

## **Metal-Free Synthesis of 4-(methylthio)-3-phenylisoquinolines**

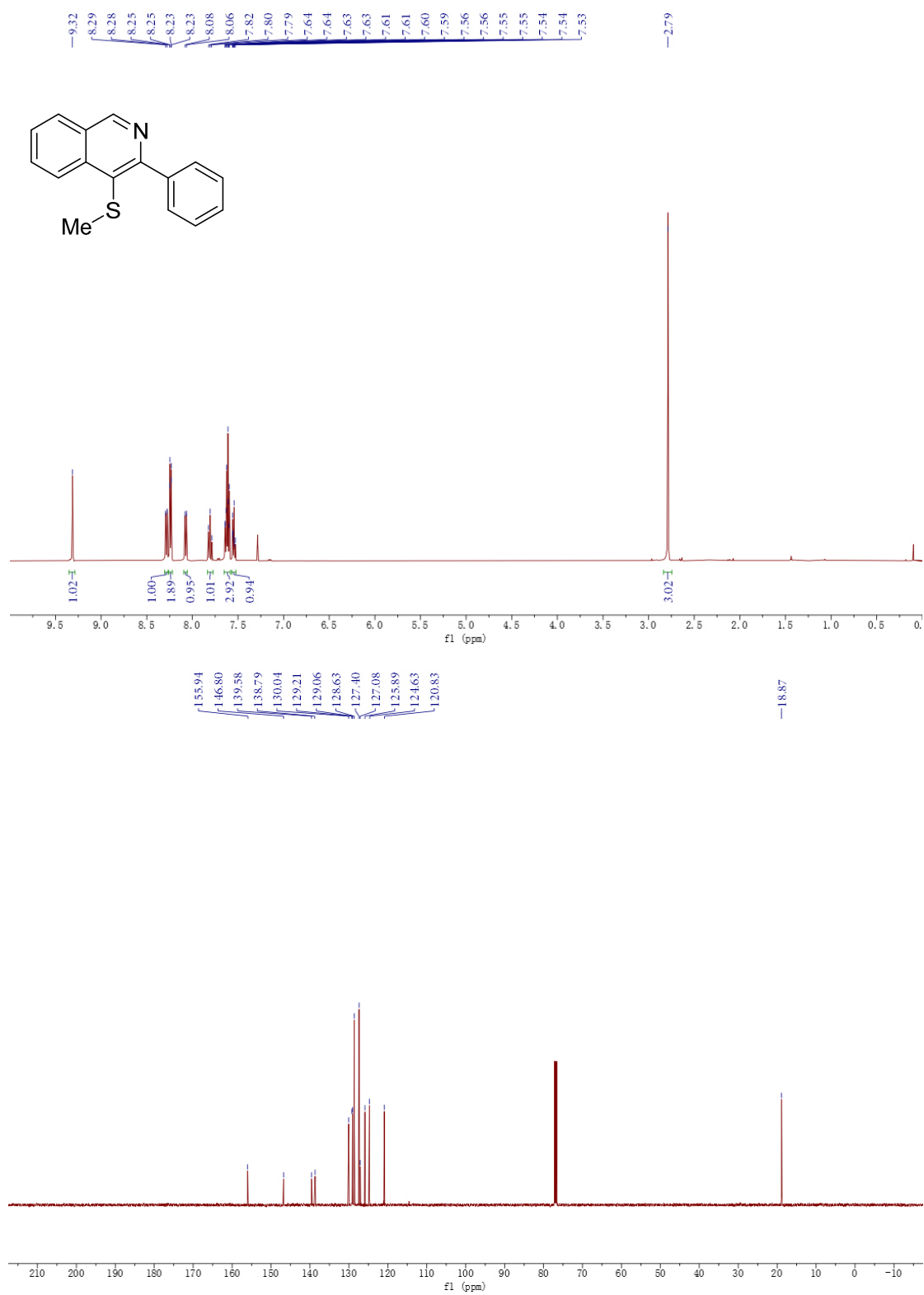
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P.R.of China

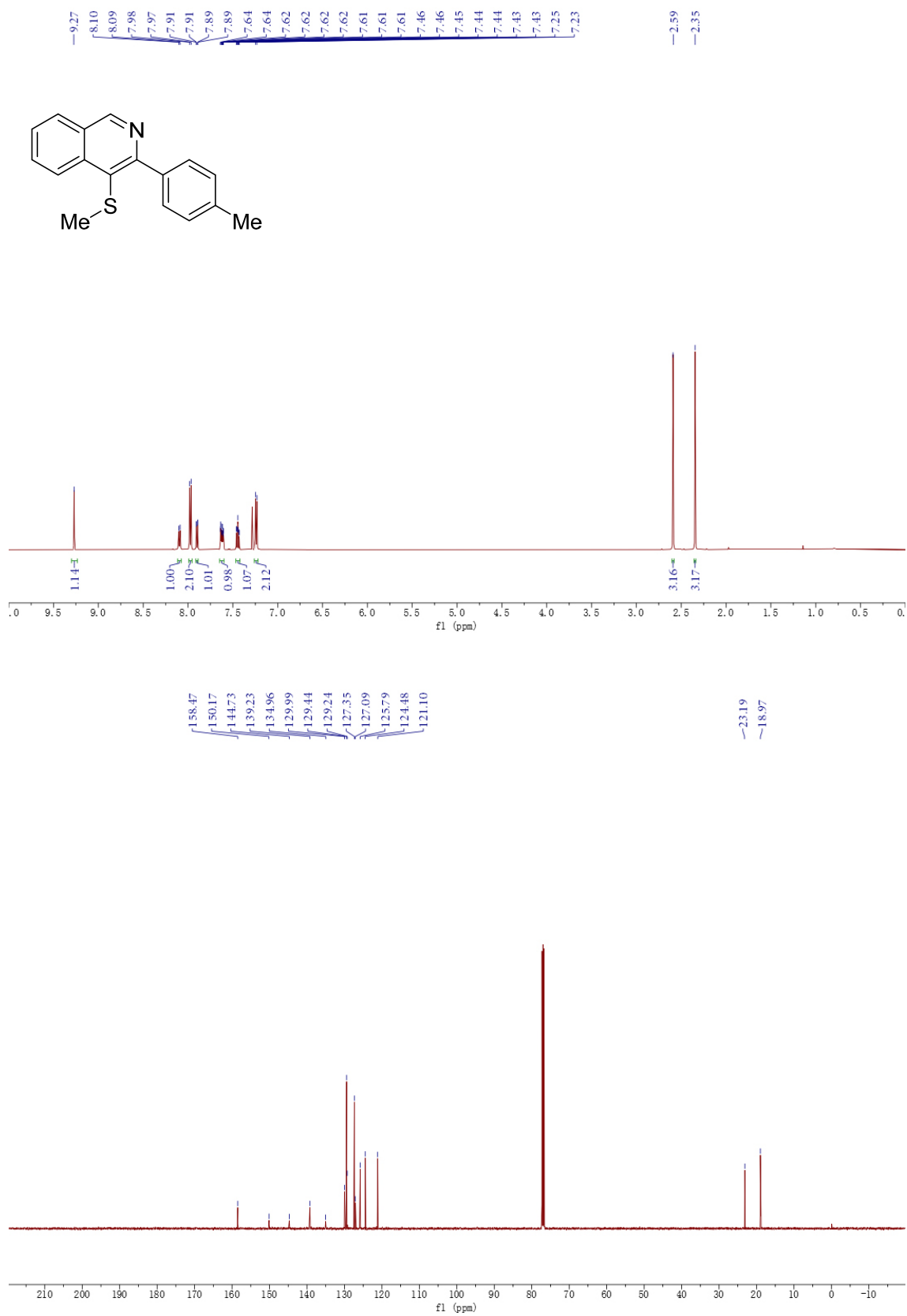
Email: [chenchq03@yeah.net](mailto:chenchq03@yeah.net)

## NMR spectra

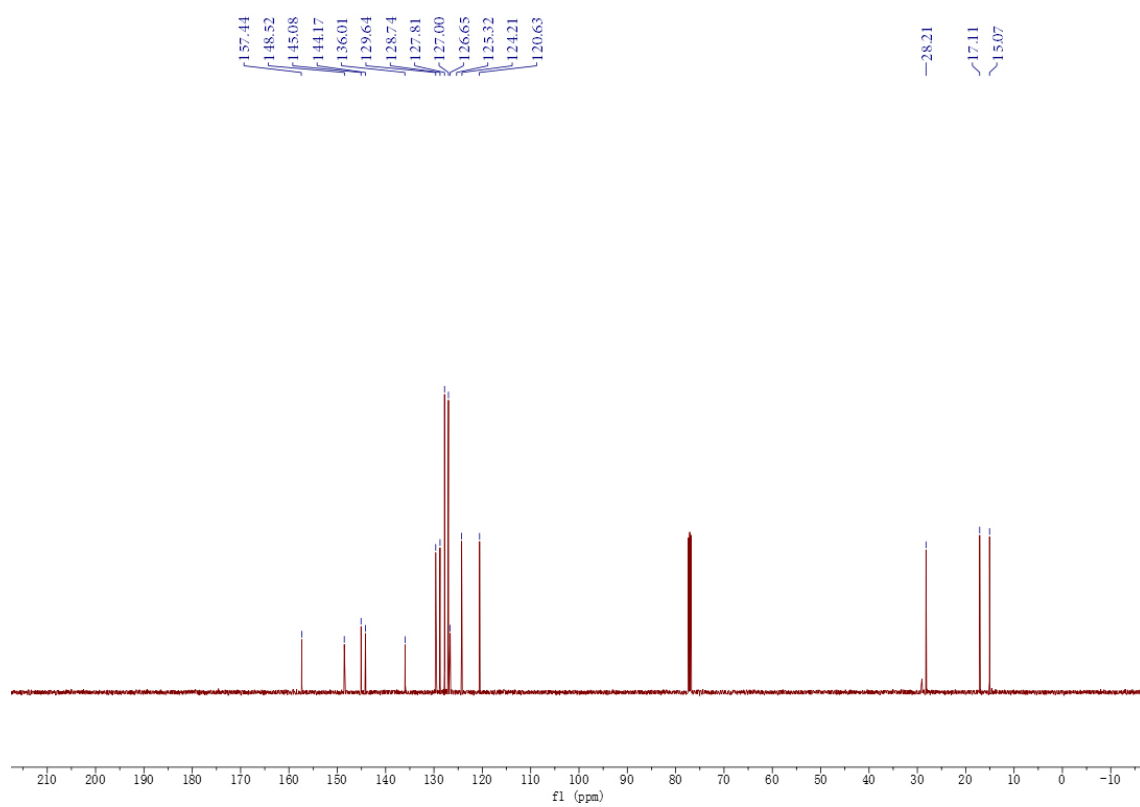
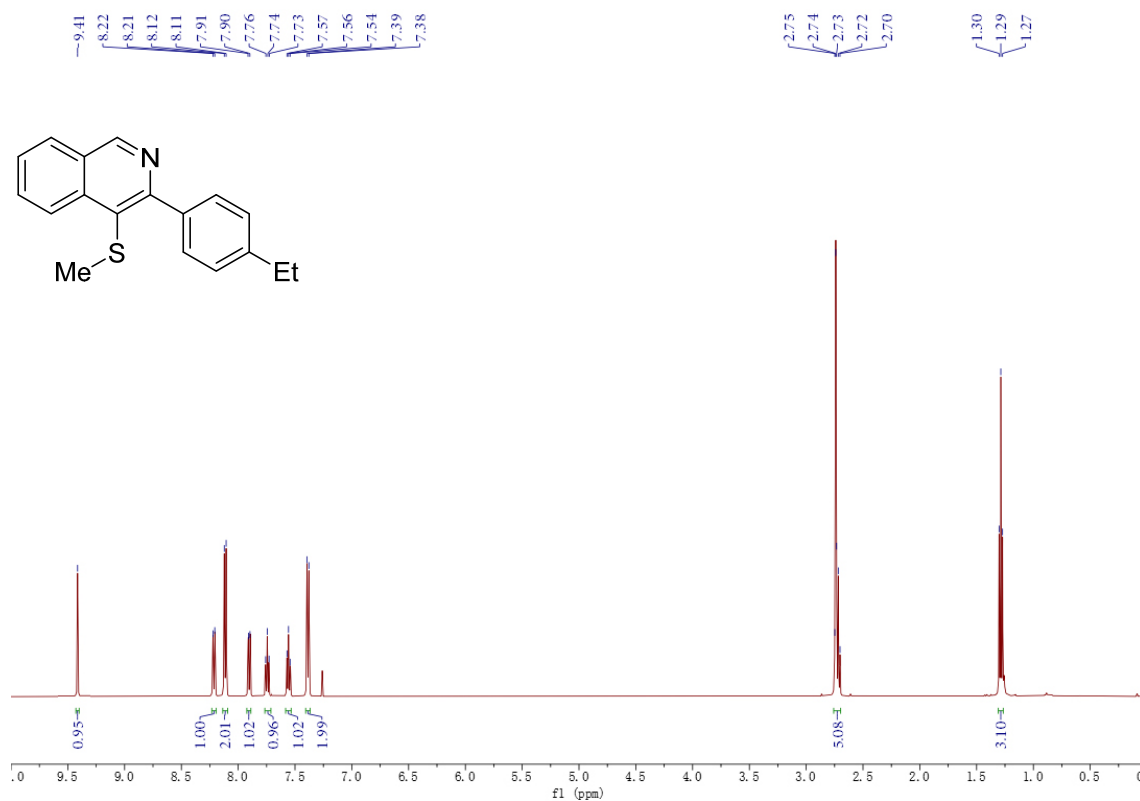
### 4-(Methylthio)-3-phenylisoquinoline (3a)



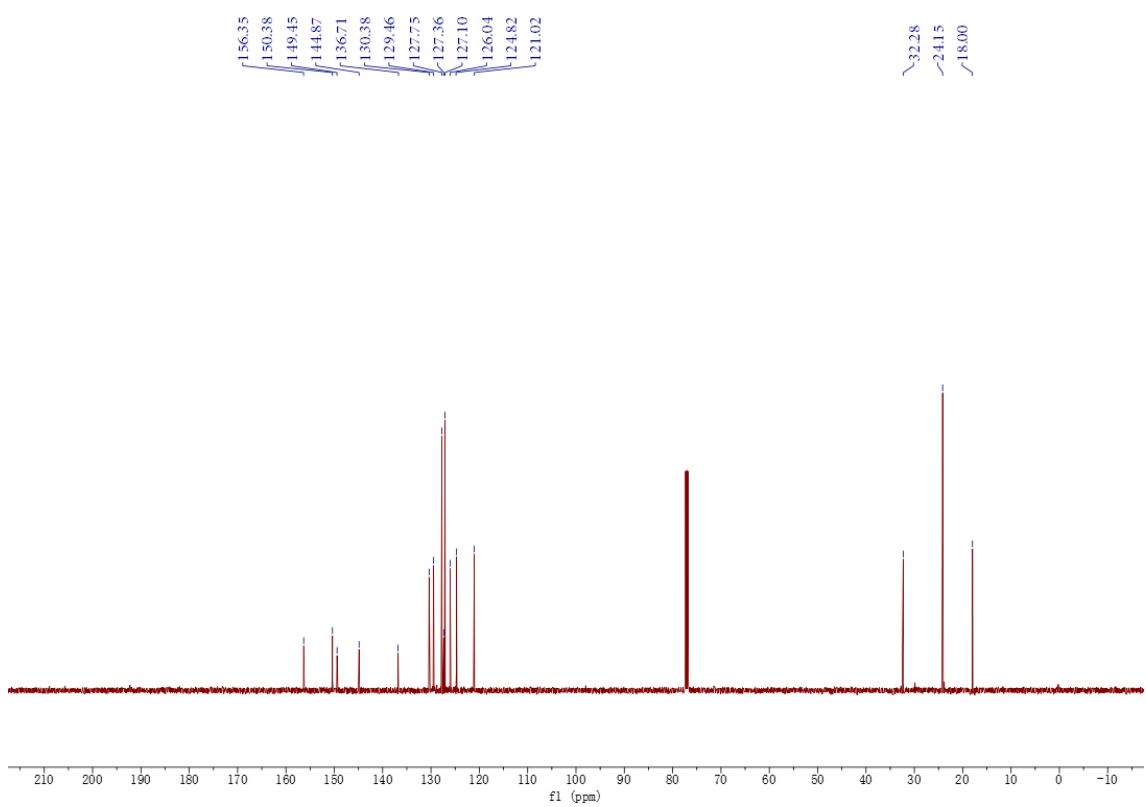
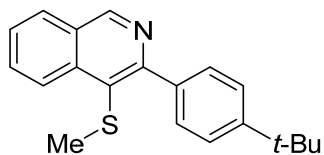
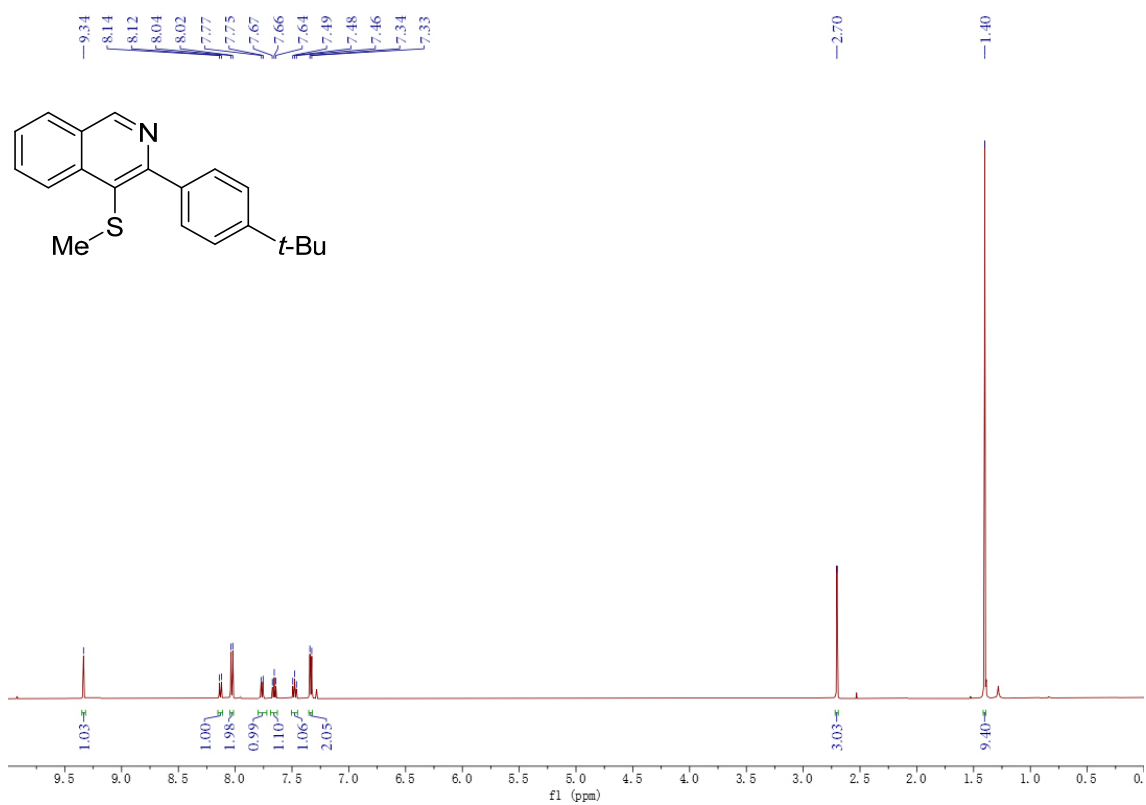
### 4-(Methylthio)-3-(p-tolyl)isoquinoline (3b)



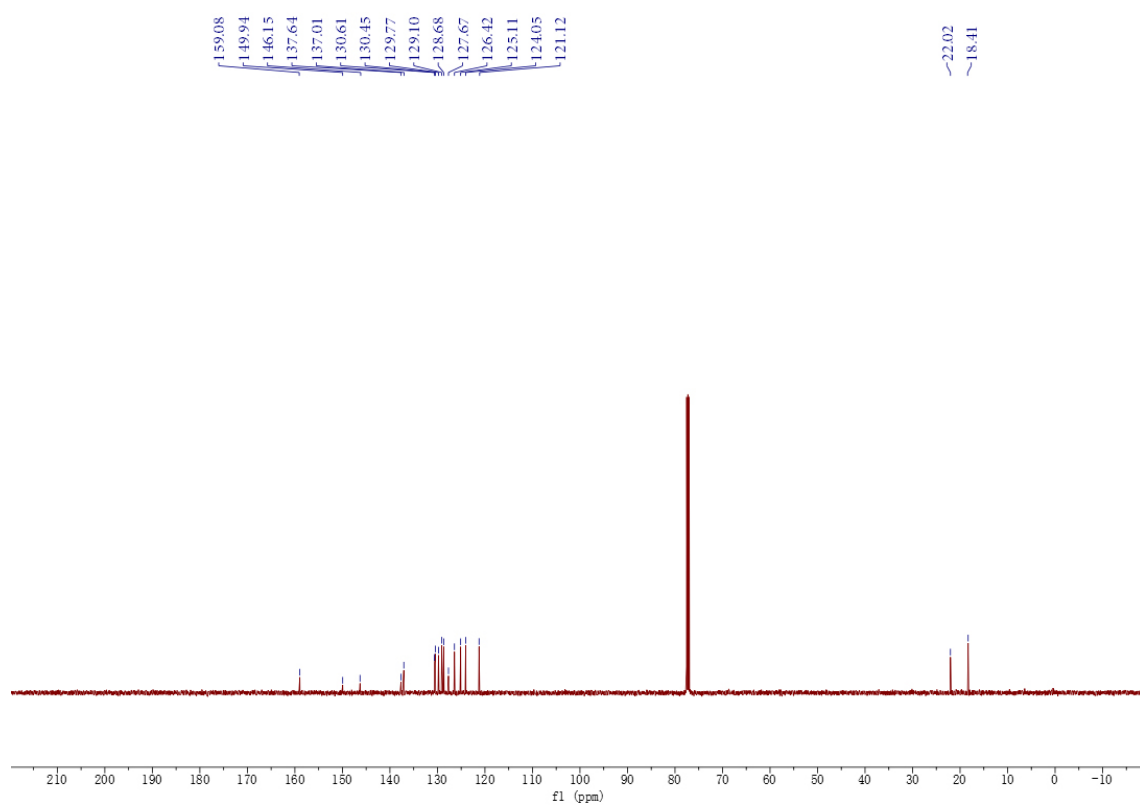
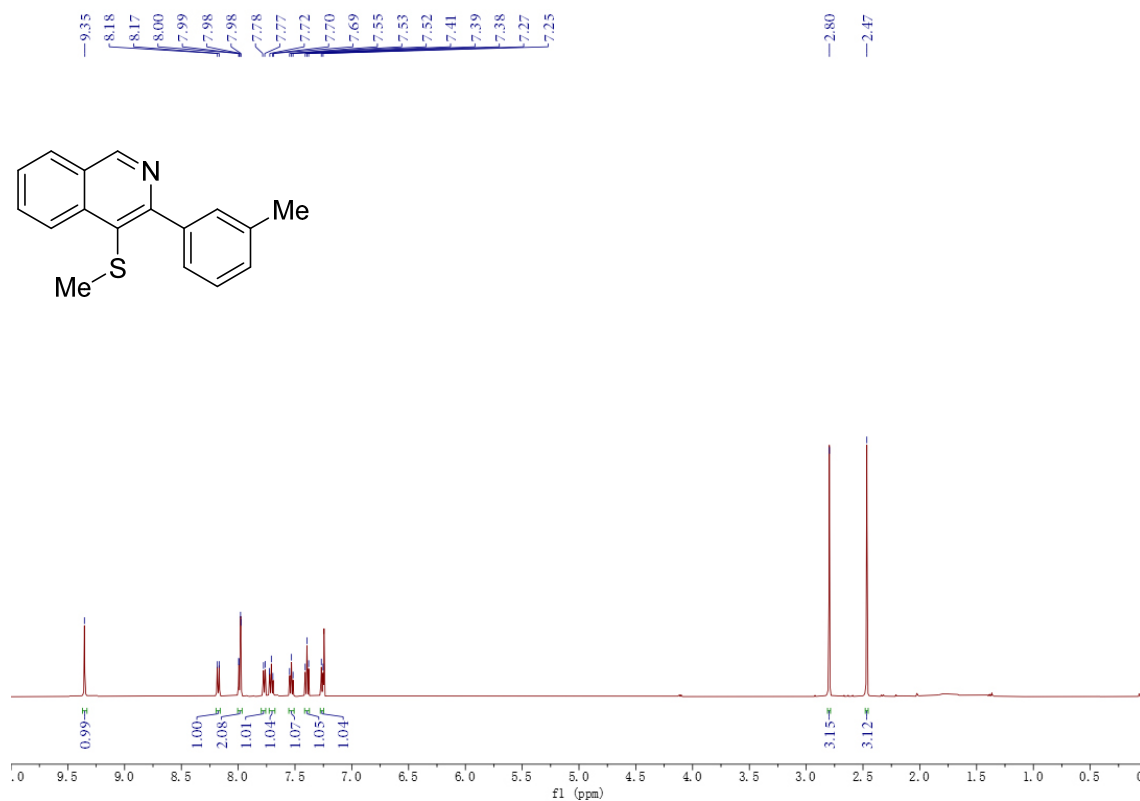
### 3-(4-Ethylphenyl)-4-(methylthio)isoquinoline (3c)



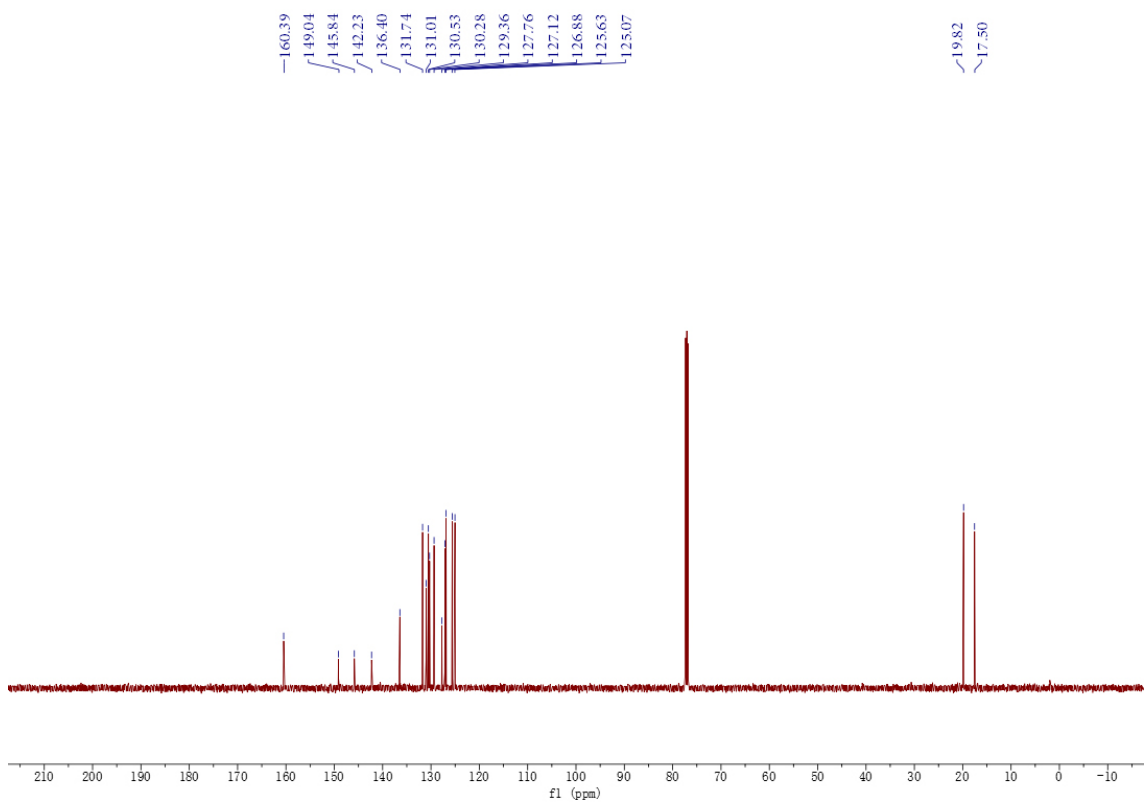
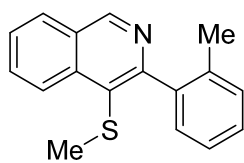
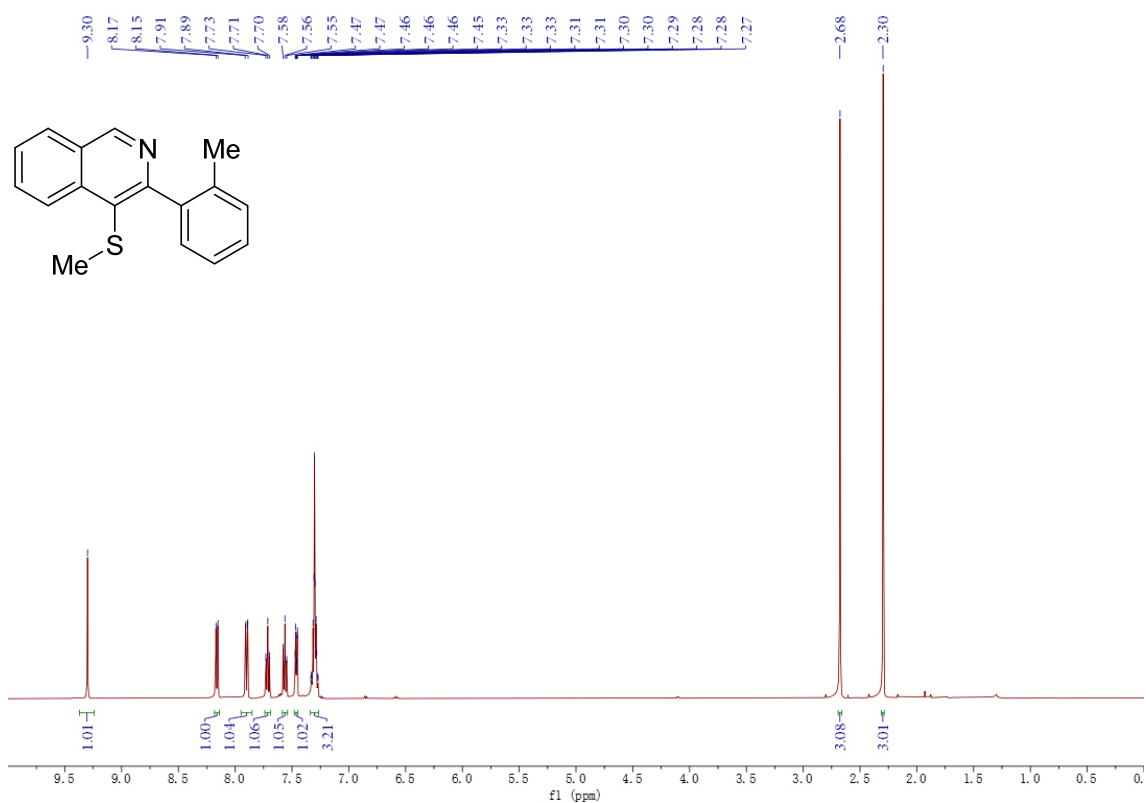
### 3-(4-(*tert*-Butyl)phenyl)-4-(methylthio)isoquinoline (3d)



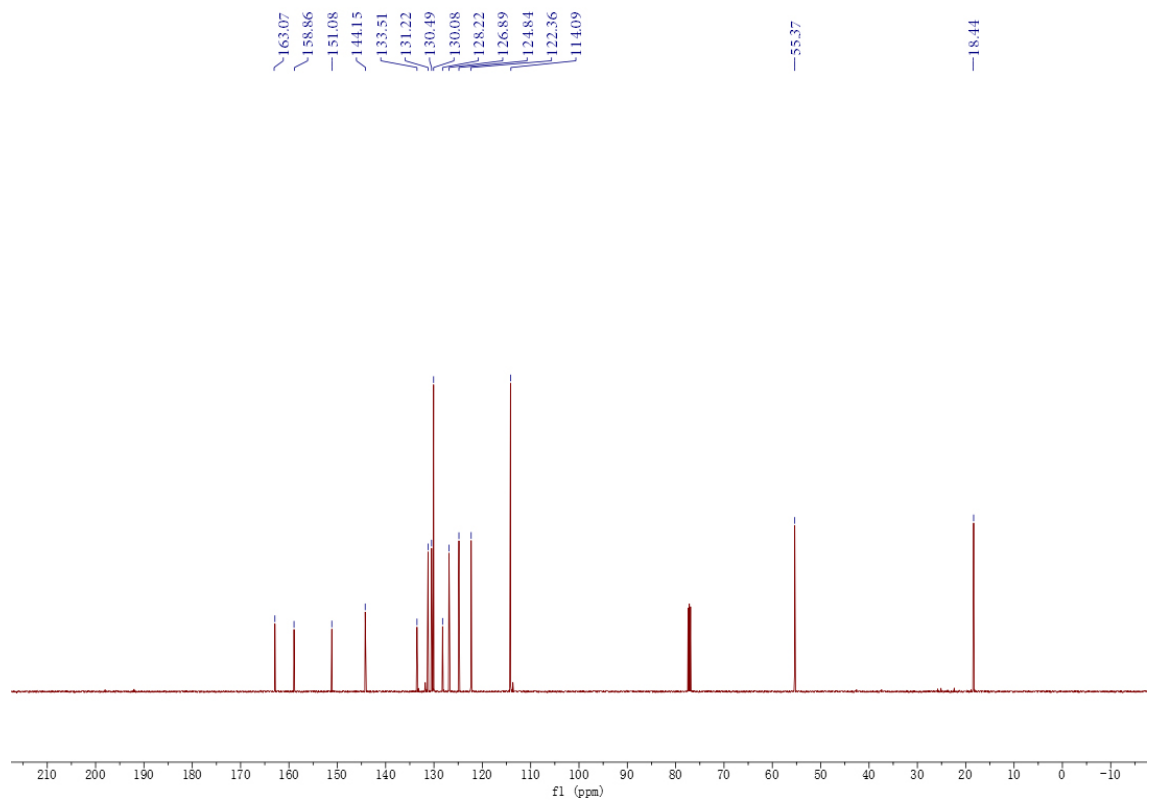
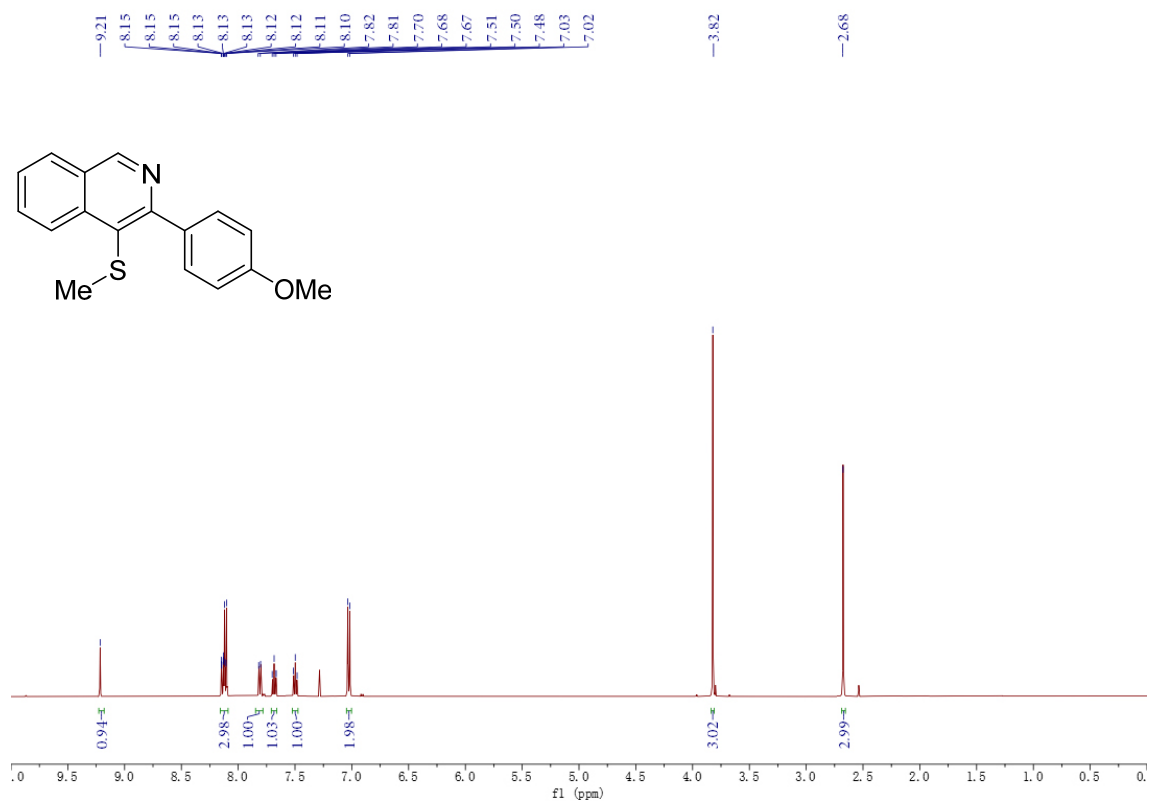
### 4-(Methylthio)-3-(m-tolyl)isoquinoline (3e)



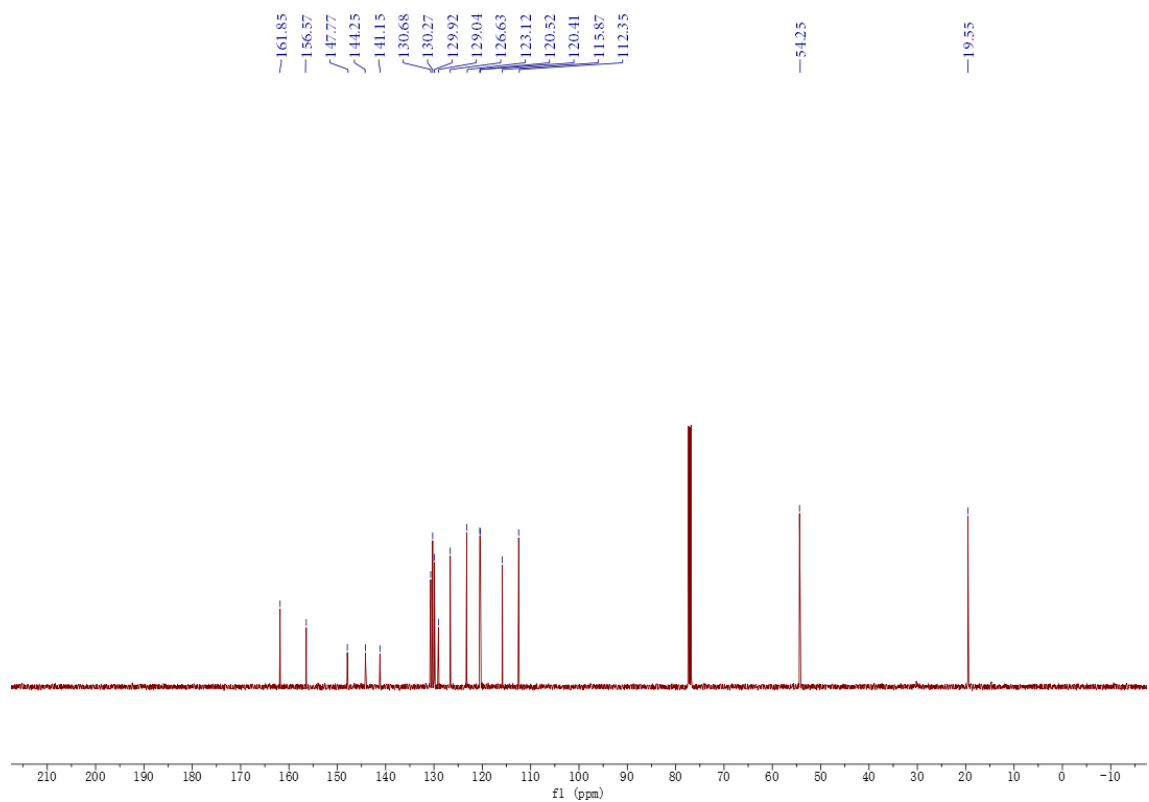
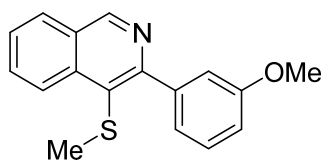
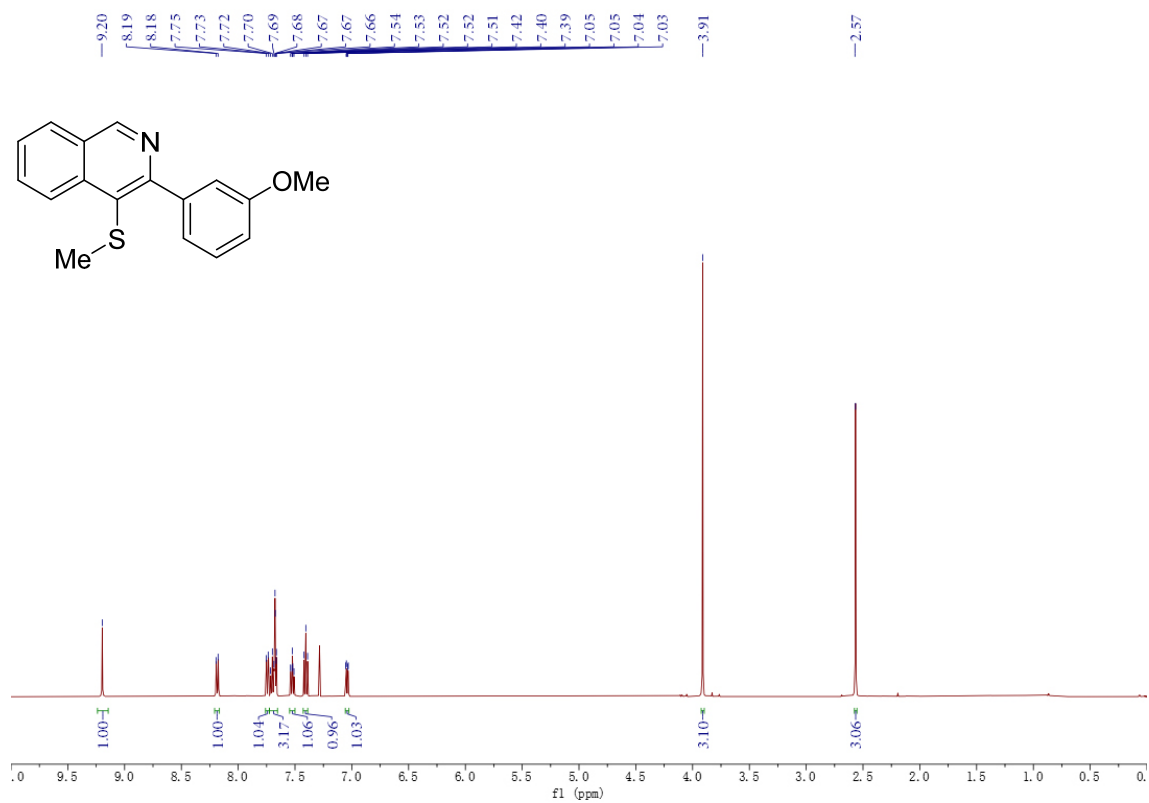
### 4-(Methylthio)-3-(o-tolyl)isoquinoline (3f)



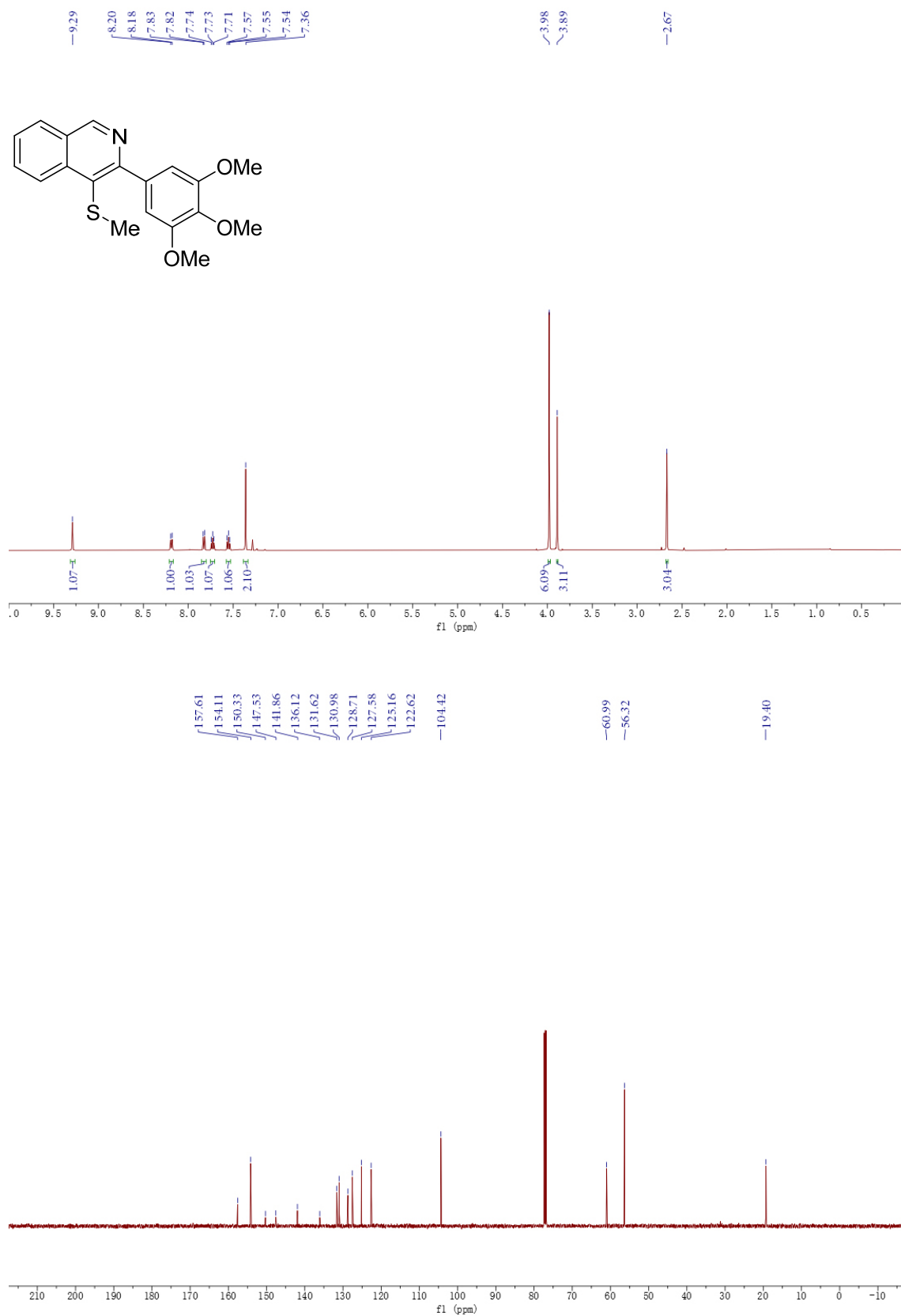
### 3-(4-Methoxyphenyl)-4-(methylthio)isoquinoline (3g)



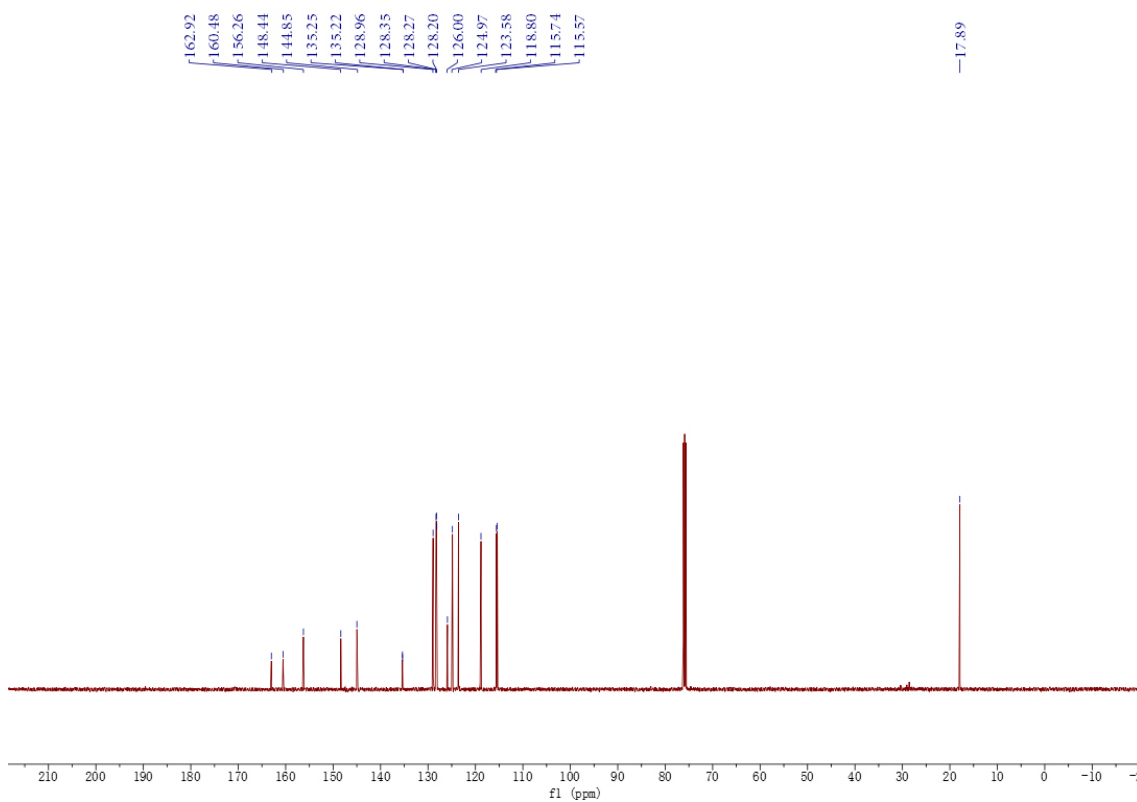
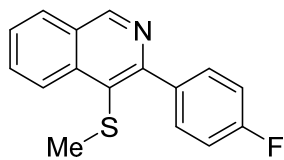
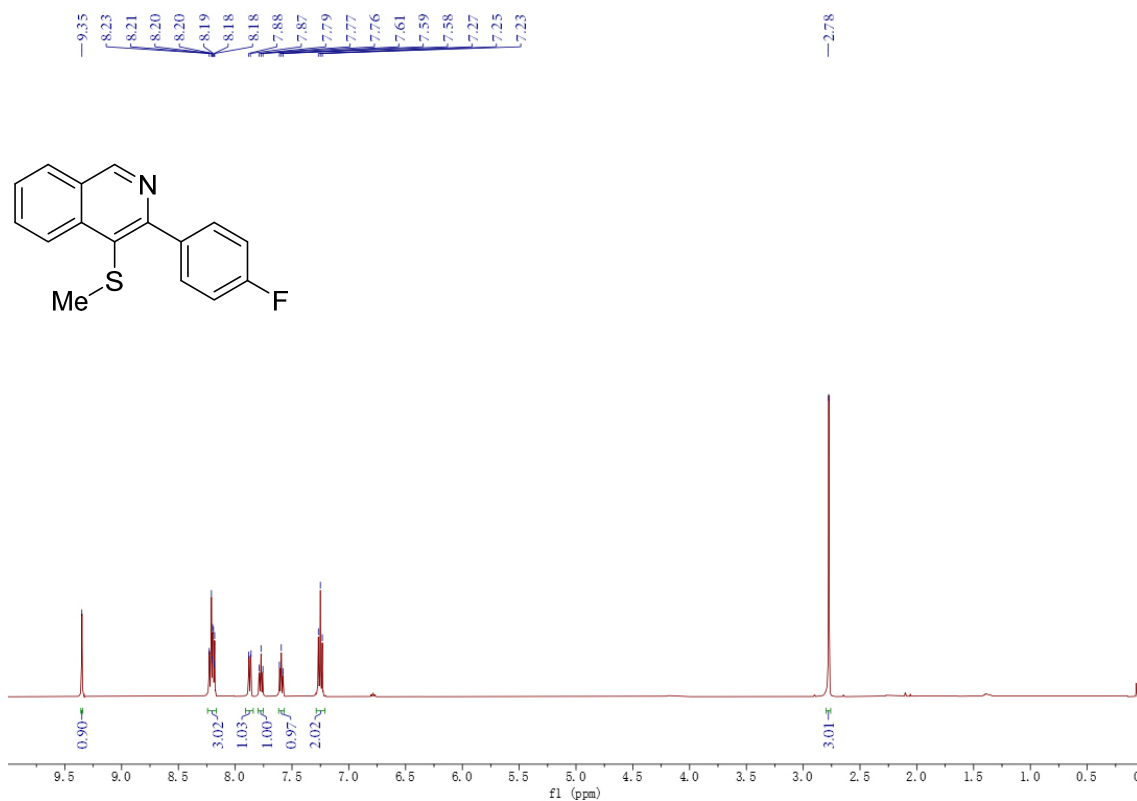
### 3-(3-Methoxyphenyl)-4-(methylthio)isoquinoline (3h)

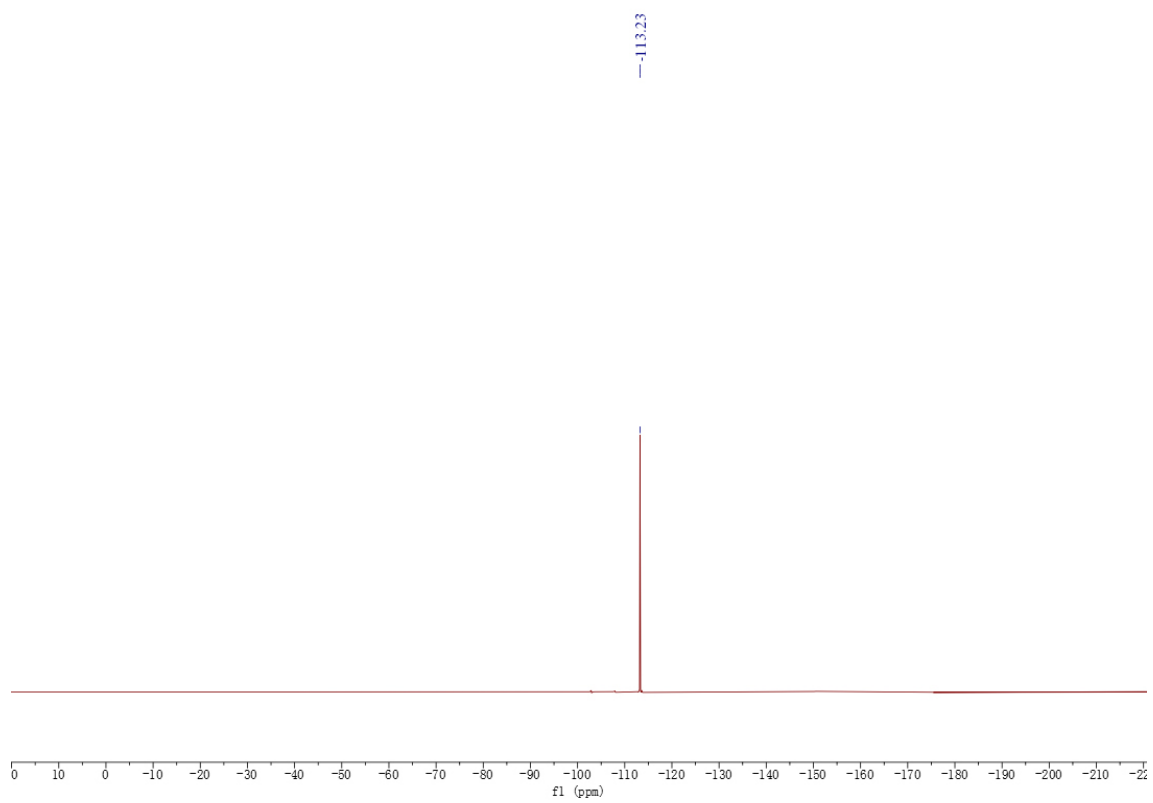


### 4-(Methylthio)-3-(3,4,5-trimethoxyphenyl)isoquinoline (3i)

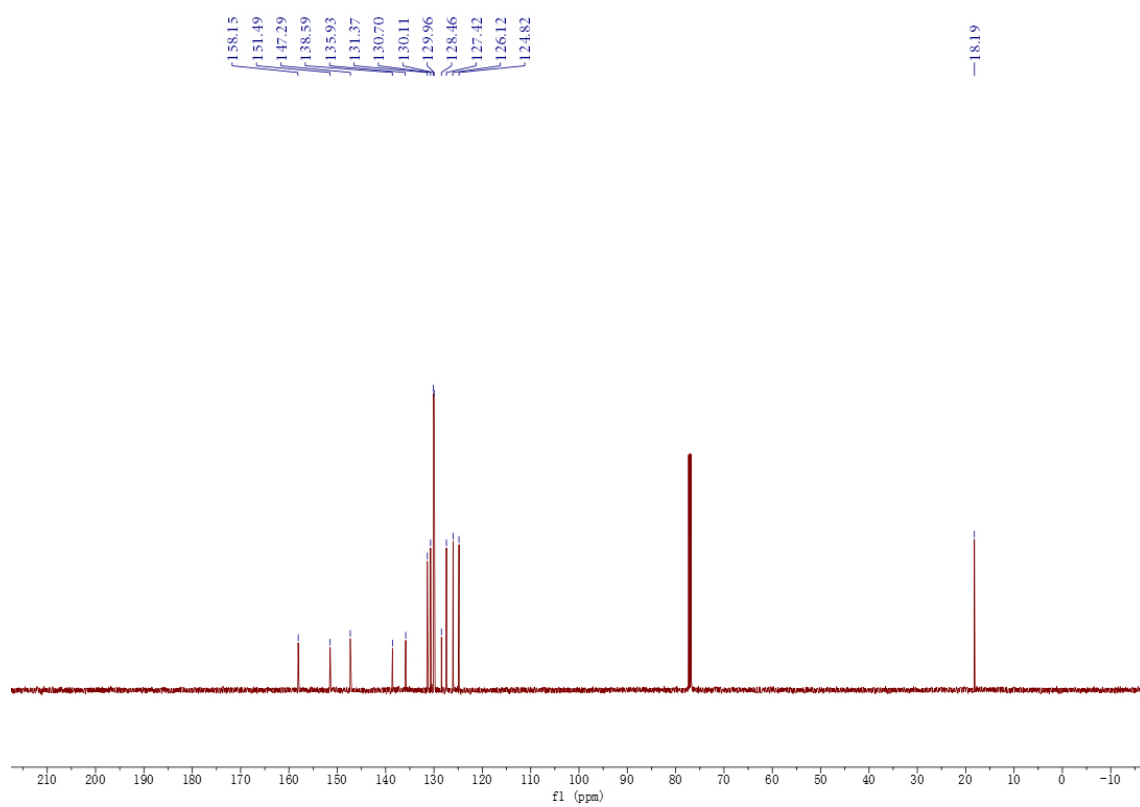
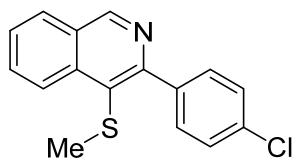
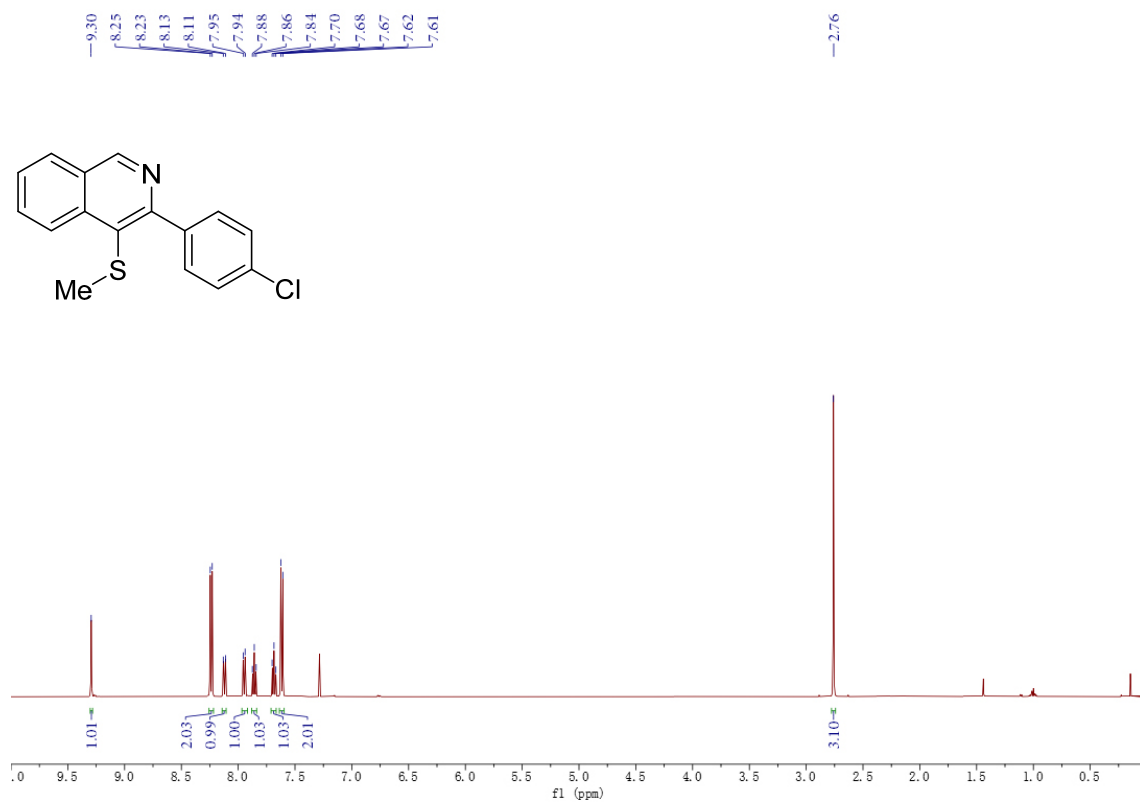


### 3-(4-Fluorophenyl)-4-(methylthio)isoquinoline (3j)

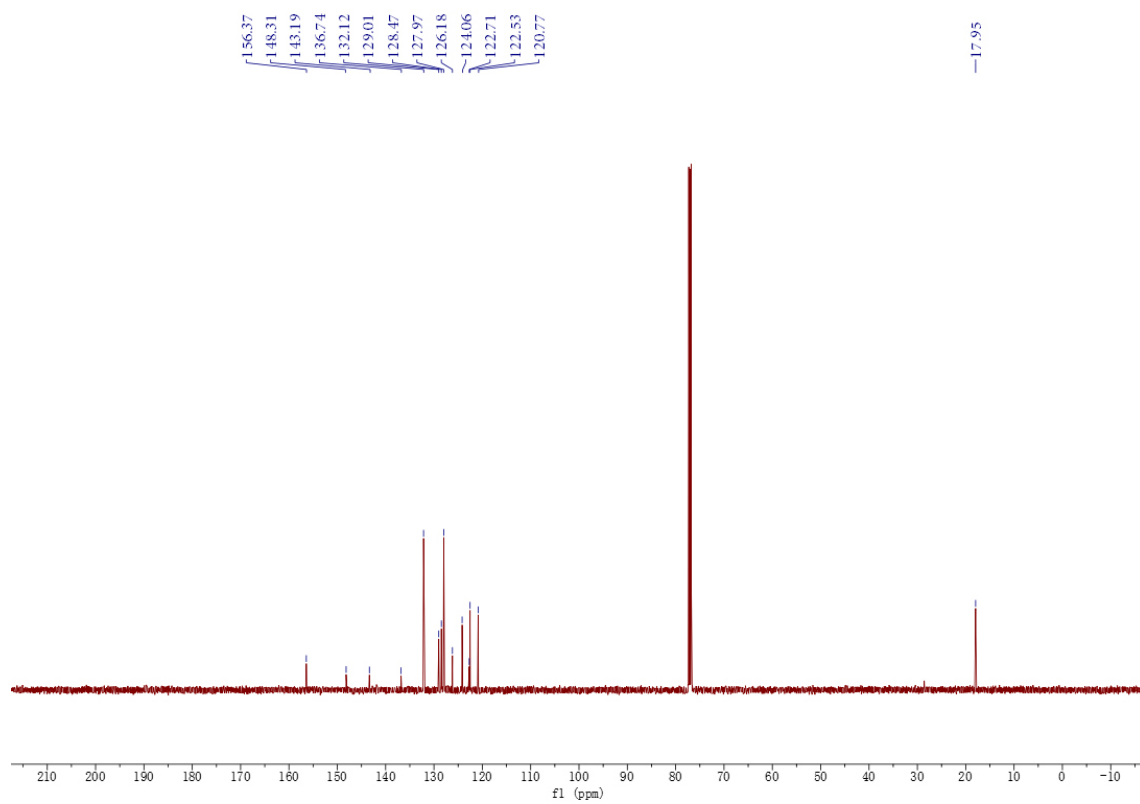
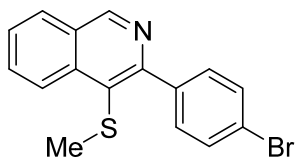
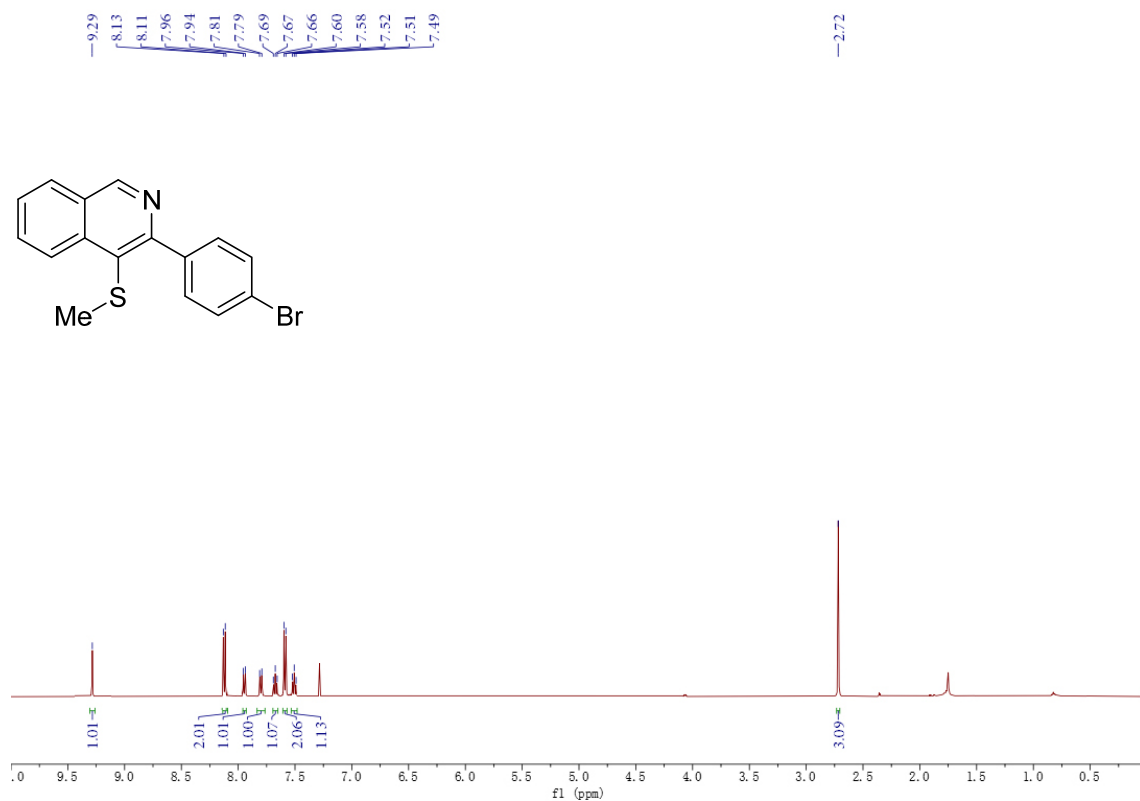




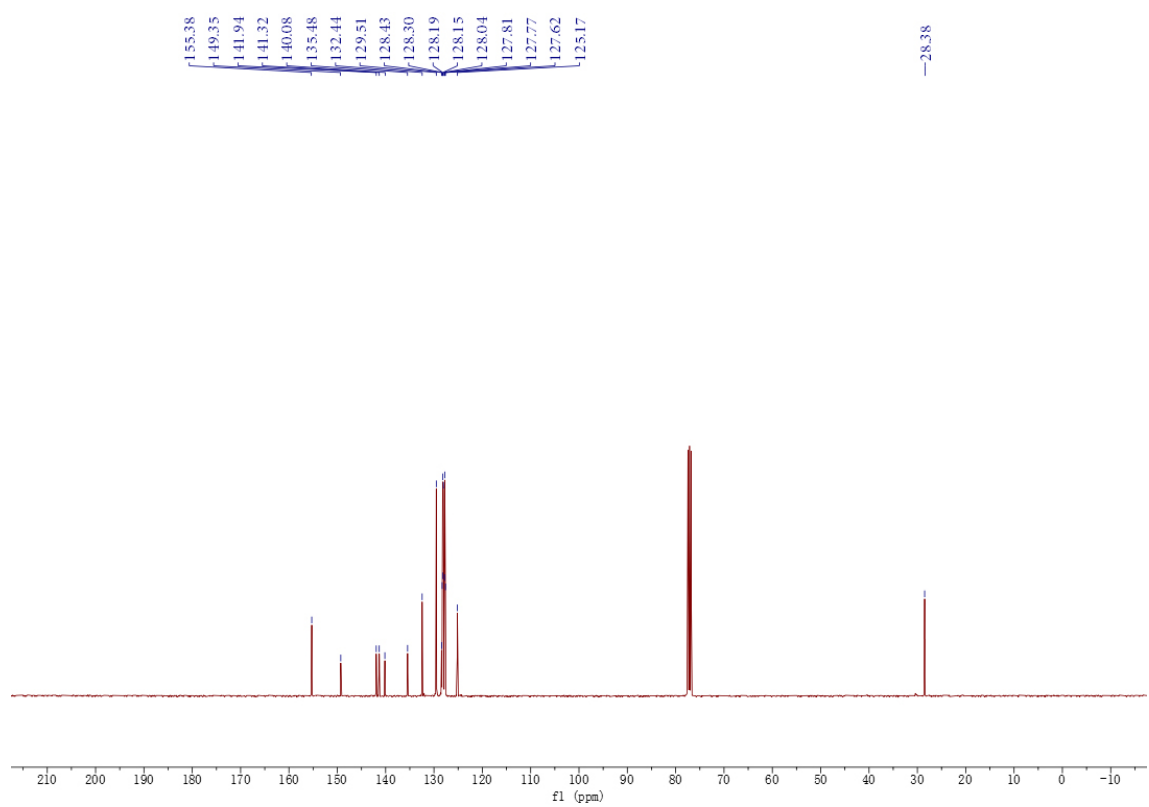
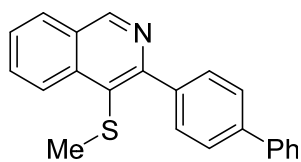
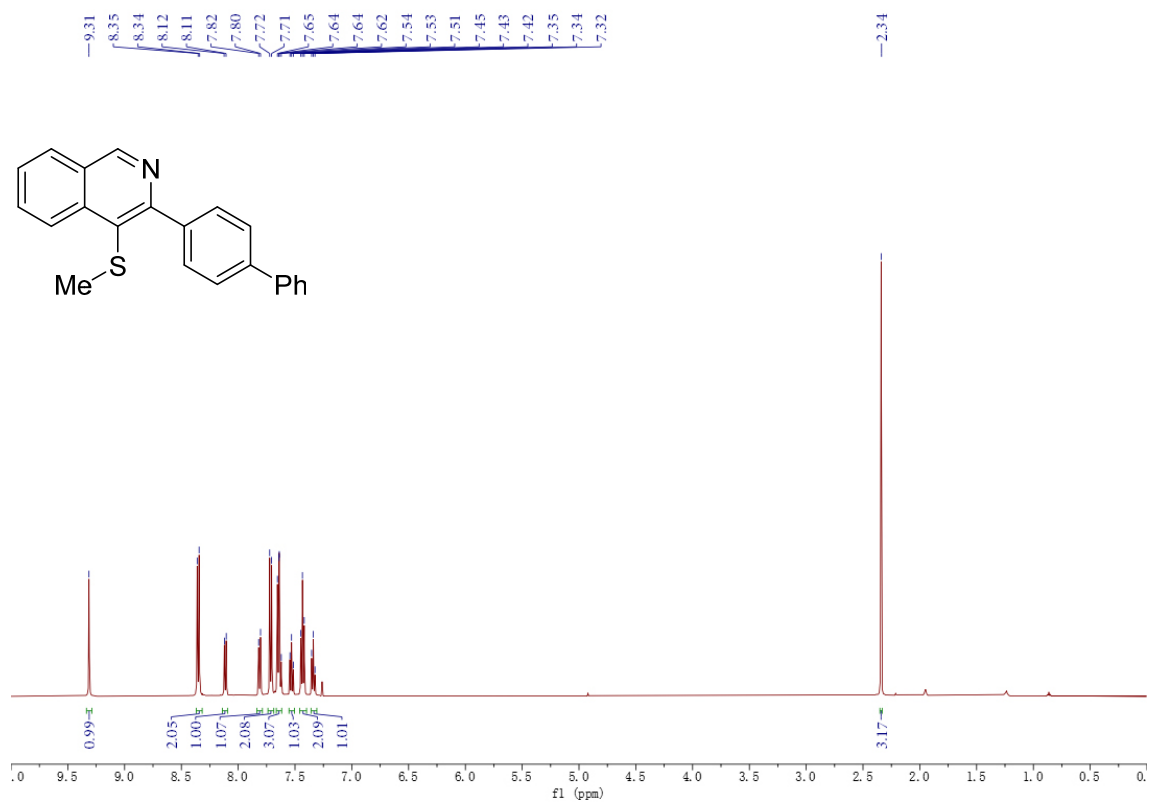
### 3-(4-Chlorophenyl)-4-(methylthio)isoquinoline (3k)



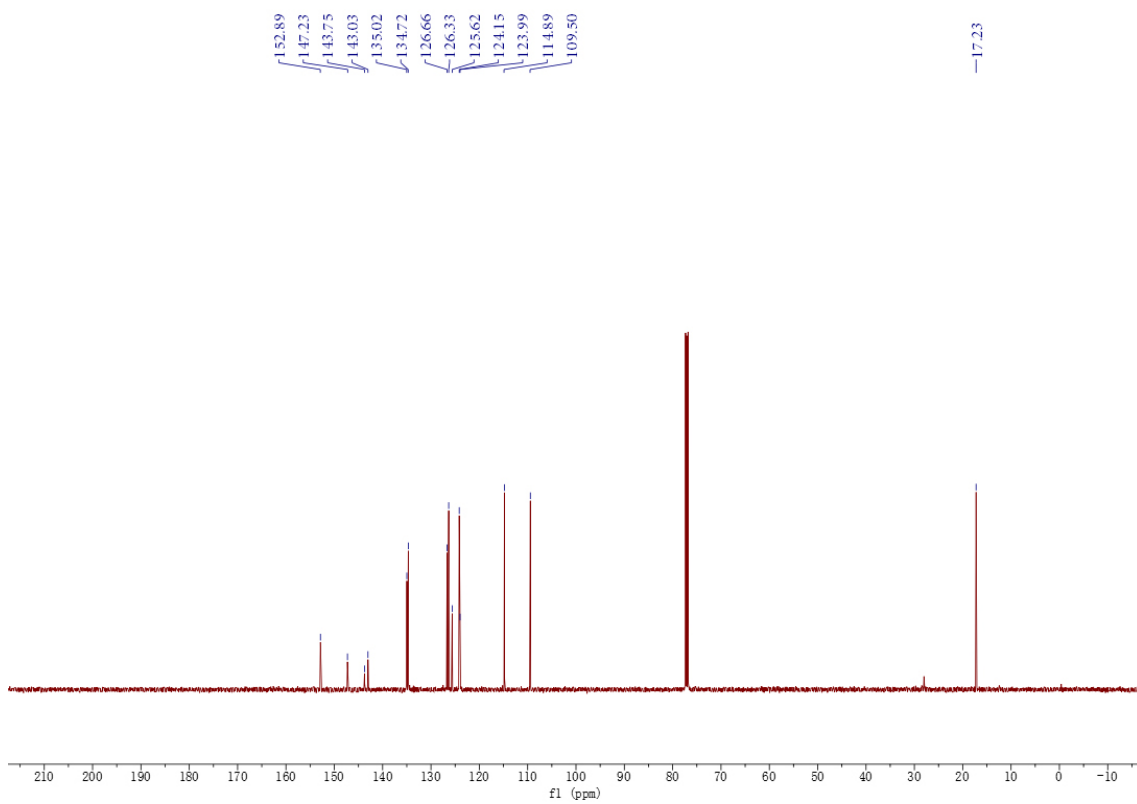
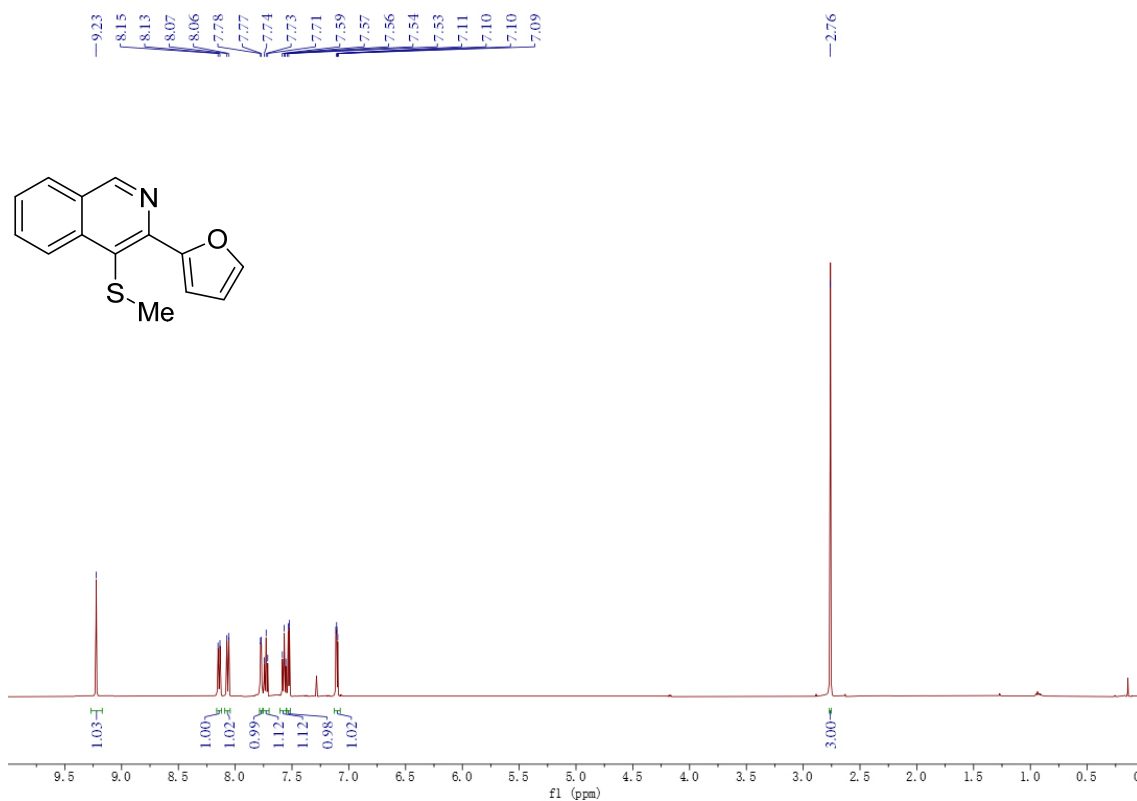
### 3-(4-Bromophenyl)-4-(methylthio)isoquinoline (31)



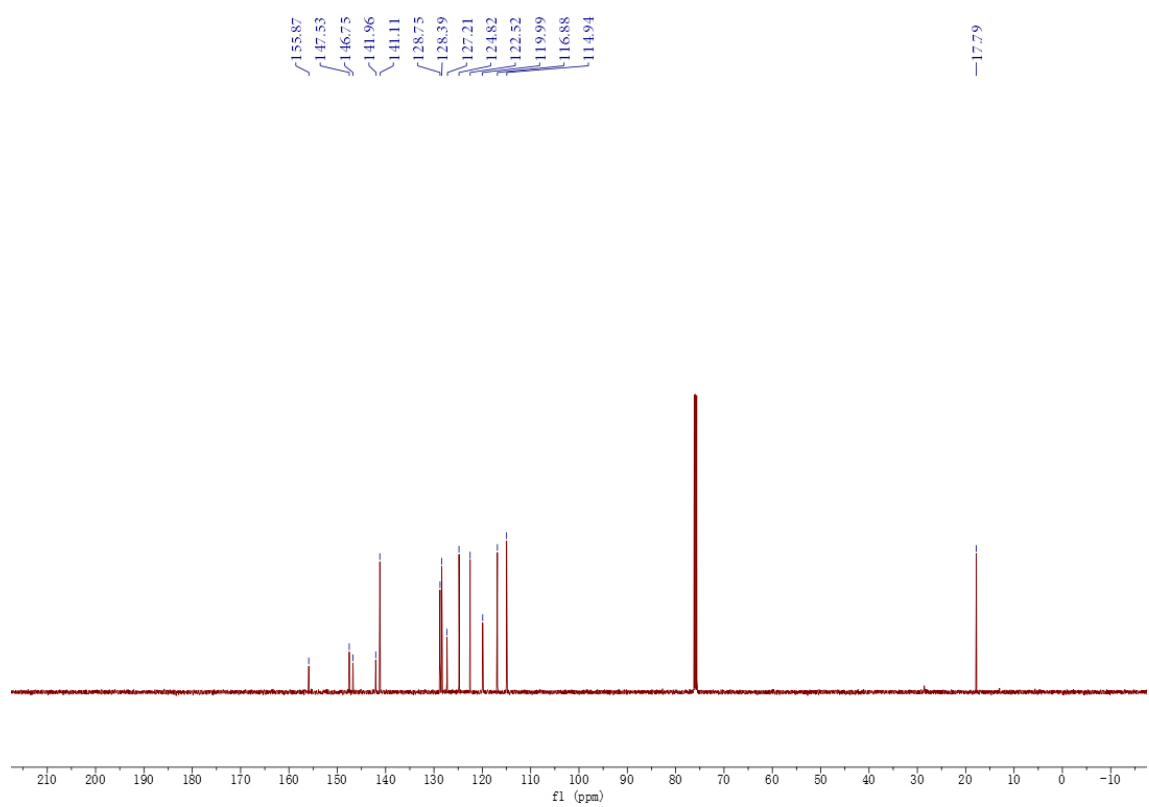
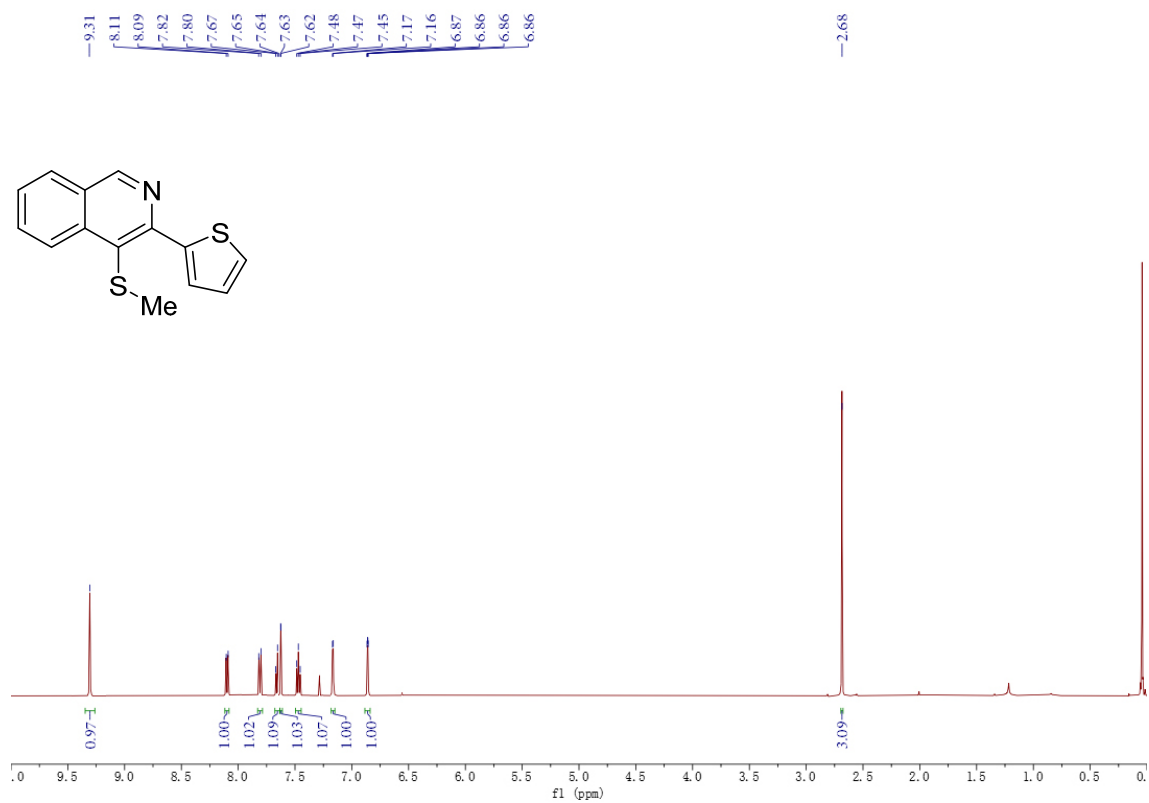
### 3-([1,1'-Biphenyl]-4-yl)-4-(methylthio)isoquinoline (3m)



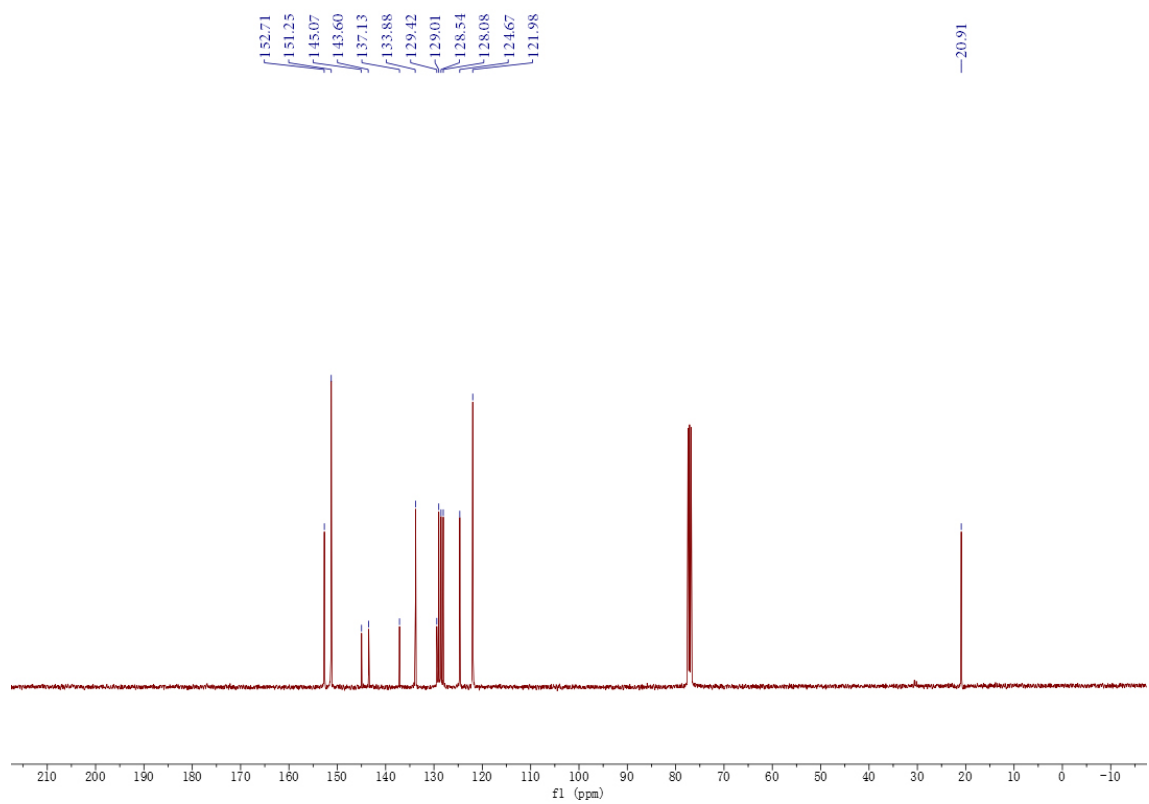
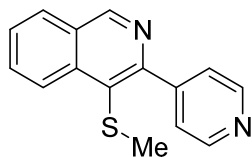
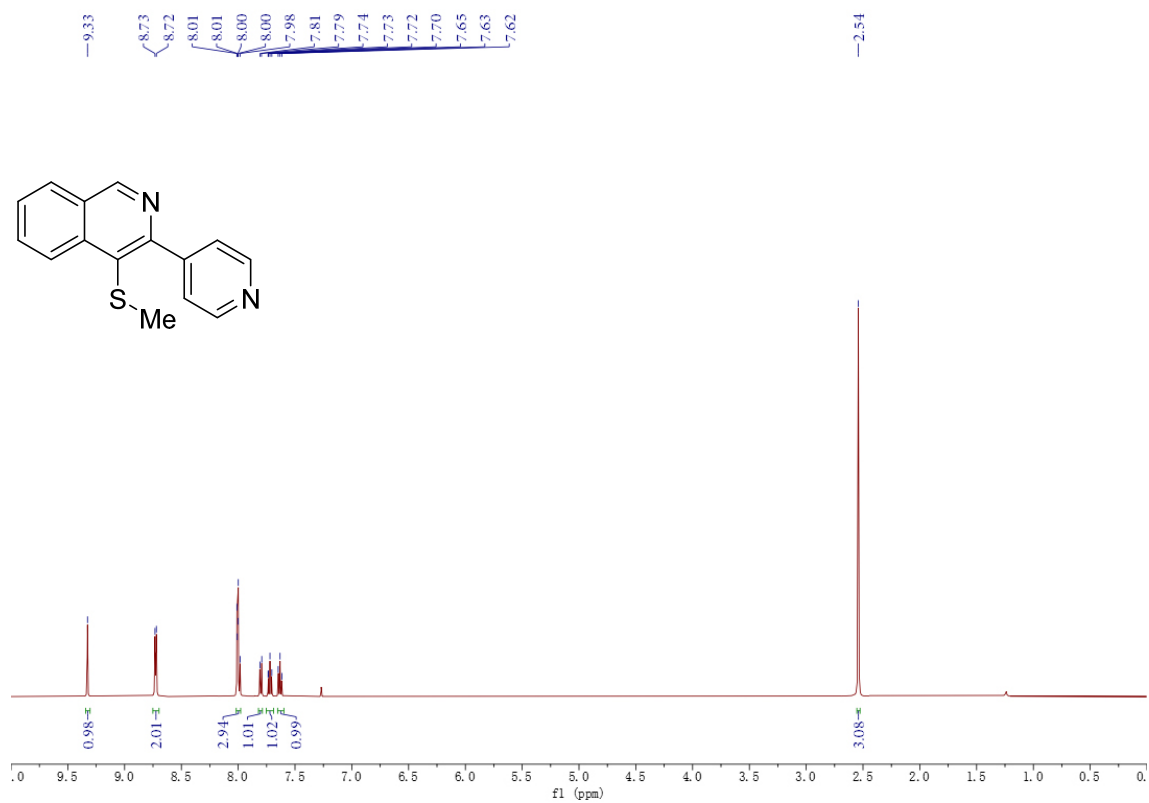
### 3-(Furan-2-yl)-4-(methylthio)isoquinoline (3n)



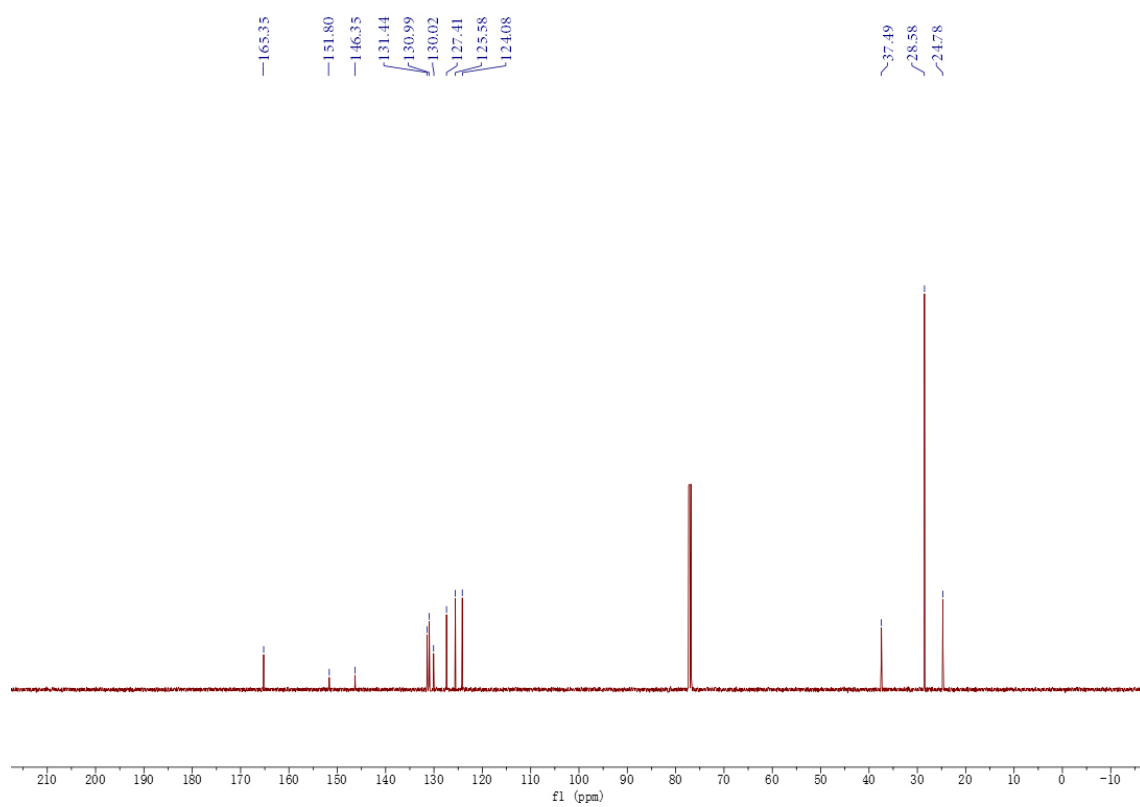
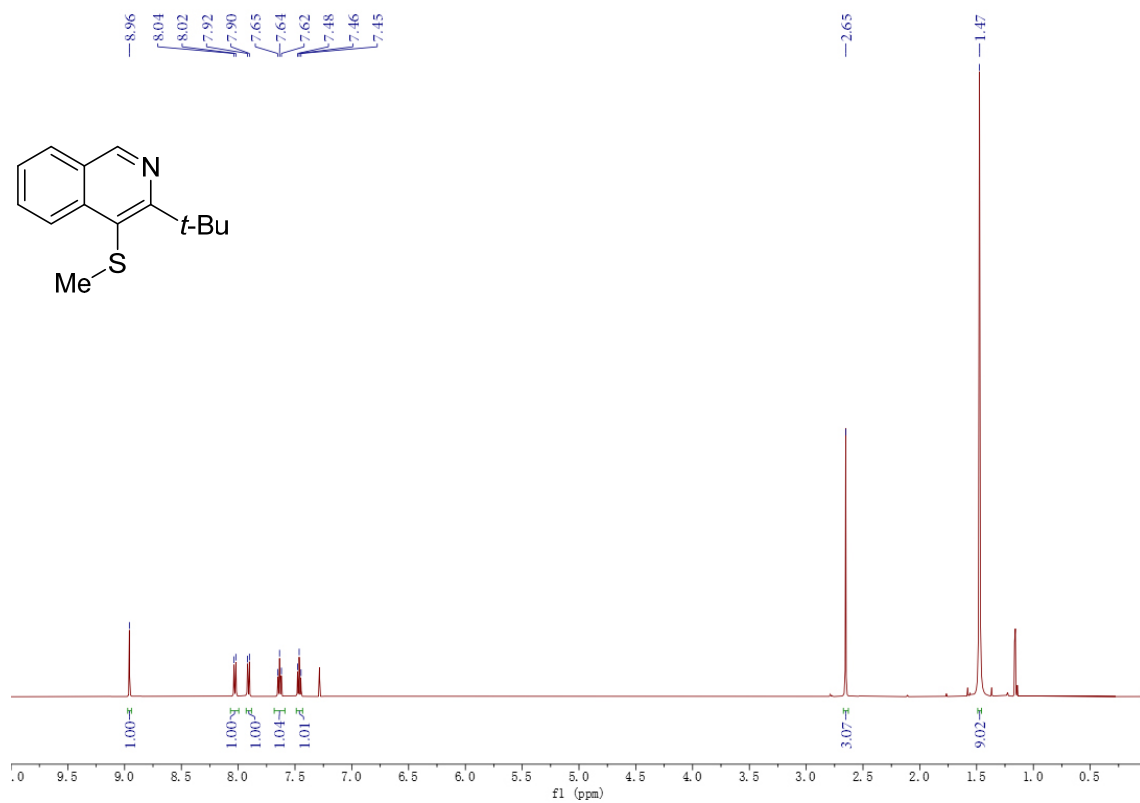
### 4-(Methylthio)-3-(thiophen-2-yl)isoquinoline (3o)



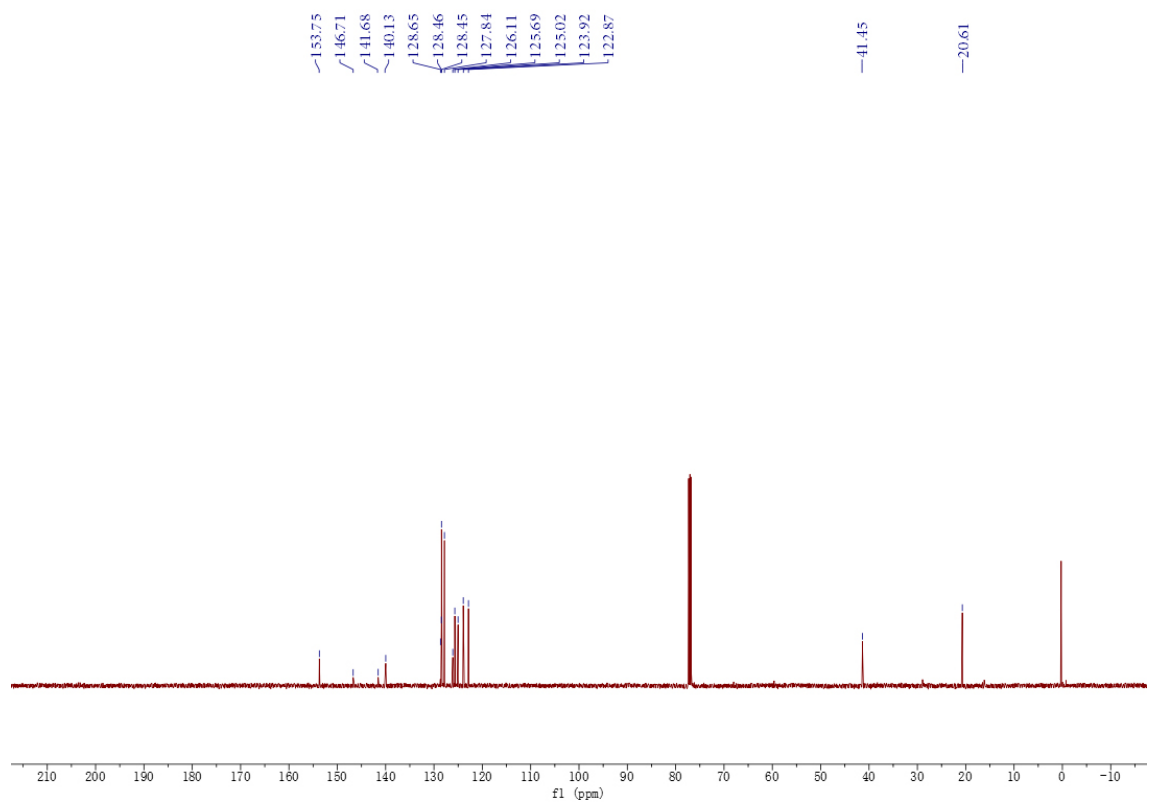
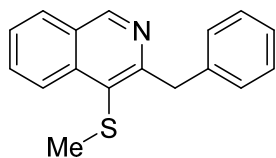
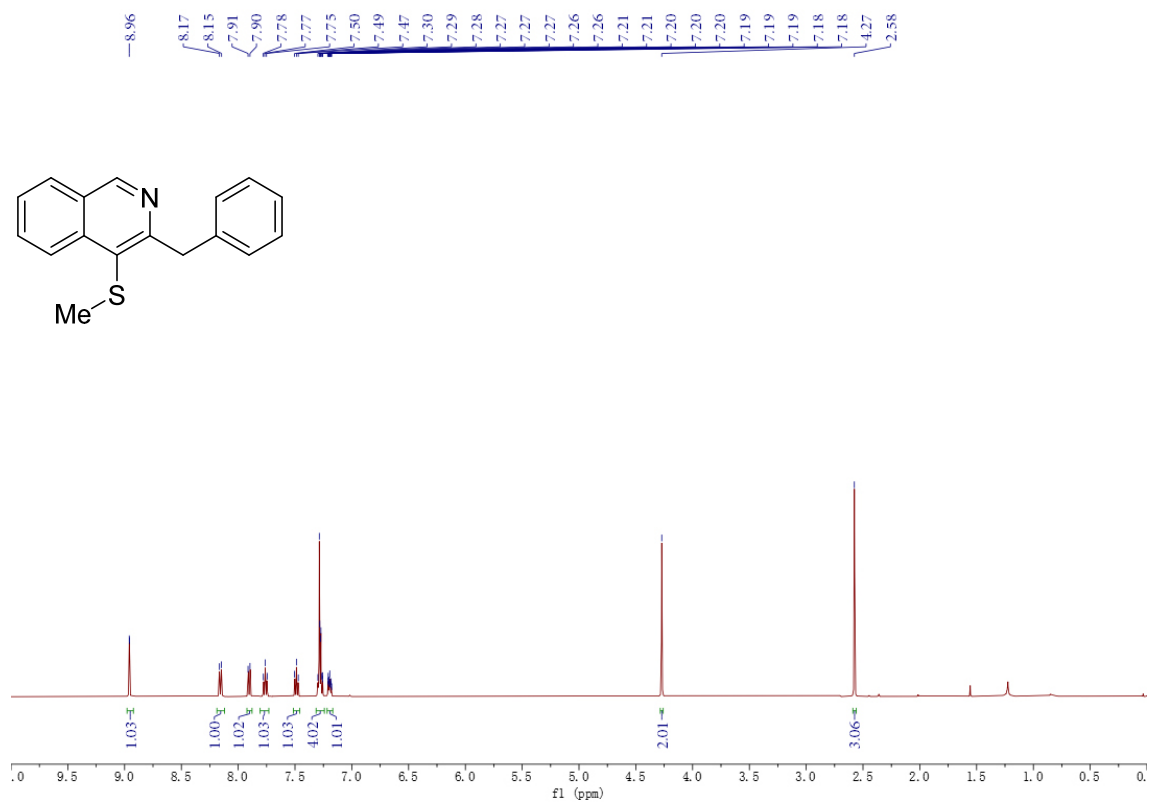
### 4-(Methylthio)-3-(pyridin-4-yl)isoquinoline (3p)



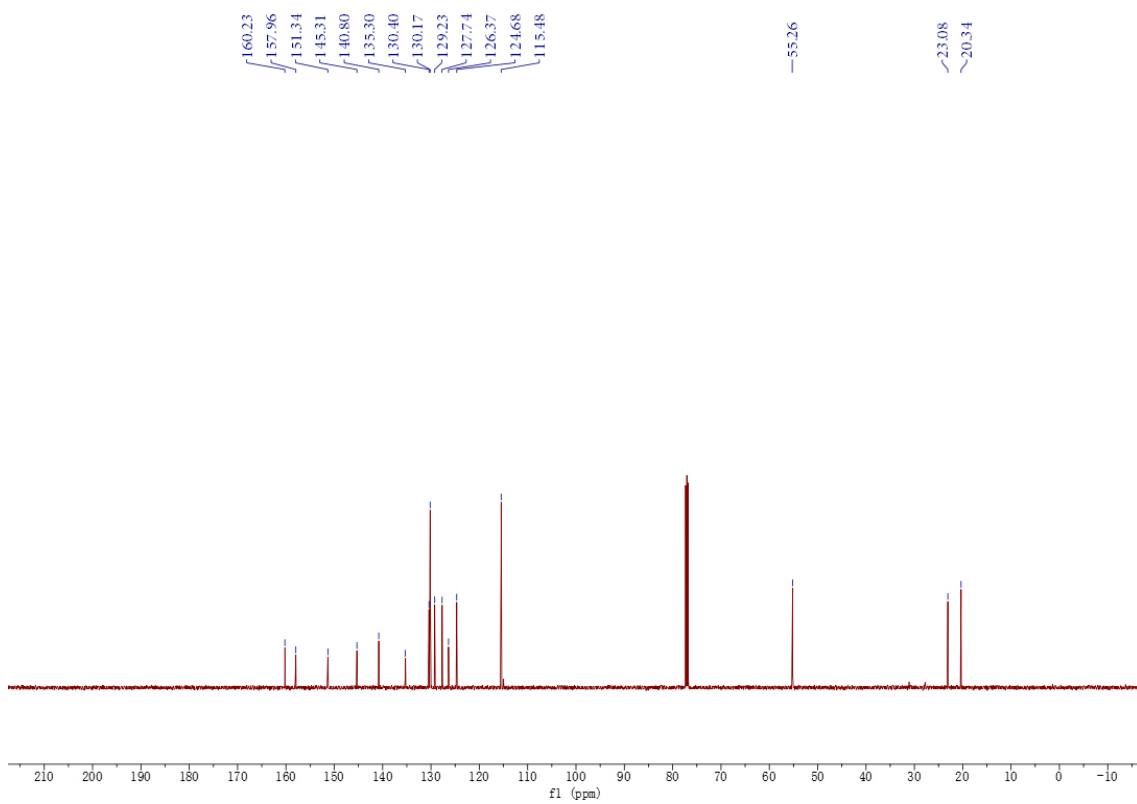
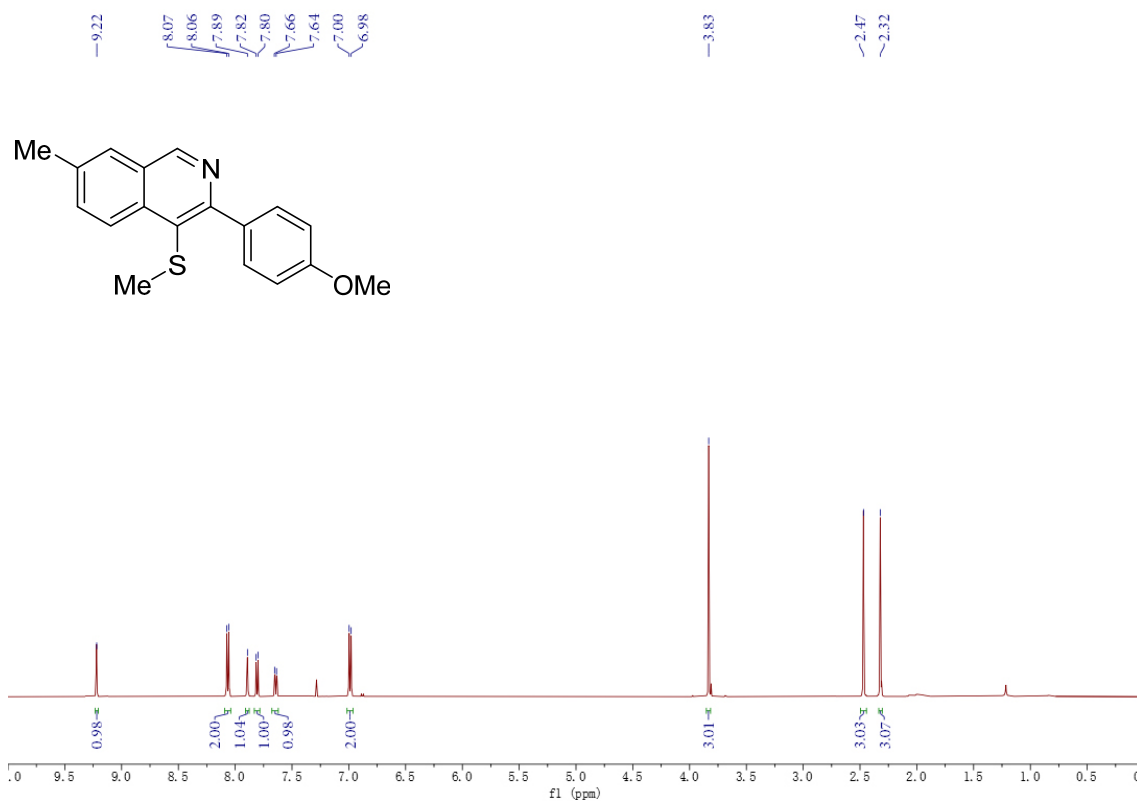
### 3-(*tert*-Butyl)-4-(methylthio)isoquinoline (3q)



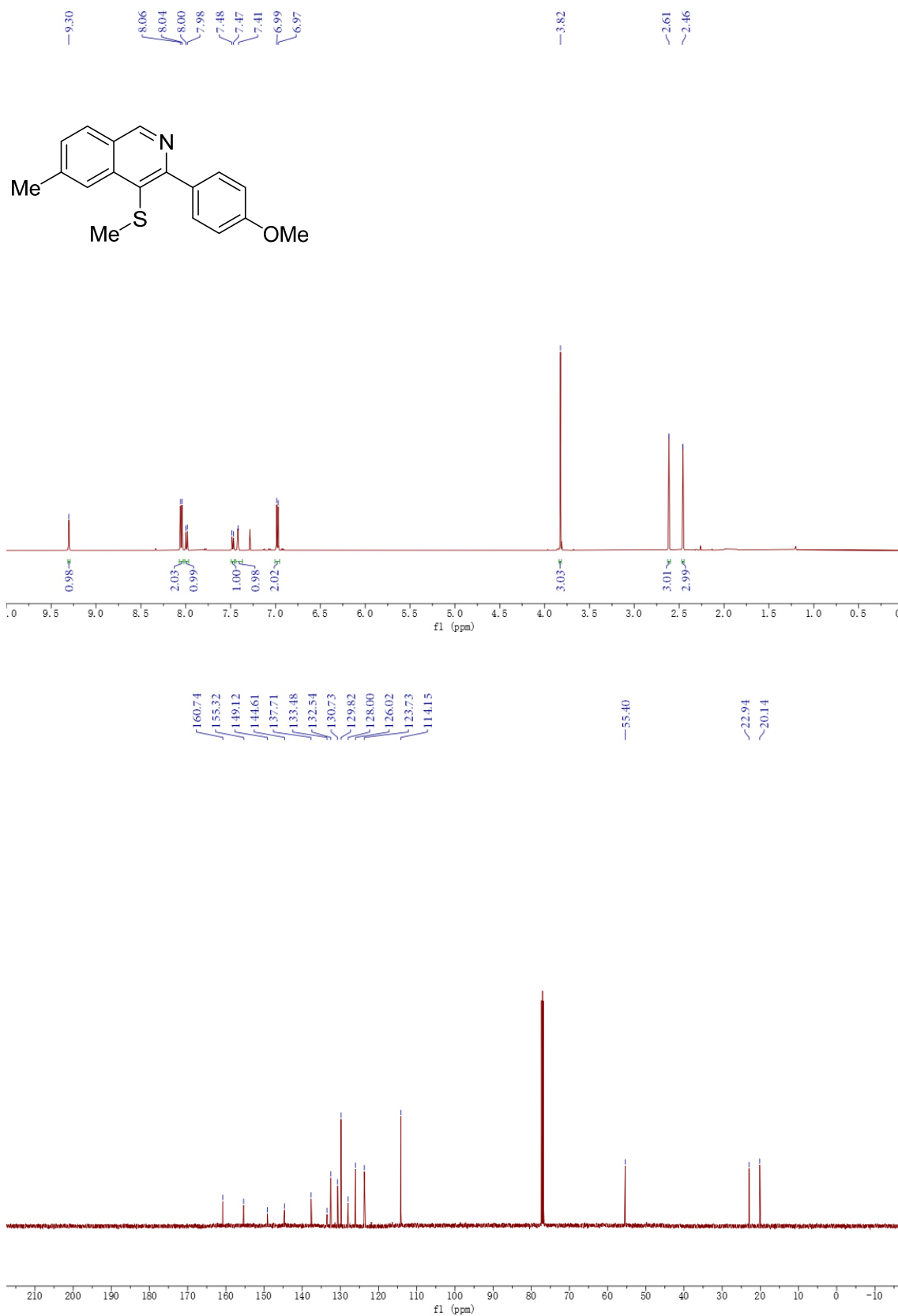
### 3-Benzyl-4-(methylthio)isoquinoline (3r)



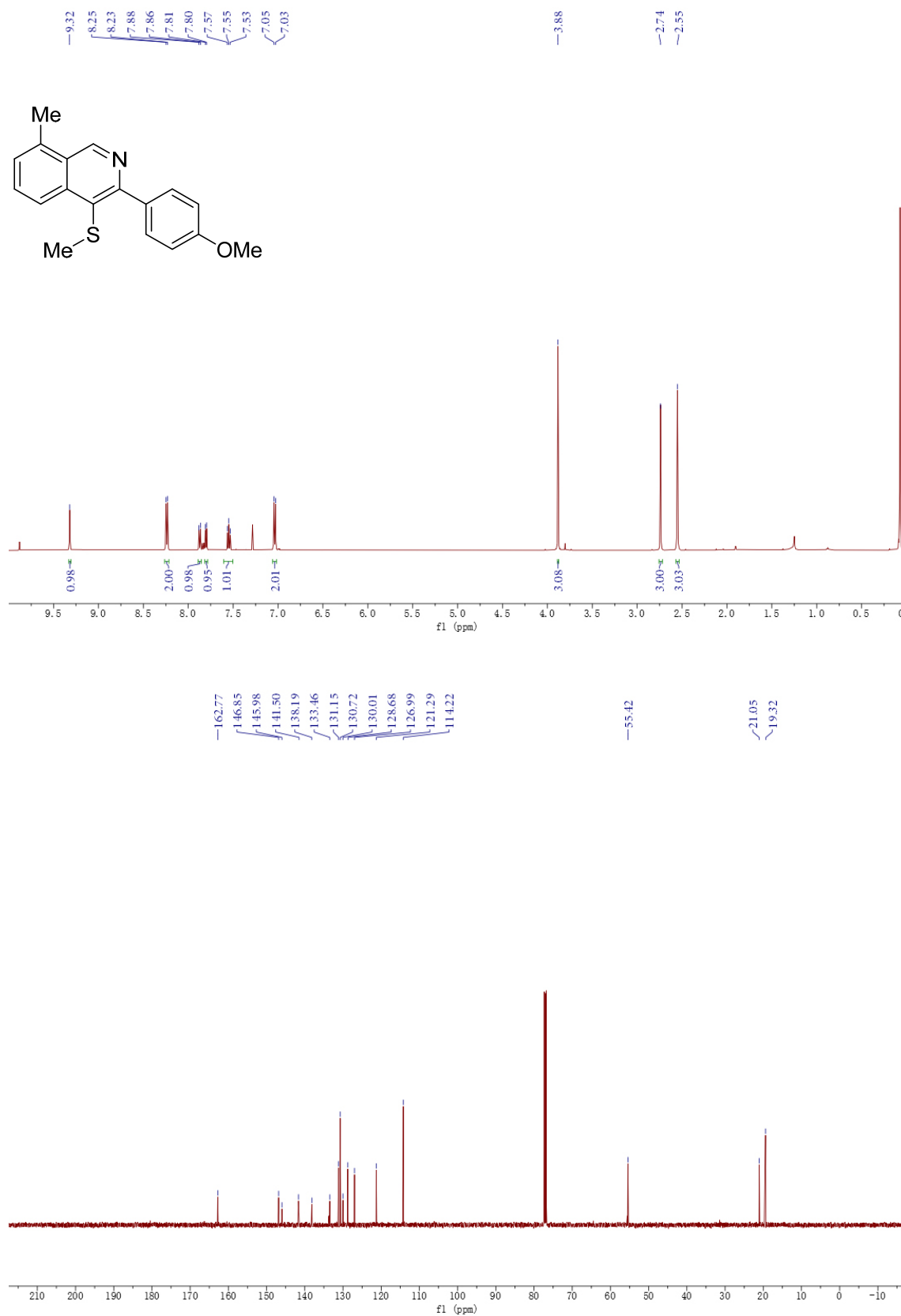
### 3-(4-Methoxyphenyl)-7-methyl-4-(methylthio)isoquinoline (3s)



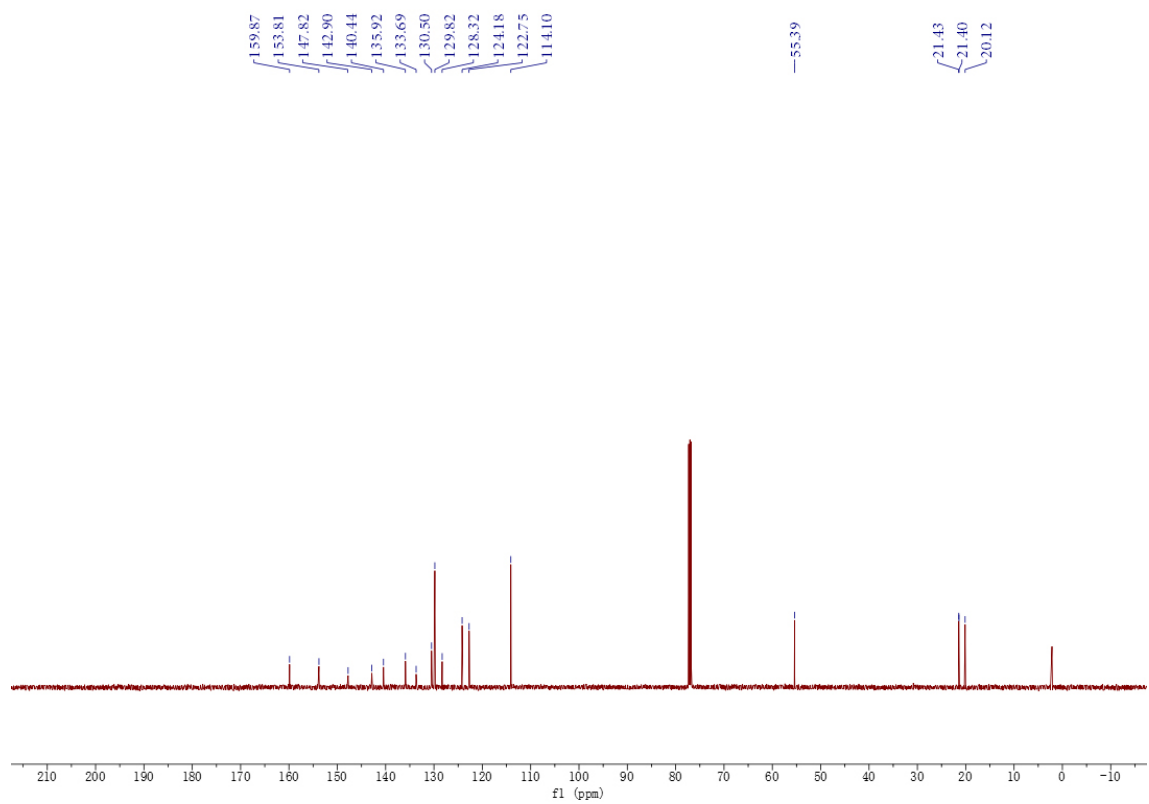
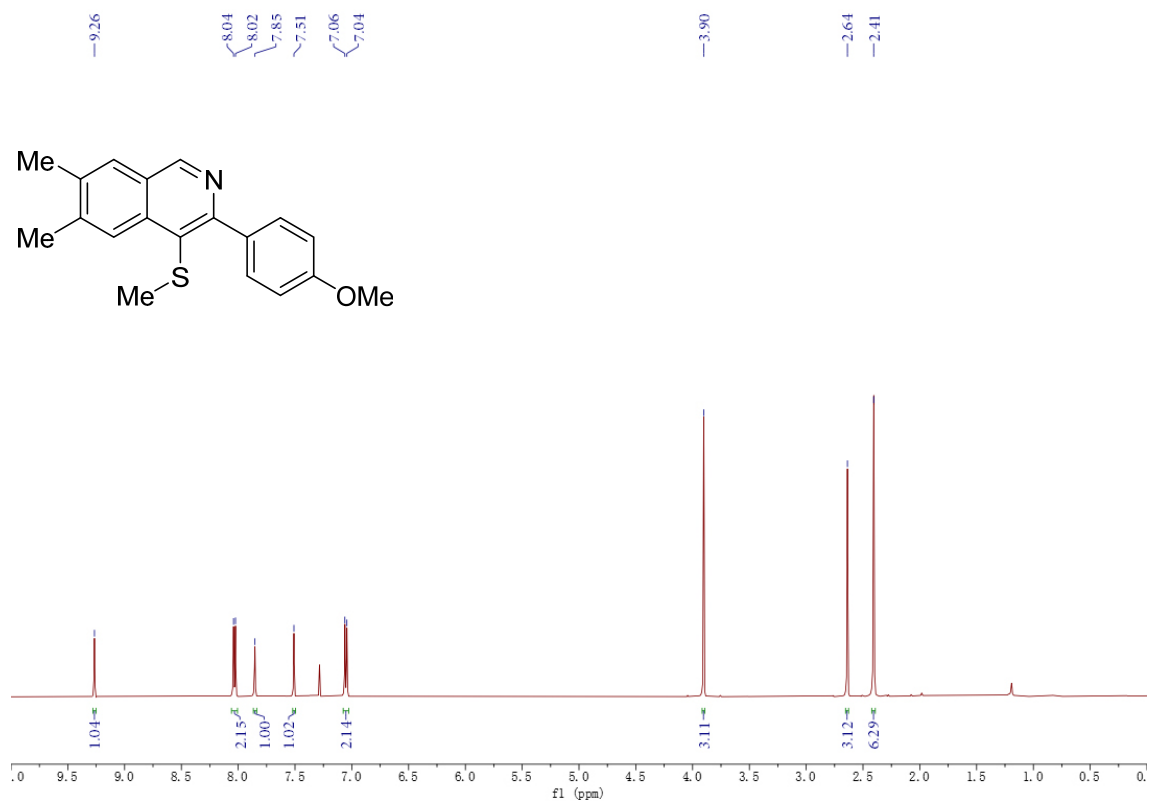
### 3-(4-Methoxyphenyl)-6-methyl-4-(methylthio)isoquinoline (3t)



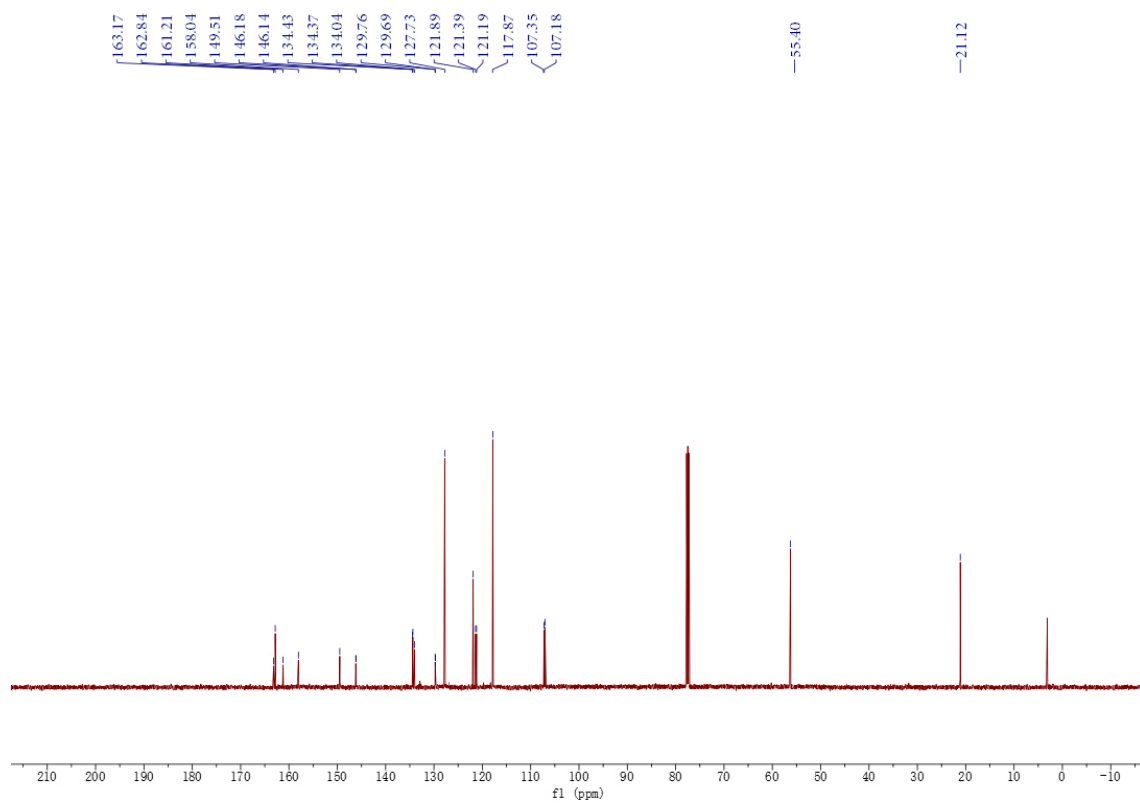
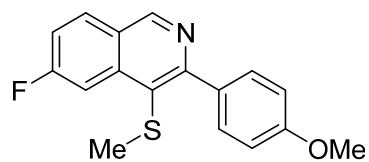
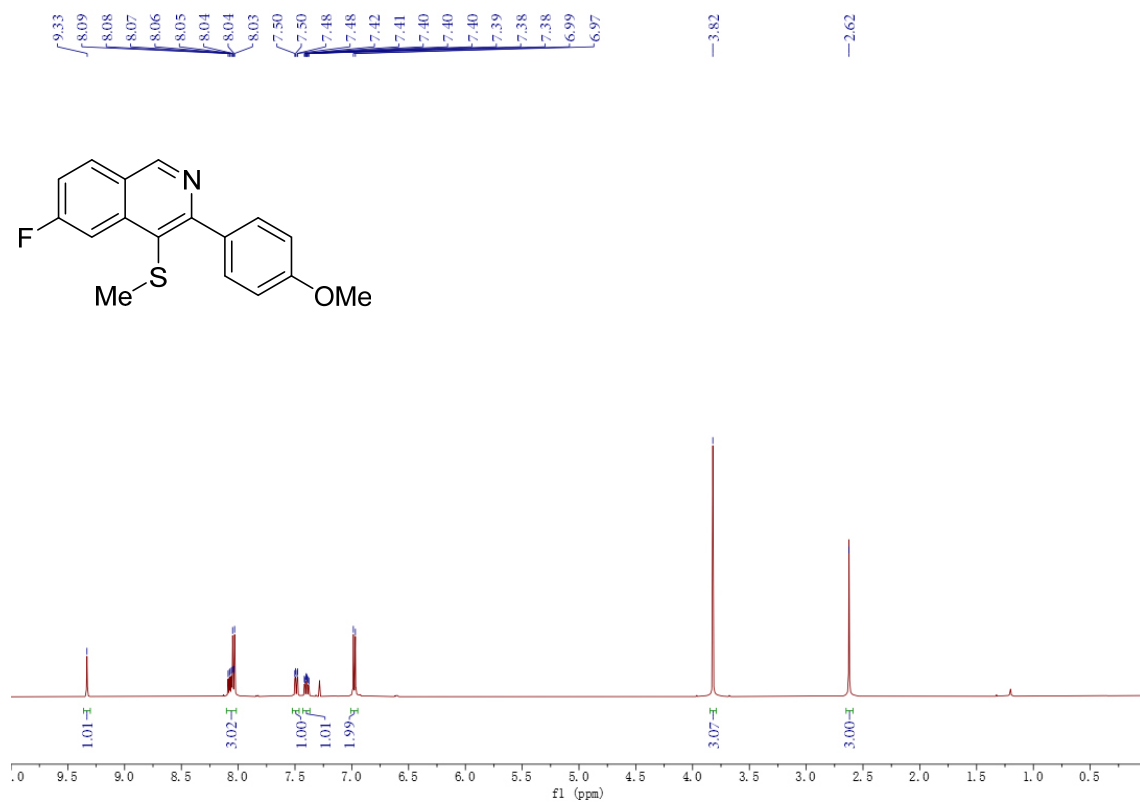
### 3-(4-Methoxyphenyl)-8-methyl-4-(methylthio)isoquinoline (3u)

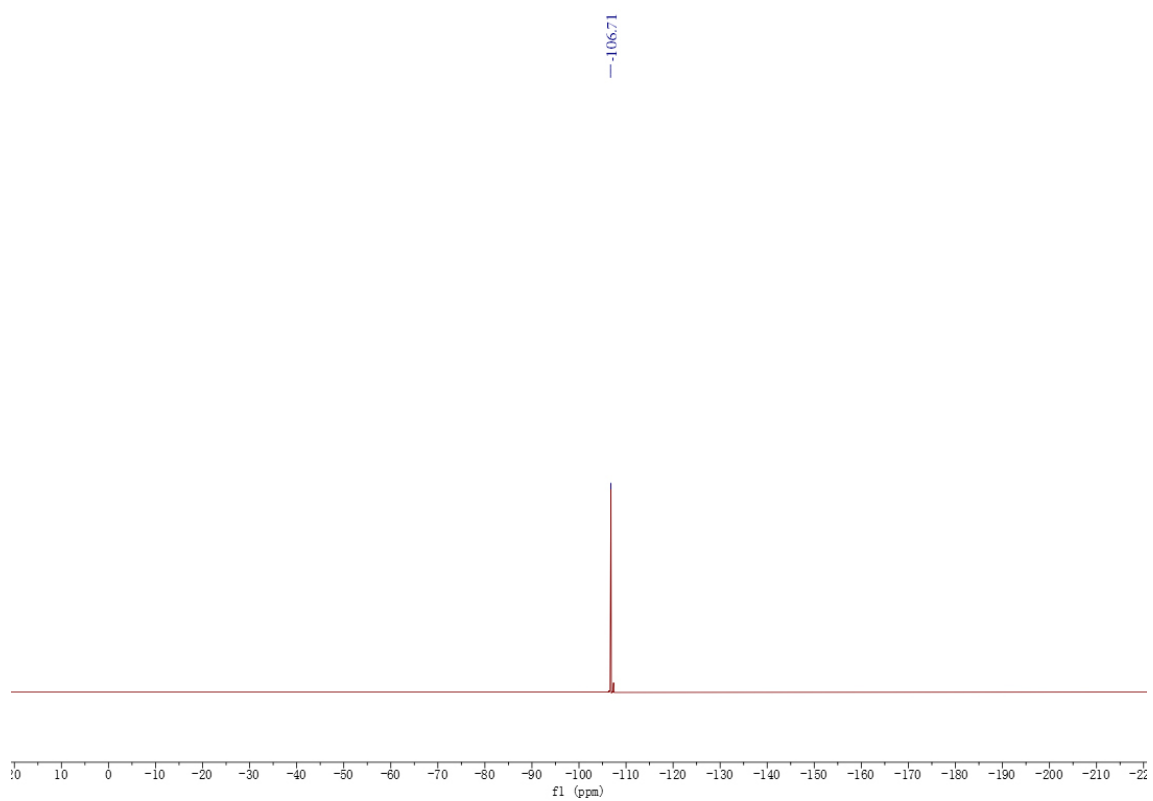


### 3-(4-Methoxyphenyl)-6,7-dimethyl-4-(methylthio)isoquinoline (3v)

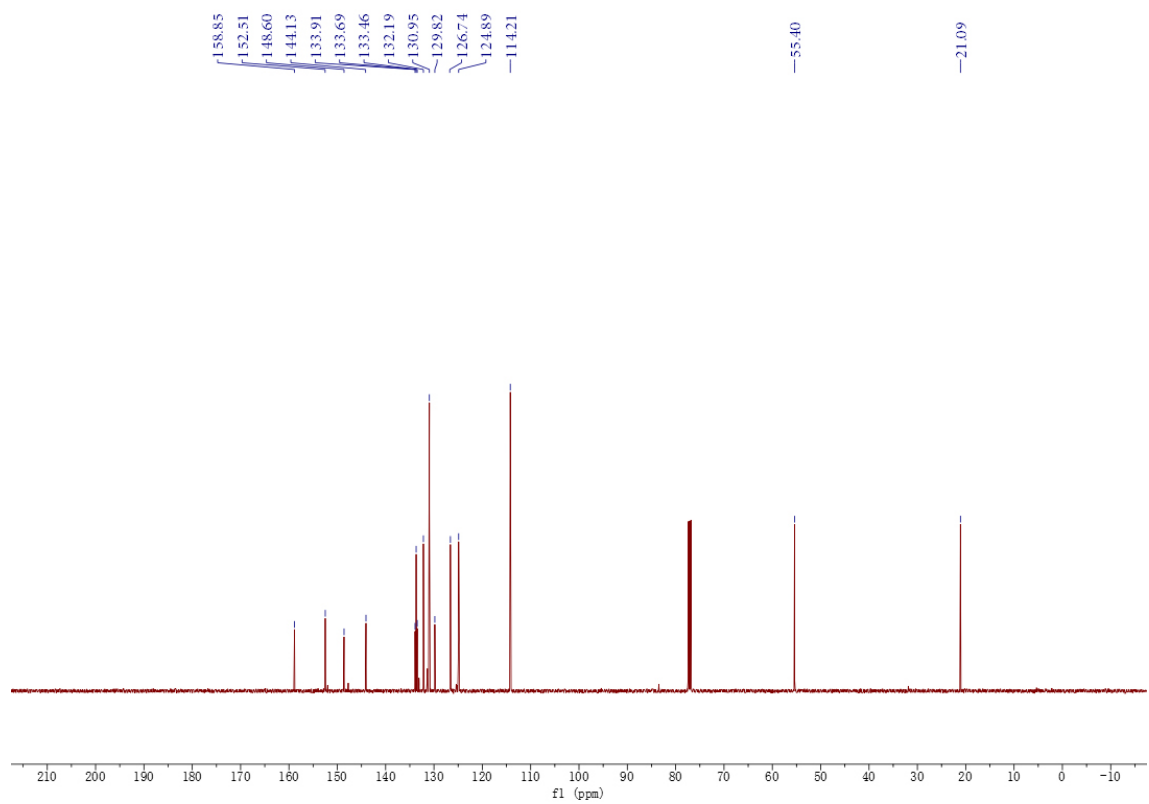
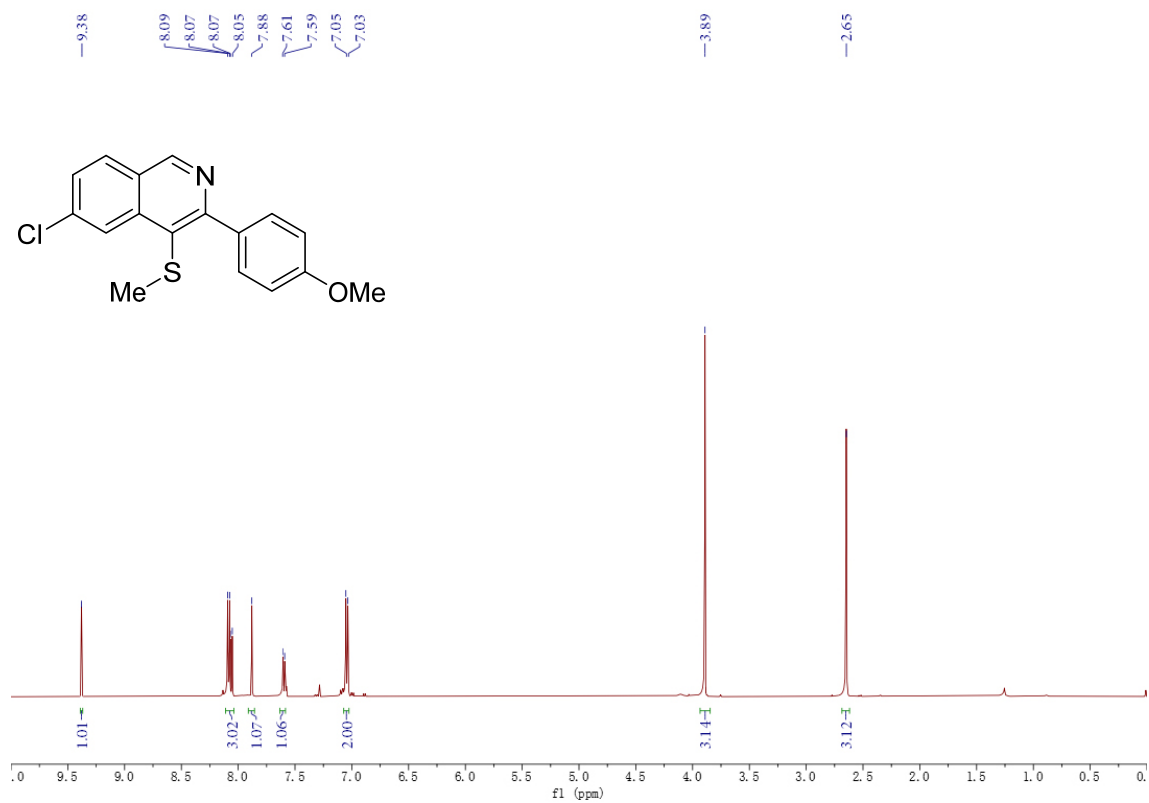


### 6-Fluoro-3-(4-methoxyphenyl)-4-(methylthio)isoquinoline (3w)

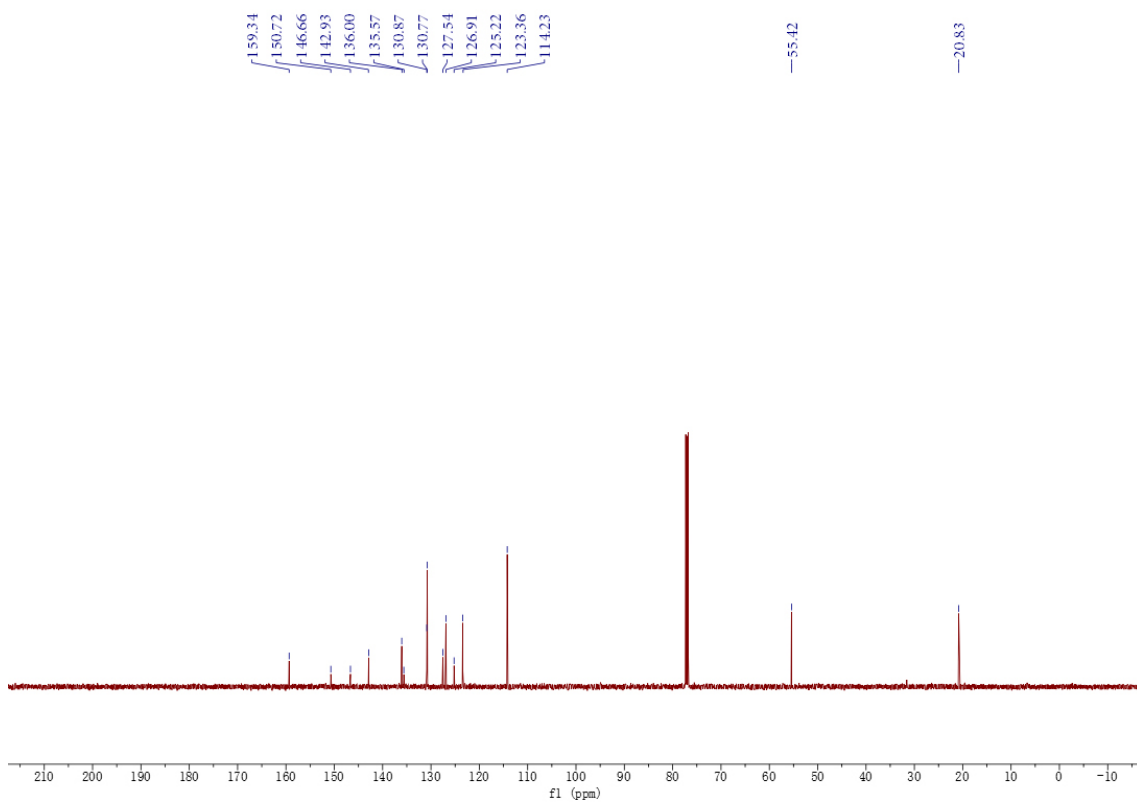
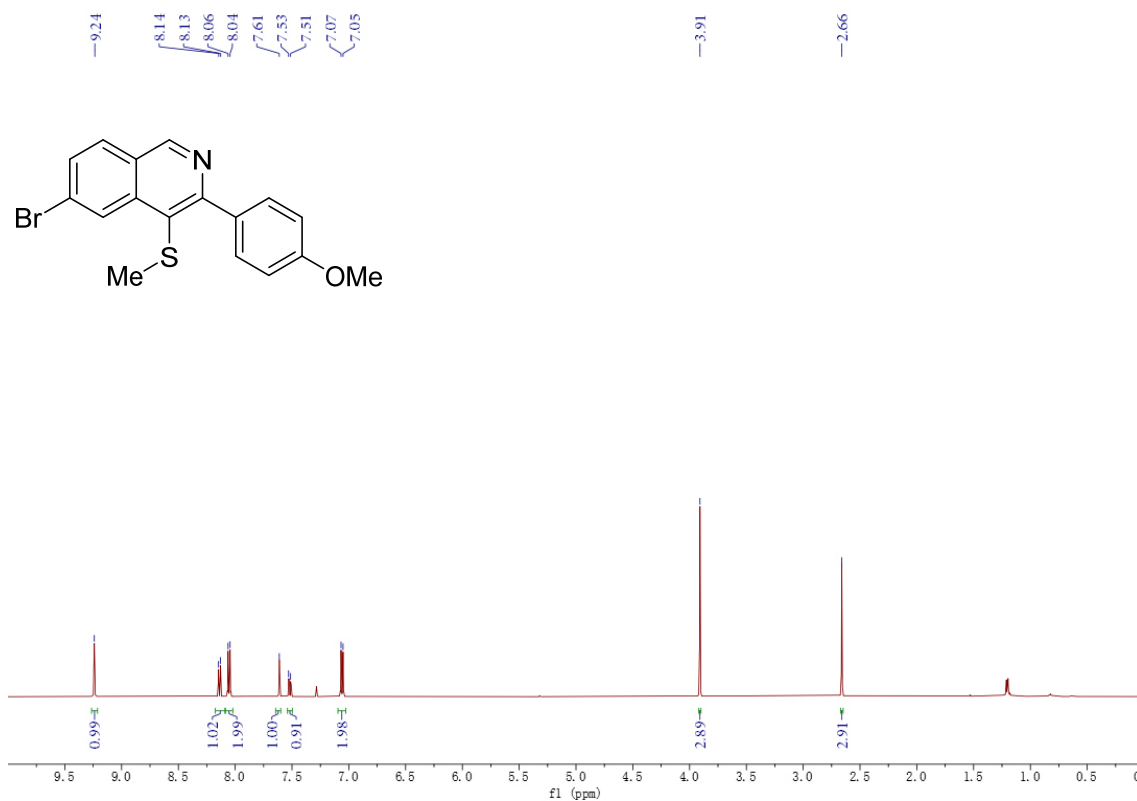




### 6-Chloro-3-(4-methoxyphenyl)-4-(methylthio)isoquinoline (3x)



### 6-Bromo-3-(4-methoxyphenyl)-4-(methylthio)isoquinoline (3y)



### 6-Methoxy-3-(4-methoxyphenyl)-4-(methylthio)isoquinoline (3z)

