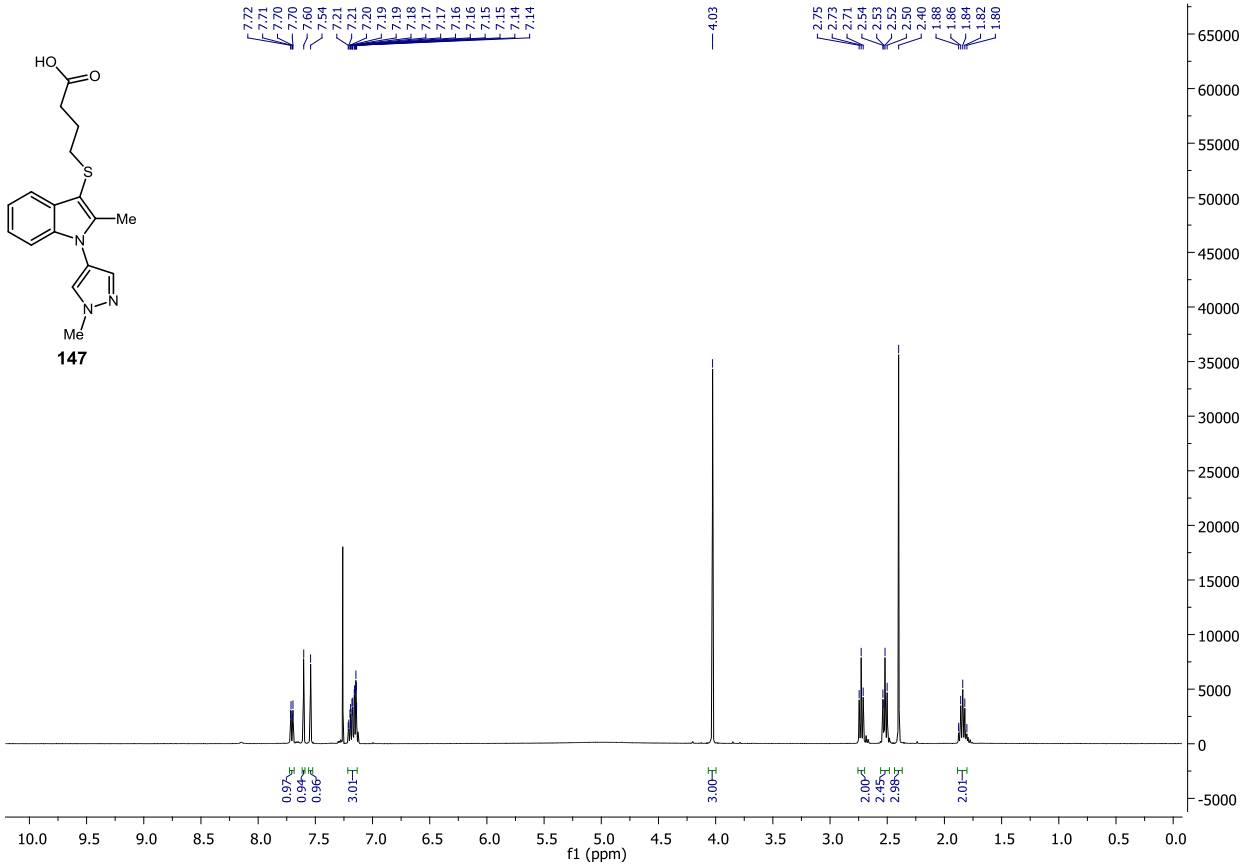
NL:  
3.26E6  
STRWAT116-OJ-HNESN-2#1-  
28 RT: 0.00-0.70 AV: 28 T:  
FTMS - p NSI Full ms  
[150.00-2000.00]

NL:  
1.76E4  
C<sub>20</sub>H<sub>16</sub>N<sub>3</sub>O<sub>2</sub>S:  
C<sub>20</sub>H<sub>16</sub>N<sub>3</sub>O<sub>2</sub>S:  
p (gss, s /p:40) Chrg -1  
R: 100000 Res .Pwr .@FWHM

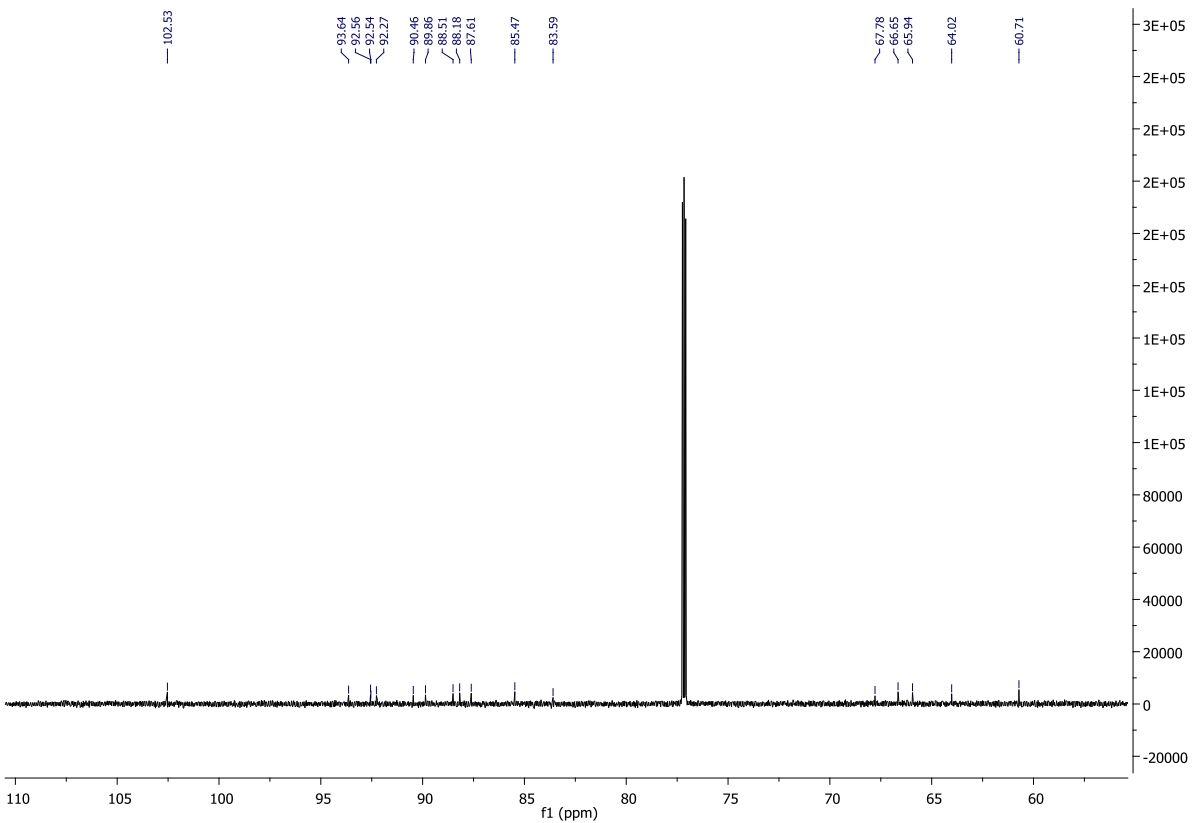


# Compound 147

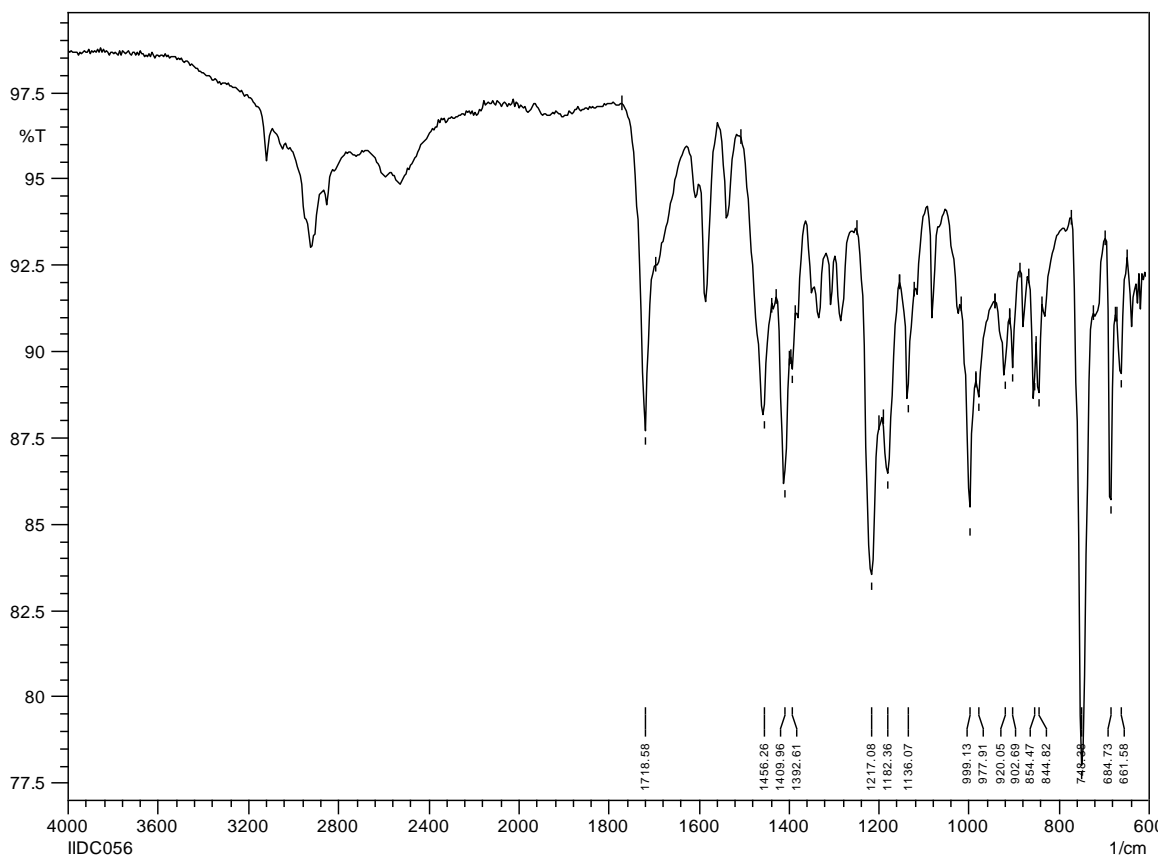
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 147



# IR of 147



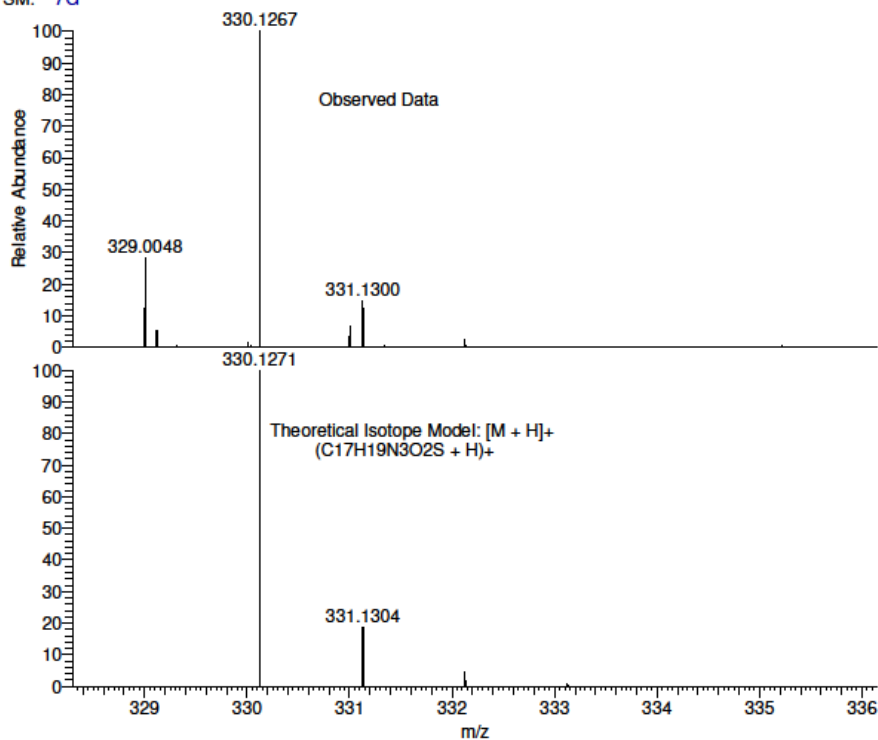
# HRMS of 147

IIDC056 MW=297?  
ASAP(SOLID)

EPSRC UK National Facility Swansea  
LTQ Orbitrap XL

Submitter  
06/08/2014 11:14:47

SM: 7G

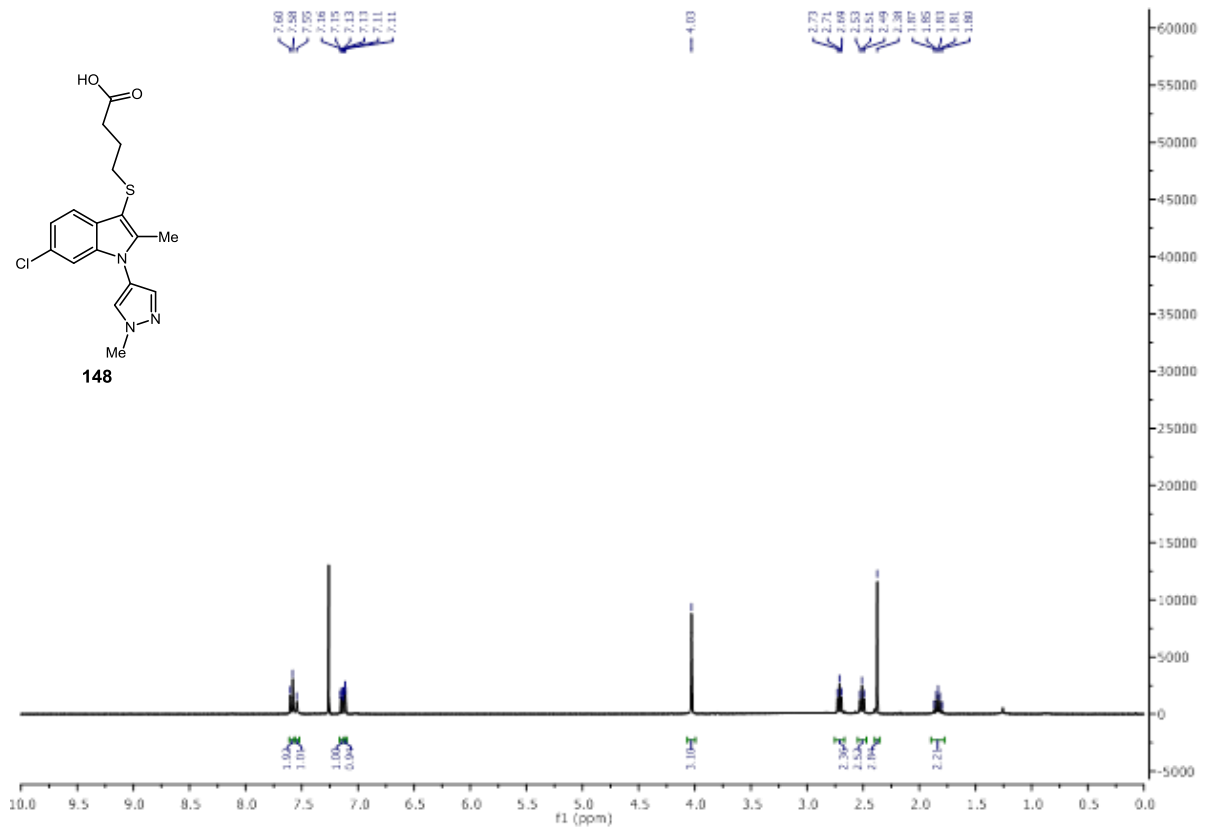


NL:  
1.57E6  
STRWAT304-PG-HASP#84-94  
RT: 2.38-2.67 AV: 11 T:  
FTMS + p APCI corona Full ms  
[100.00-800.00]

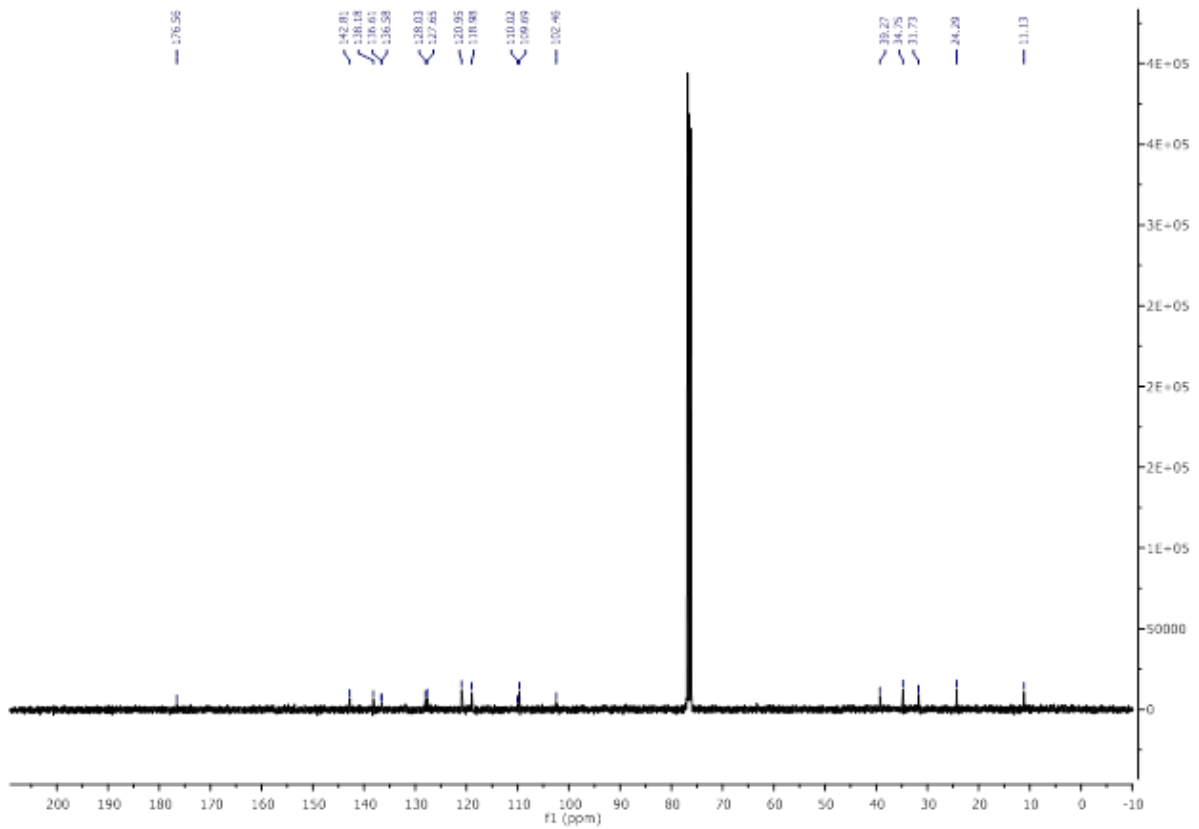
NL:  
1.82E4  
C<sub>17</sub>H<sub>19</sub>N<sub>3</sub>O<sub>2</sub>SH:  
C<sub>17</sub>H<sub>20</sub>N<sub>3</sub>O<sub>2</sub>S:  
p (gss, s/p:40) Chrg 1  
R: 100000 Res .Pwr .@FWHM

# Compound 148

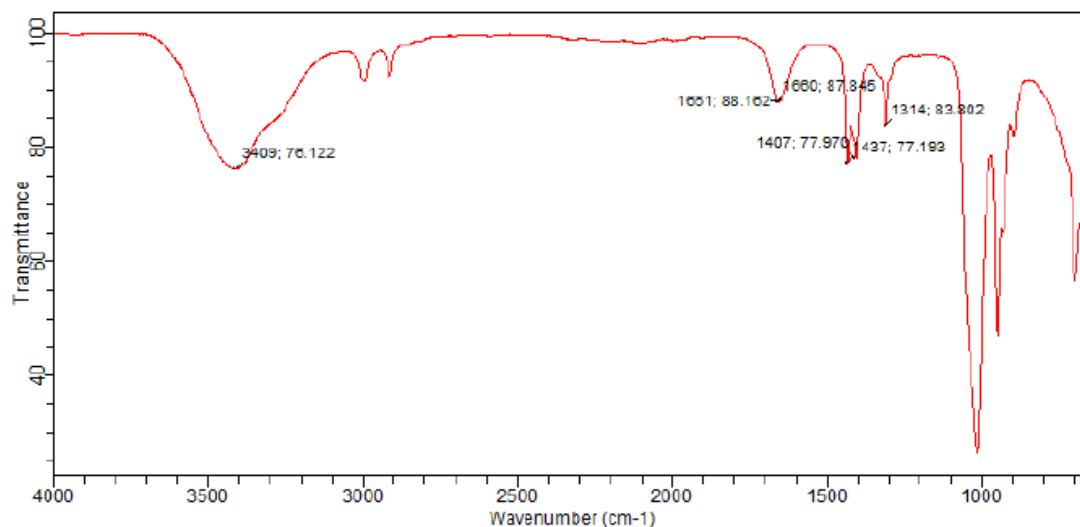
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 148



## IR of 148

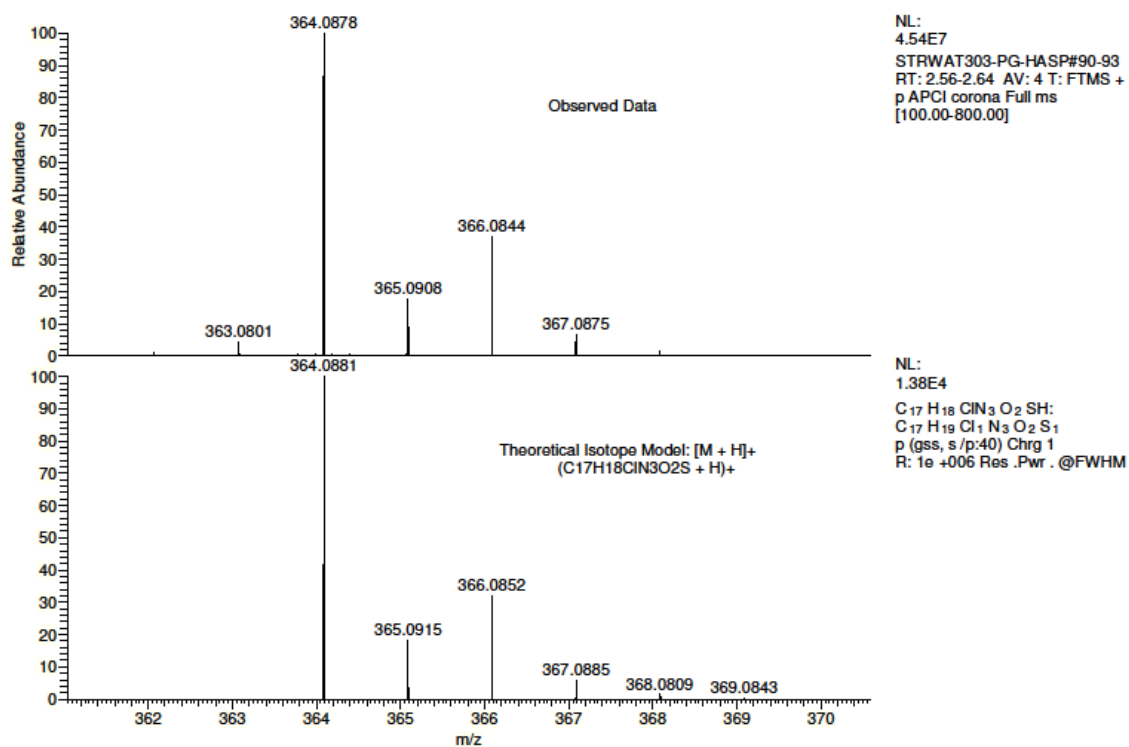


## HRMS of 148

IIDC057 MW=331?  
ASAP(SOLID)

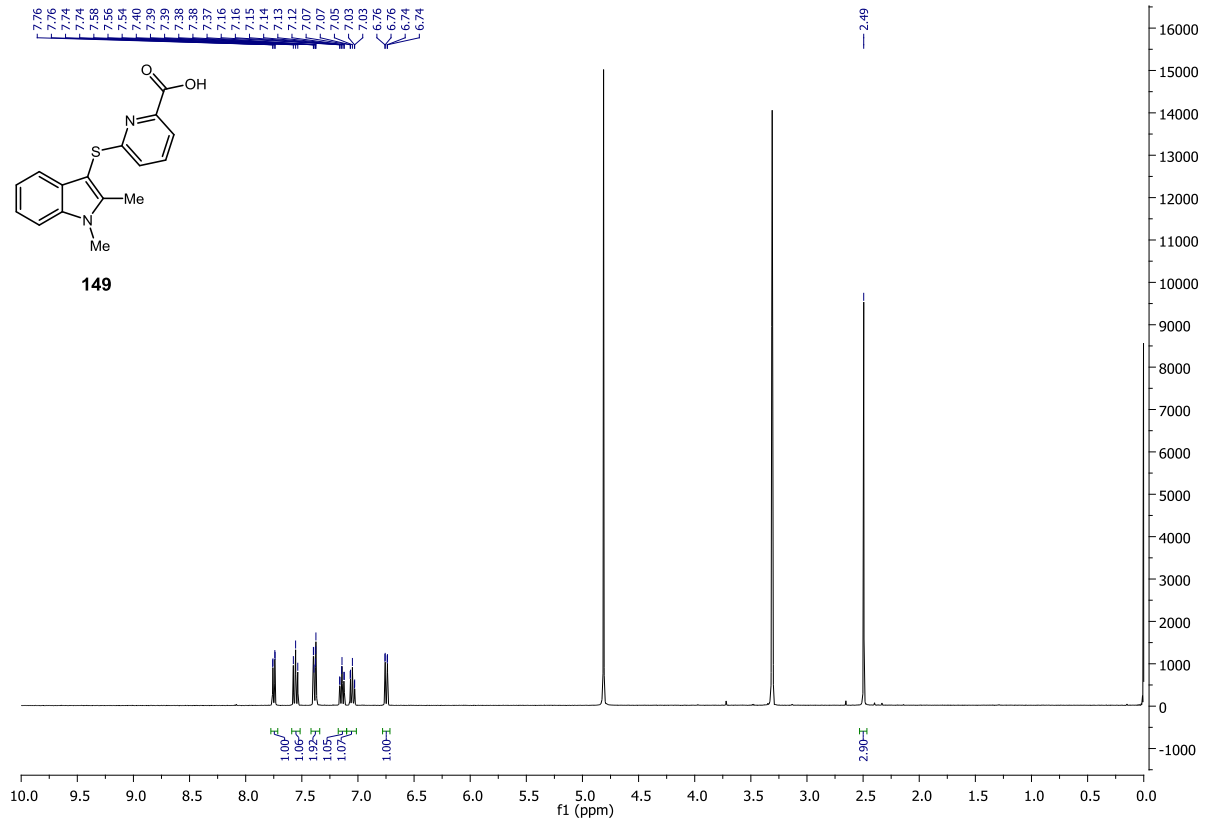
EPSRC UK National Facility Swansea  
LTQ Orbitrap XL

Diana  
06/08/2014 08:34:03

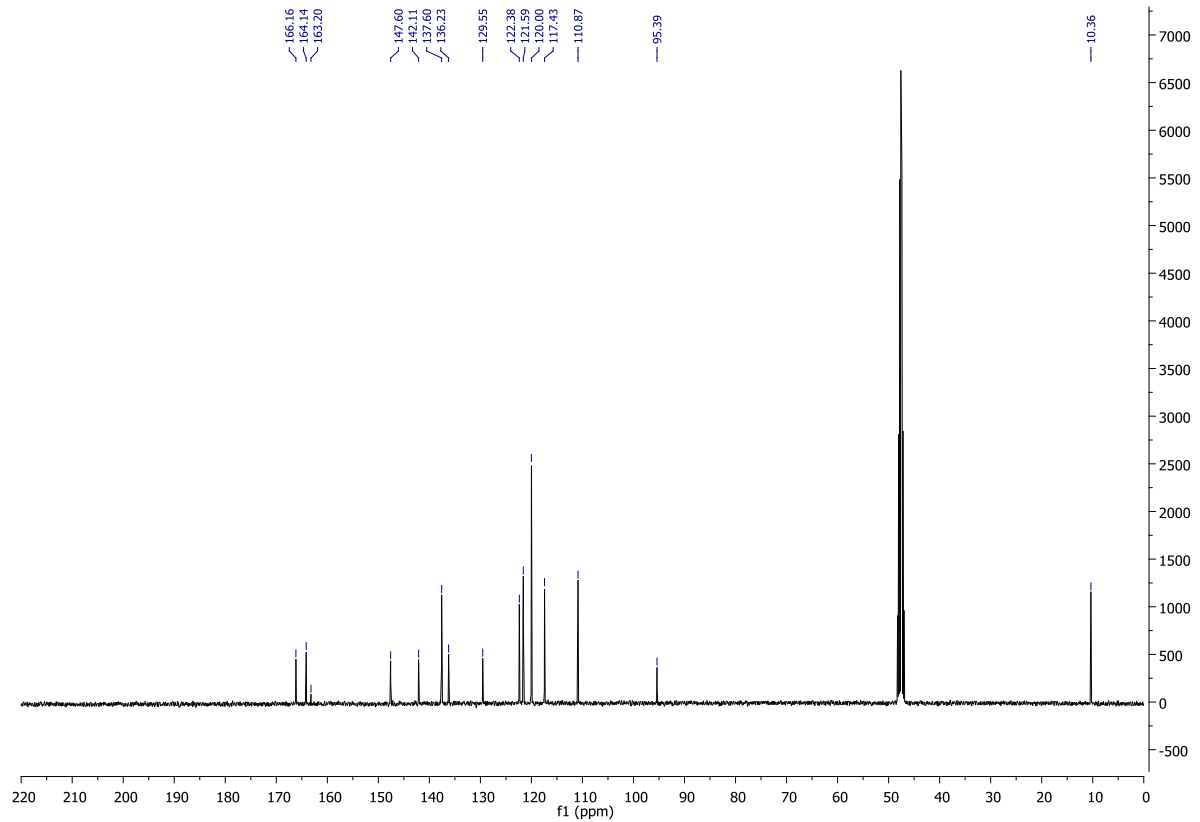


# Compound 149

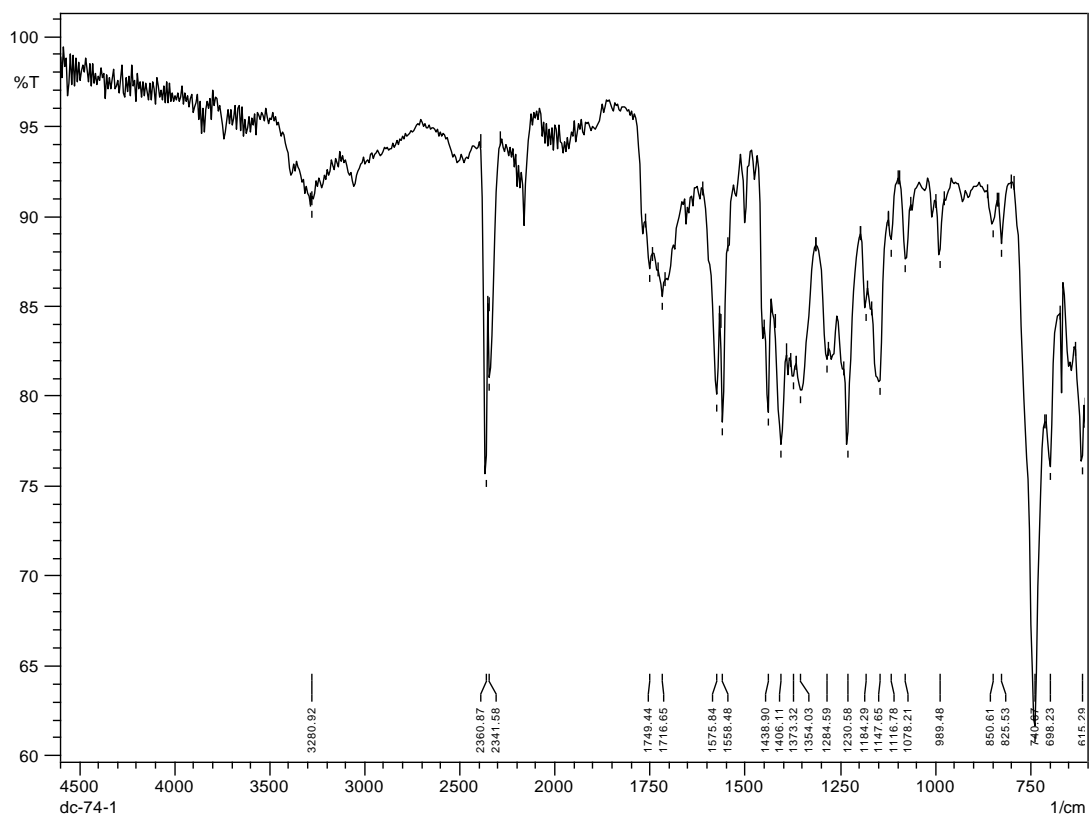
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 149

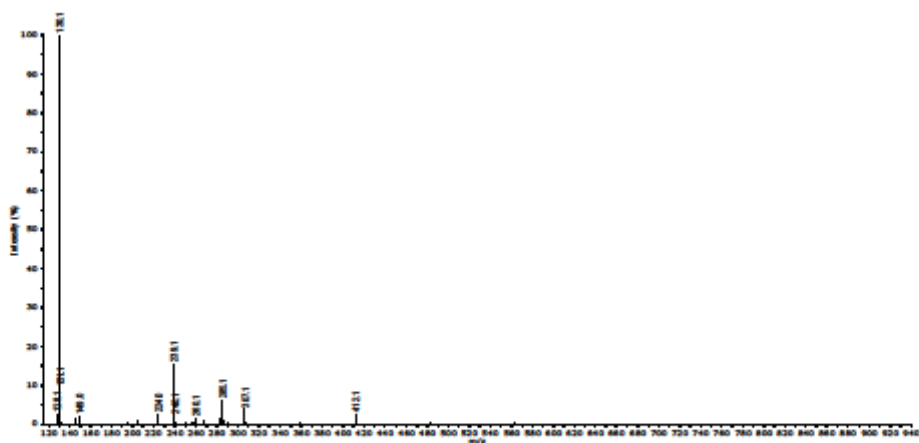


# IR of 149

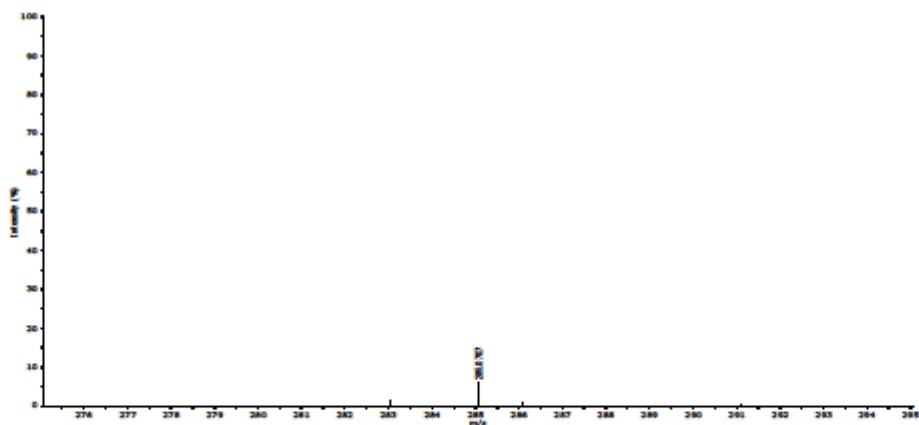


# HRMS of 149

Spectrum RT 4.19, Peak [1], Target Mass 285.0692



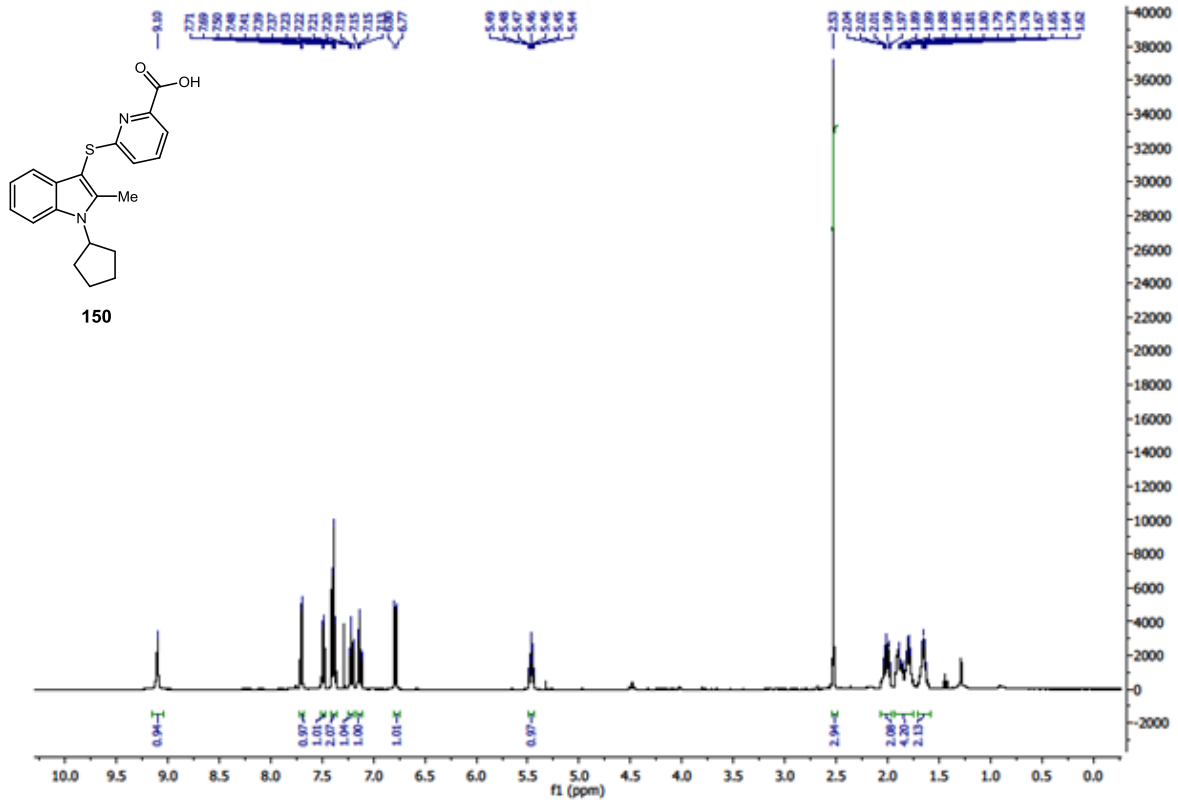
Expanded Spectrum RT 4.19, Peak [1], Target Mass 285.0692



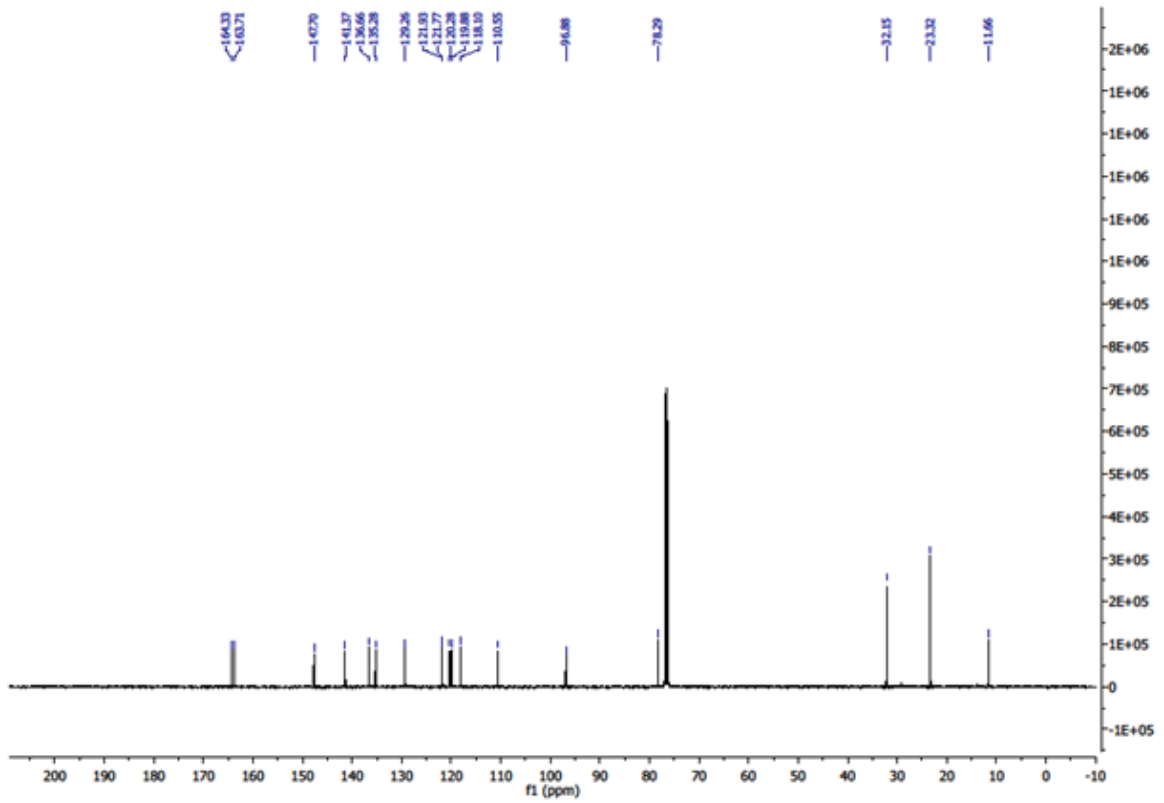
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
285.0693	285.0692	0.1	0.2	C <sub>15</sub> H <sub>13</sub> N <sub>2</sub> O <sub>2</sub> S

# Compound 150

## <sup>1</sup>H NMR

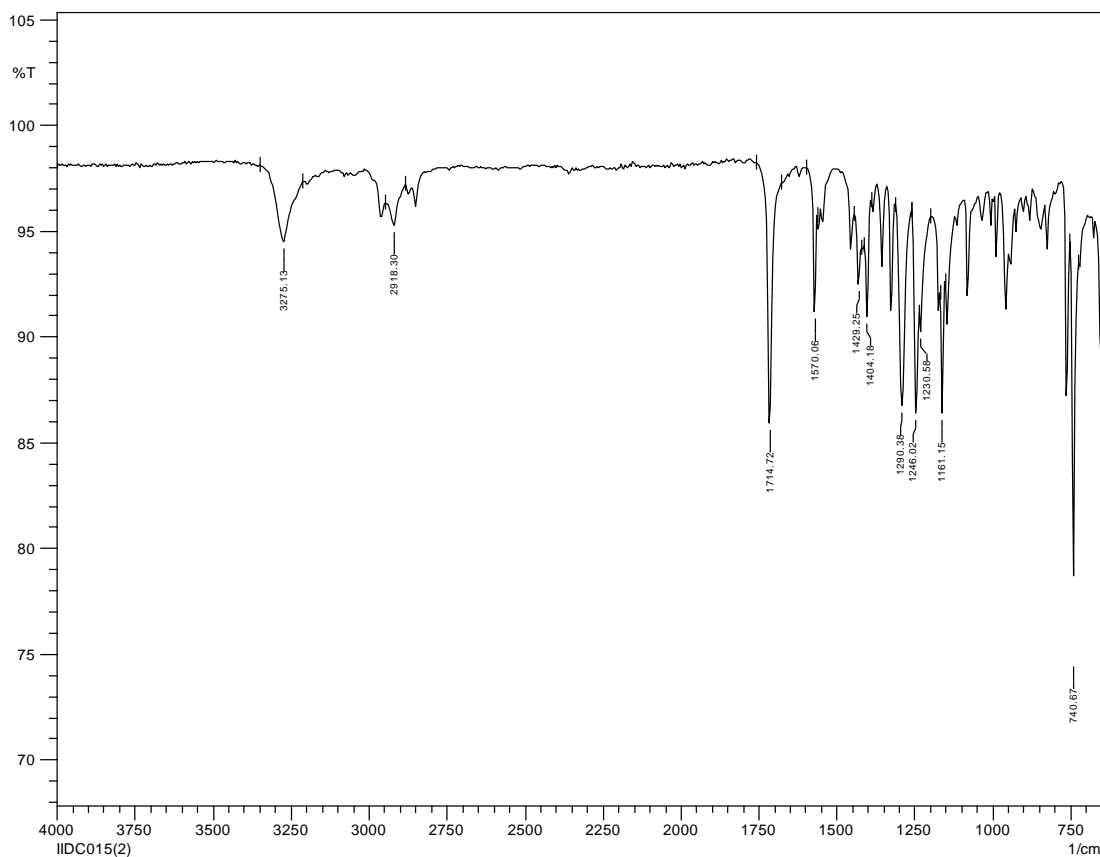


## <sup>13</sup>C NMR of 150





## IR of 150

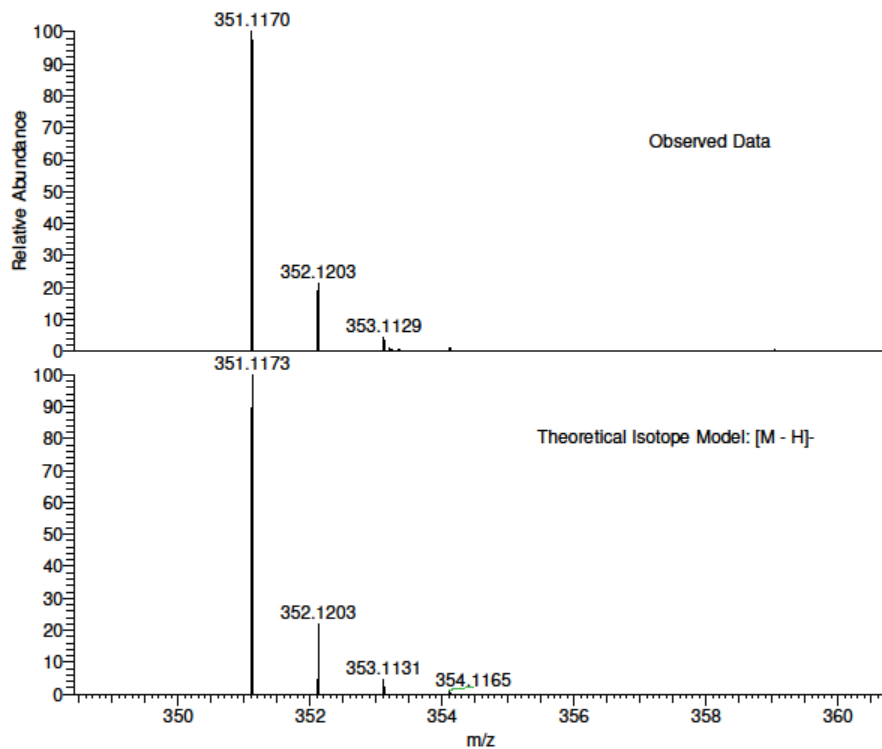


## HRMS of 150

IIDC015.1 MW=652?  
(MeOH)/MeOH+DEA

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
09/10/2013 15:08:49

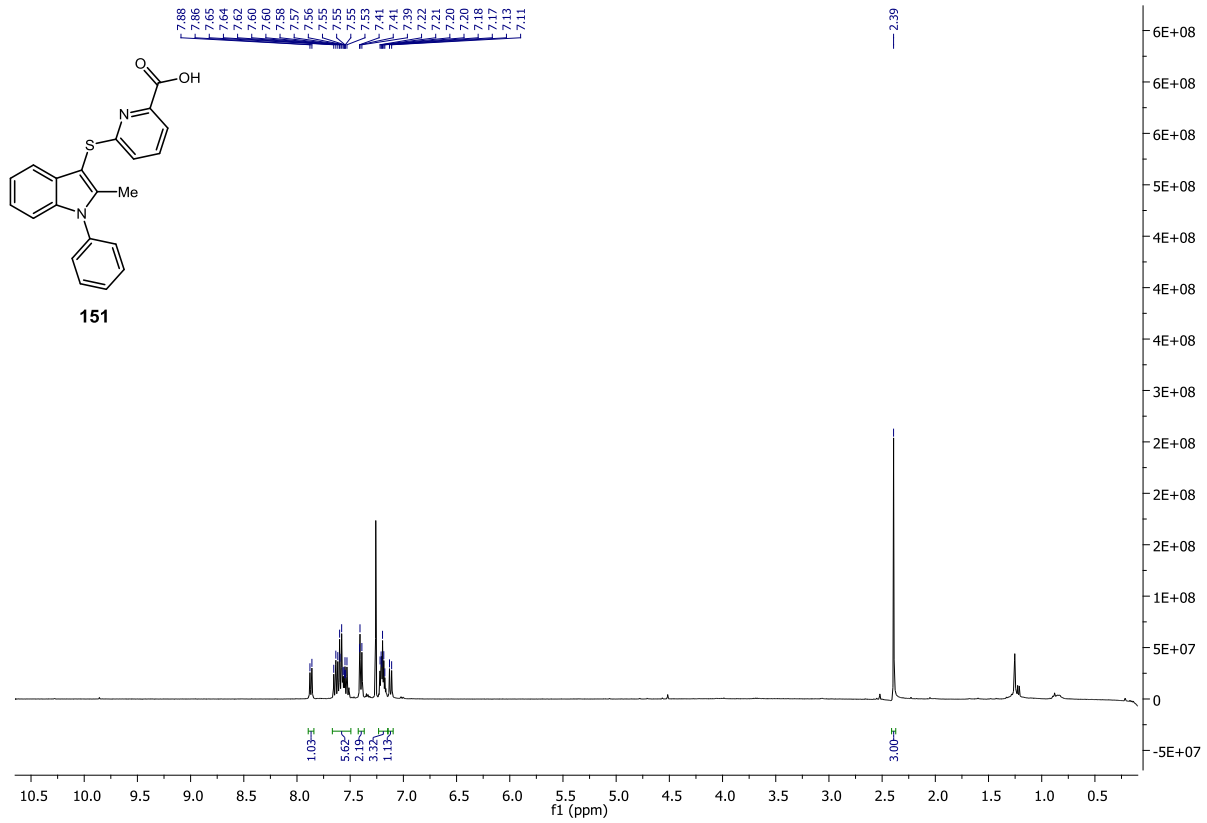


NL:  
6.25E6  
STRWAT119-OJ-HNESN-2#5-  
57 RT: 0.10-1.42 AV: 53 T:  
FTMS - p NSI Full ms  
[150.00-2000.00]

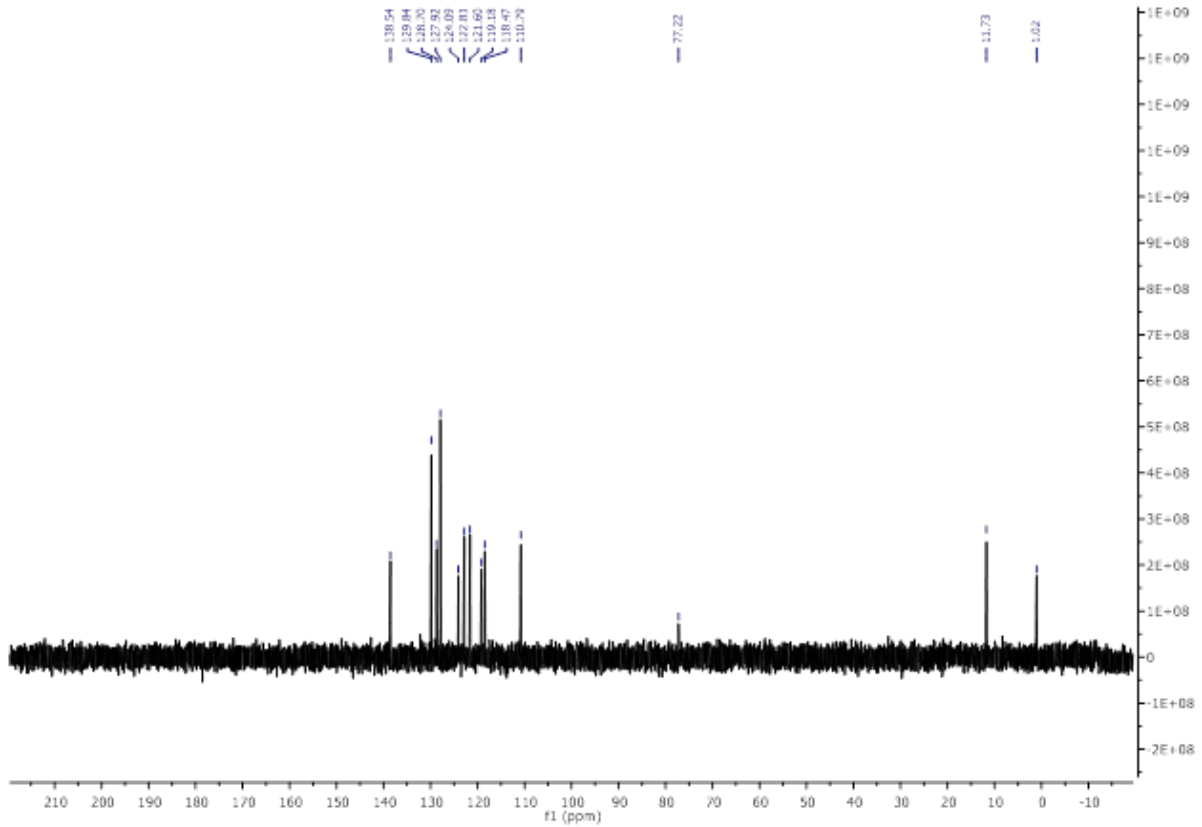
NL:  
1.77E4  
C<sub>20</sub>H<sub>19</sub>N<sub>2</sub>O<sub>2</sub>S:  
C<sub>20</sub>H<sub>19</sub>N<sub>2</sub>O<sub>2</sub>S<sub>1</sub>  
p (gss, s /p:40) Chrg -1  
R: 100000 Res .Pwr . @FWHM

# Compound 151

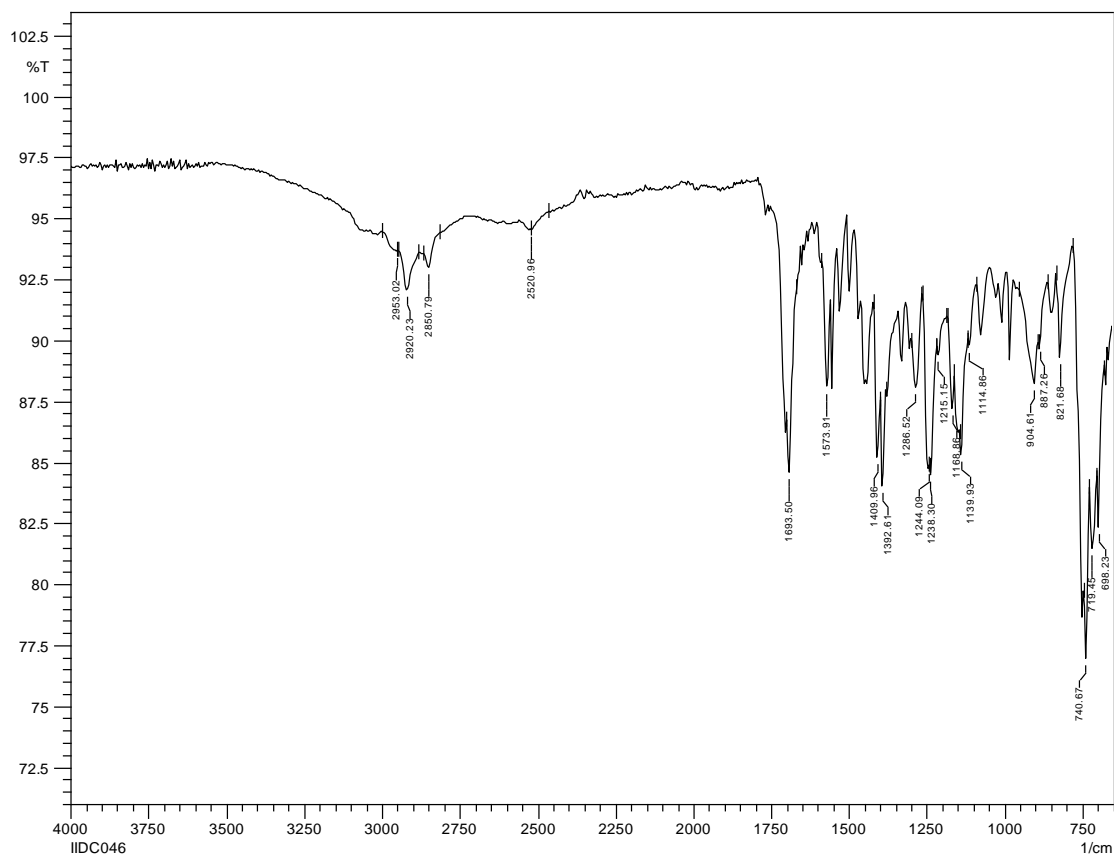
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 151



### IR of 151



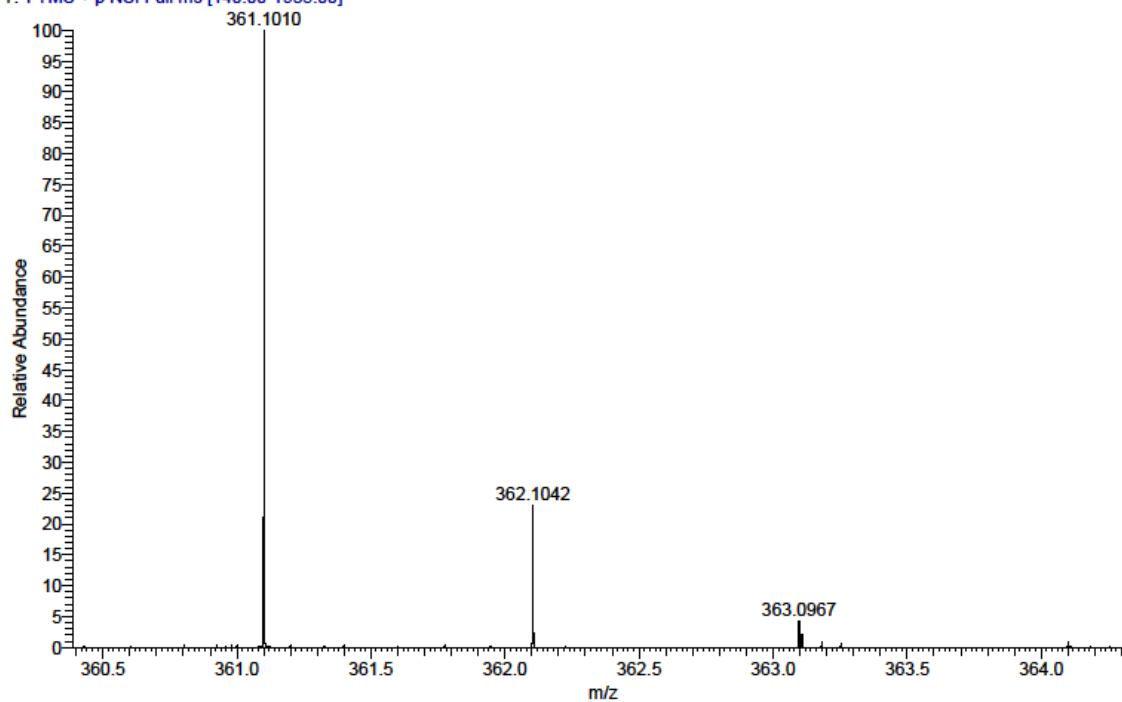
### HRMS of 151

IIDC046 MW=361?  
C<sub>21</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>S  
(MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

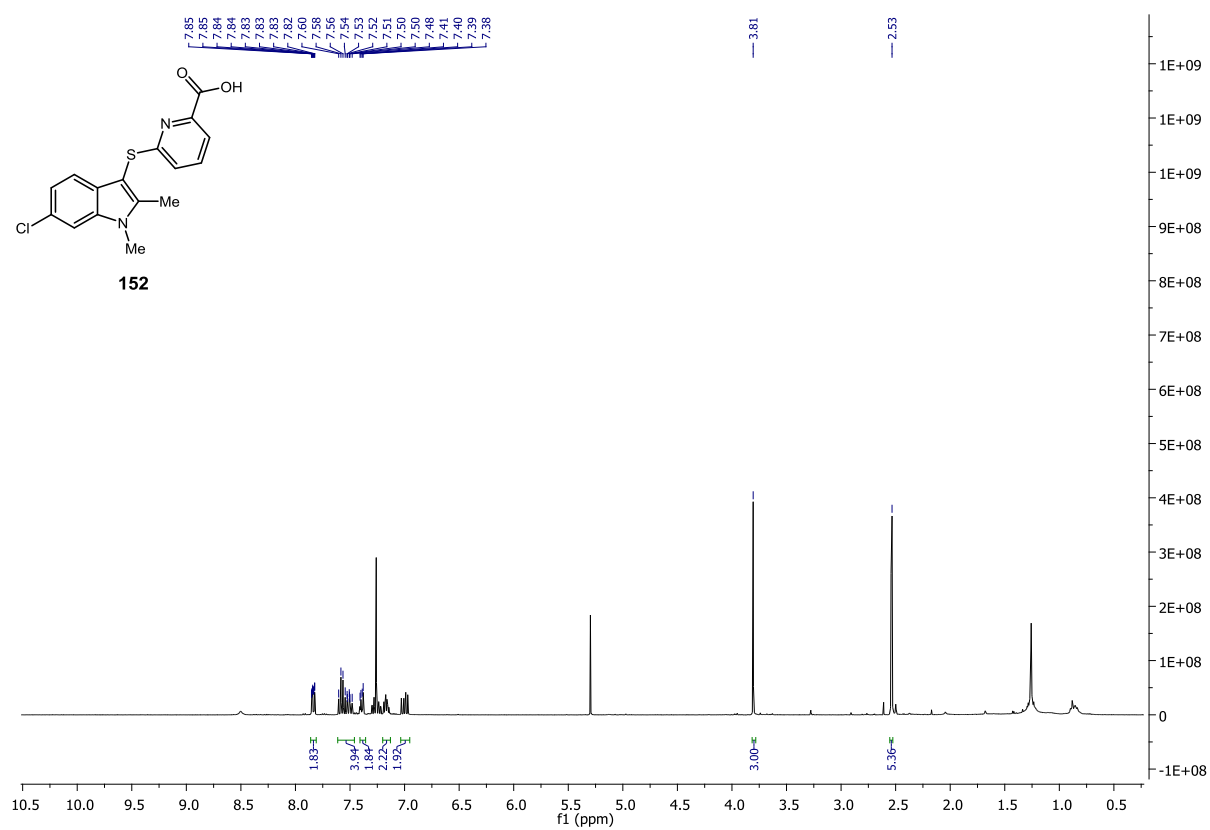
Diana Castagna  
05/08/2014 13:31:35

STRWAT310-OE-HNESP #36-40 RT: 0.82-0.94 AV: 5 NL: 1.67E6  
T: FTMS + p NSI Full ms [140.00-1935.00]

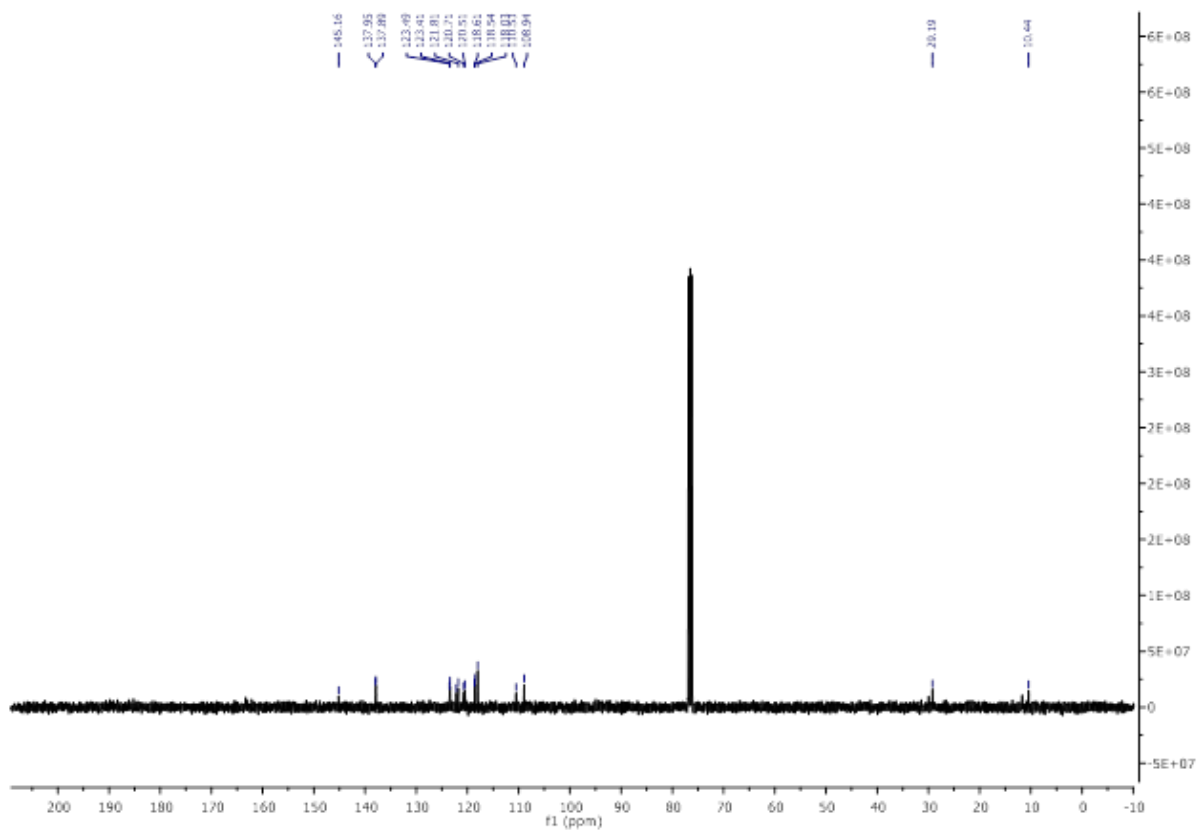


# Compound 152

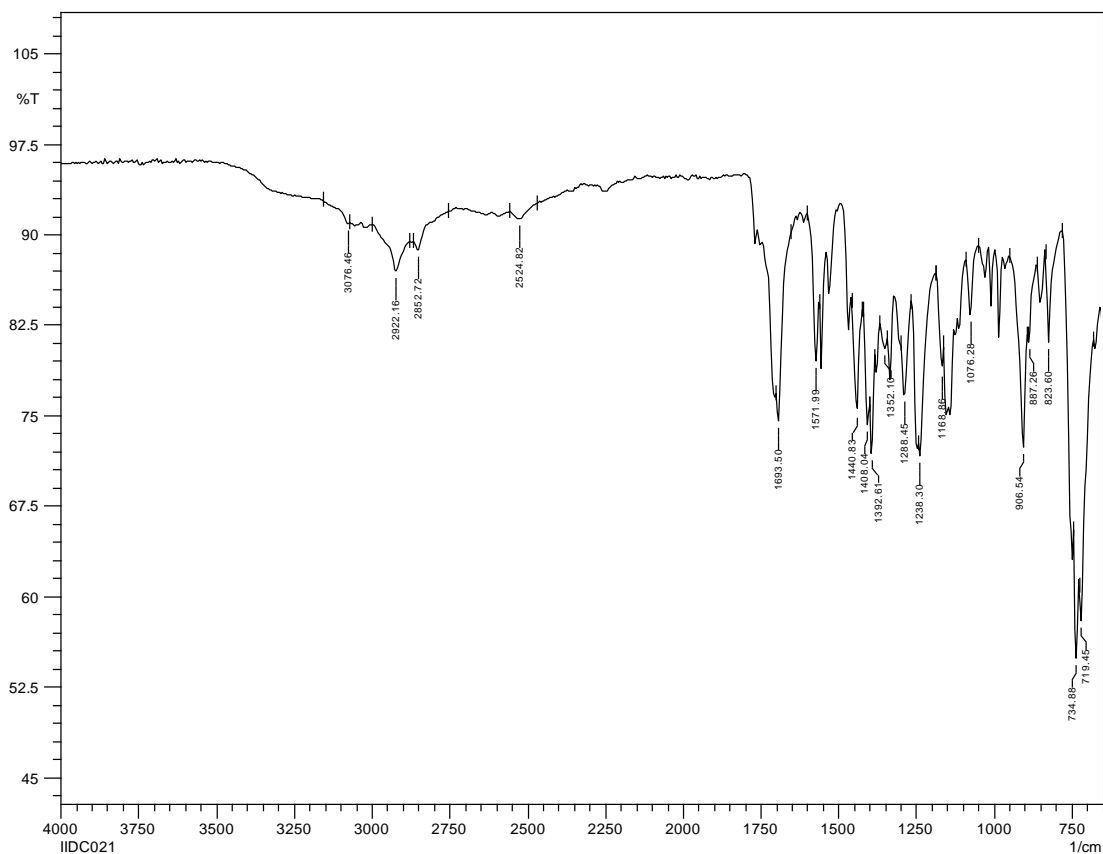
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 152



## IR of 152



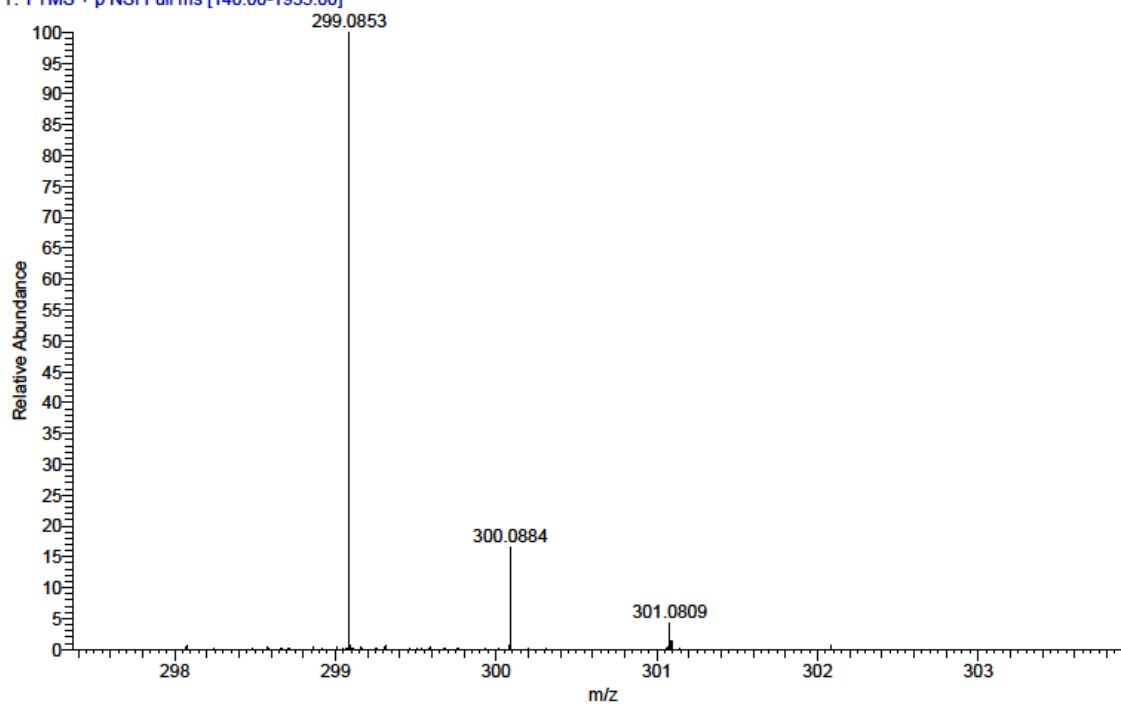
## HRMS of 152

IIDC021 MW=298?  
C<sub>16</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>S  
(MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

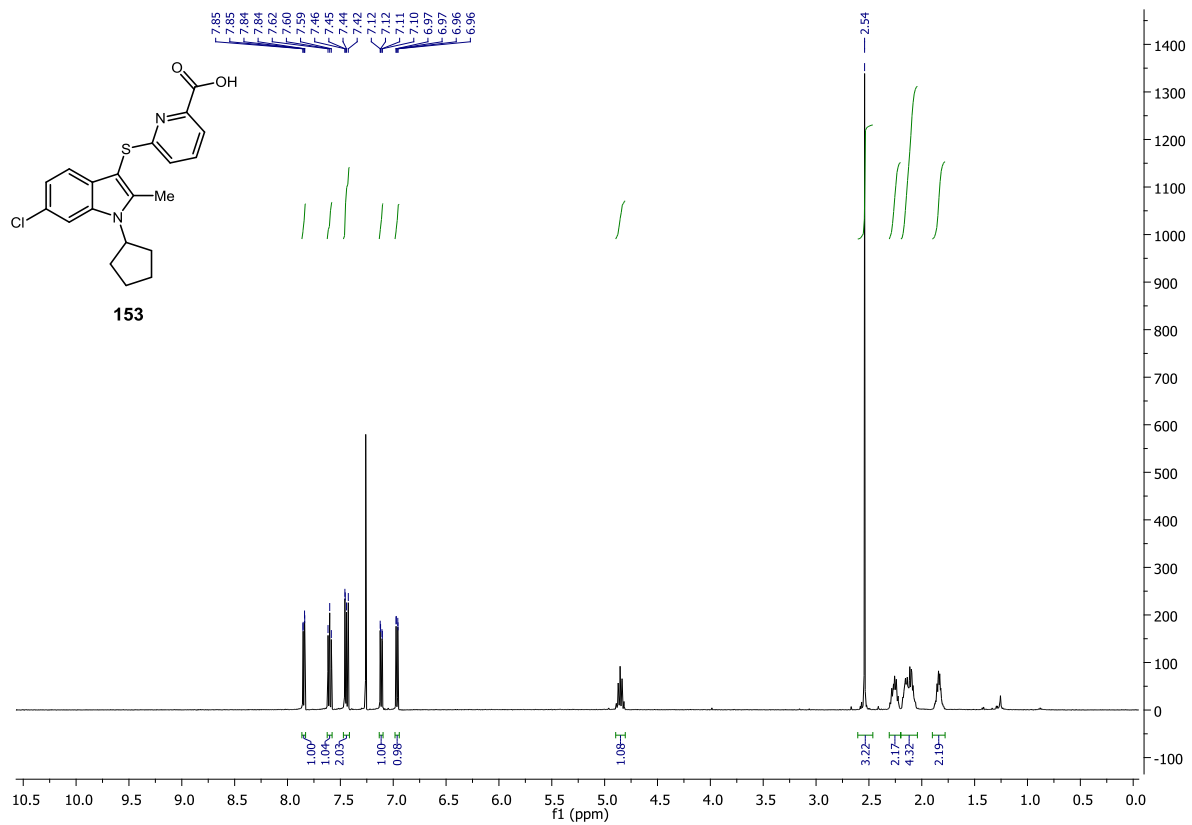
Diana Castagna  
05/08/2014 13:34:26

STRWAT311-OE-HNESP #37-41 RT: 0.83-0.94 AV: 5 NL: 1.25E7  
T: FTMS + p NSI Full ms [140.00-1935.00]

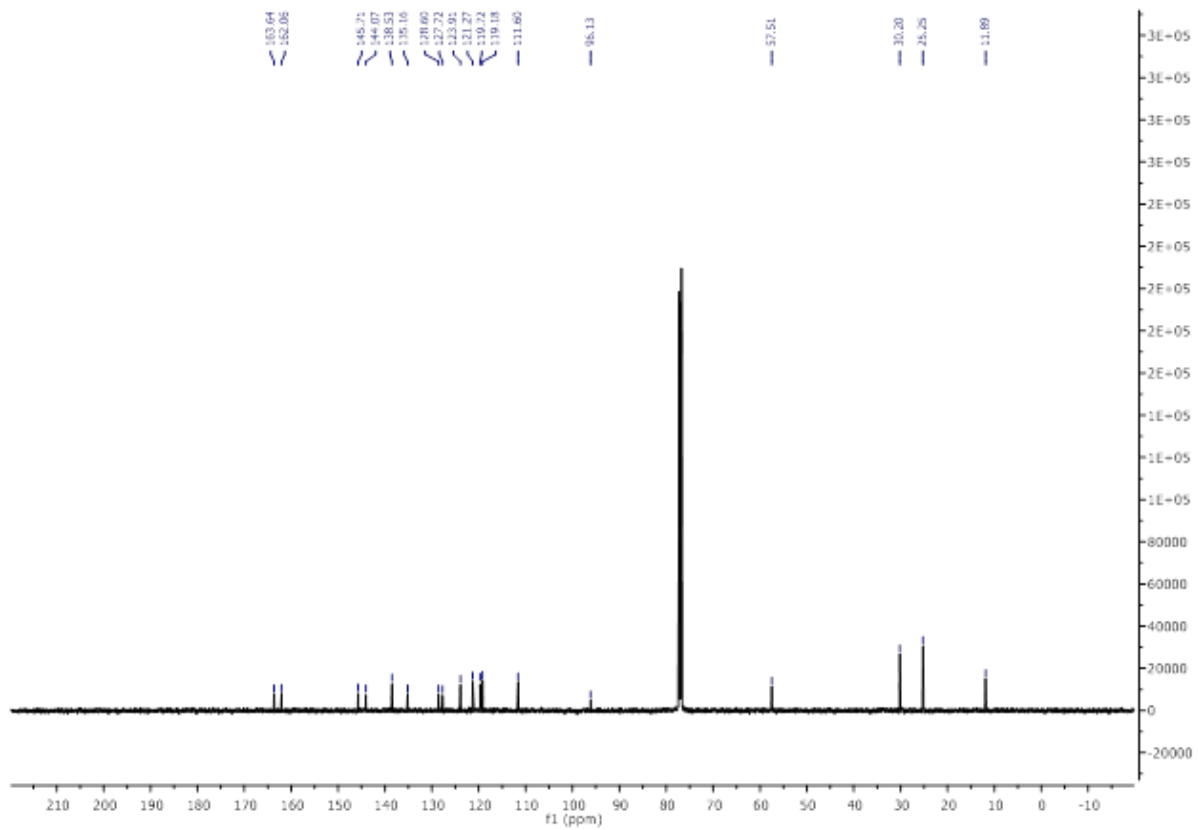


# Compound 153

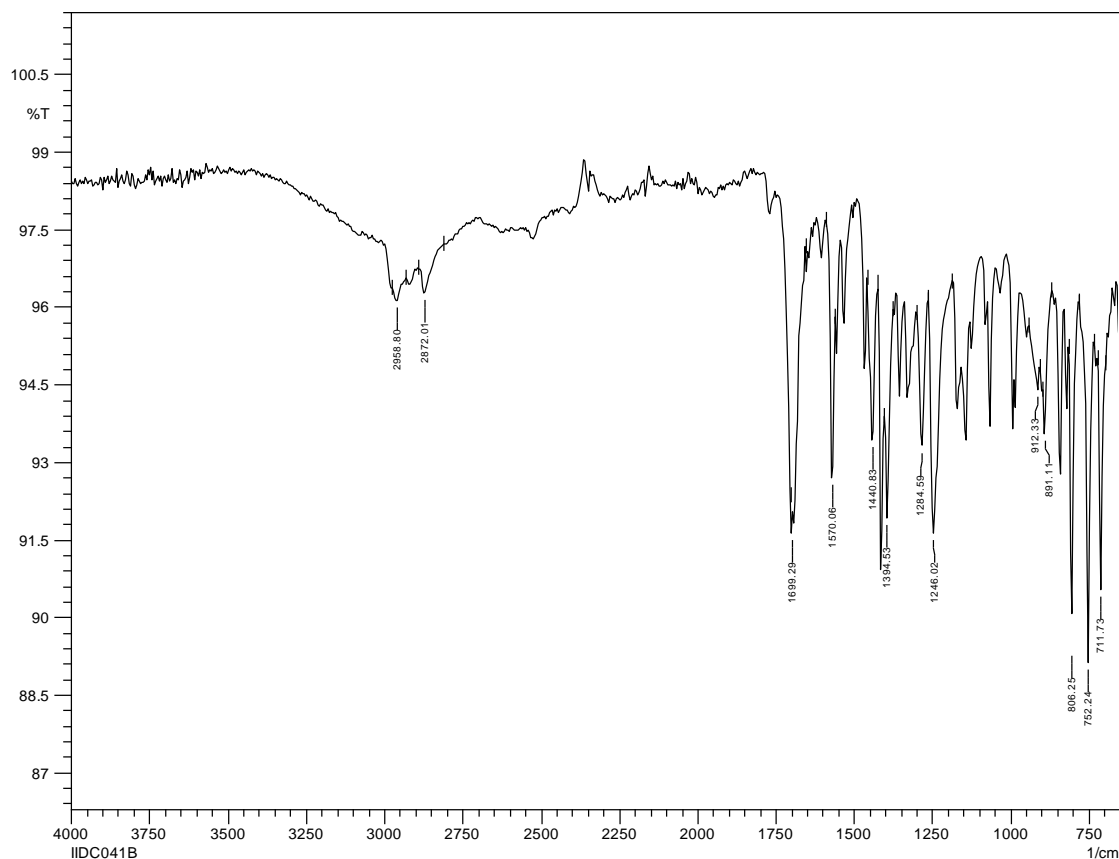
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 153



# IR of 153

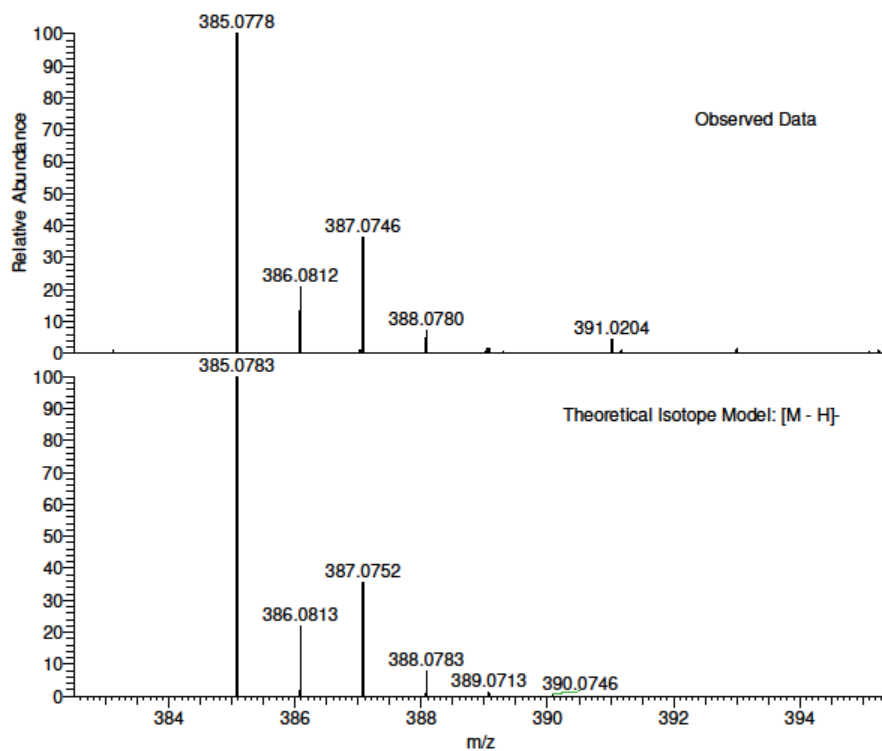


# HRMS of 153

IIC041 MW-386?  
(MeOH)/MeOH+DEA

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
09/10/2013 15:30:34

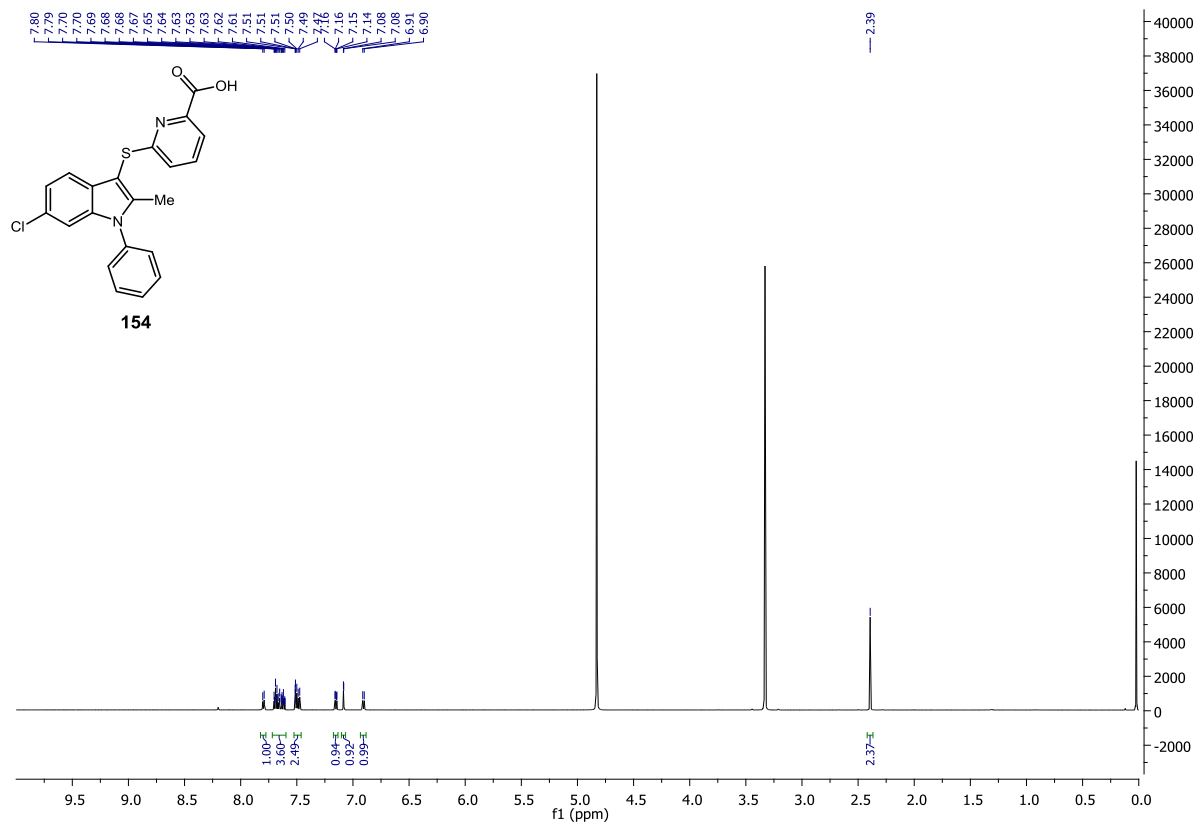


NL:  
2.00E6  
STRWAT115-OJ-HNESN-3#21-  
52 RT: 0.52-1.32 AV: 32 T:  
FTMS - p NSI Full ms  
[150.00-2000.00]

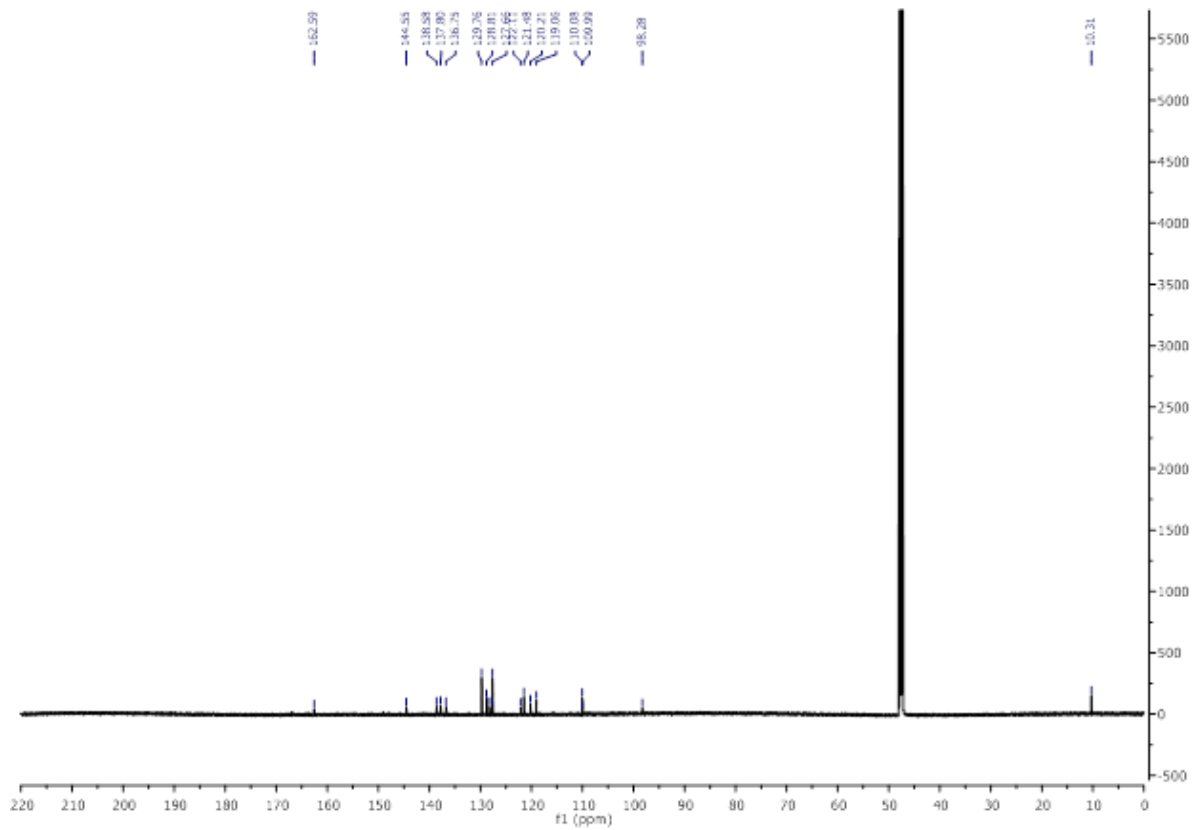
NL:  
1.34E4  
C<sub>20</sub>H<sub>18</sub>ClN<sub>2</sub>O<sub>2</sub>S:  
C<sub>20</sub>H<sub>18</sub>Cl<sub>1</sub>N<sub>2</sub>O<sub>2</sub>S<sub>1</sub>  
p (gss, s /p:40) Chrg -1  
R: 100000 Res .Pwr . @FWHM

# Compound 154

## <sup>1</sup>H NMR

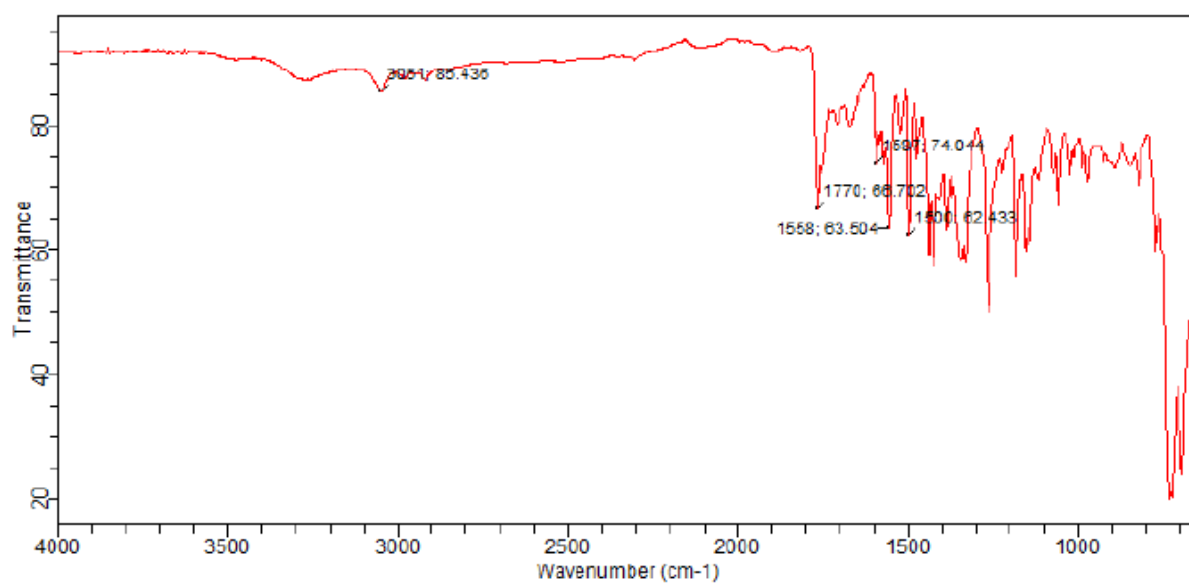


## <sup>13</sup>C NMR of 154



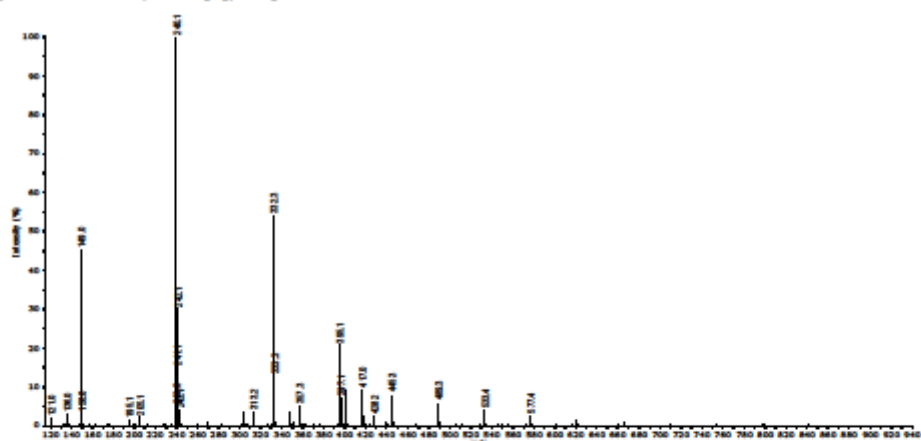


# IR of 154

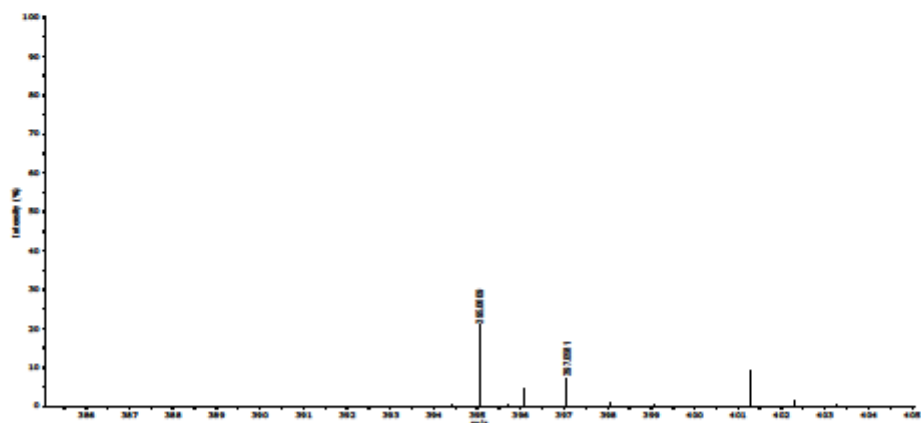


# HRMS of 154

Spectrum RT 6.11, Peak [1], Target Mass 395.0616



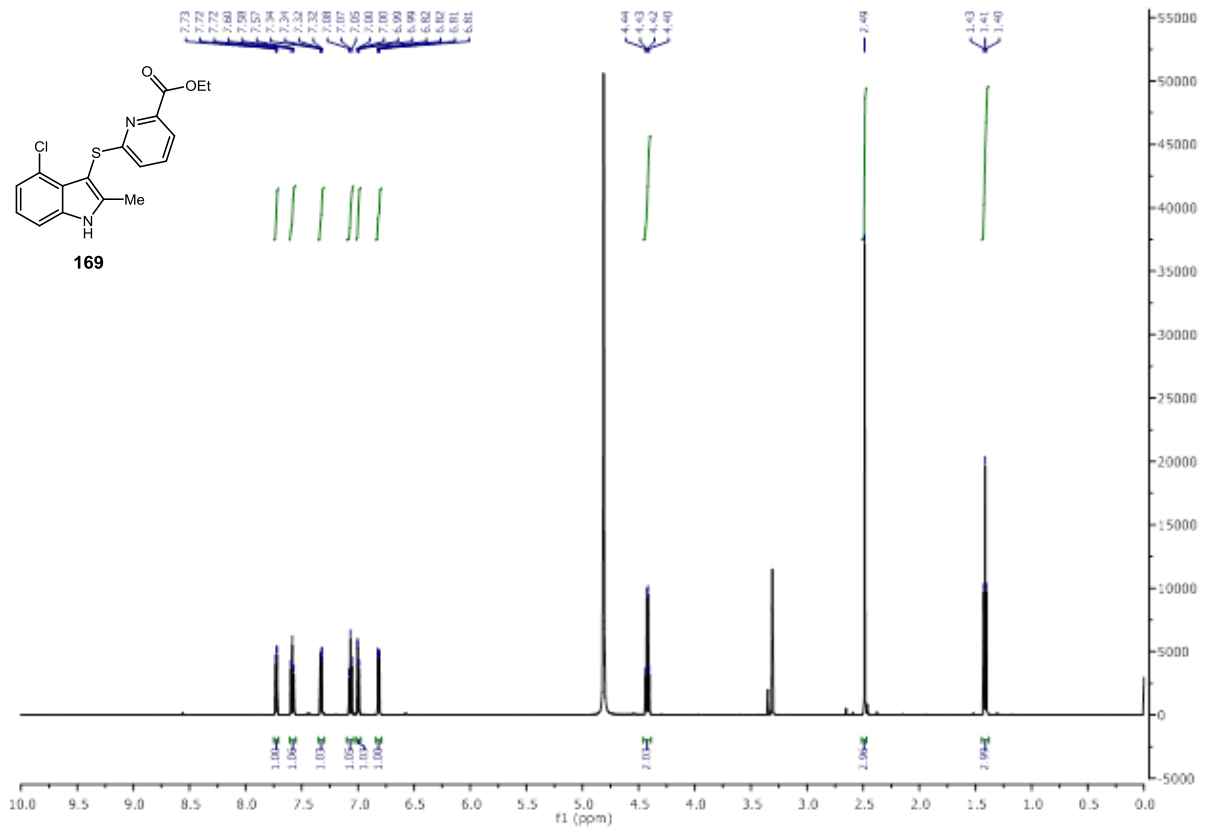
Expanded Spectrum RT 6.11, Peak [1], Target Mass 395.0616



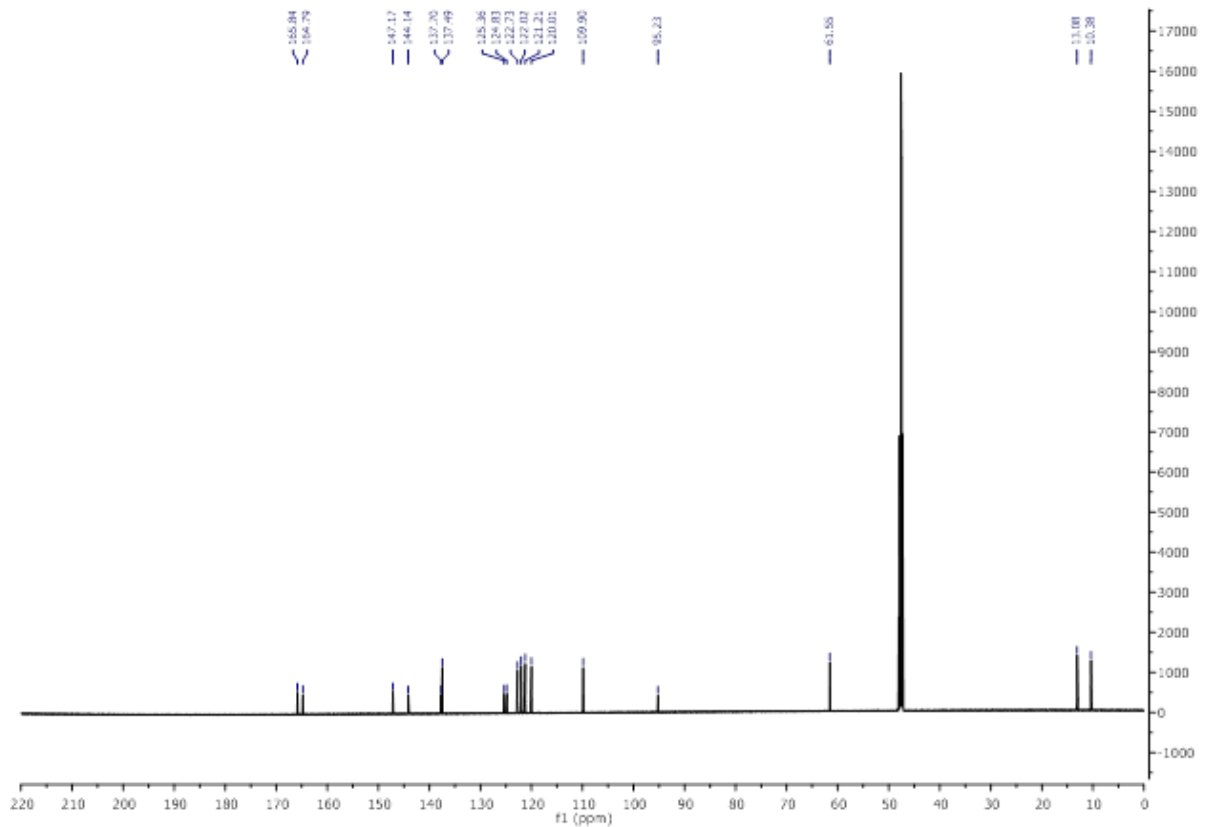
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
395.0617	395.0616	0.1	0.3	C <sub>21</sub> H <sub>16</sub> ClN <sub>2</sub> O <sub>2</sub> S

# Compound 169

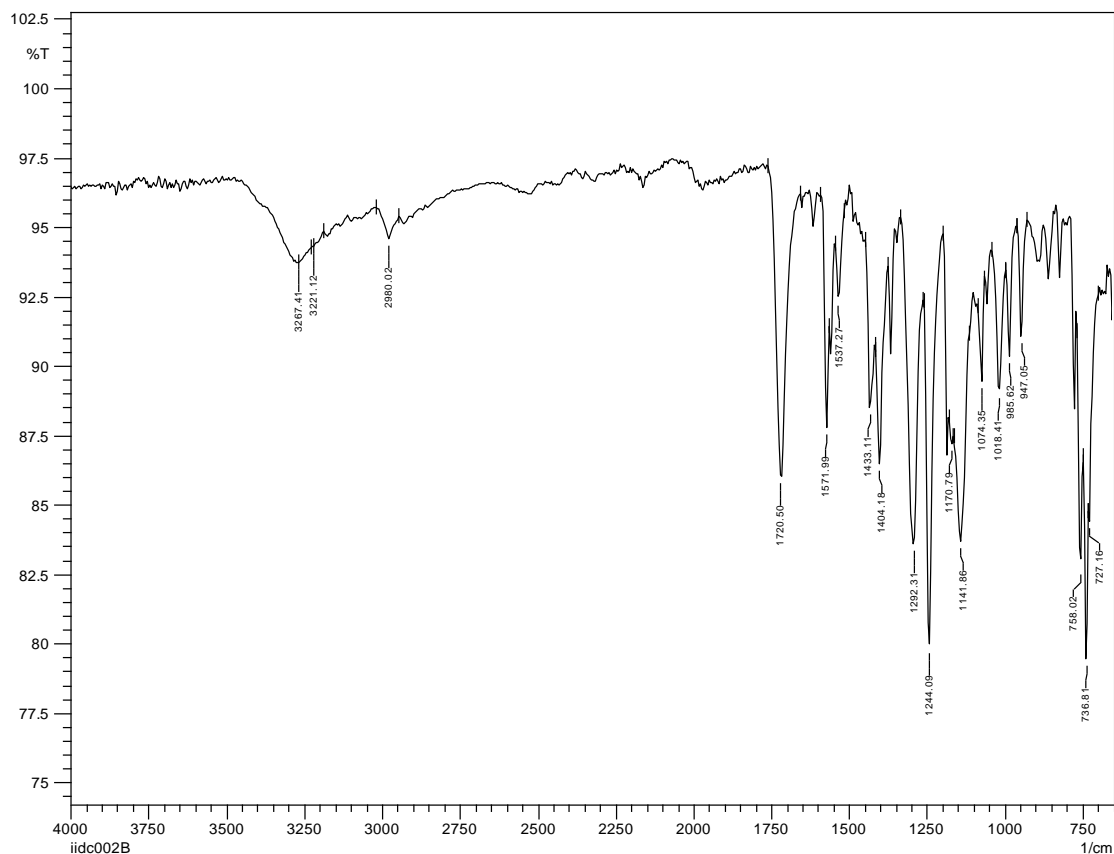
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 169



# IR of 169

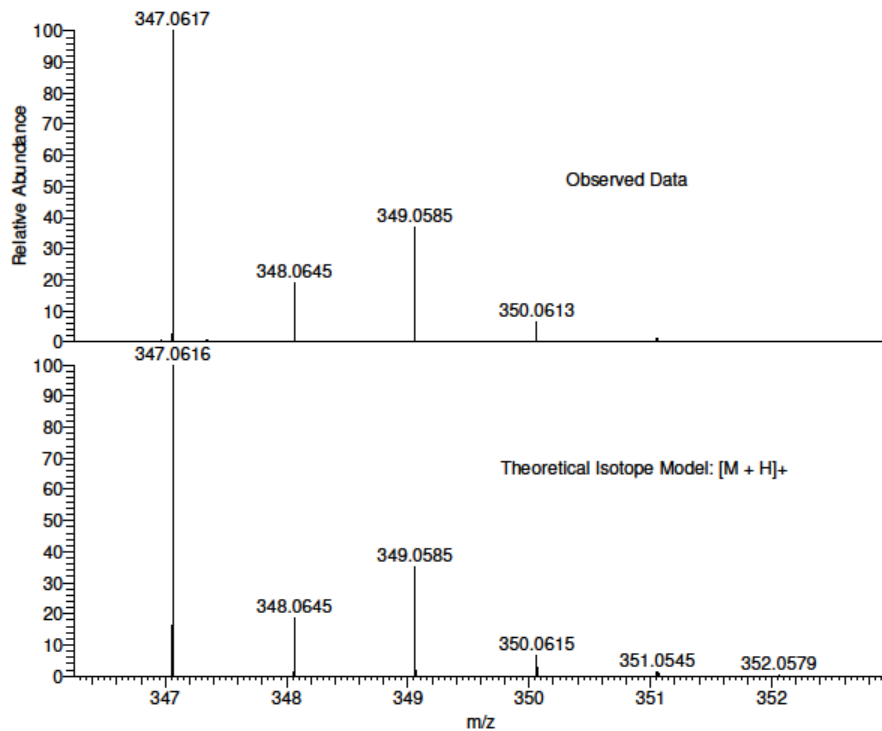


# HRMS of 169

iiDC002B MW=346?  
C<sub>17</sub>H<sub>15</sub>ClN<sub>2</sub>O<sub>2</sub>S  
(DCM)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
15/11/2013 21:12:40

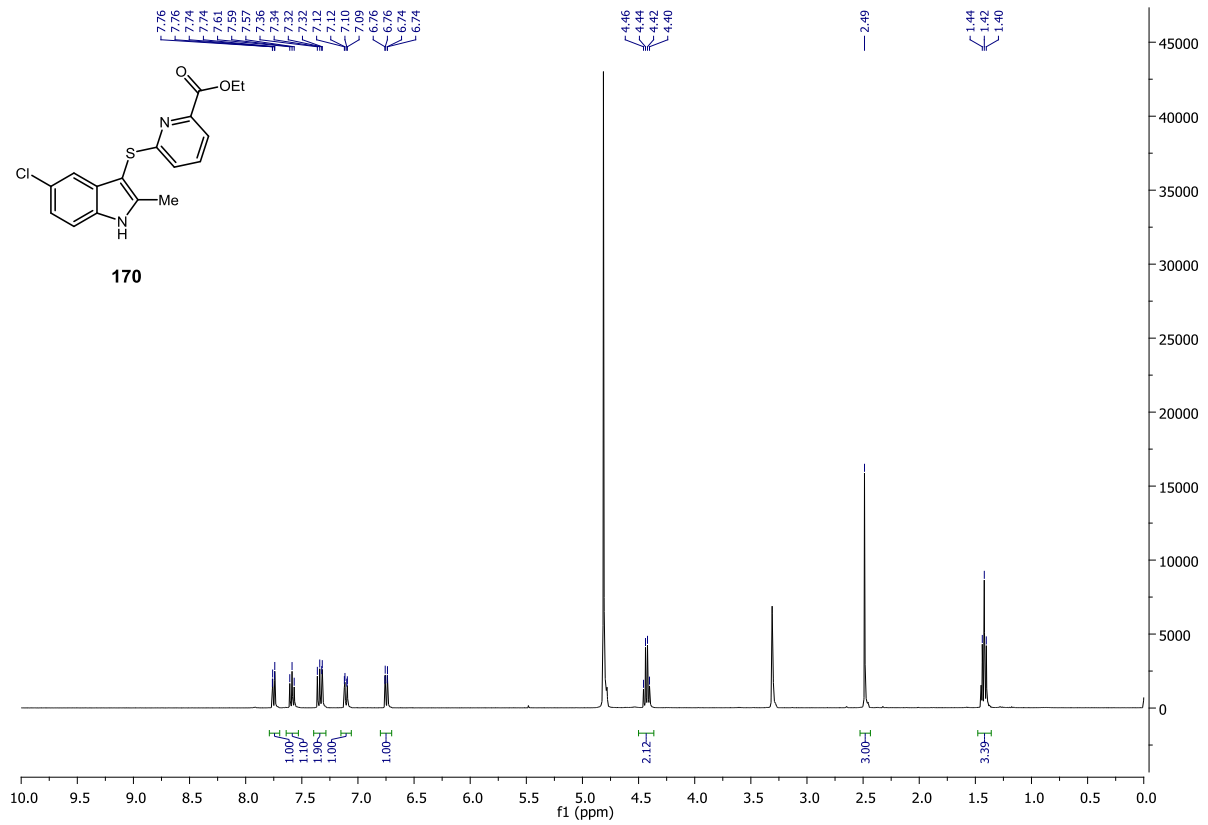


NL:  
9.30E7  
STRWAT143-OC-HNESP#29-  
57 RT: 0.71-1.05 AV: 14 F:  
FTMS + p NSI Full ms  
[120.00-2000.00]

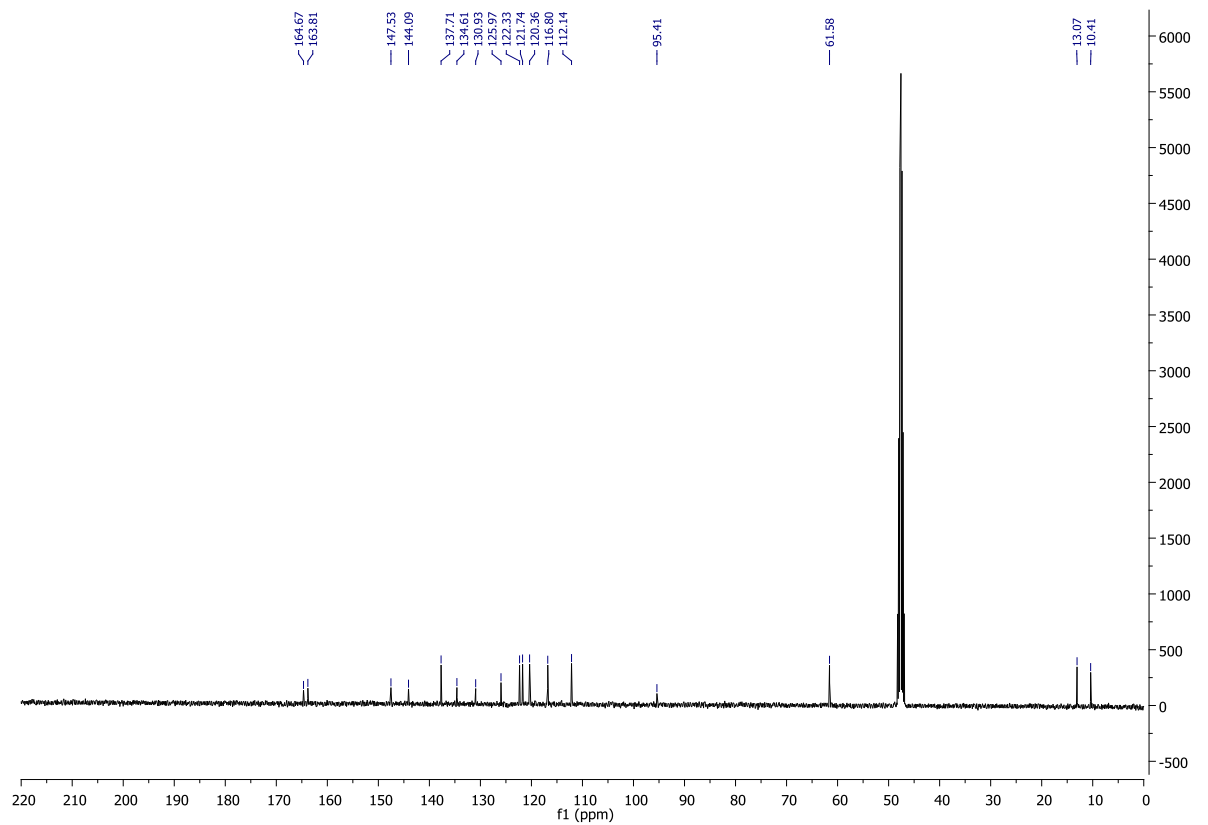
NL:  
1.39E4  
C<sub>17</sub>H<sub>15</sub>ClN<sub>2</sub>O<sub>2</sub>SH:  
C<sub>17</sub>H<sub>16</sub>Cl<sub>1</sub>N<sub>2</sub>O<sub>2</sub>S<sub>1</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr .@FWHM

# Compound 170

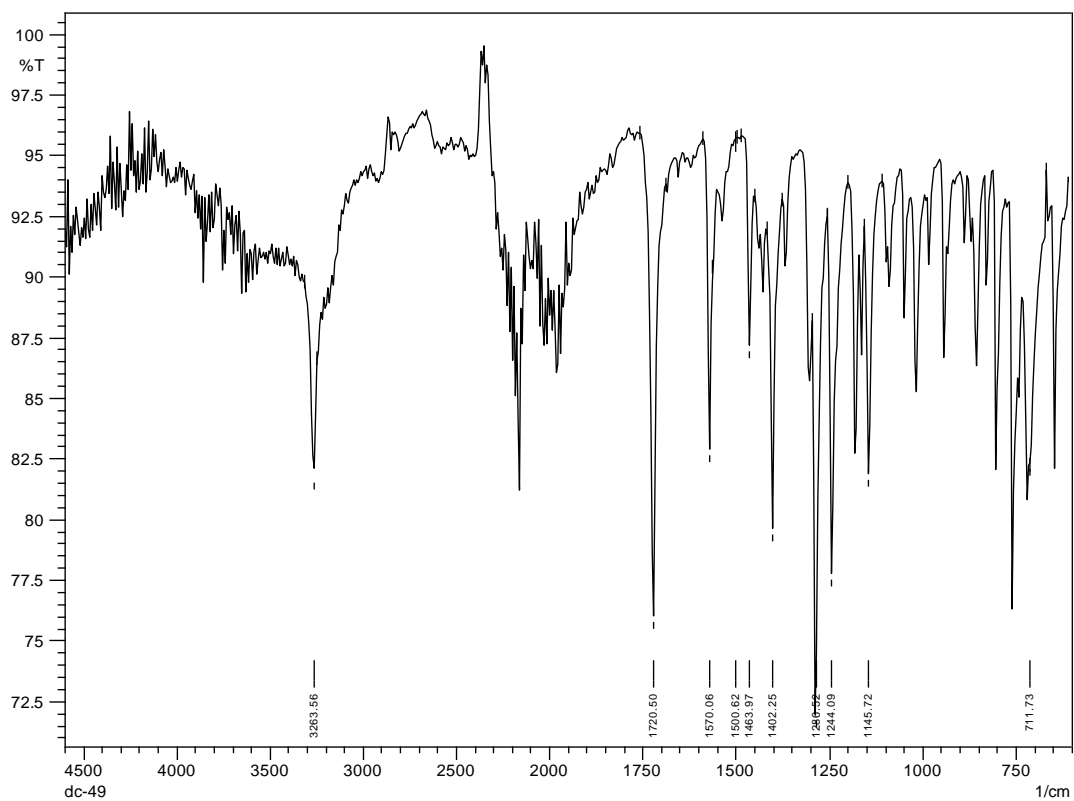
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 170



# IR of 170

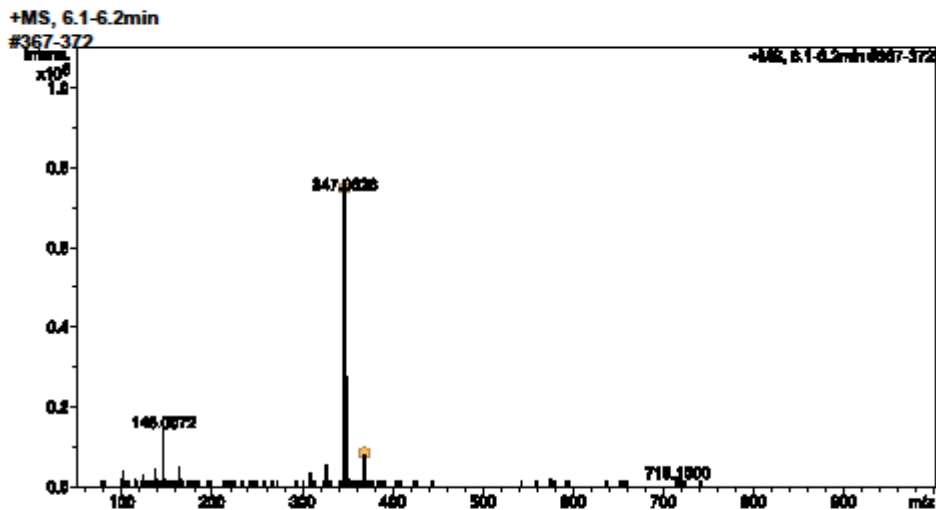


HRMS of 170

Brucker maXis Impact: LC-MS SmartFormula Report

<b>Analysis Info</b>		Acquisition Date 22/10/2014 09:19:10
Analysis Name	C:\Data\Data\N34272-59-5_1-A,8_01_1070.d	
Method	lcms pos 50-1000.m	Operator Spectroscopy
Sample Name	N34272-59-5	Instrument / Ser maXis impact 282001.0
Comment		0101

<b>Acquisition Parameter</b>			
Source Type	ESI	Scan Begin	50 m/z
Ion Polarity	Positive	Scan End	1000 m/z

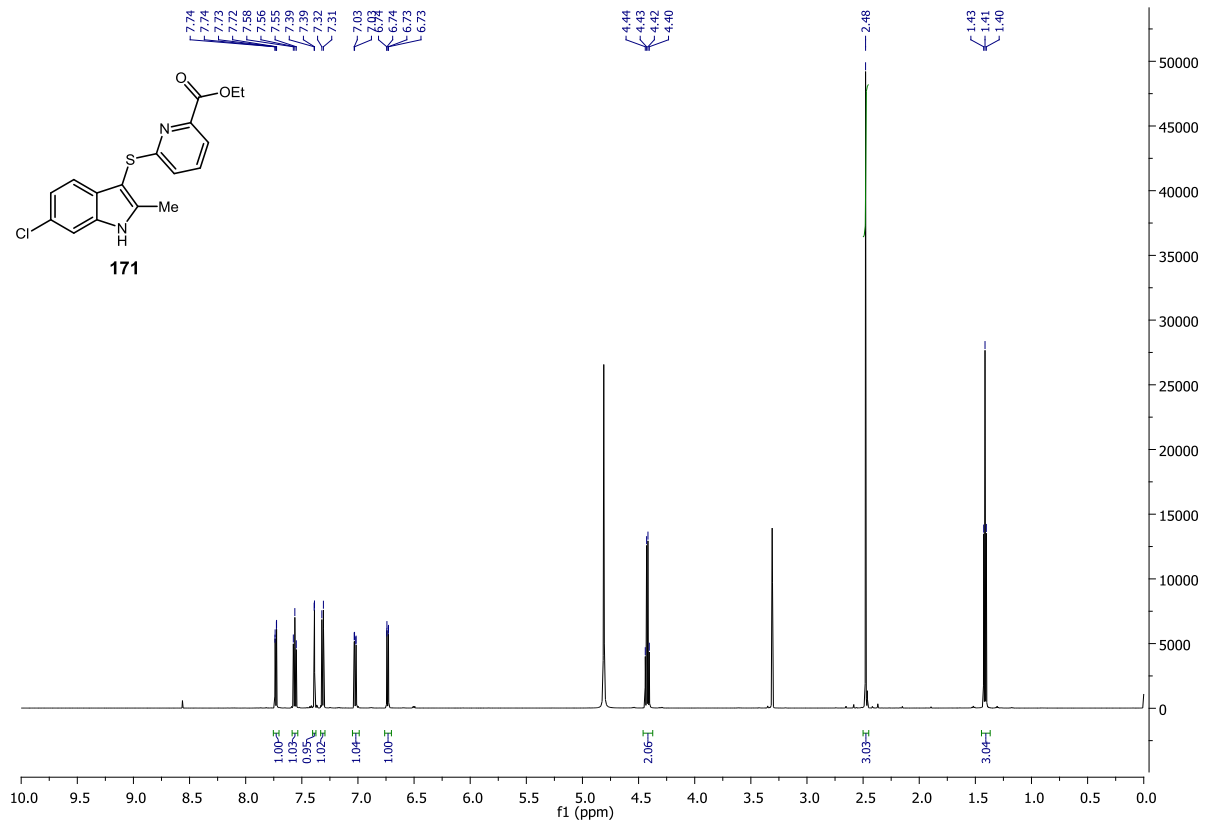


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdB	e <sup>-</sup> Conf	N-Rule
347.0626	1	C17H16ClN2O2S	347.0616	2.9	24.9	1	100.00	10.5	even	ok
369.0440	1	C17H15ClN2NaO2S	369.0435	1.5	61.9	1	100.00	10.5	even	ok

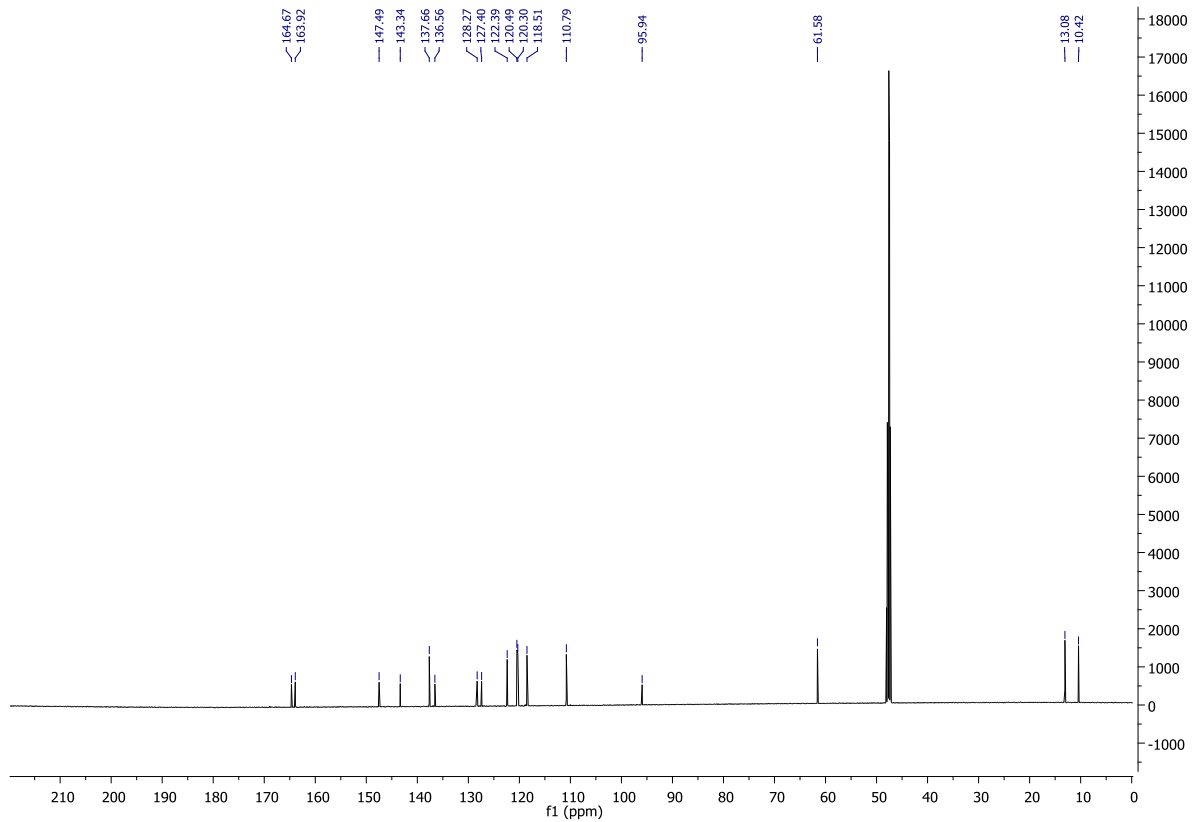
Measured mass should be within ±5 ppm of target mass

# Compound 171

## <sup>1</sup>H NMR

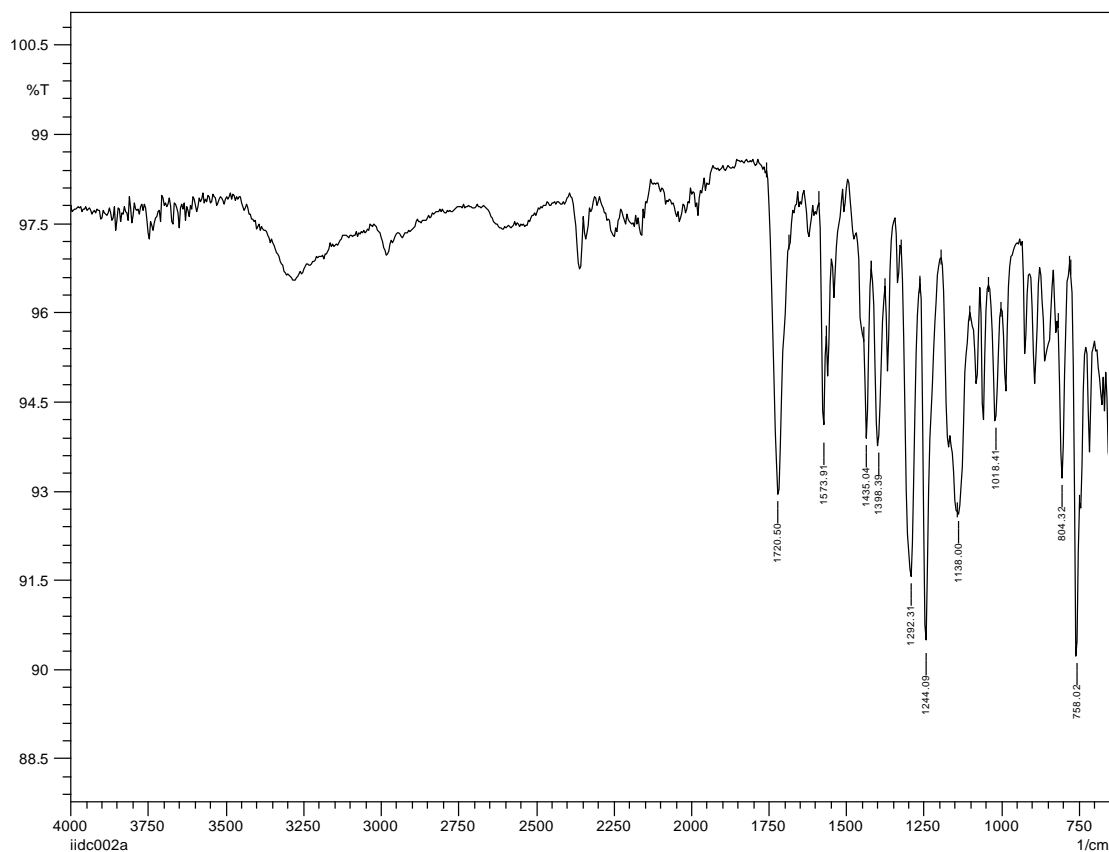


## <sup>13</sup>C NMR of 171





# IR of 171

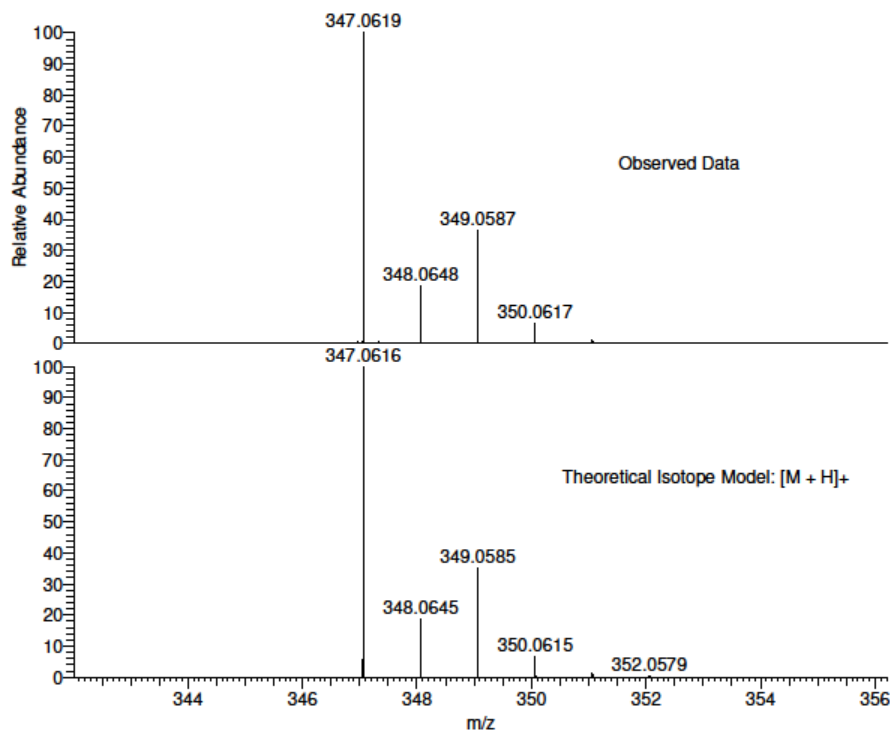


# HRMS of 171

IIC0002A MW=346?  
C17H15ClN2O2S  
(DCM)/MeOH + NH4OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
15/11/2013 21:15:28

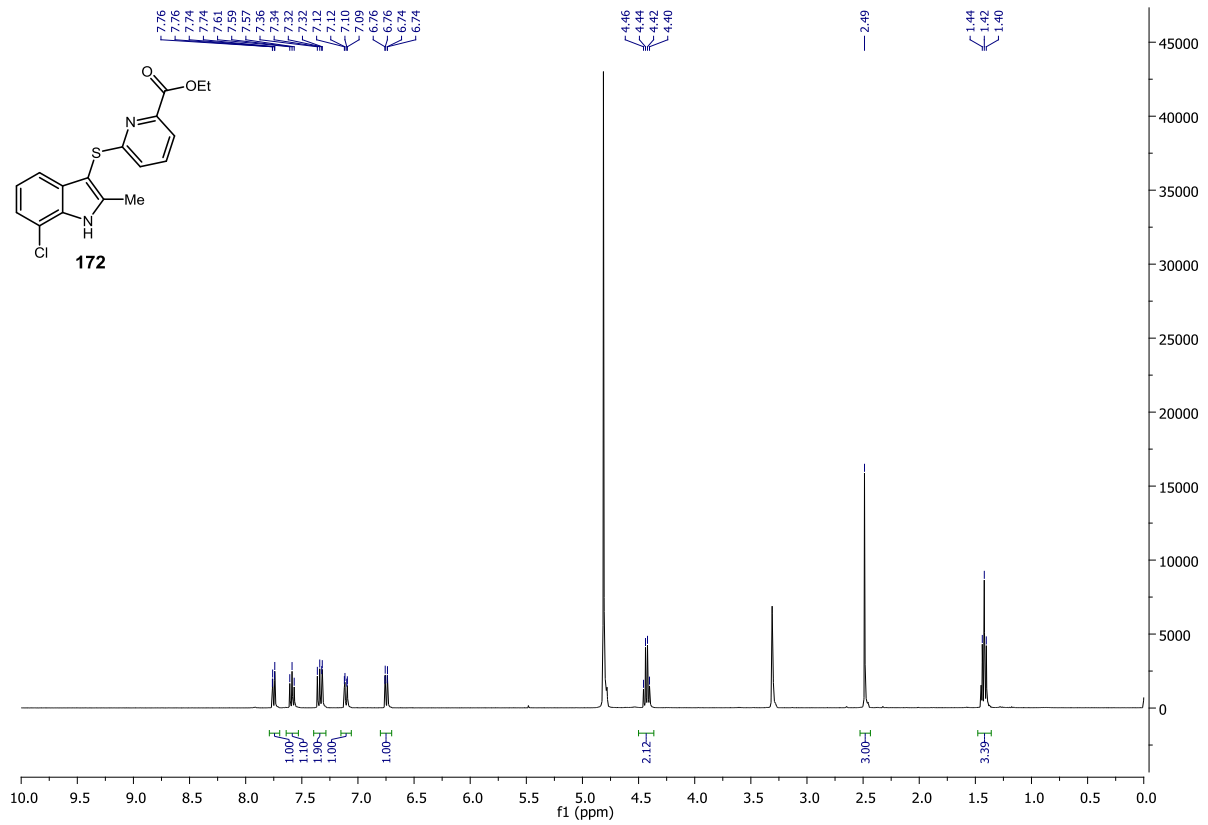


NL:  
6.07E7  
STRWAT144-OC-HNESP#33-  
58 RT: 0.74-1.08 AV: 13 F:  
FTMS + p NSI Full ms  
[120.00-2000.00]

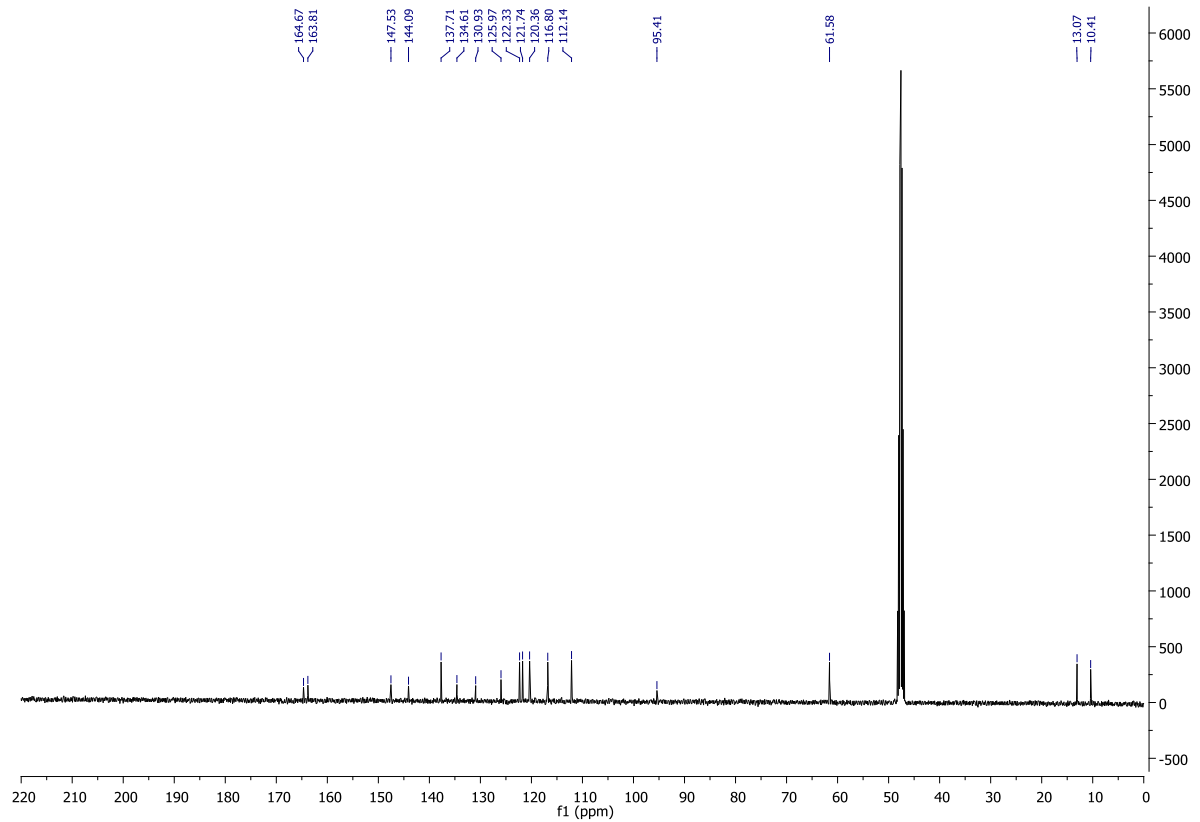
NL:  
1.39E4  
C17 H15 ClN2 O2 SH:  
C17 H16 Cl1 N2 O2 S1  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 172

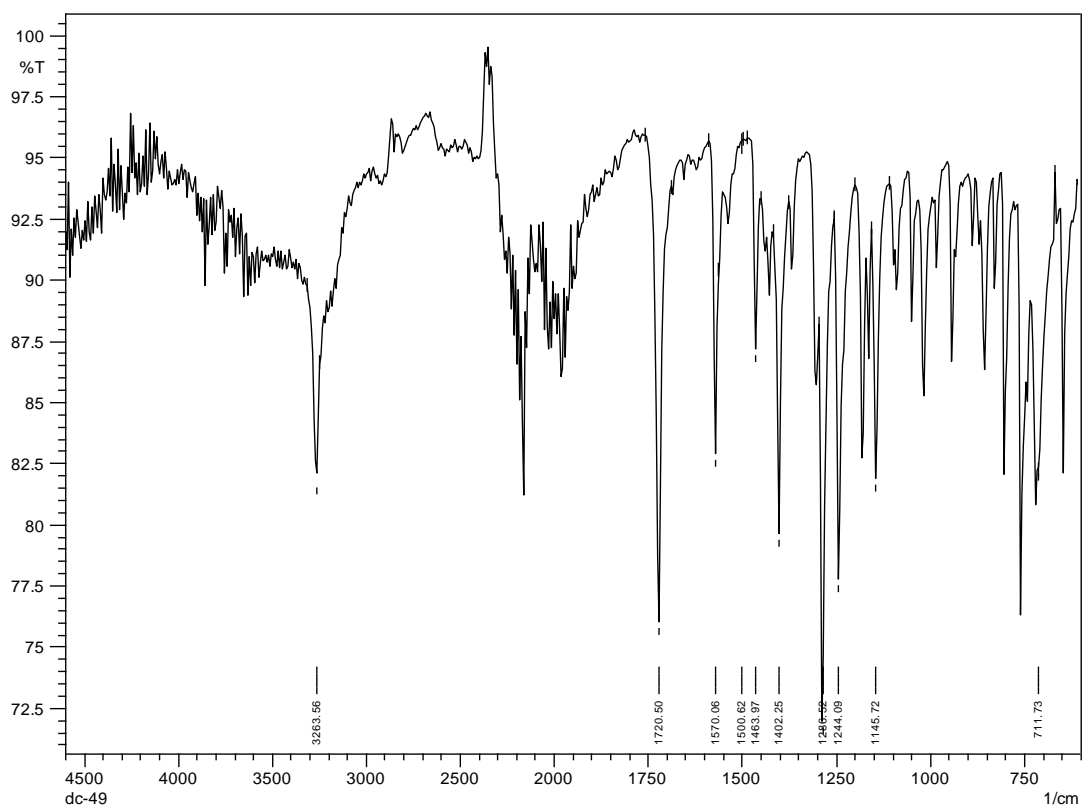
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 172



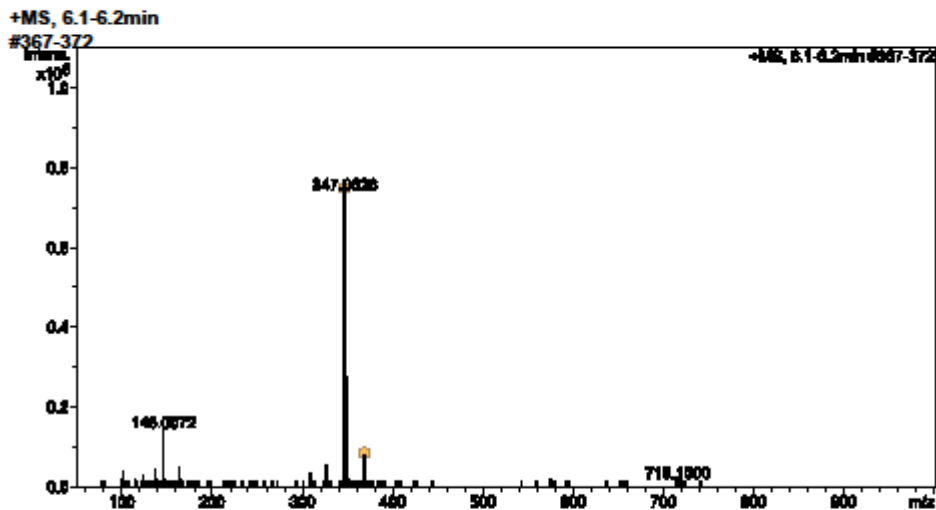
# IR of 172



Brucker maXis Impact: LC-MS SmartFormula Report

Analysis Info  
 Analysis Name C:\Data\Data\N34272-59-5\_1-A,8\_01\_1070.d  
 Method lcms pos 50-1000.m  
 Sample Name N34272-59-5  
 Comment  
 Acquisition Date 22/10/2014 09:19:10  
 Operator Spectroscopy  
 Instrument / Ser maXis impact 282001.0  
 0101

Acquisition Parameter  
 Source Type ESI Scan Begin 50 m/z  
 Ion Polarity Positive Scan End 1000 m/z

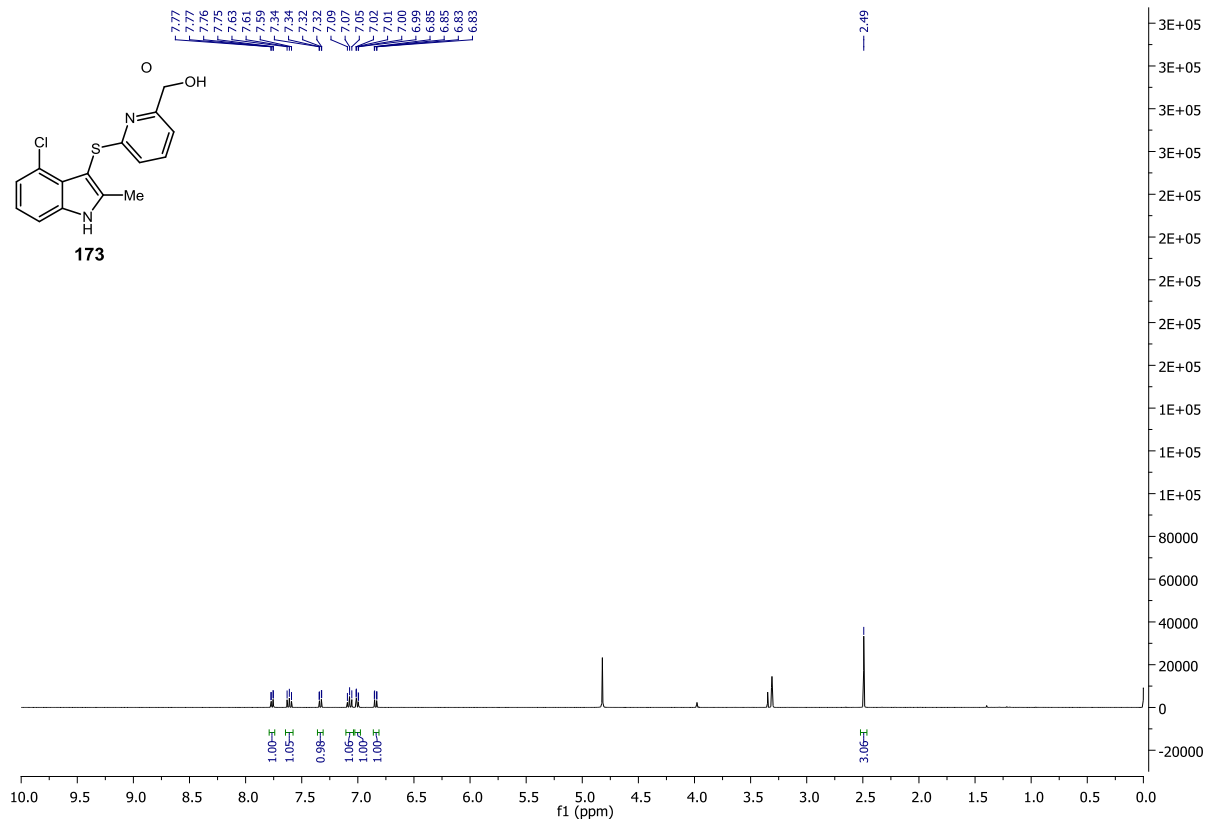


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdB	e <sup>-</sup> Conf	N-Rule
347.0626	1	C17H16ClN2O2S	347.0616	2.9	24.9	1	100.00	10.5	even	ok
369.0440	1	C17H15ClN2NaO2S	369.0435	1.5	61.9	1	100.00	10.5	even	ok

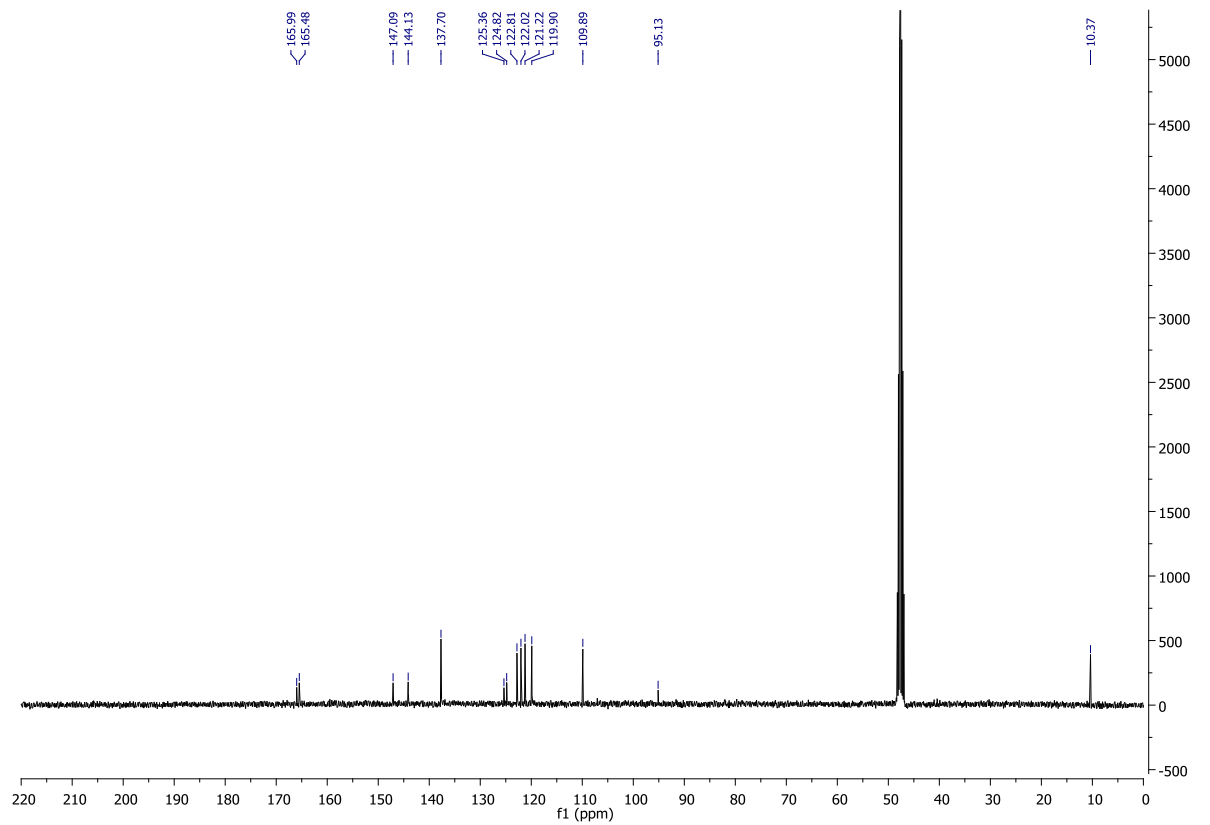
Measured mass should be within ±5 ppm of target mass

# Compound 173

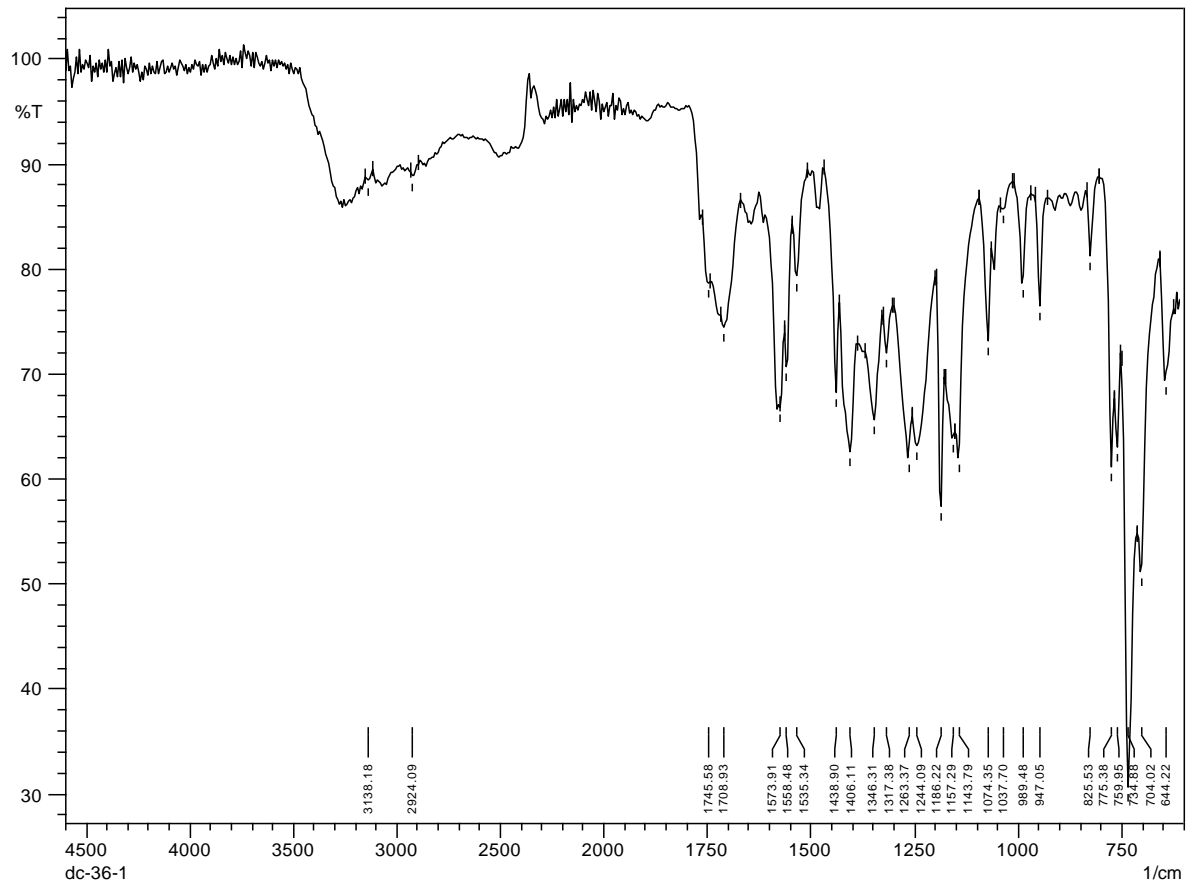
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 173



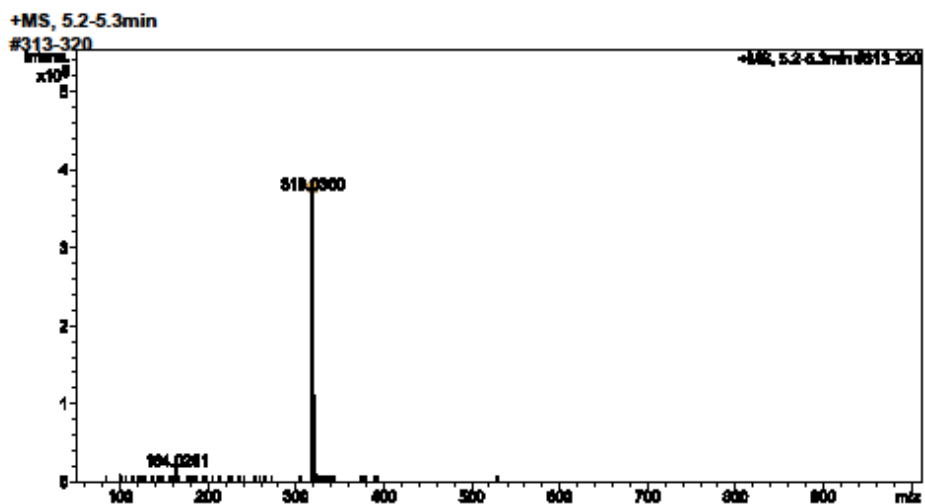
# IR of 173



Bruker maXis Impact: LC-MS SmartFormula Report

Analysis Info Acquisition Date 07/10/2014 06:35:20  
 Analysis Name C:\Data\Data\N34272-36-1\_1-A,4\_01\_962.d Operator Spectroscopy  
 Method lcms pos 50-1000.m Instrument / Ser maXis impact 282001.0  
 Sample Name N34272-36-1 Comment 0101

Acquisition Parameter  
 Source Type ESI Scan Begin 50 m/z  
 Ion Polarity Positive Scan End 1000 m/z

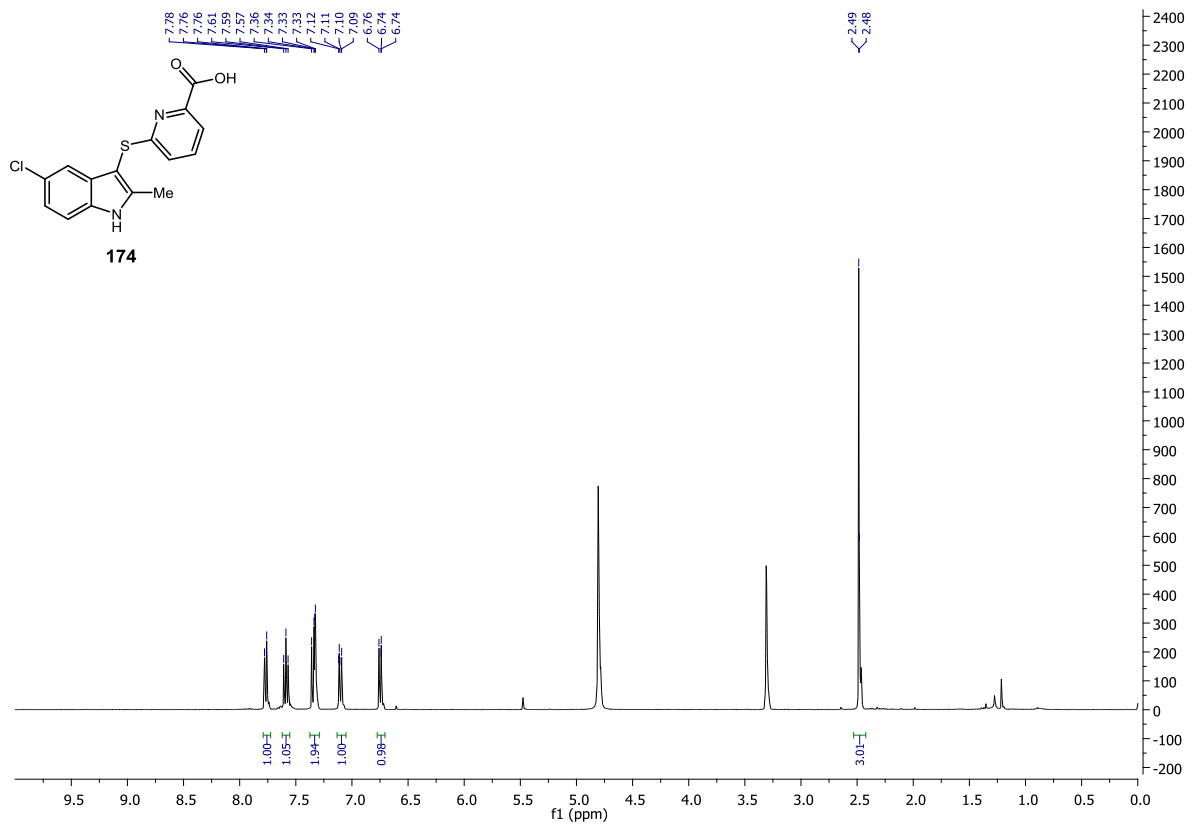


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdB	e <sup>-</sup> Conf	N-Rule
319.0300	1	C <sub>15</sub> H <sub>12</sub> CIN <sub>2</sub> O <sub>2</sub> S	319.0303	-0.7	53.6	1	100.00	10.5	even	ok

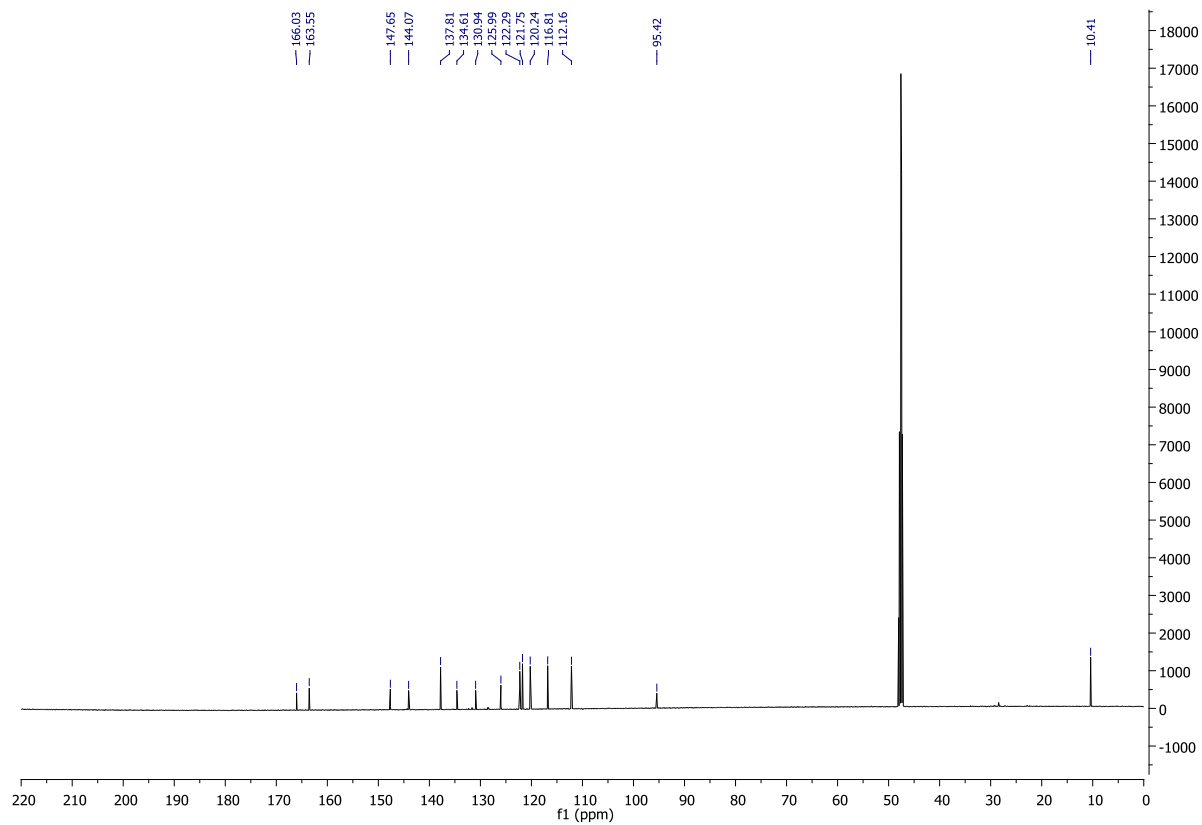
Measured mass should be within ±5 ppm of target mass

# Compound 174

## <sup>1</sup>H NMR

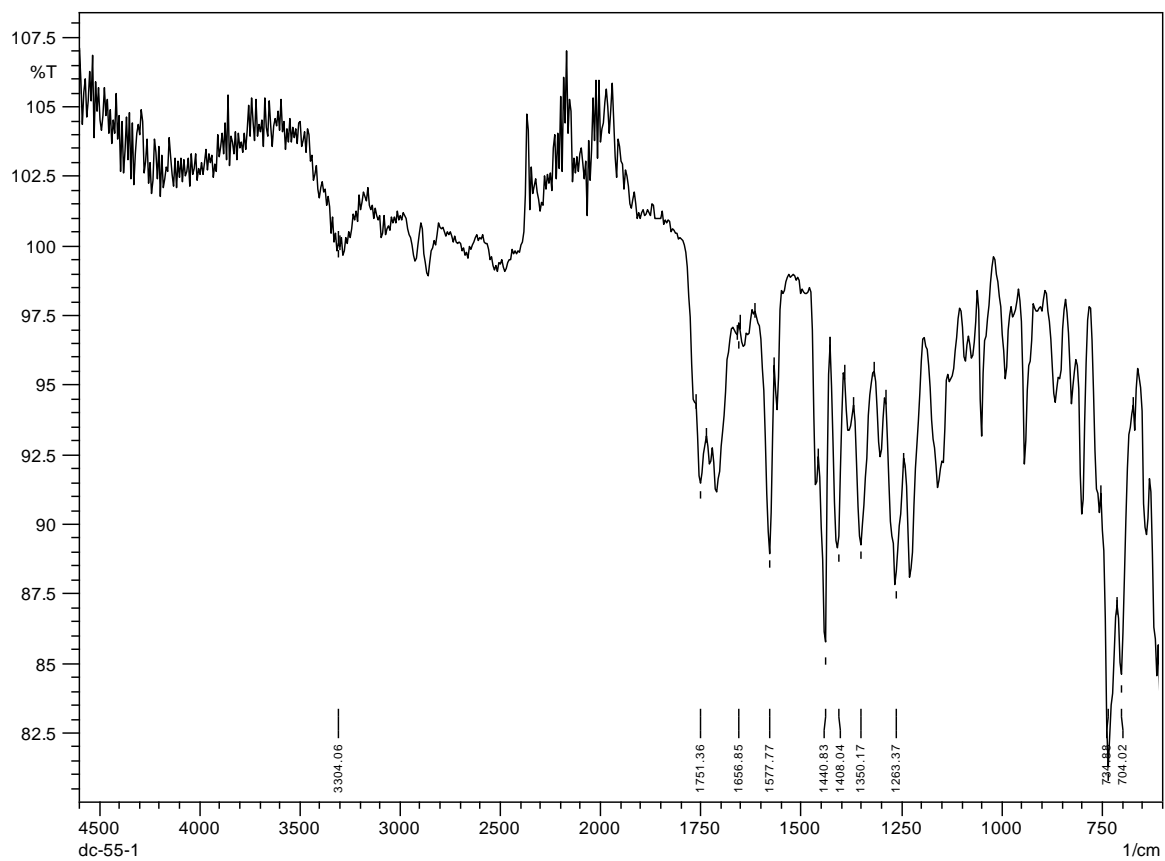


## <sup>13</sup>C NMR of 174





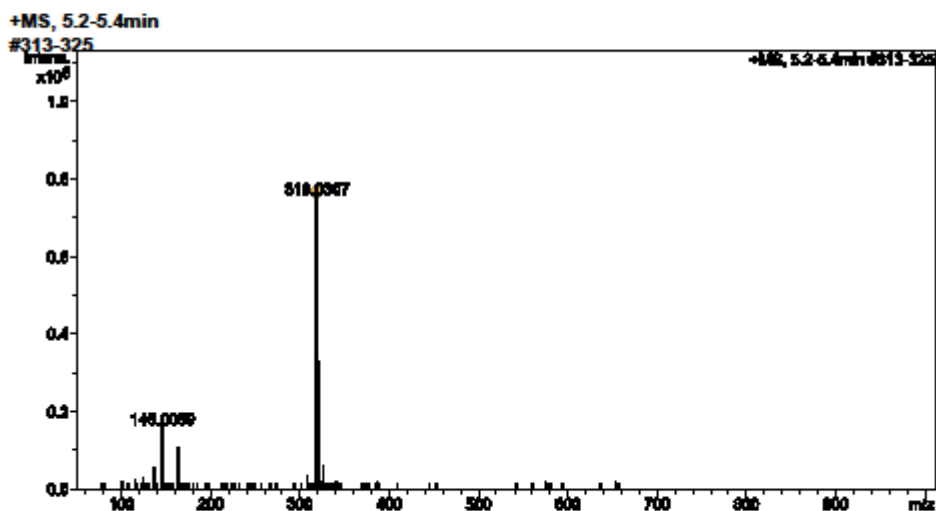
# IR of 174



Braker maXis Impact: LC-MS SmartFormula Report

Analysis Info Acquisition Date 24/10/2014 15:50:43  
 Analysis Name C:\Data\Data\N34272-64-7\_1-A,8\_01\_1122.d  
 Method lcms pos 50-1000.m Operator Spectroscopy  
 Sample Name N34272-64-7 Instrument / Ser maXis impact 282001.0  
 Comment 0101

Acquisition Parameter  
 Source Type ESI Scan Begin 50 m/z  
 Ion Polarity Positive Scan End 1000 m/z

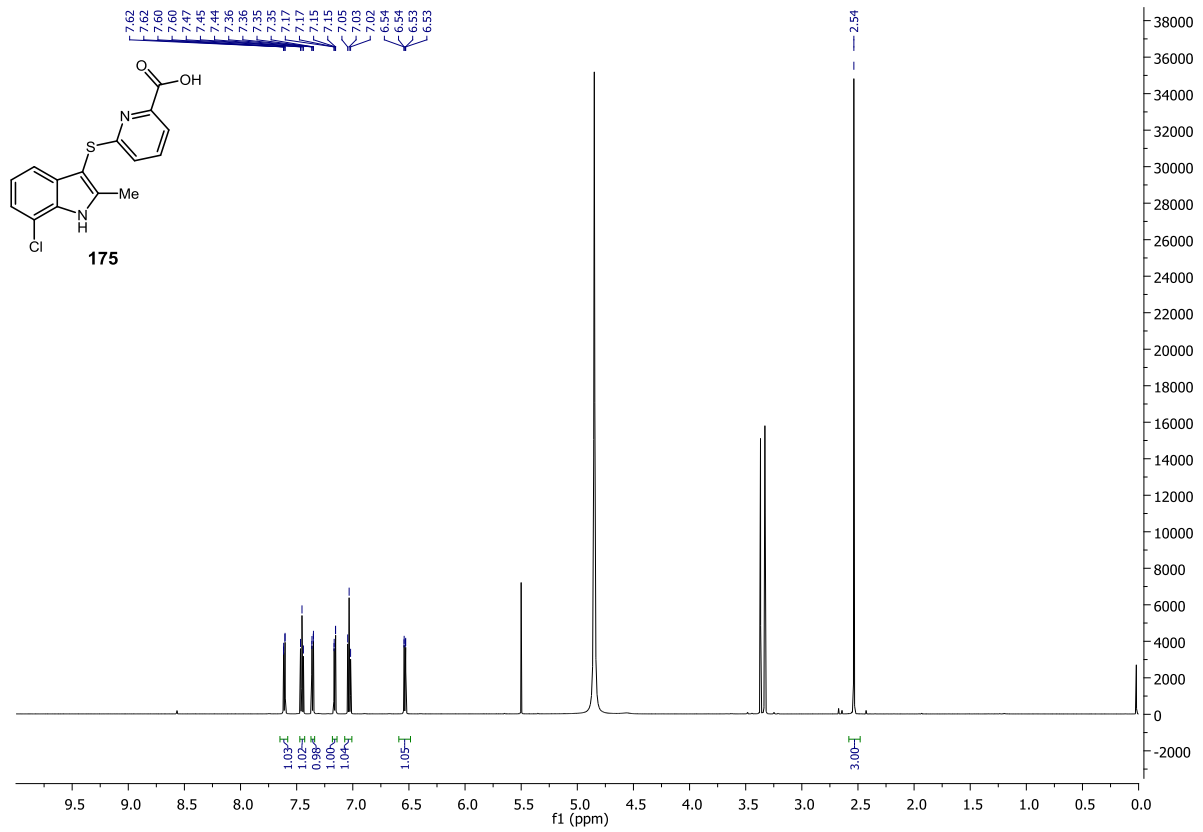


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdB	e <sup>-</sup> Conf	N-Rule
319.0307	1	C <sub>15</sub> H <sub>12</sub> CIN <sub>2</sub> O <sub>2</sub> S	319.0303	1.5	24.3	1	100.00	10.5	even	ok

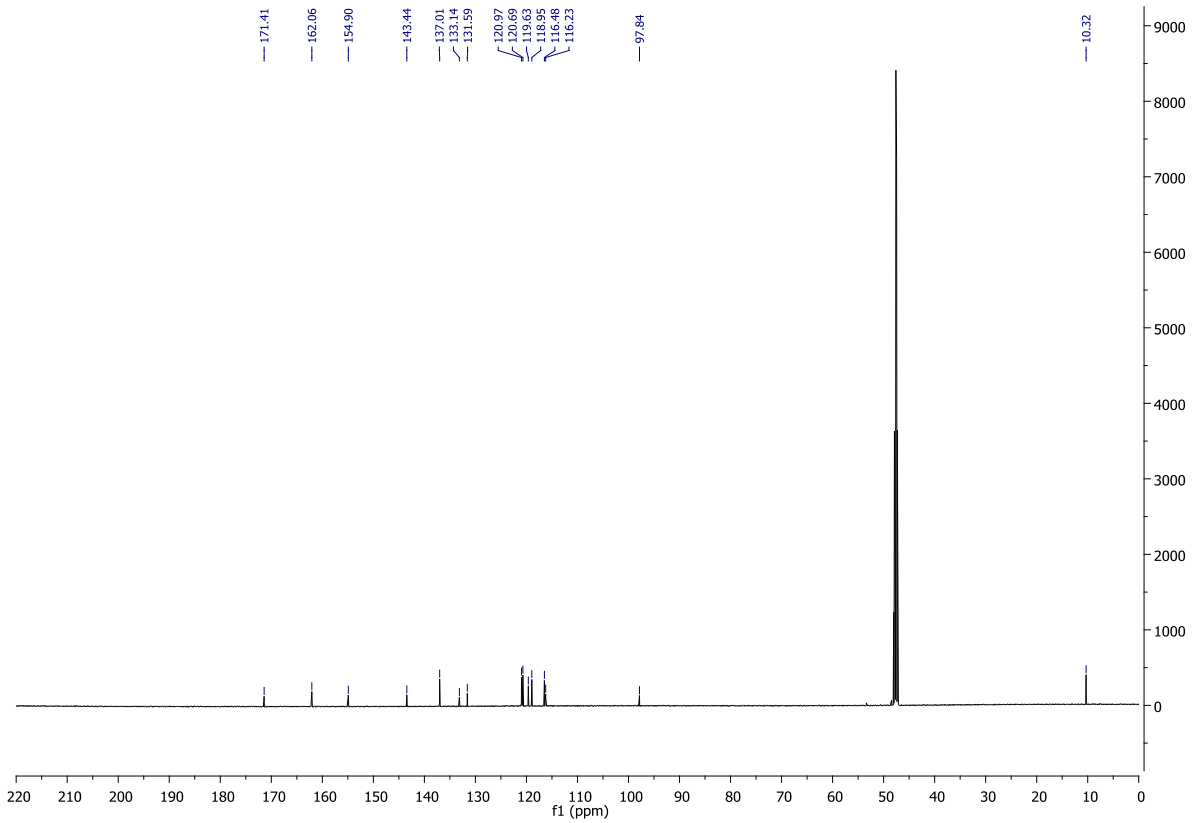
Measured mass should be within ±5 ppm of target mass

# Compound 175

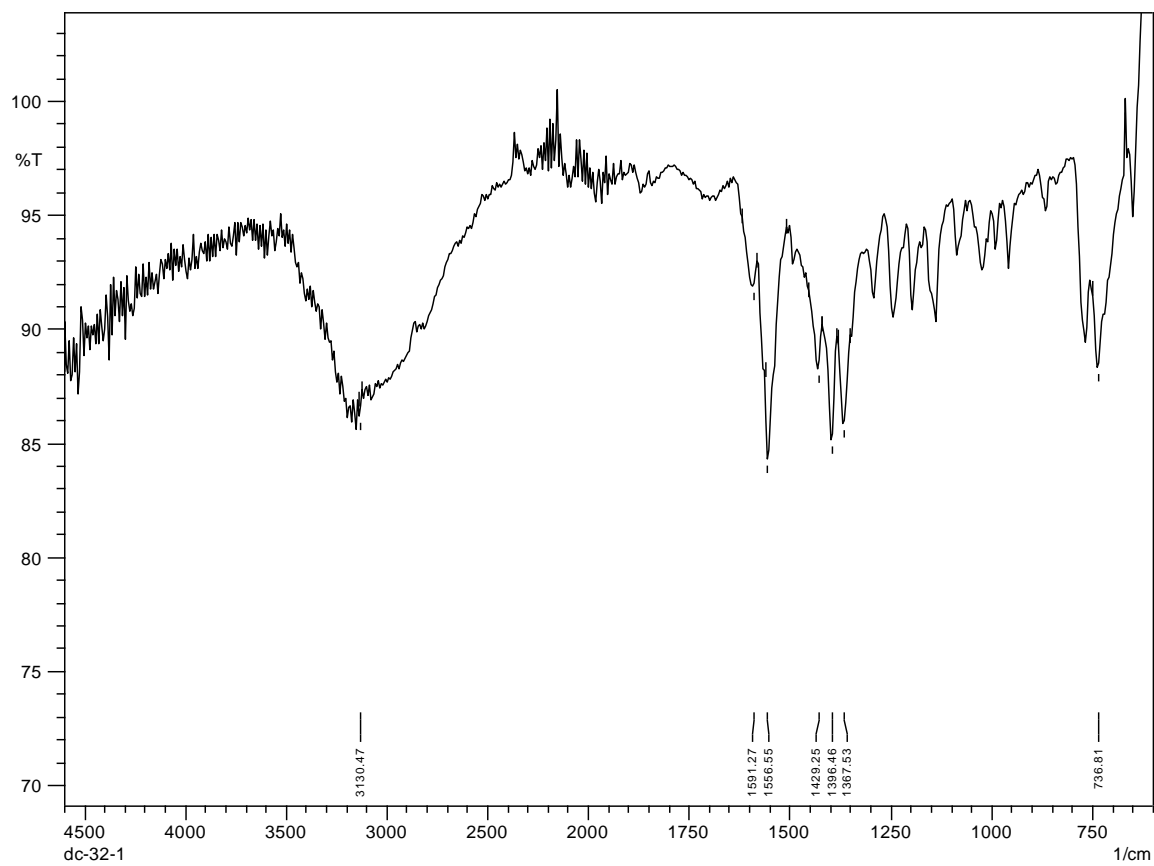
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 175



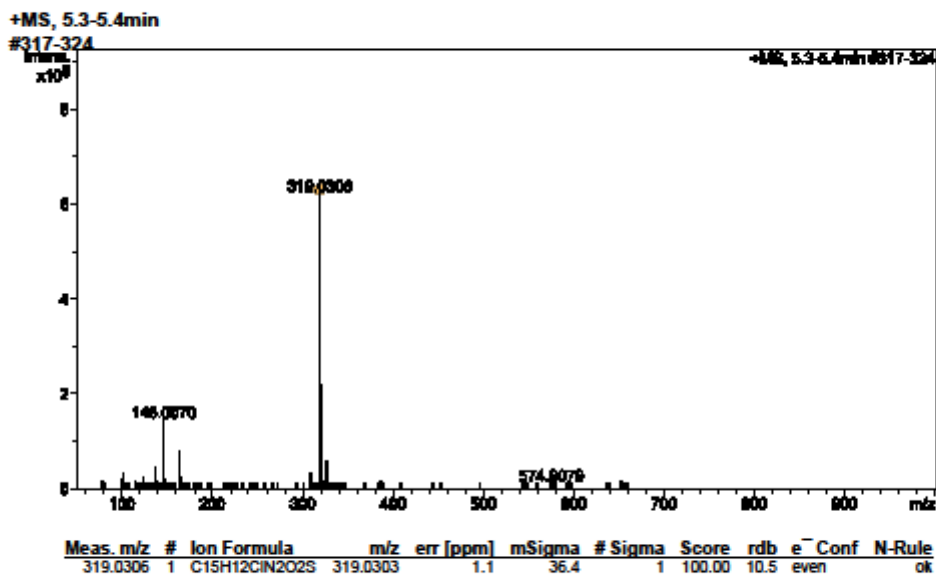
# IR of 175



Bruker maXis Impact: LC-MS SmartFormula Report

Analysis Info  
 Analysis Name C:\Data\Data\N34272-59-3\_1-A,6\_01\_1068.d Acquisition Date 22/10/2014 08:57:38  
 Method lcms pos 50-1000.m Operator Spectroscopy  
 Sample Name N34272-59-3 Instrument / Ser maXis impact 282001.0  
 Comment 0101

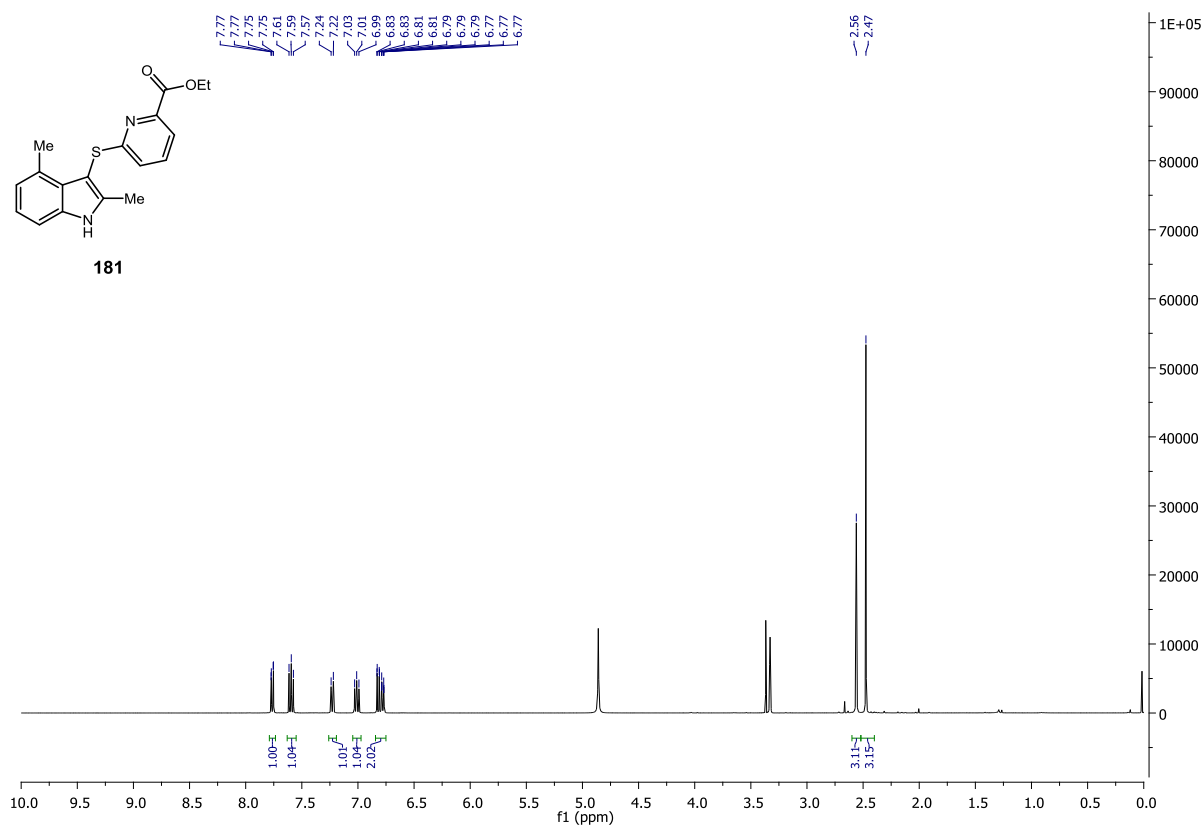
Acquisition Parameter  
 Source Type ESI Scan Begin 50 m/z  
 Ion Polarity Positive Scan End 1000 m/z



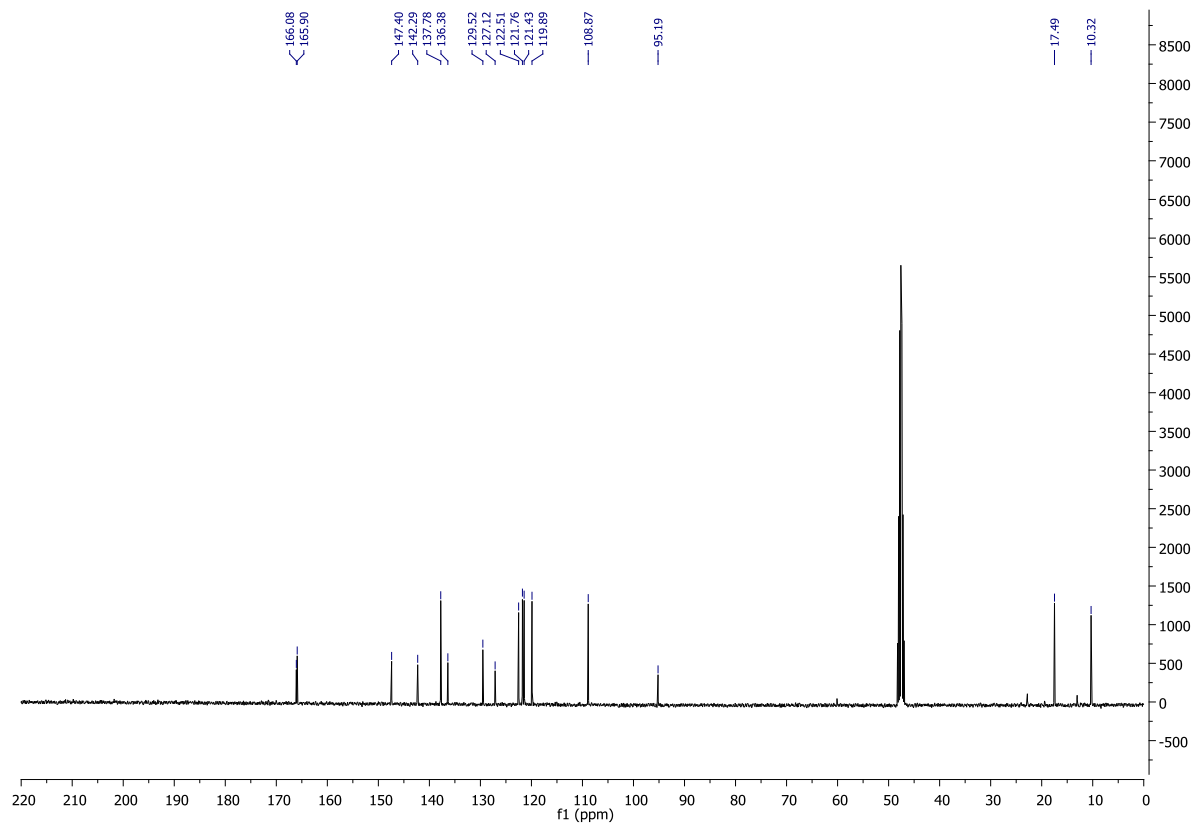
Measured mass should be within ±5 ppm of target mass

# Compound 181

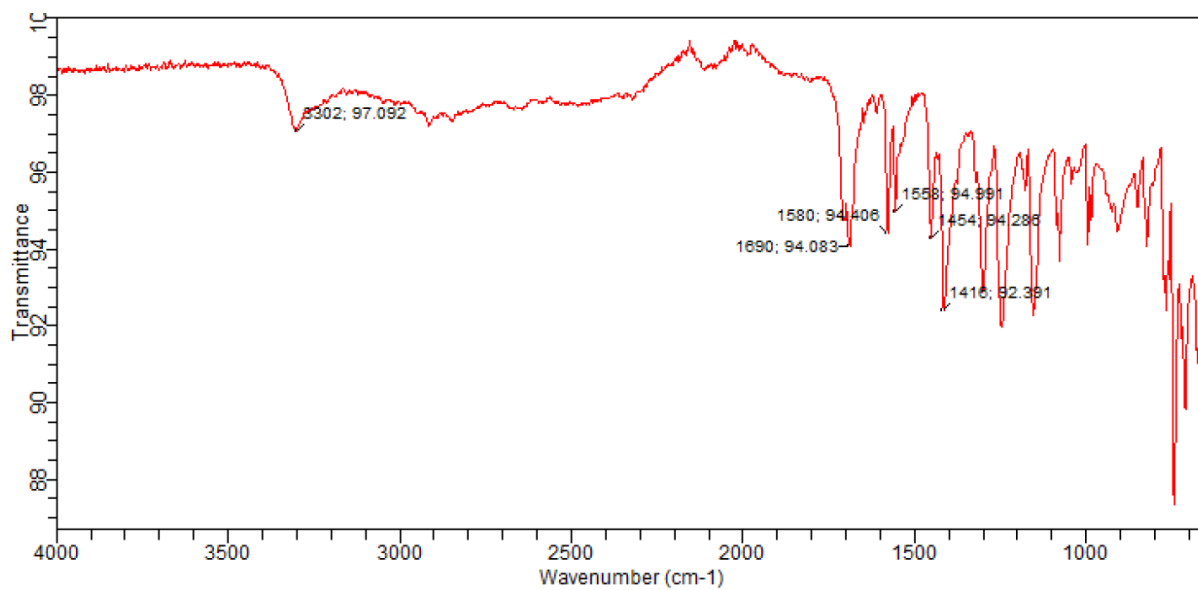
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 181



# IR of 181

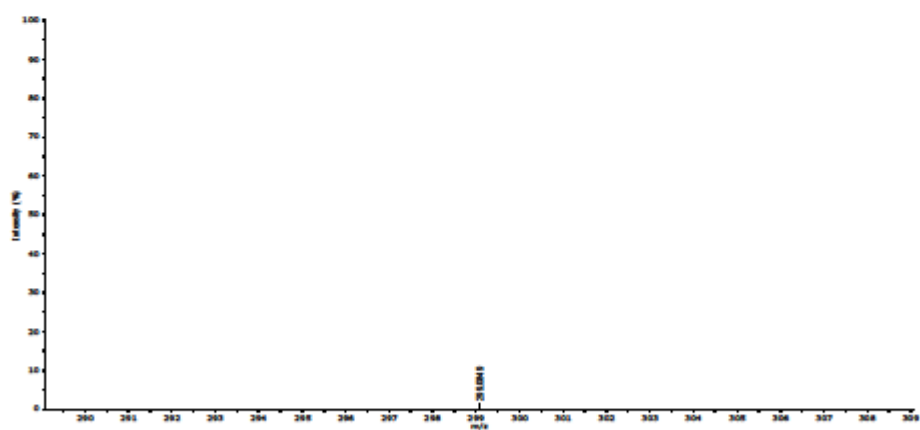


# HRMS of 181

Spectrum RT 4.45, Peak [1], Target Mass 299.0849



Expanded Spectrum RT 4.45, Peak [1], Target Mass 299.0849

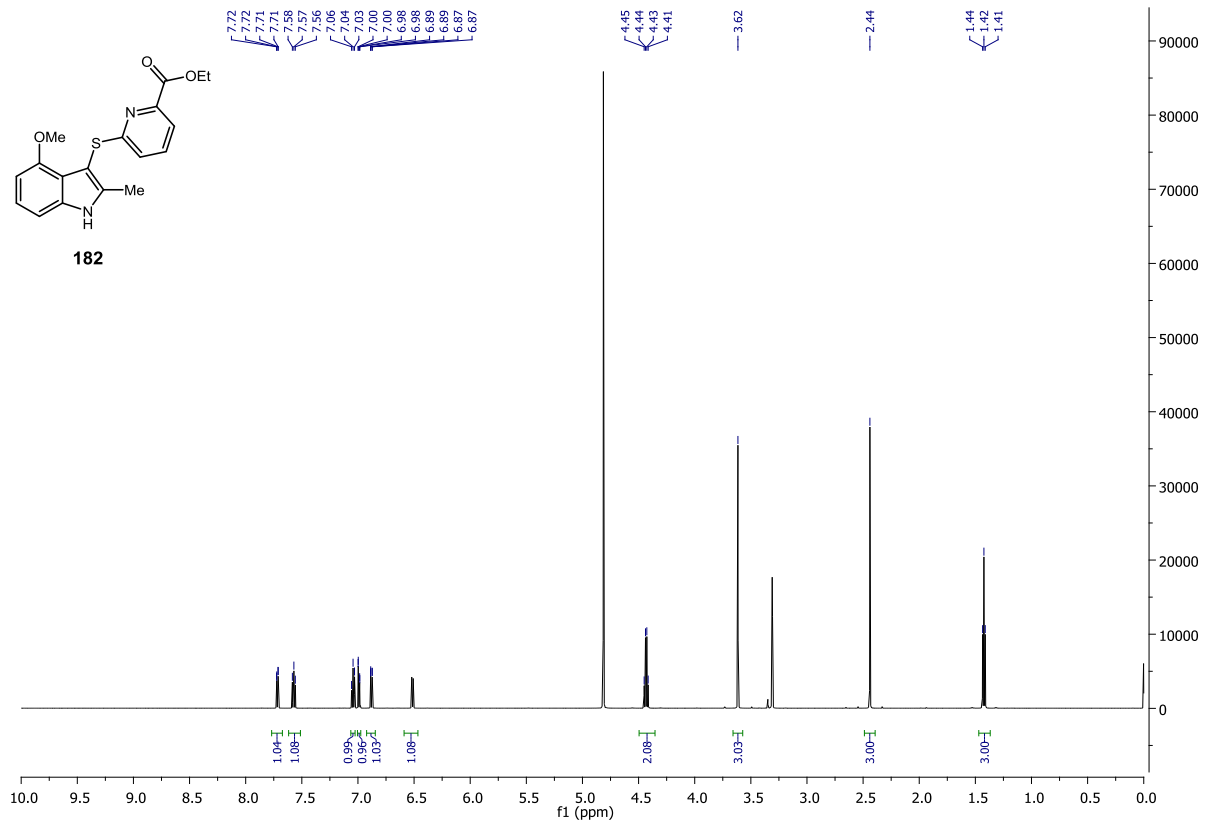


Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
299.0849	299.0849	0.0	0.0	C <sub>16</sub> H <sub>15</sub> N <sub>2</sub> O <sub>2</sub> S

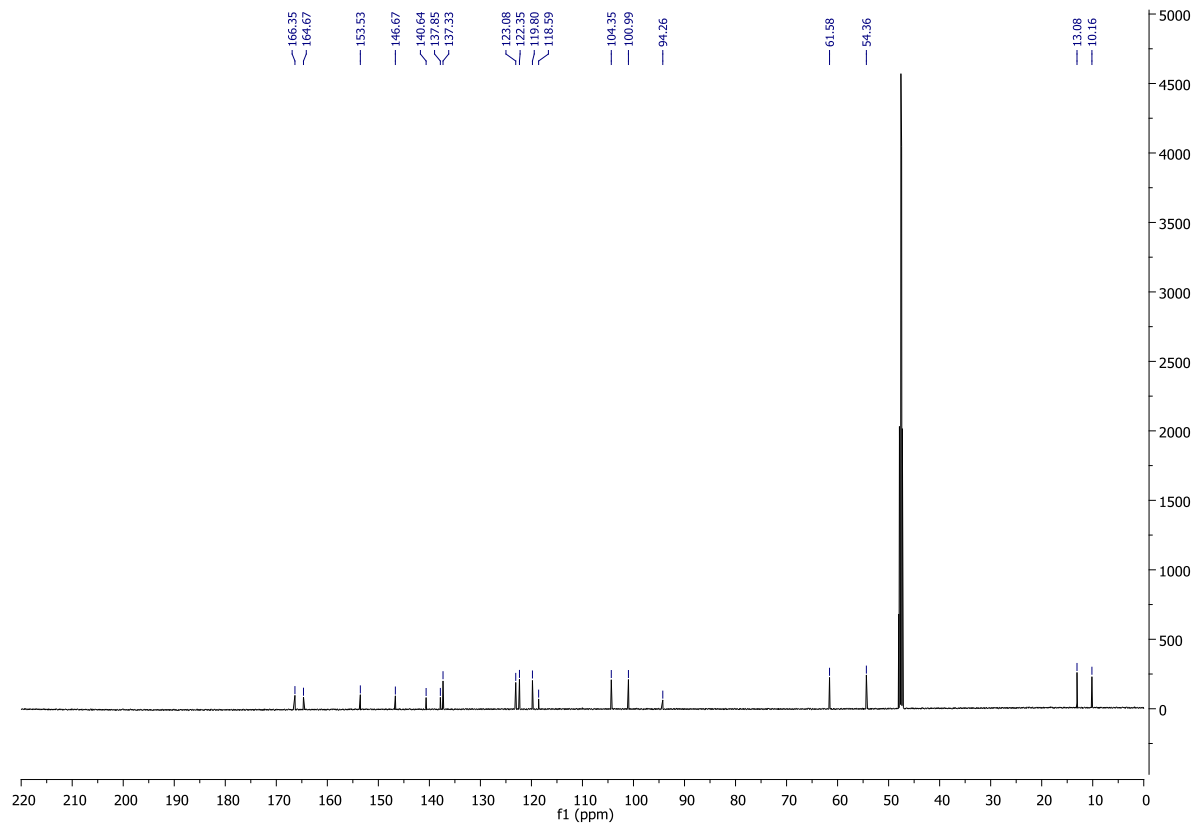


# Compound 182

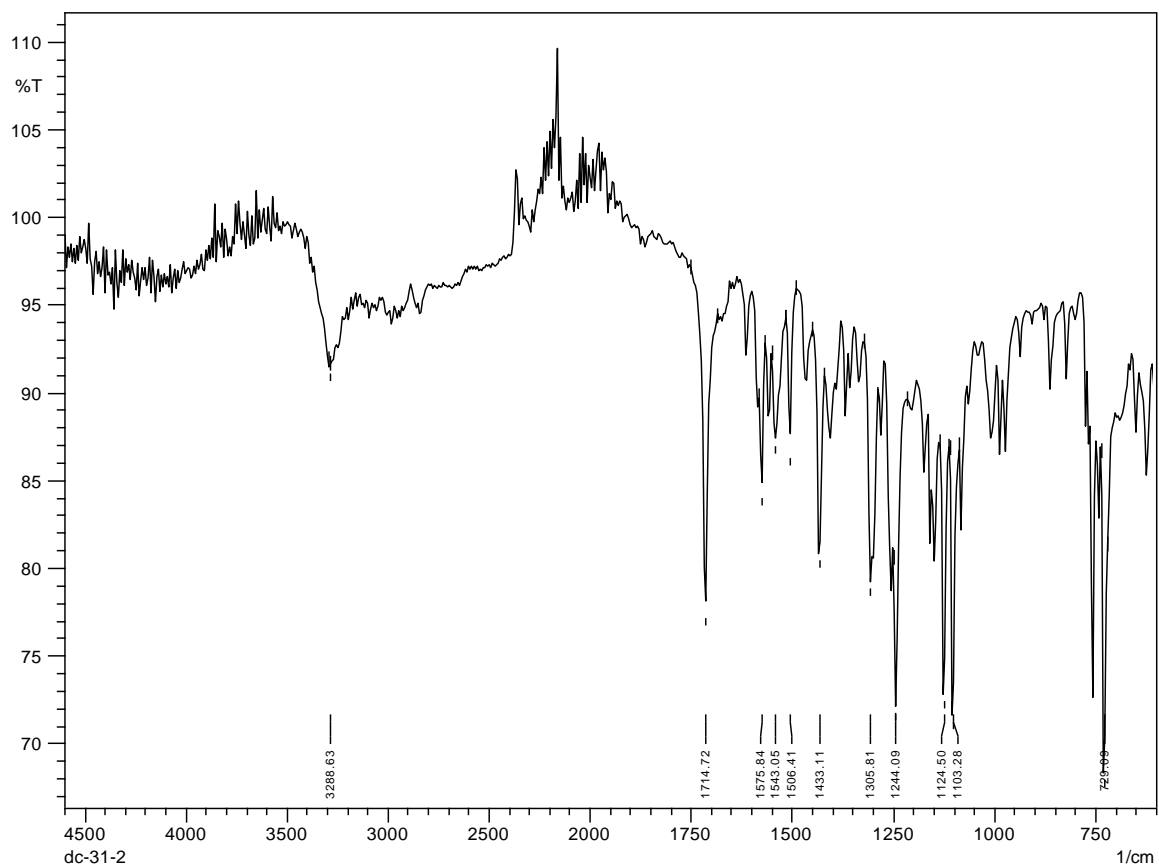
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 182



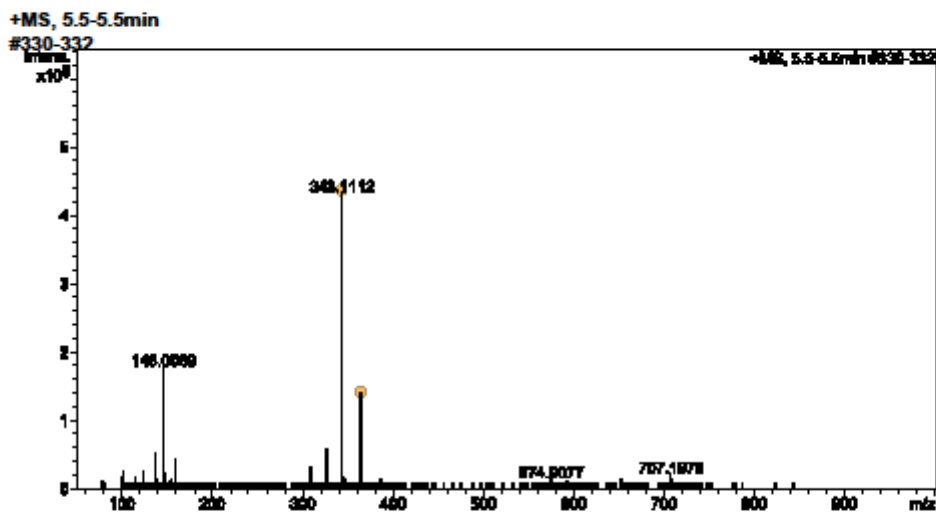
# IR of 182



Bruker maXis Impact: LC-MS SmartFormula Report

<b>Analysis Info</b>		Acquisition Date 24/10/2014 15:18:25
Analysis Name	C:\Data\Data\N34272-84-4_1-A,5_01_1119.d	
Method	lcms pos 50-1000.m	Operator Spectroscopy
Sample Name	N34272-84-4	Instrument / Ser maXis impact 282001.0
Comment		0101

<b>Acquisition Parameter</b>			
Source Type	ESI	Scan Begin	50 m/z
Ion Polarity	Positive	Scan End	1000 m/z

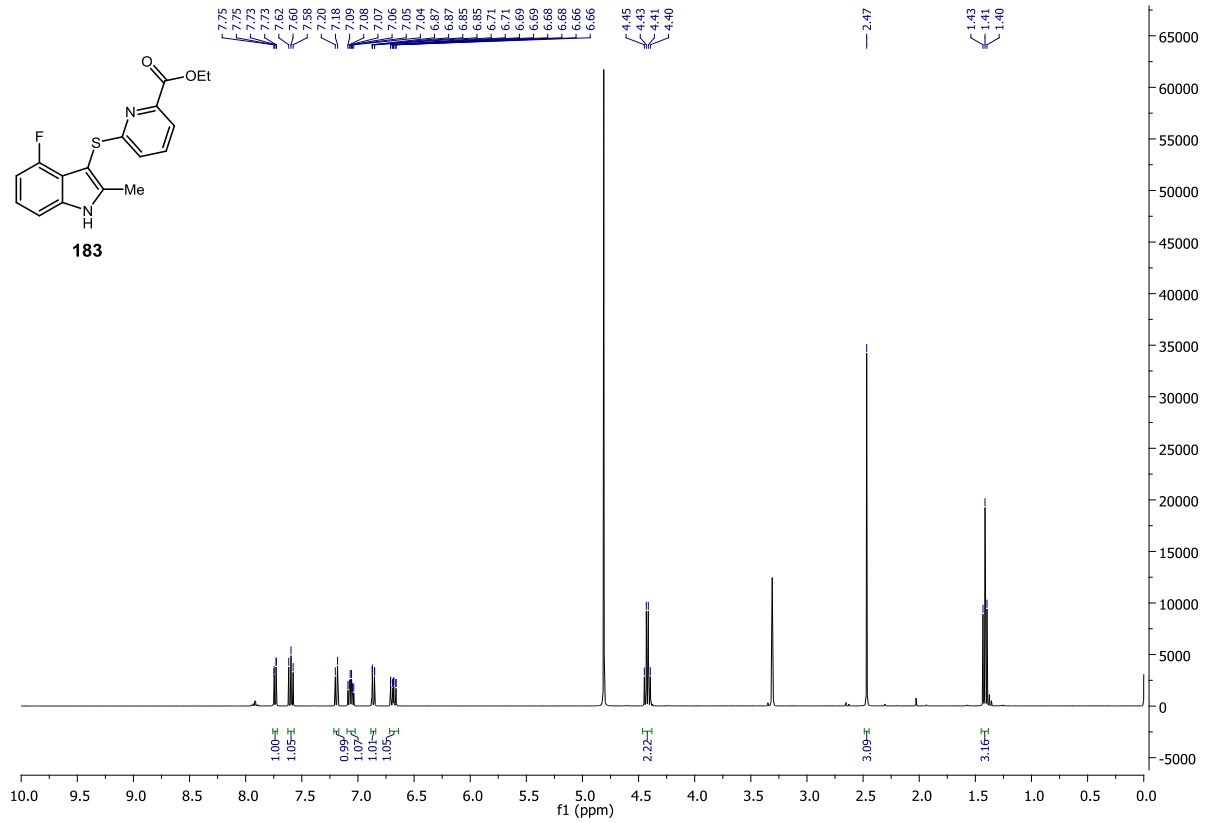


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdb	e <sup>-</sup> Conf	N-Rule
343.1112	1	C18H19N2O3S	343.1111	-0.2	52.9	1	100.00	10.5	even	ok
365.0929	1	C18H18N2NaO3S	365.0930	0.3	59.2	1	100.00	10.5	even	ok

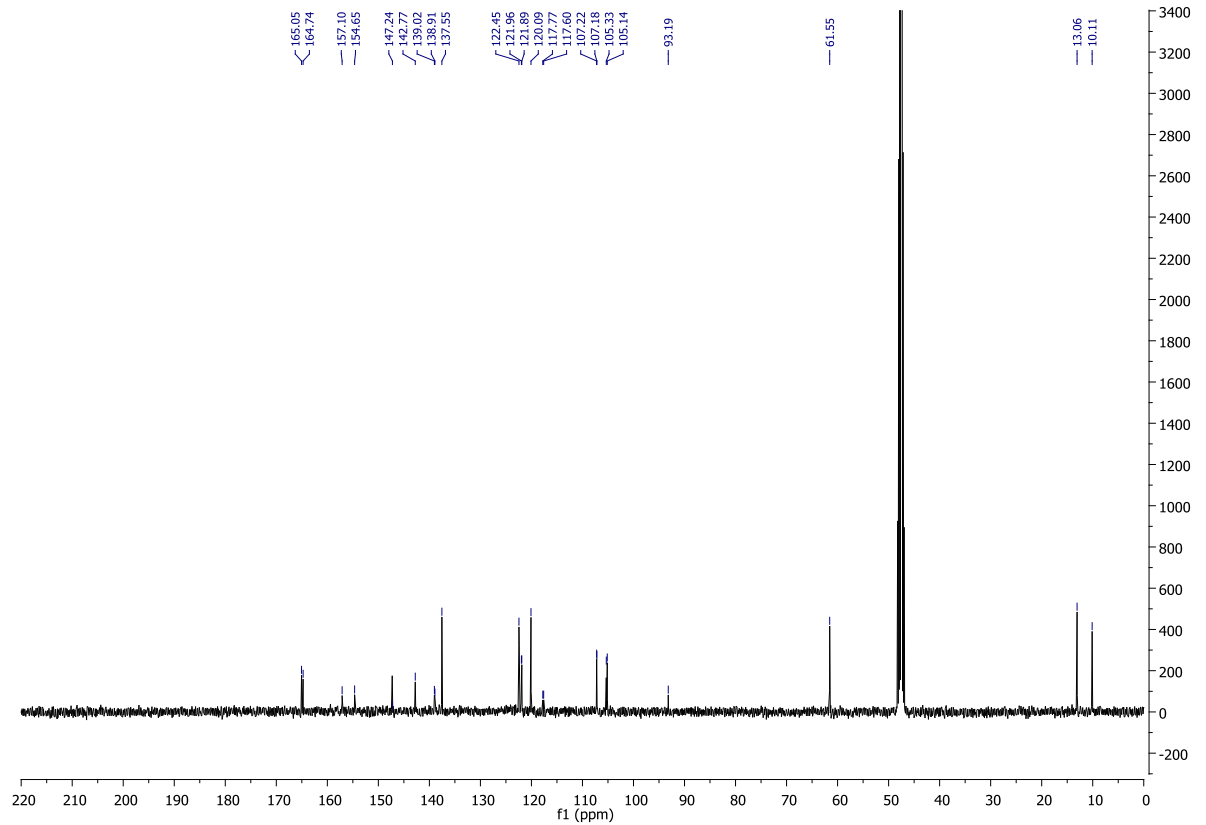
Measured mass should be within ±5 ppm of target mass

# Compound 183

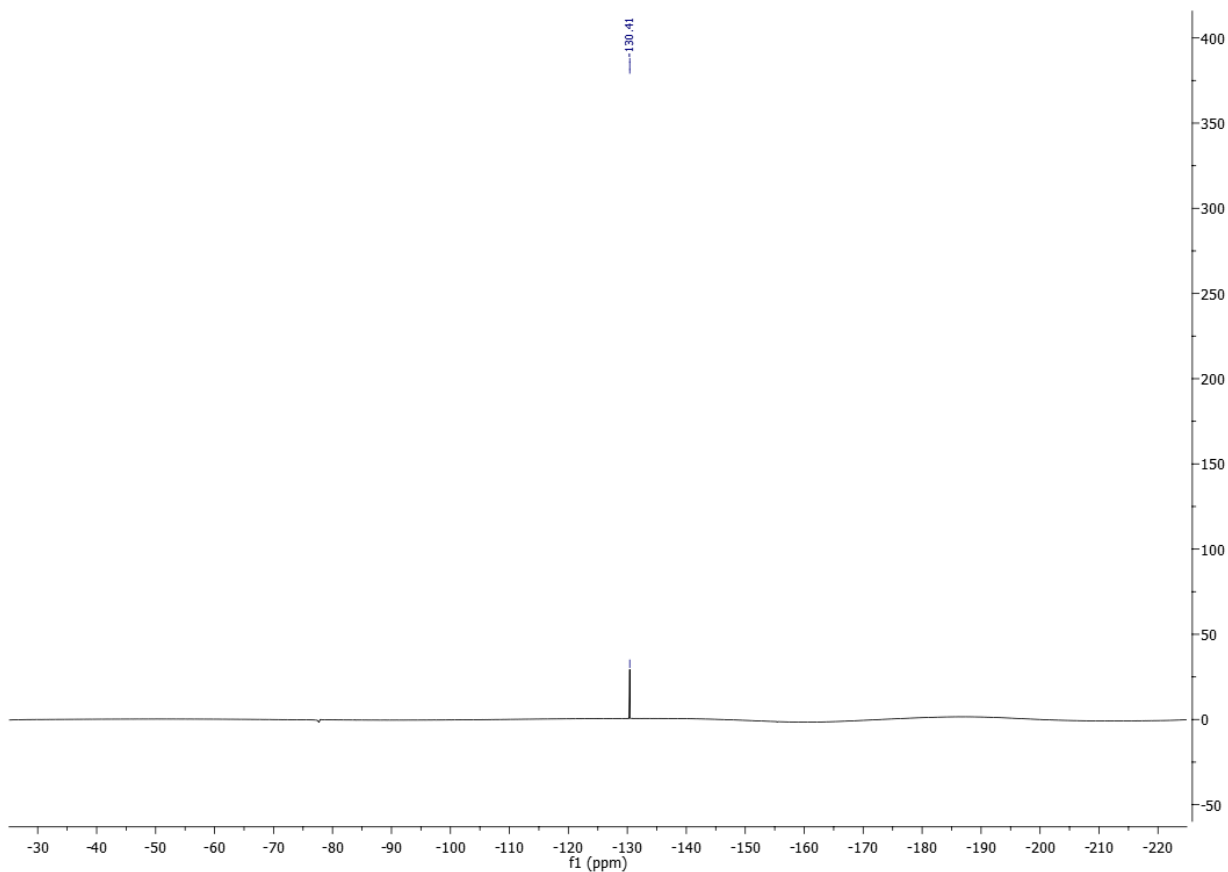
## <sup>1</sup>H NMR



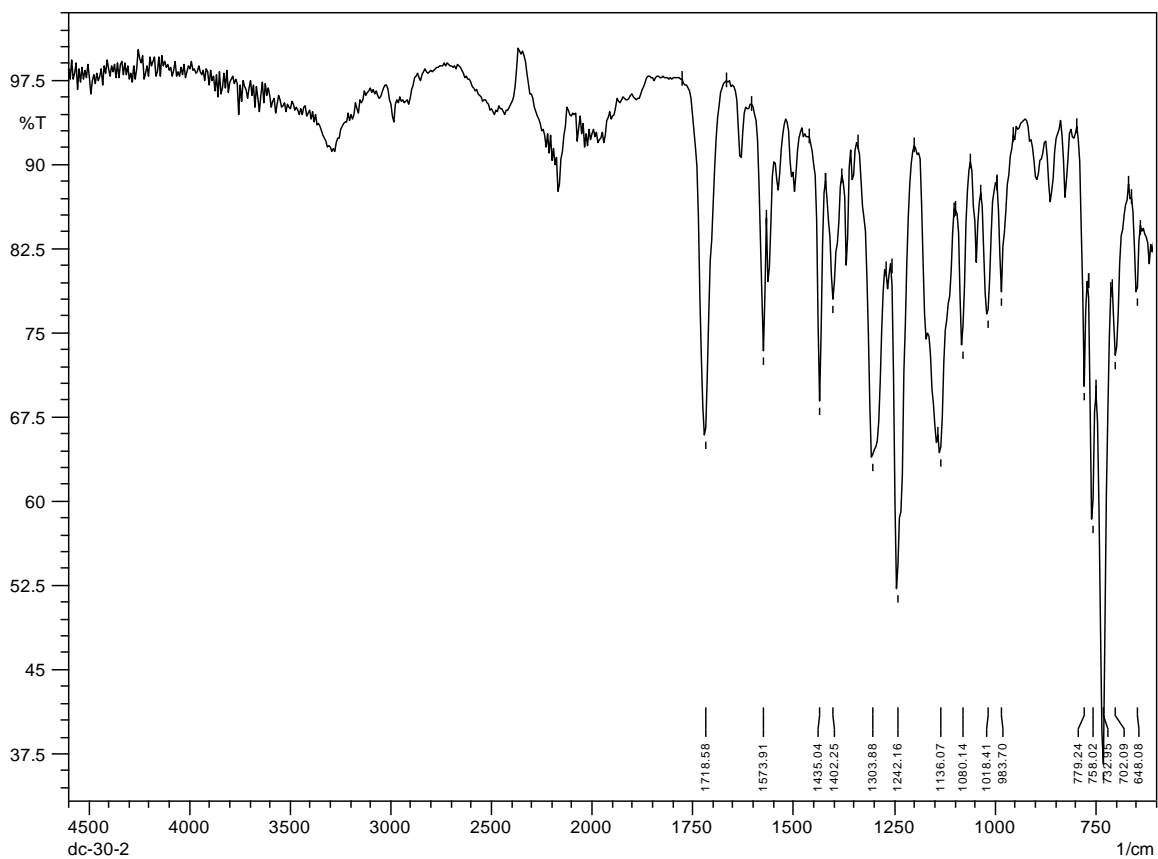
## <sup>13</sup>C NMR of 183



# <sup>19</sup>F NMR of 183



# IR of 183

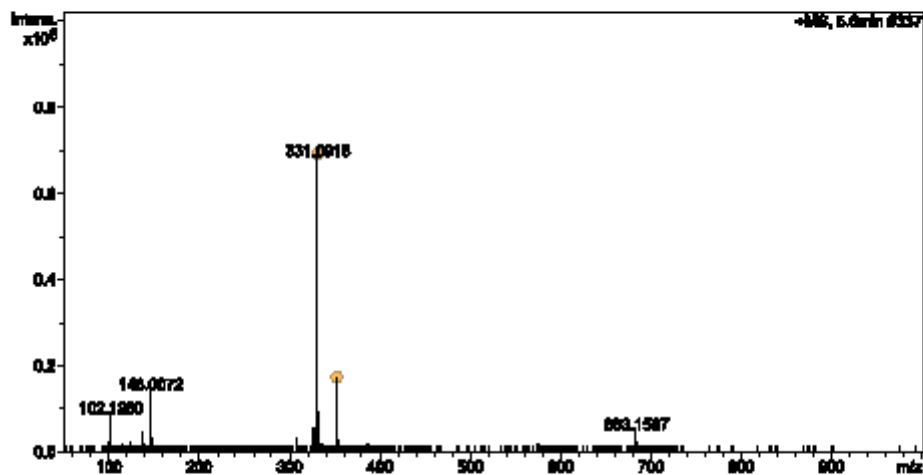


Bruker maXis Impact: LC-MS SmartFormula Report

Analysis Info  
 Analysis Name C:\Data\Data\N34272-59-2\_1-A,5\_01\_1067.d  
 Method lcms\_pos 50-1000.m  
 Sample Name N34272-59-2  
 Comment  
 Acquisition Date 22/10/2014 08:46:53  
 Operator Spectroscopy  
 Instrument / Ser maXis impact 282001.0  
 0101

Acquisition Parameter  
 Source Type ESI Scan Begin 50 m/z  
 Ion Polarity Positive Scan End 1000 m/z

+MS, 5.6min #337

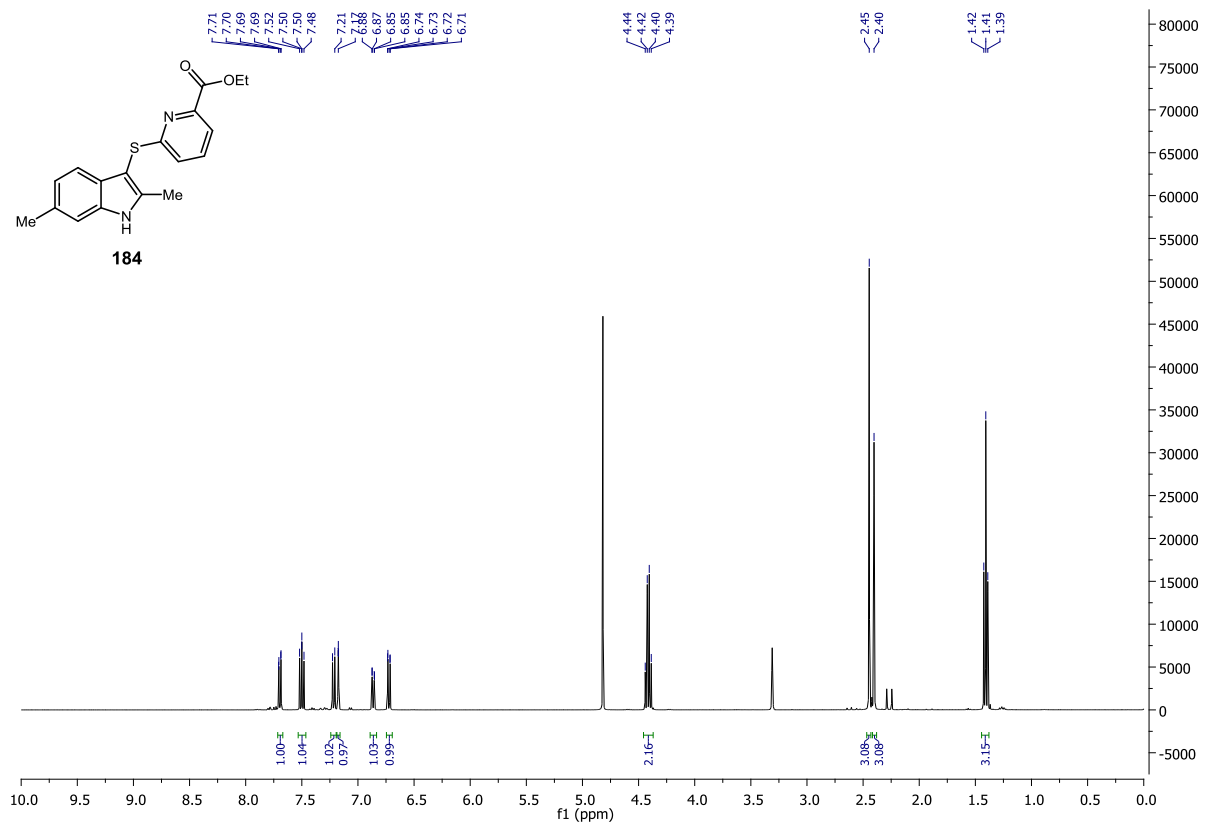


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdb	e <sup>-</sup> Conf	N-Rule
331.0918	1	C17H16FN2O2S	331.0911	2.1	45.0	1	100.00	10.5	even	ok
353.0735	1	C17H15FN2NaO2S	353.0730	1.3	53.1	1	100.00	10.5	even	ok

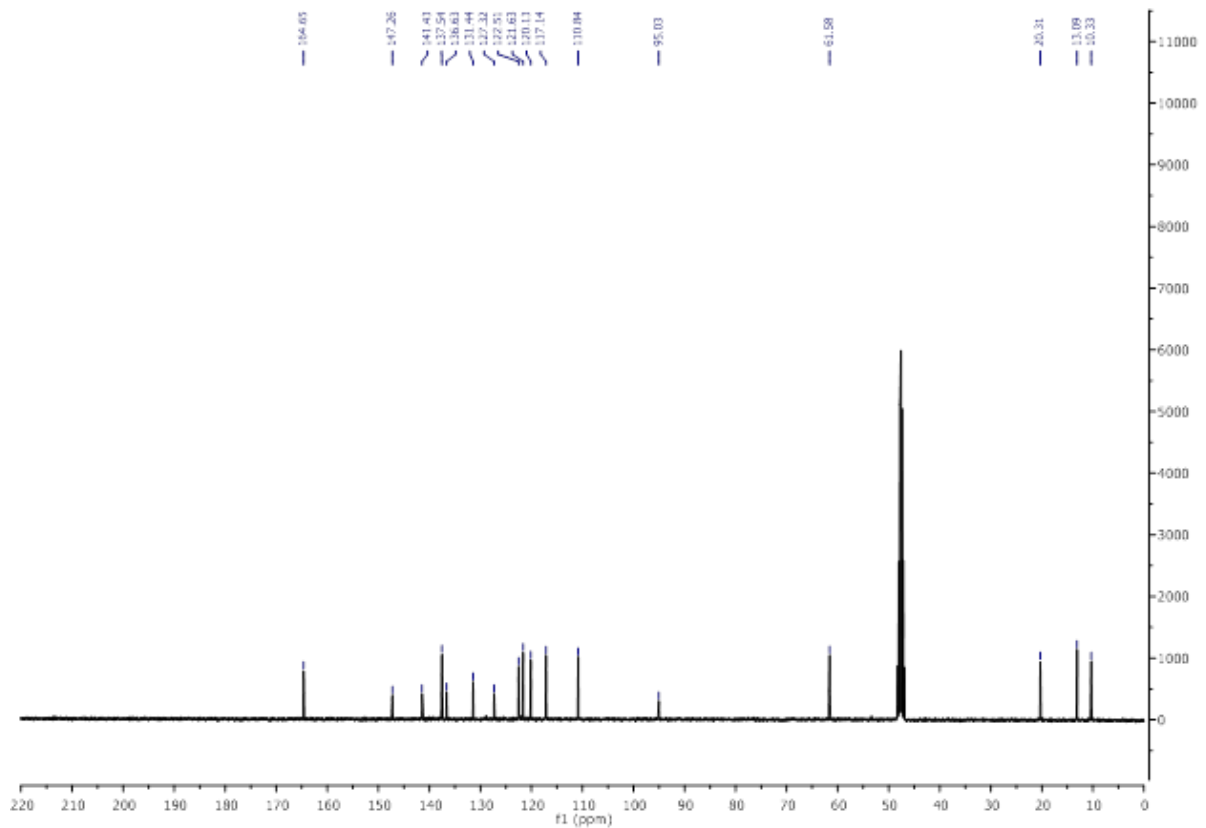
Measured mass should be within ±5 ppm of target mass

# Compound 184

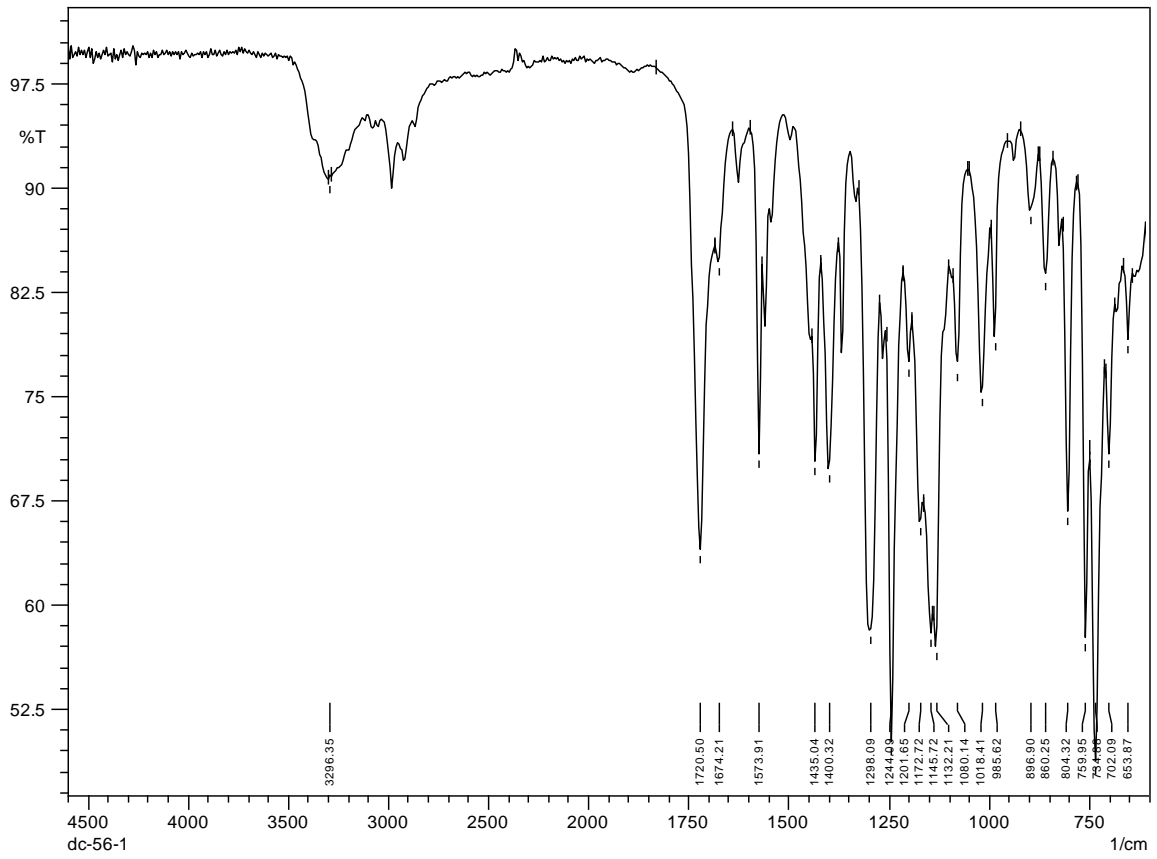
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 184



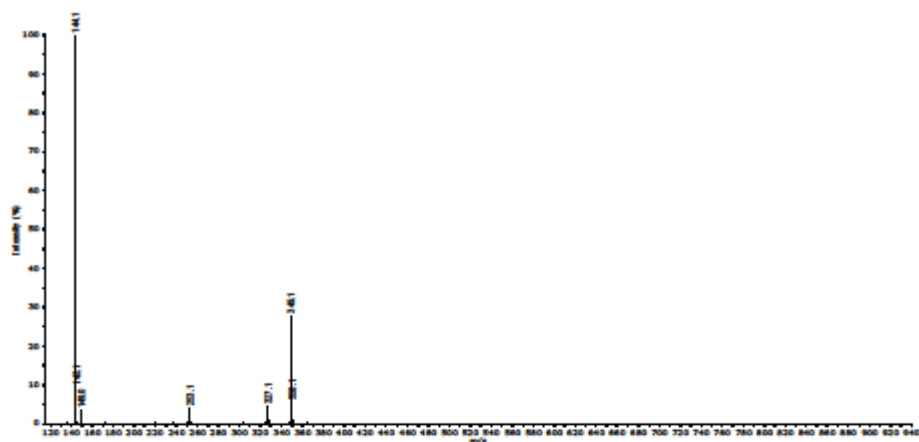
# IR of 184



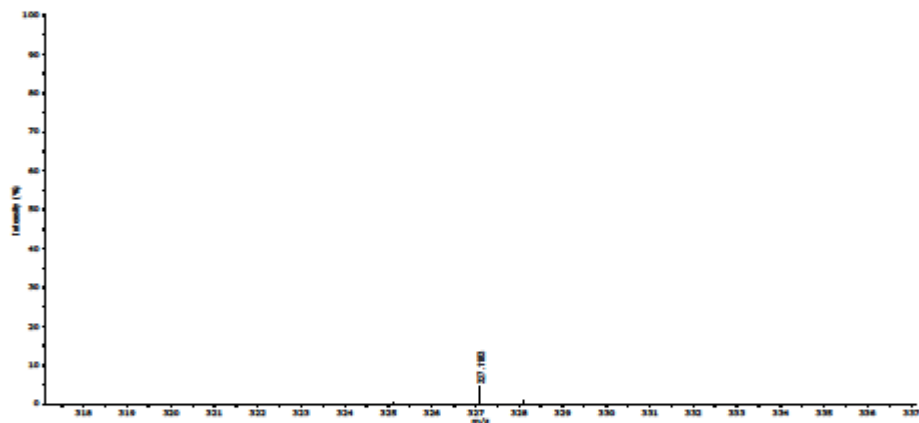


# HRMS of 184

Spectrum RT 5.47, Peak [1], Target Mass 327.1162



Expanded Spectrum RT 5.47, Peak [1], Target Mass 327.1162



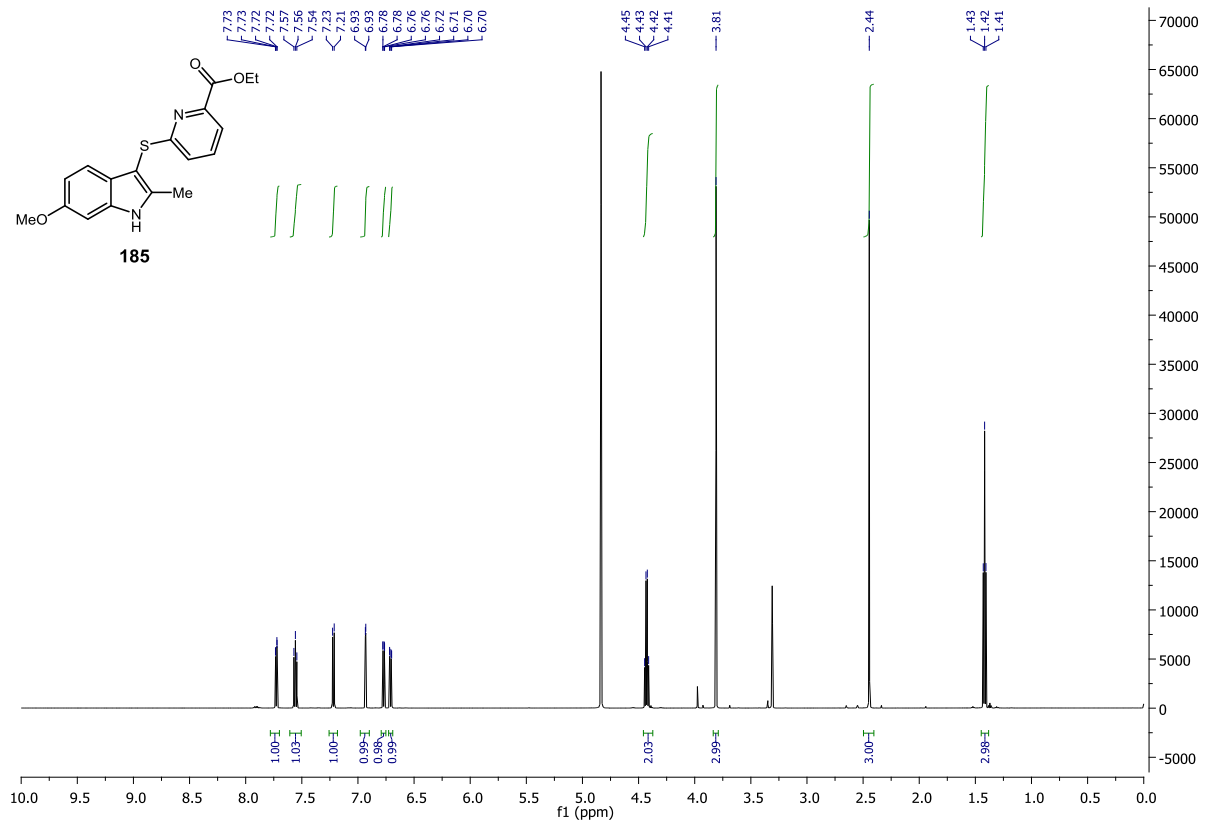
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
327.1161	327.1162	-0.1	-0.2	C <sub>18</sub> H <sub>19</sub> N <sub>2</sub> O <sub>2</sub> S

**An error of < 5ppm indicates that the measured mass is consistent with the proposed formula.**

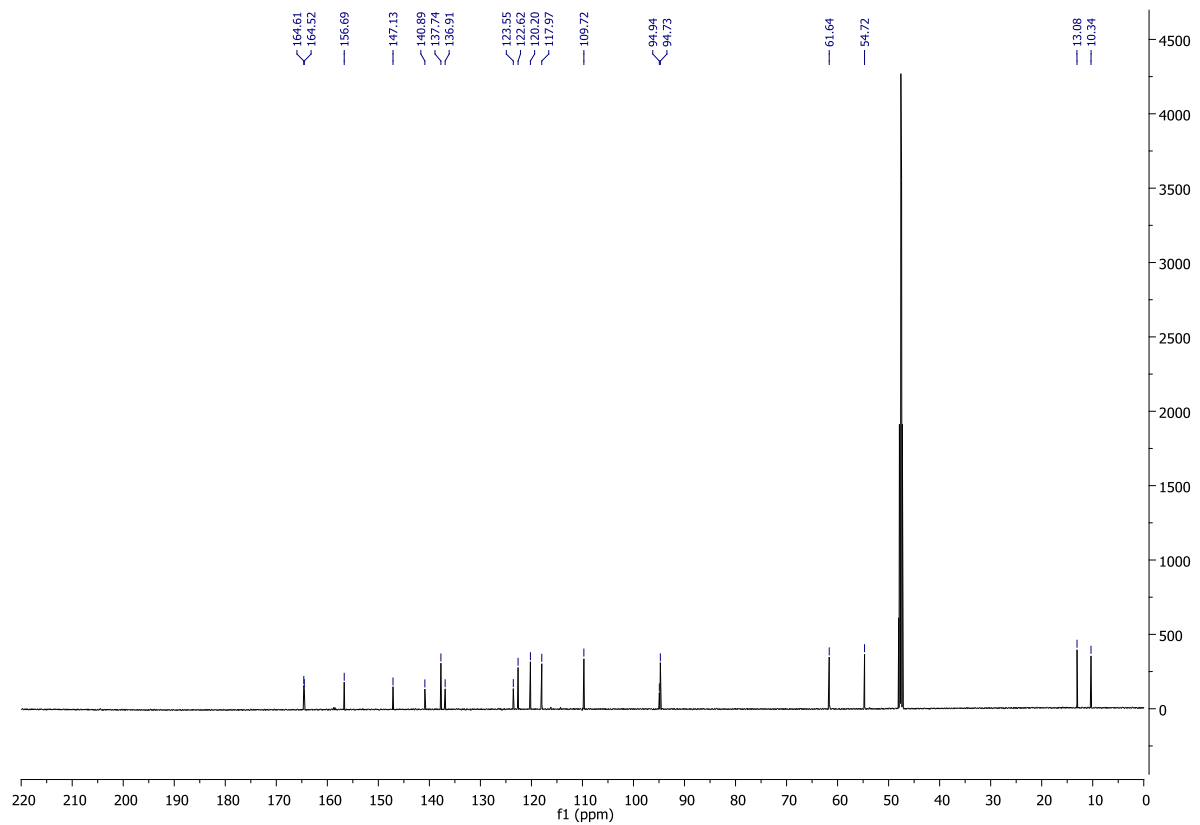
Contacts: Marco Smith #3727 or Alec Simpson #3732

# Compound 185

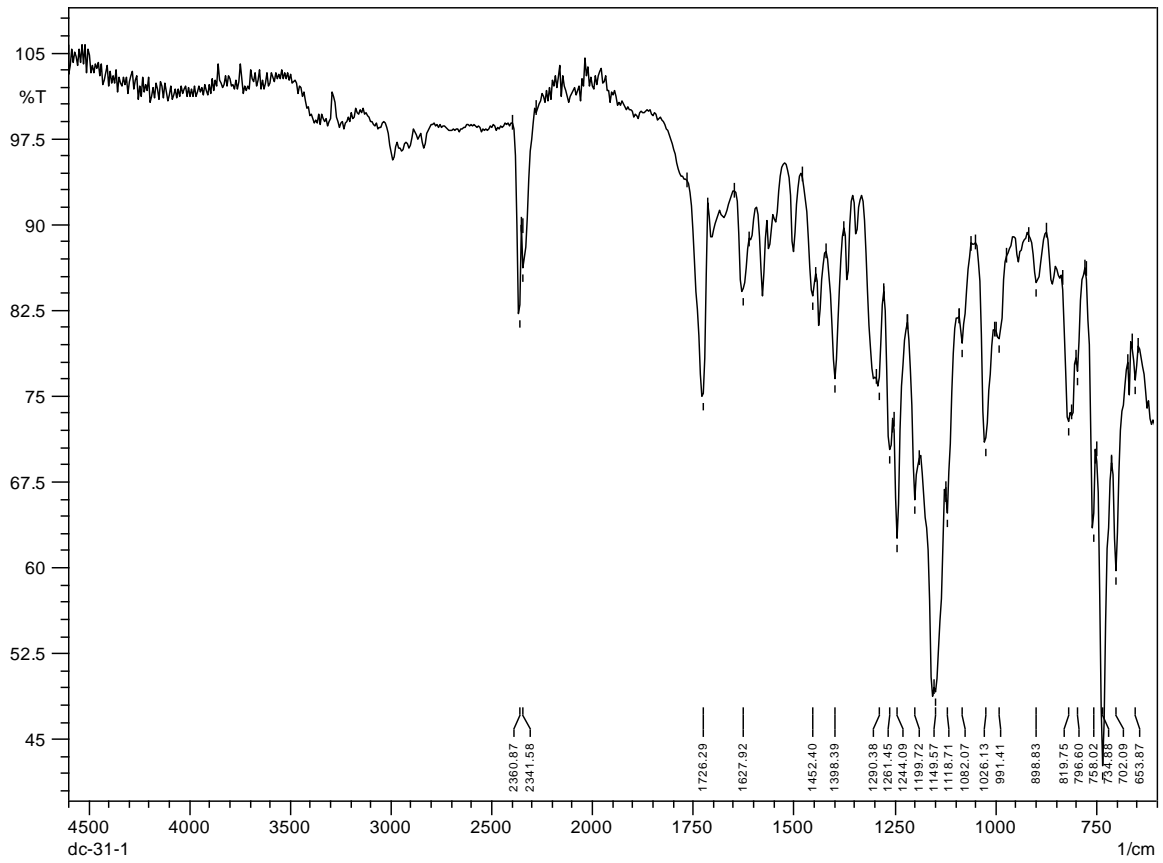
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 185



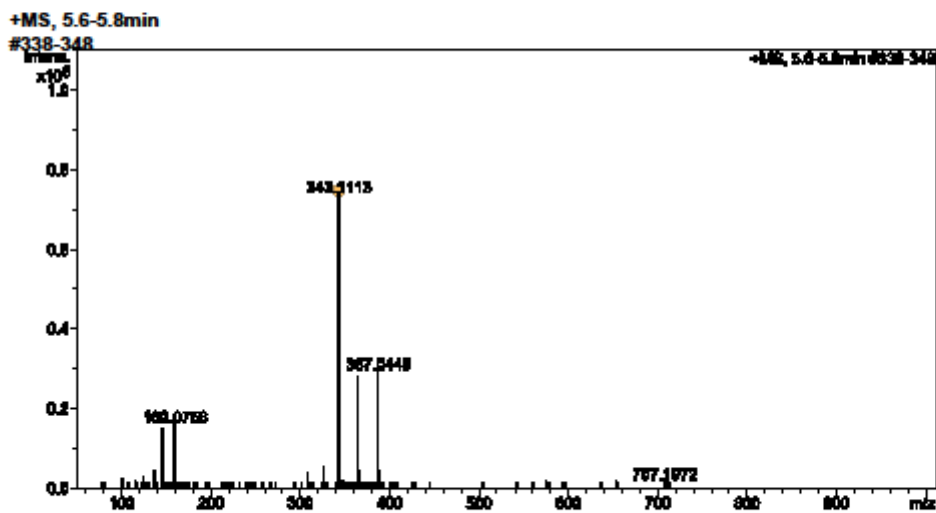
# IR of 185



Brucker maXis Impact: LC-MS SmartFormula Report

<b>Analysis Info</b>		Acquisition Date 24/10/2014 15:07:39
Analysis Name	C:\Data\Data\N34272-64-3_1-A,4_01_1118.d	
Method	lcms pos 50-1000.m	Operator Spectroscopy
Sample Name	N34272-64-3	Instrument / Ser maXis impact 282001.0
Comment		0101

<b>Acquisition Parameter</b>			
Source Type	ESI	Scan Begin	50 m/z
Ion Polarity	Positive	Scan End	1000 m/z

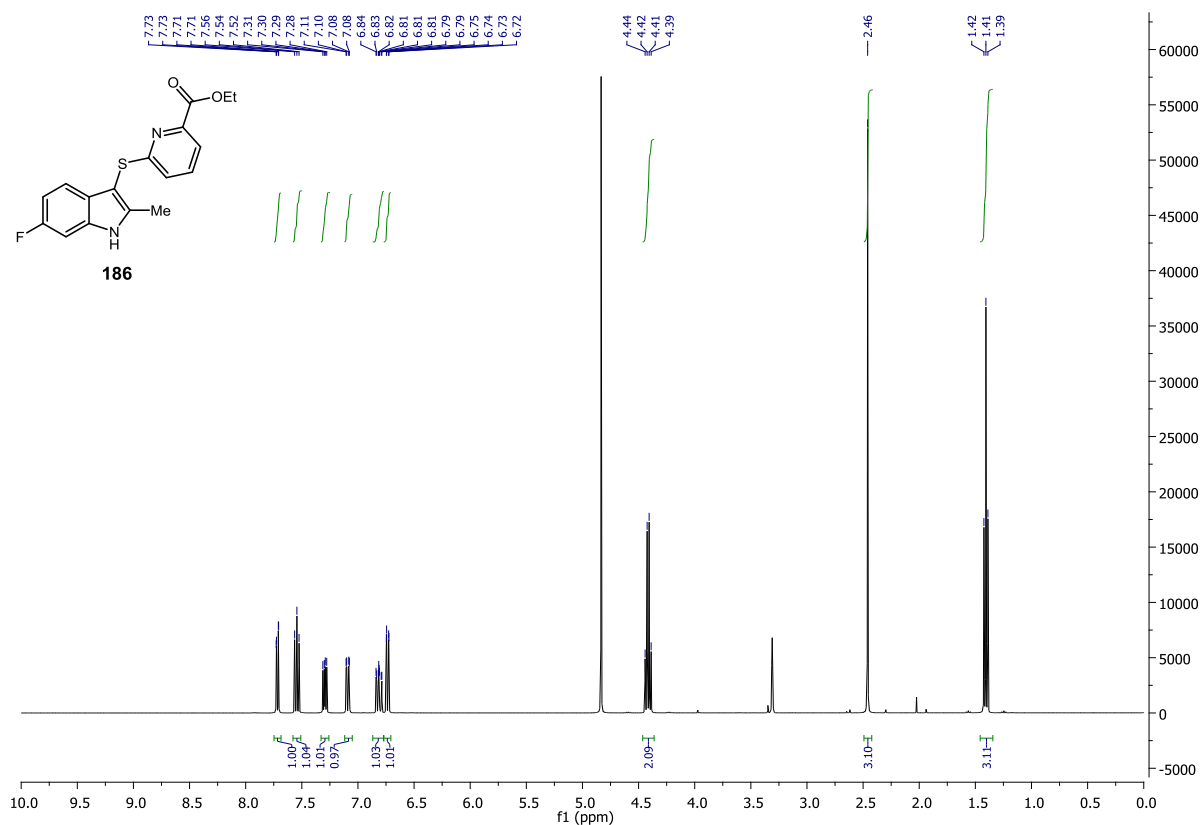


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdb	e <sup>-</sup> Conf	N-Rule
343.1113	1	C18H19N2O3S	343.1111	-0.6	35.3	1	100.00	10.5	even	ok

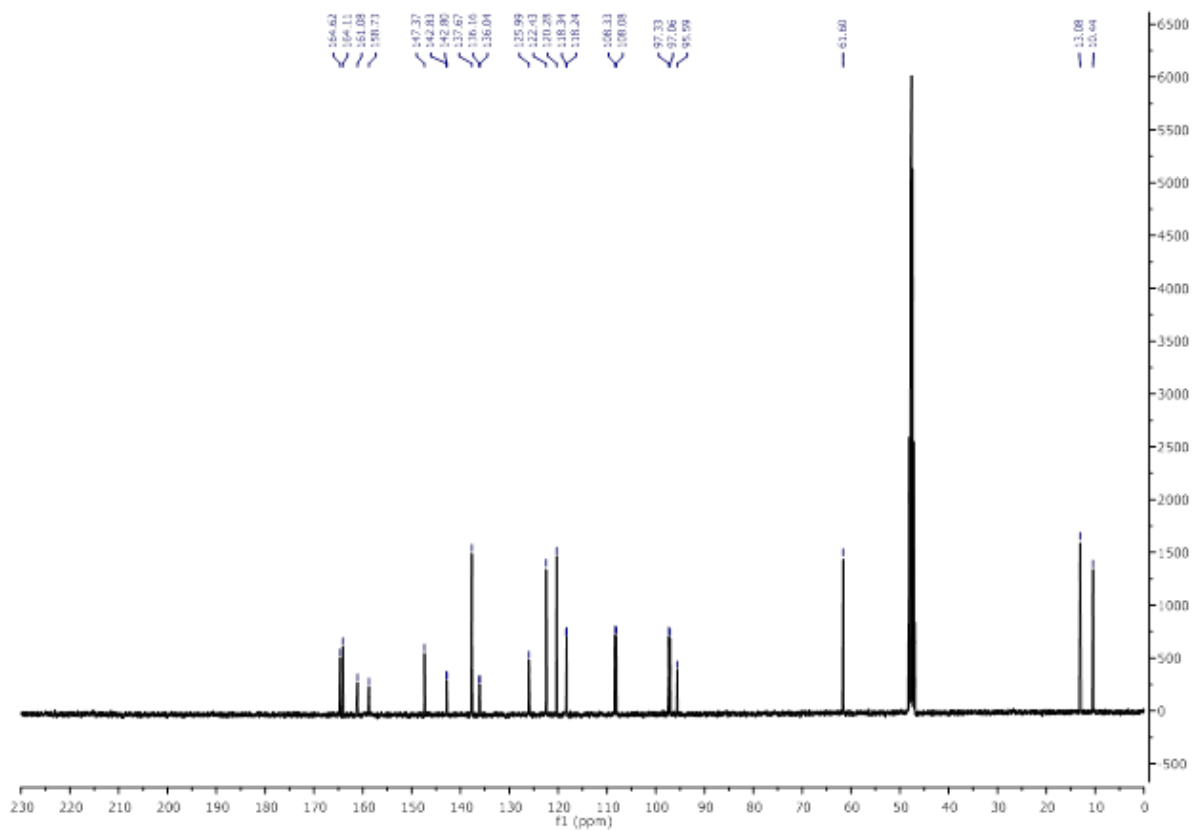
Measured mass should be within ±5 ppm of target mass

# Compound 186

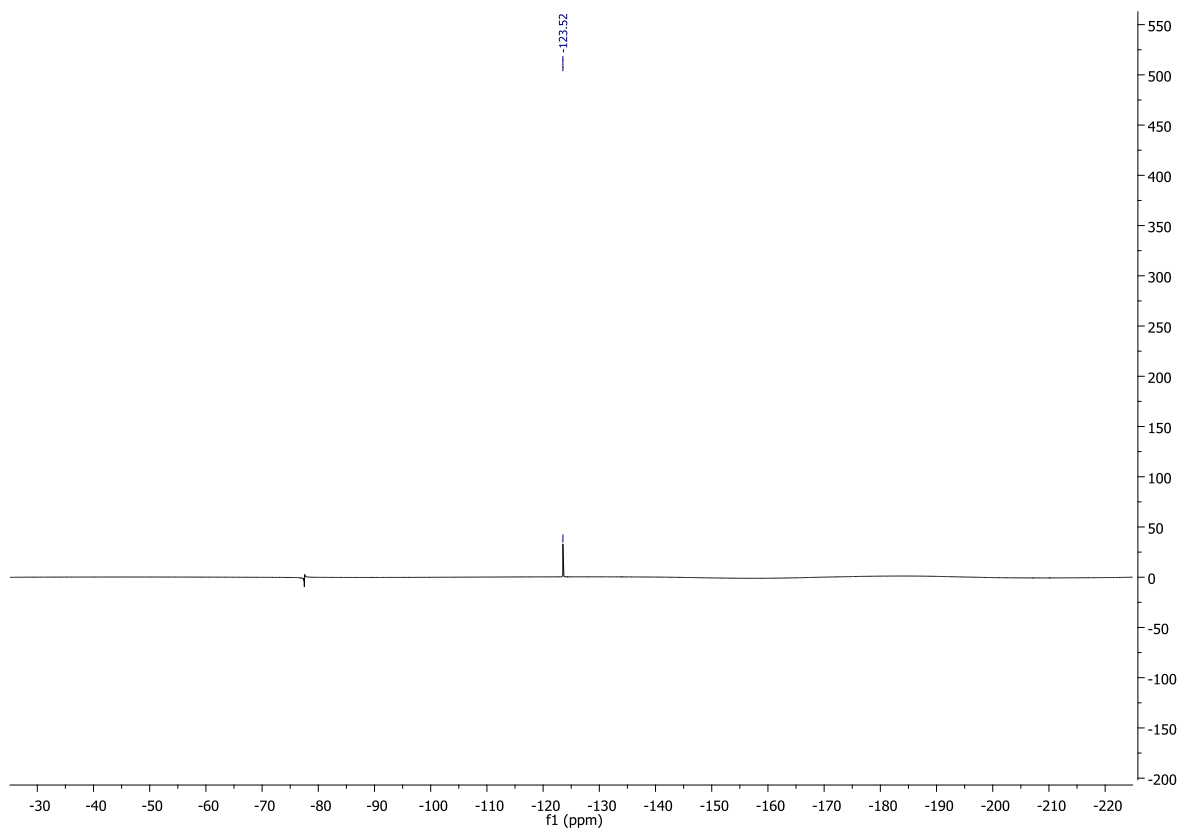
## <sup>1</sup>H NMR



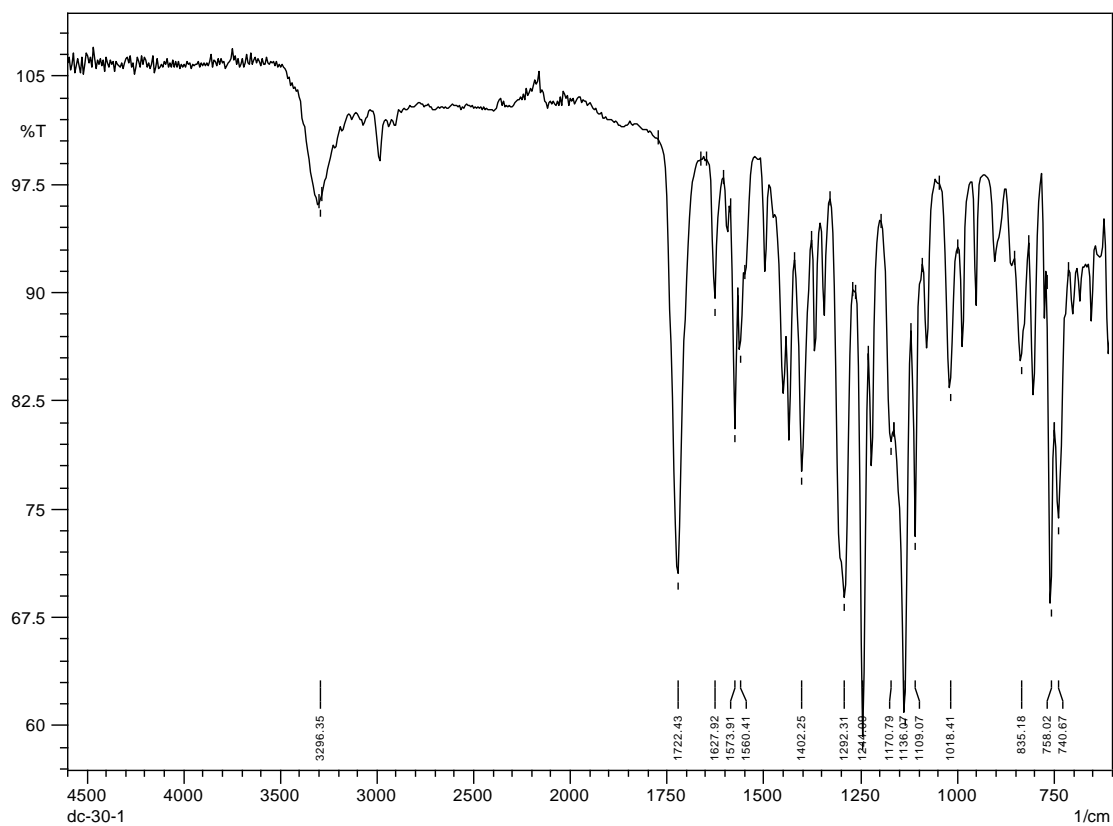
## <sup>13</sup>C NMR of 186



# <sup>19</sup>F NMR of 186



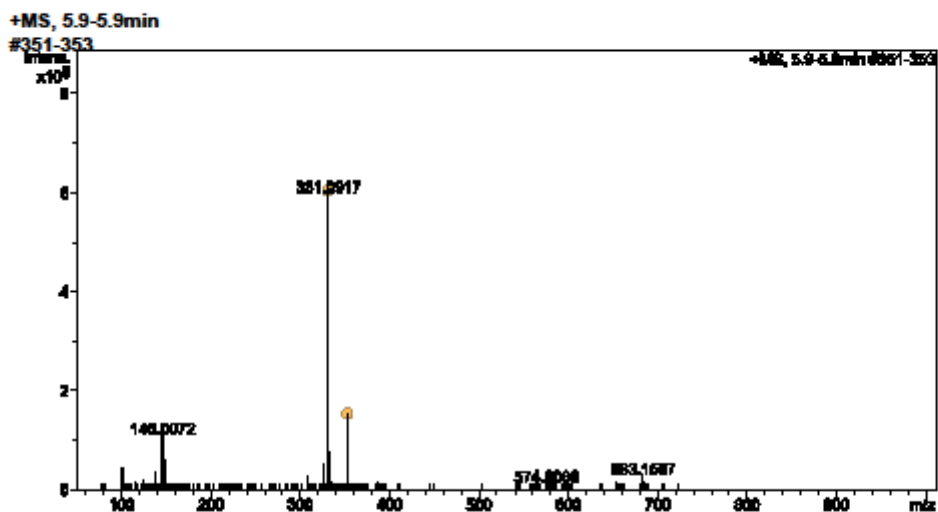
# IR of 186



Bruker maXis Impact: LC-MS SmartFormula Report

Analysis Info Acquisition Date 22/10/2014 08:38:06  
 Analysis Name C:\Data\Data\N34272-59-1\_1-A,4\_01\_1066.d  
 Method lcms pos 50-1000.m Operator Spectroscopy  
 Sample Name N34272-59-1 Instrument / Ser maXis impact 282001.0  
 Comment 0101

Acquisition Parameter  
 Source Type ESI Scan Begin 50 m/z  
 Ion Polarity Positive Scan End 1000 m/z

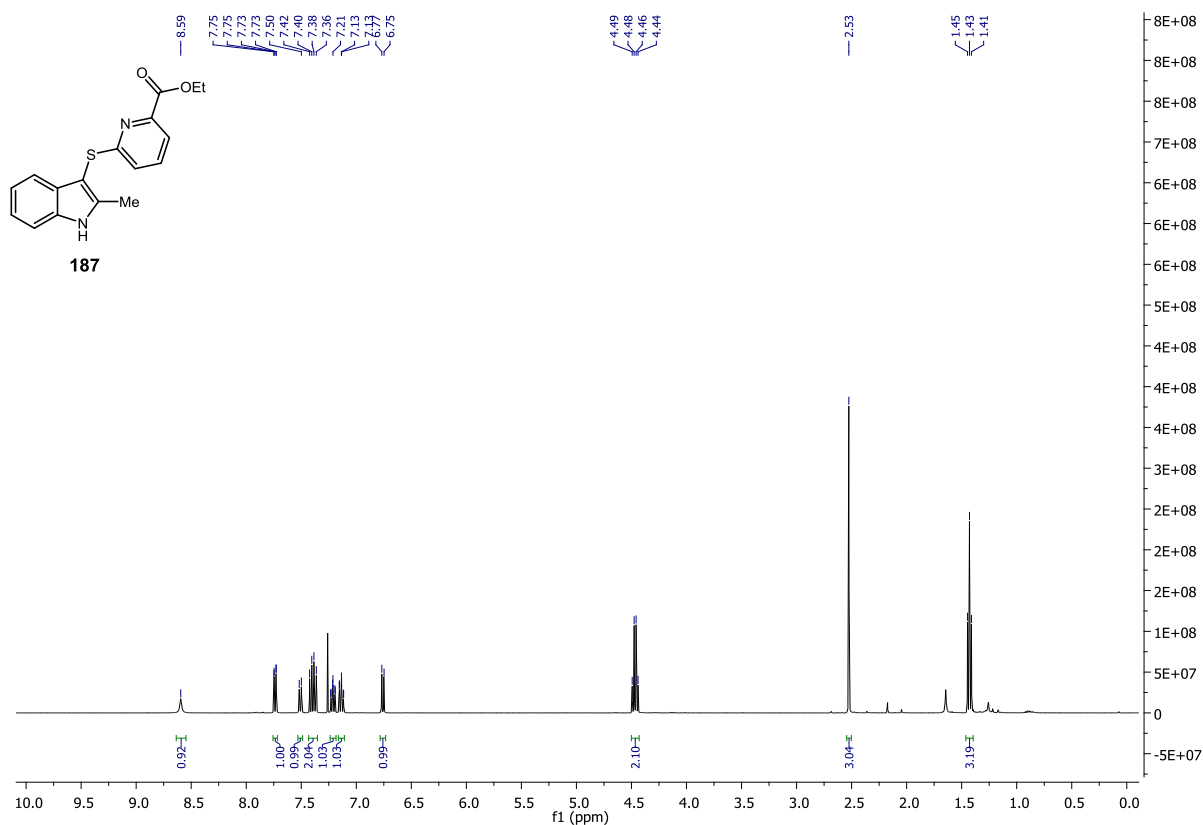


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdb	e <sup>-</sup> Conf	N-Rule
331.0917	1	C17H16FN2O2S	331.0911	1.9	51.2	1	100.00	10.5	even	ok
353.0734	1	C17H15FN2NaO2S	353.0730	1.1	55.2	1	100.00	10.5	even	ok

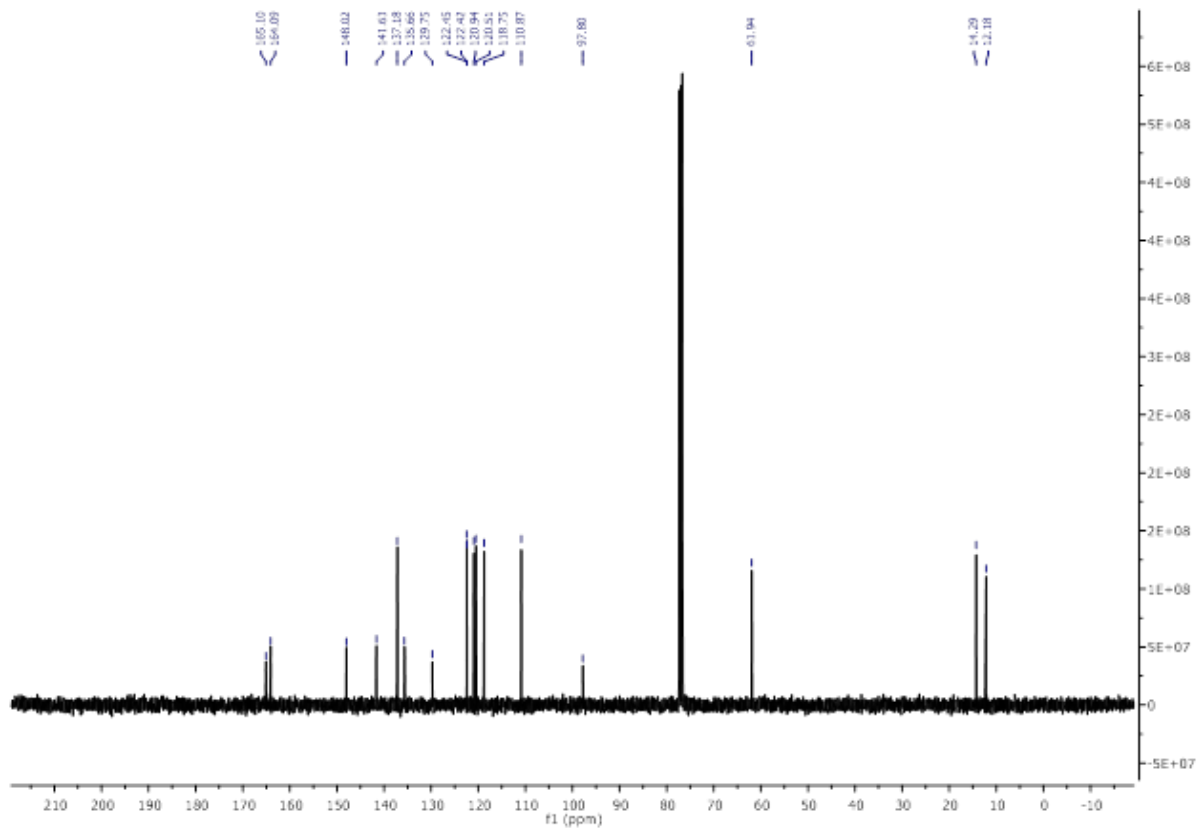
Measured mass should be within ±5 ppm of target mass

# Compound 187

## <sup>1</sup>H NMR

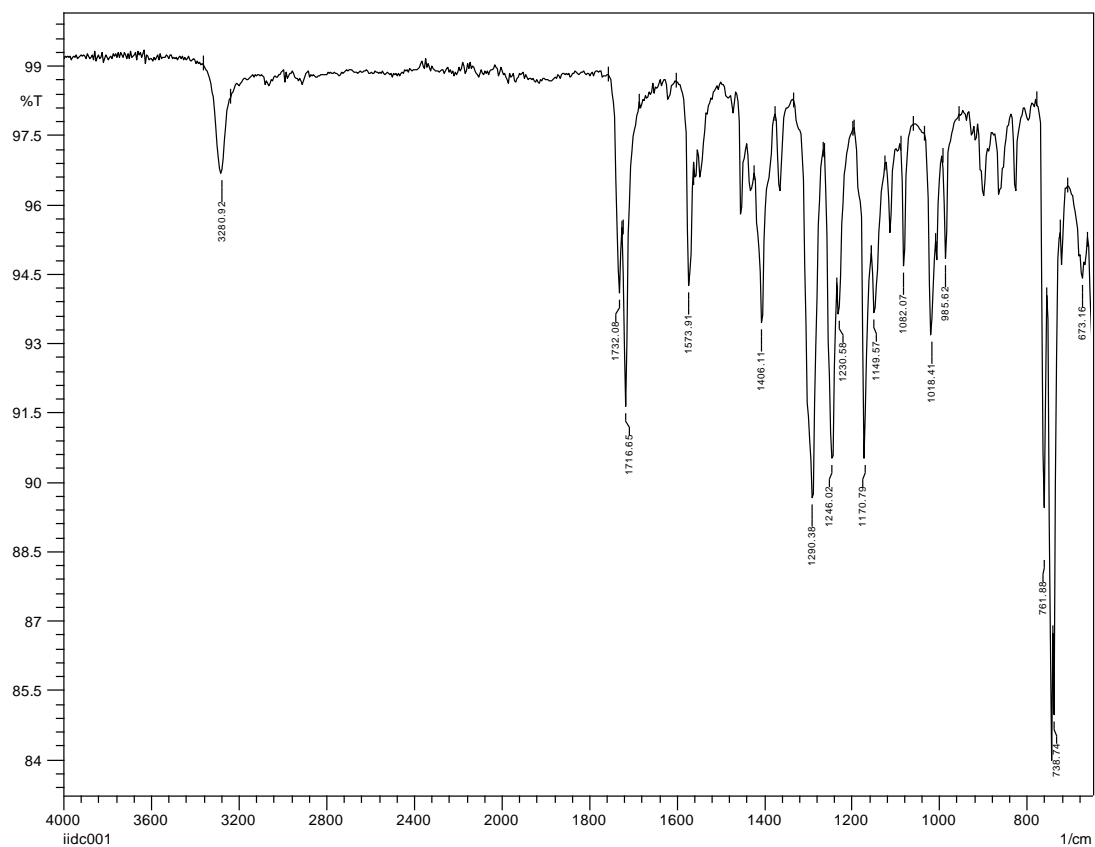


## <sup>13</sup>C NMR of 187





## IR of 187

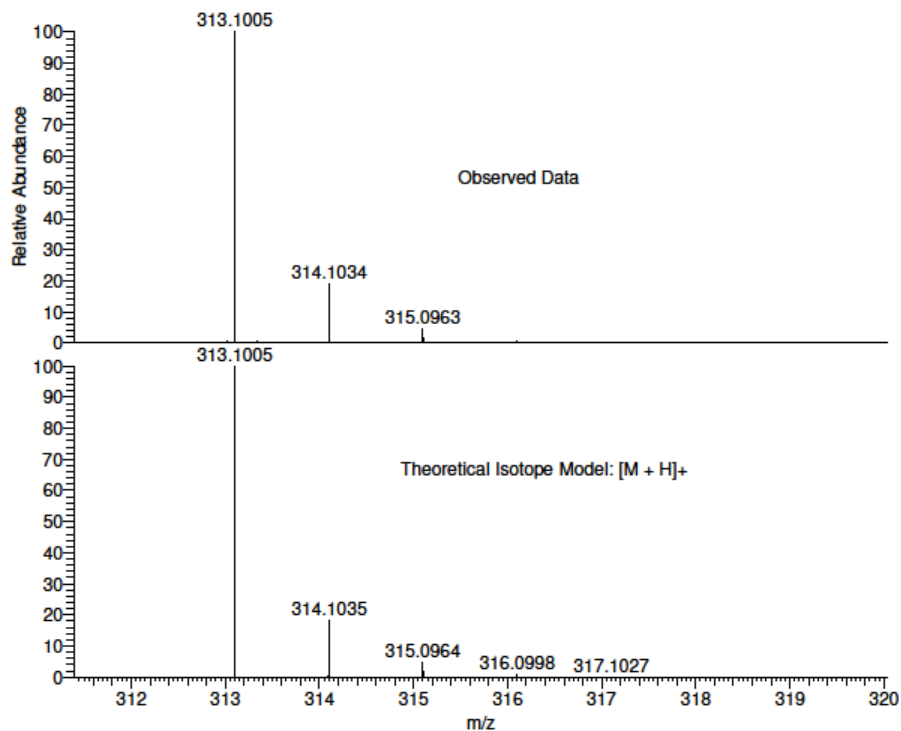


## HRMS of 187

IIDC001 MW=312?  
C<sub>17</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>S  
(DCM)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
15/11/2013 21:09:51

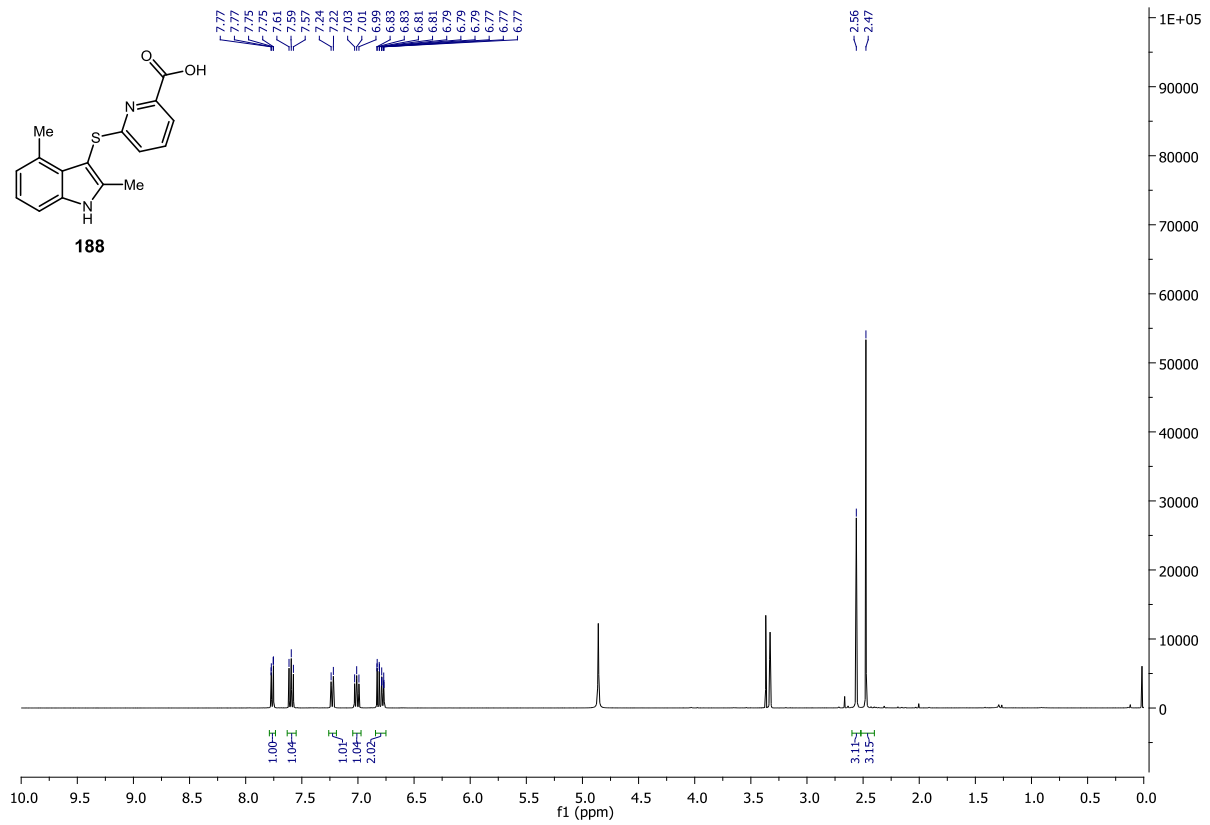


NL:  
8.88E7  
STRWAT142-OC-HNESP#31-  
56 RT: 0.71-1.05 AV: 13 F:  
FTMS + p NSI Full ms  
[120.00-2000.00]

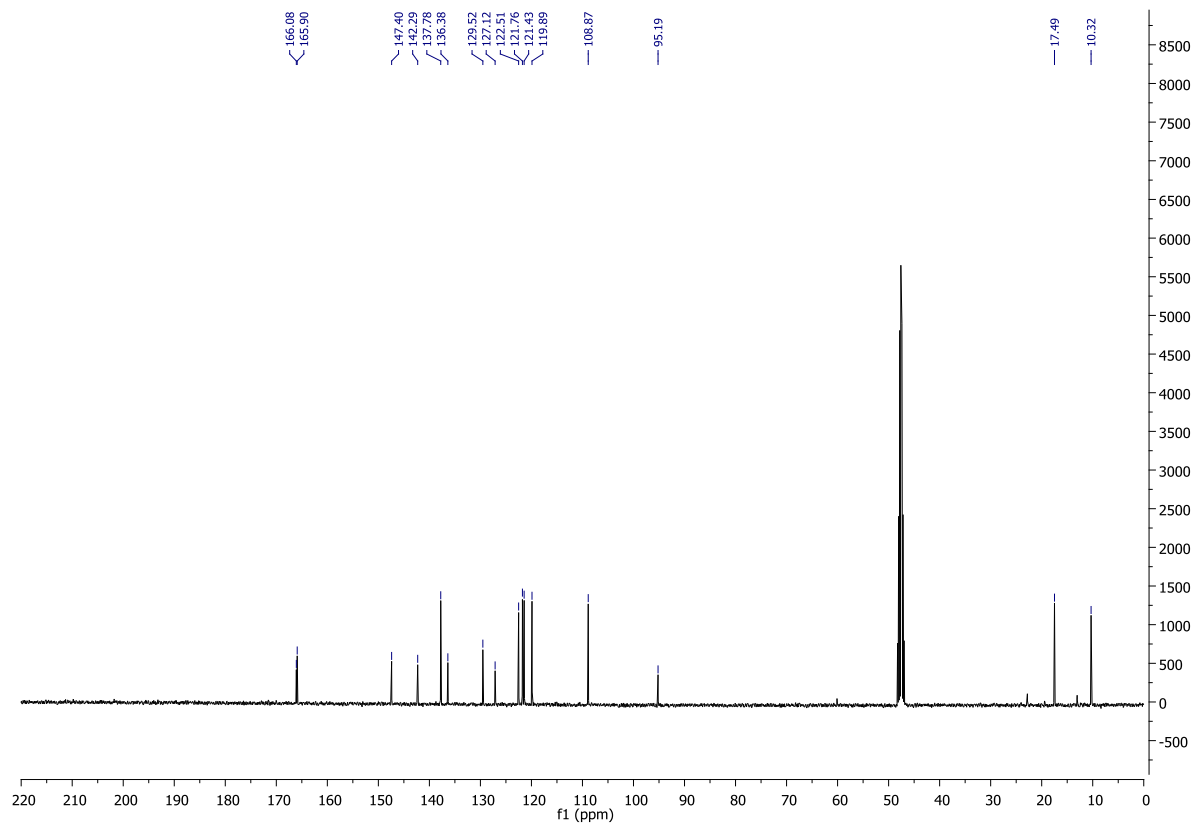
NL:  
1.83E4  
C<sub>17</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>SH:  
C<sub>17</sub>H<sub>17</sub>N<sub>2</sub>O<sub>2</sub>S<sub>1</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr .@FWHM

# Compound 188

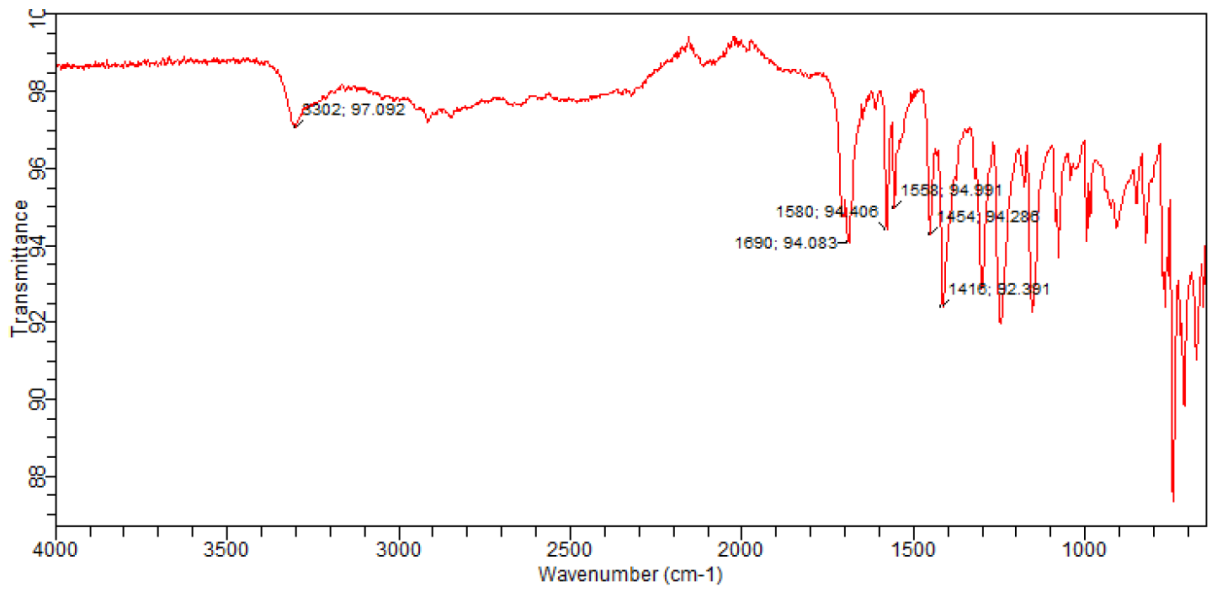
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 188



### IR of 188

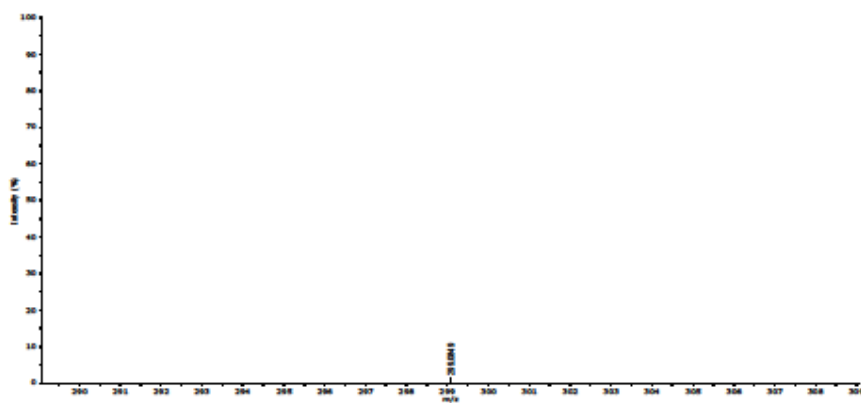


### HRMS of 188

Spectrum RT 4.45, Peak [1], Target Mass 299.0849

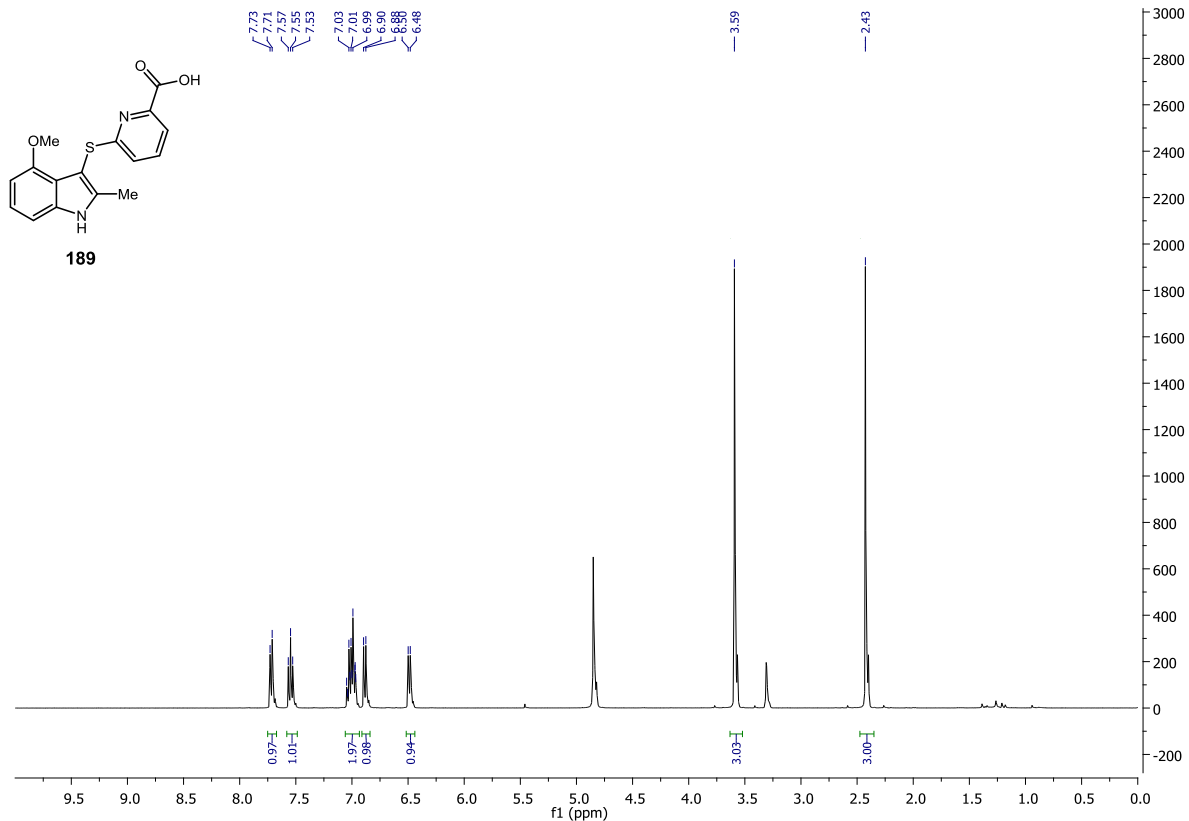


Expanded Spectrum RT 4.45, Peak [1], Target Mass 299.0849

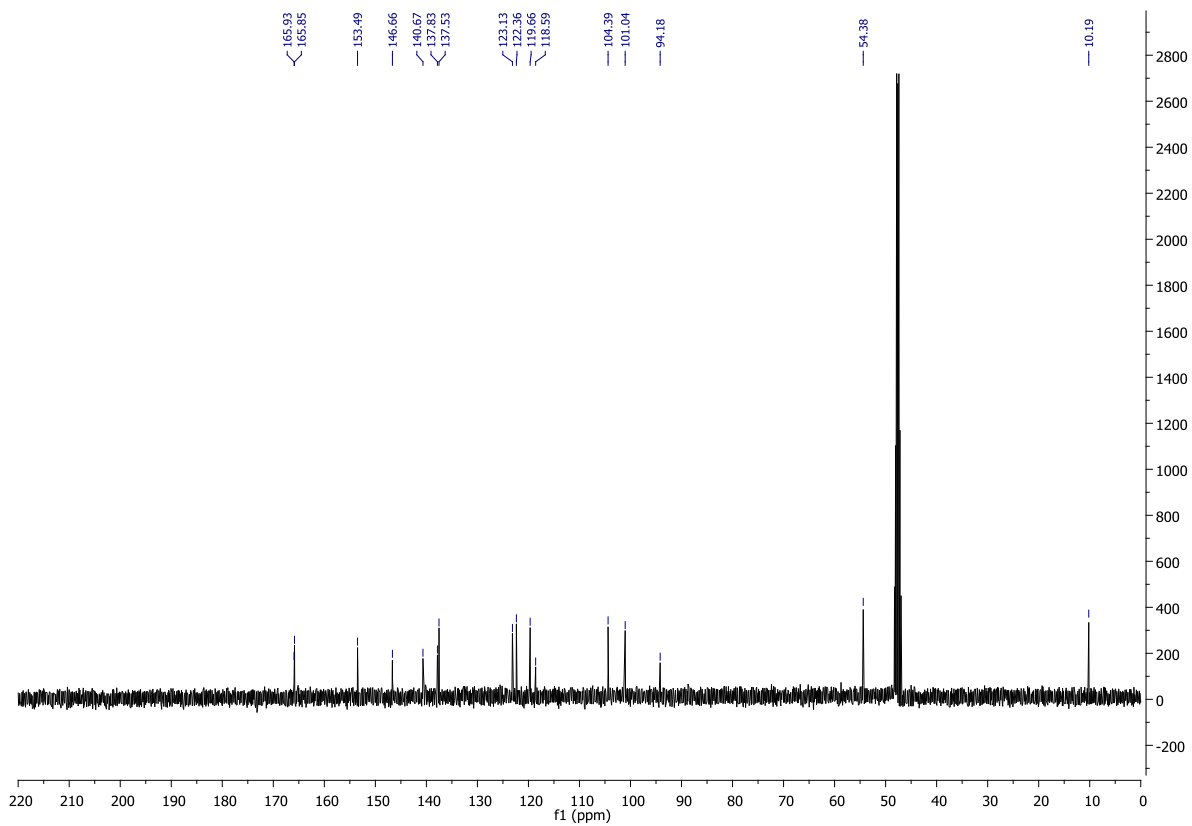


Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
299.0849	299.0849	0.0	0.0	C <sub>16</sub> H <sub>15</sub> N <sub>2</sub> O <sub>2</sub> S

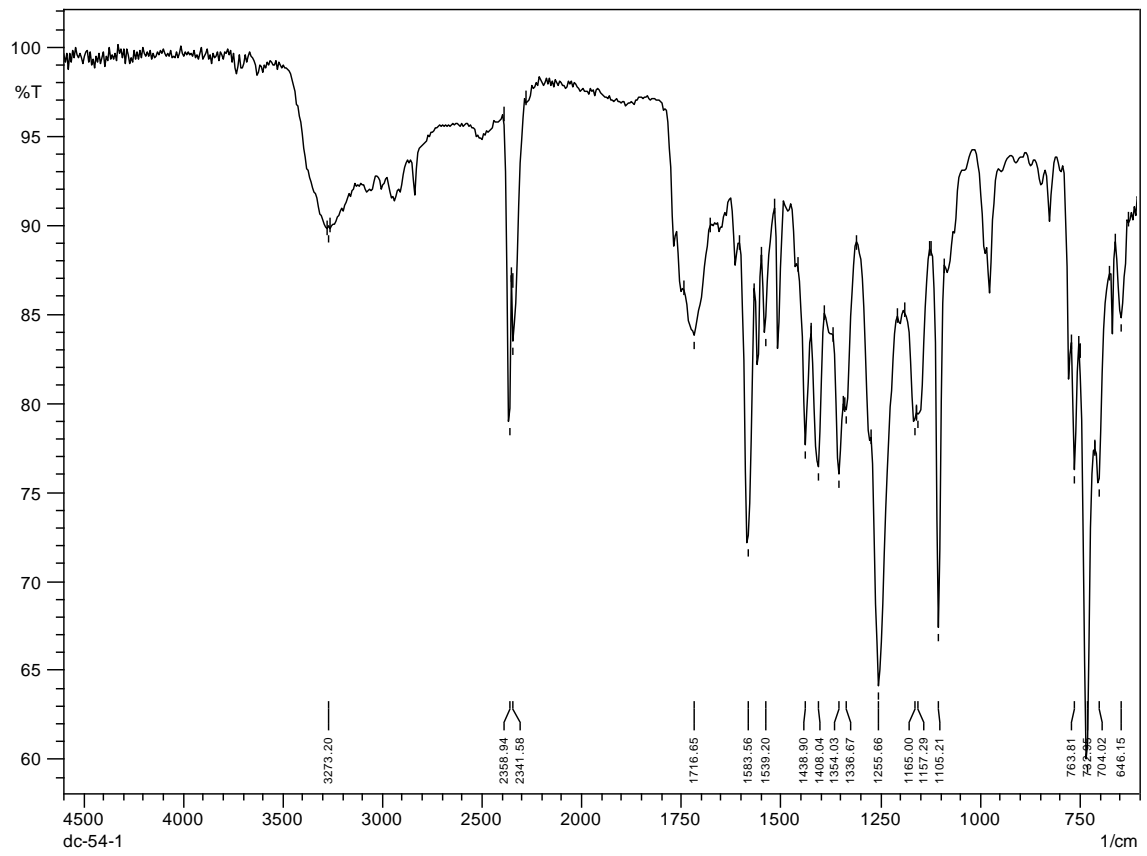
**Compound 189**  
**<sup>1</sup>H NMR**



**<sup>13</sup>C NMR of 189**



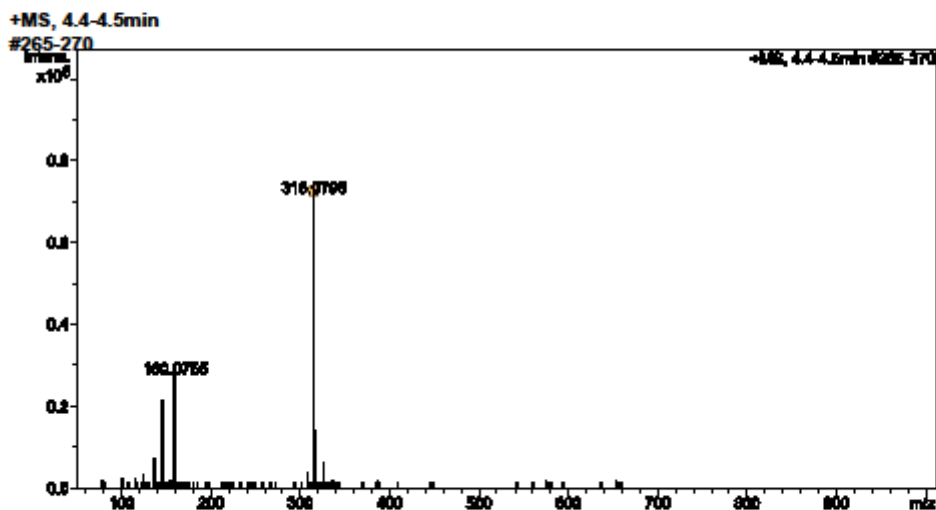
# IR of 189



Bruker maXis Impact: LC-MS SmartFormula Report

Analysis Info Acquisition Date 24/10/2014 15:39:57  
 Analysis Name C:\Data\Data\N34272-64-6\_1-A,7\_01\_1121.d  
 Method lcms pos 50-1000.m Operator Spectroscopy  
 Sample Name N34272-64-6 Instrument / Ser maXis impact 282001.0  
 Comment 0101

Acquisition Parameter  
 Source Type ESI Scan Begin 50 m/z  
 Ion Polarity Positive Scan End 1000 m/z

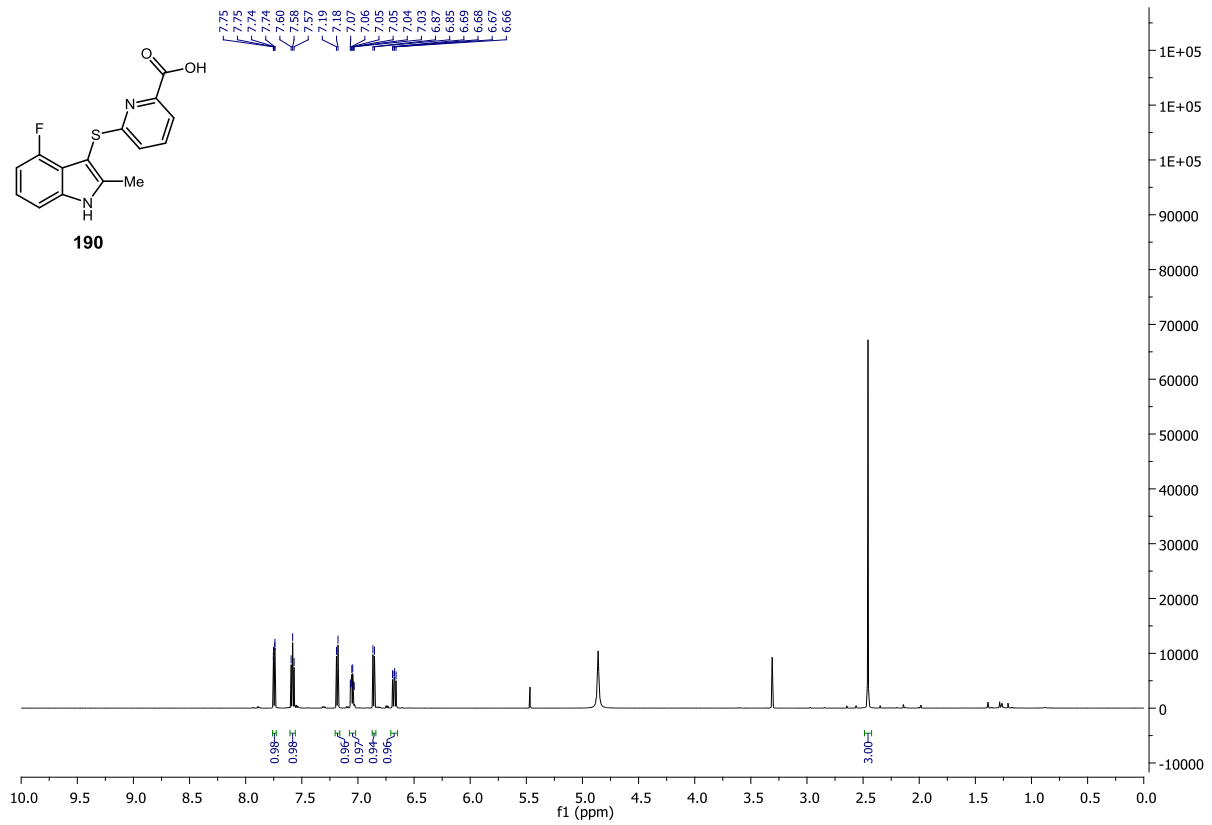


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdb	e <sup>-</sup> Conf	N-Rule
315.0798	1	C <sub>16</sub> H <sub>15</sub> N <sub>2</sub> O <sub>3</sub> S	315.0798	0.1	20.5	1	100.00	10.5	even	ok

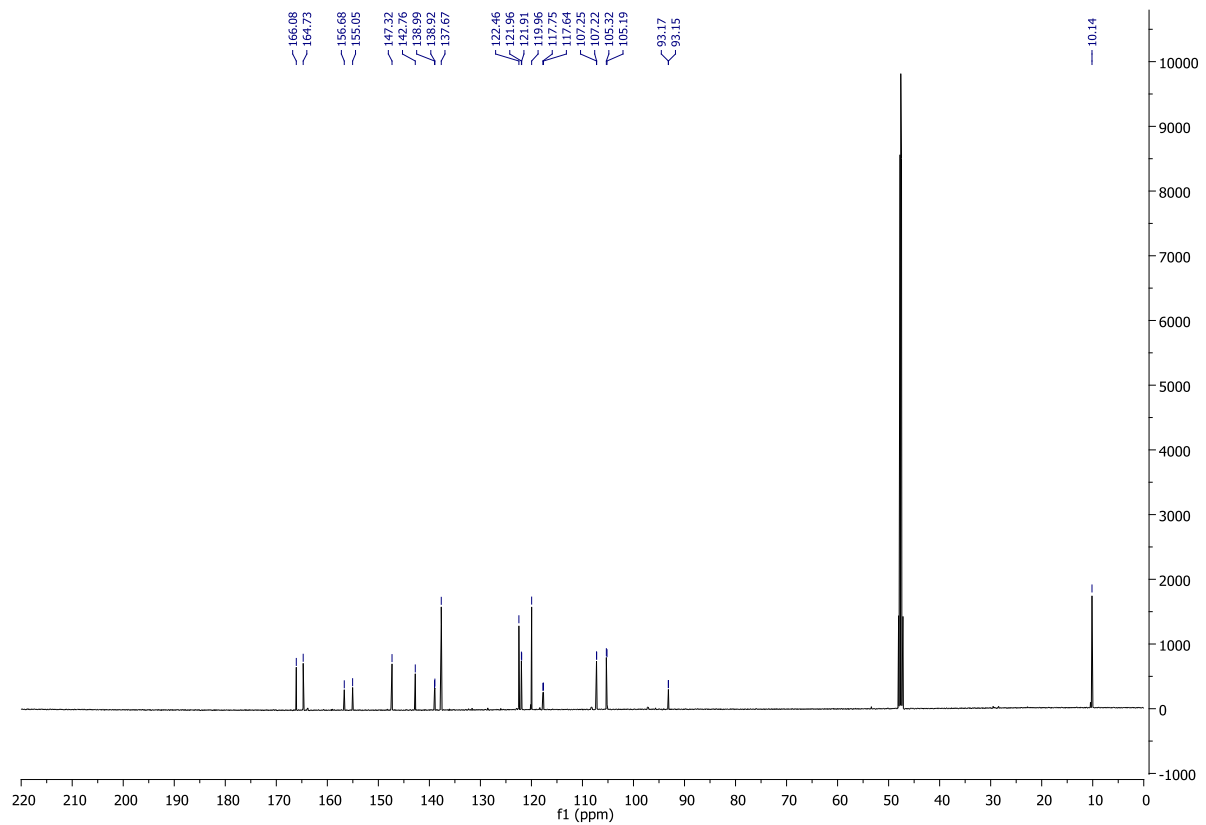
Measured mass should be within ±5 ppm of target mass

# Compound 190

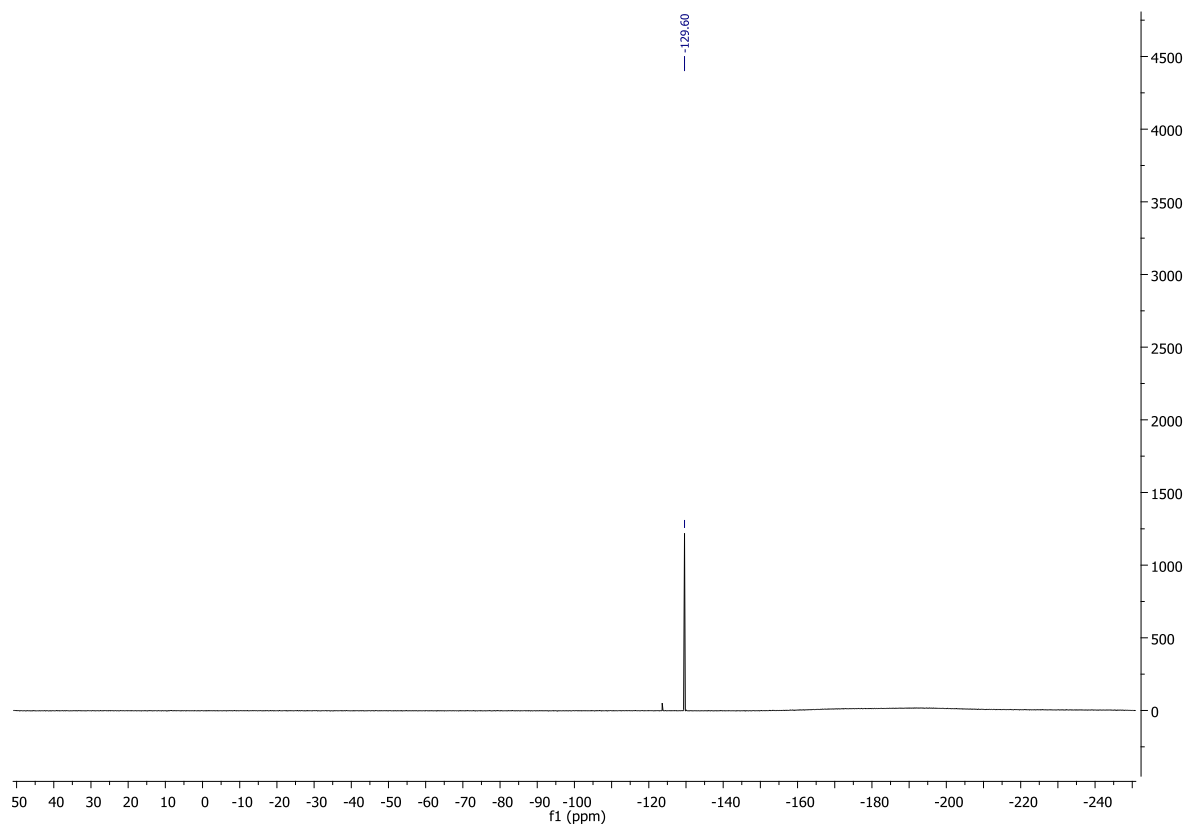
## <sup>1</sup>H NMR



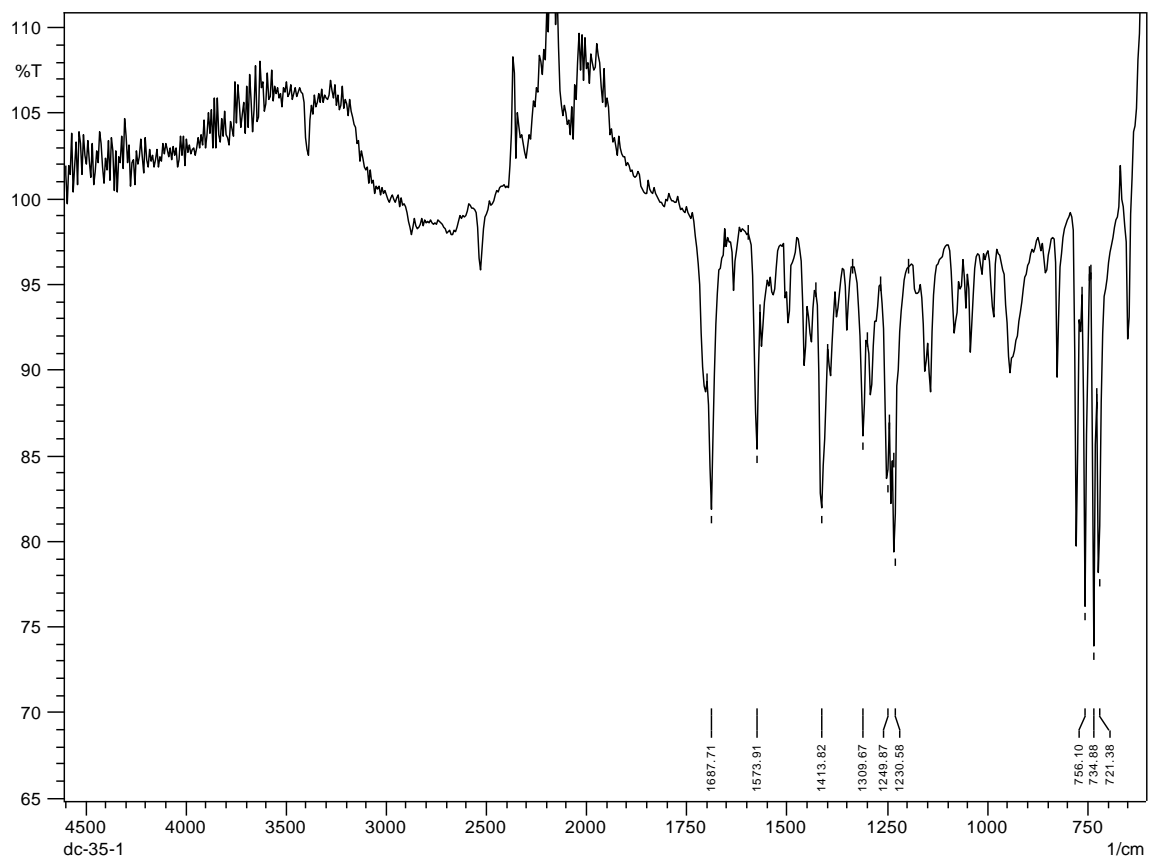
## <sup>13</sup>C NMR of 190



# <sup>19</sup>F NMR of 190



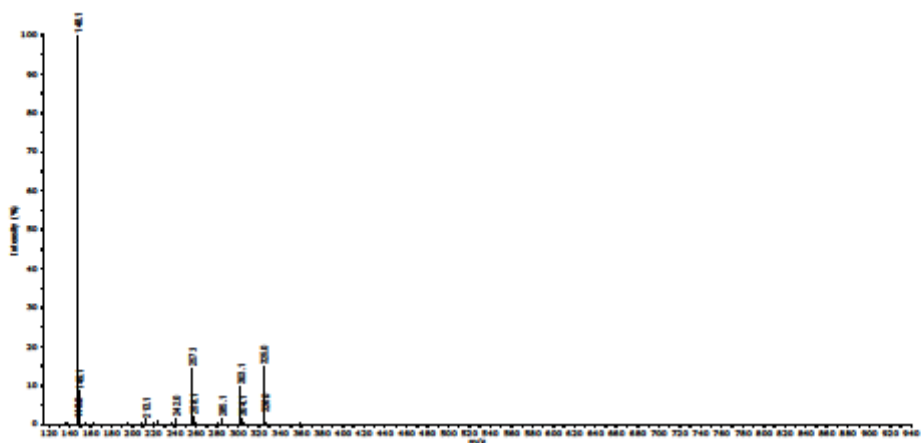
# IR of 190



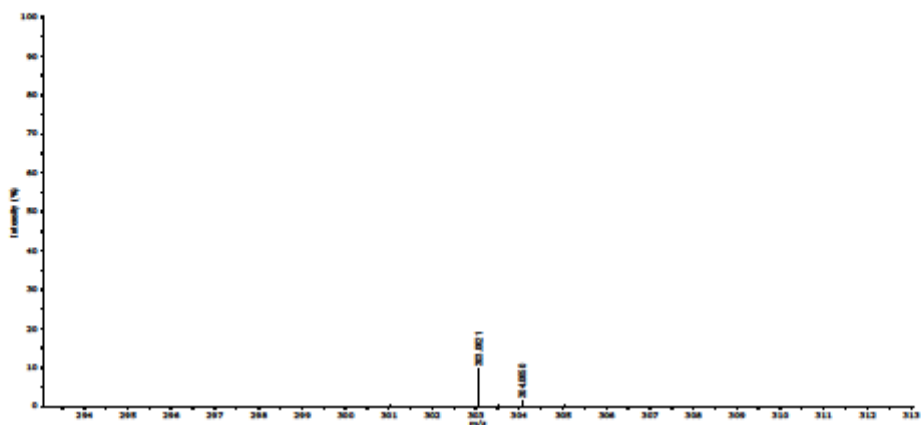


## HRMS of 190

Spectrum RT 4.22, Peak [1], Target Mass 303.0598



Expanded Spectrum RT 4.22, Peak [1], Target Mass 303.0598



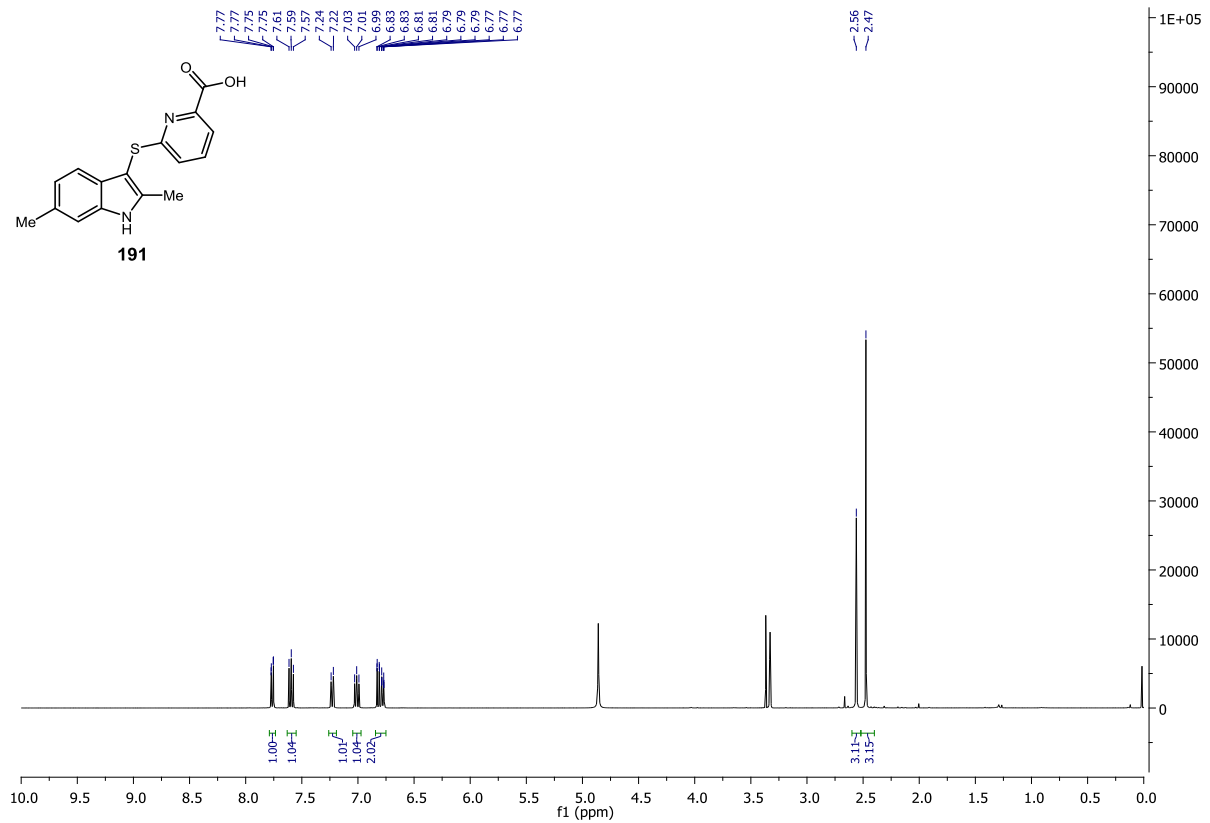
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
303.0596	303.0598	-0.2	-0.7	C <sub>15</sub> H <sub>12</sub> FN <sub>2</sub> O <sub>2</sub> S

**An error of < 5ppm indicates that the measured mass is consistent with the proposed formula.**

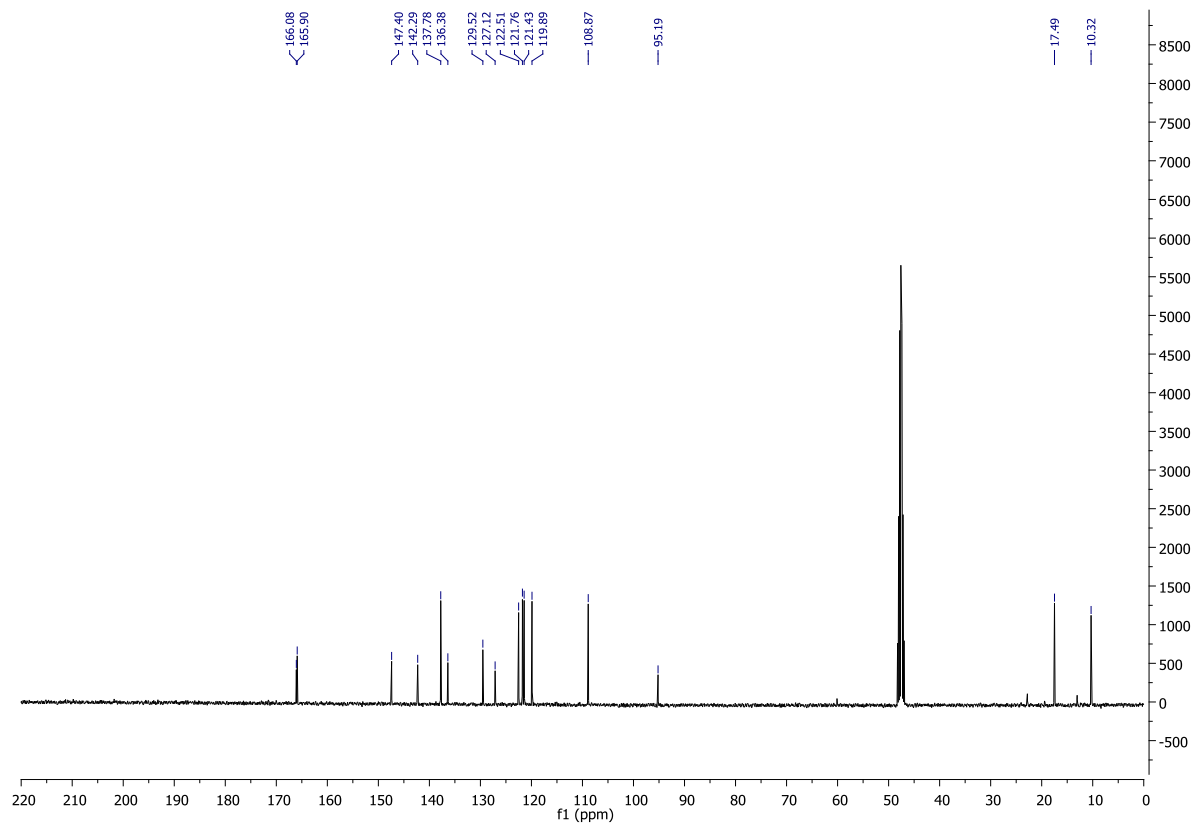
Contacts: Marco Smith #3727 or Alec Simpson #3732

# Compound 191

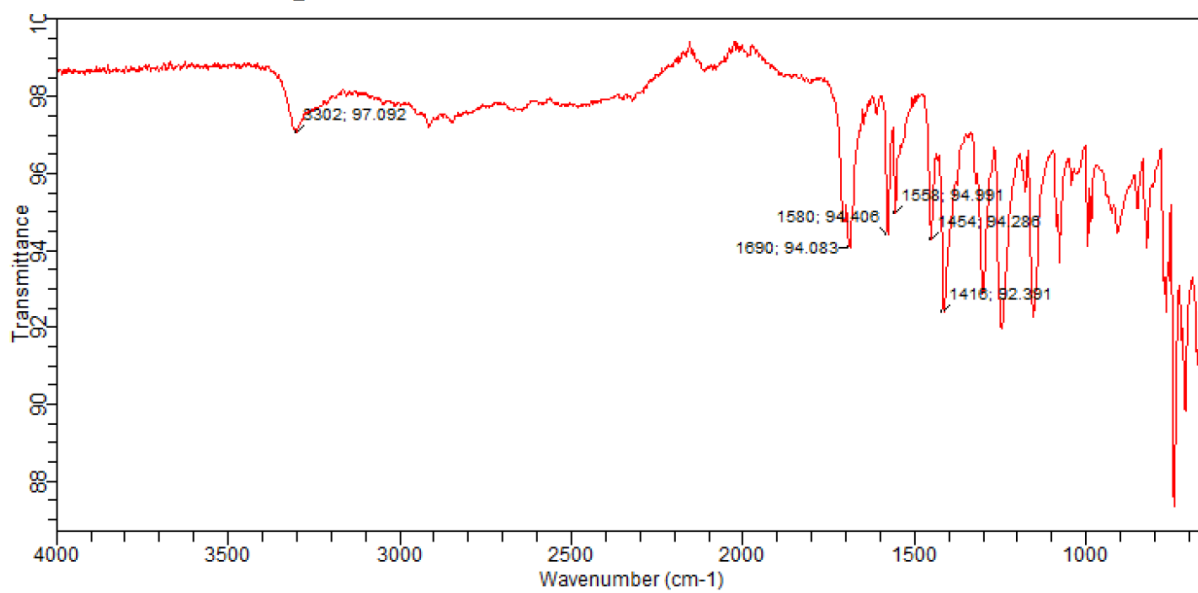
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 191

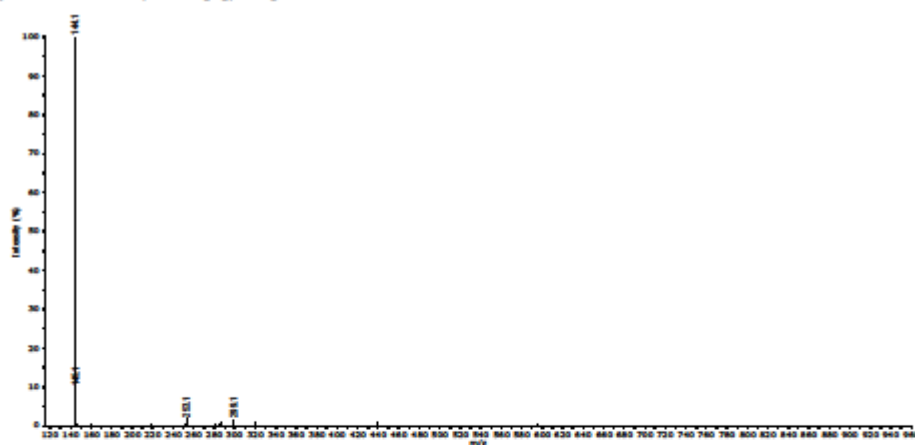


# IR of 191

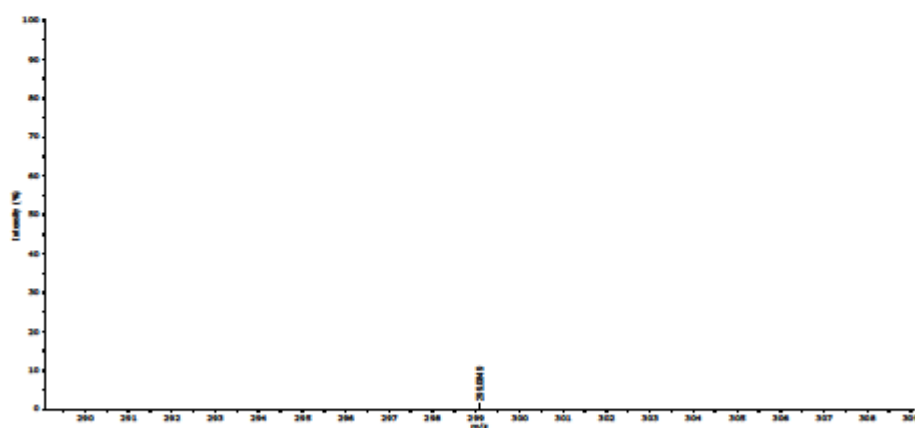


# HRMS of 191

Spectrum of 191, Peak [1], Target Mass 299.0849



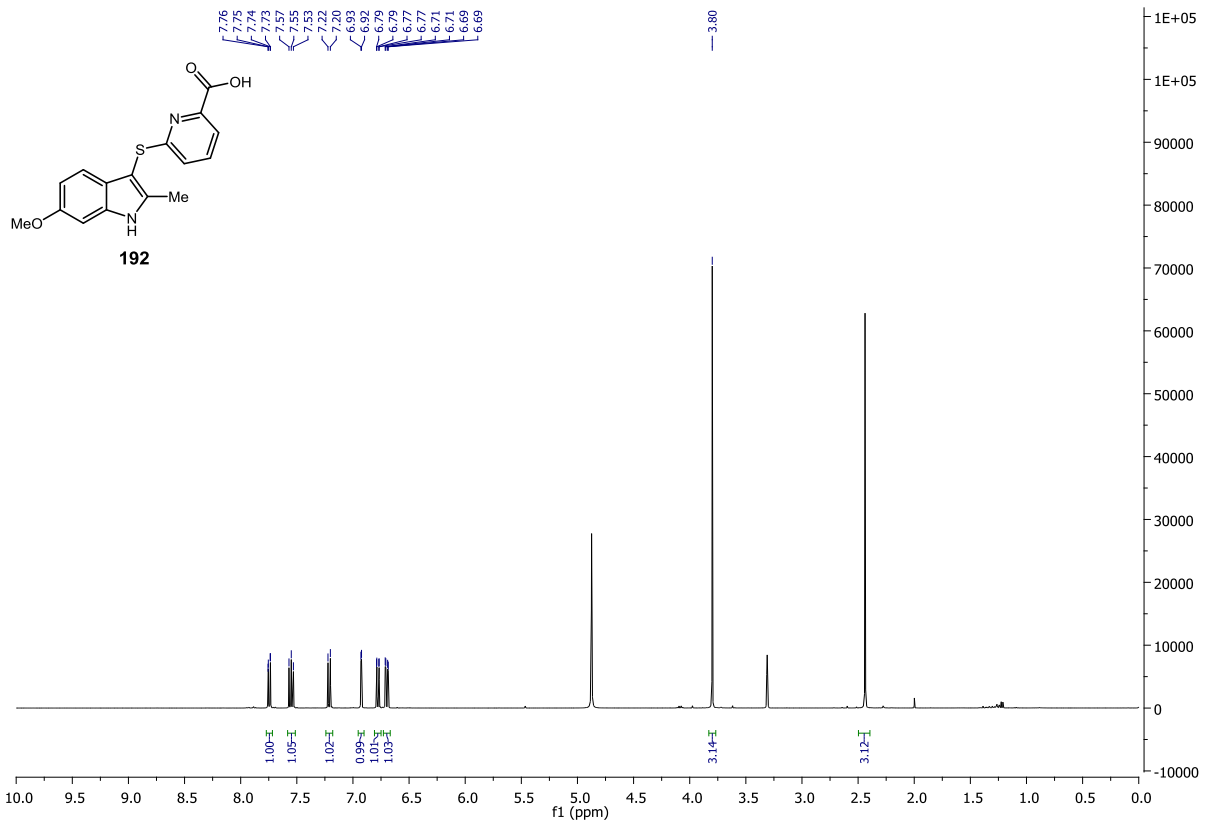
Expanded Spectrum RT 4.45, Peak [1], Target Mass 299.0849



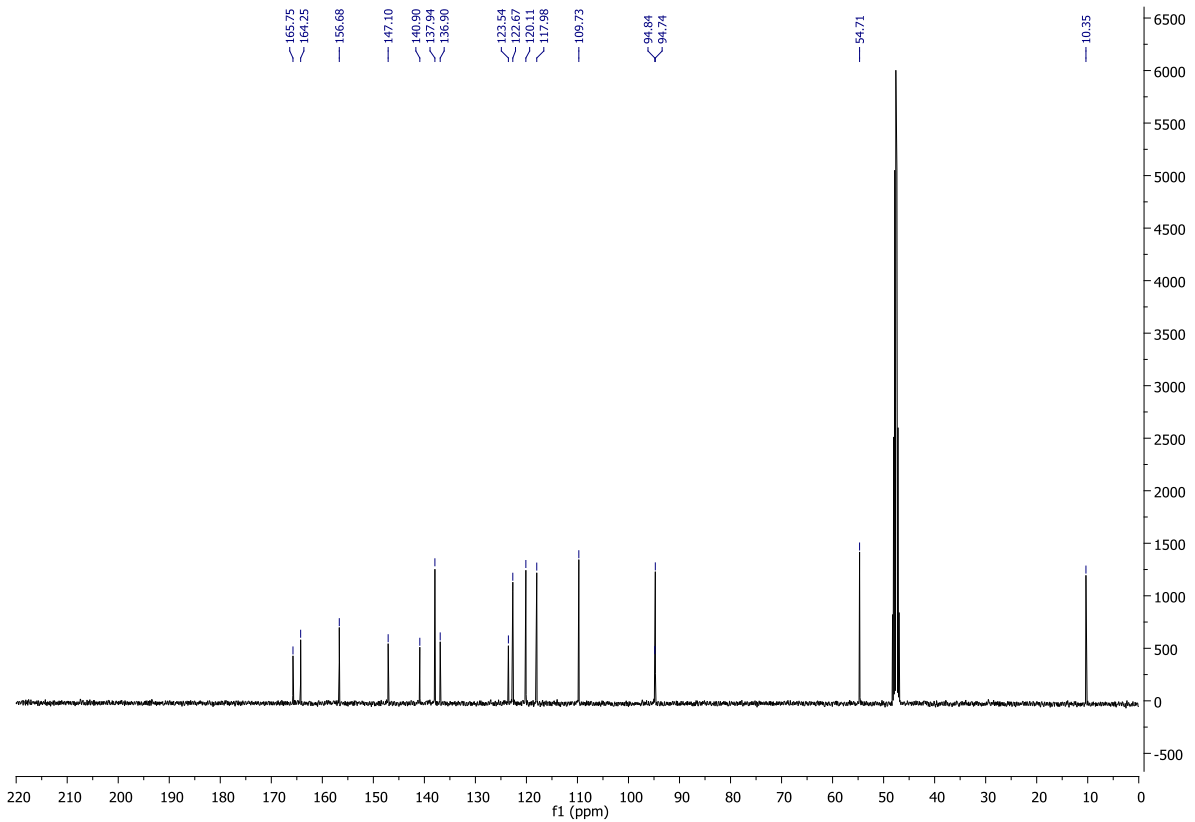
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
299.0849	299.0849	0.0	0.0	C <sub>16</sub> H <sub>15</sub> N <sub>2</sub> O <sub>2</sub> S

# Compound 192

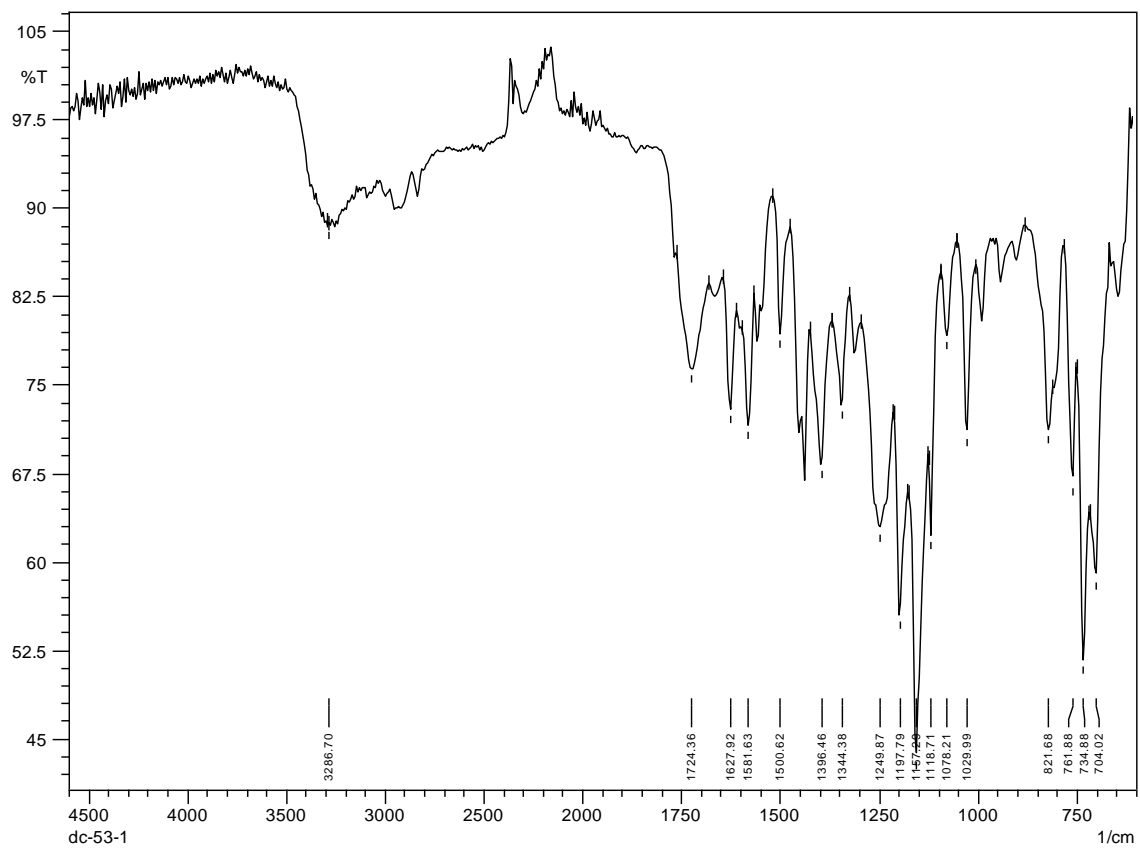
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 192



# IR of 192

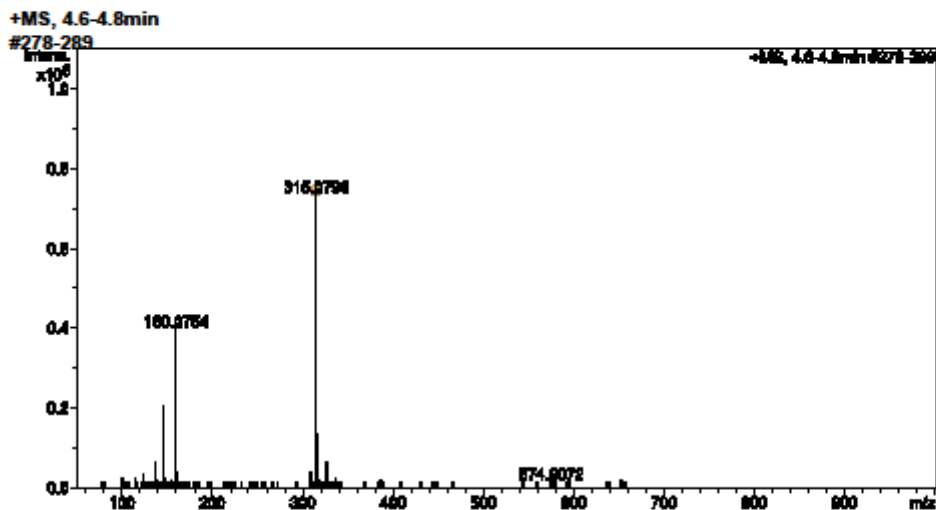


HRMS of 192

Bruker maXis Impact: LC-MS SmartFormula Report

**Analysis Info**  
 Analysis Name C:\Data\Data\N34272-64-5\_1-A,6\_01\_1120.d  
 Method lcms pos 50-1000.m  
 Sample Name N34272-64-5  
 Comment  
 Acquisition Date 24/10/2014 15:29:12  
 Operator Spectroscopy  
 Instrument / Ser maXis impact 282001.0  
 0101

**Acquisition Parameter**  
 Source Type ESI Scan Begin 50 m/z  
 Ion Polarity Positive Scan End 1000 m/z

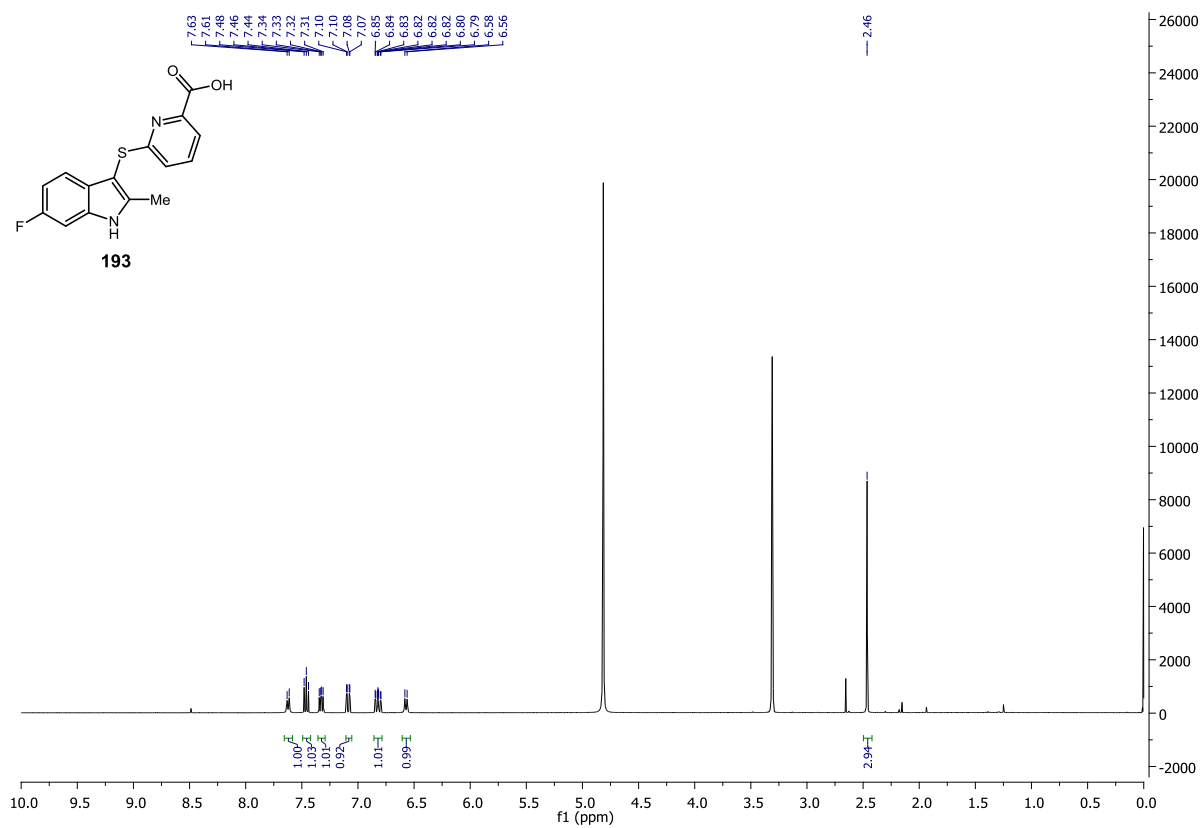


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdb	e <sup>-</sup> Conf	N-Rule
315.0798	1	C <sub>16</sub> H <sub>15</sub> N <sub>2</sub> O <sub>3</sub> S	315.0798	-0.1	21.8	1	100.00	10.5	even	ok

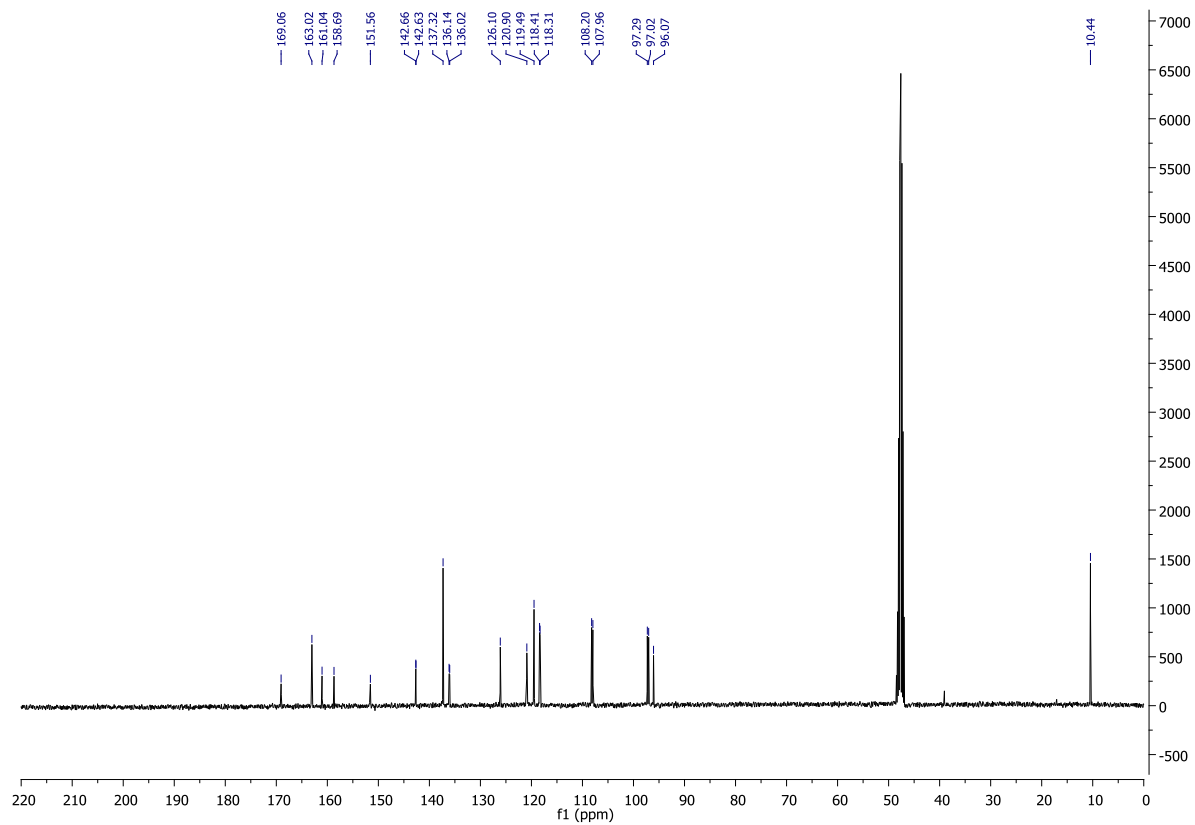
Measured mass should be within ±5 ppm of target mass

# Compound 193

## <sup>1</sup>H NMR

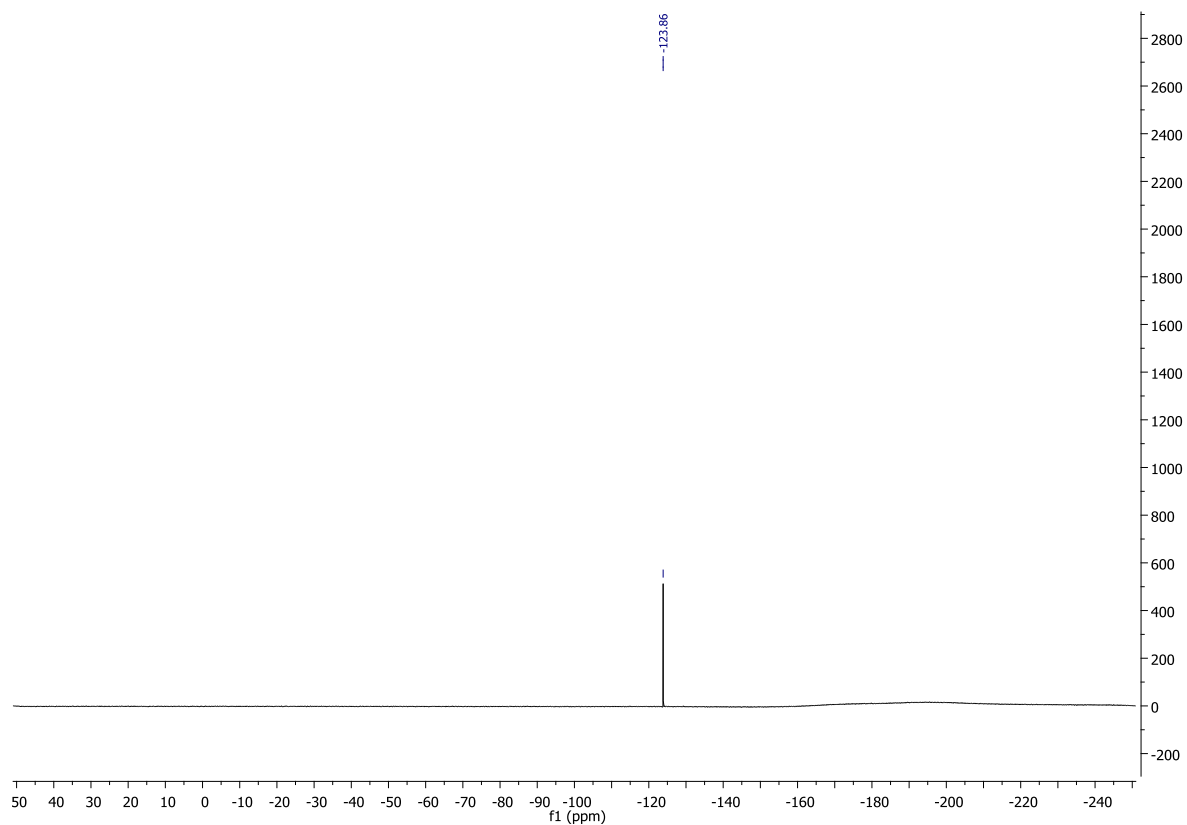


## <sup>13</sup>C NMR of 193

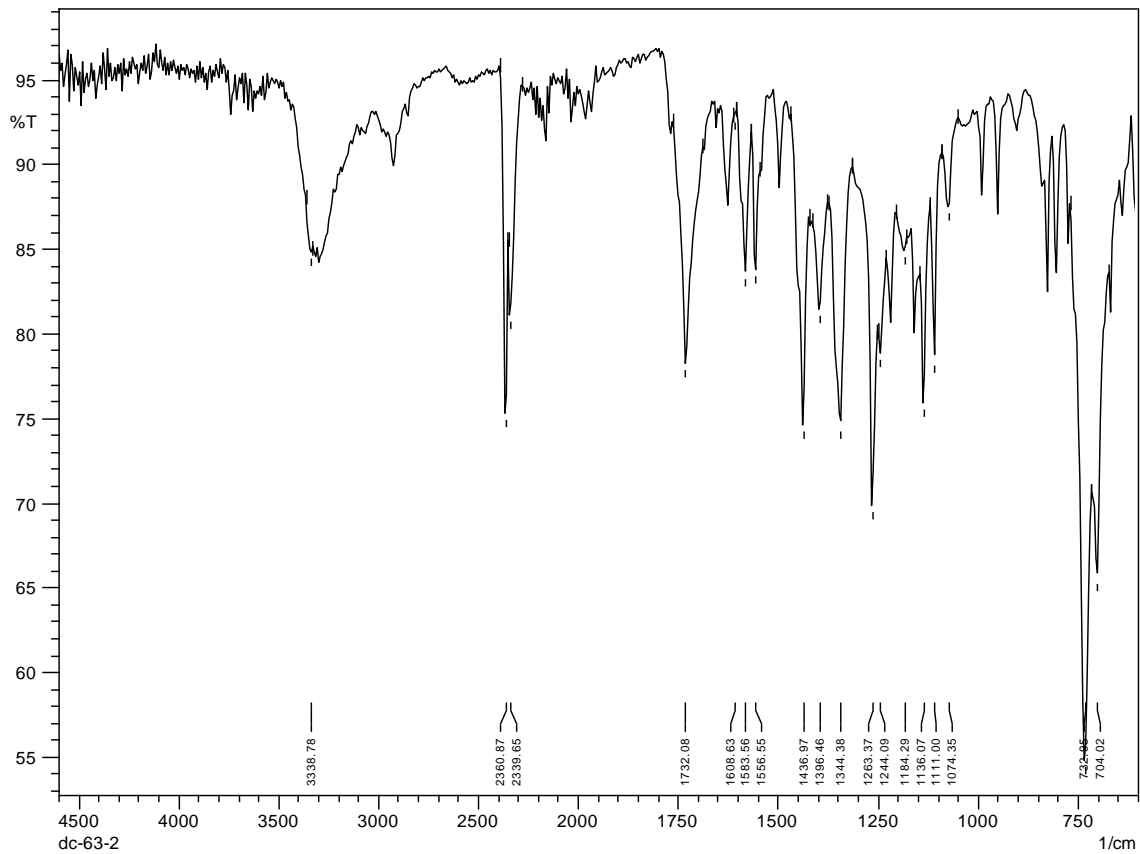




# <sup>19</sup>F NMR of 193



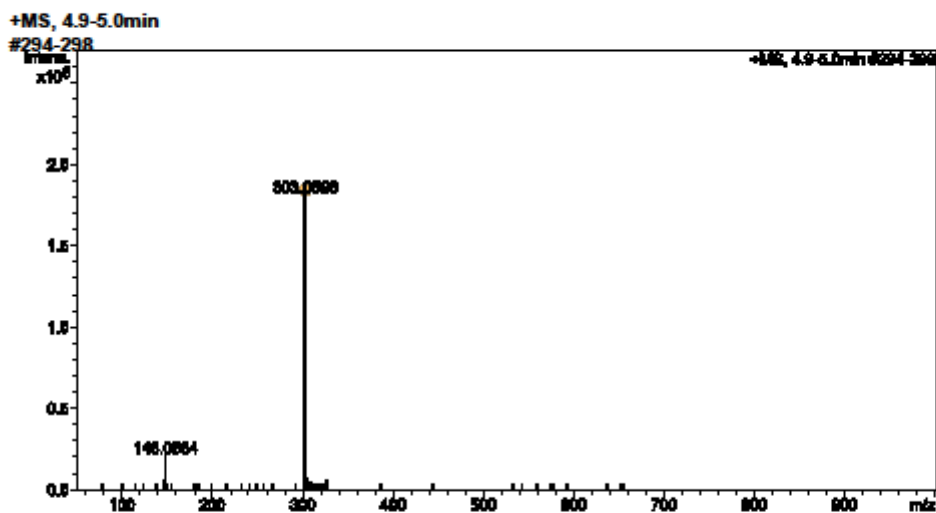
# IR of 193



**Bruker maXis Impact: LC-MS SmartFormula Report**

<b>Analysis Info</b>		Acquisition Date 24/10/2014 14:46:10
Analysis Name	C:\Data\Data\N34272-64-1_1-A,2_01_1116.d	
Method	lcms pos 50-1000.m	Operator Spectroscopy
Sample Name	N34272-64-1	Instrument / Ser maXis impact 282001.0
Comment		0101

<b>Acquisition Parameter</b>			
Source Type	ESI	Scan Begin	50 m/z
Ion Polarity	Positive	Scan End	1000 m/z

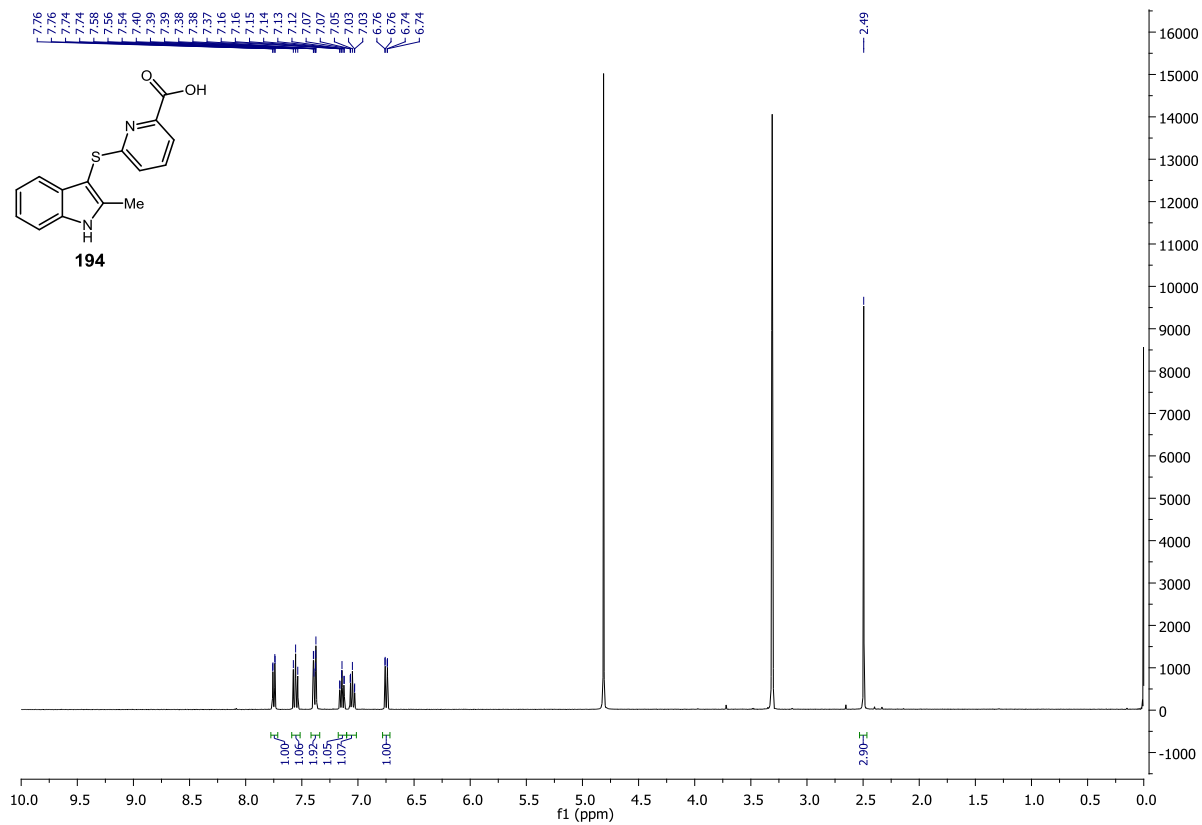


Meas. m/z	#	Ion Formula	m/z	err [ppm]	mSigma	# Sigma	Score	rdB	e <sup>-</sup> Conf	N-Rule
303.0596	1	C <sub>15</sub> H <sub>12</sub> FN <sub>2</sub> O <sub>2</sub> S	303.0598	-0.6	37.6	1	100.00	10.5	even	ok

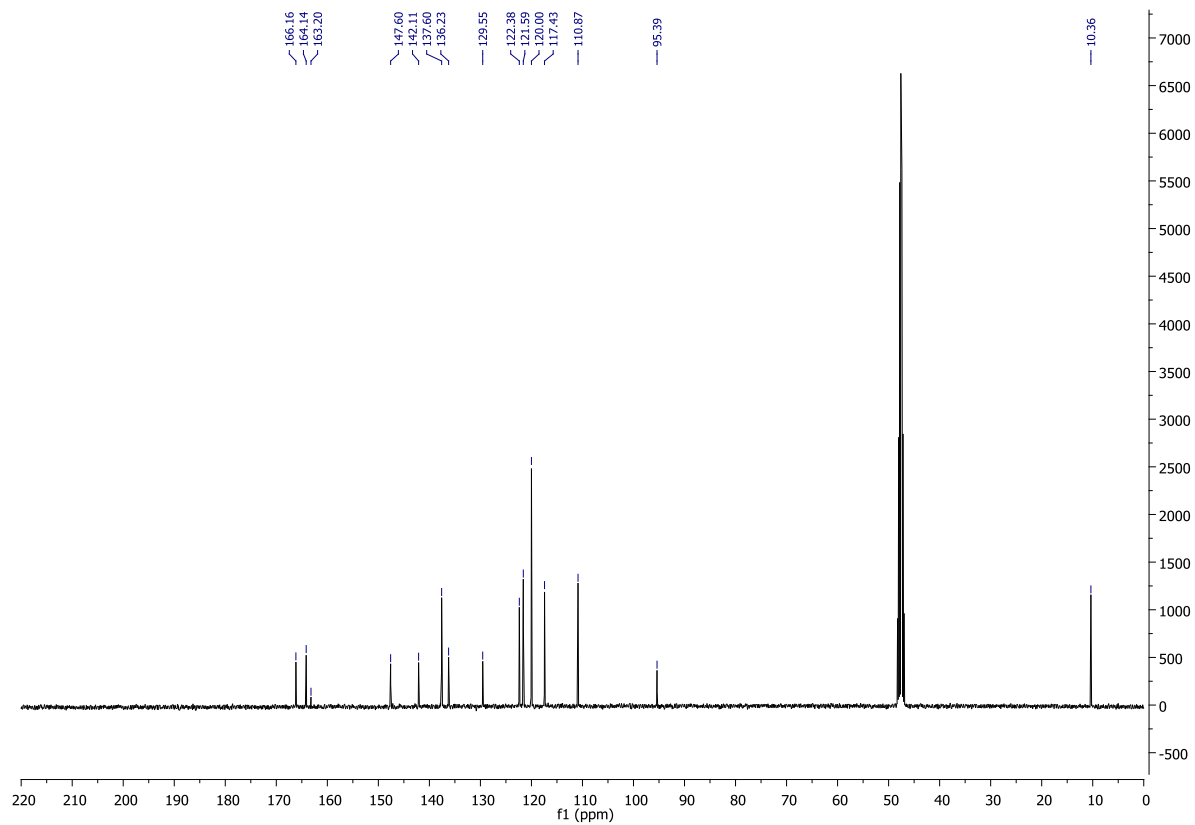
Measured mass should be within ±5 ppm of target mass

# Compound 194

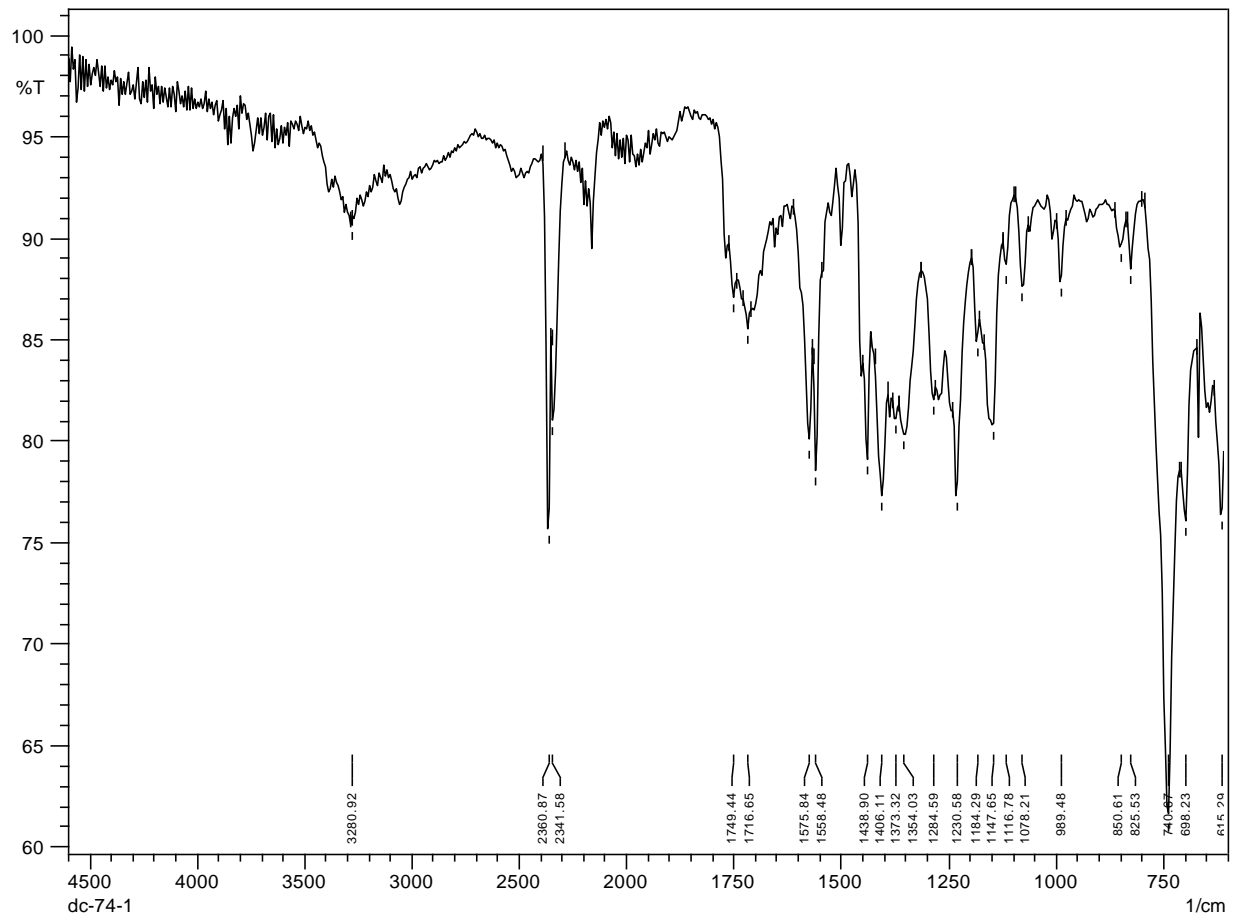
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 194

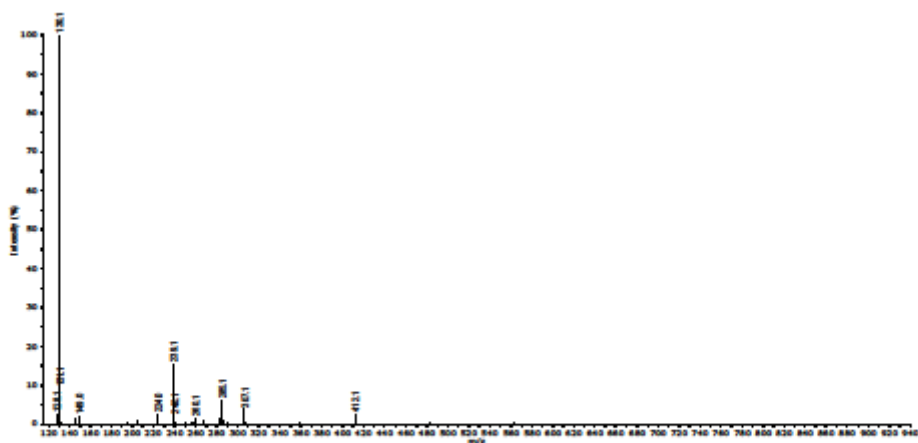


# IR of 194

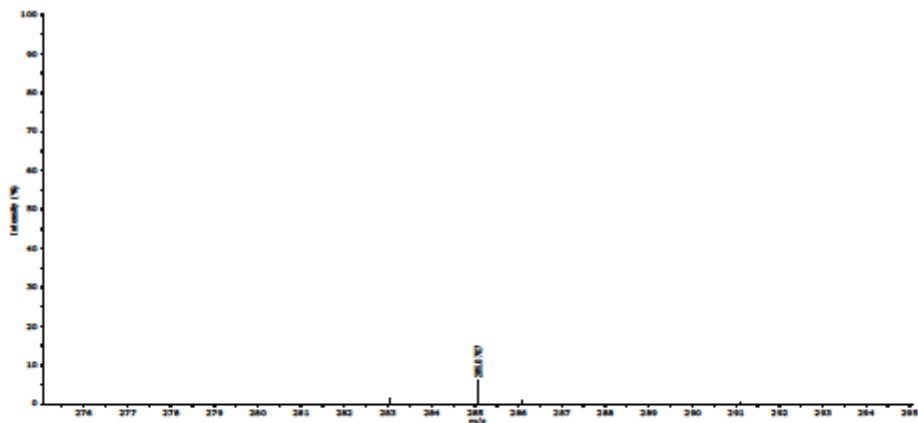


# HRMS of 194

Spectrum RT 4.19, Peak [1], Target Mass 285.0692



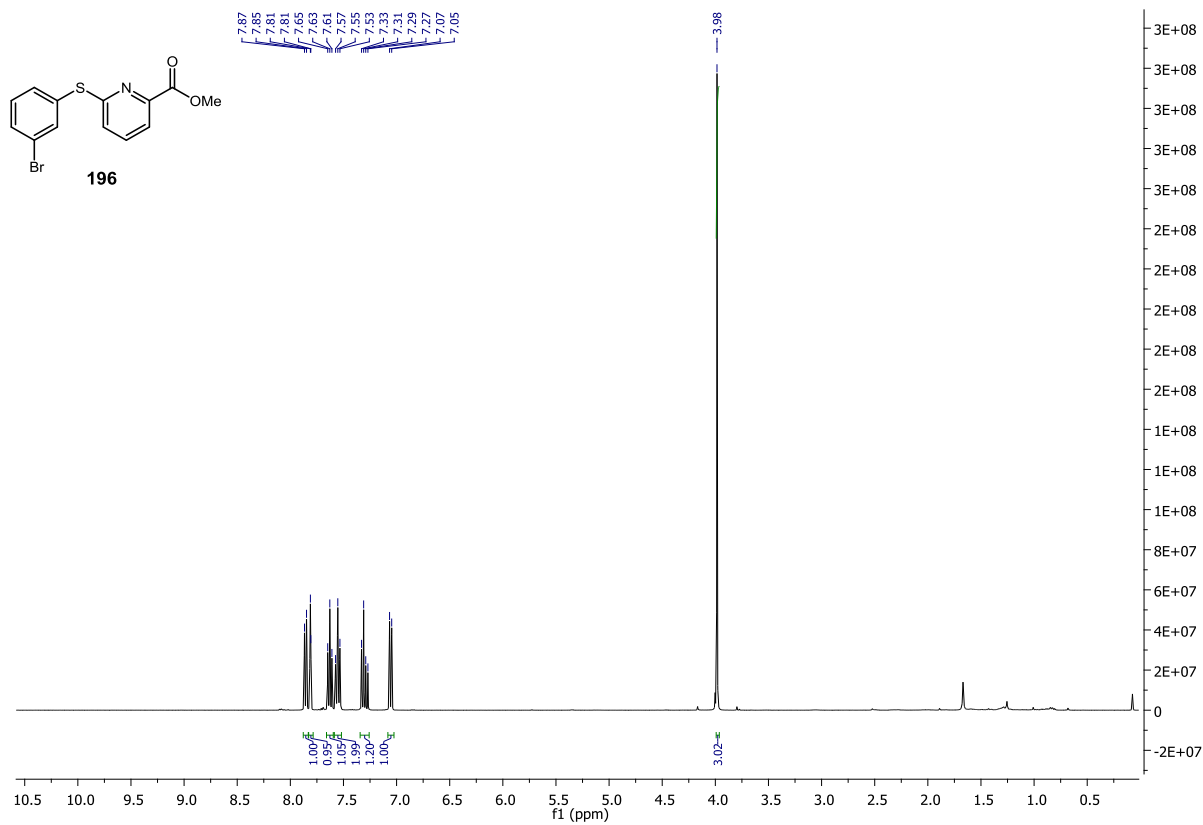
Expanded Spectrum RT 4.19, Peak [1], Target Mass 285.0692



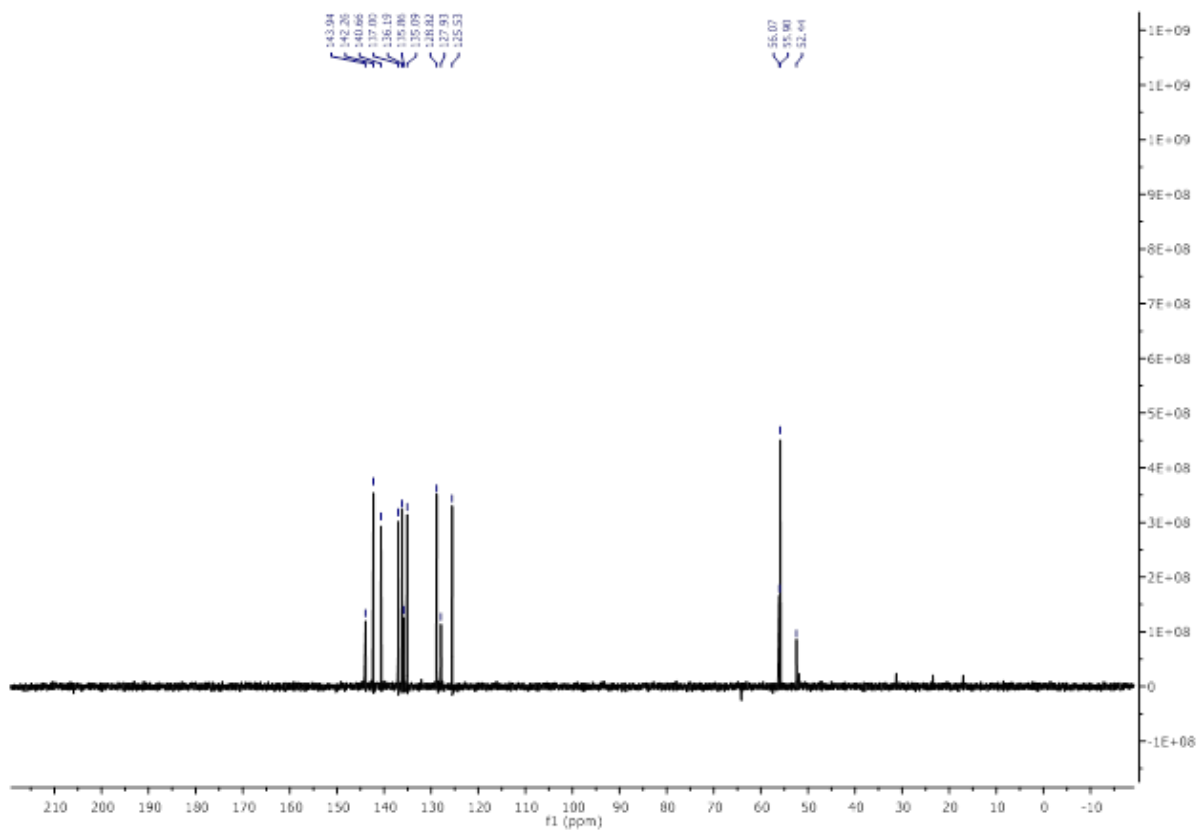
Measured Mass	Calculated Mass	Error (mDa)	Error (ppm)	Formula [M+H] <sup>+</sup>
285.0693	285.0692	0.1	0.2	C <sub>15</sub> H <sub>13</sub> N <sub>2</sub> O <sub>2</sub> S

# Compound 196

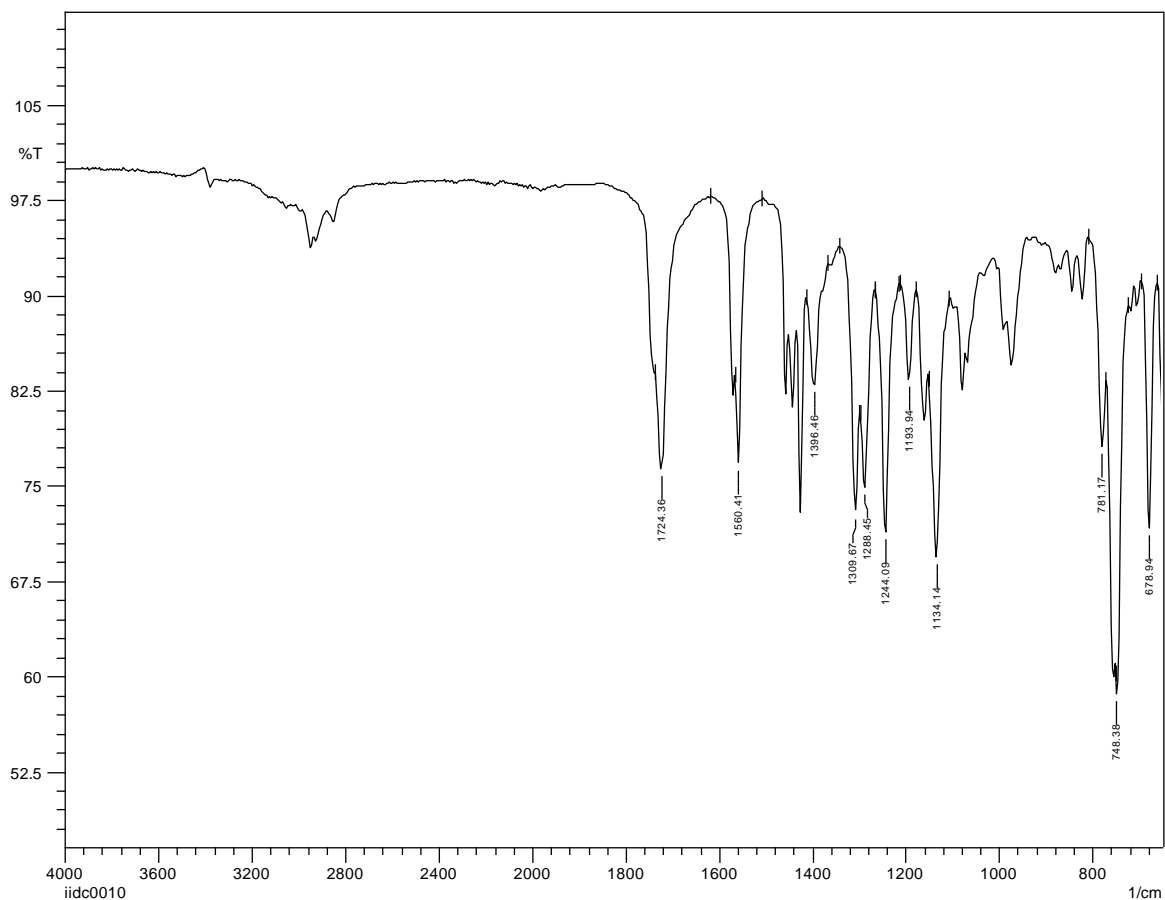
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 196



## IR of 196



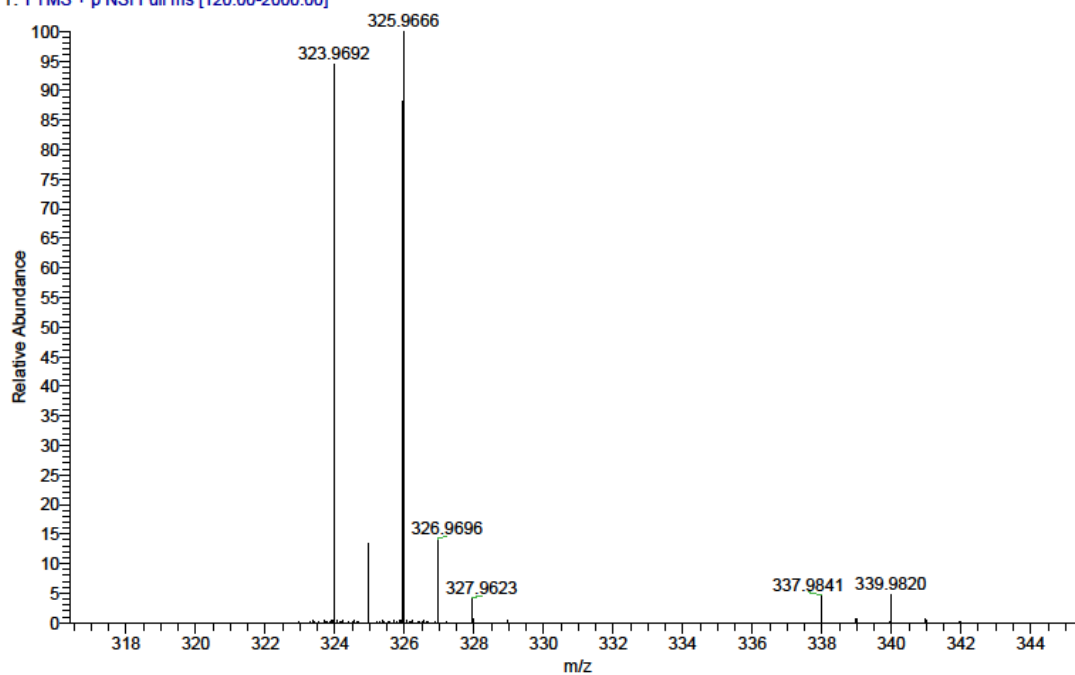
## HRMS of 196

IIDC10.3 MW=324?  
C<sub>13</sub>H<sub>10</sub>BrNO<sub>2</sub>S  
(MeOH)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

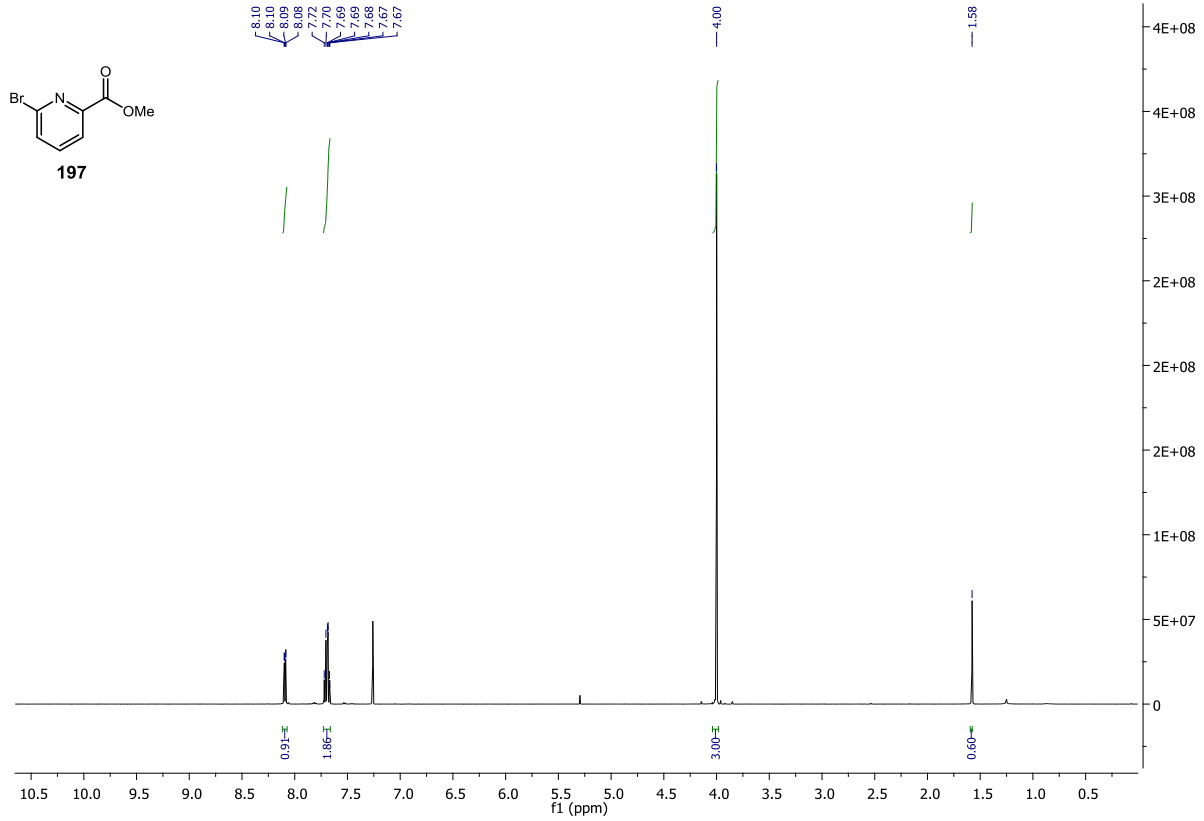
Diana Castagna  
11/10/2013 14:43:15

STRWAT118-OJ-HNESP #31-68 RT: 0.69-1.14 AV: 17 SM: 7G NL: 8.97E7  
T: FTMS + p NSI Full ms [120.00-2000.00]

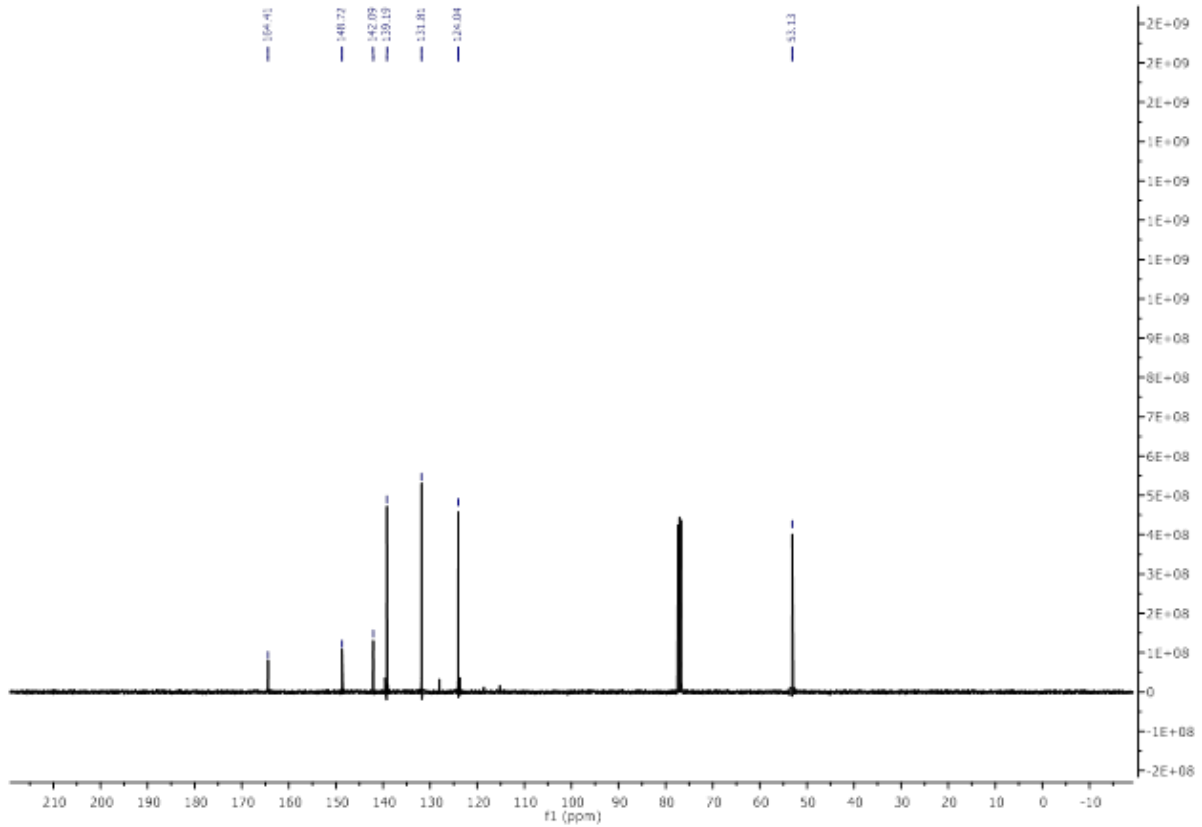


# Compound 197

## <sup>1</sup>H NMR

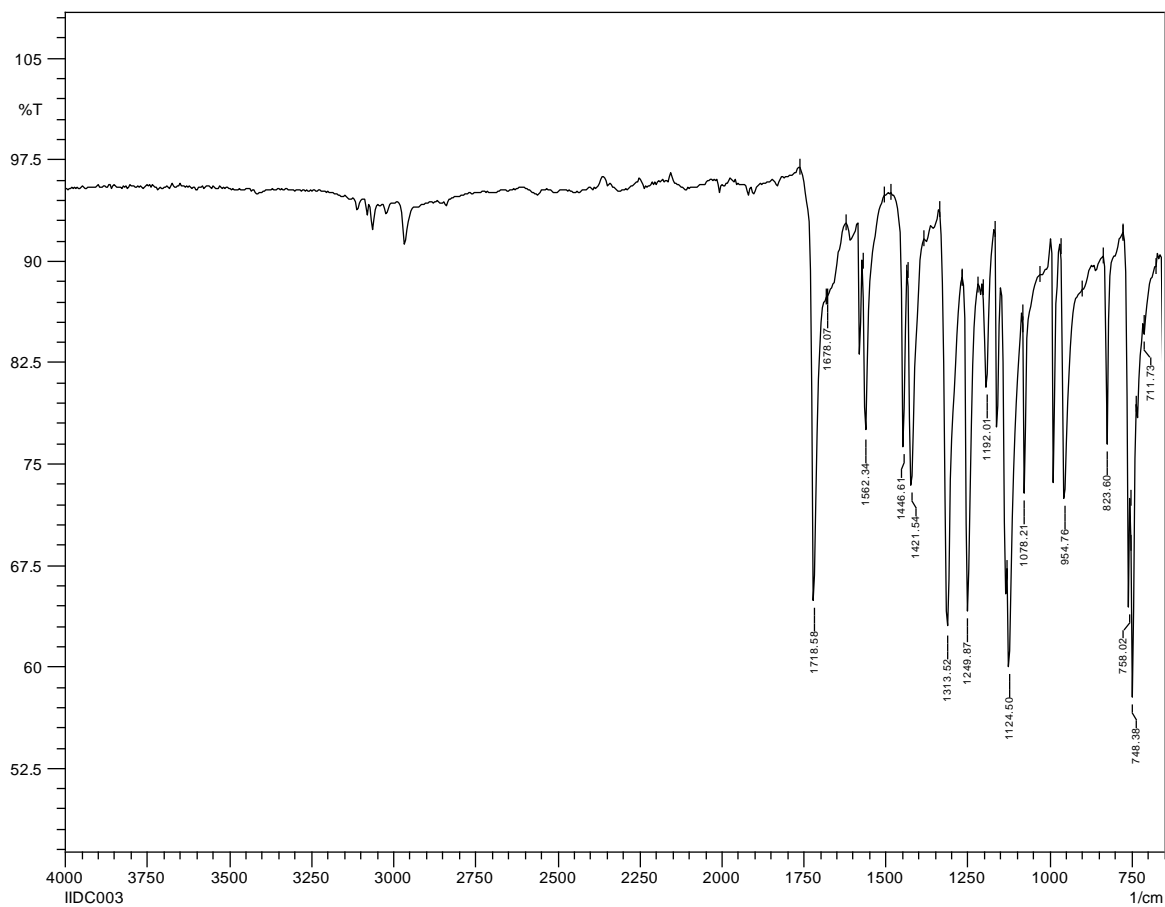


## <sup>13</sup>C NMR of 197





## IR of 197



## HRMS of 197

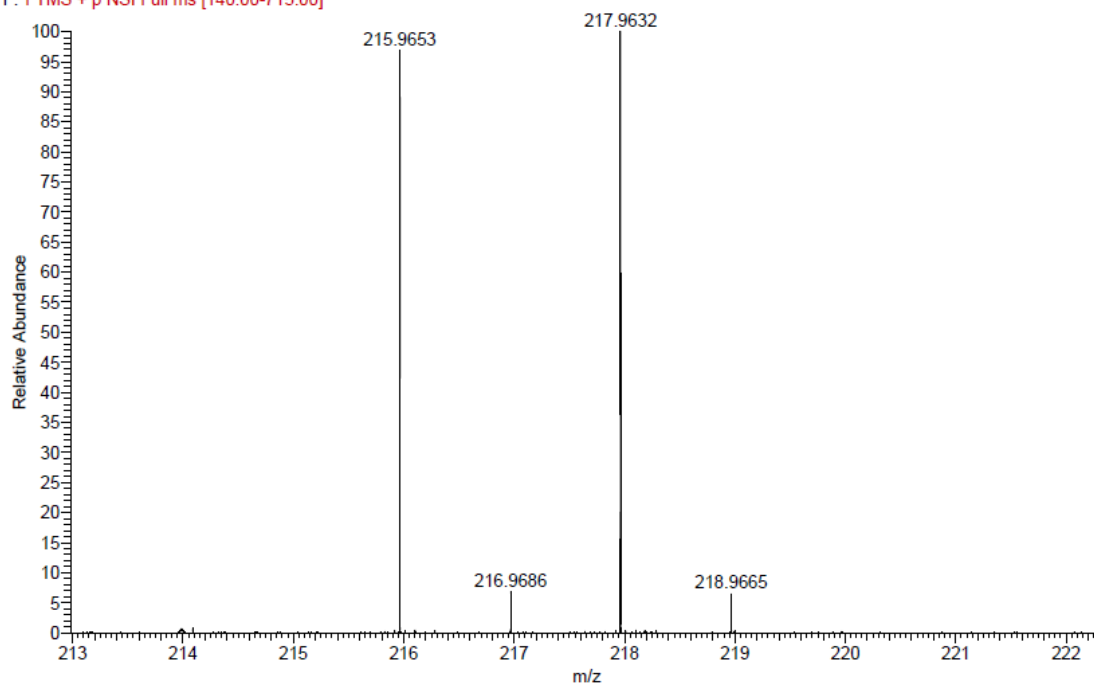
IIDC003 MW=216?  
C7H6BrNO2  
(DCM)/MeOH + NH4OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
27/02/2014 12:24:45

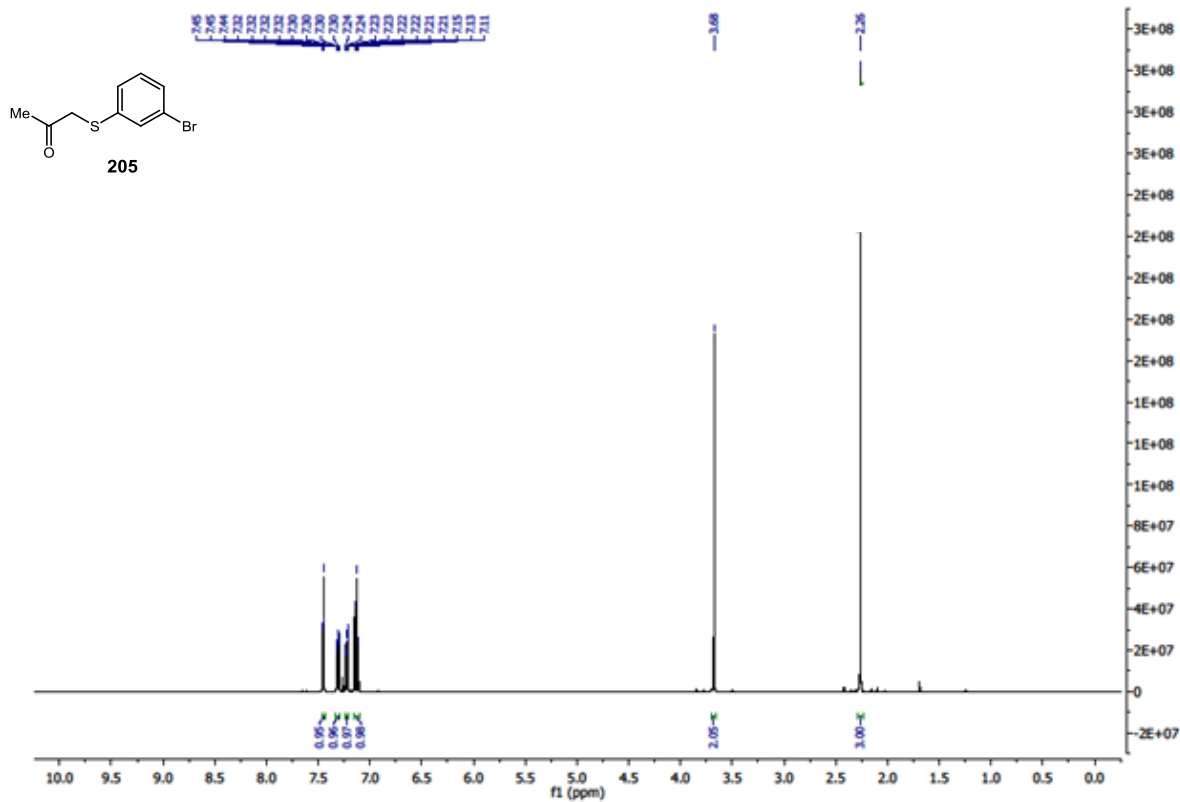
STRWAT203-OC-HNESP #68-80 RT: 1.31-1.46 AV: 6 SM: 7G NL: 1.73E6

F: FTMS + p NSI Full ms [140.00-715.00]

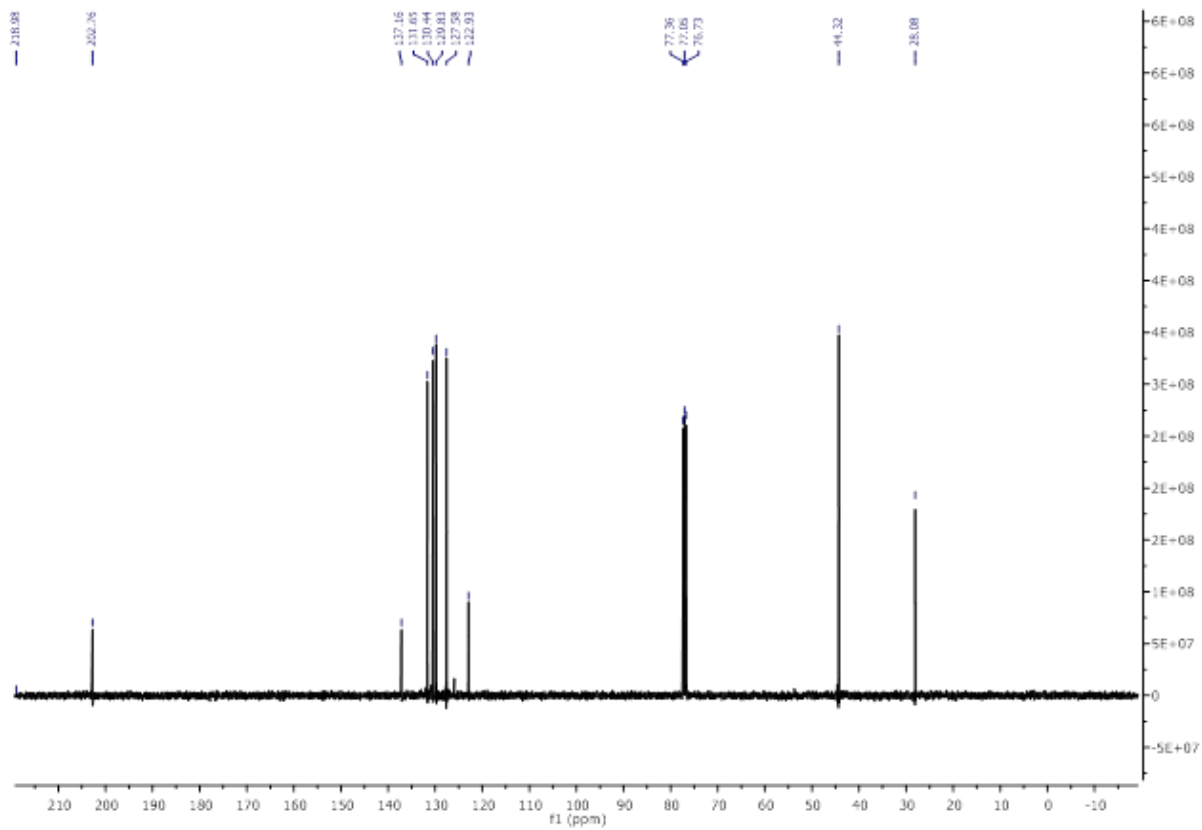


# Compound 205

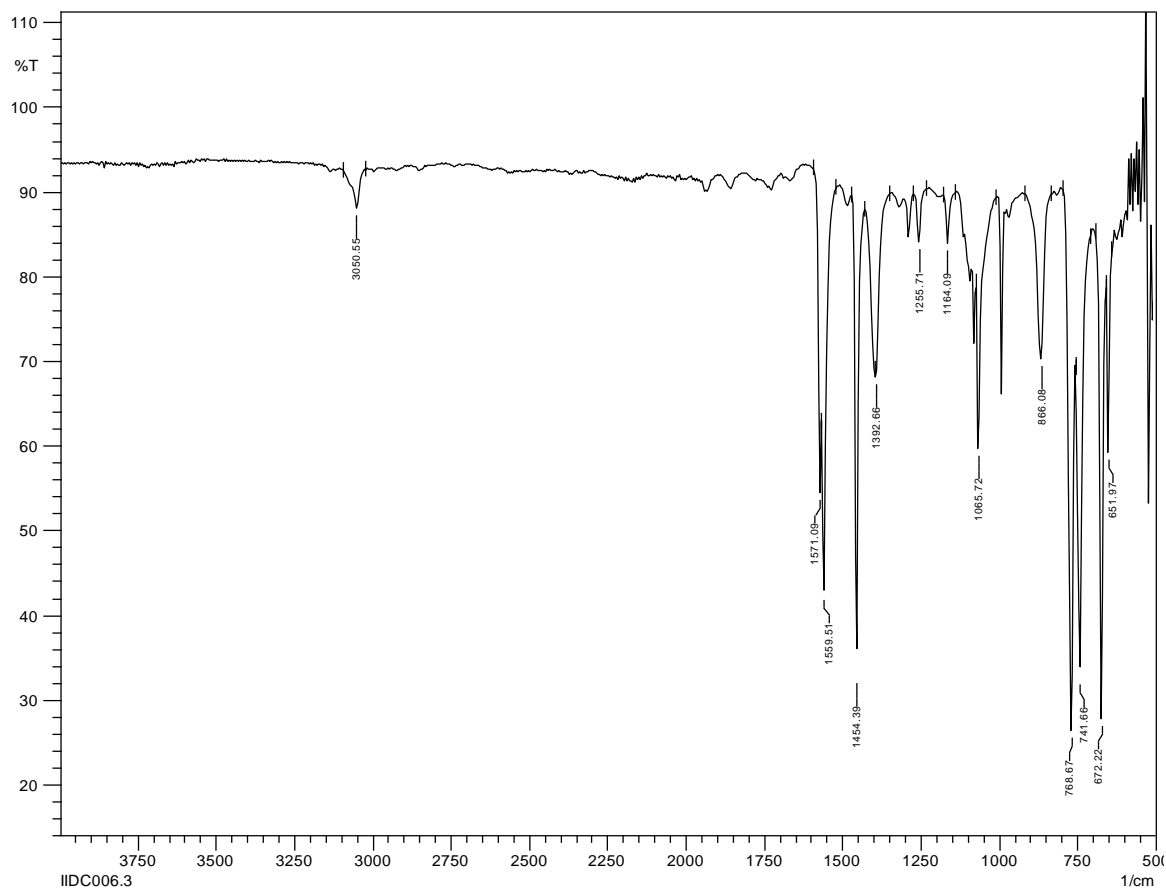
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 205



# IR of 205

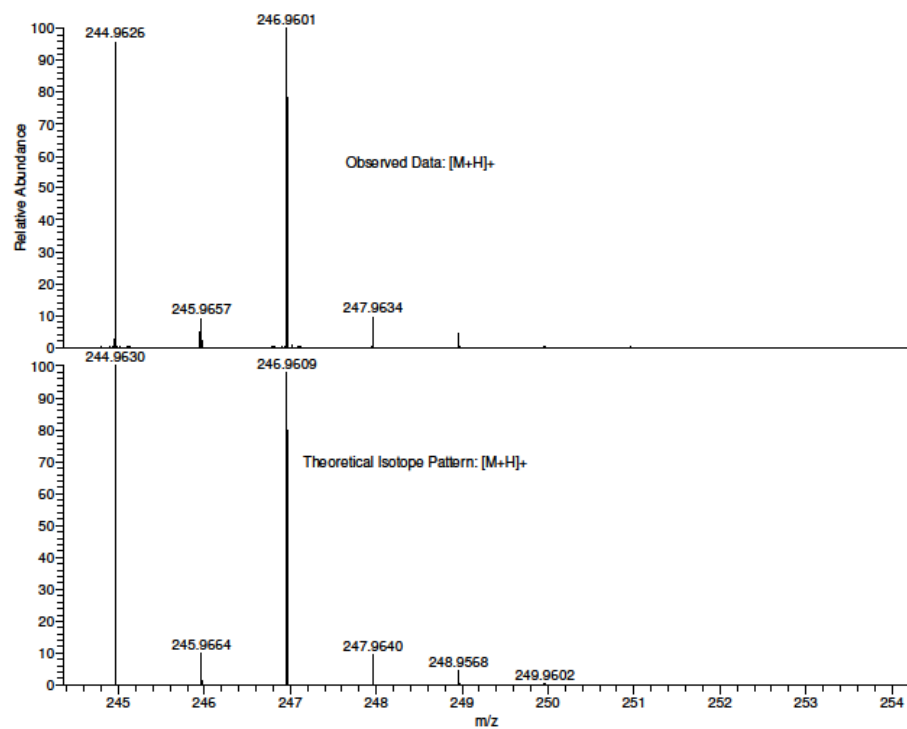


# HRMS of 205

IIDC006 MW=245?  
ASAP (LIQUID/D/M1)

EPSRC UK National Facility Swansea  
LTO Orbitrap XL

Castagna  
03/03/2014 14:05:31

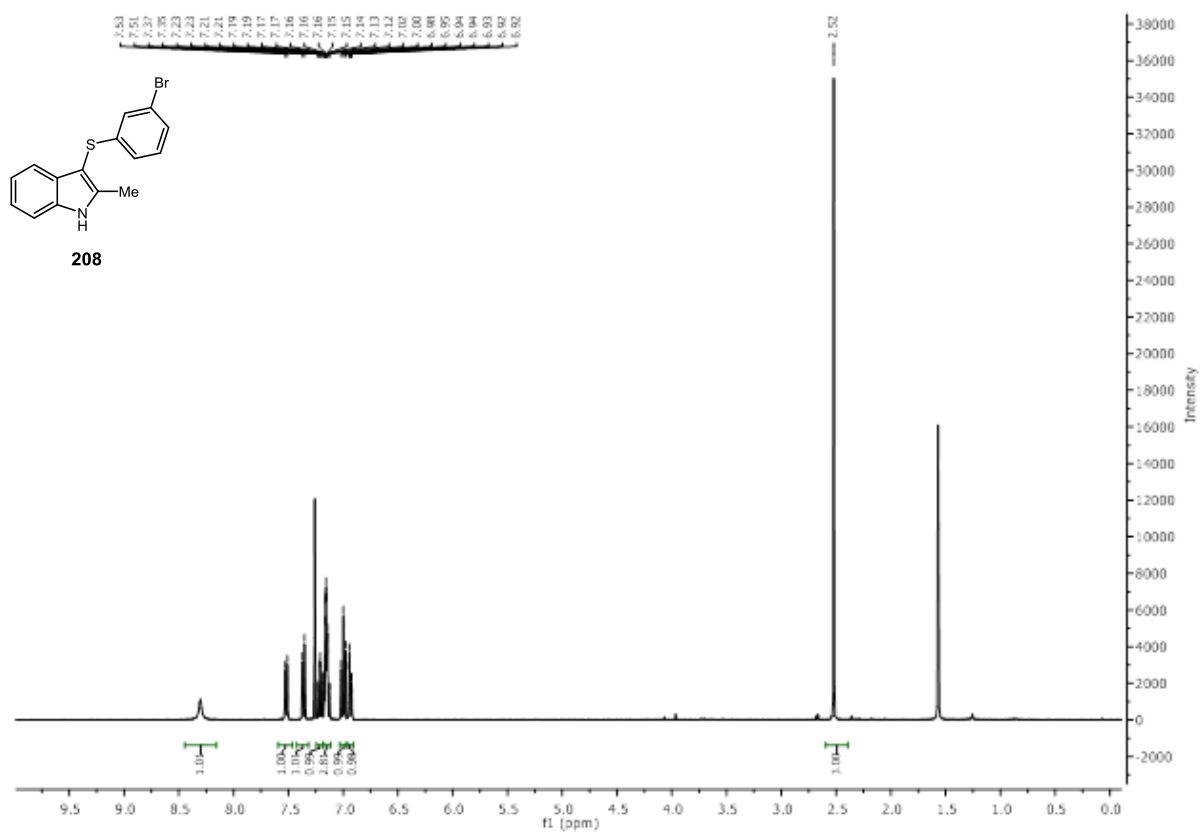


NL:  
1.88E8  
STRWAT202-PG-HASP#57-82  
RT: 1.67-2.40 AV: 26 T:  
FTMS + pAPCI corona Full ms  
[100.00-1000.00]

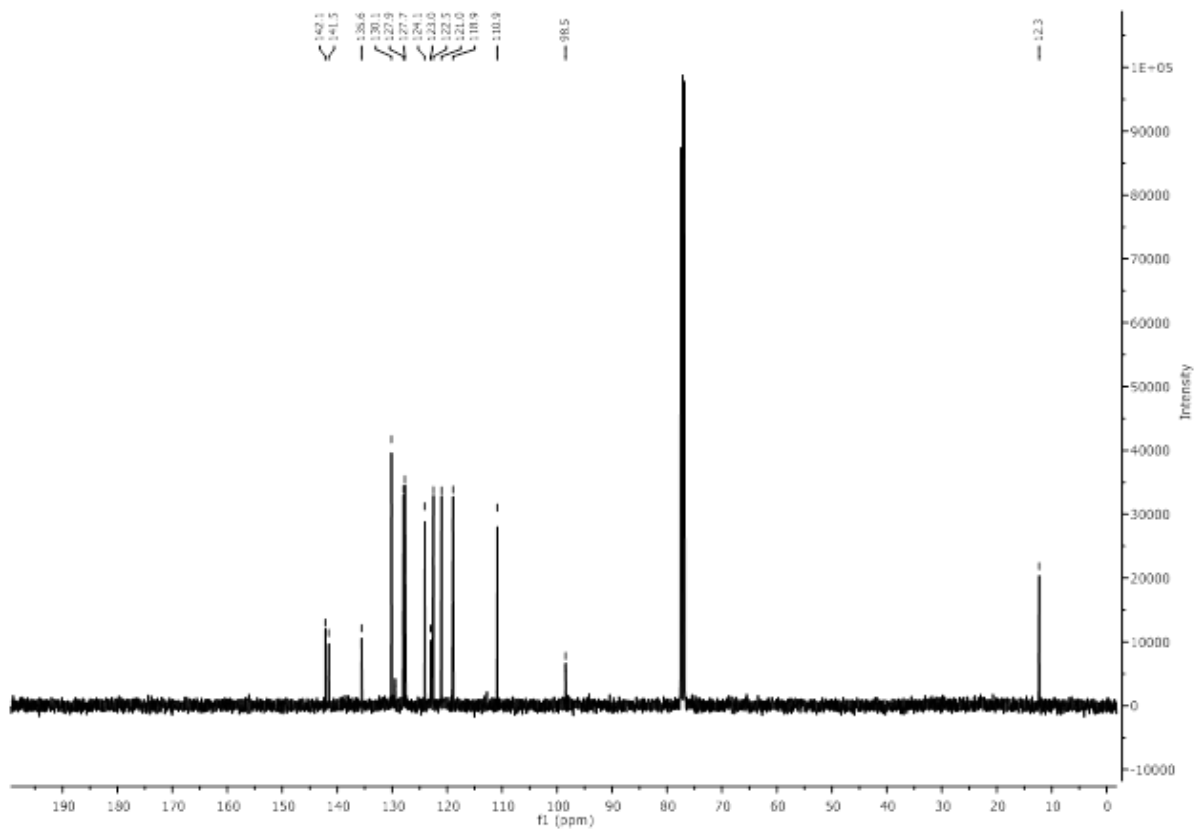
NL:  
1.02E4  
C<sub>9</sub>H<sub>9</sub>BrOSH:  
C<sub>9</sub>H<sub>10</sub>Br<sub>1</sub>O<sub>1</sub>S<sub>1</sub>  
p (gss, s/p+0) Chrg 1  
R: 100000 Res. Pwr. @FWHM

# Compound 208

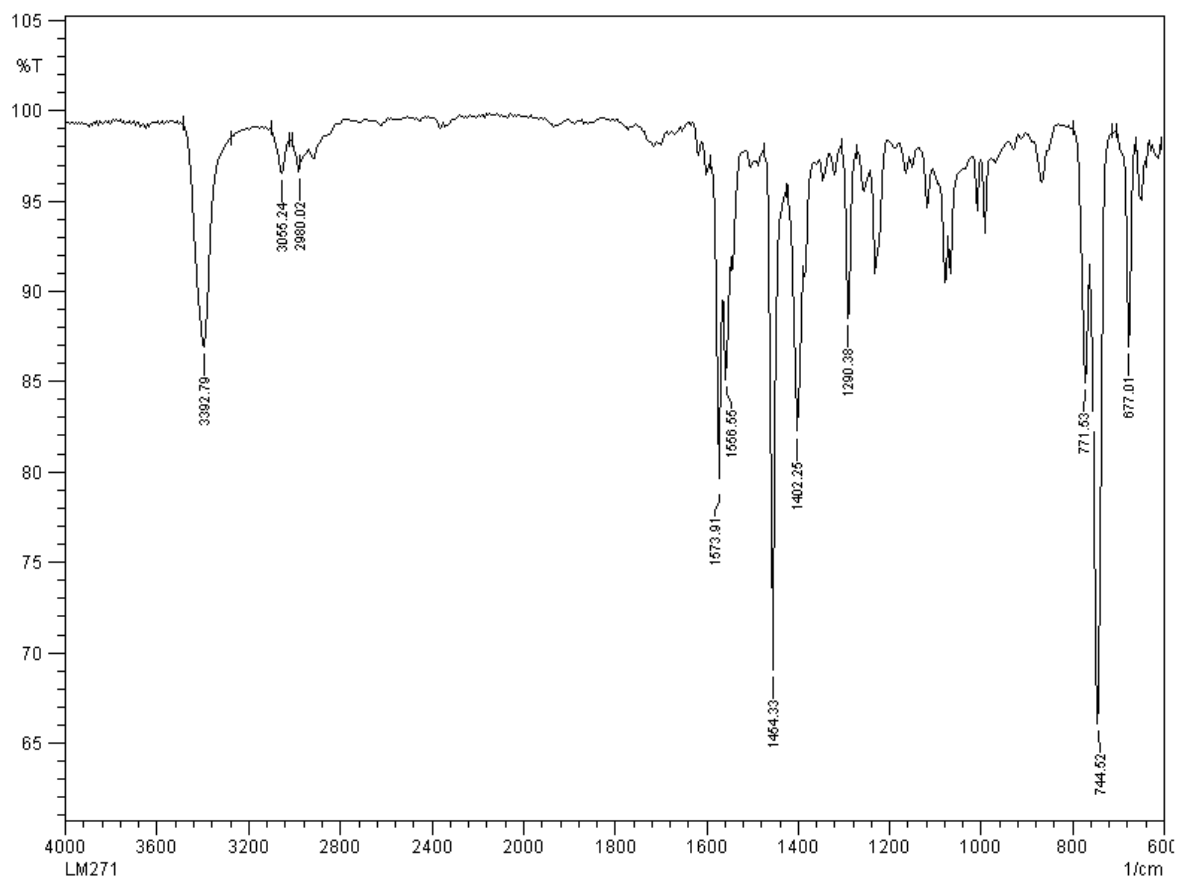
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 208



## IR of 208

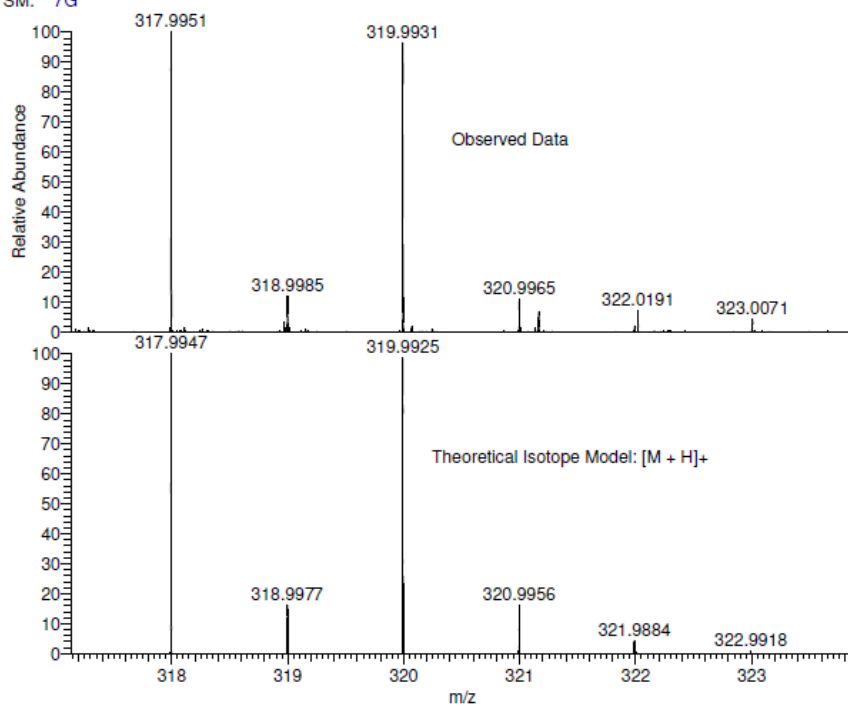


## HRMS of 208

LM271 MW=318?  
C<sub>15</sub>H<sub>12</sub>BrNS  
(MeOH)/MeOH + NH<sub>4</sub>OAc  
SM: 7G

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Lisa Miller  
06/10/2014 11:29:54

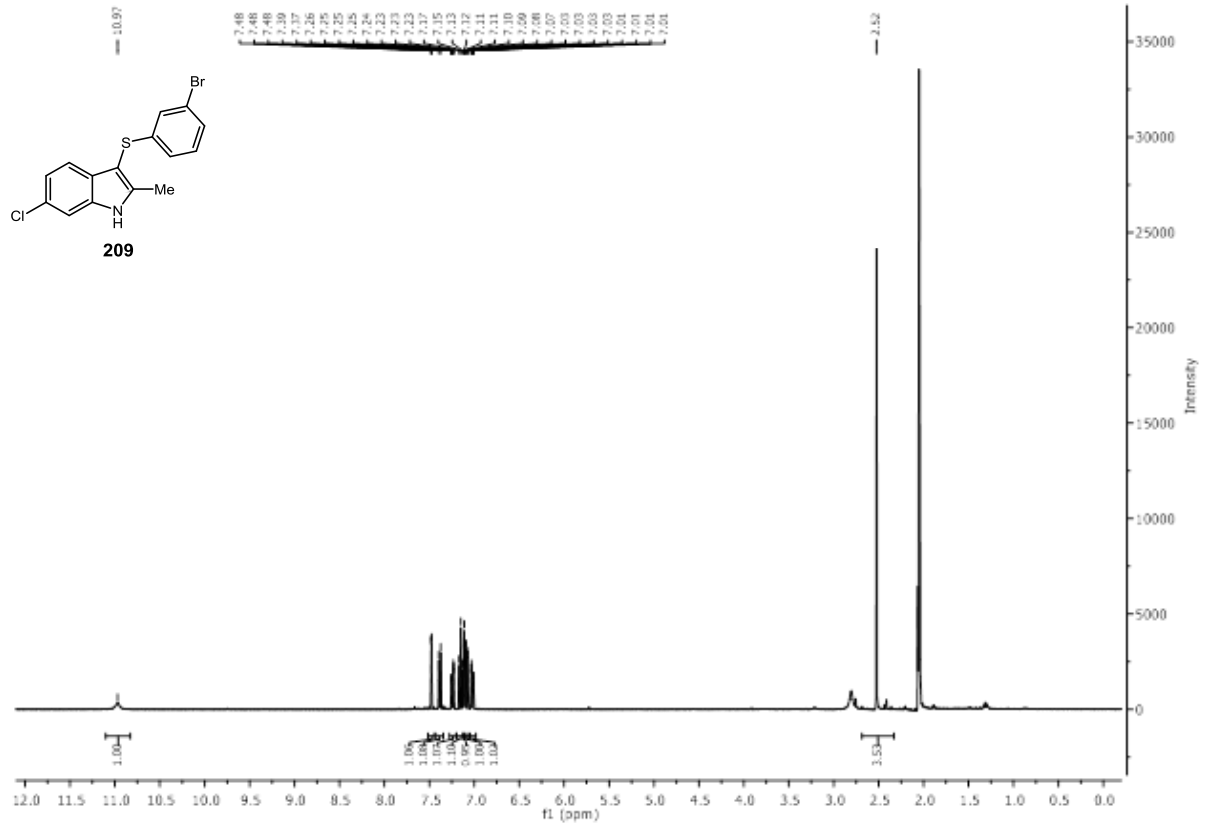


NL:  
1.80E5  
STRWAT351-OA-HNESP-  
2#28-44 RT: 0.66-1.02 AV: 15  
T: FTMS + p NSI Full ms  
[140.00-1935.00]

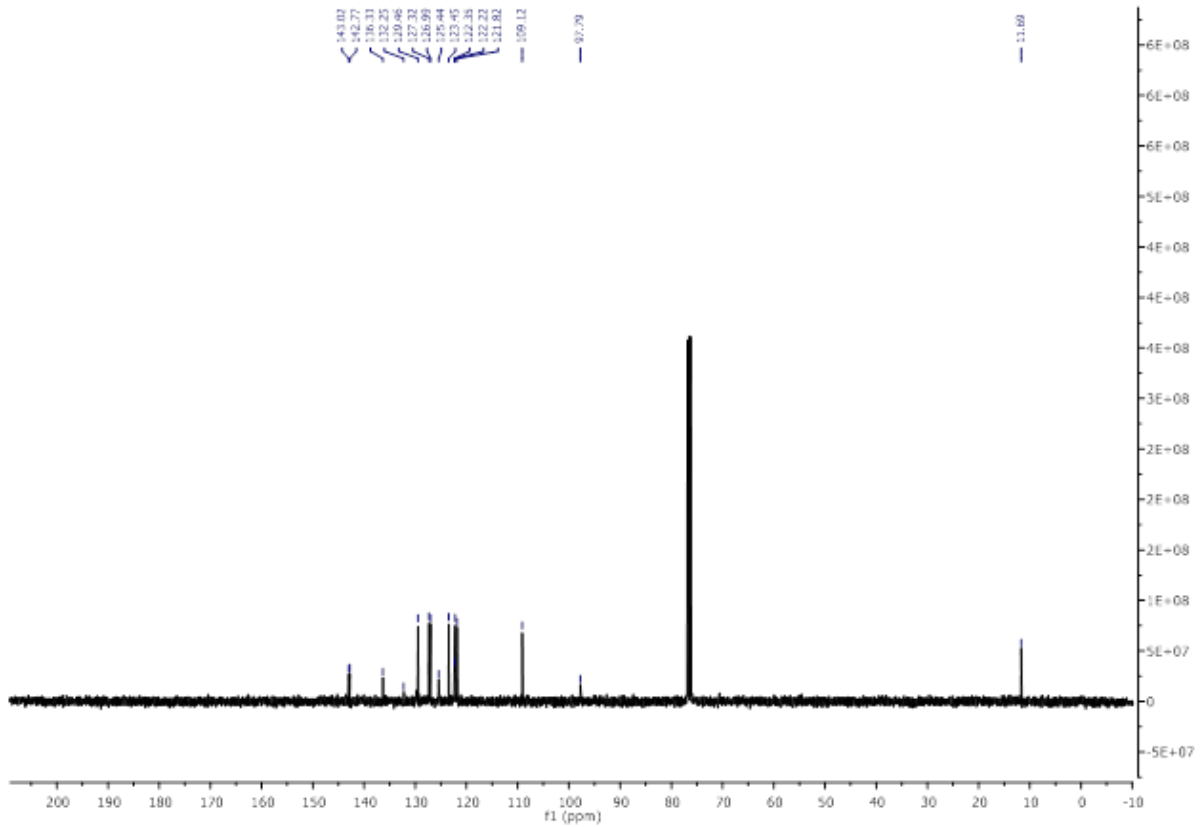
NL:  
9.56E3  
C<sub>15</sub>H<sub>12</sub>BrNSH:  
C<sub>15</sub>H<sub>13</sub>Br<sub>1</sub>N<sub>1</sub>S<sub>1</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

# Compound 209

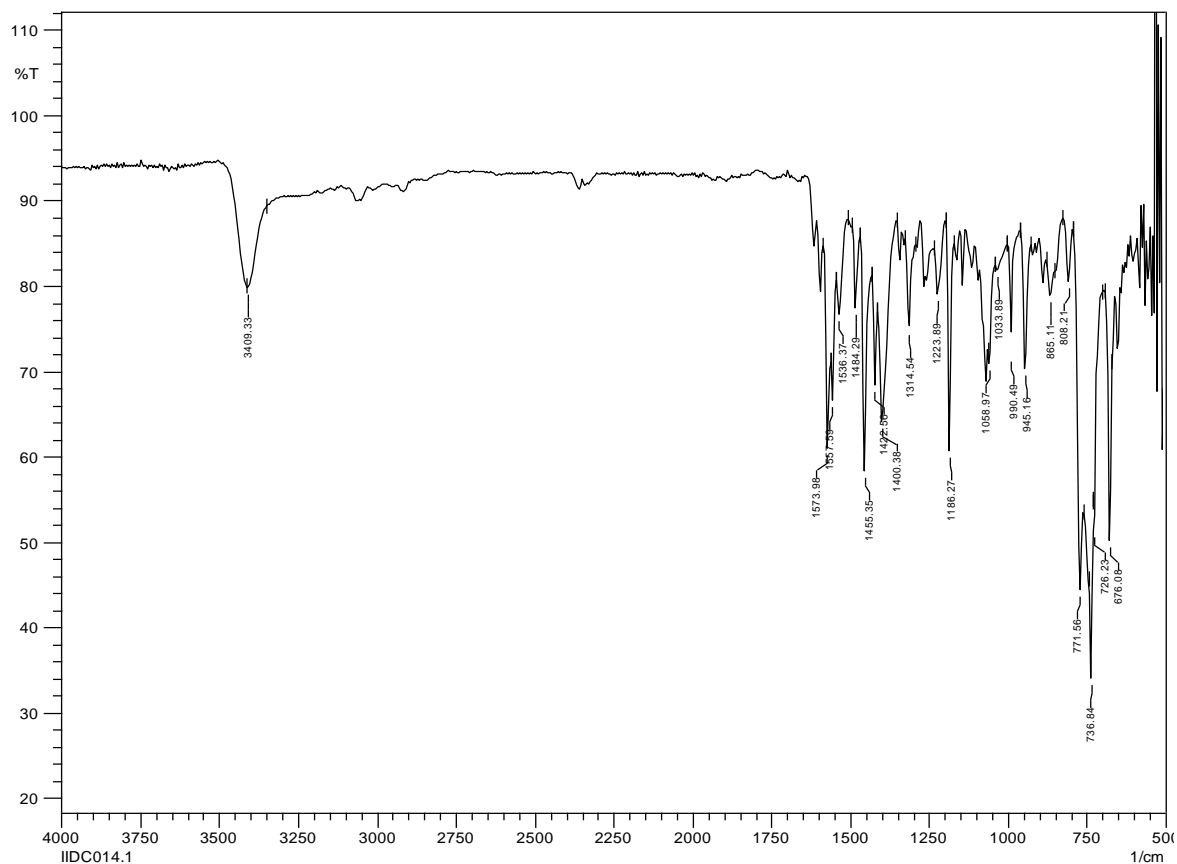
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 209



# IR of 209

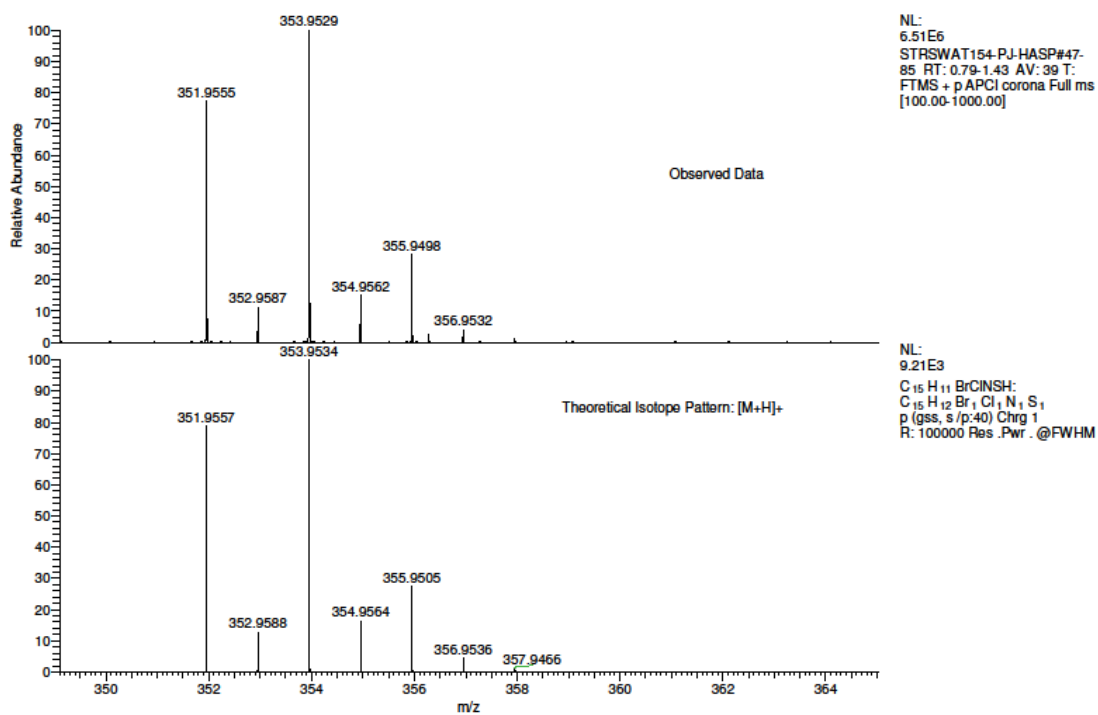


# HRMS of 209

IIDC014 MW=352?  
ASAP (MeOH)

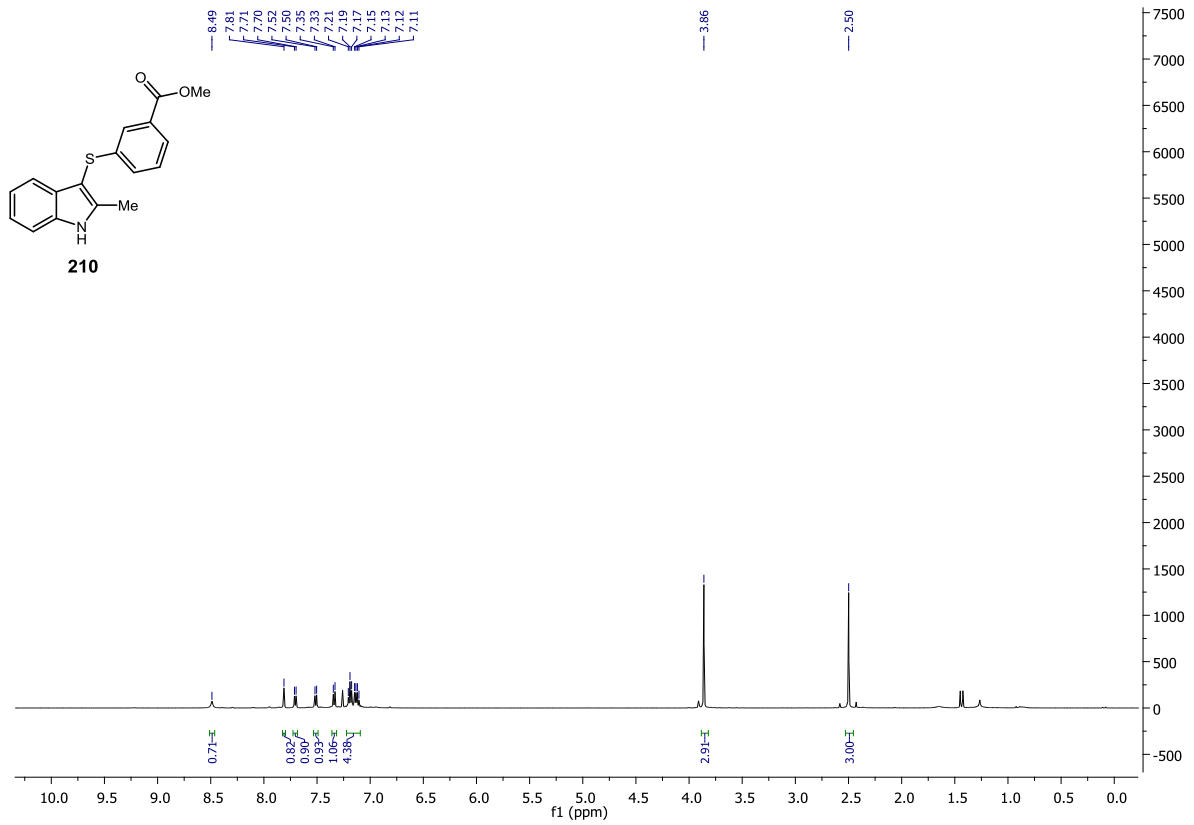
EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
26/11/2013 12:36:21

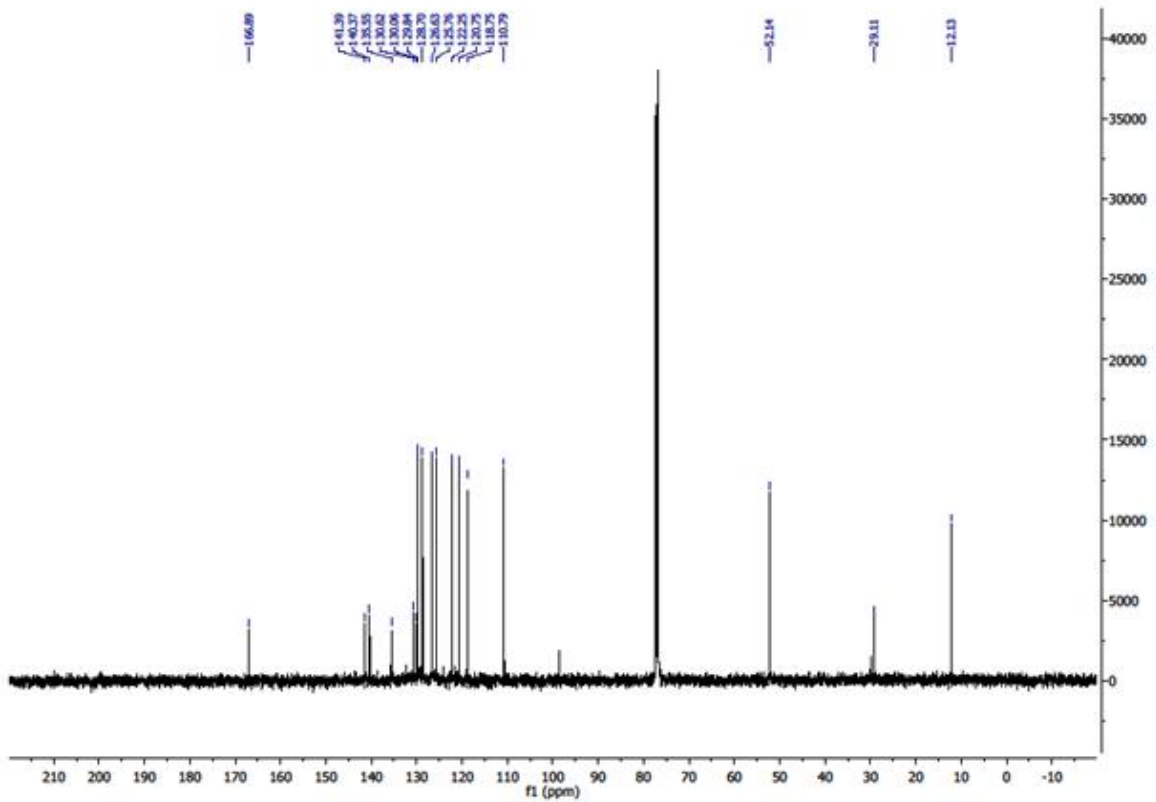


# Compound 210

## <sup>1</sup>H NMR

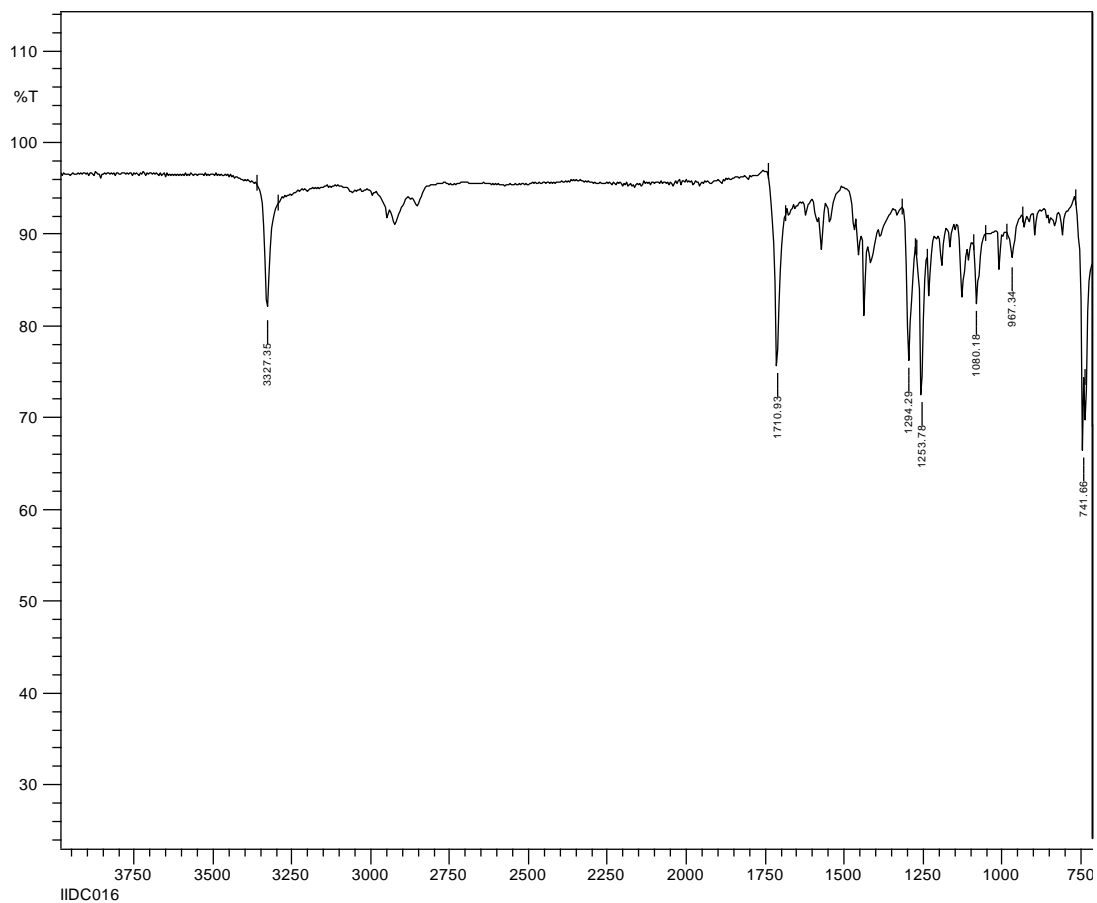


## <sup>13</sup>C NMR of 210





## IR of 210

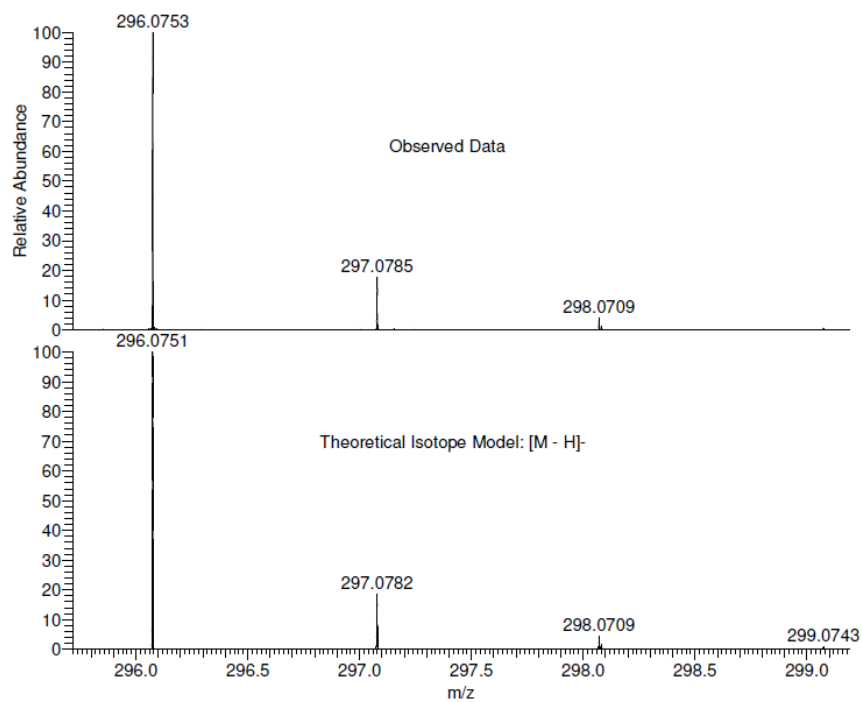


## HRMS of 210

IIDC016 MW=297?  
C<sub>17</sub>H<sub>15</sub>NO<sub>2</sub>S  
(DCM)/MeOH

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Diana Castagna  
28/02/2014 07:58:42

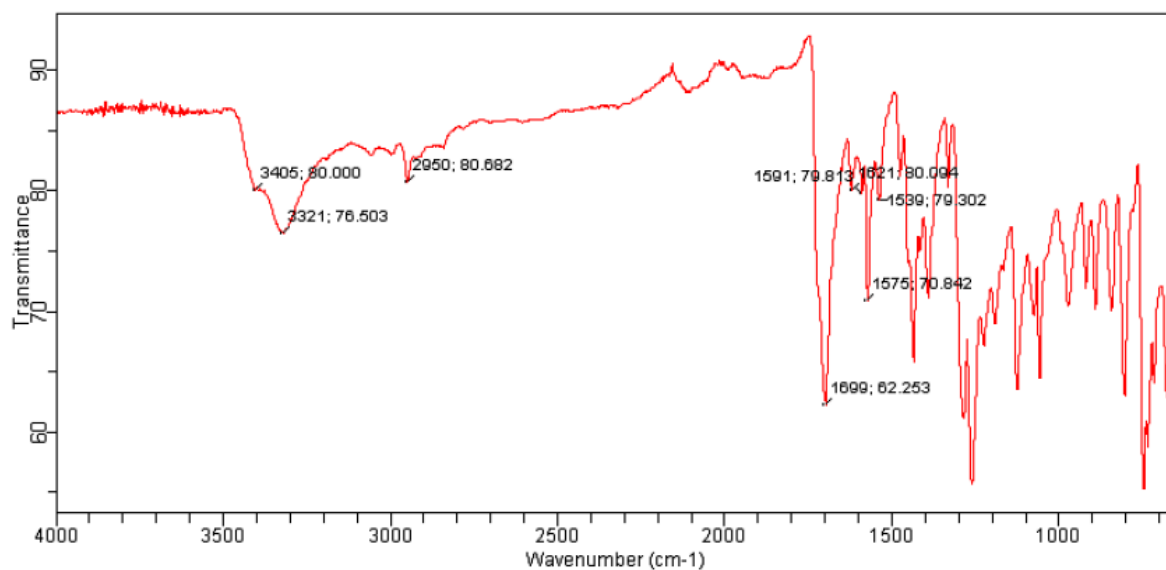


NL:  
2.10E7  
STRWAT201-OA-HNESN#1-6  
RT: 0.20-0.52 AV: 5 T: FTMS -  
p NSI Full ms [120.00-2000.00]

NL:  
1.84E4  
C<sub>17</sub>H<sub>14</sub>NO<sub>2</sub>S:  
C<sub>17</sub>H<sub>14</sub>N<sub>1</sub>O<sub>2</sub>S<sub>1</sub>  
p (gss, s/p:40) Chrg -1  
R: 100000 Res .Pwr .@FWHM



## IR of 211



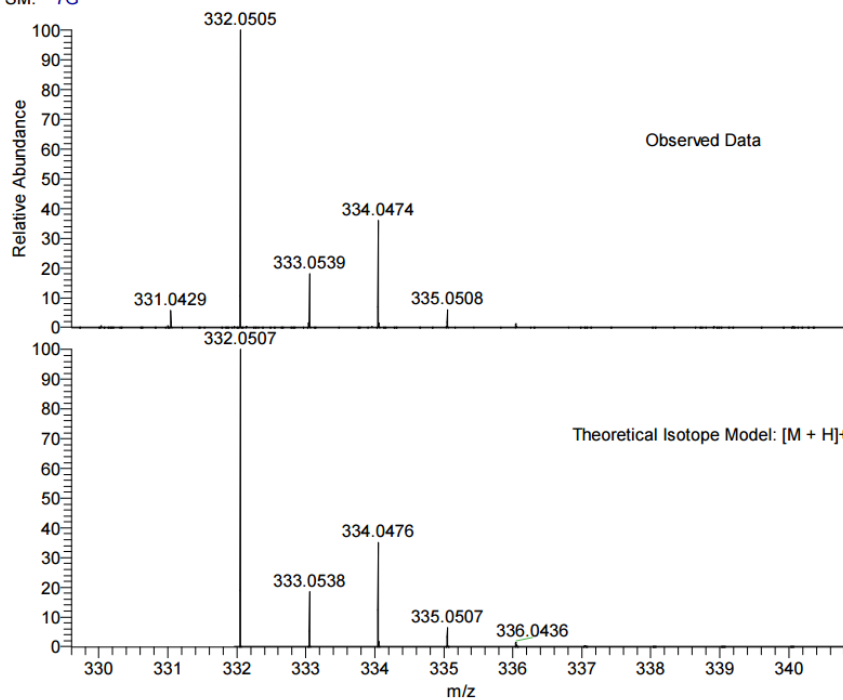
## HRMS of 211

LM353 MW=331?  
C<sub>17</sub>H<sub>14</sub>ClNO<sub>2</sub>S  
(DCM)/MeOH + NH<sub>4</sub>OAc

EPSRC National Facility Swansea  
LTQ Orbitrap XL

Lisa Miller  
08/04/2015 12:34:28

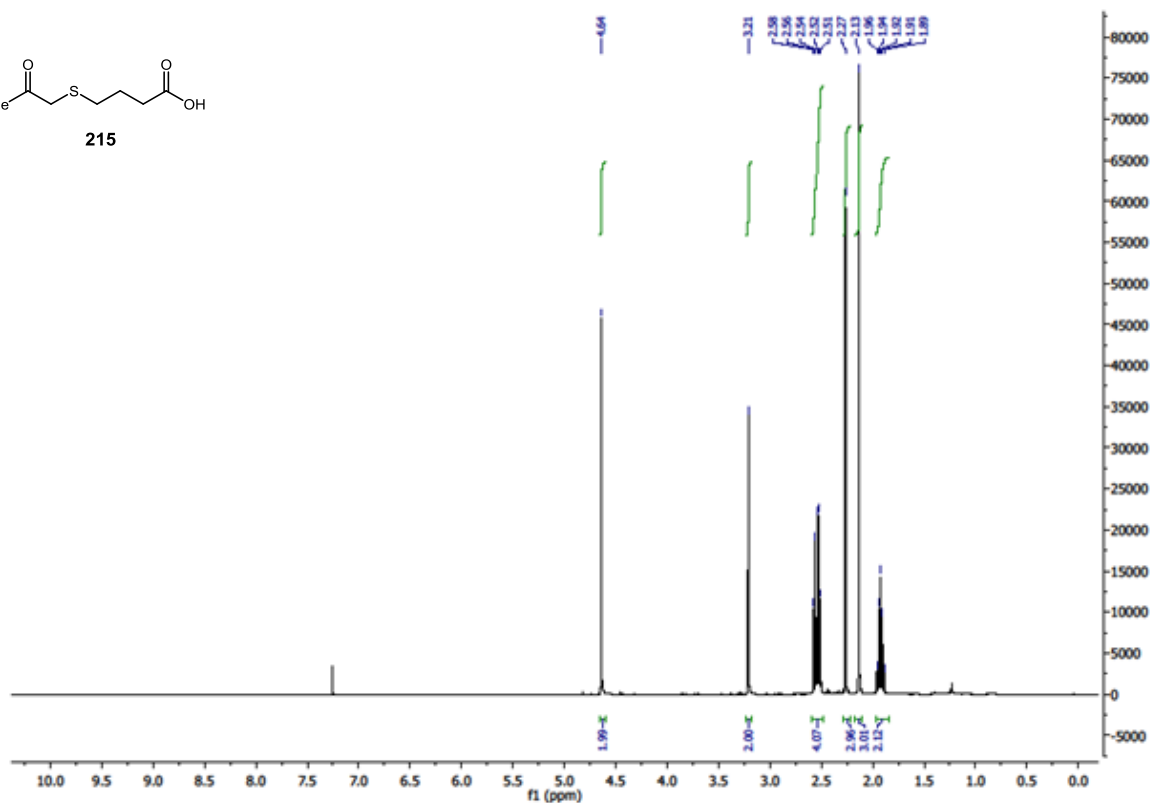
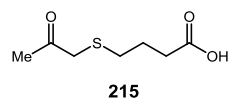
SM: 7G



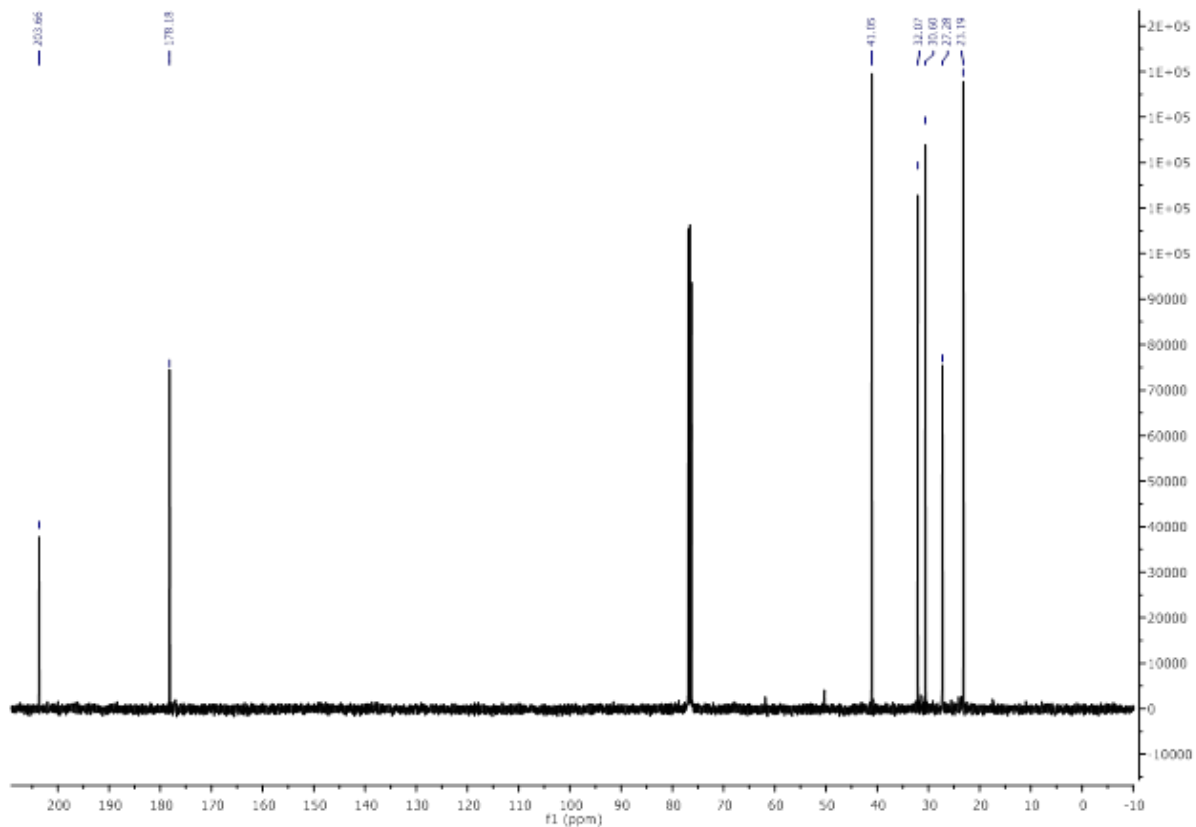
NL:  
6.08E6  
STRWAT465-OR-HNESP#9-12  
RT: 0.15-0.24 AV: 4 T: FTMS  
+ p NSI Full ms  
[140.00-1935.00]

NL:  
1.39E4  
C<sub>17</sub>H<sub>14</sub>ClNO<sub>2</sub>S:  
C<sub>17</sub>H<sub>15</sub>Cl<sub>1</sub>N<sub>1</sub>O<sub>2</sub>S<sub>1</sub>  
p (gss, s /p:40) Chrg 1  
R: 100000 Res .Pwr . @FWHM

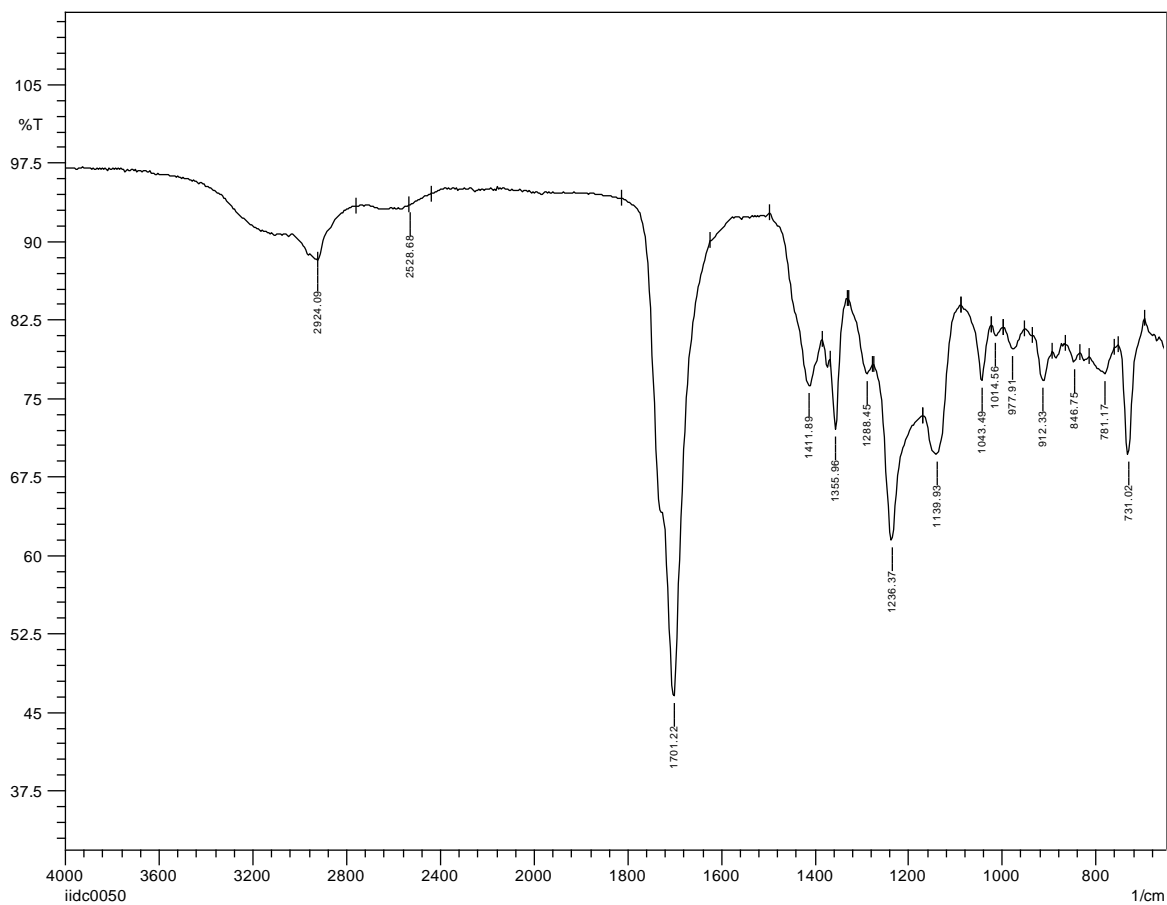
**Compound 215**  
**<sup>1</sup>H NMR**



**<sup>13</sup>C NMR of 215**



## IR of 215

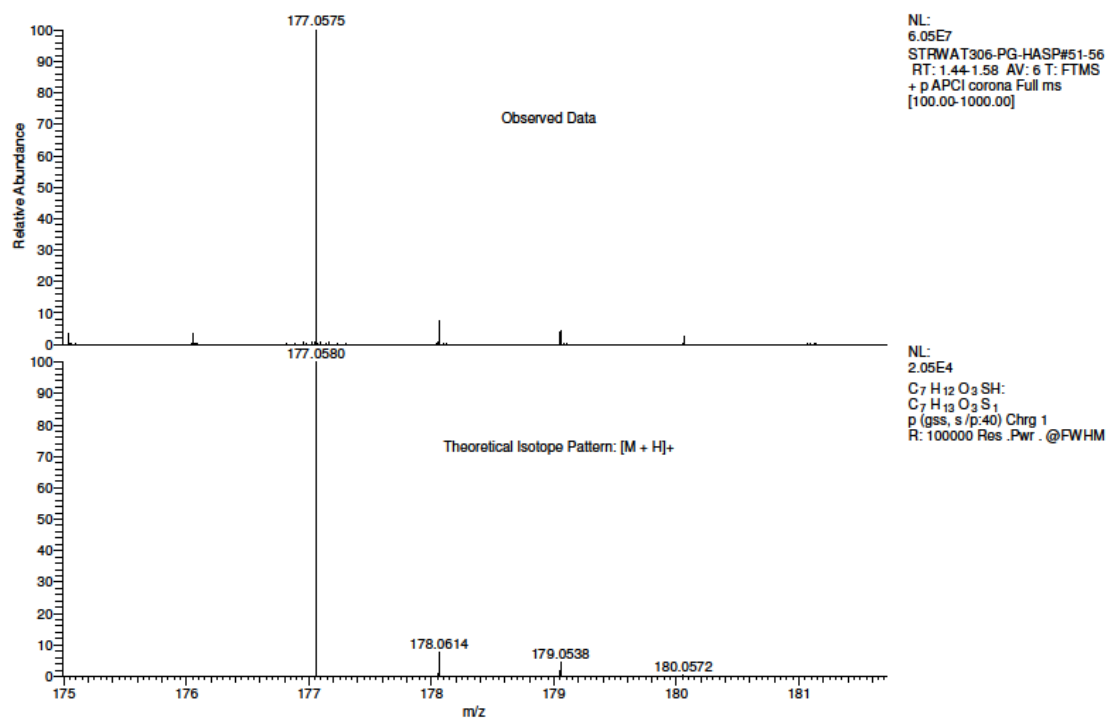


## HRMS of 215

IIDC050 MW=176?  
ASAP(SOLID)

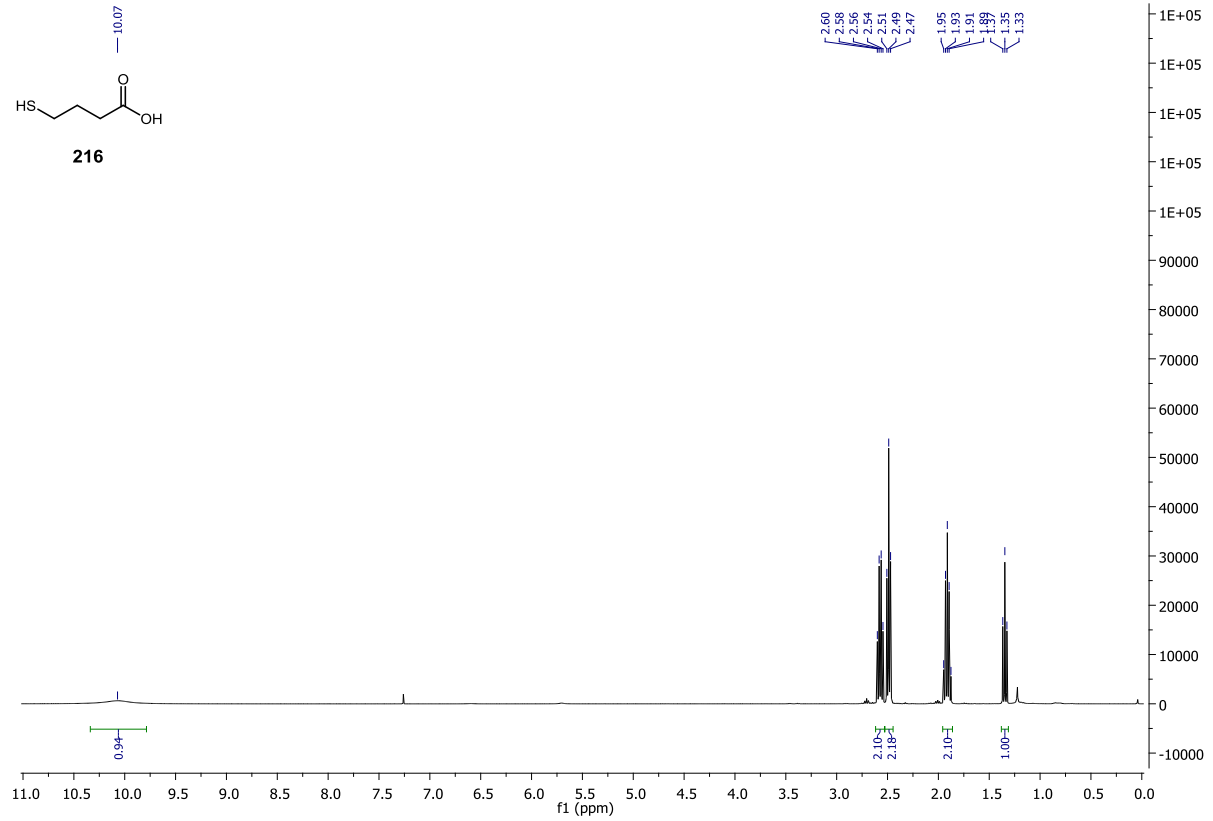
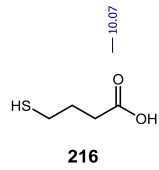
EPSRC National Centre Swansea  
LTQ Orbitrap XL

Diana  
06/08/2014 15:31:22

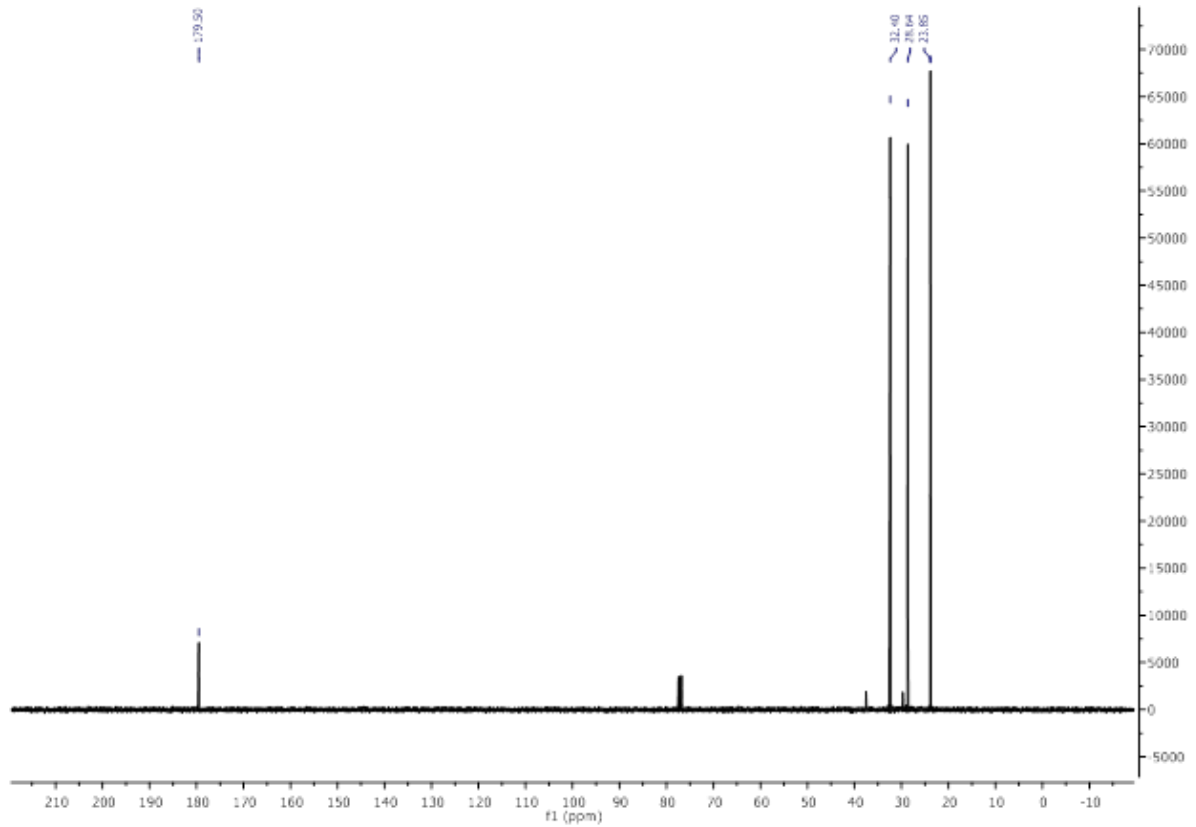


# Compound 216

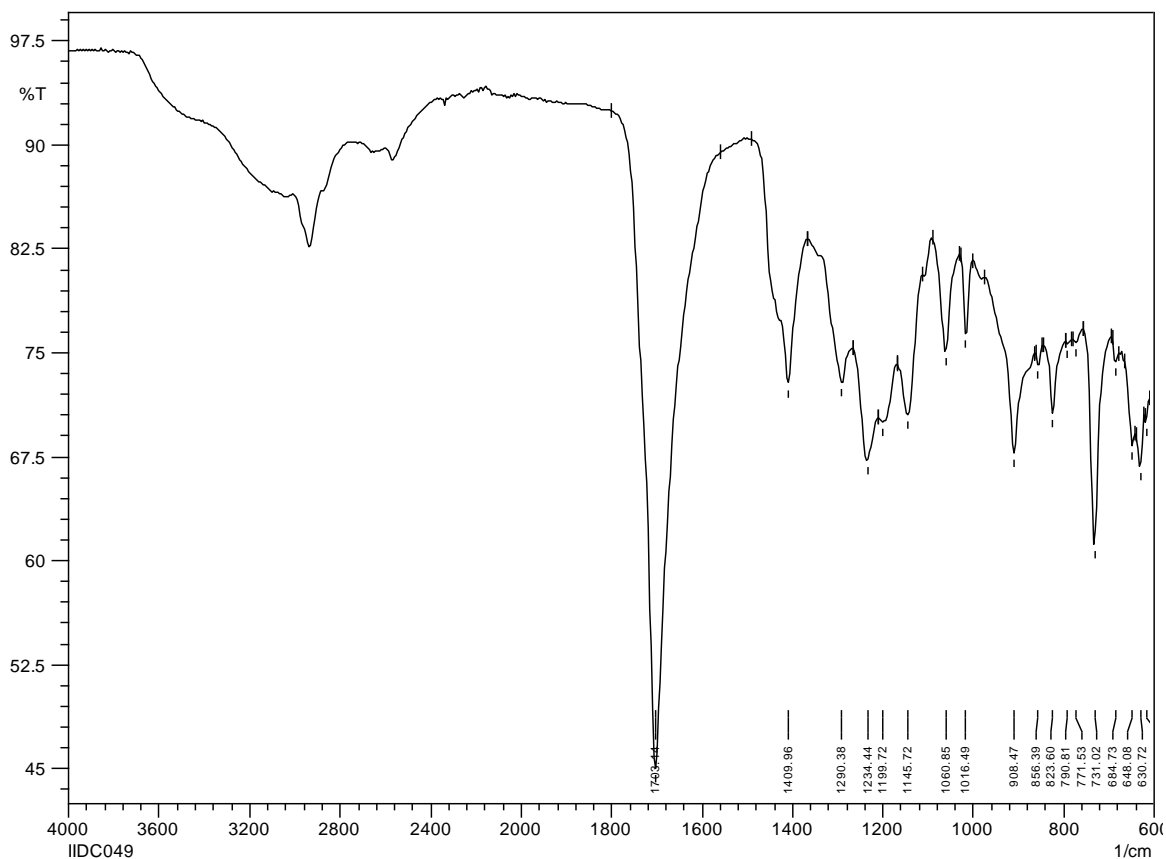
## <sup>1</sup>H NMR



## <sup>13</sup>C NMR of 216



## IR of 216

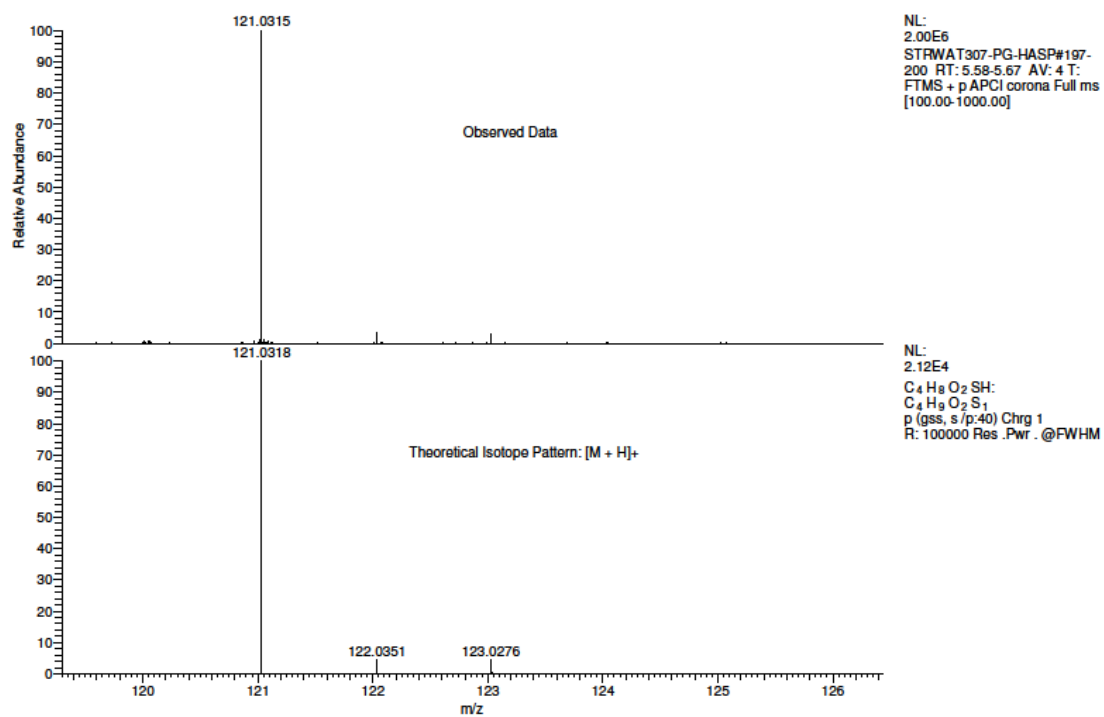


## HRMS of 216

IIDC049 MW=120?  
ASAP(SOLID)

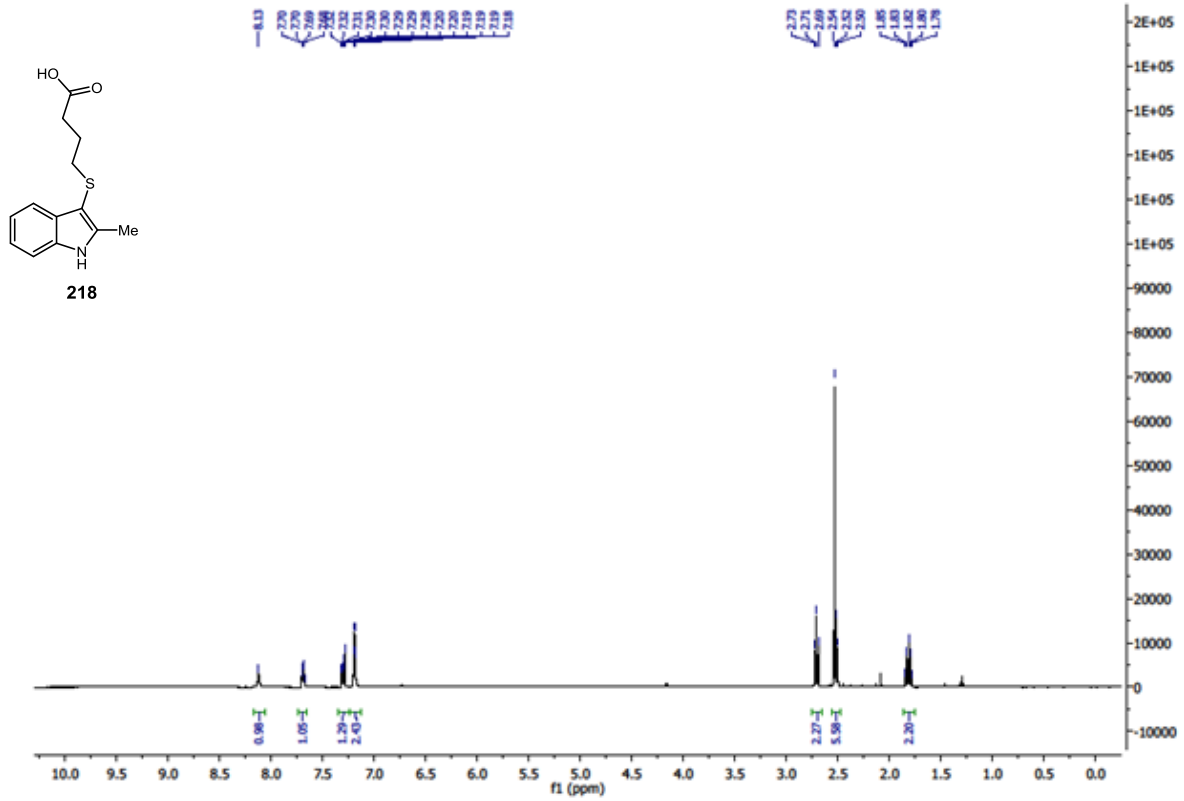
EPSRC National Centre Swansea  
LTQ Orbitrap XL

Diana  
06/08/2014 15:43:00

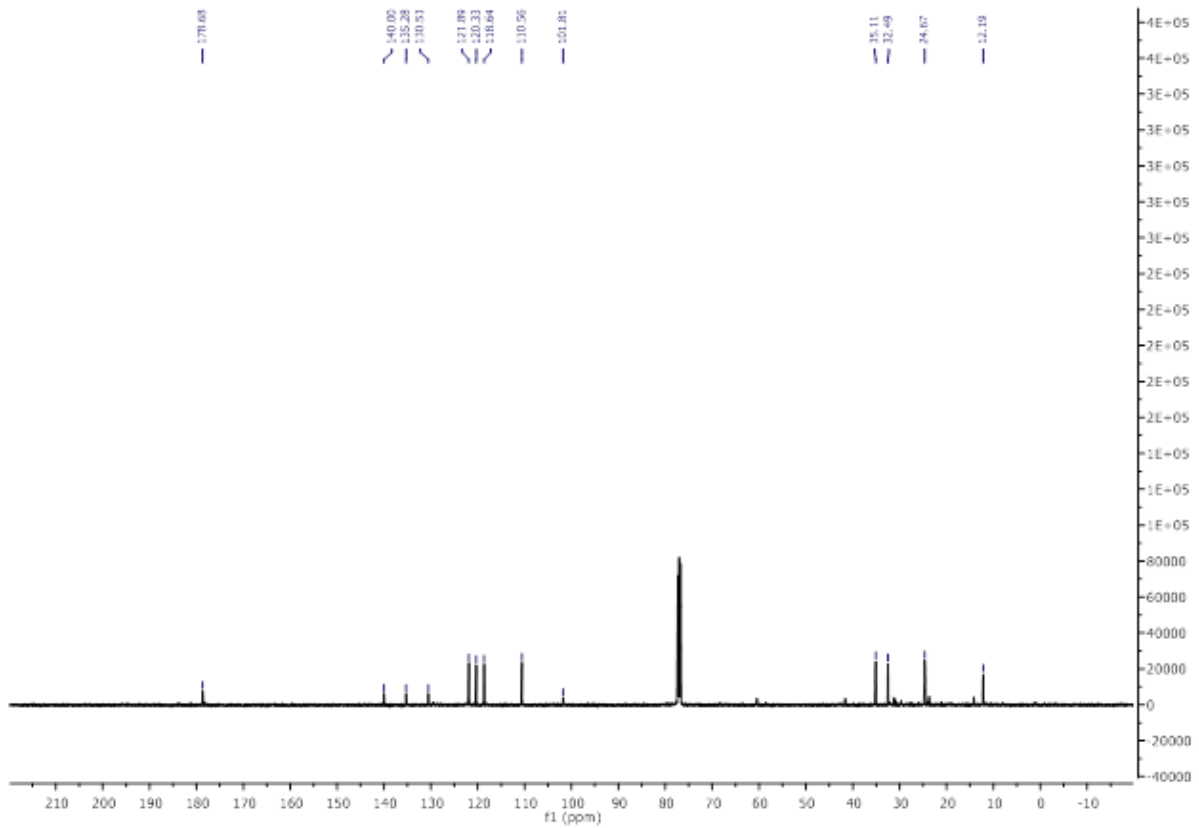


# Compound 218

## <sup>1</sup>H NMR

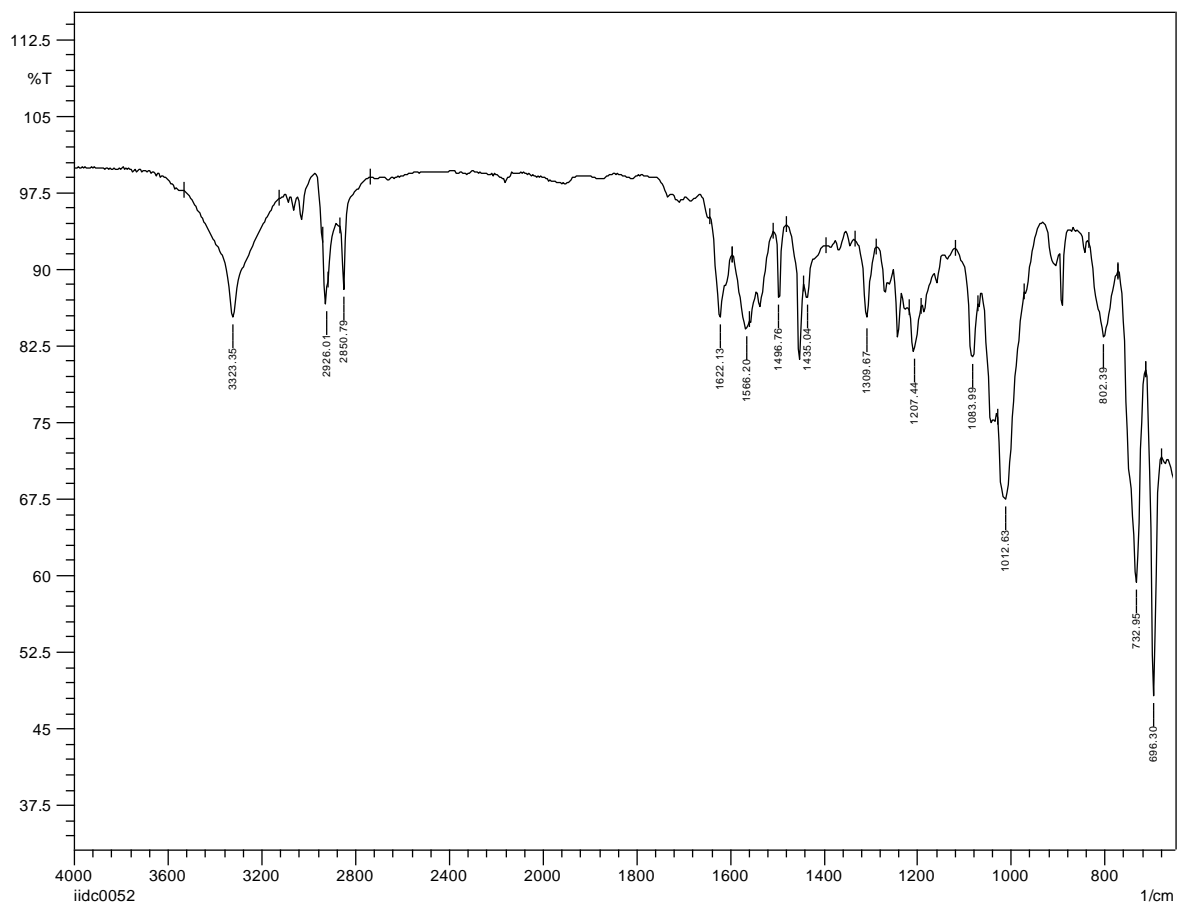


## <sup>13</sup>C NMR of 218



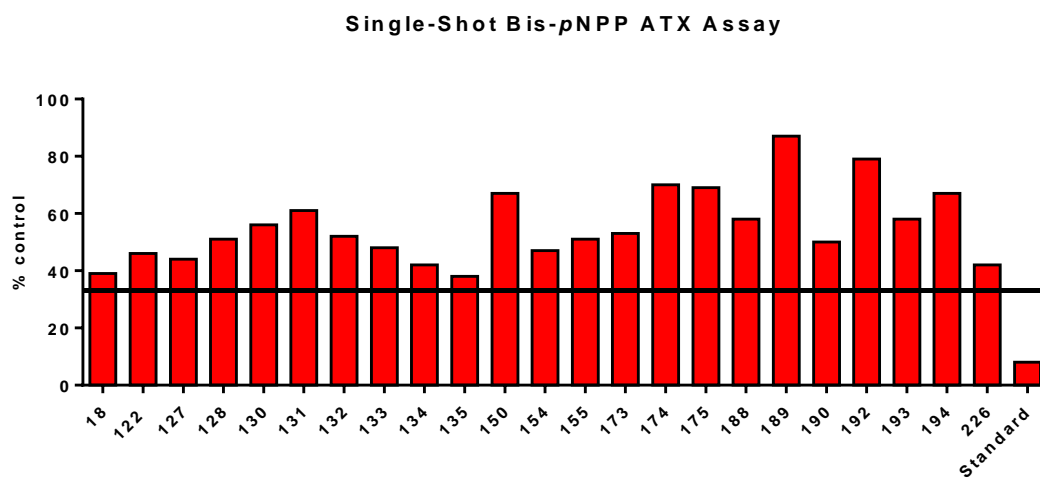


# IR of 218

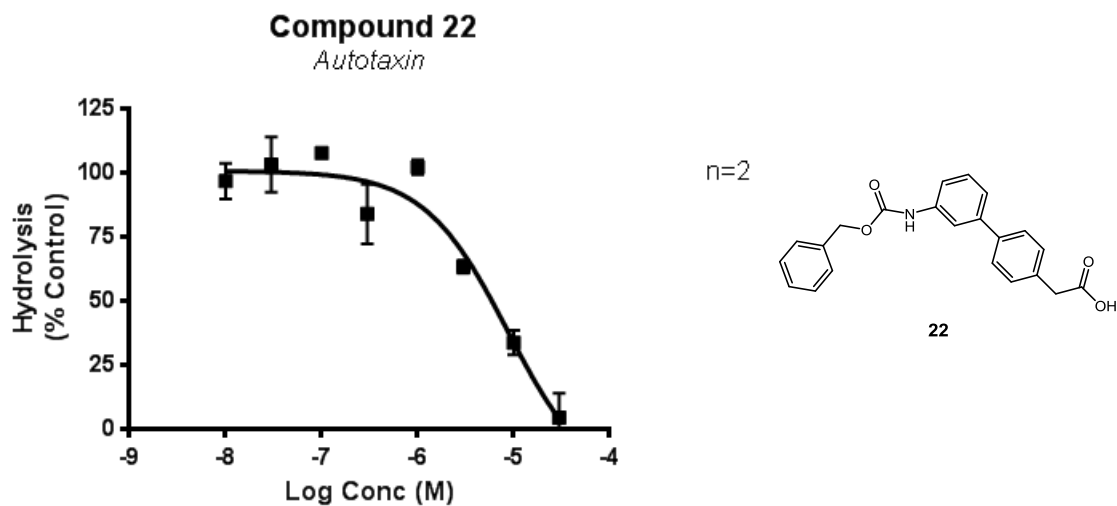
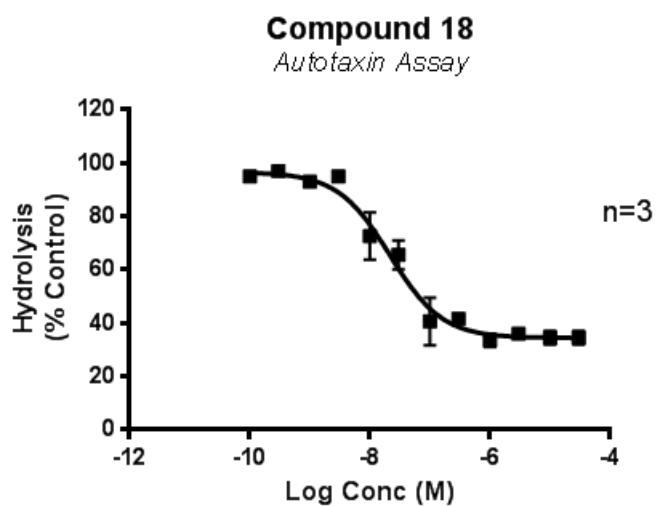


## 2. Bis-pNPP Assay Data

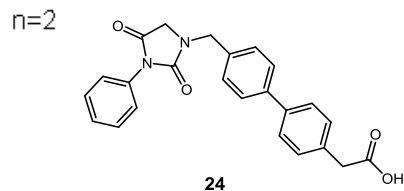
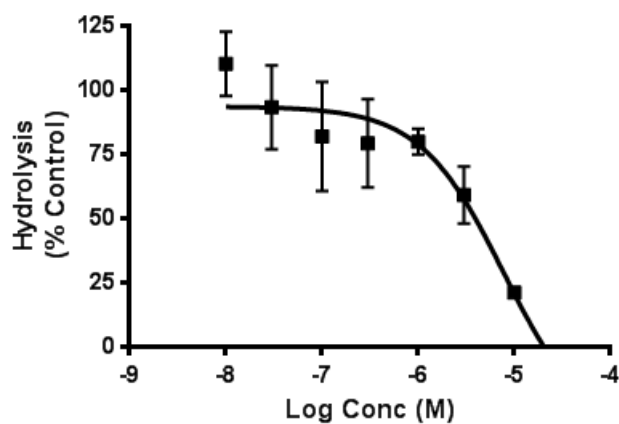
### 2.1 Bis-pNPP Single Shot Data



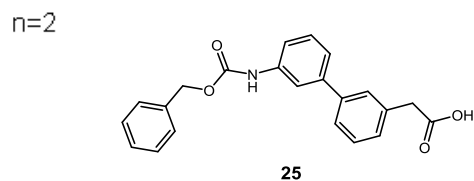
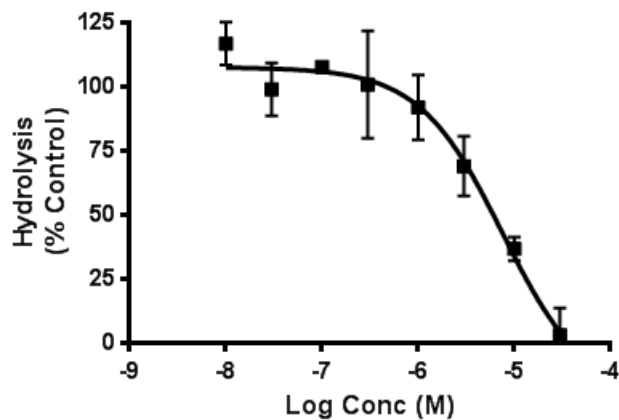
### 2.2 Full Curve Assay Results



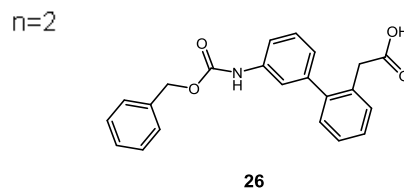
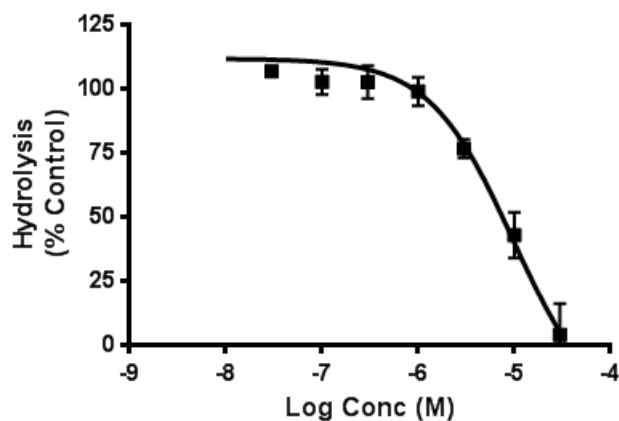
**Compound 24**  
*Autotaxin*

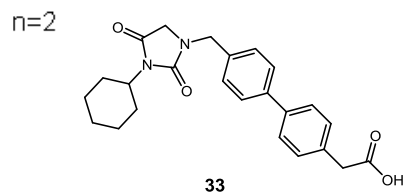
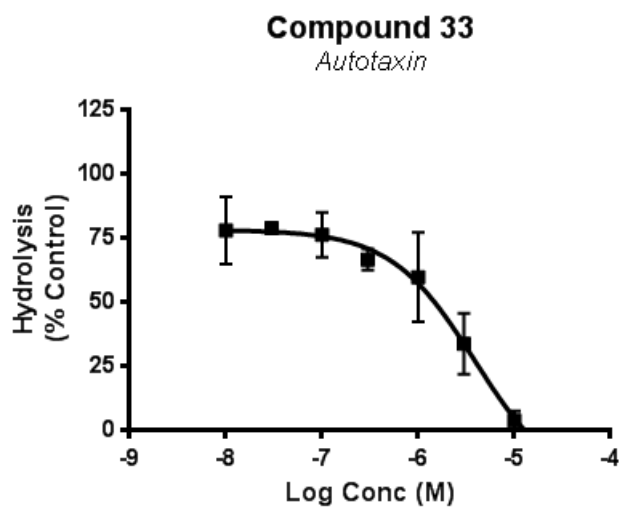
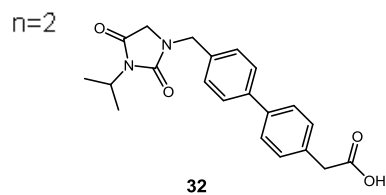
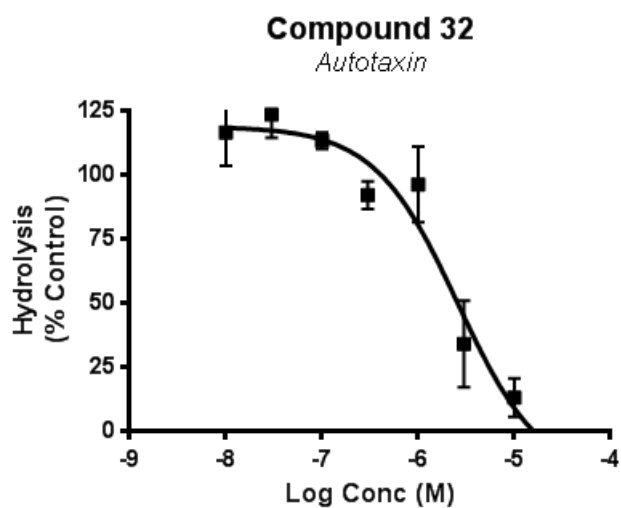
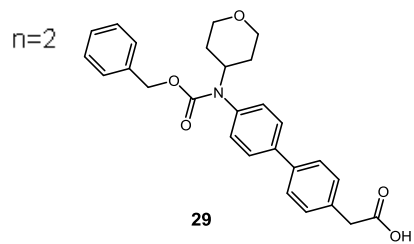
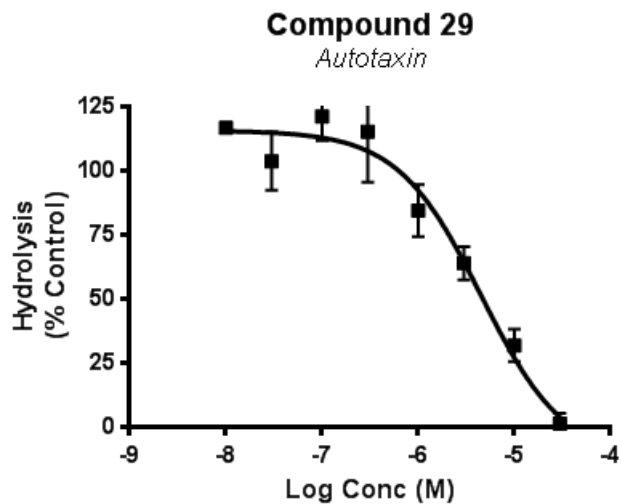


**Compound 25**  
*Autotaxin*

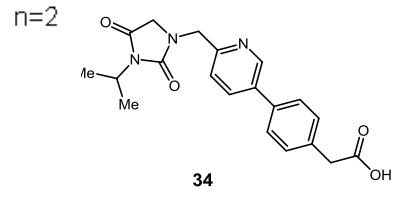
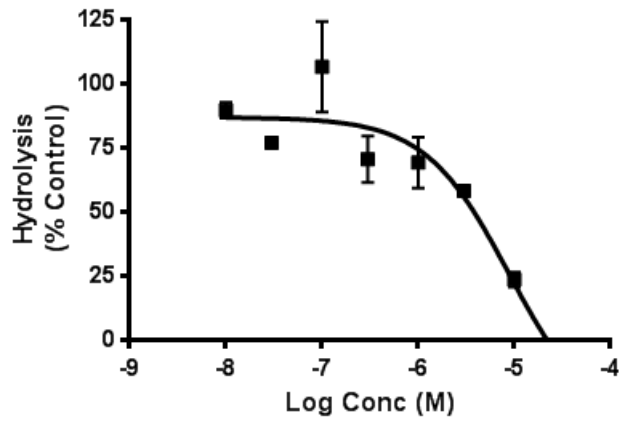


**Compound 26**  
*Autotaxin*

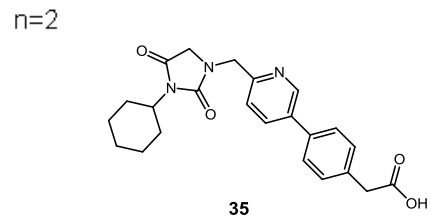
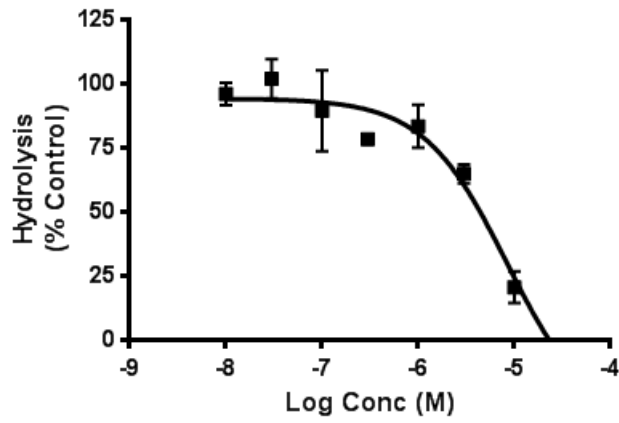




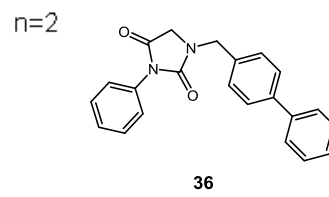
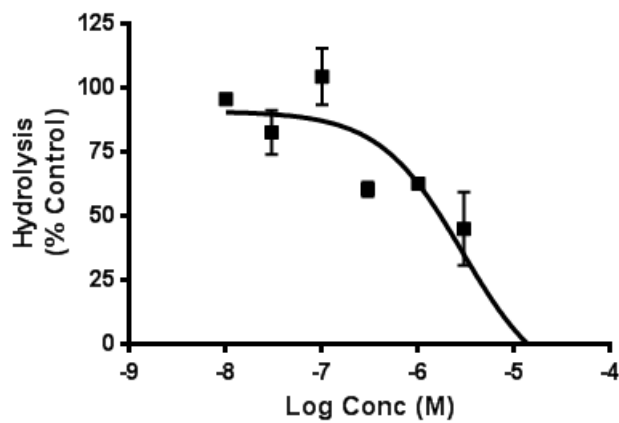
**Compound 34**  
*Autotaxin*



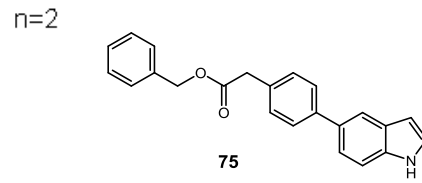
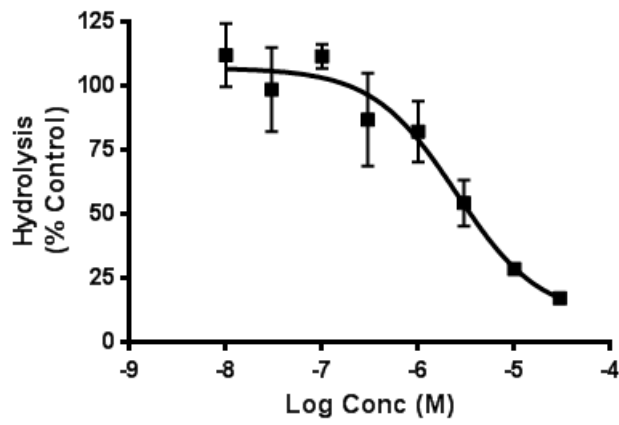
**Compound 35**  
*Autotaxin*



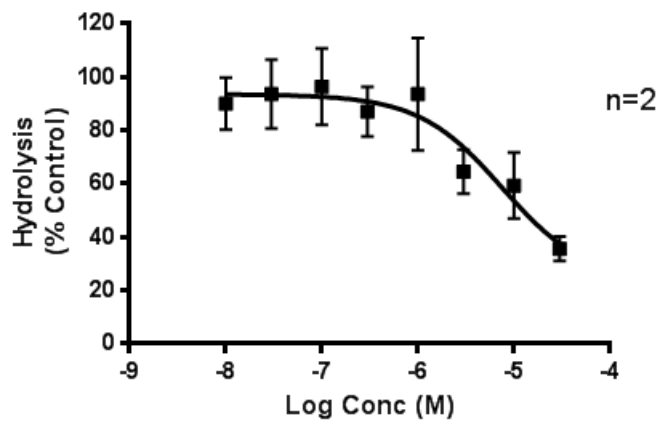
**Compound 36**  
*Autotaxin*



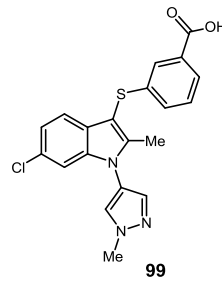
**Compound 75**  
*Autotaxin*



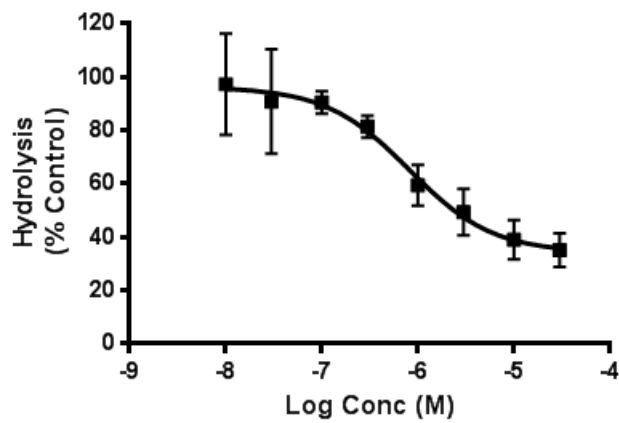
**Compound 104**  
*Autotaxin Assay*



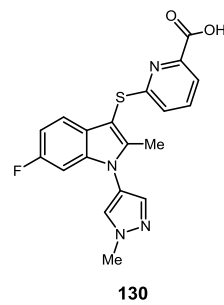
n=2



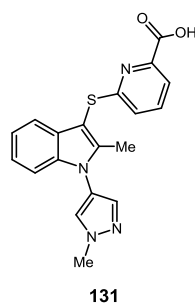
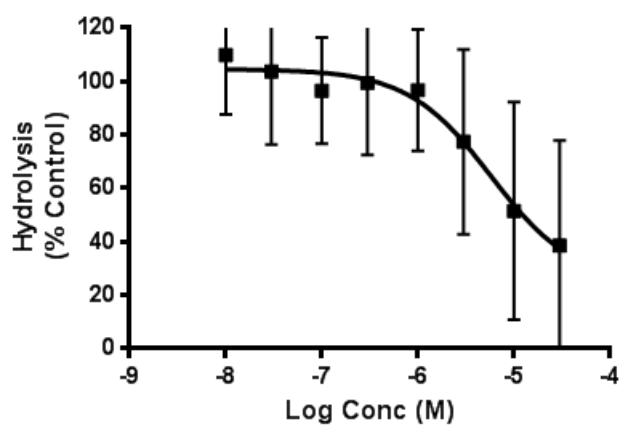
**Compound 134**  
*Autotaxin Assay*



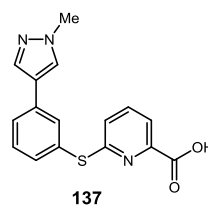
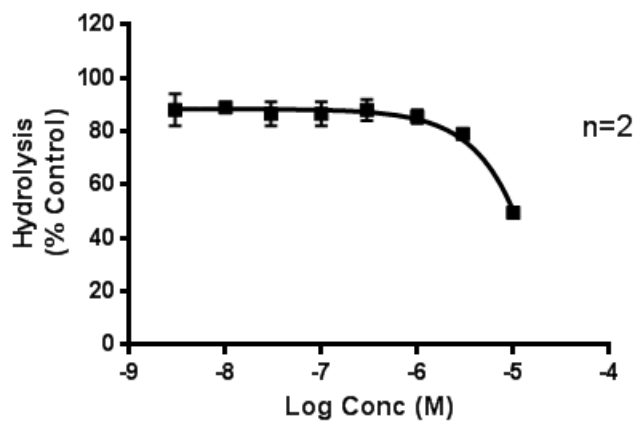
n=2



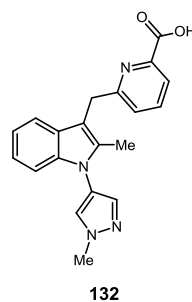
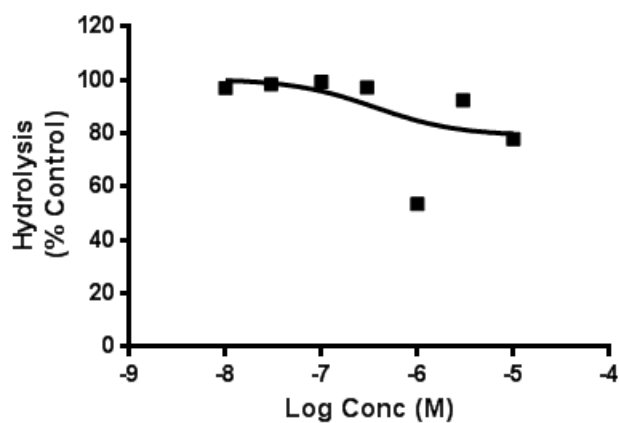
**Compound 136**  
*Autotaxin Assay*



**Compound 137**  
*Autotaxin Assay*

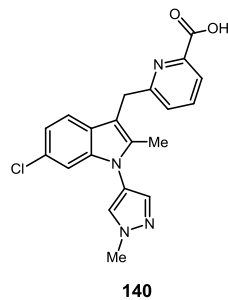
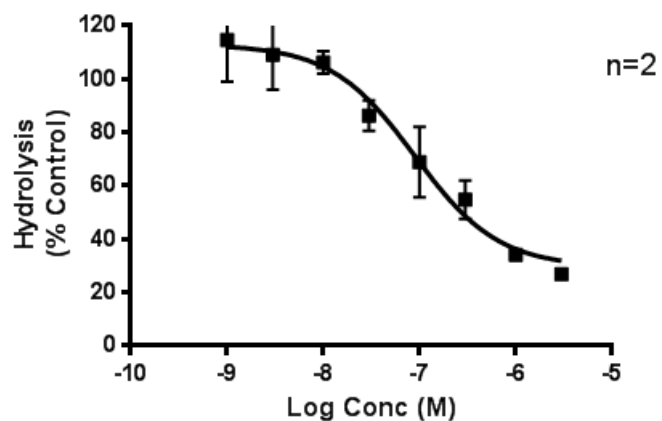


**Compound 138**  
*Autotaxin Assay*



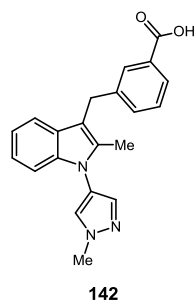
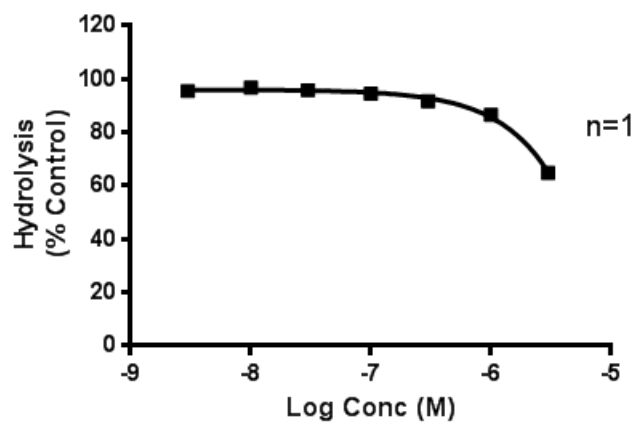
### Compound 140

Autotaxin Assay



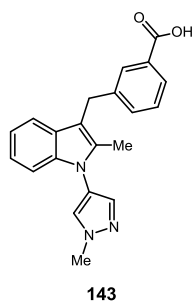
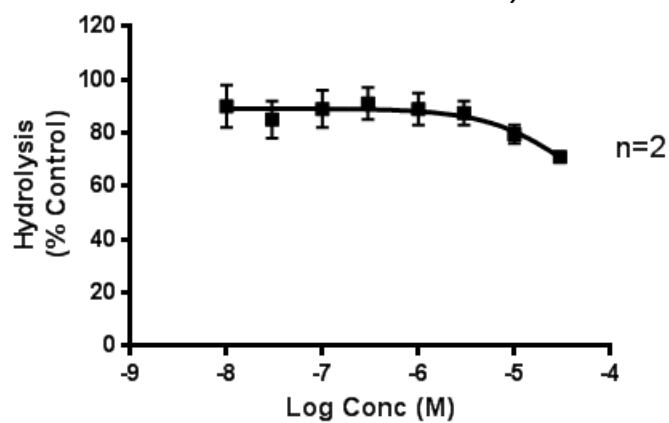
### Compound 142

Autotaxin Assay



### Compound 143

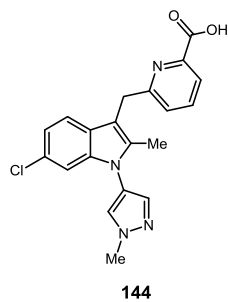
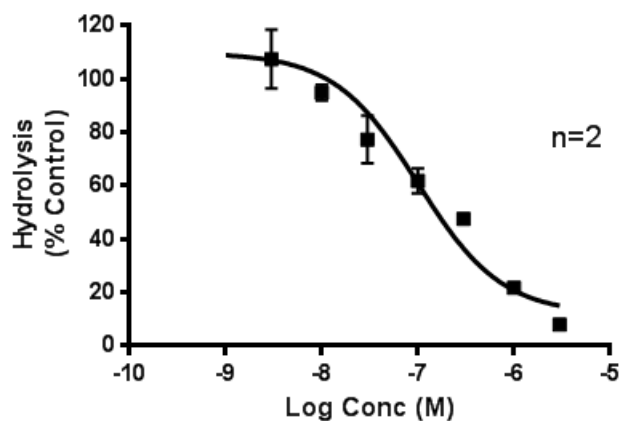
Autotaxin Assay





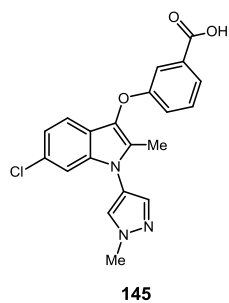
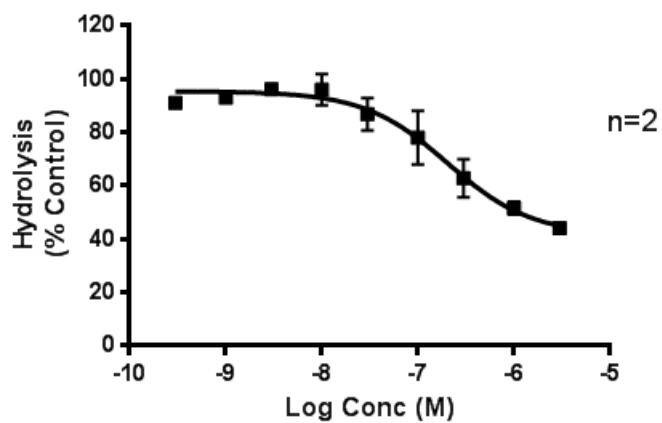
### Compound 144

Autotaxin Assay



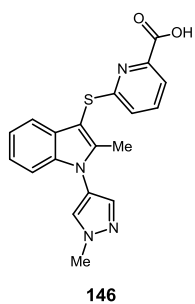
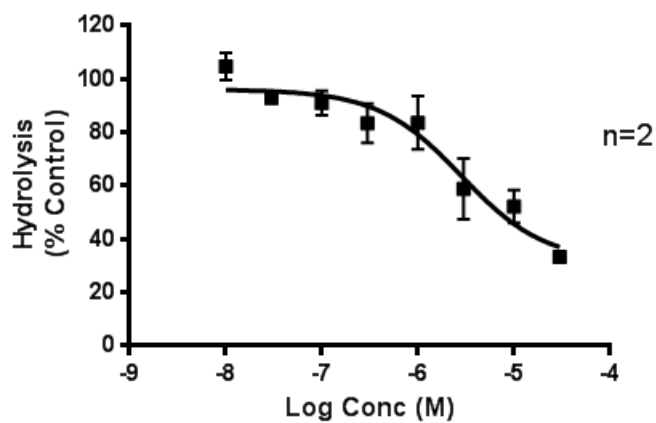
### Compound 145

Autotaxin Assay



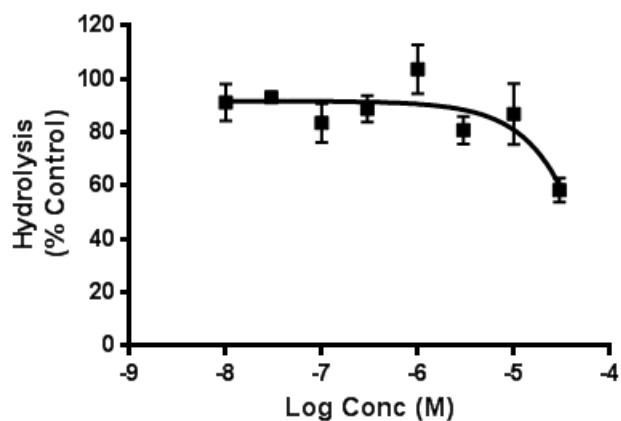
### Compound 146

Autotaxin Assay

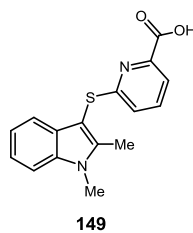


### Compound 149

Autotaxin Assay

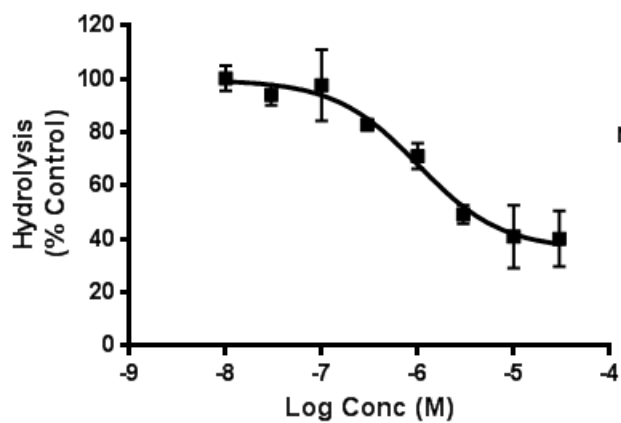


n=2

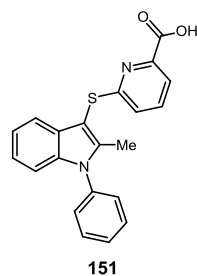


### Compound 151

Autotaxin Assay

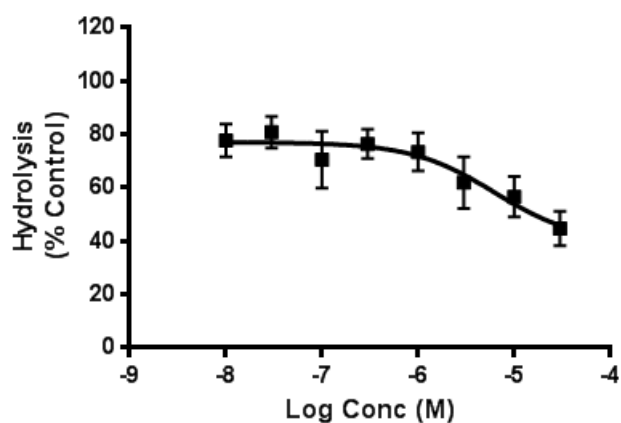


n=2

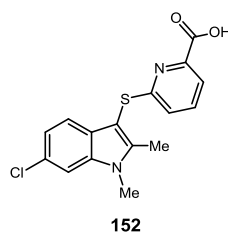


### Compound 152

Autotaxin Assay

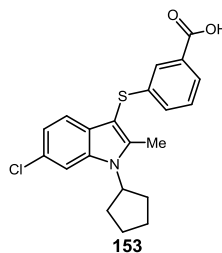
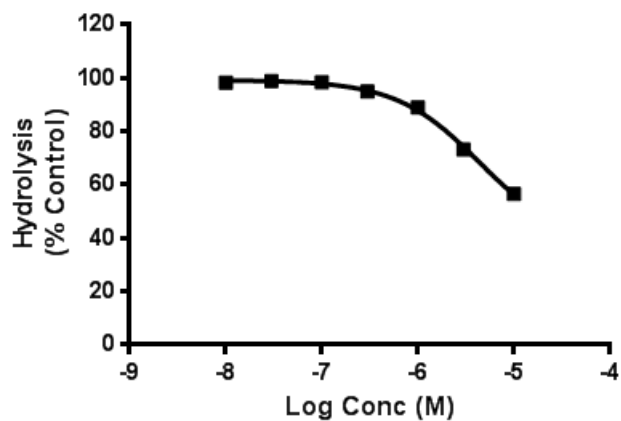


n=2



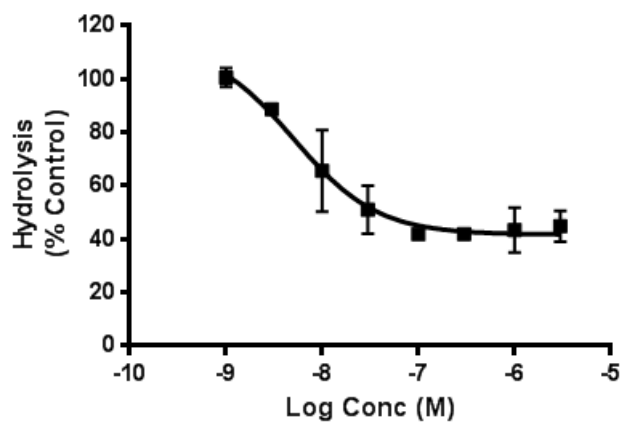
### Compound 153

Autotaxin Assay

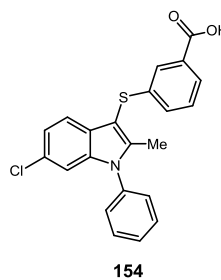


### Compound 154

Autotaxin Assay

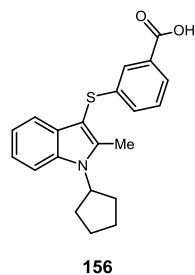
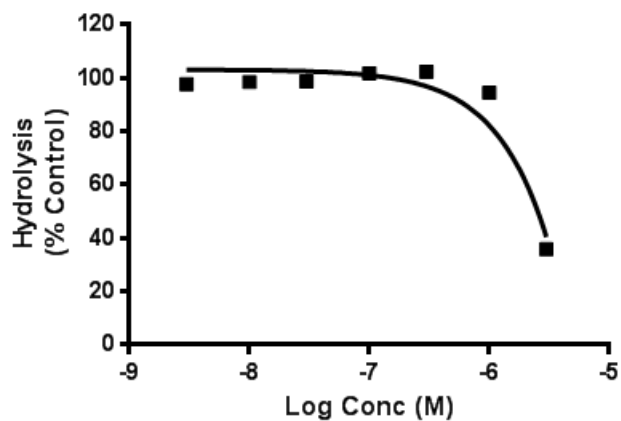


n=2

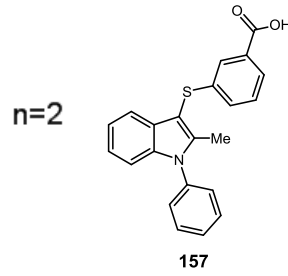
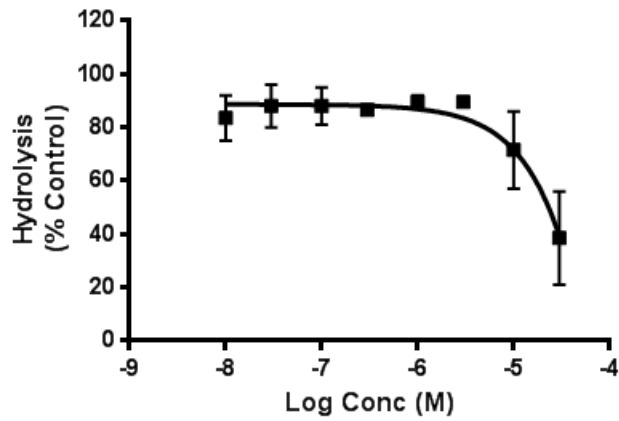


### Compound 156

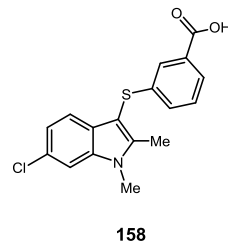
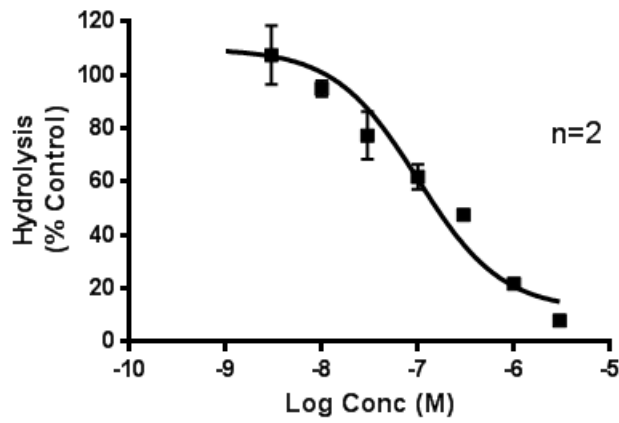
Autotaxin Assay



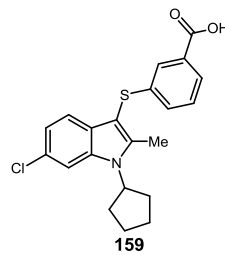
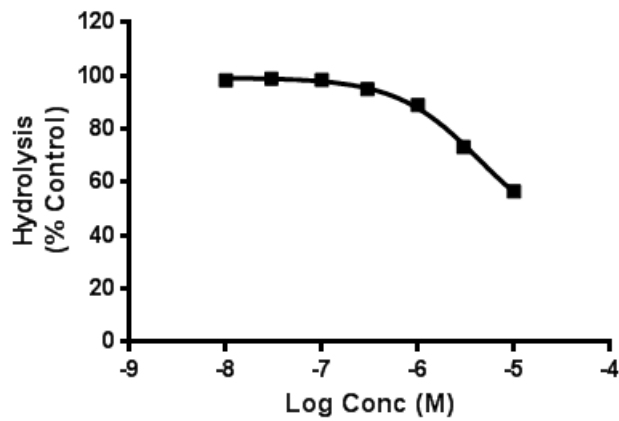
**Compound 157**  
*Autotaxin Assay*



**Compound 158**  
*Autotaxin Assay*

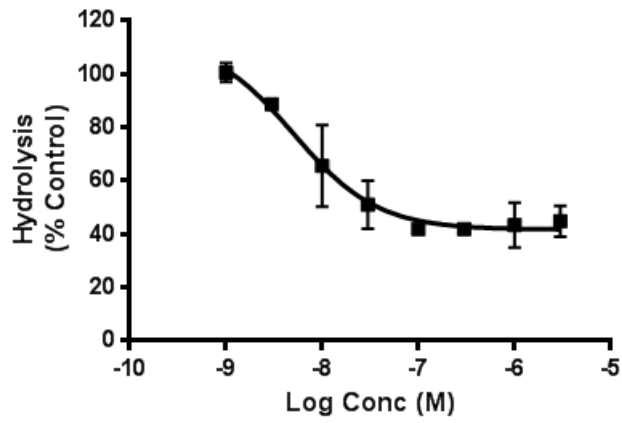


**Compound 159**  
*Autotaxin Assay*

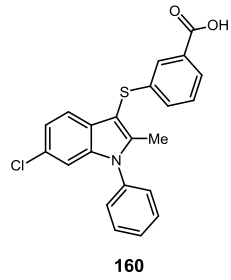


### Compound 160

Autotaxin Assay

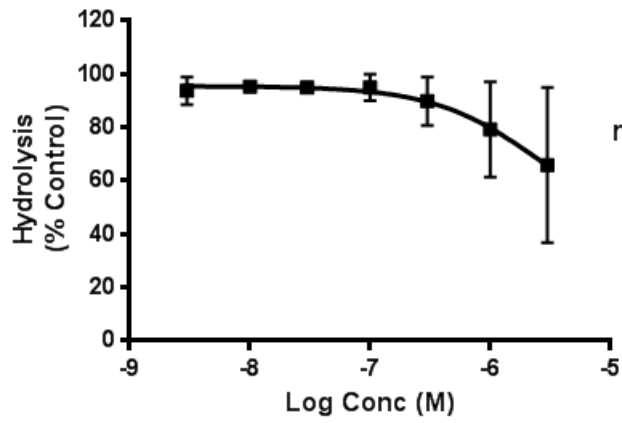


n=2

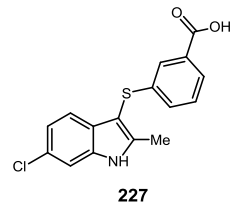


### Compound 227

Autotaxin Assay



n=2



### 3. LPC Assay Full Curve Data

#### LPC assays, ATX compounds (Lisa)

