Tetrahydroquinolines by multicomponent Povarov reaction in water: Calix[*n*]arene-catalysed and mechanistic insights

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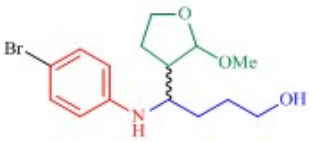
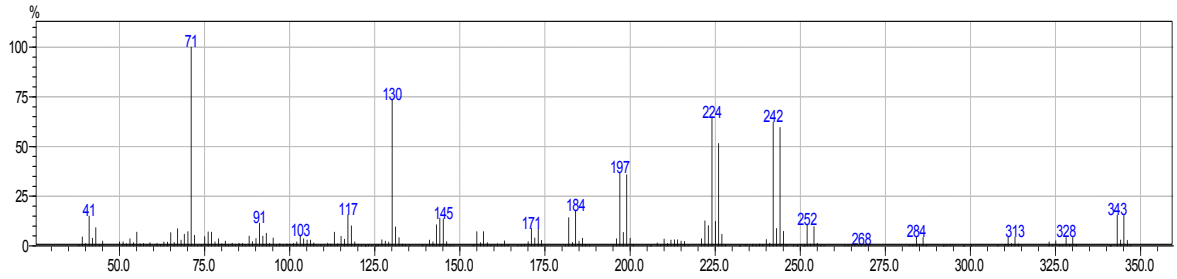
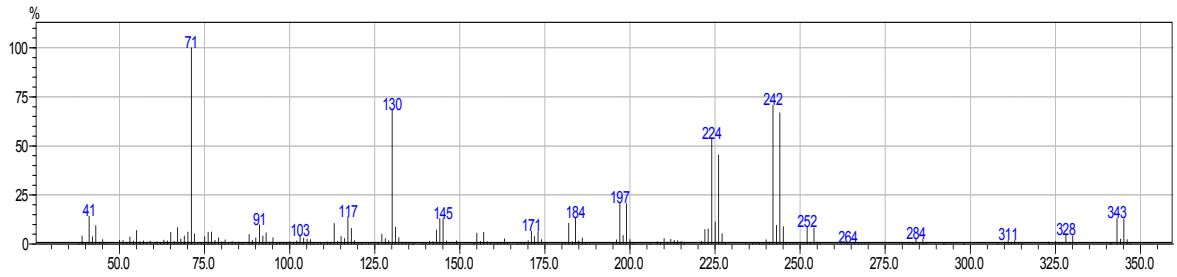
Compound T1A



T1A

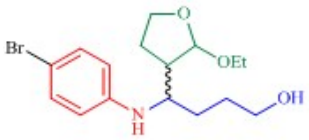


Relative Intensity (%)/*m/z*

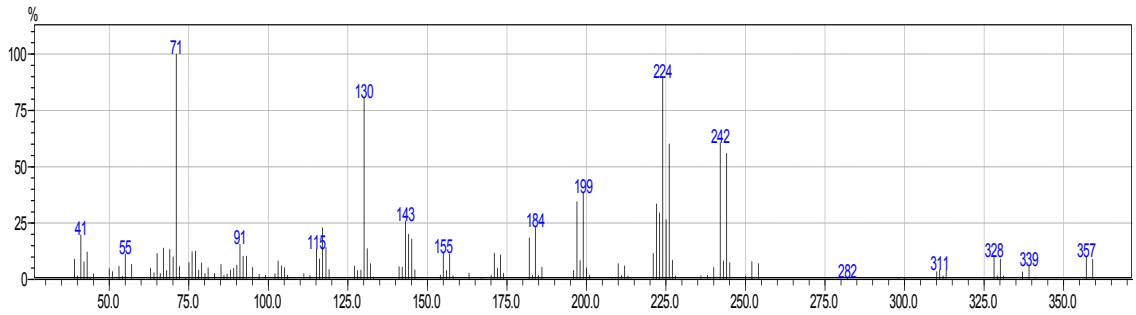


Relative Intensity (%)/*m/z*

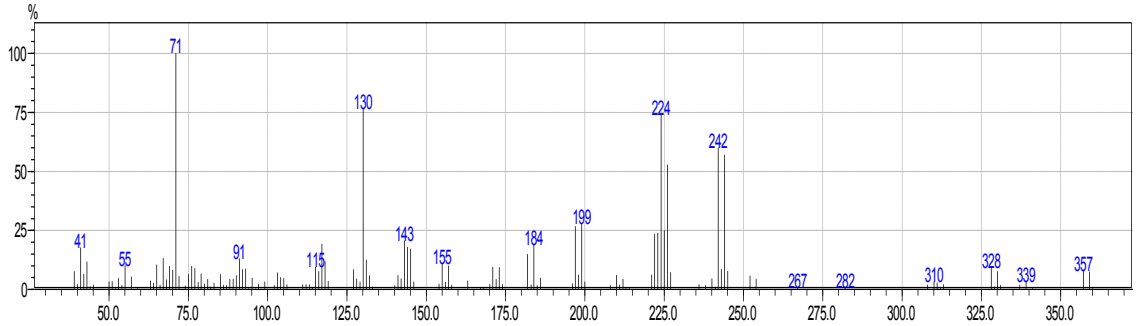
Compound T1B



T1B

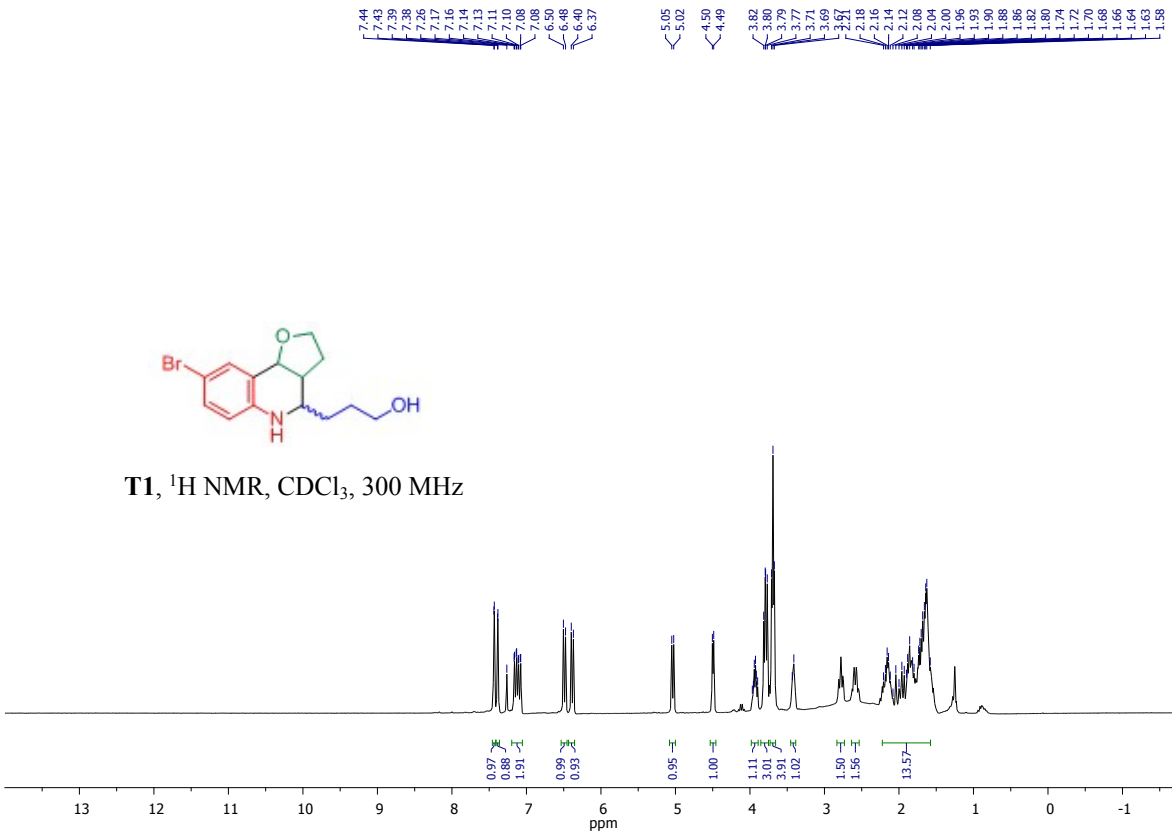


Relative Intensity (%)/*m/z*

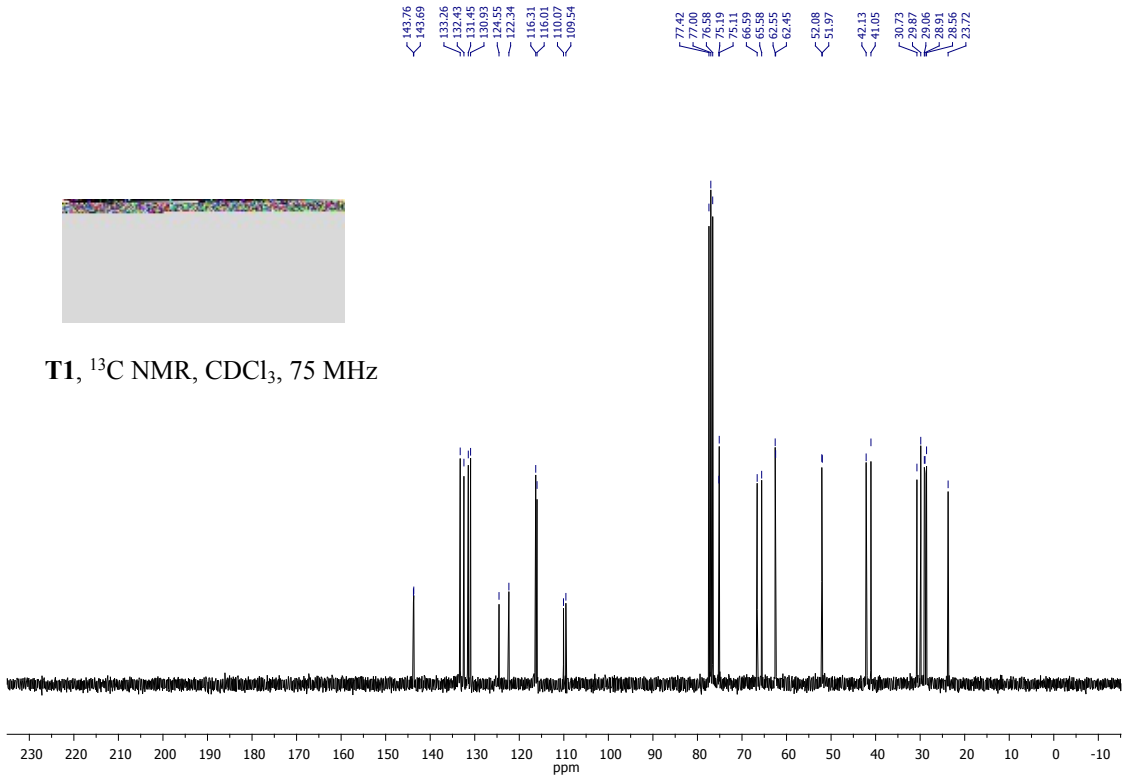


Relative Intensity (%)/*m/z*

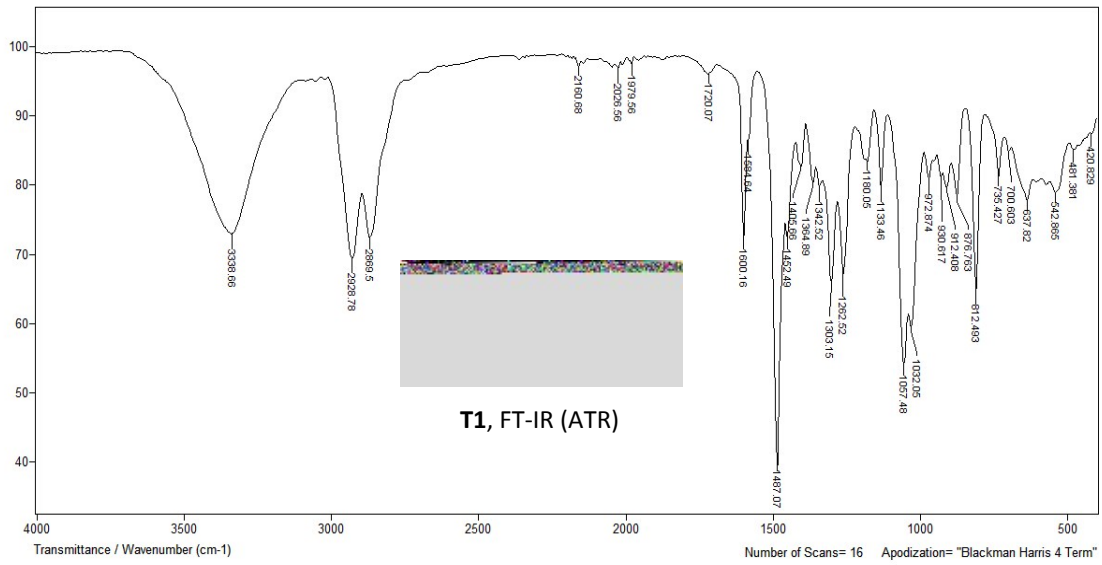
Compound T1



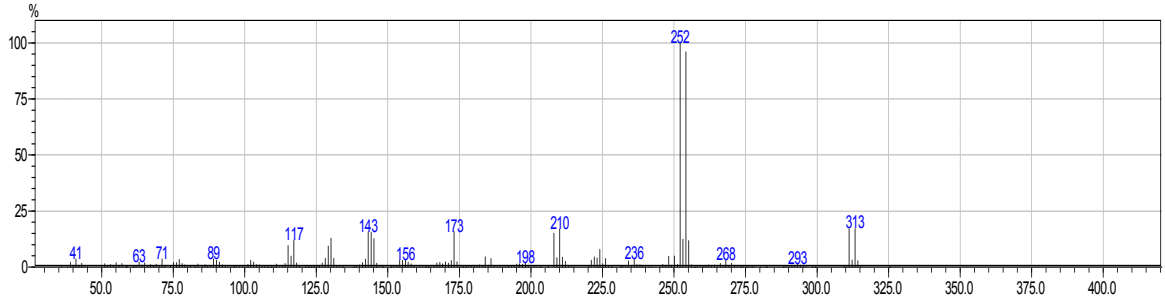
T1, ^{1}H NMR, $CDCl_3$, 300 MHz



T1, ^{13}C NMR, $CDCl_3$, 75 MHz

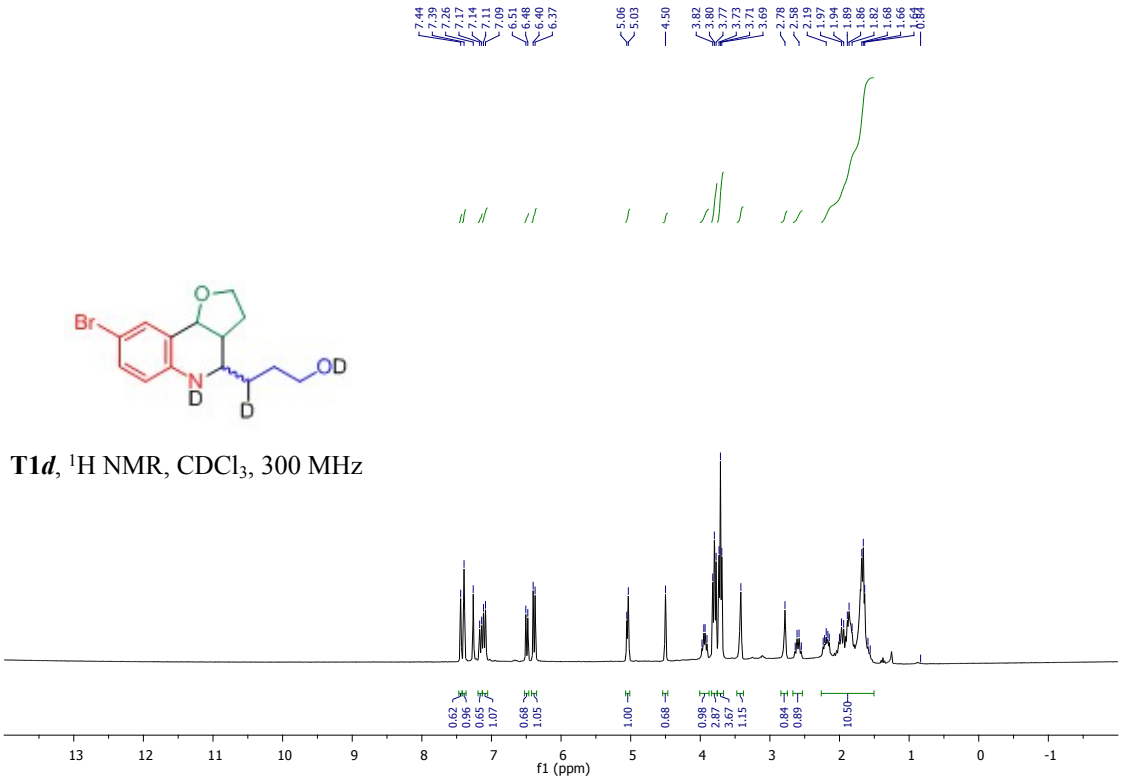


T1, FT-IR (ATR)

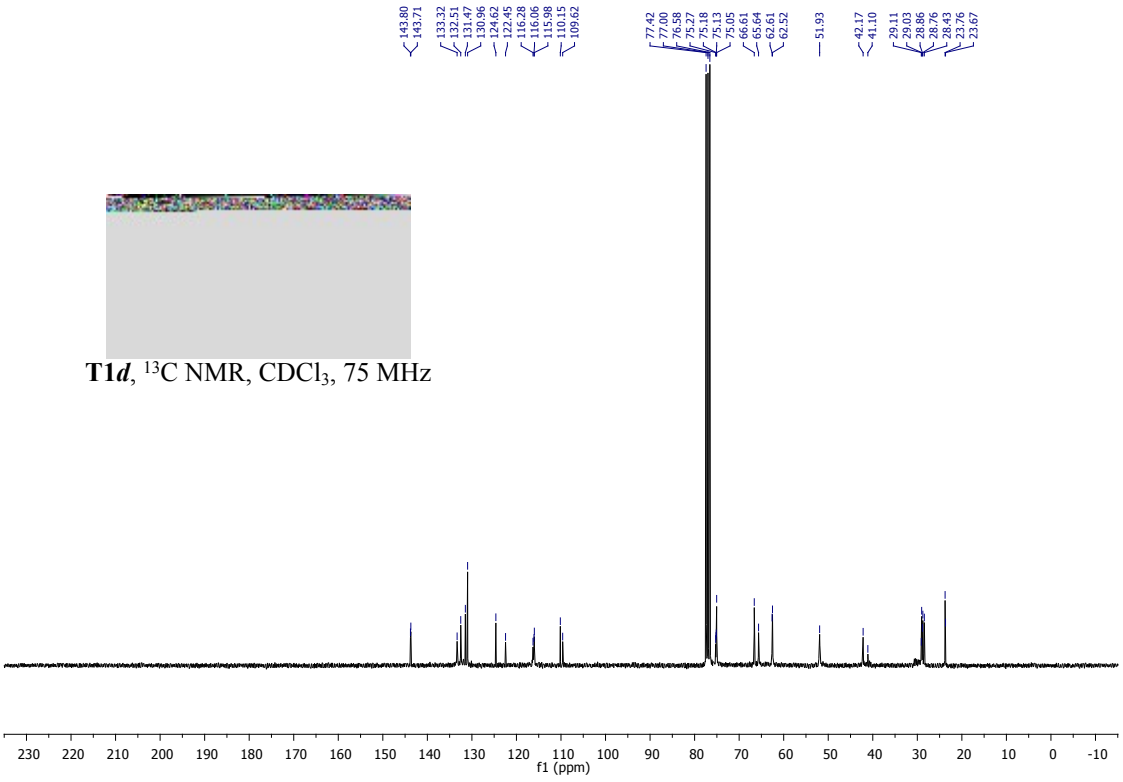


Relative Intensity (%)/*m/z*

Compound T1*d*

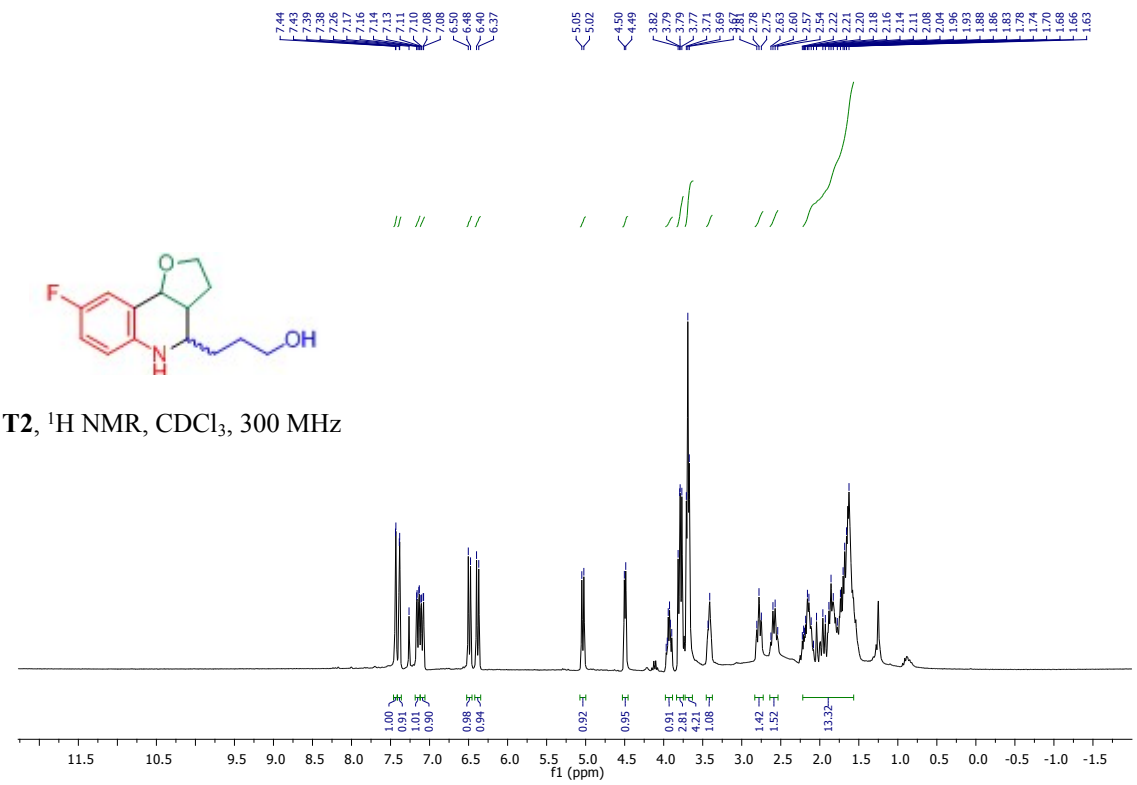


T1*d*, ^{1}H NMR, $CDCl_3$, 300 MHz

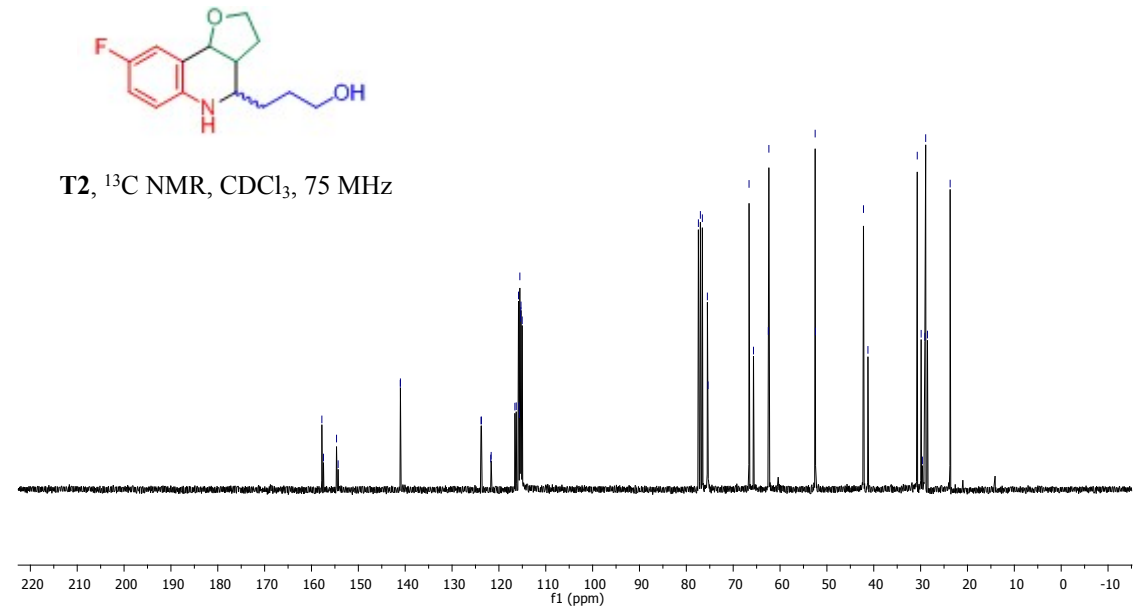


T1*d*, ^{13}C NMR, $CDCl_3$, 75 MHz

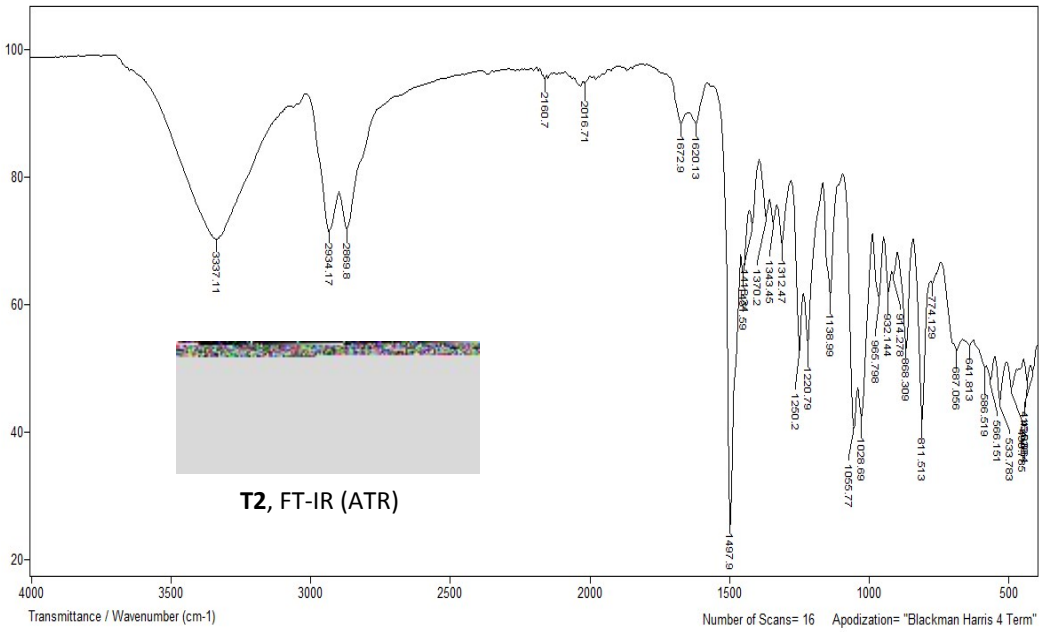
Compound T2



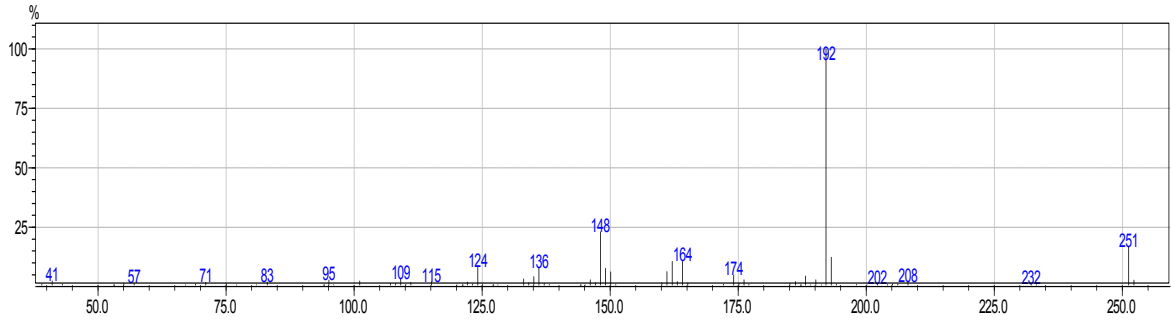
T2, ^{1}H NMR, $CDCl_3$, 300 MHz



T2, ^{13}C NMR, $CDCl_3$, 75 MHz

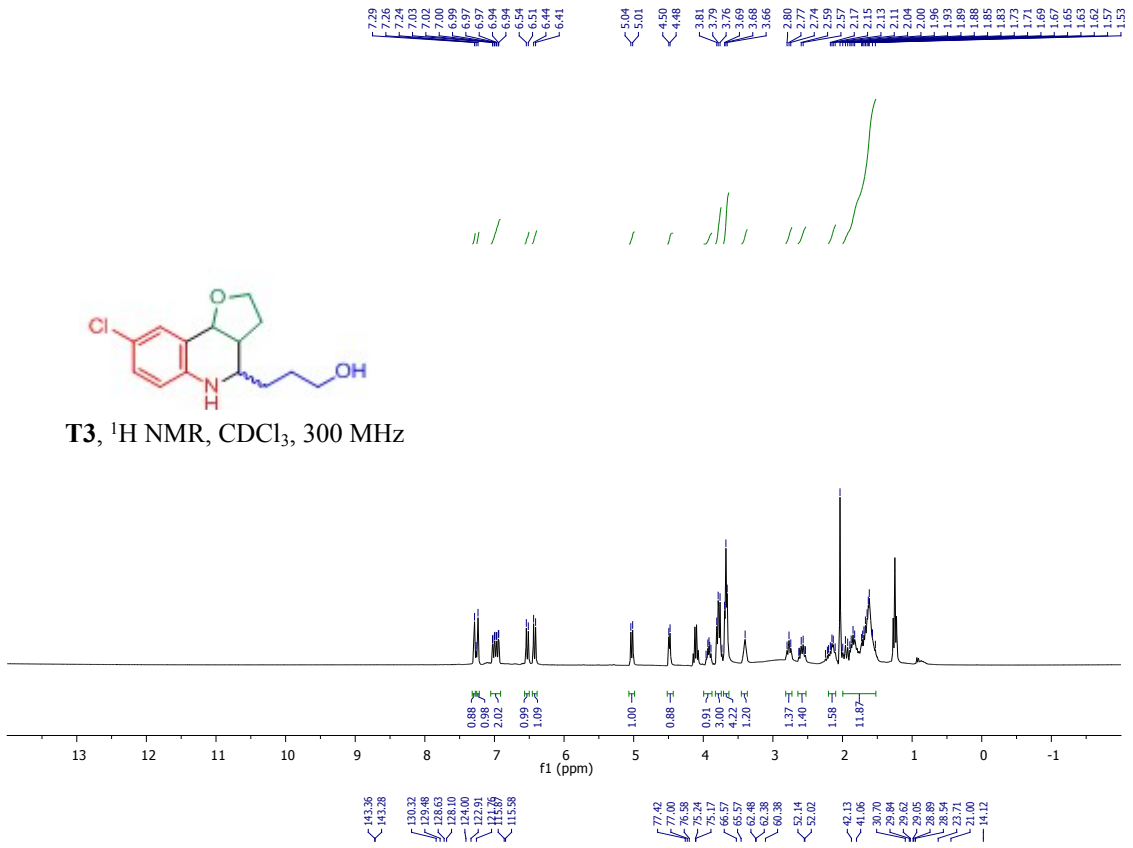


T2, FT-IR (ATR)

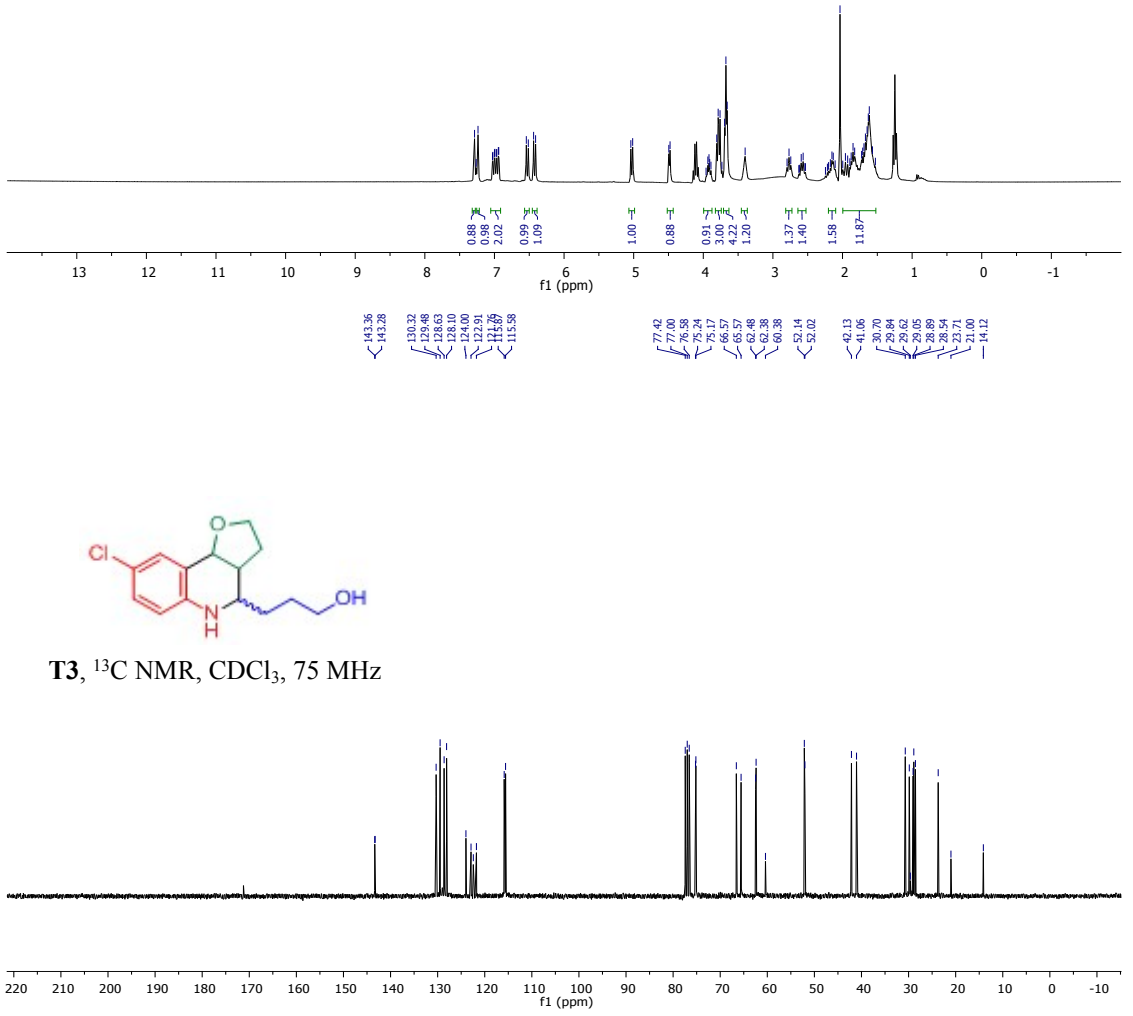


Relative Intensity (%)/*m/z*

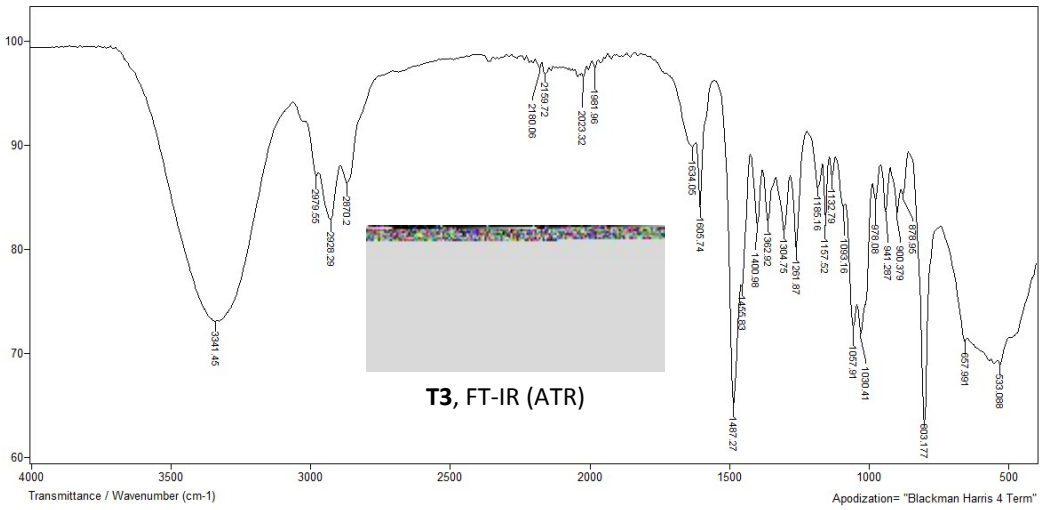
Compound T3



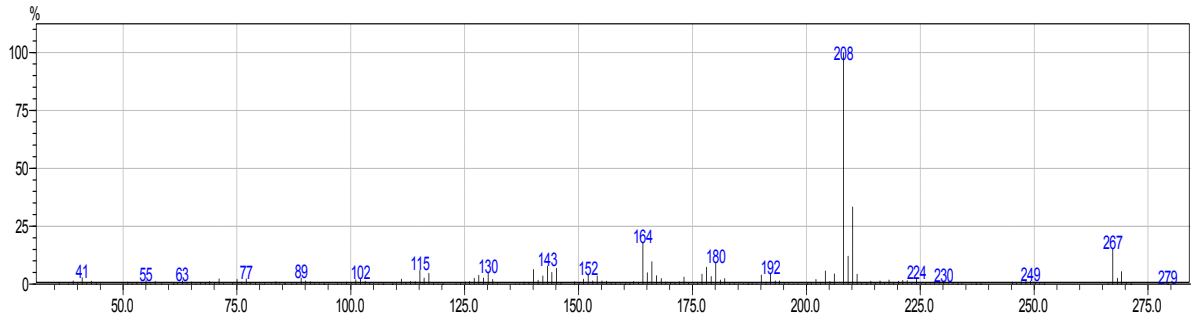
T3, ^{1}H NMR, $CDCl_3$, 300 MHz



T3, ^{13}C NMR, $CDCl_3$, 75 MHz

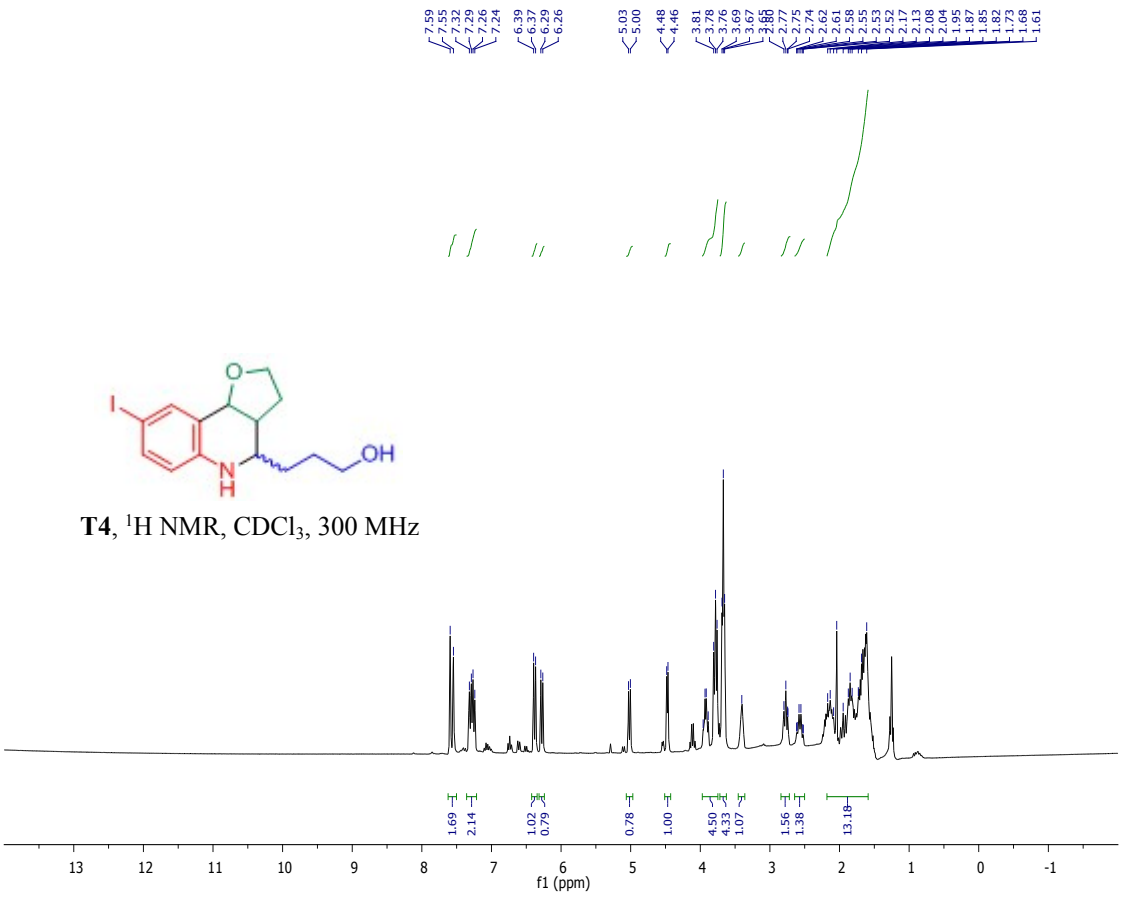


T3, FT-IR (ATR)

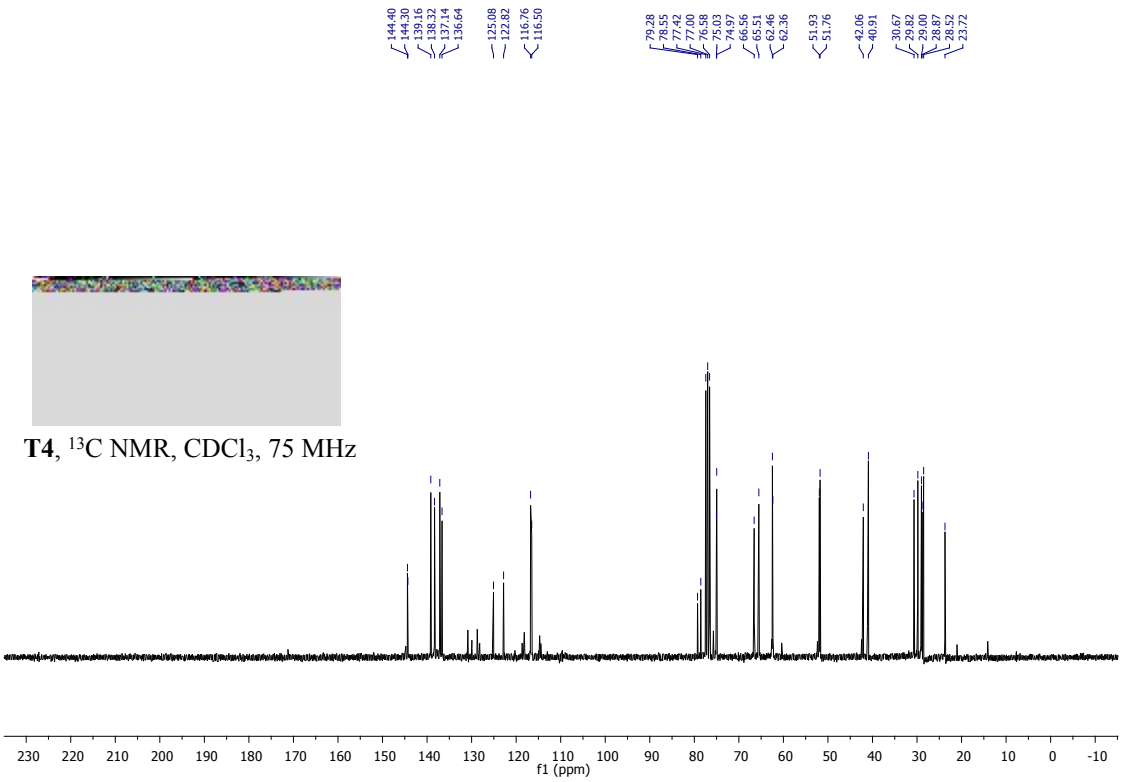


Relative Intensity (%)/*m/z*

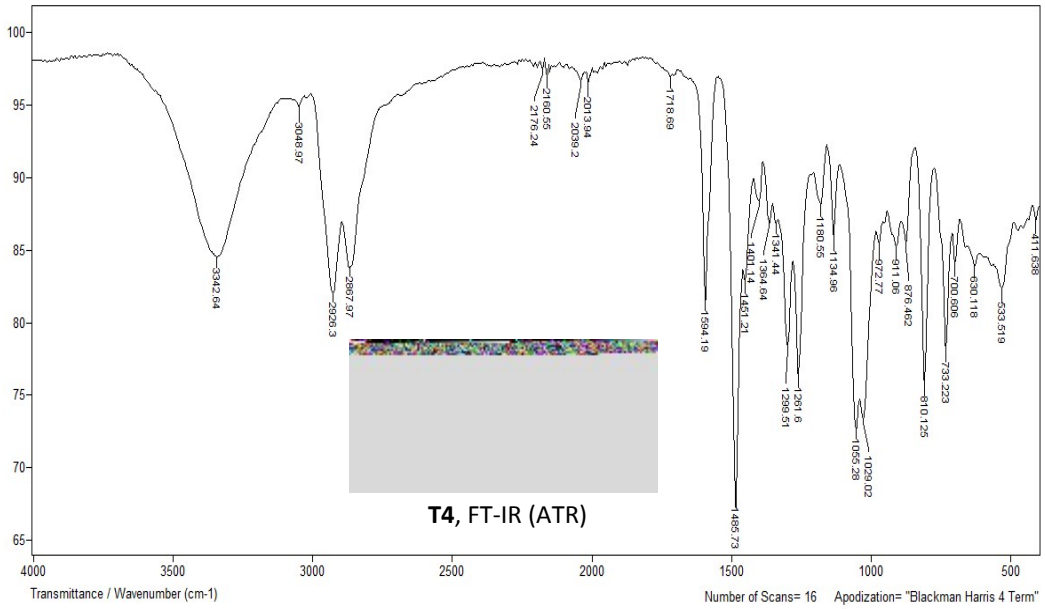
Compound T4



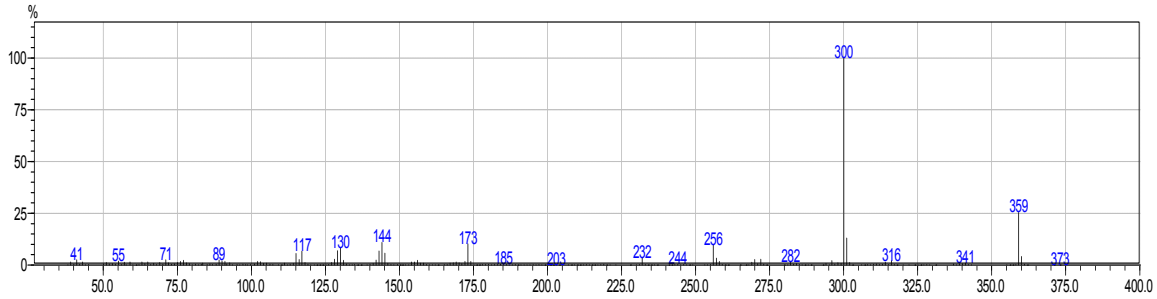
T4, ^{1}H NMR, $CDCl_3$, 300 MHz



T4, ^{13}C NMR, $CDCl_3$, 75 MHz



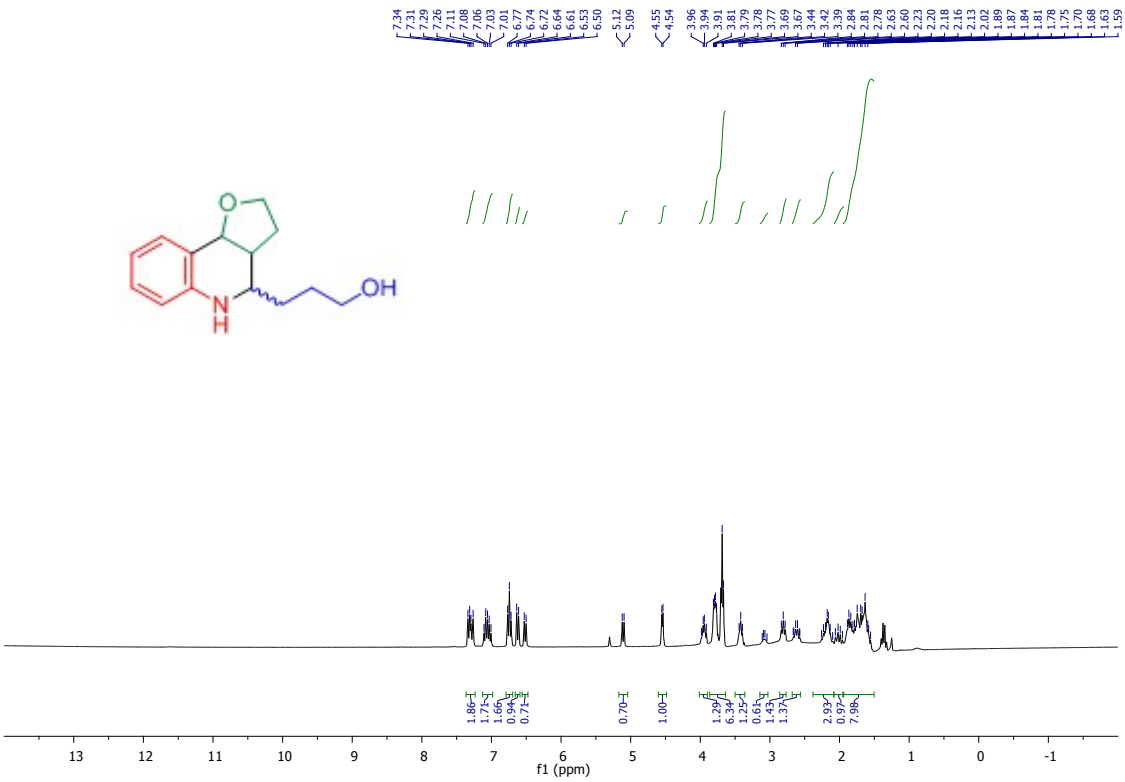
T4, FT-IR (ATR)

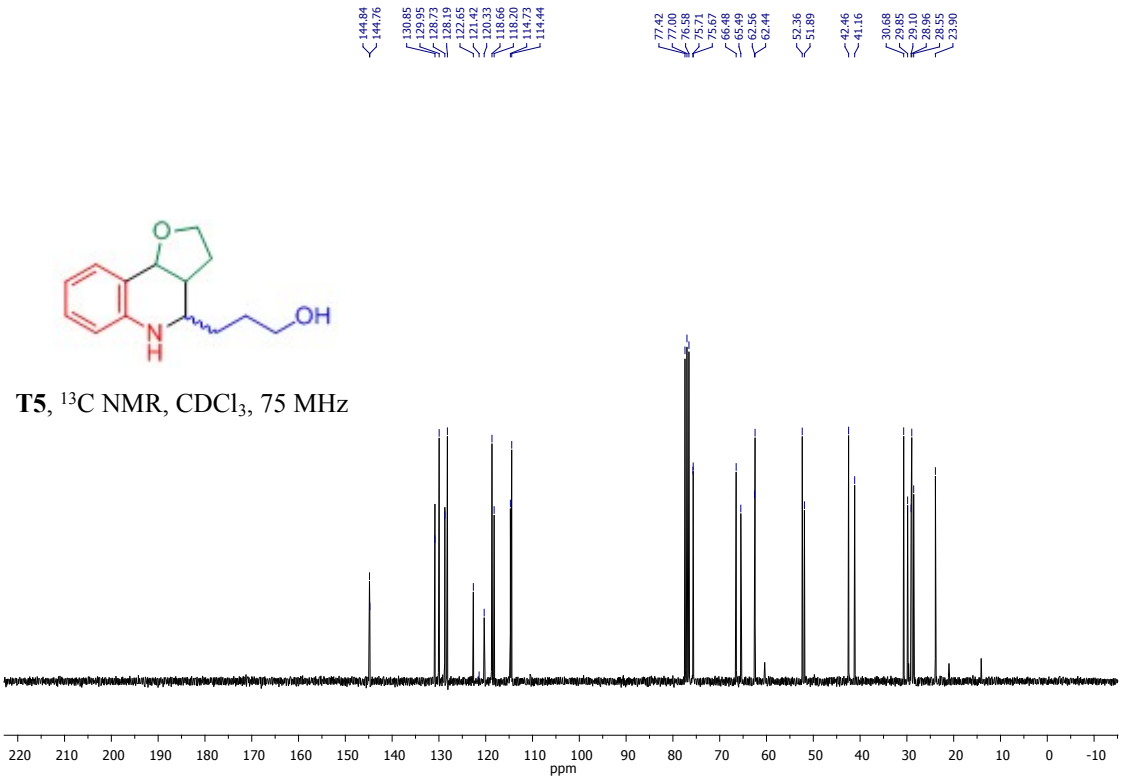


Relative Intensity (%)/*m/z*

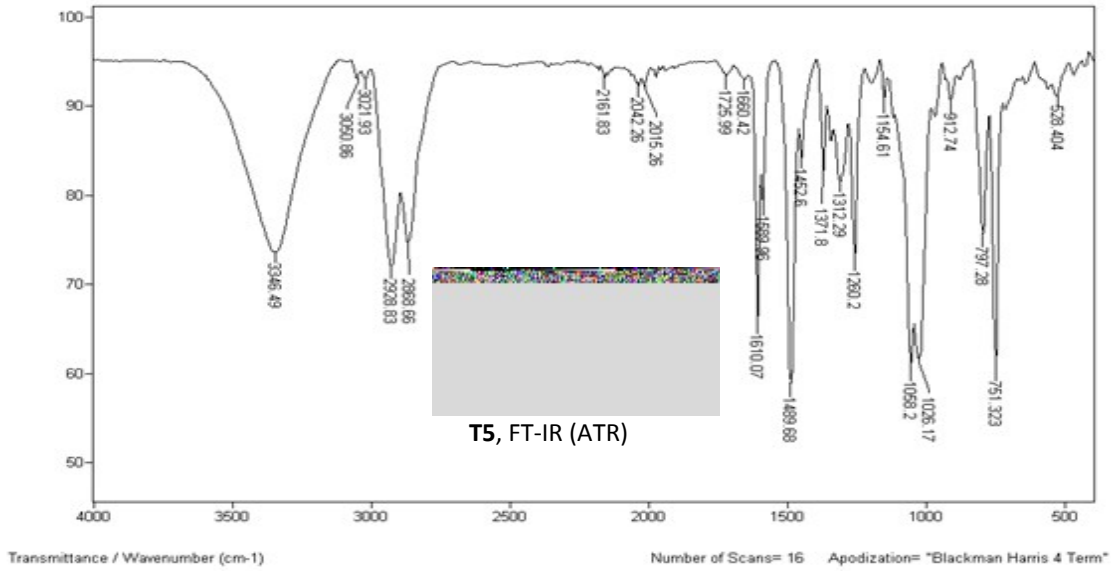
Compound T5

T5, ^{1}H NMR, $CDCl_3$, 300 MHz

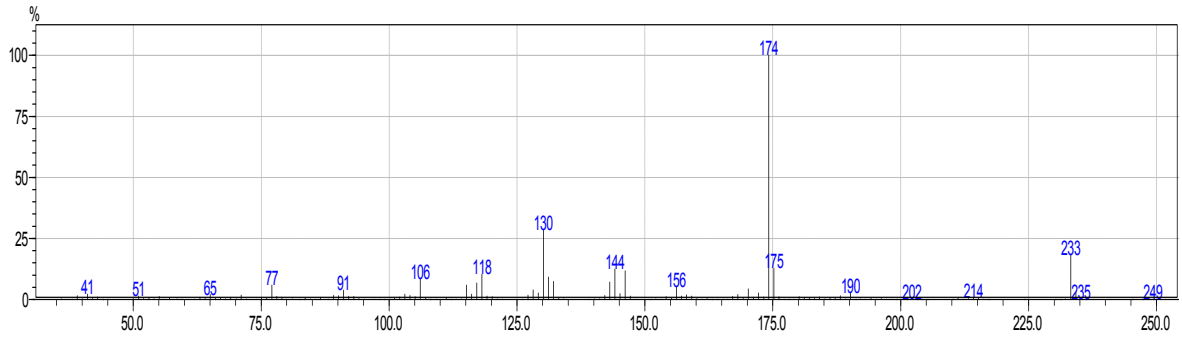




T5, ^{13}C NMR, $CDCl_3$, 75 MHz

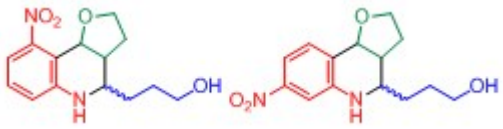


T5, FT-IR (ATR)

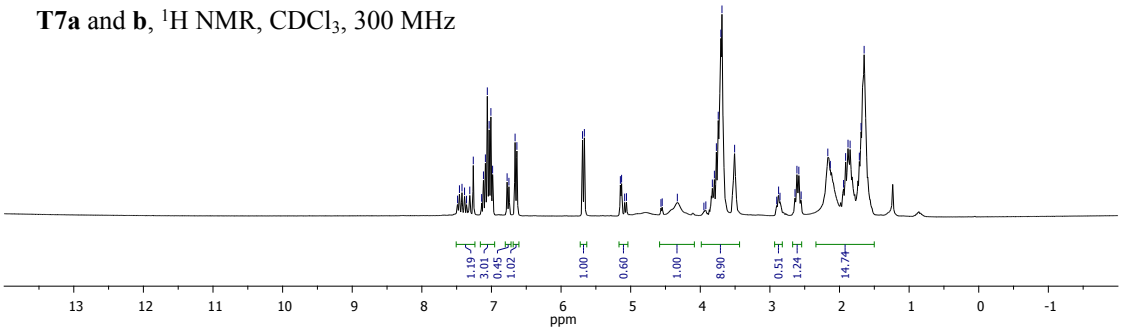


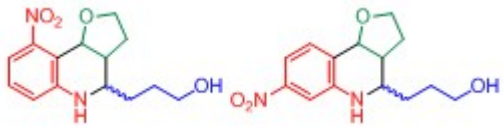
Relative Intensity (%)/*m/z*

Compound T7

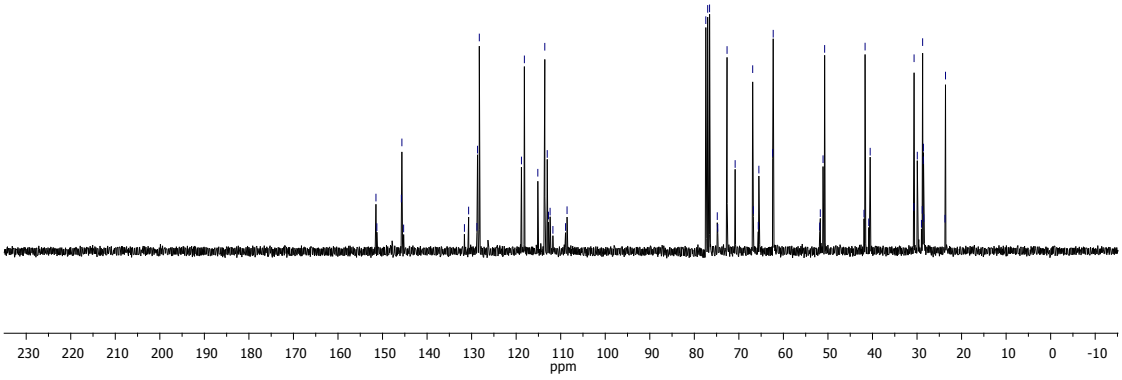


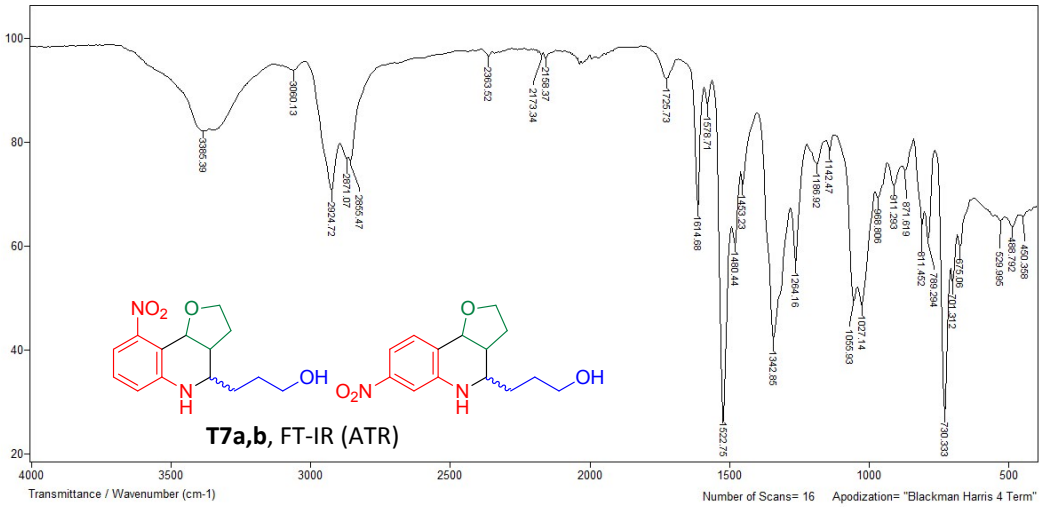
T7a and **b**, ^{1}H NMR, $CDCl_3$, 300 MHz

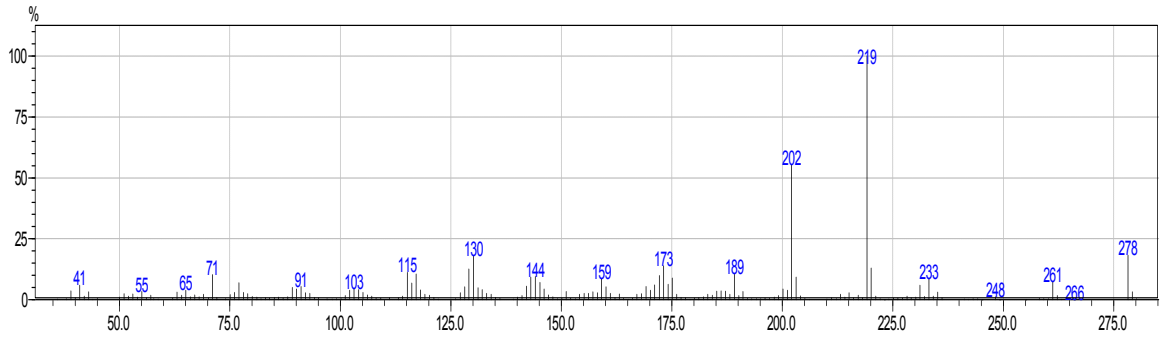




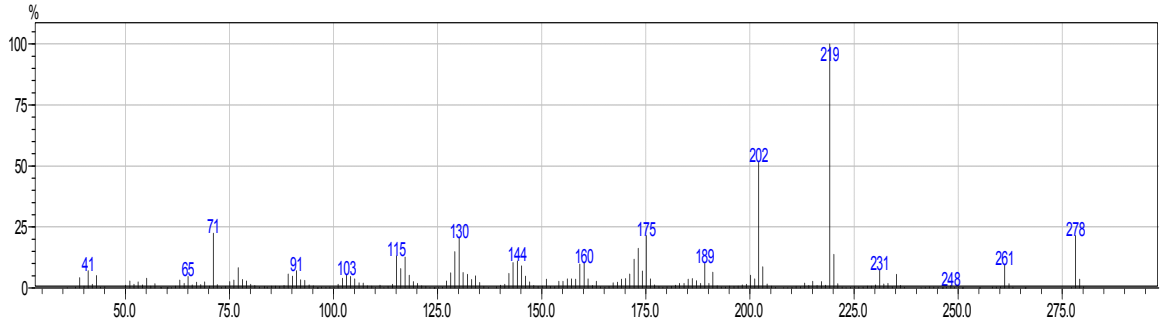
T7a and **b**, ^{13}C NMR, $CDCl_3$, 75 MHz





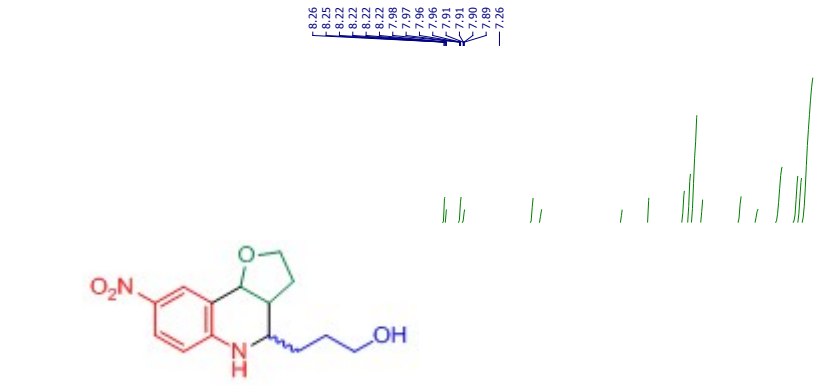


Relative Intensity (%)/*m/z*

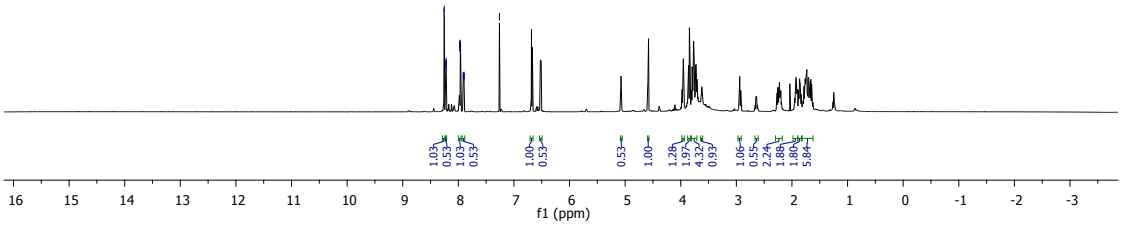


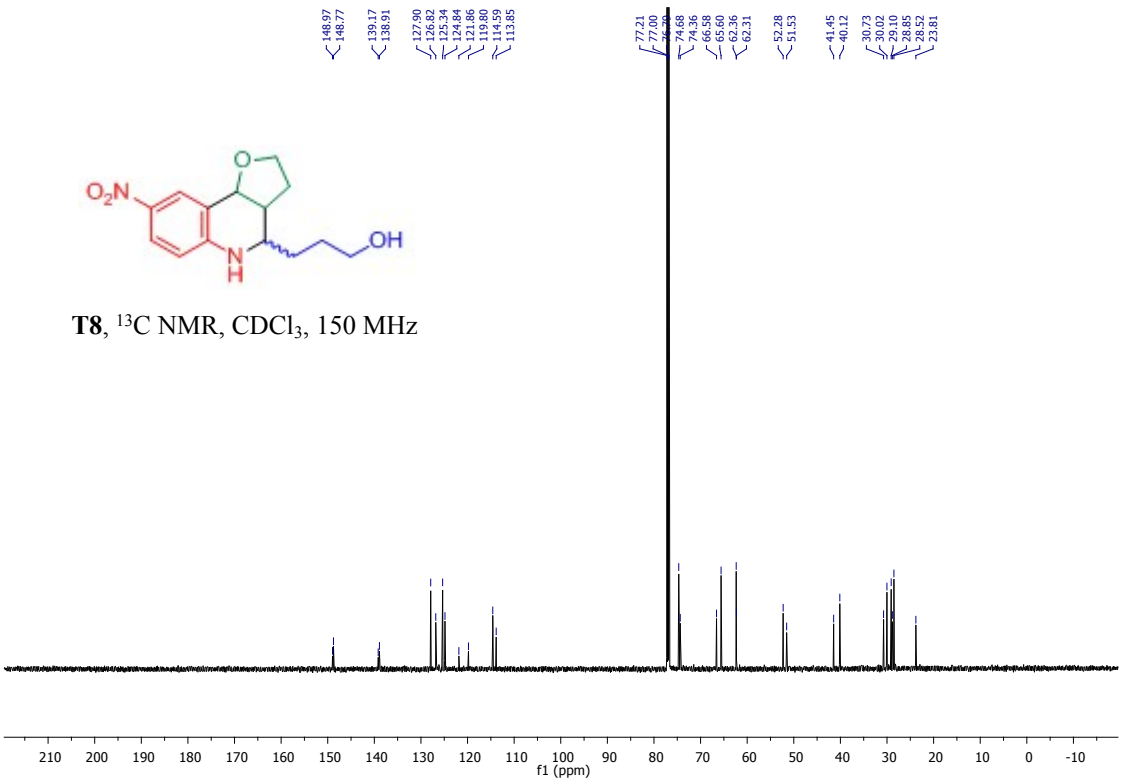
Relative Intensity (%)/*m/z*

Compound T8

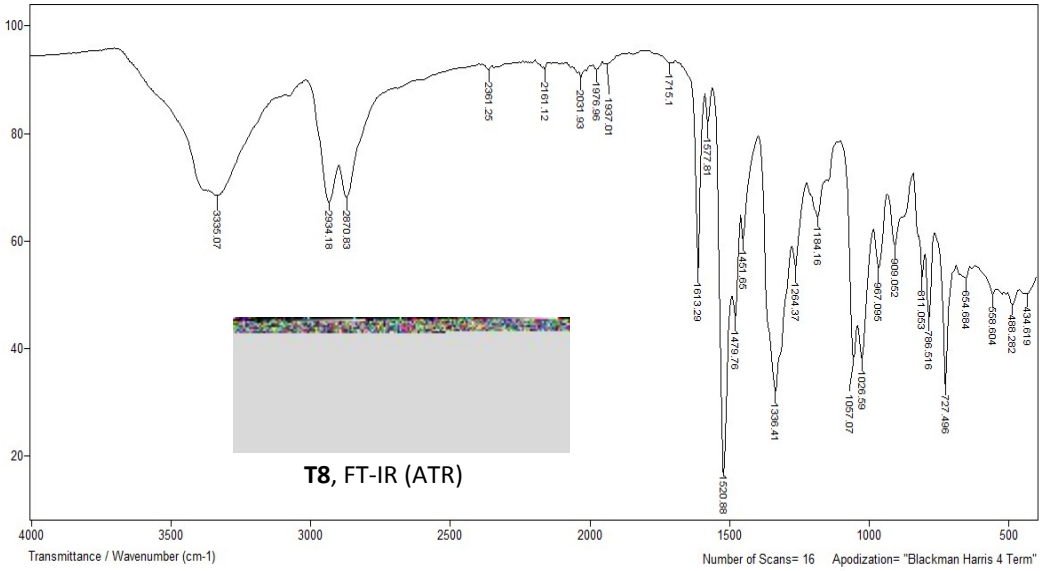


T8, ^{1}H NMR, $CDCl_3$, 600 MHz

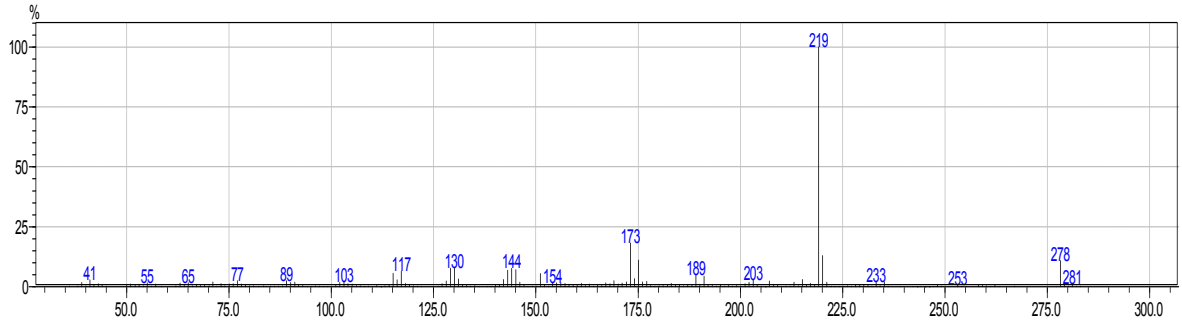




T8, ^{13}C NMR, $CDCl_3$, 150 MHz

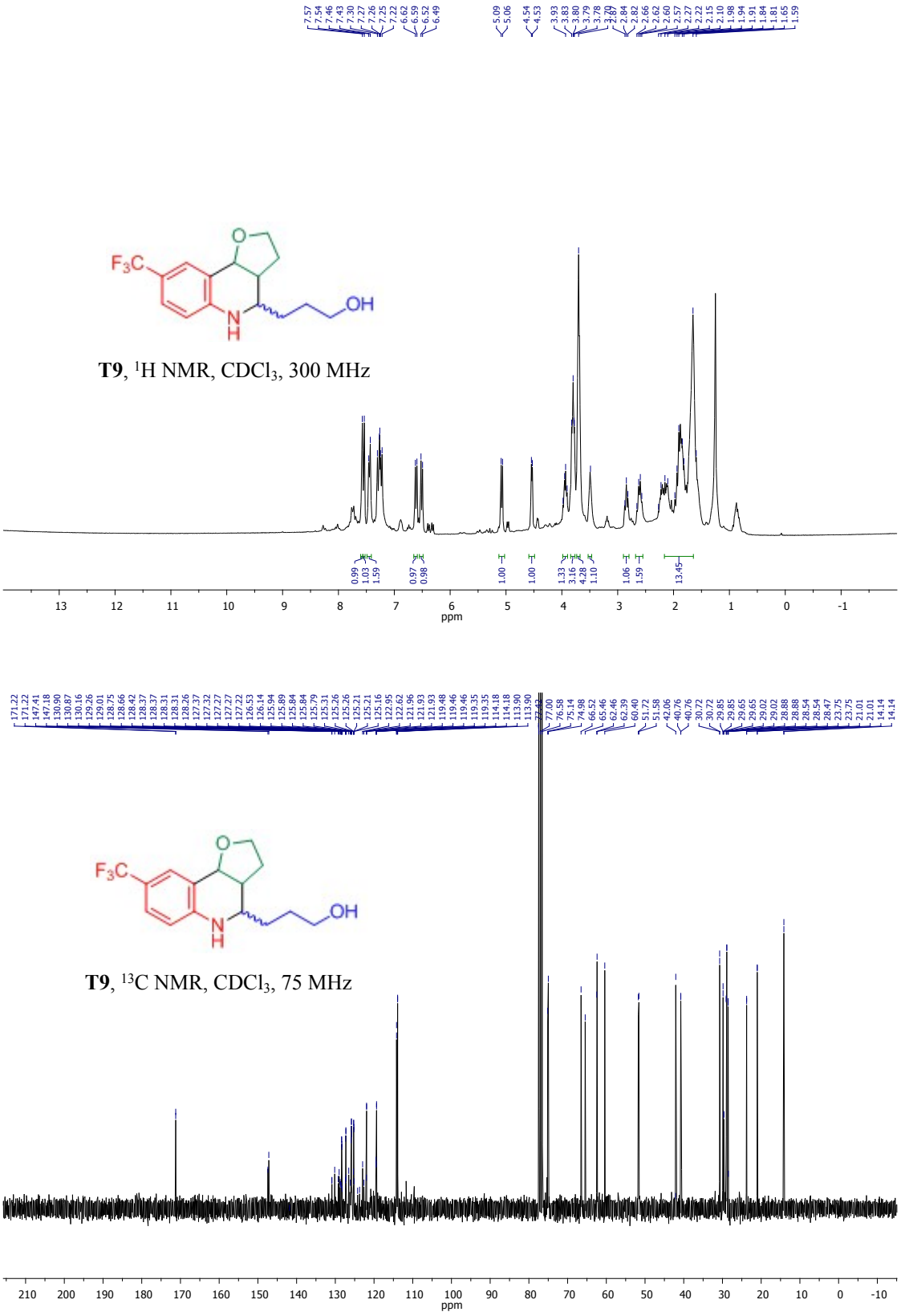


T8, FT-IR (ATR)



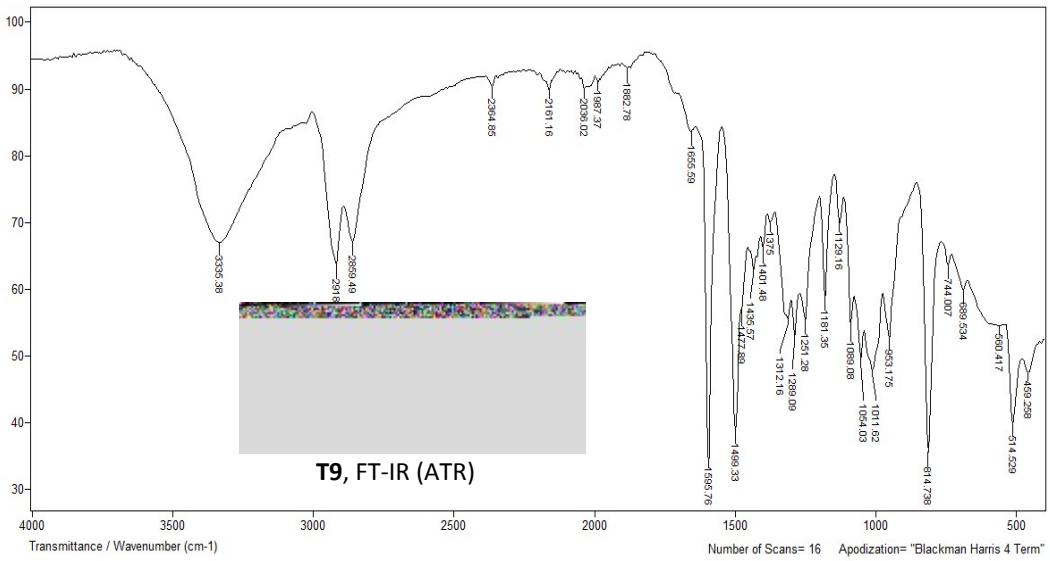
Relative Intensity (%)/*m/z*

Compound T9

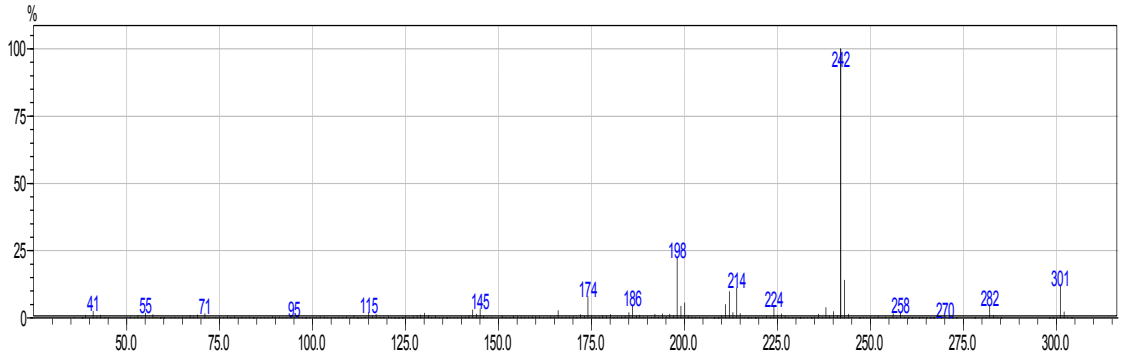


T9, ^{1}H NMR, $CDCl_3$, 300 MHz

T9, ^{13}C NMR, $CDCl_3$, 75 MHz

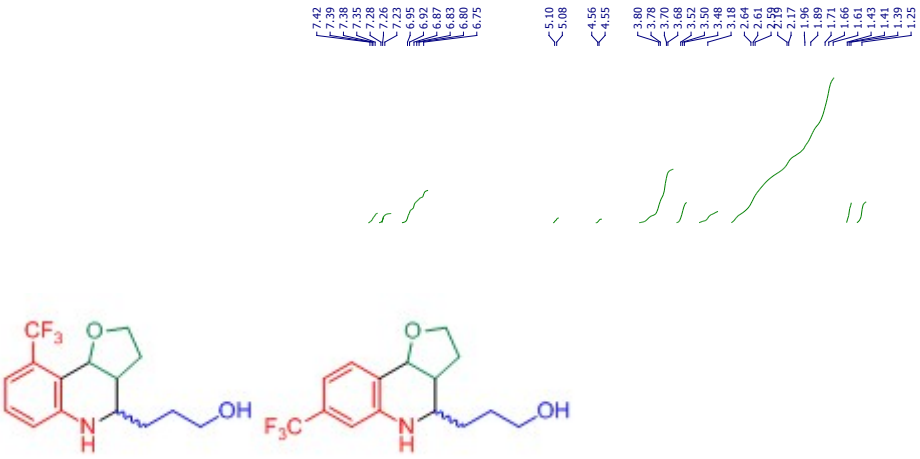


T9, FT-IR (ATR)

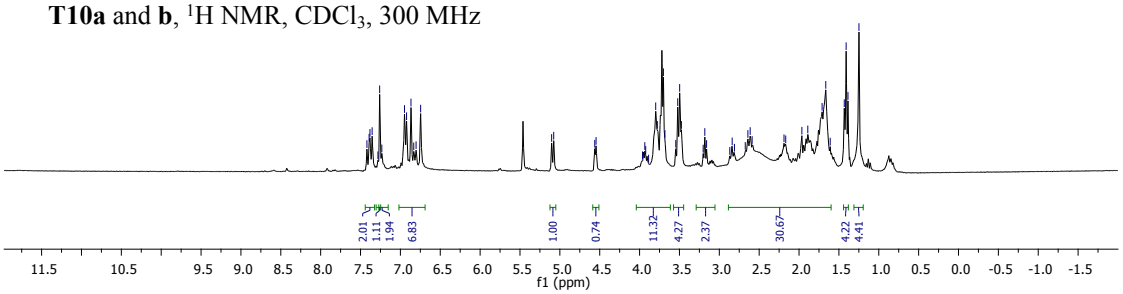


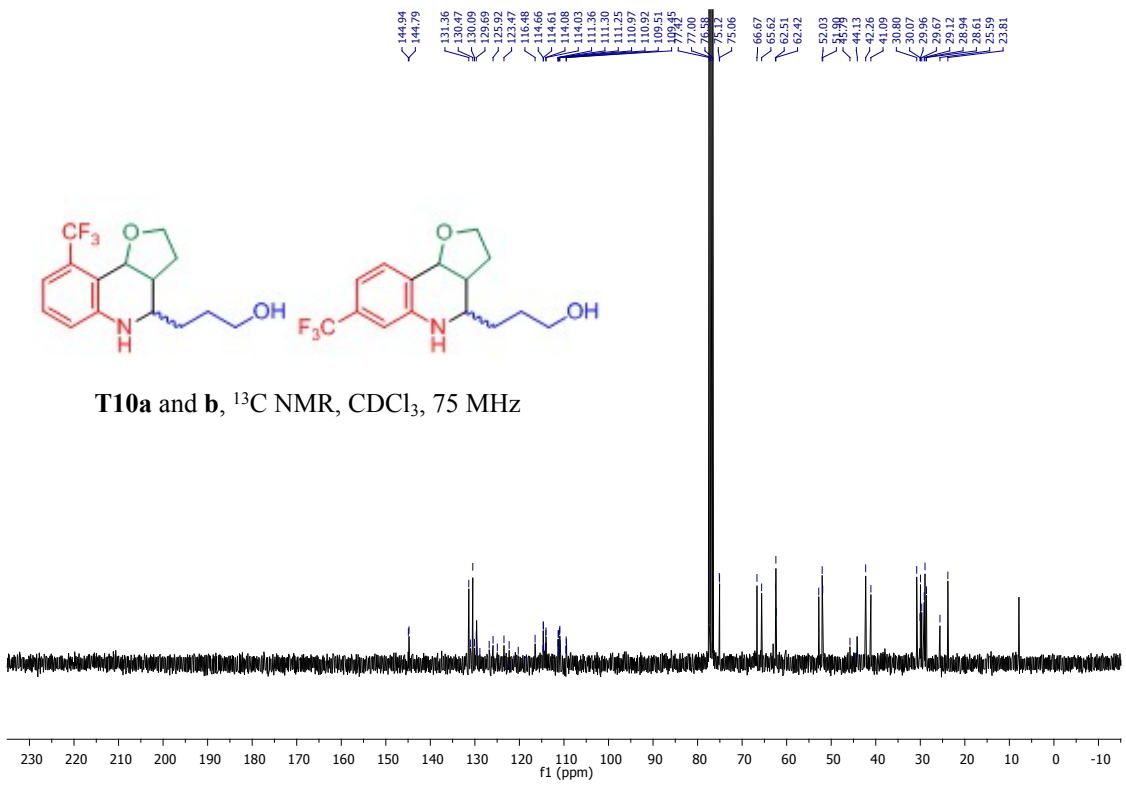
Relative Intensity (%)/*m/z*

Compound T10

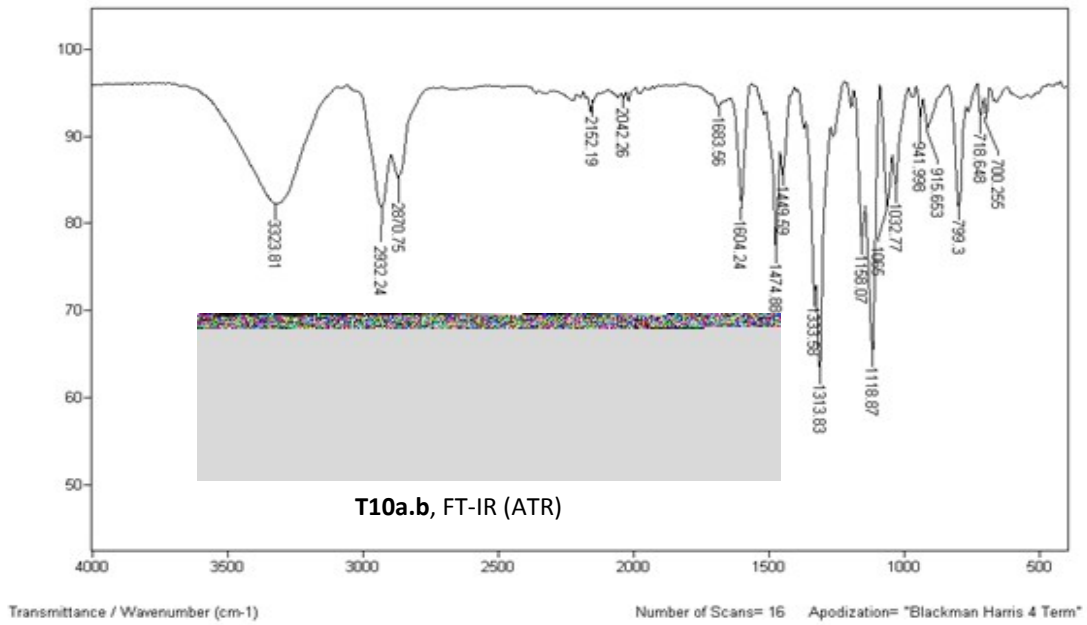


T10a and **b**, ^{1}H NMR, $CDCl_3$, 300 MHz

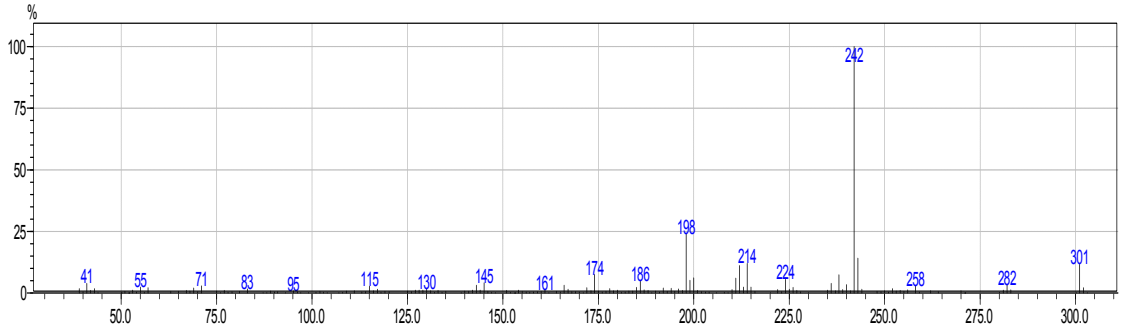




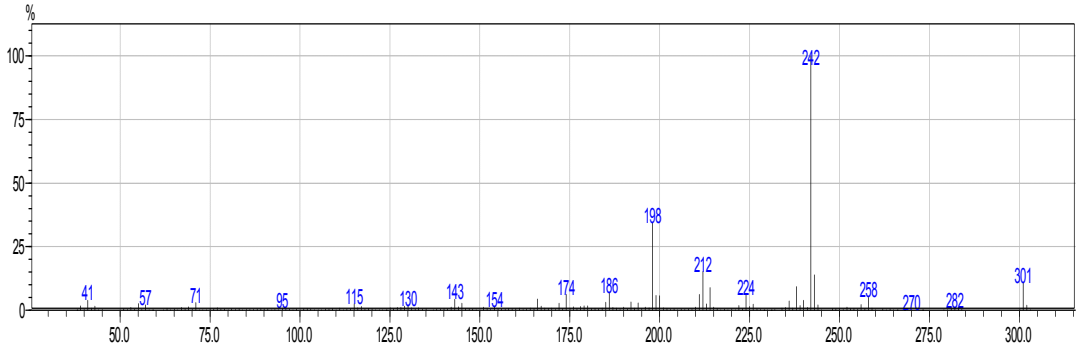
T10a and **b**, ^{13}C NMR, $CDCl_3$, 75 MHz



T10a.b, FT-IR (ATR)

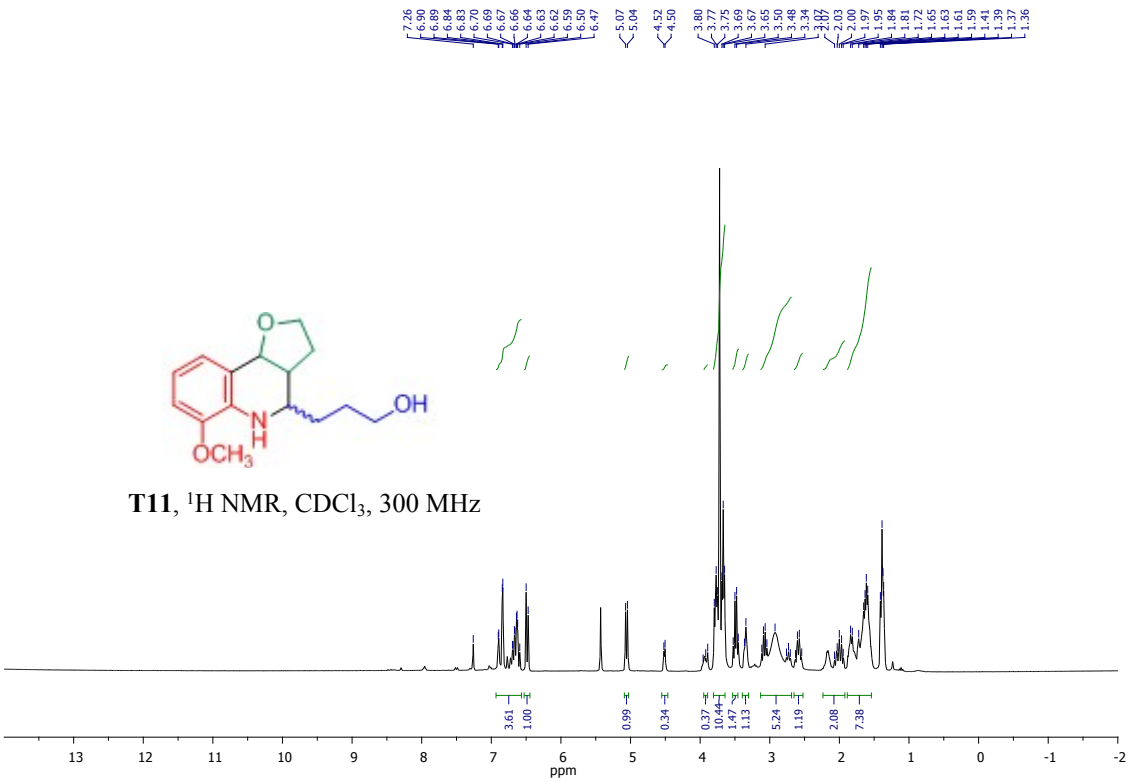


Relative Intensity (%)/*m/z*

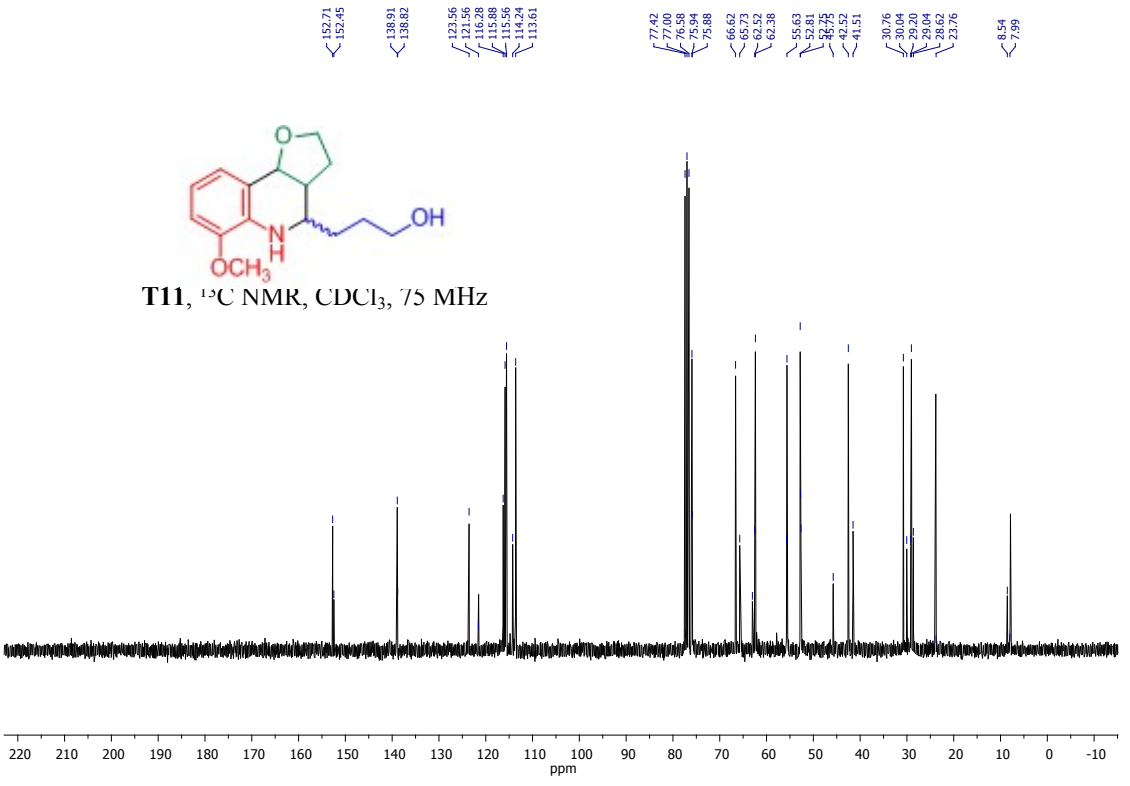


Relative Intensity (%)/*m/z*

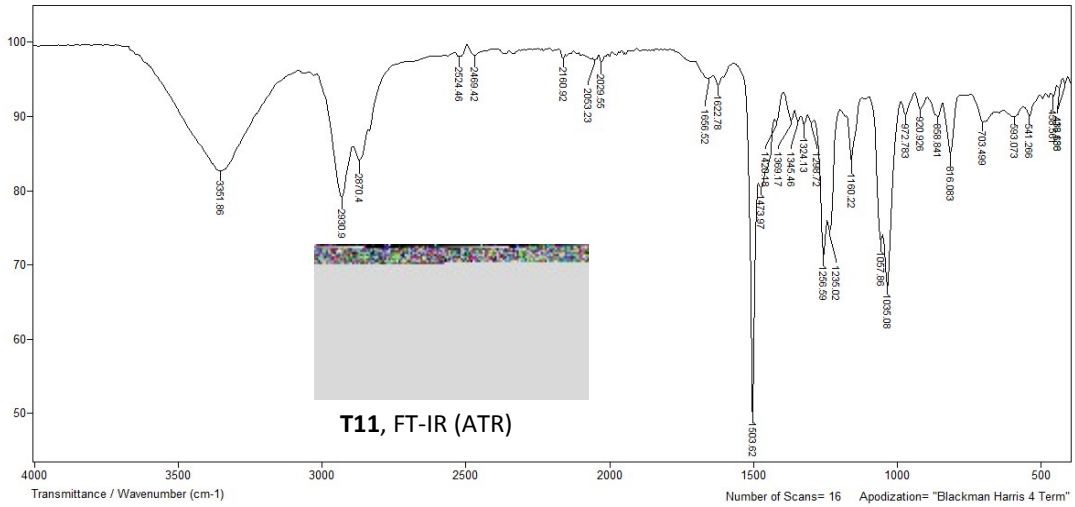
Compound T11



T11, ^{1}H NMR, $CDCl_3$, 300 MHz



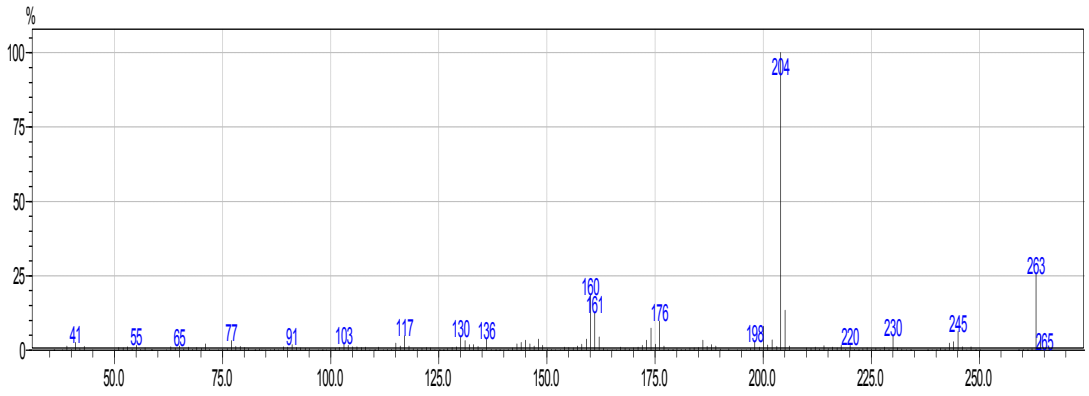
T11, ^{13}C NMR, $CDCl_3$, 75 MHz



T11, FT-IR (ATR)

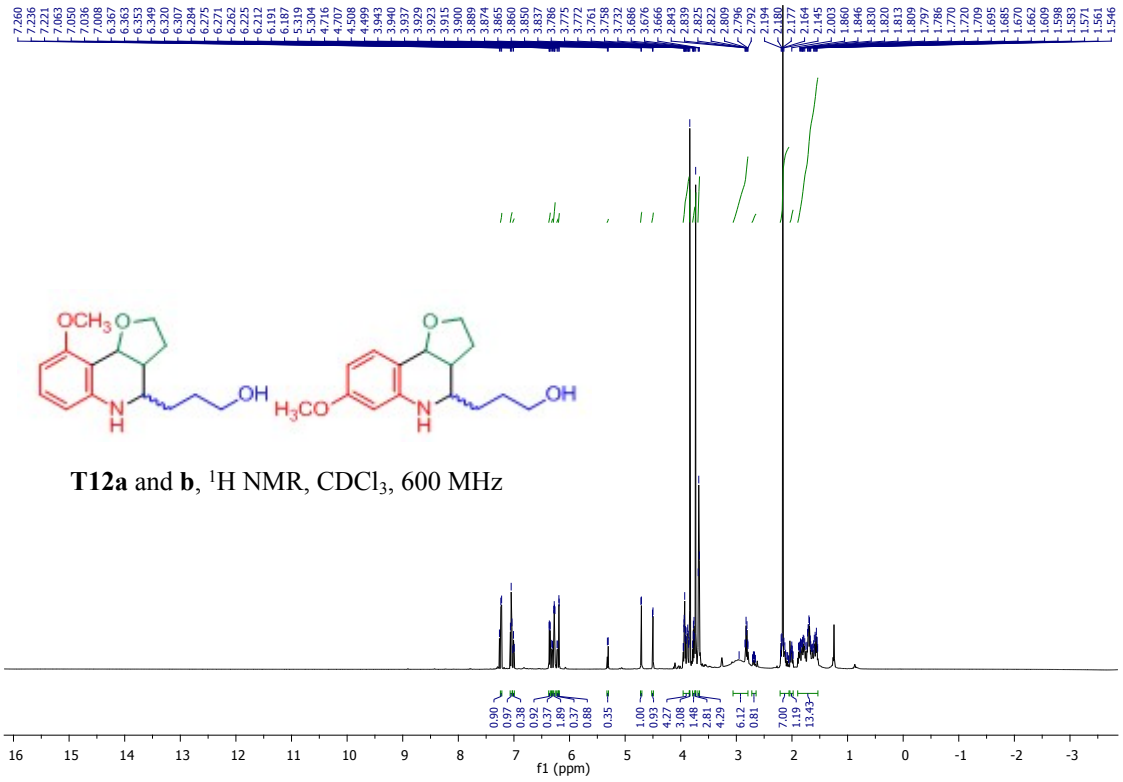
Transmittance / Wavenumber (cm-1)

Number of Scans= 16 Apodization= "Blackman Harris 4 Term"

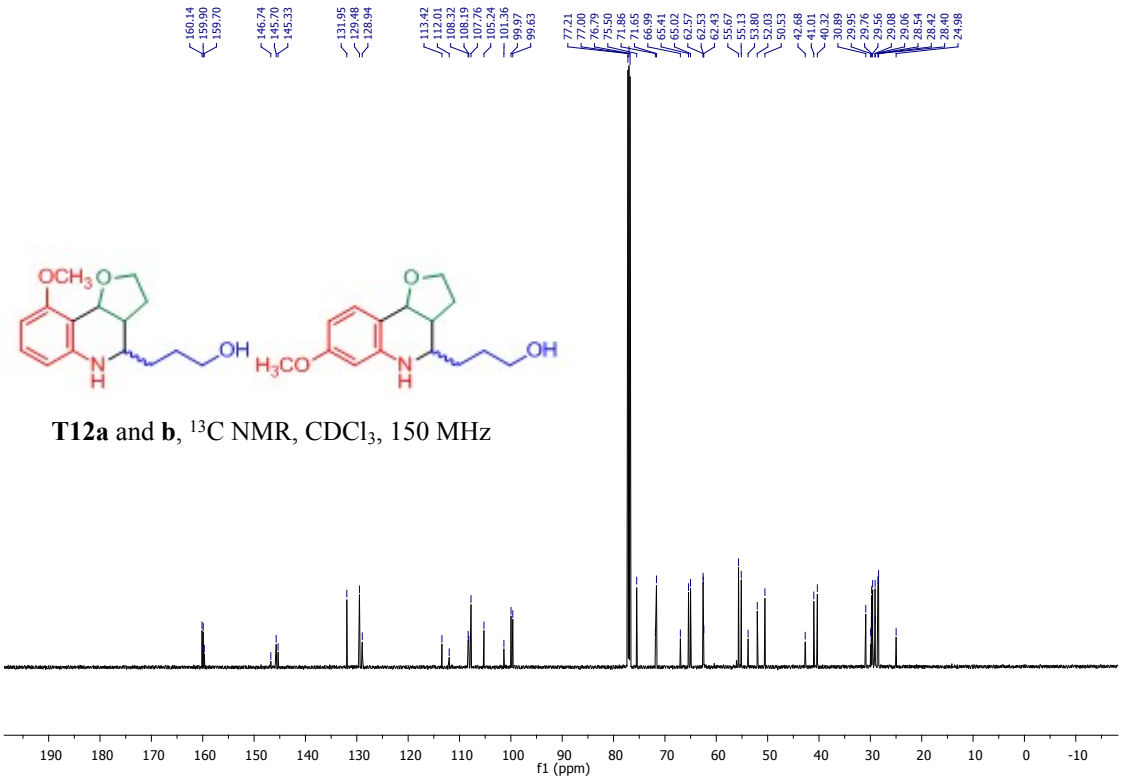


Relative Intensity (%)/*m/z*

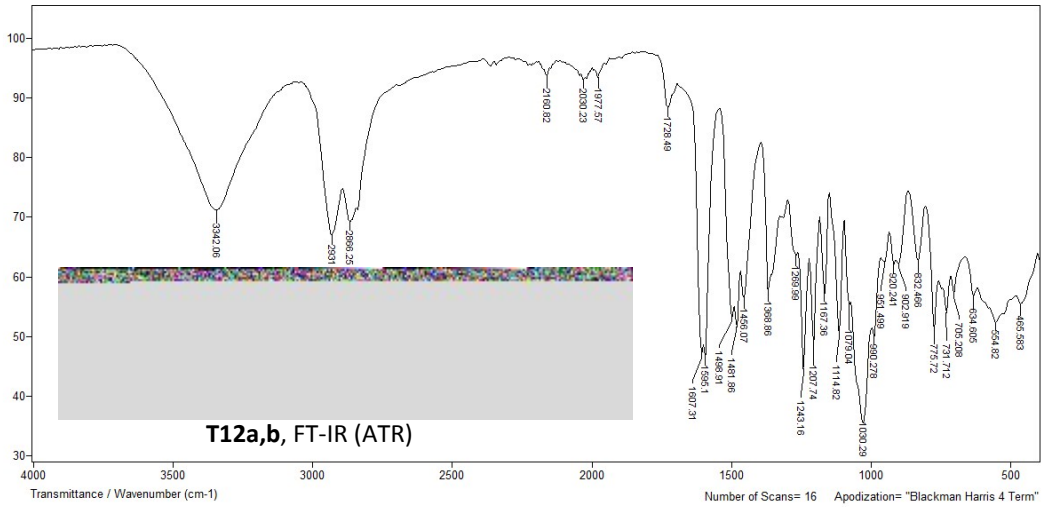
Compound T12

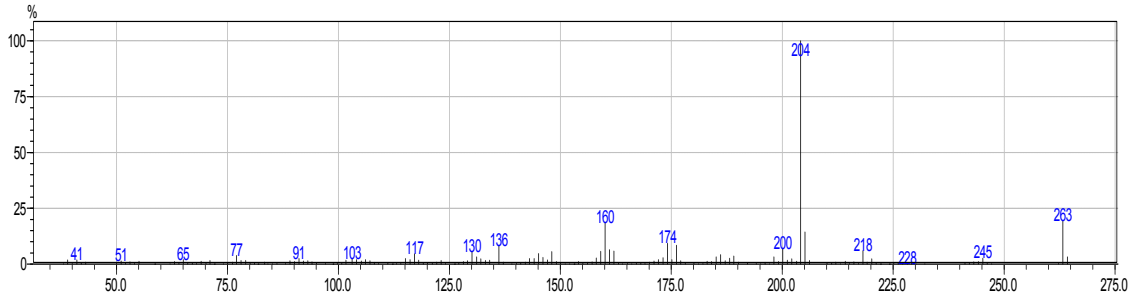


T12a and **b**, ^{1}H NMR, $CDCl_3$, 600 MHz

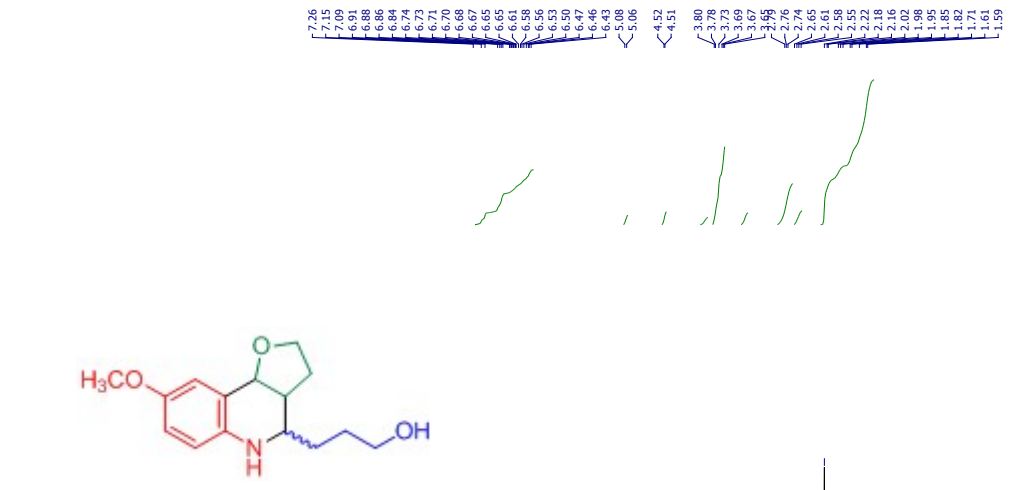


T12a and **b**, ^{13}C NMR, $CDCl_3$, 150 MHz

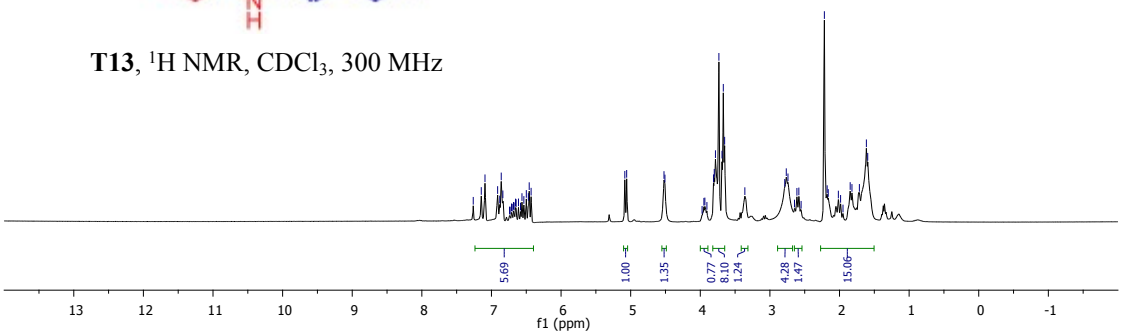

3342.06
2931
2869.25
2160.82
2030.23
1977.57
1728.49
1607.31
1595.1
1488.91
1481.86
1456.07
1368.86
1269.90
1243.16
1207.74
1167.36
1114.82
1079.04
1030.29
990.278
961.489
920.241
892.919
832.469
775.72
731.712
705.208
654.805
554.82
465.583
T12a,b, FT-IR (ATR)
Transmittance / Wavenumber (cm-1)
Number of Scans= 16
Apodization= "Blackman Harris 4 Term"

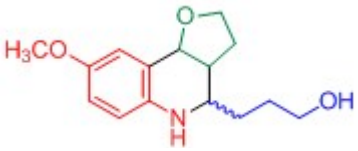

%
204
160
263
174
41
51
65
77
91
103
117
130
136
200
218
228
245
Relative Intensity (%)/m/z

Compound T13

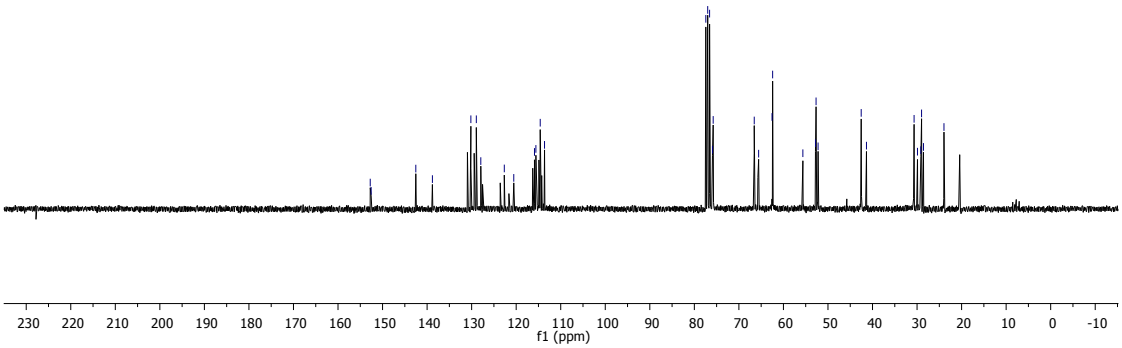


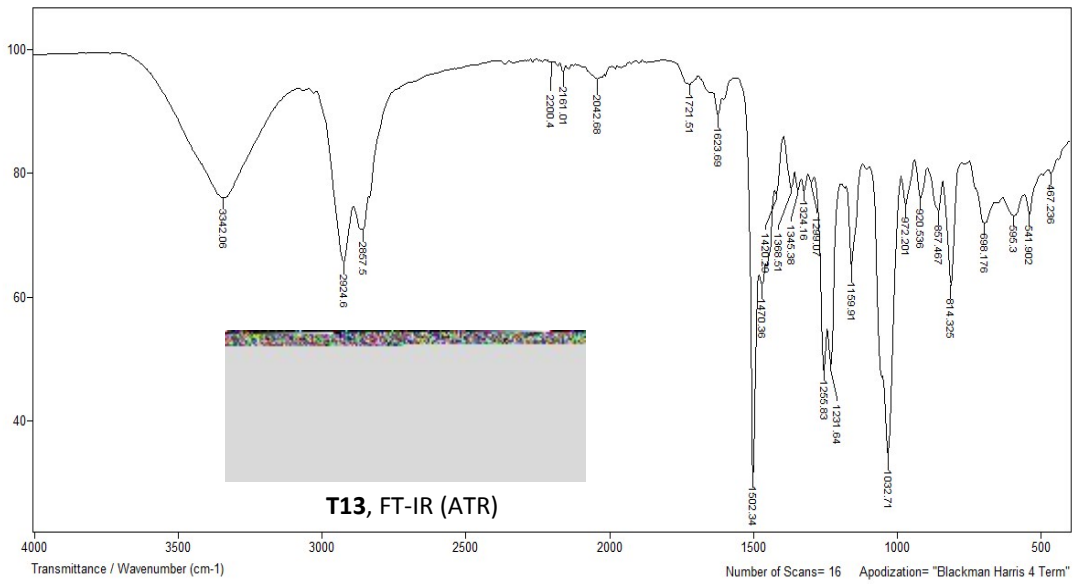
T13, ^{1}H NMR, $CDCl_3$, 300 MHz



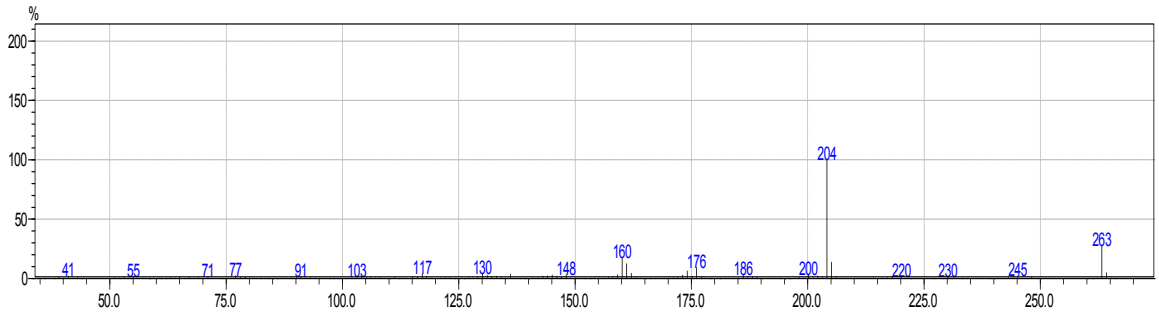


T14, ^{13}C NMR, $CDCl_3$, 75 MHz



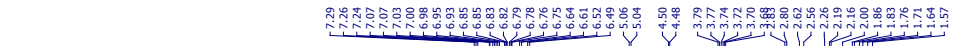


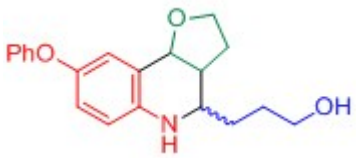
T13, FT-IR (ATR)



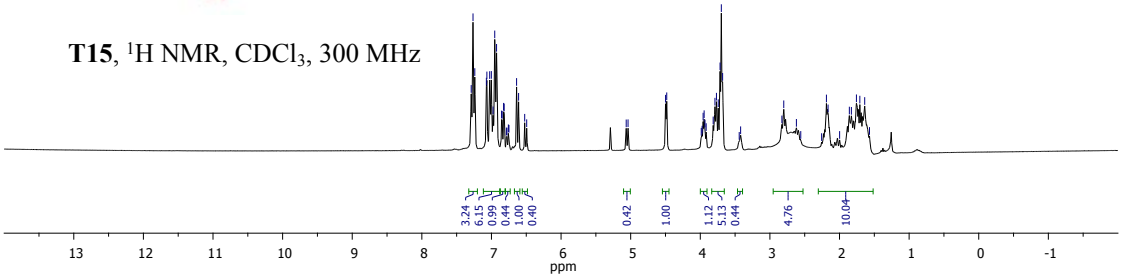
Relative Intensity (%)/*m/z*

Compound T15

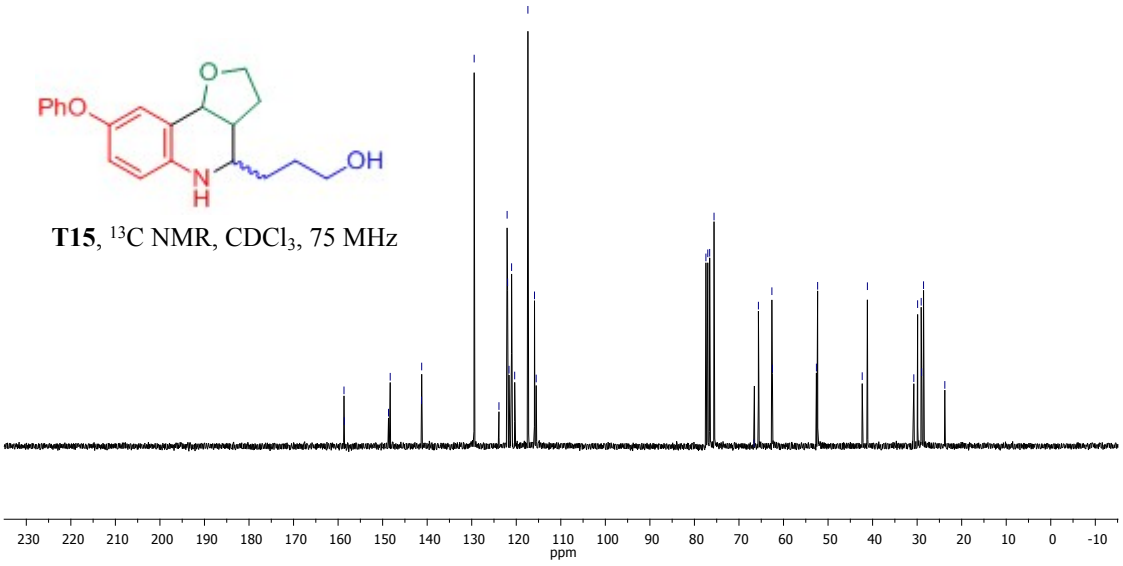


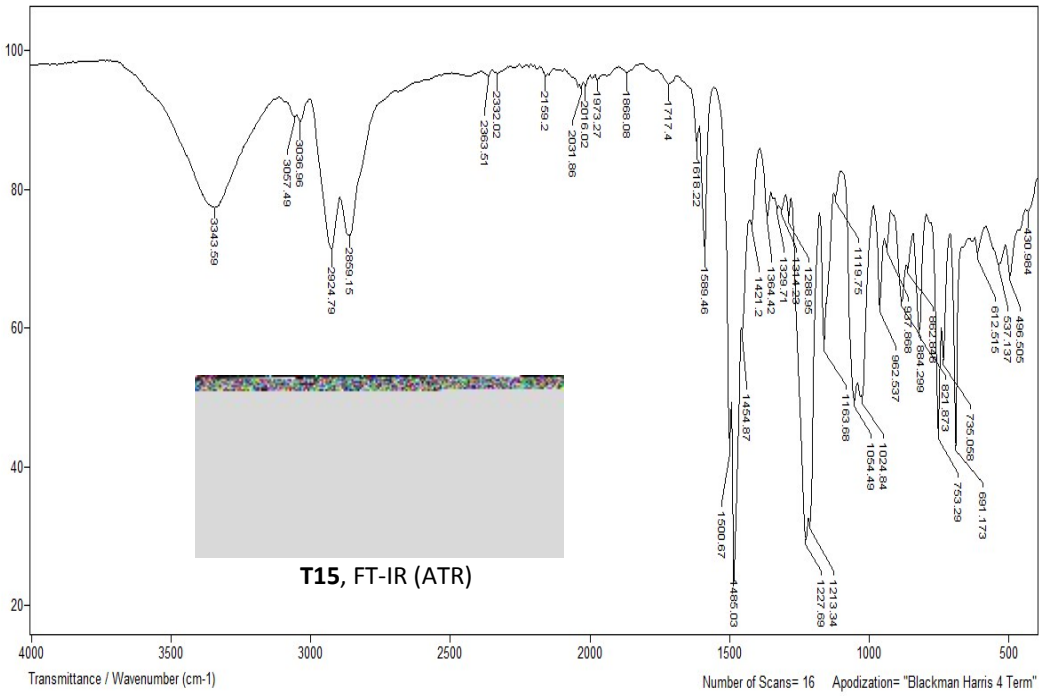


T15, ^{1}H NMR, $CDCl_3$, 300 MHz

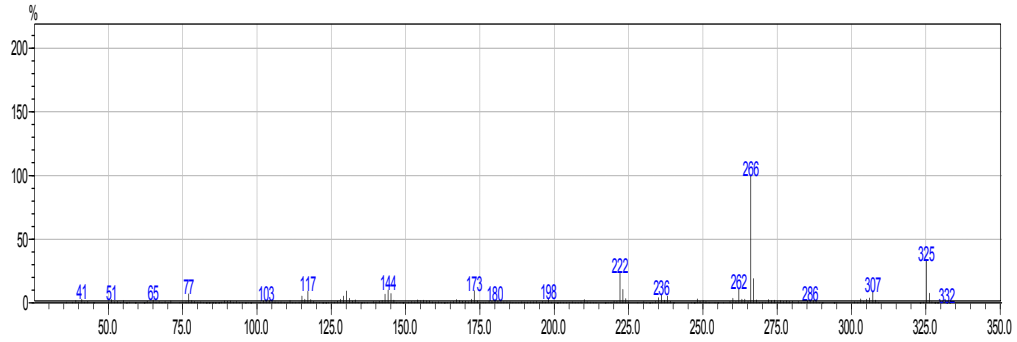


T15, ^{13}C NMR, $CDCl_3$, 75 MHz



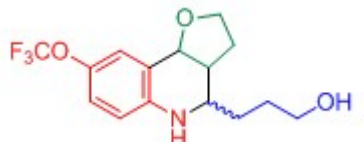


T15, FT-IR (ATR)

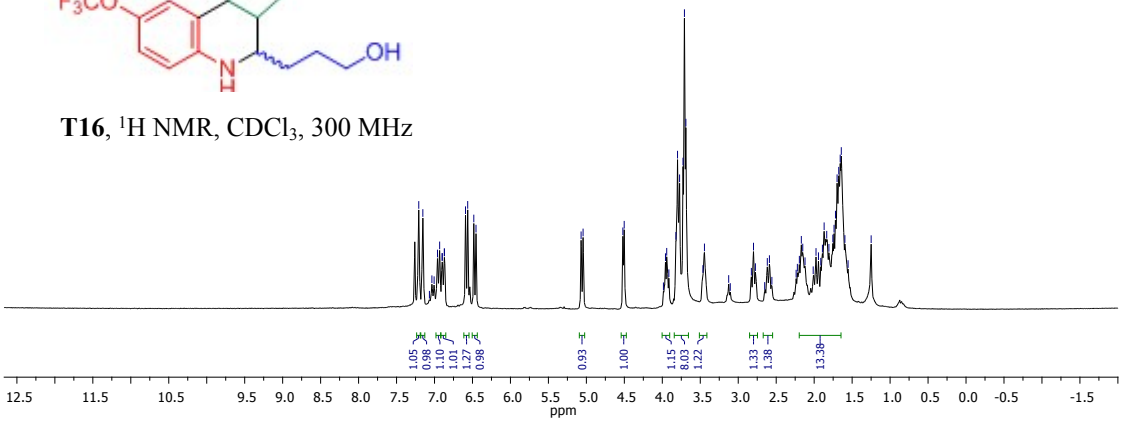


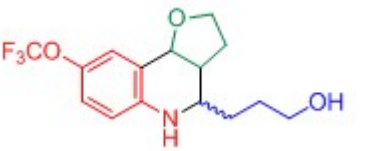
Relative Intensity (%)/*m/z*

Compound T16

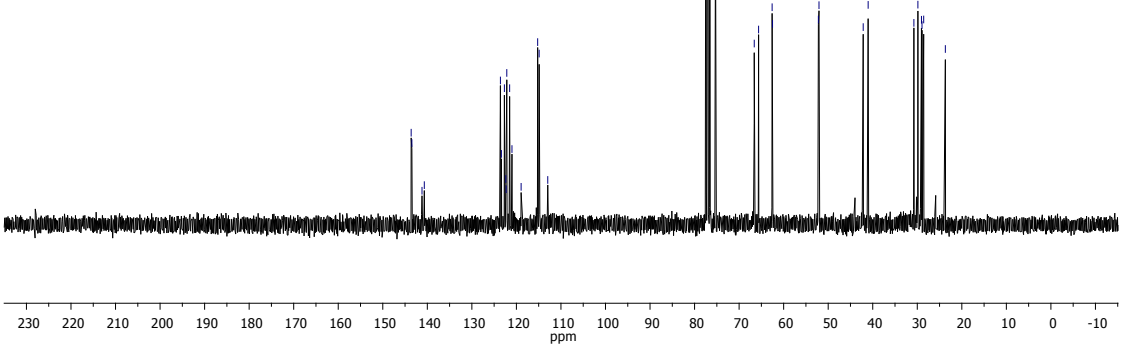


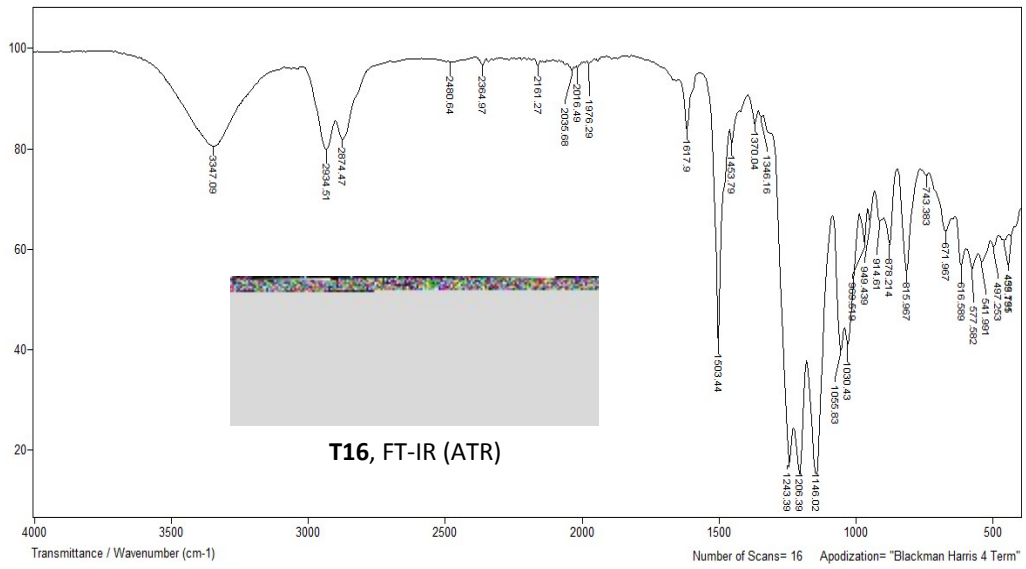
T16, ^{1}H NMR, $CDCl_3$, 300 MHz



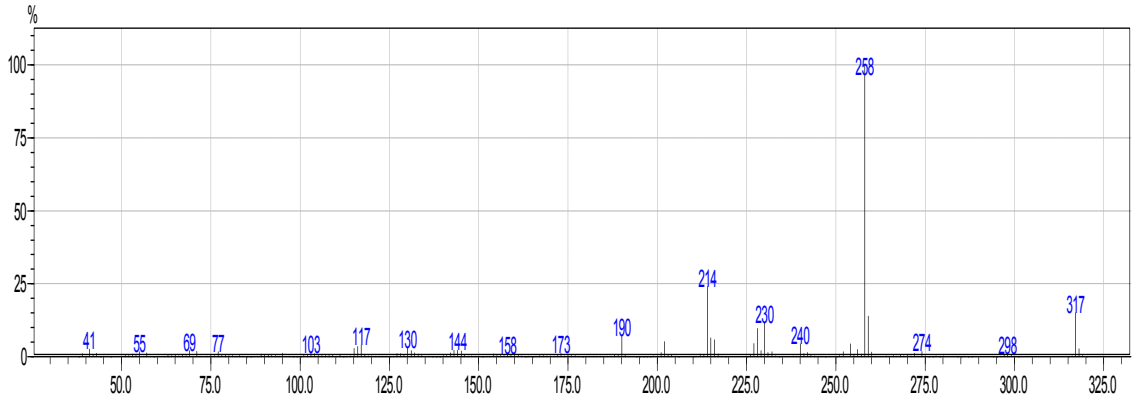


T16, ^{13}C NMR, $CDCl_3$, 75 MHz



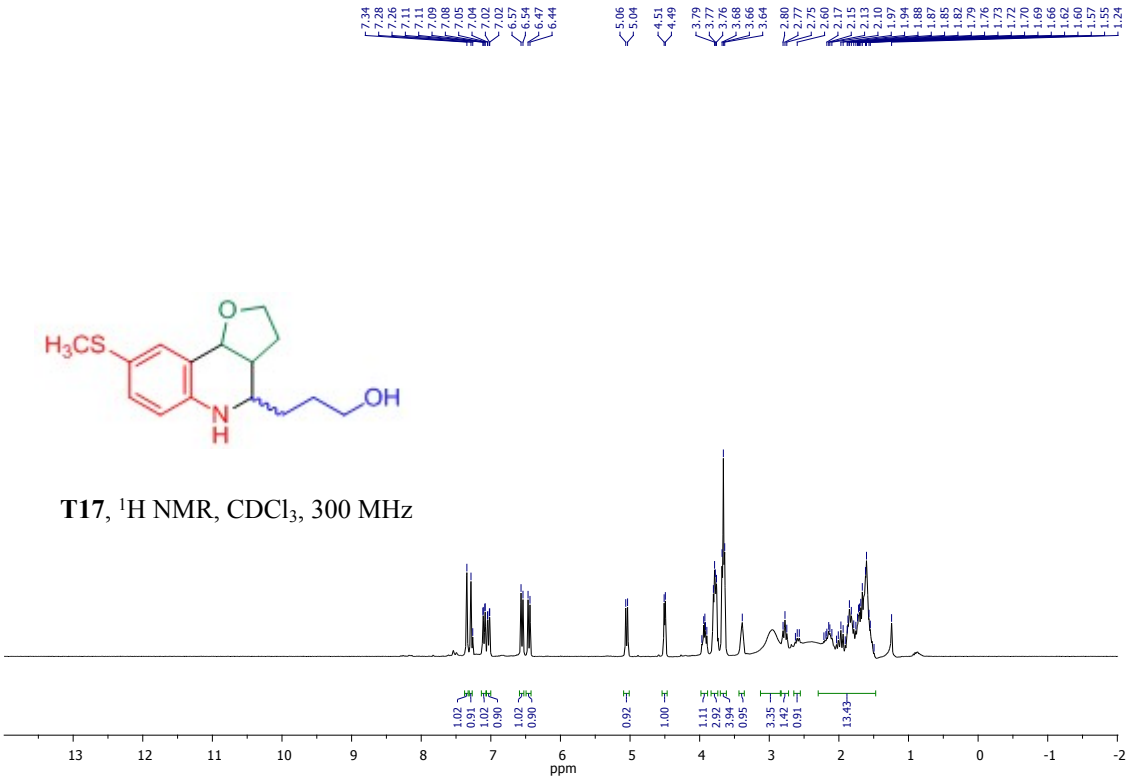


T16, FT-IR (ATR)

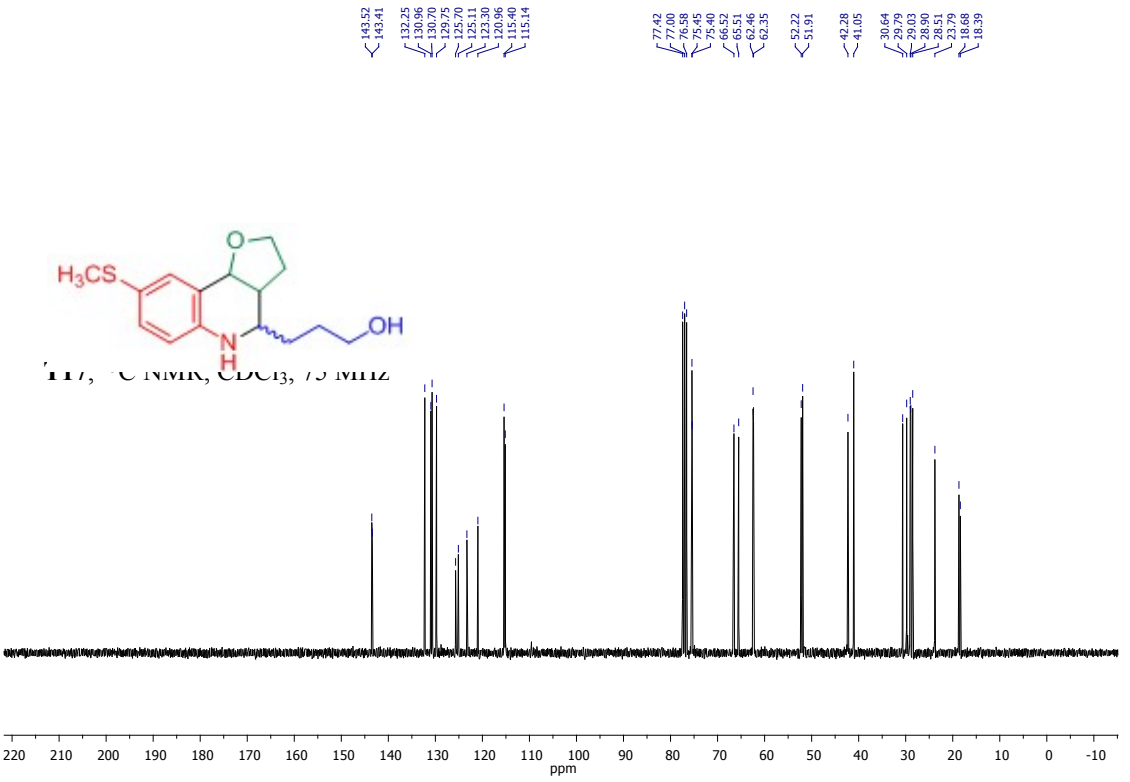


Relative Intensity (%)/*m/z*

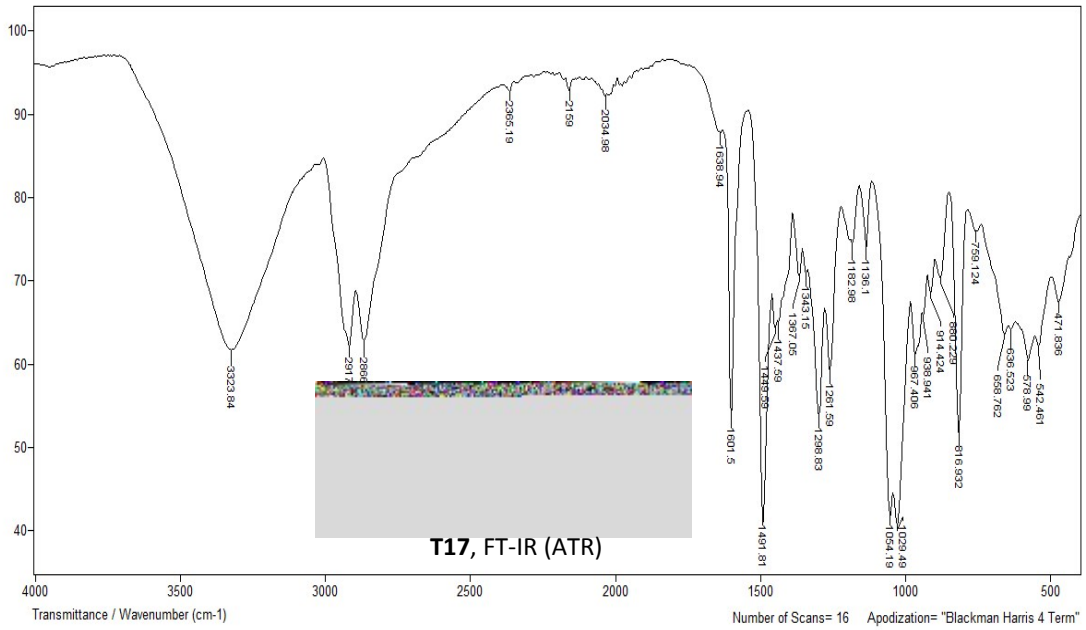
Compound T17



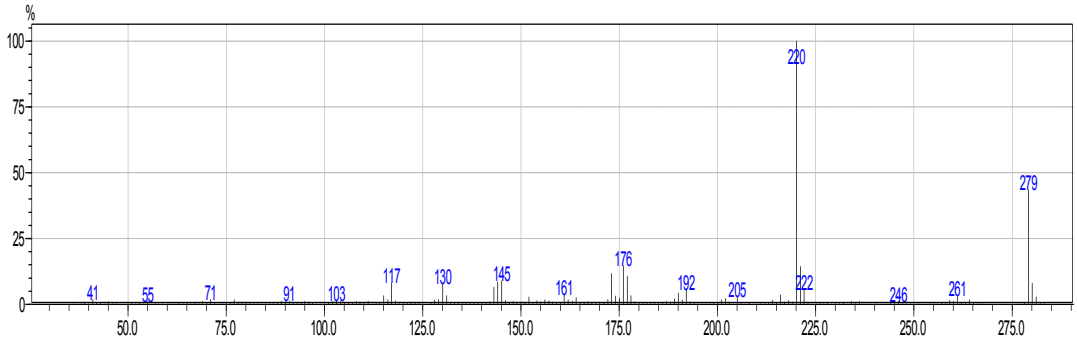
T17, ^{1}H NMR, $CDCl_3$, 300 MHz



T17, ^{13}C NMR, $CDCl_3$, 75 MHz

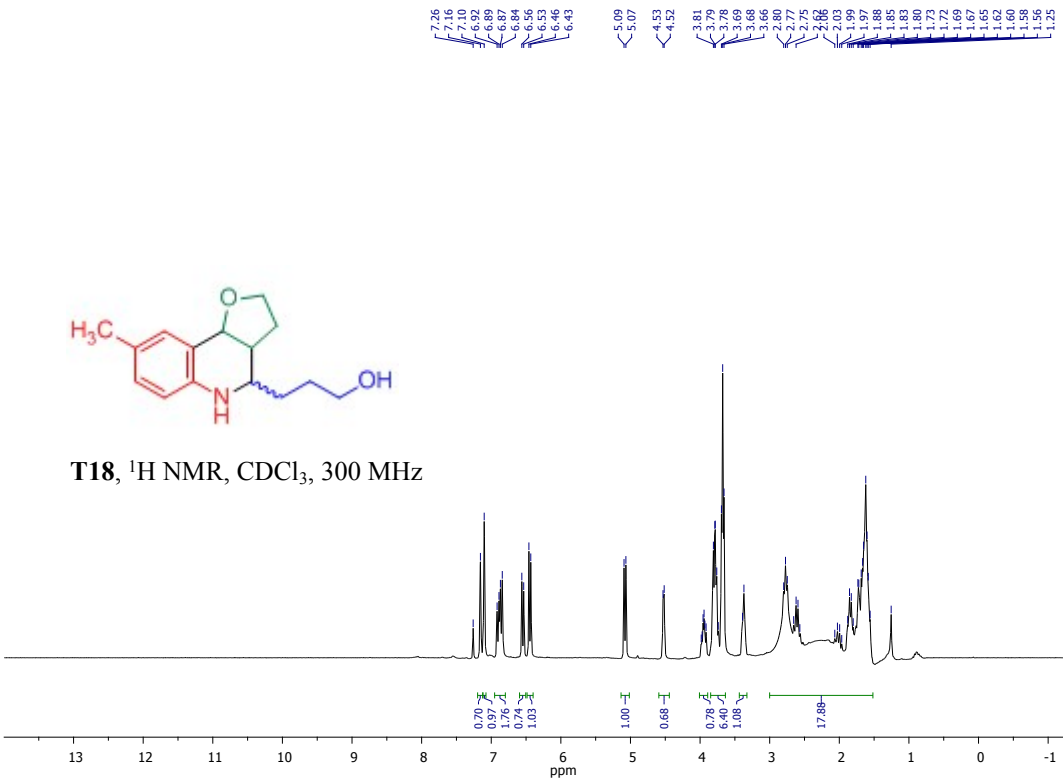


T17, FT-IR (ATR)

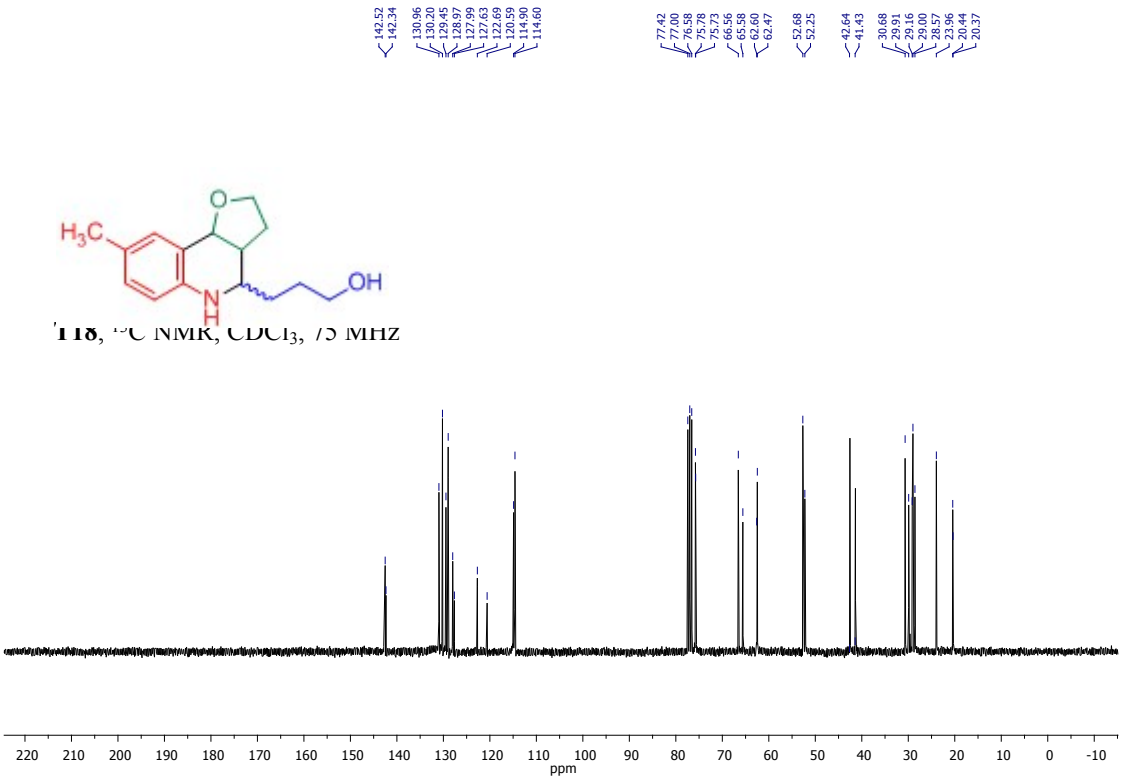


Relative Intensity (%)/*m/z*

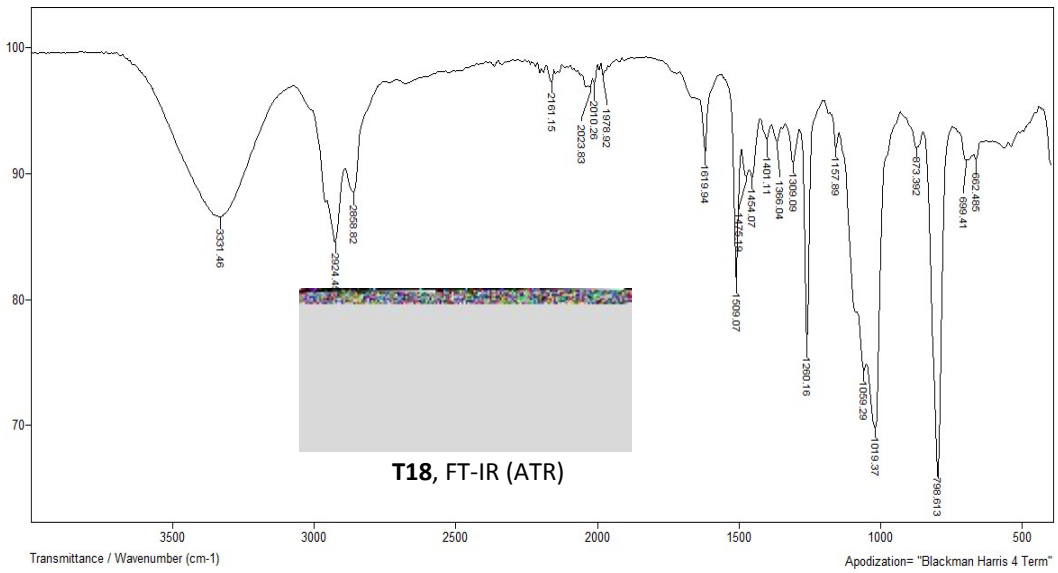
Compound T18



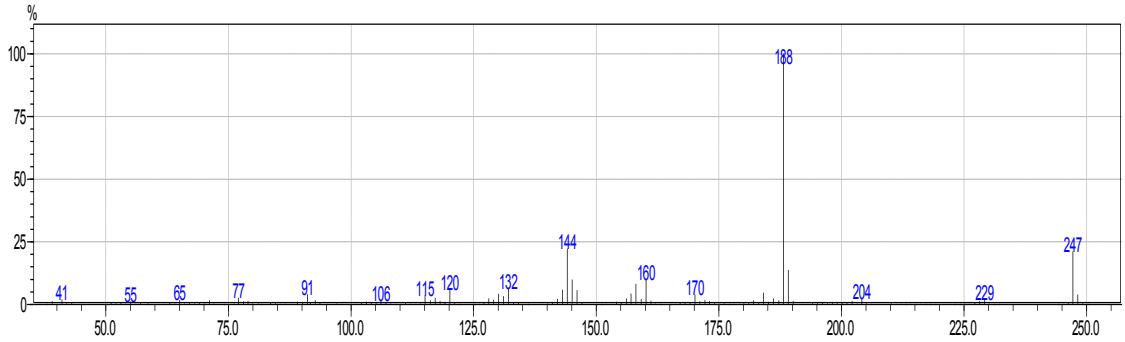
T18, ^{1}H NMR, $CDCl_3$, 300 MHz



T18, ^{13}C NMR, $CDCl_3$, 75 MHz

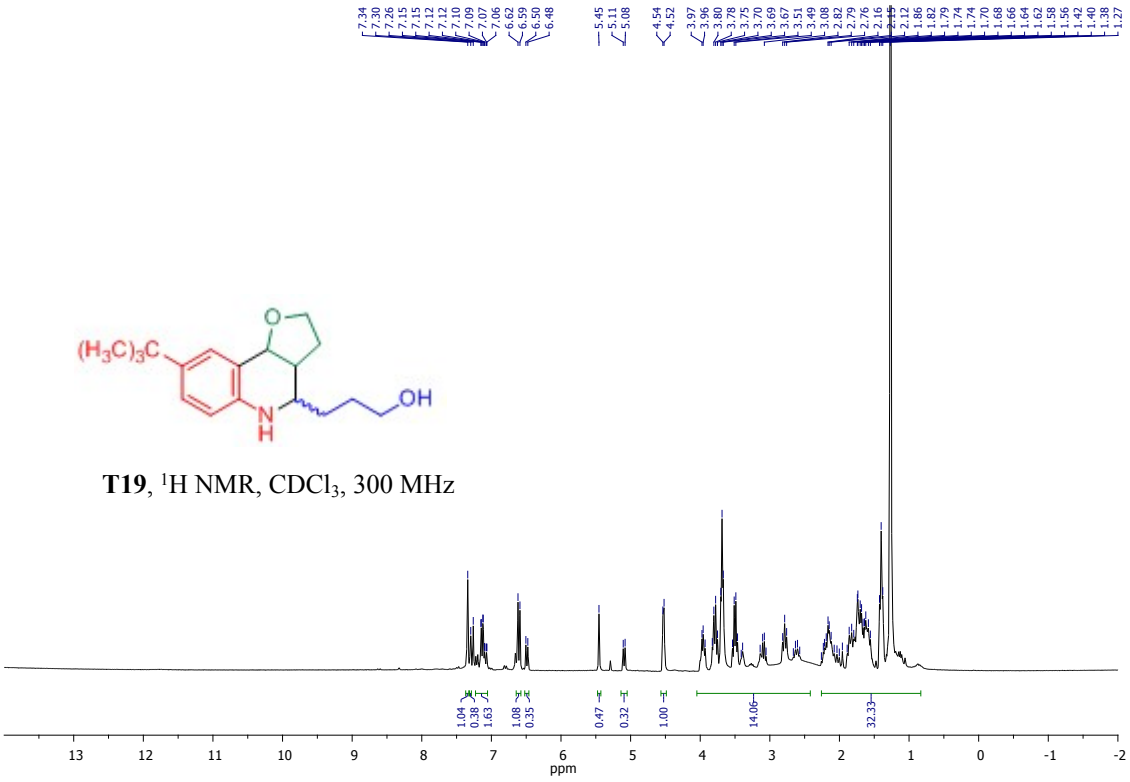


T18, FT-IR (ATR)

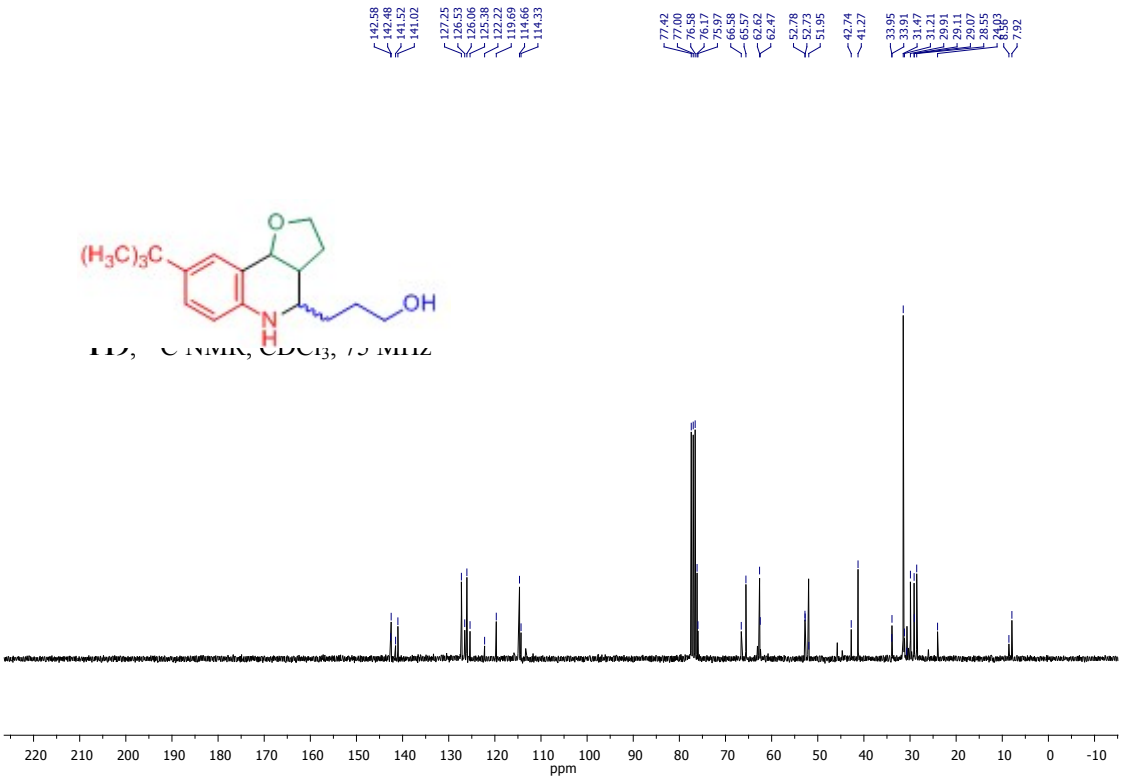


Relative Intensity (%)/*m/z*

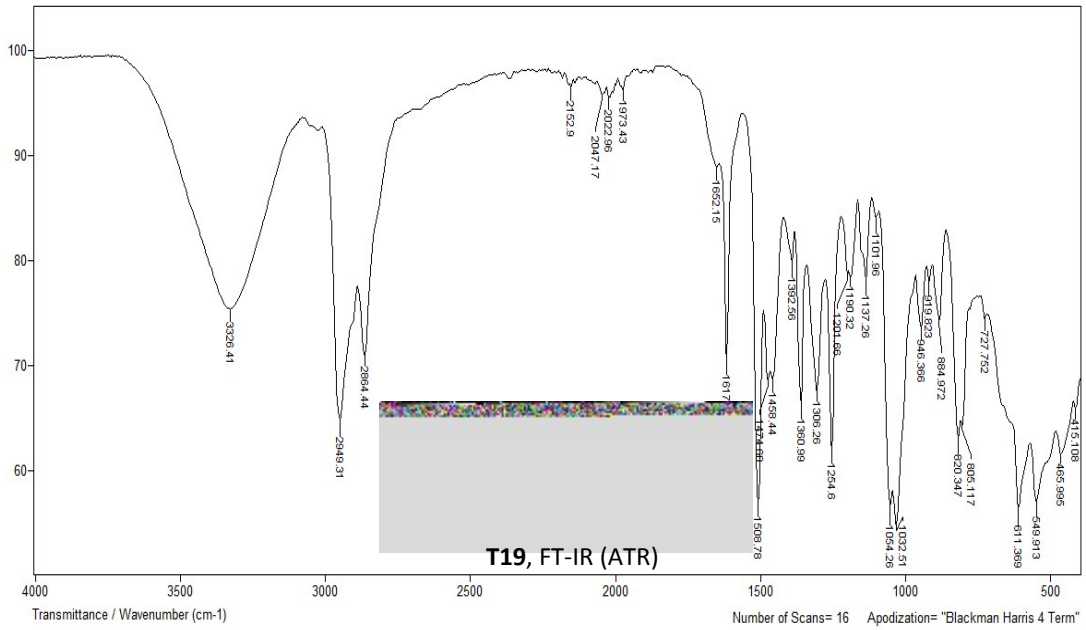
Compound T19



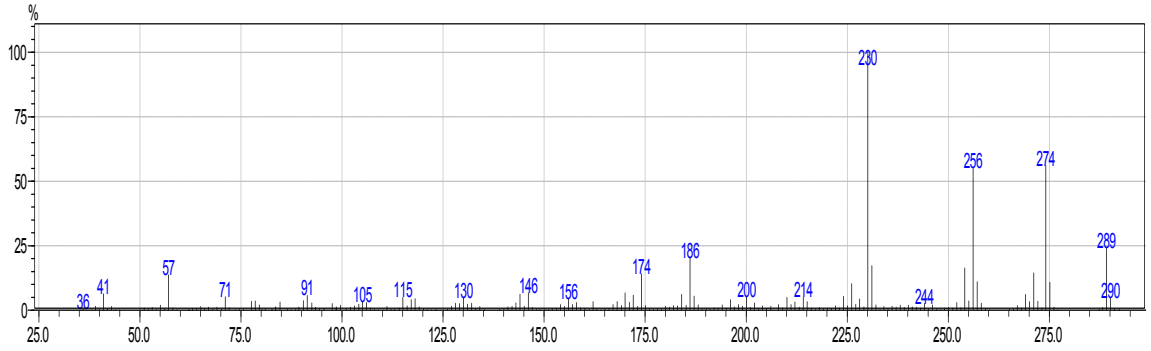
T19, ^{1}H NMR, $CDCl_3$, 300 MHz



T19, ^{13}C NMR, $CDCl_3$, 75 MHz



T19, FT-IR (ATR)



Relative Intensity (%)/*m/z*