

## Diastereoselective Synthesis of Tetrahydropyrans via Prins-Ritter and Prins-arythiolation Cyclization Reactions

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<sup>a</sup>*Natural Products Chemistry Group, Chemical Science & Technology Division*

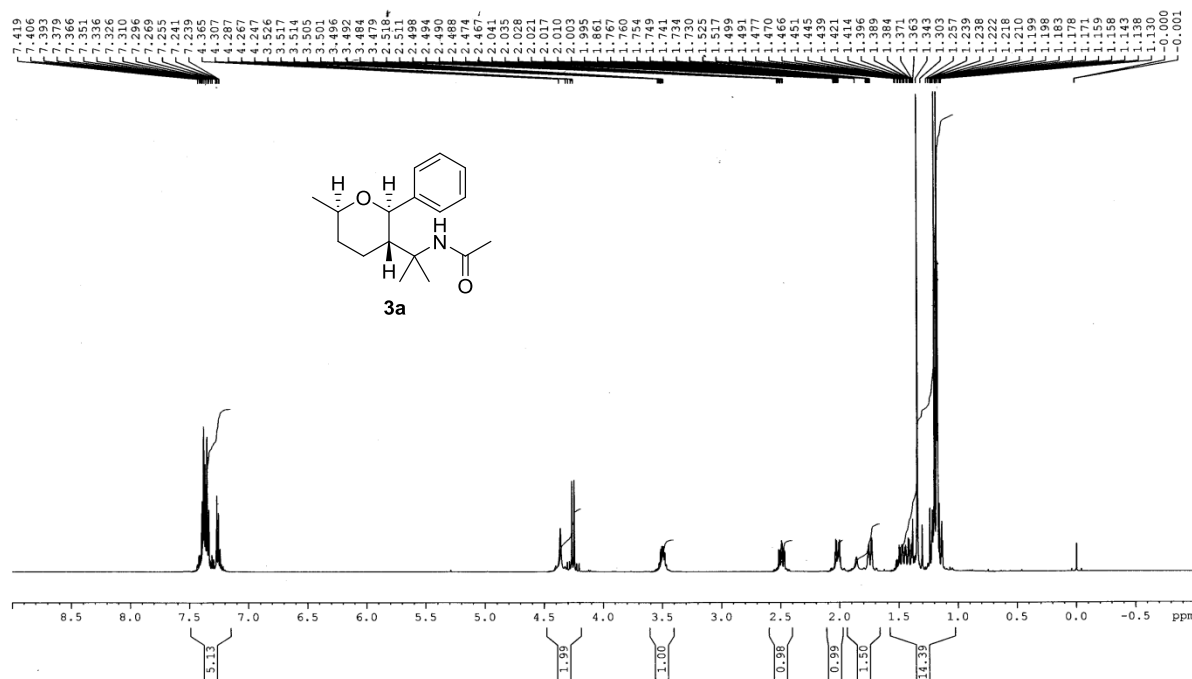
*CSIR-North East Institute of Science & Technology, Jorhat - 785006, India.*

<sup>b</sup>*Department of Chemistry, Gauhati University, Guwahati - 781014, India*

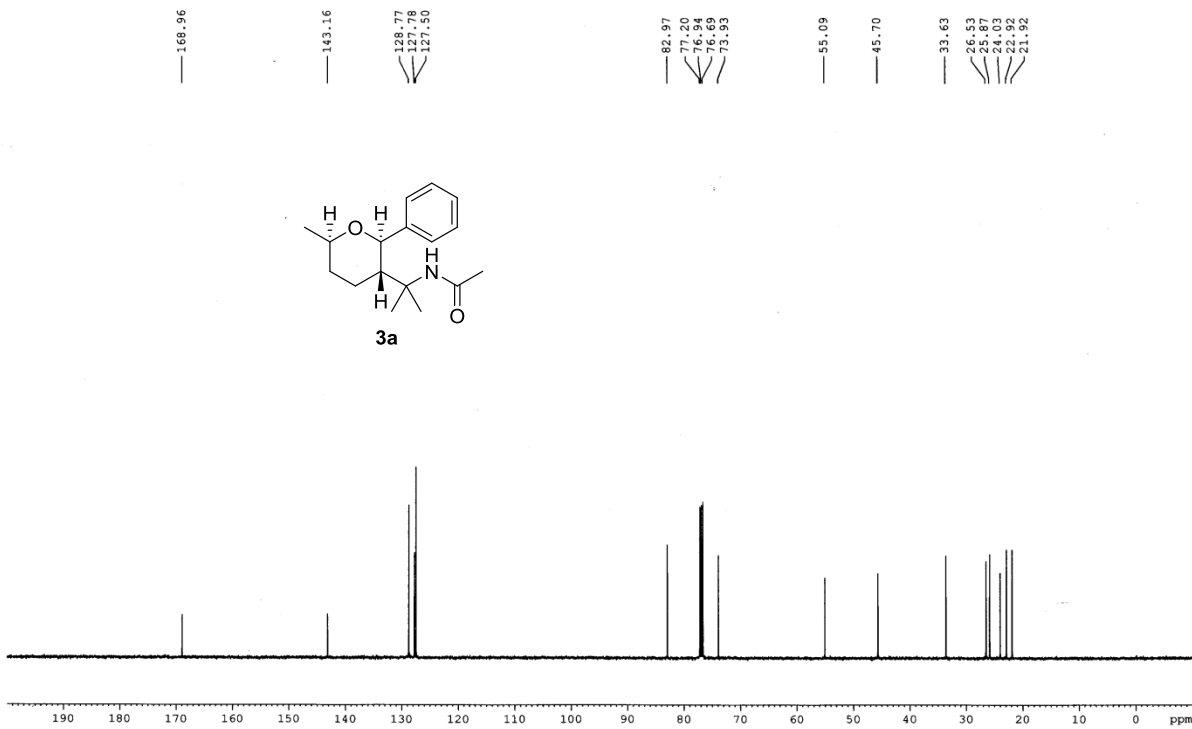
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1. Spectra of <sup>1</sup> H and <sup>13</sup> C of all compounds	S2-S33
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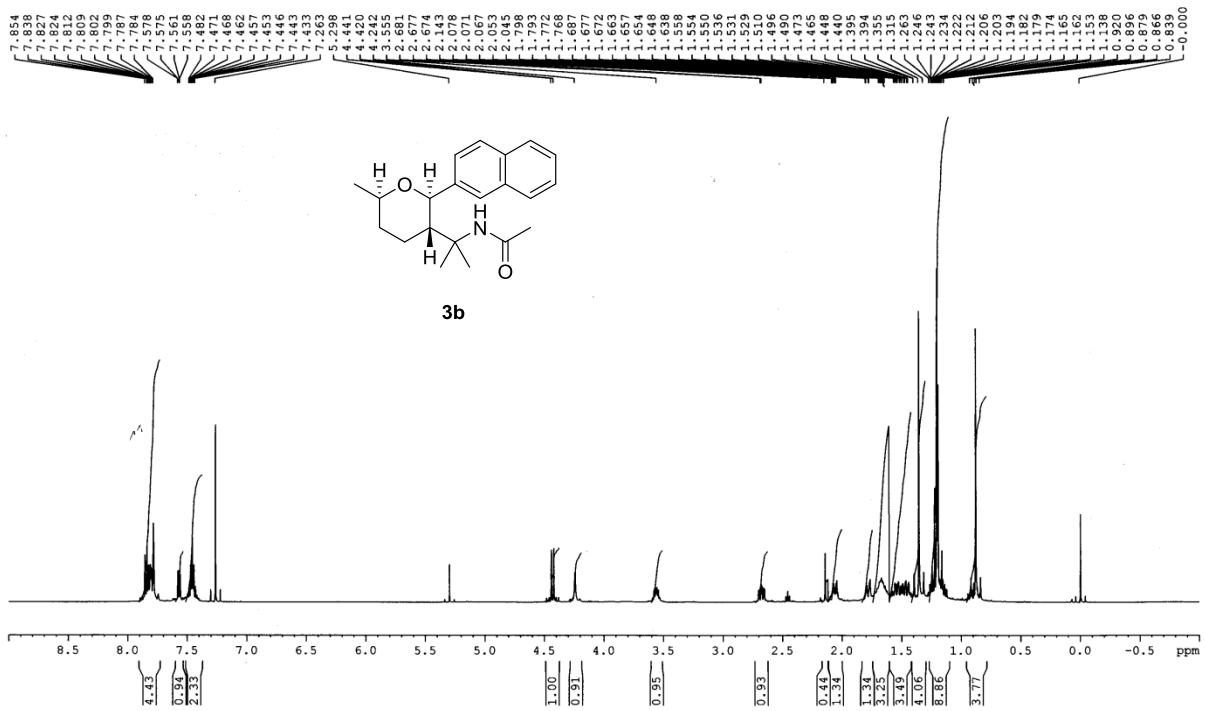
Name of Sample: NH-Benzaldehyde  
Spectrum No : 6640



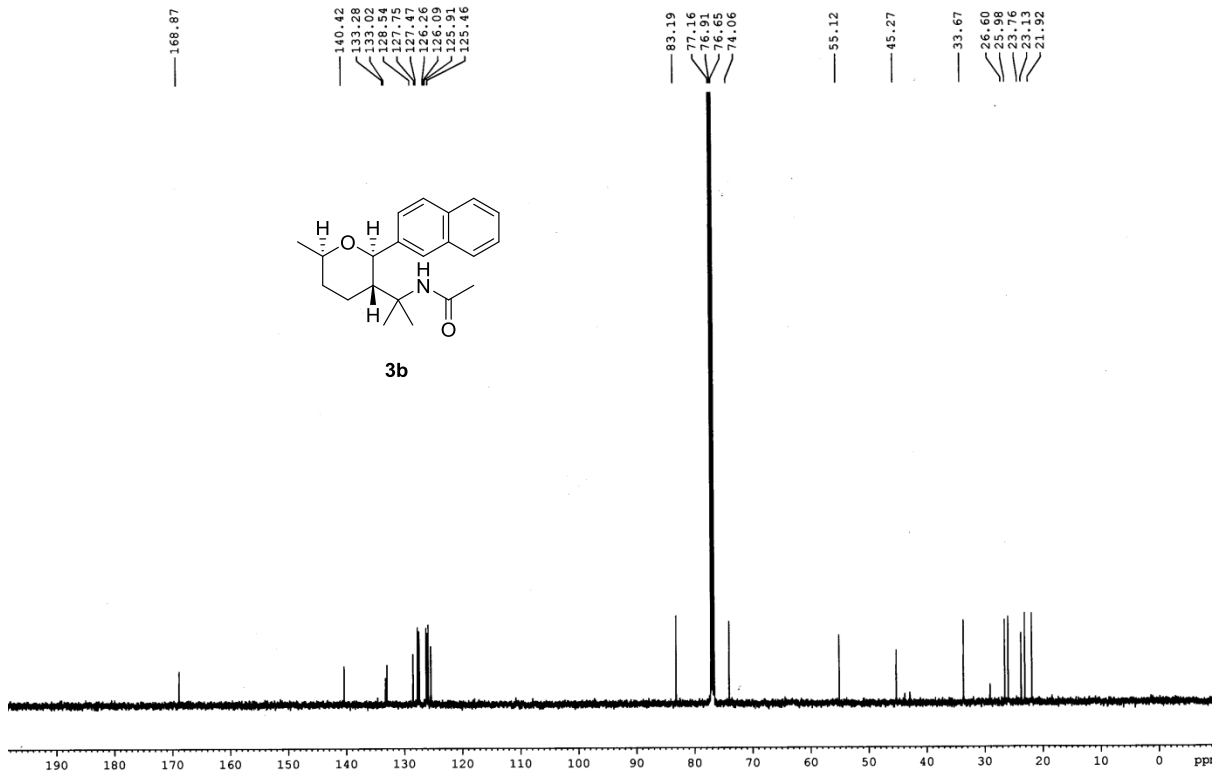
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Spectrum No : 6642

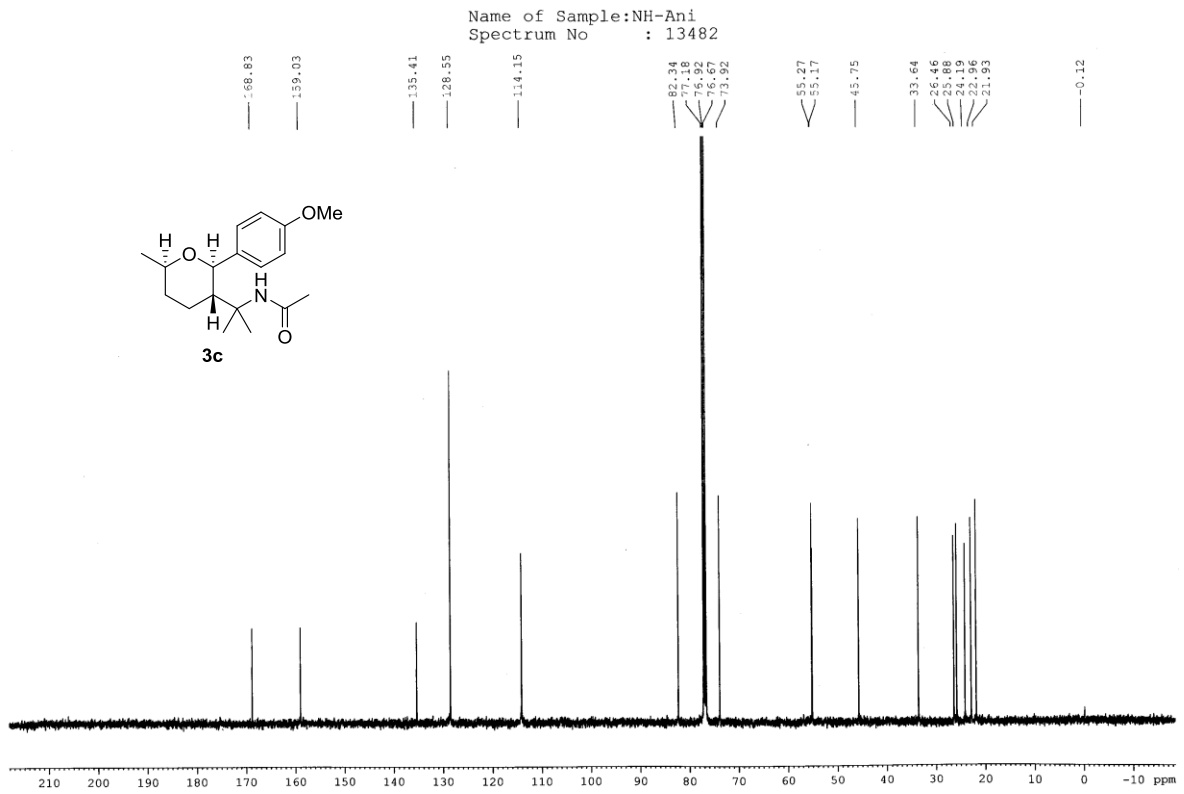
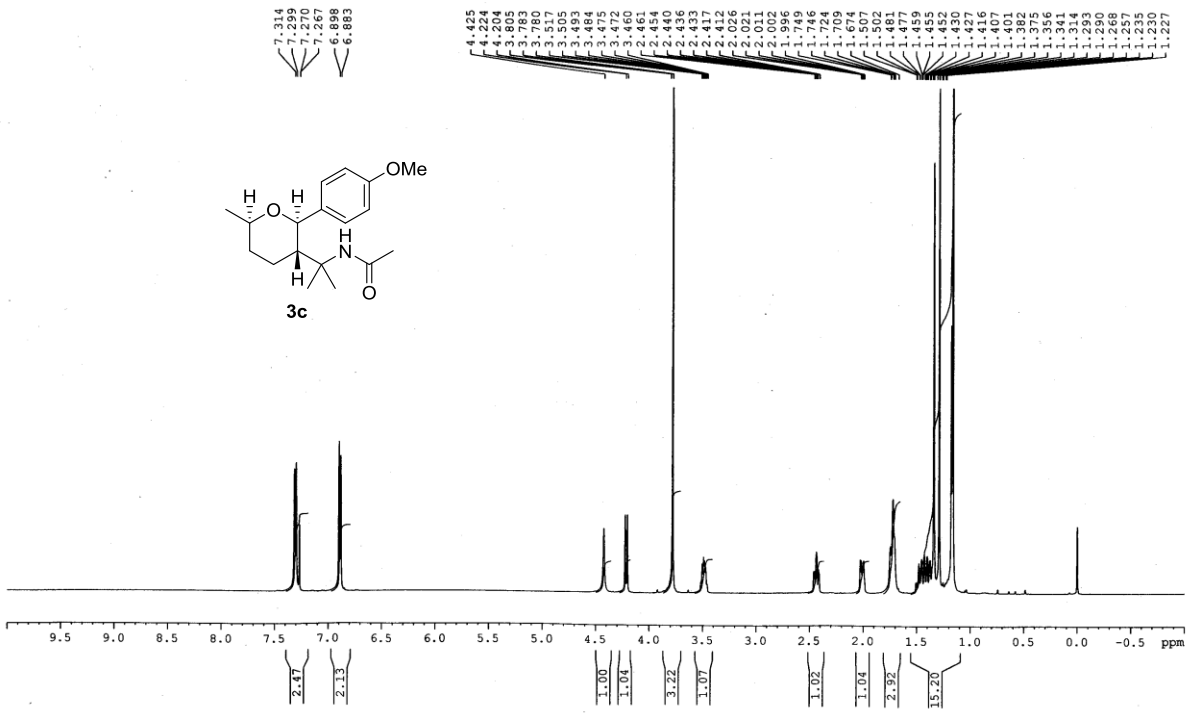


5298  
NH-Naphth



Name of Sample: NH-naph  
Spectrum No : 5275

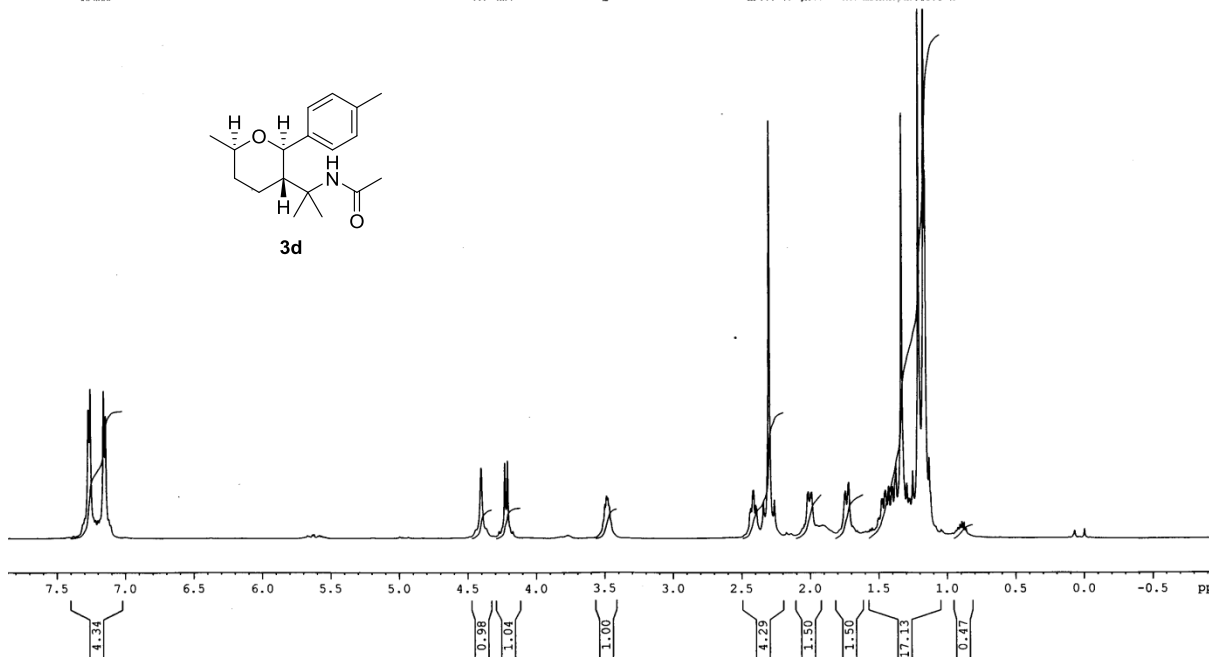
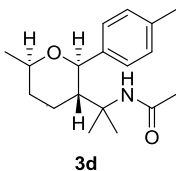




NH-Tolu  
4846

7.311  
7.289  
7.274  
7.256  
7.250  
7.202  
7.186  
7.162  
7.147  
7.123  
7.108

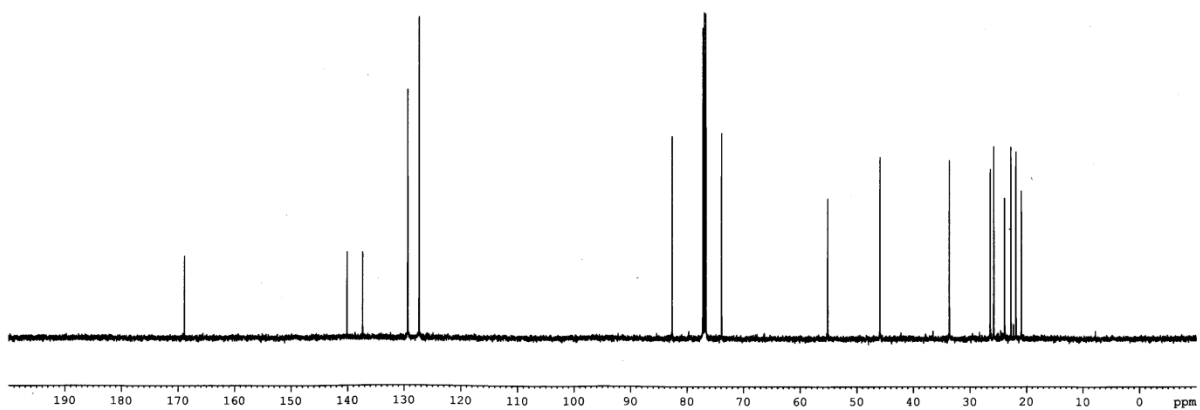
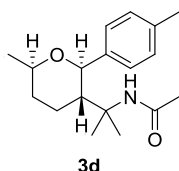
4.442  
4.404  
4.368  
4.272  
4.251  
4.232  
4.172  
4.172  
3.501  
3.490  
3.484  
3.480  
3.472  
2.482  
2.419  
2.416  
2.399  
2.394  
2.344  
2.304  
2.276  
2.142  
2.045  
2.022  
2.017  
1.998  
1.984  
1.953  
1.953  
1.912  
1.746  
1.721  
1.692  
1.659  
1.597  
1.581  
1.565  
1.551  
1.537  
1.507  
1.500  
1.482  
1.464  
1.454  
1.429  
1.408  
1.402  
1.377  
1.337  
1.281  
1.274  
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1.154  
1.108  
1.046  
1.036  
1.036  
0.939



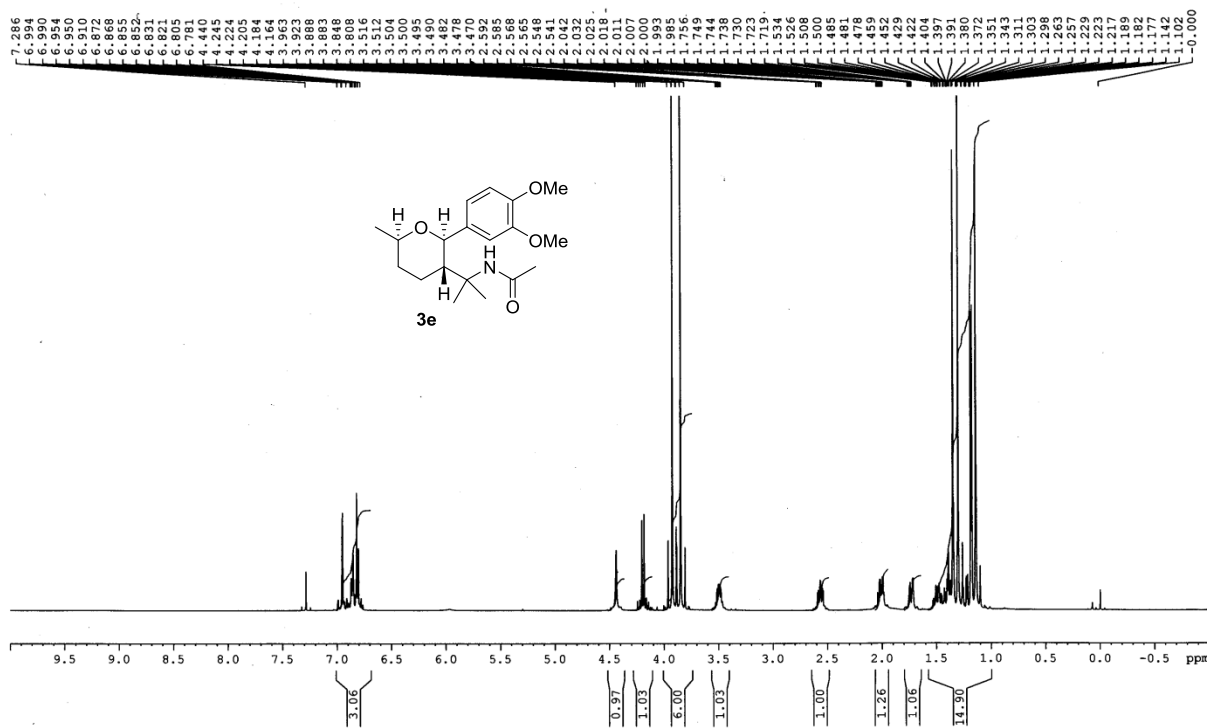
Tolu  
4847

168.89  
140.14  
137.38  
129.37  
127.37

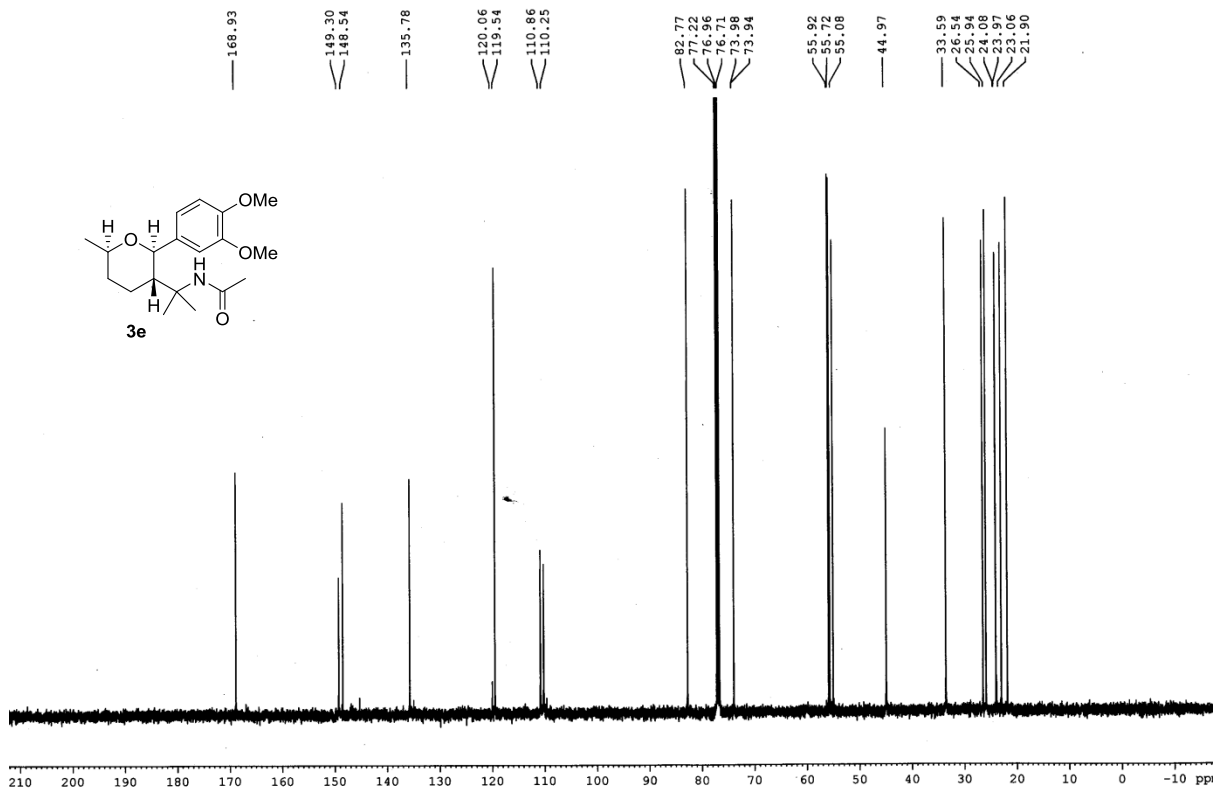
82.66  
77.20  
76.84  
73.90  
55.17  
45.95  
33.64  
26.45  
25.84  
23.92  
22.79  
22.35  
20.96



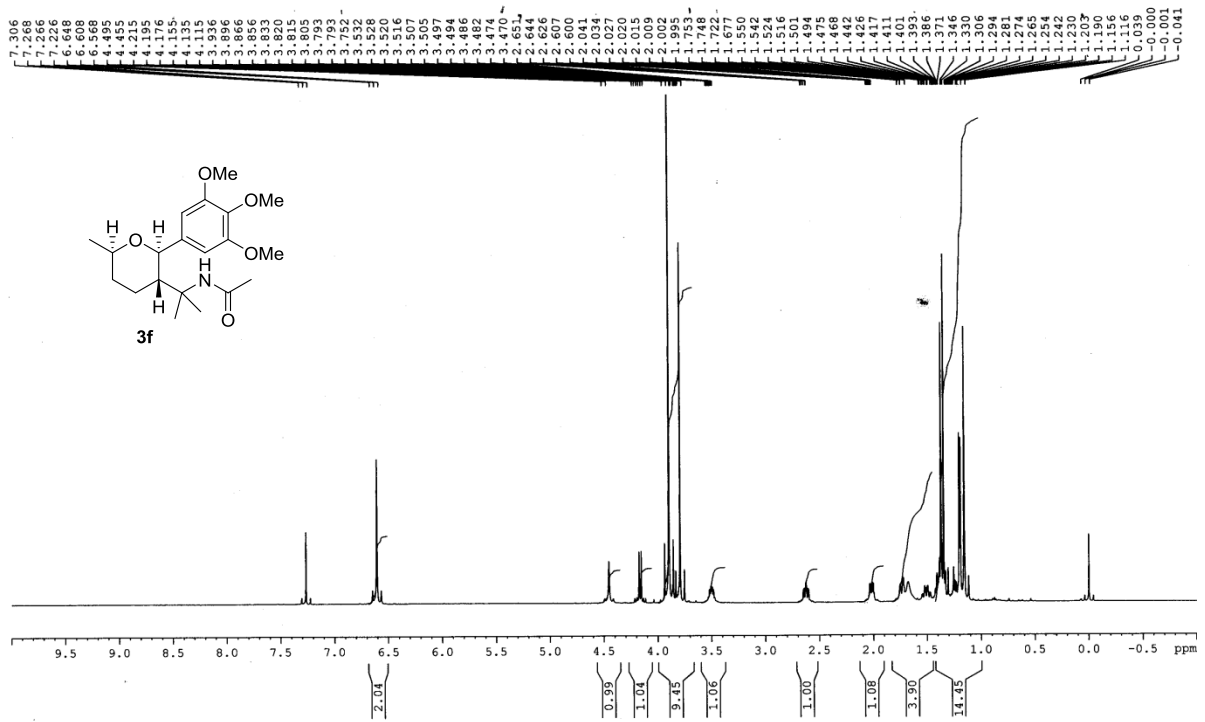
NH-Vera  
5770



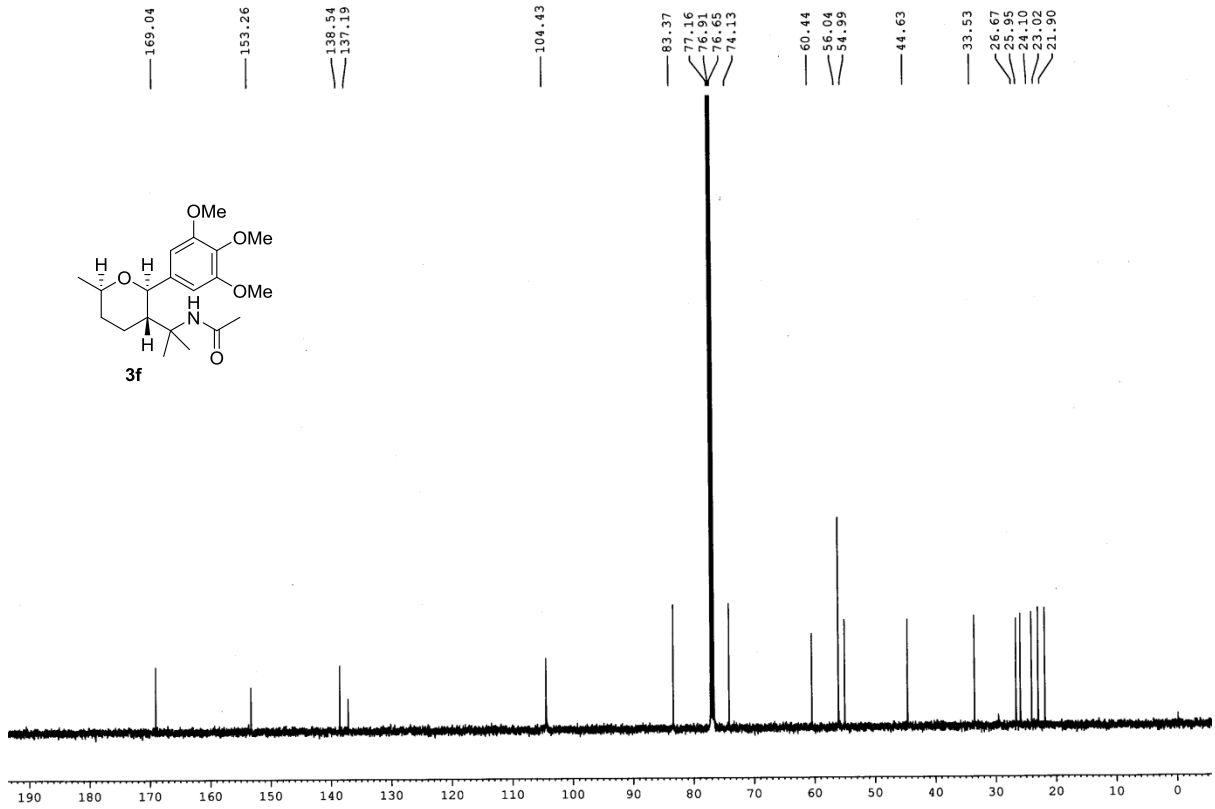
Nh-Vera  
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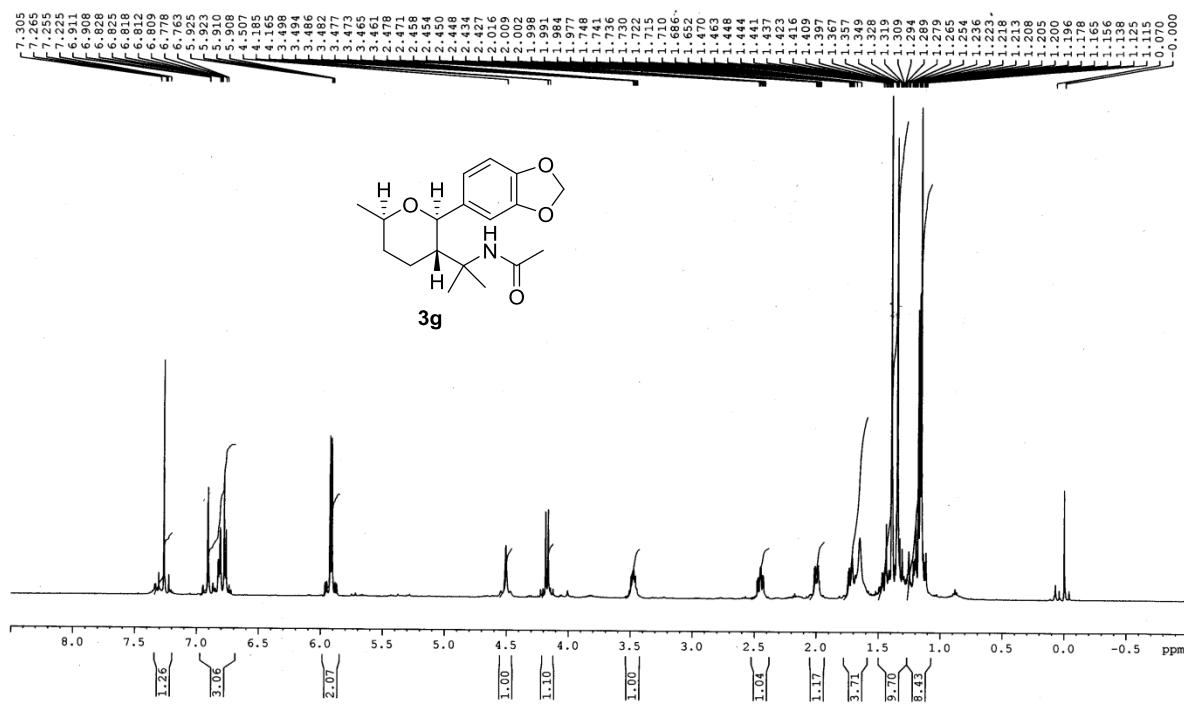
NH-3,4,5-OMe  
6447



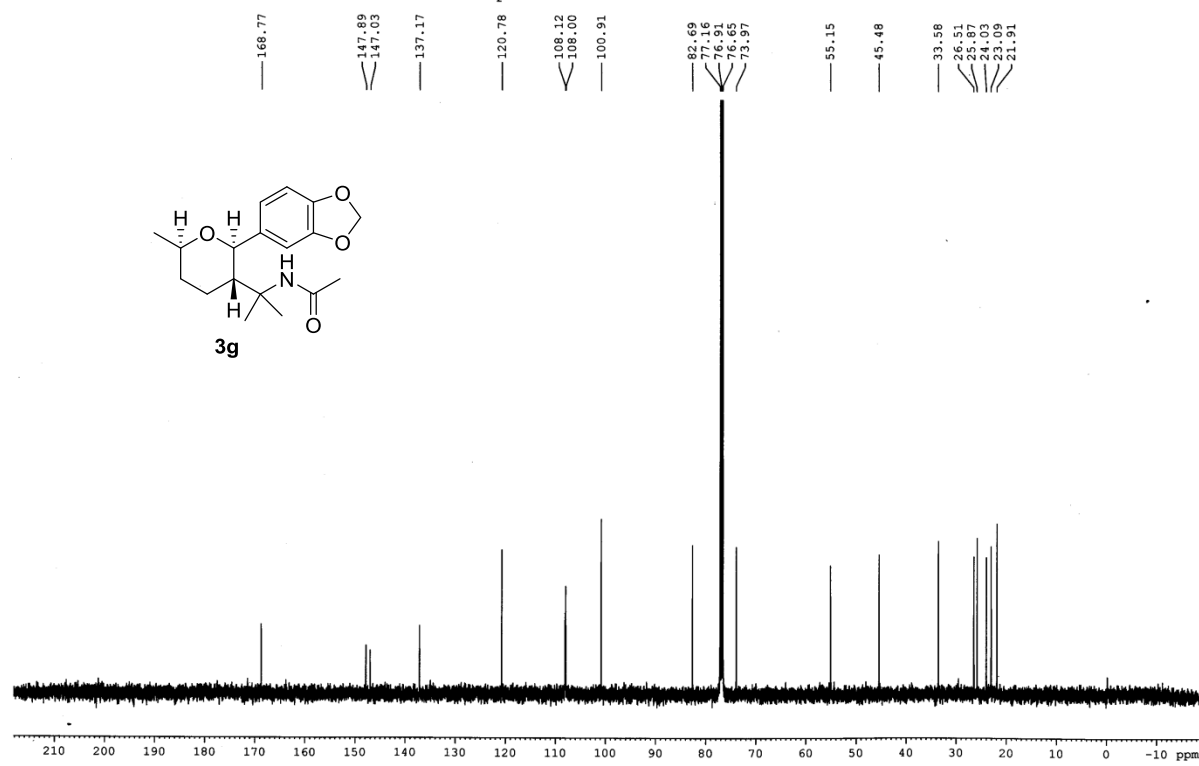
NH-3,4,5-OMe  
6448



BN-NH-Pi  
4785

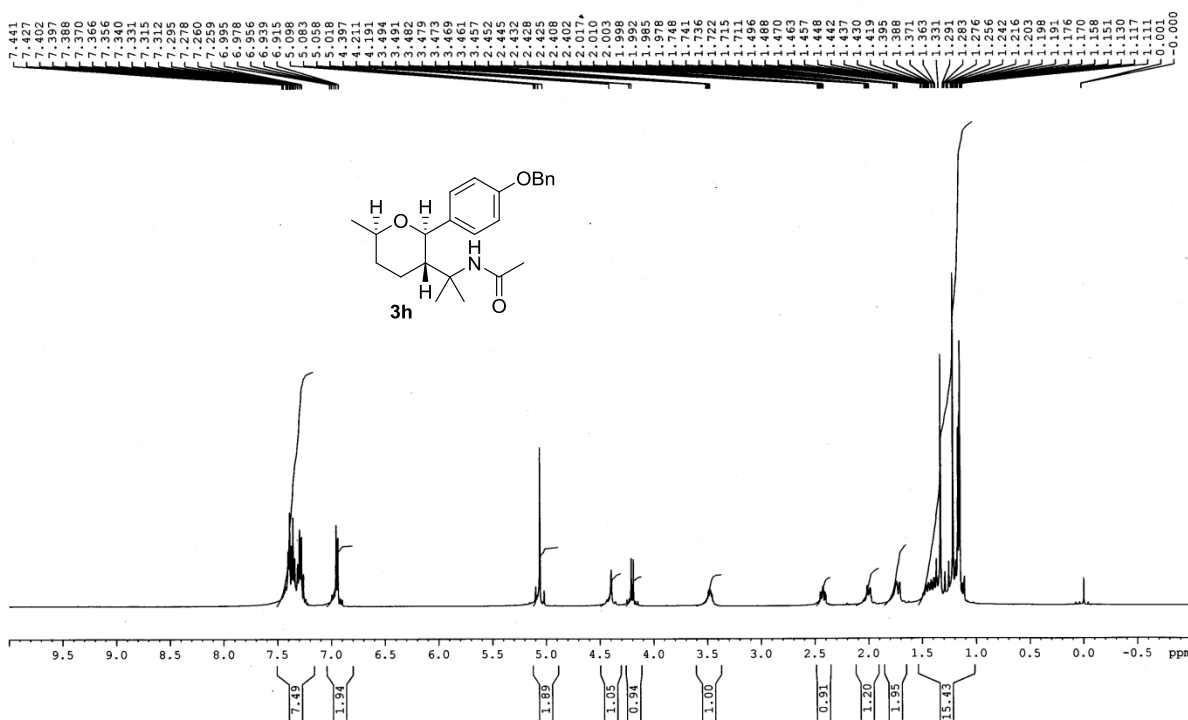


Name of Sample: NH-Pi  
Spectrum No : 4743

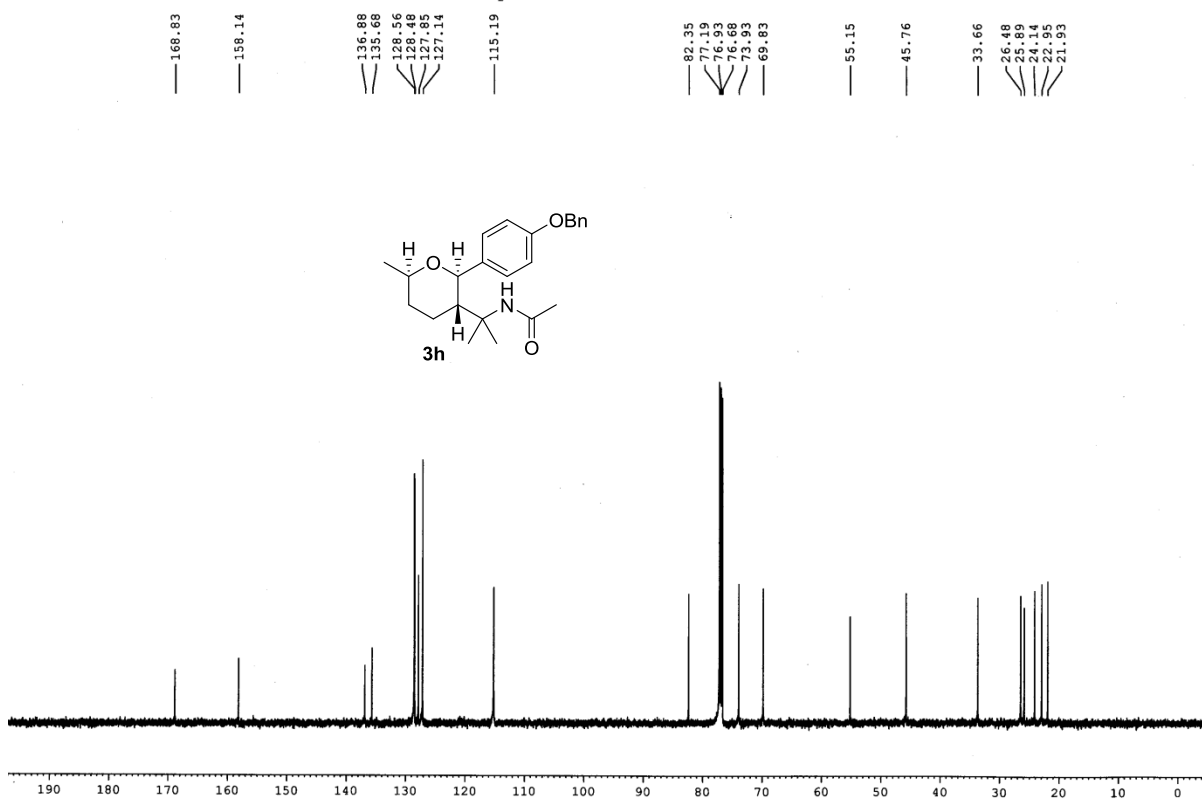




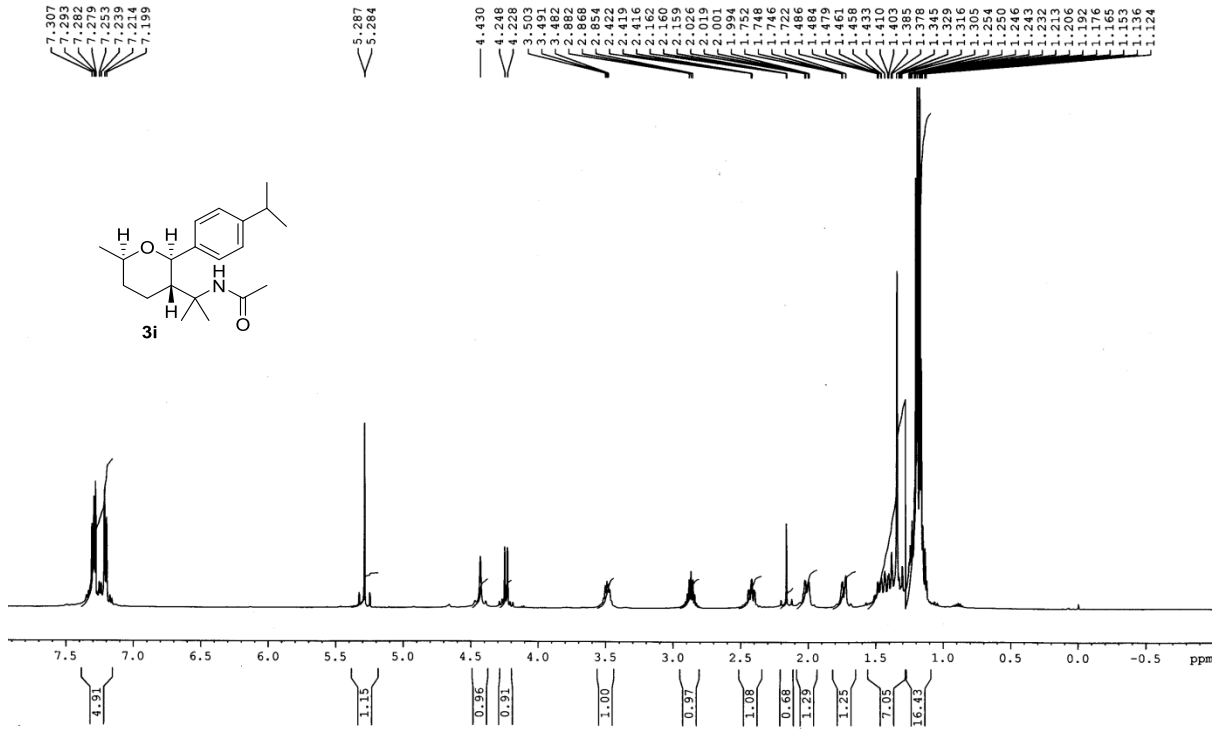
Name of Sample:Nh-Benyloxy  
Spectrum No :6075



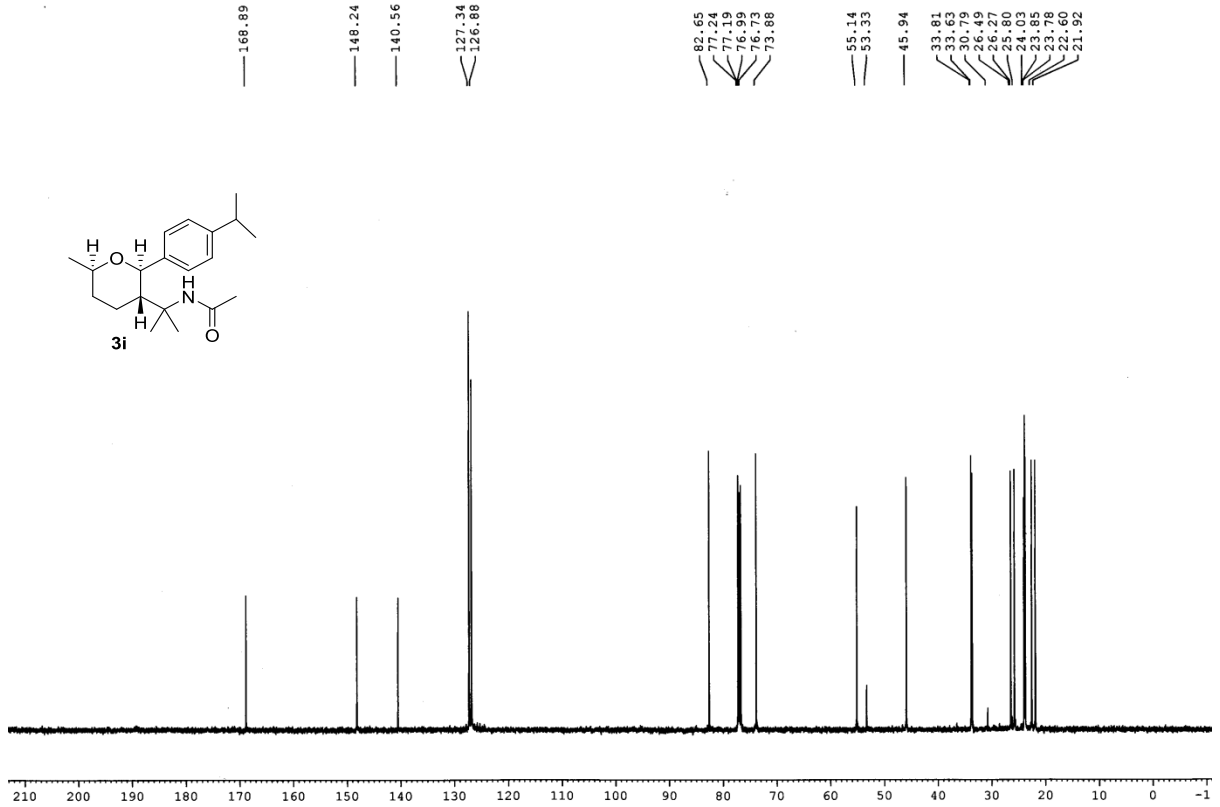
Name of Sample:NH-Benyloxy  
Spectrum No :6076



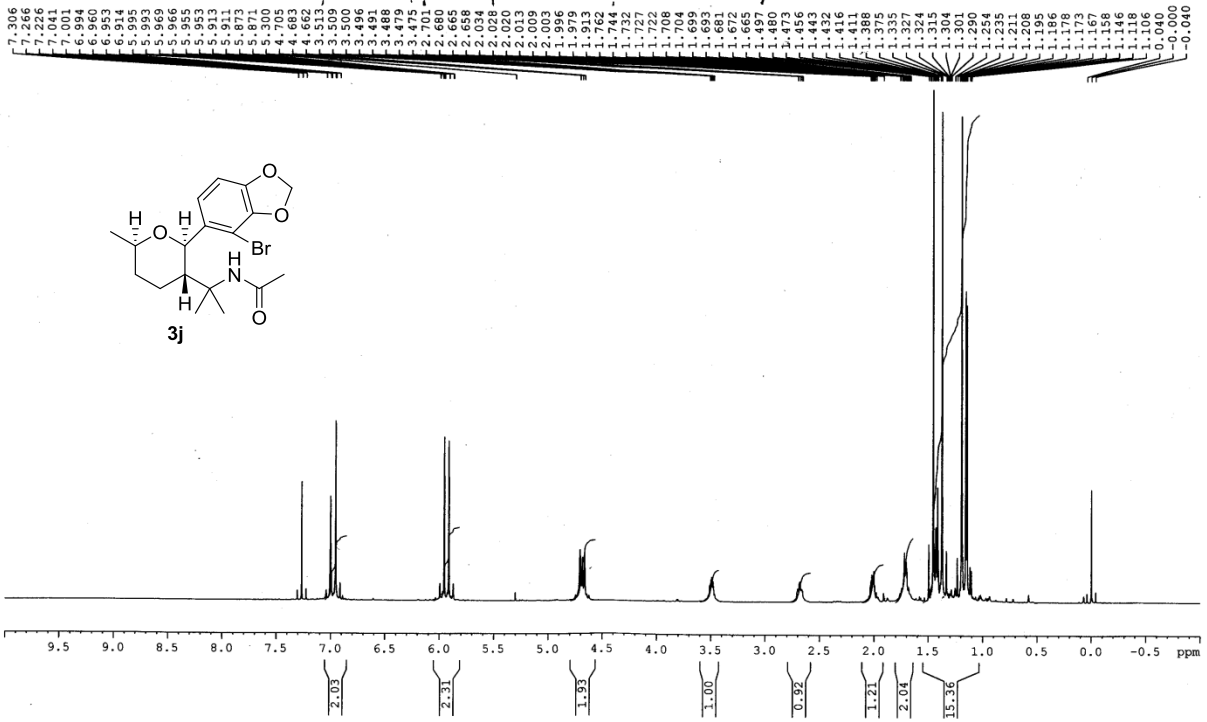
Name of Sample: NH-isopropyl-benzal  
Spectrum No :4683



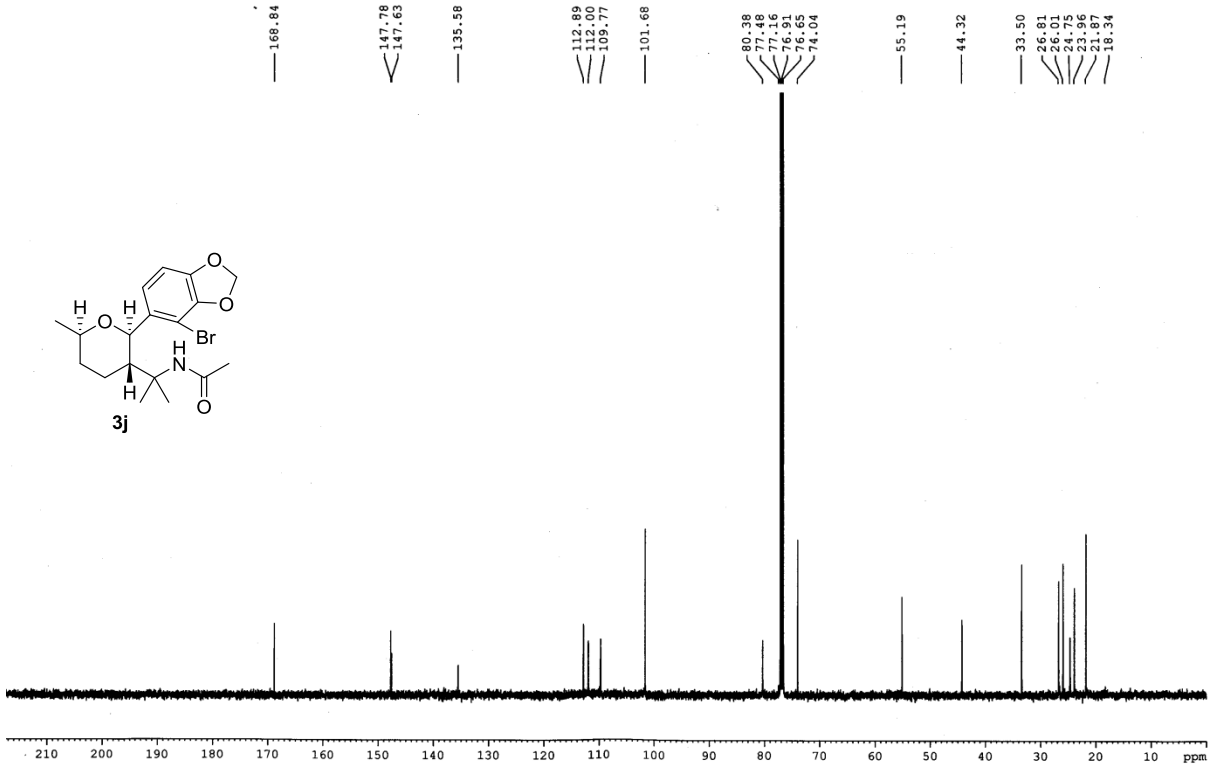
Name of Sample: NH-iso  
Spectrum No :4584



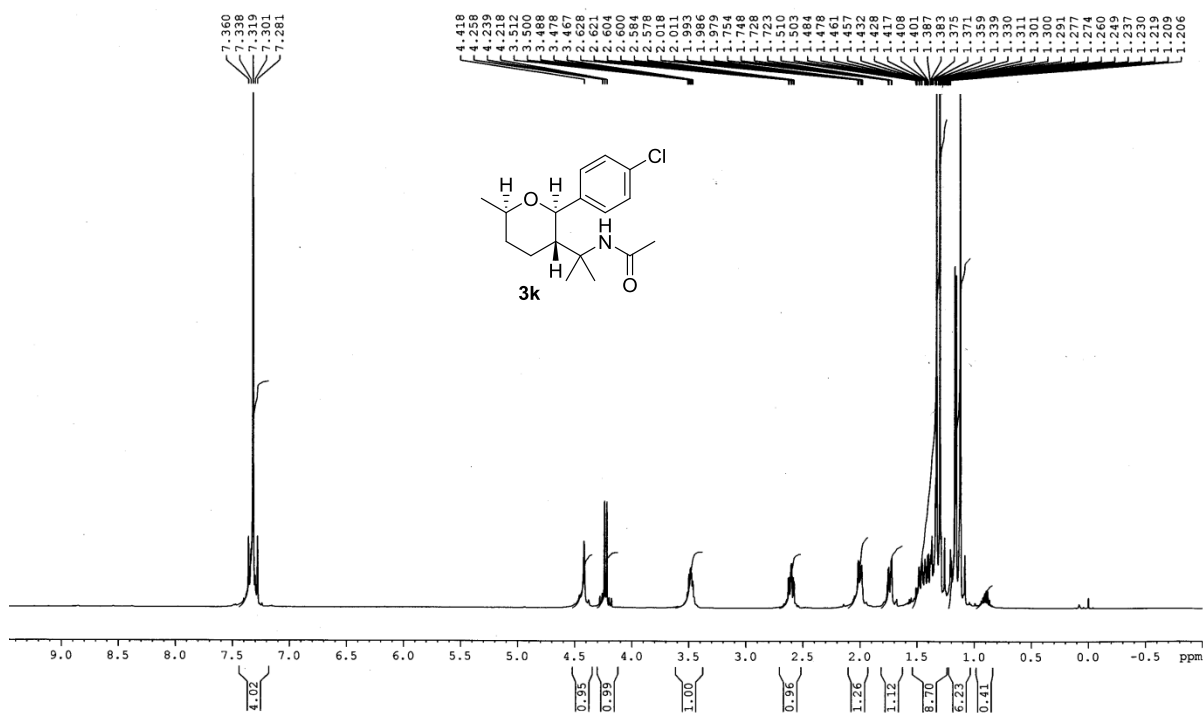
BR-pipero  
6449



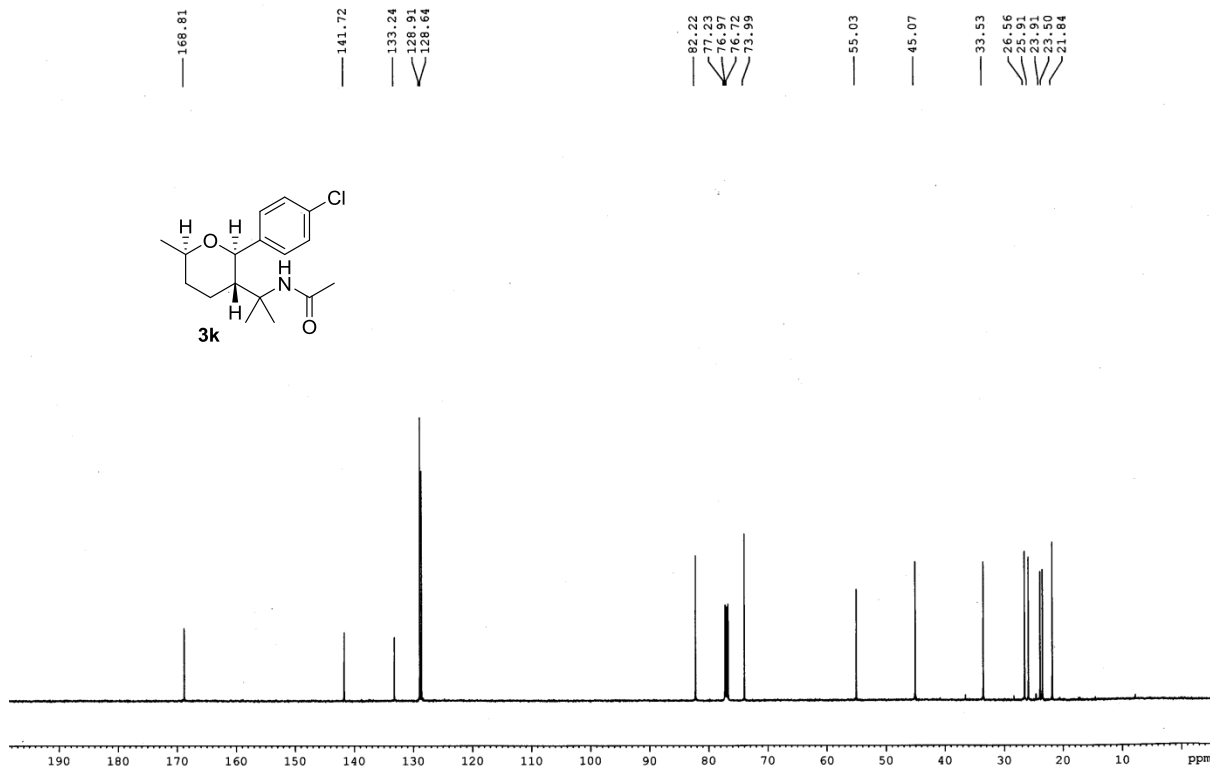
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Brpipero



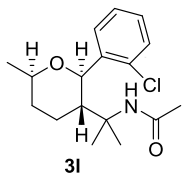
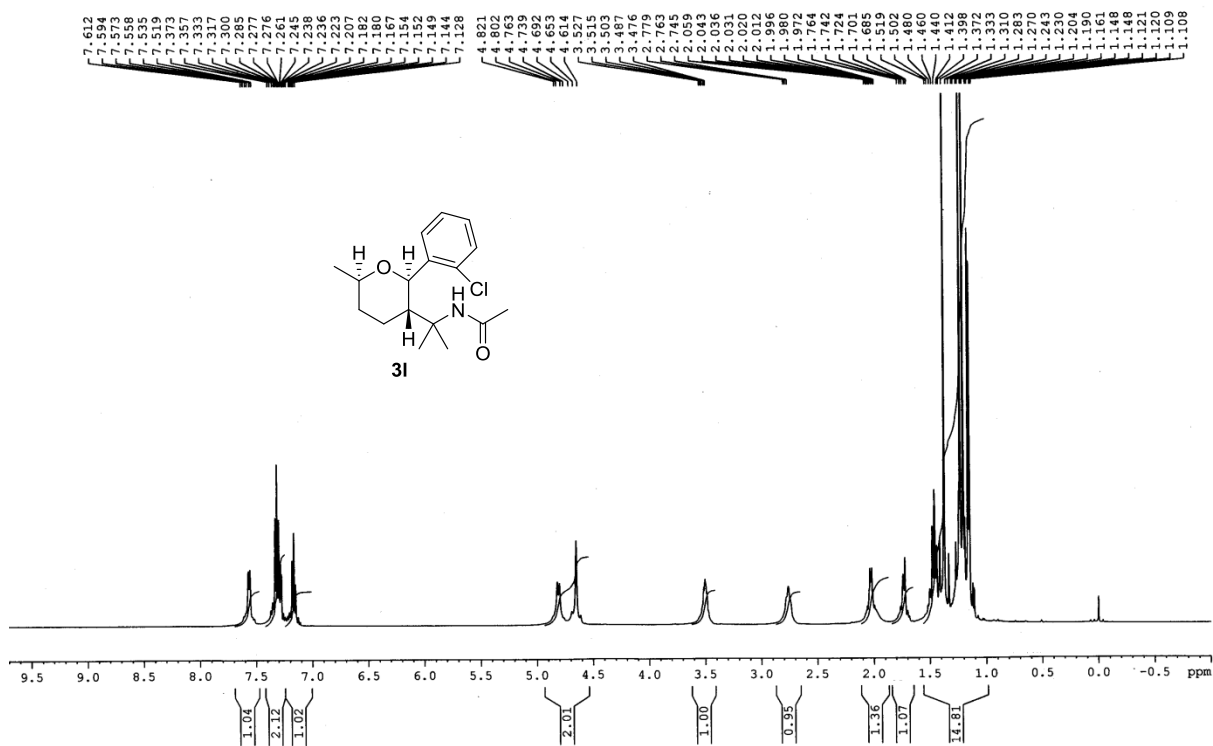
5920  
NH-P-Cl



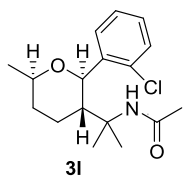
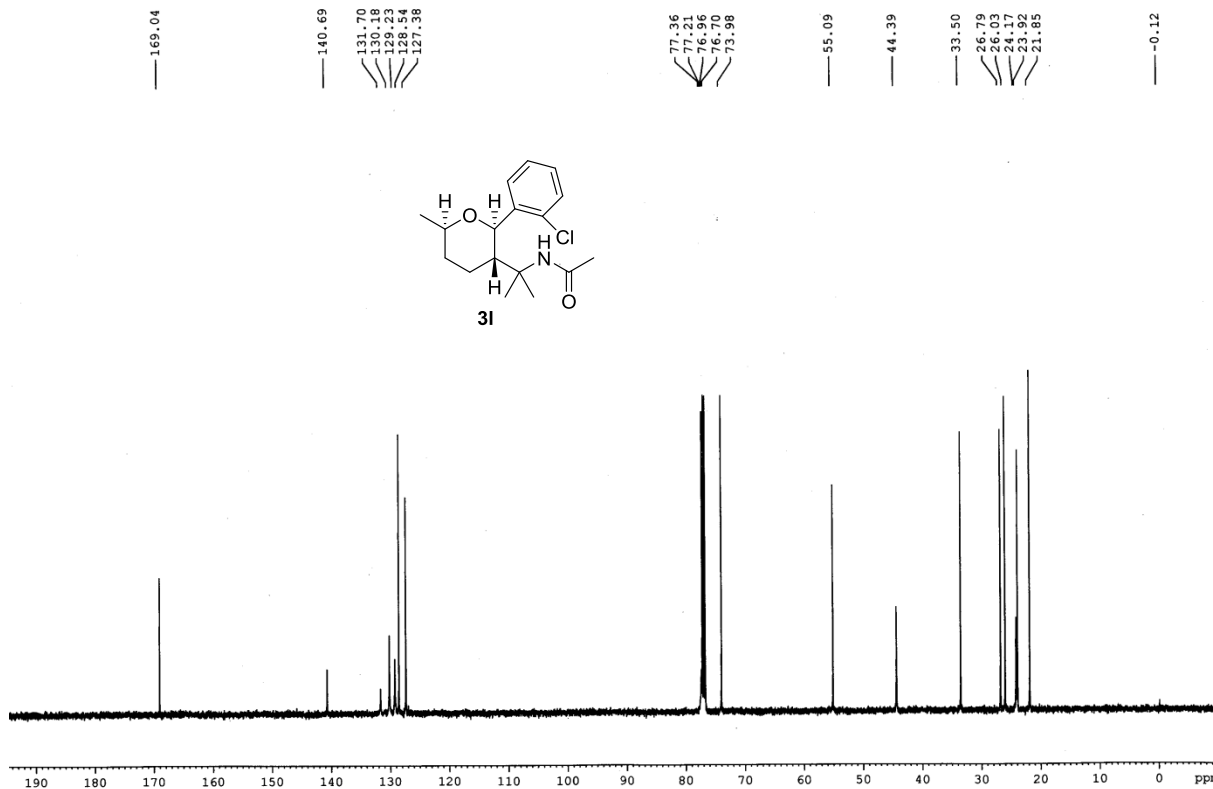
5921  
NH-P-Cl



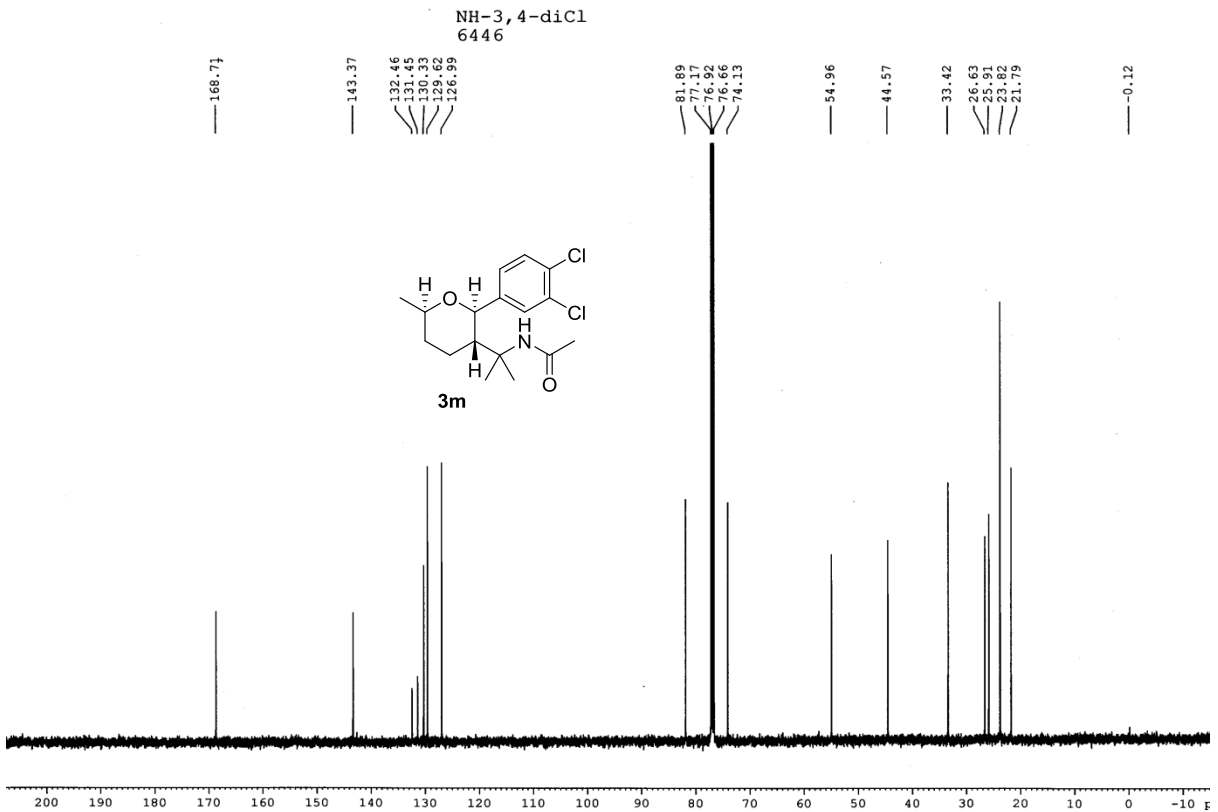
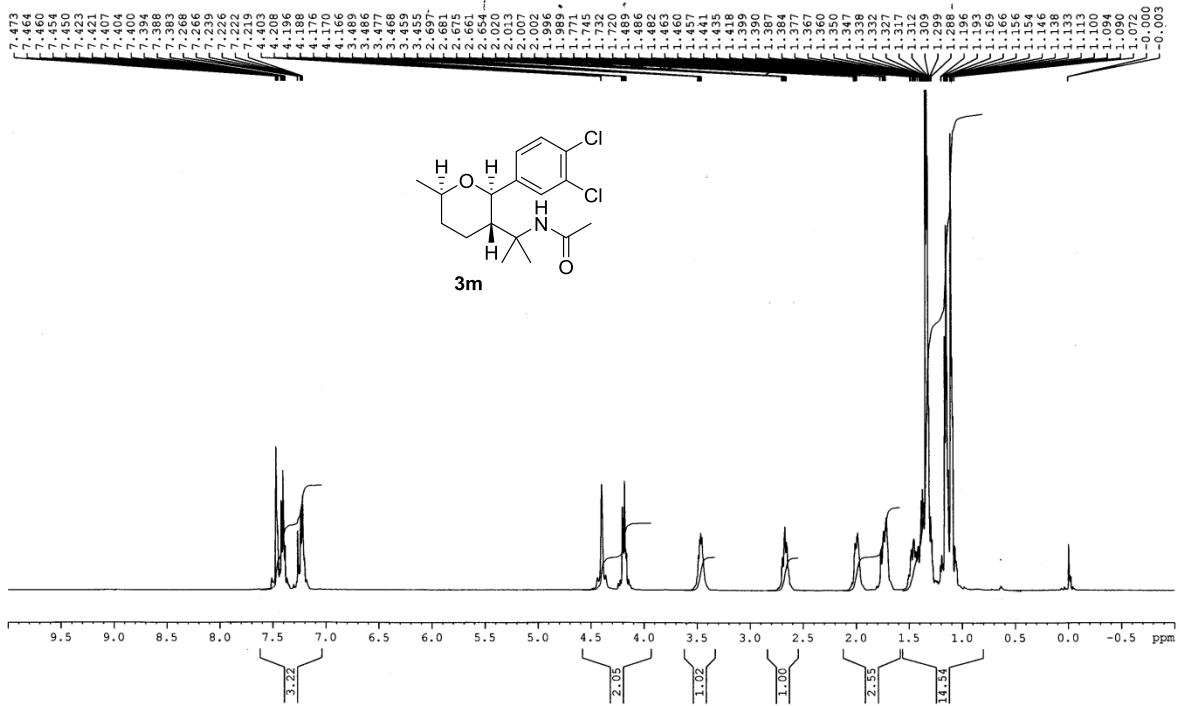
6073  
NH-2Cl



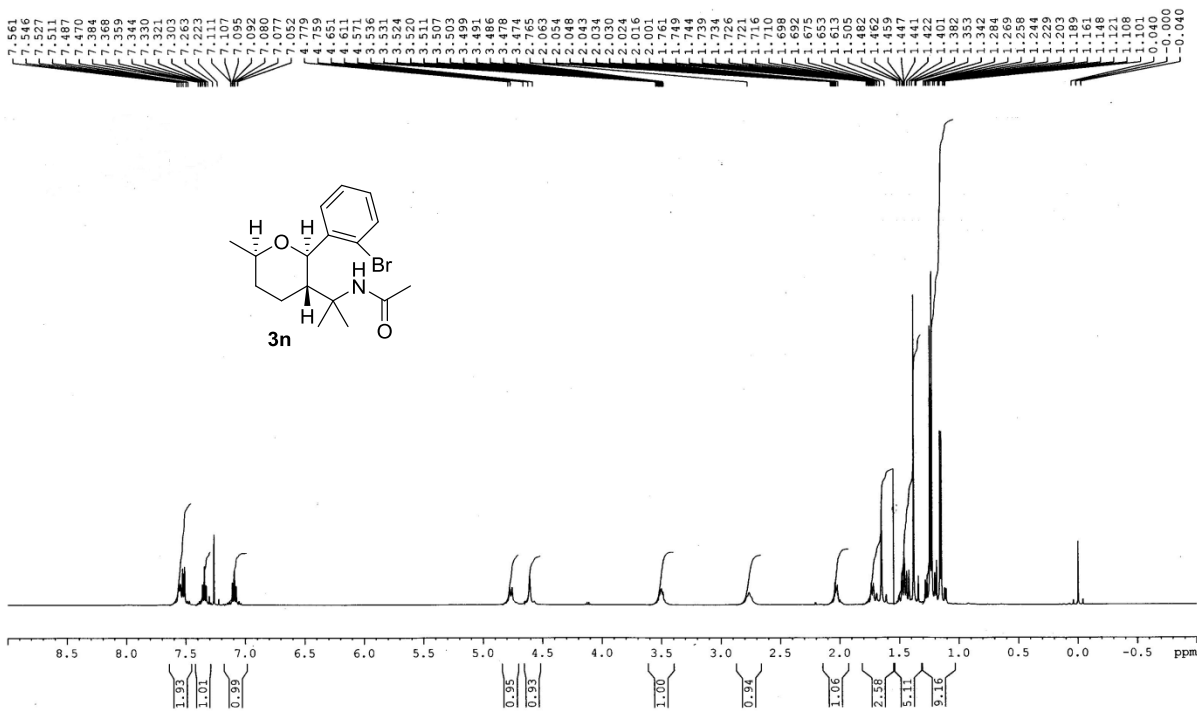
Name of Sample: NH-2-Cl  
Spectrum No : 6074



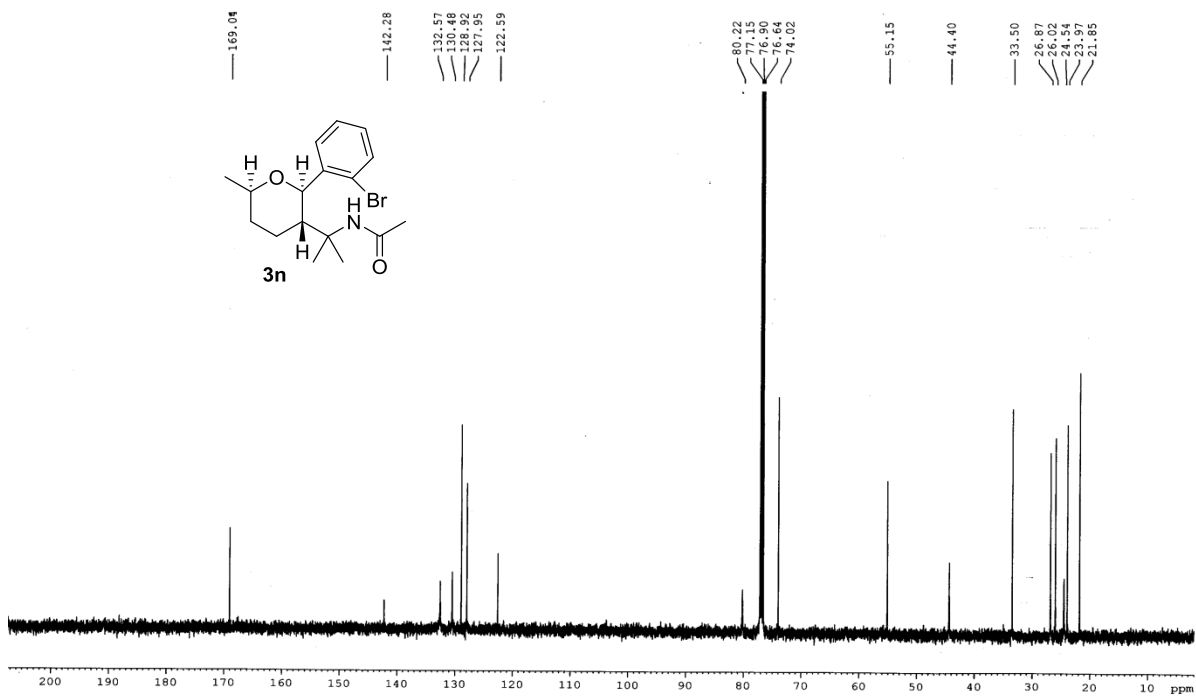
Name of Sample: 3-4 diCl  
Spectrum No : 6445



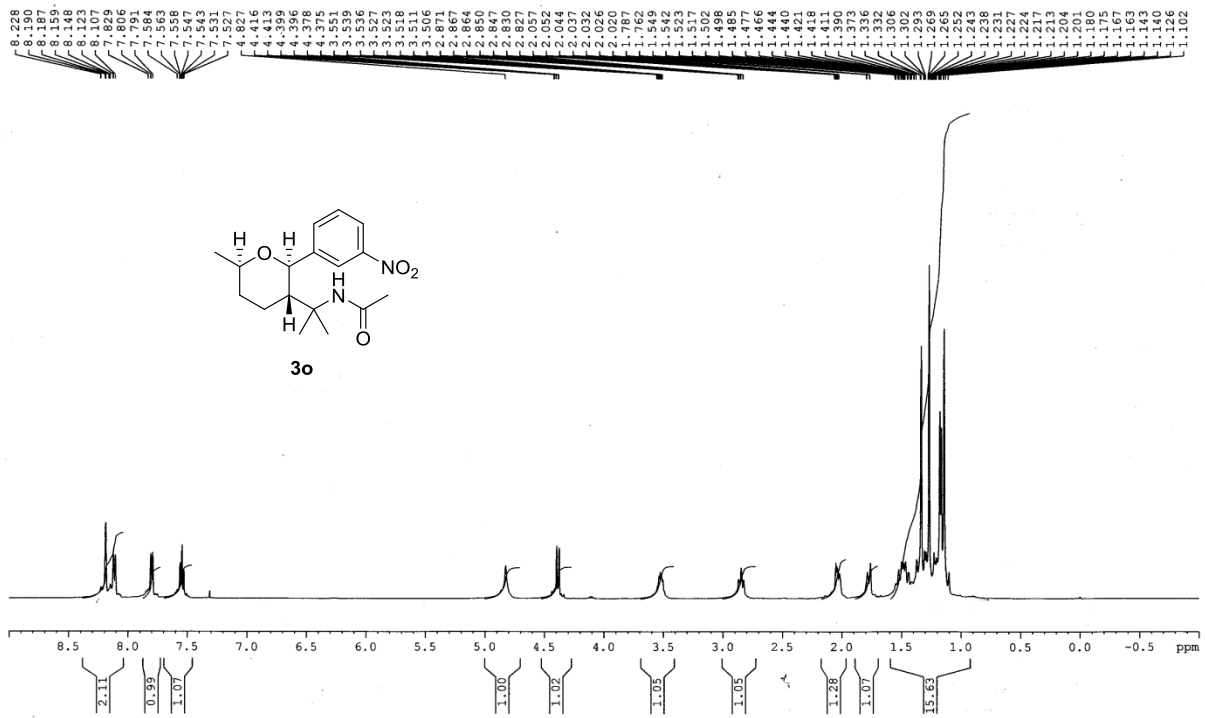
NH-2-Br  
6831



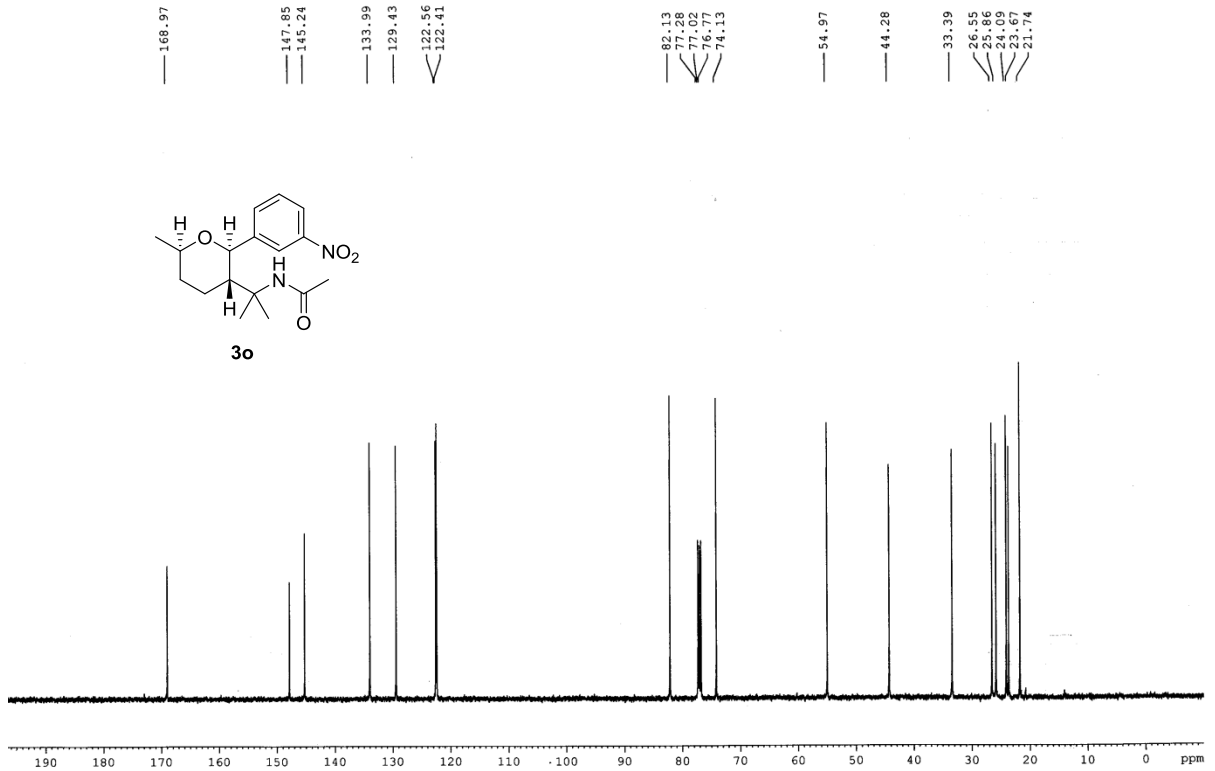
NH-2-Br  
6832



NH-m-NO2  
6840

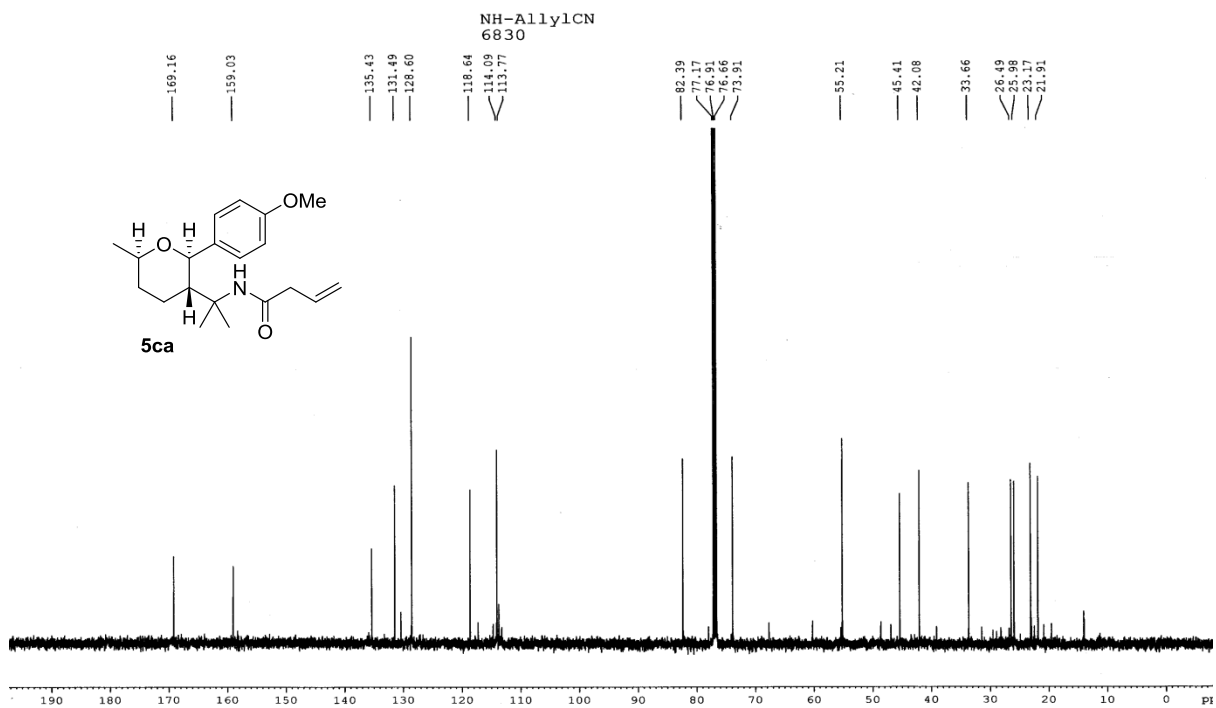
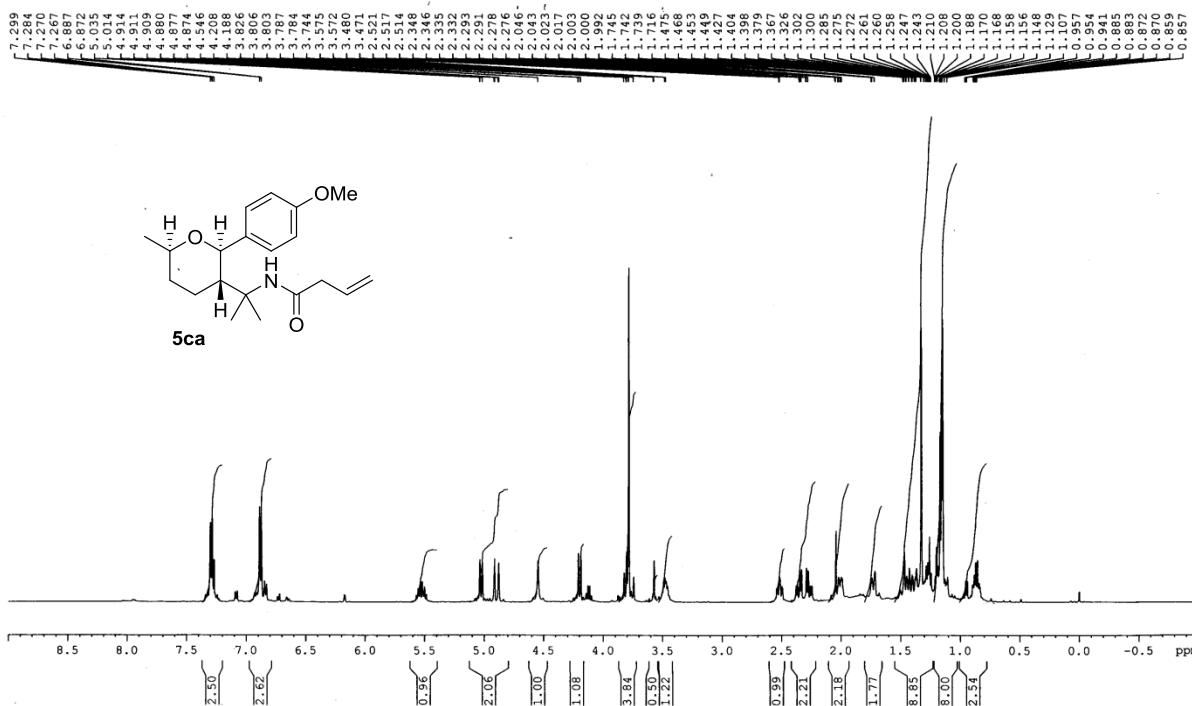


NH-m-NO2  
6841

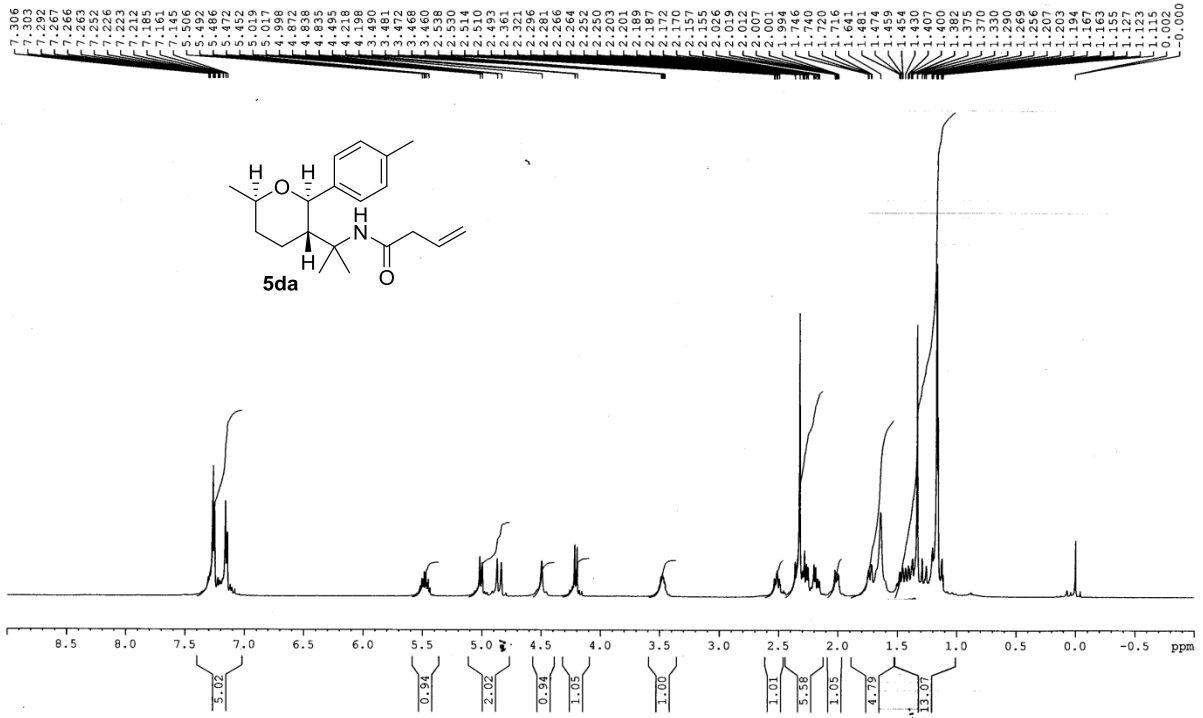




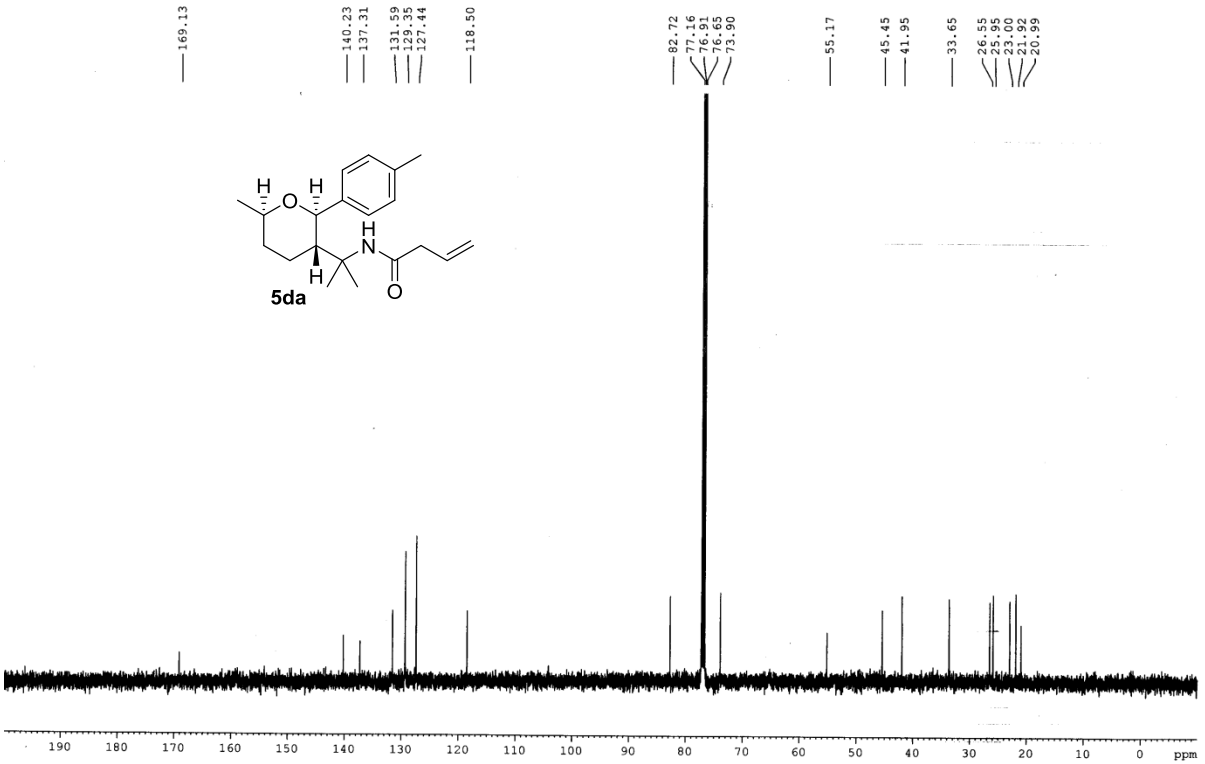
NH-AllylCN  
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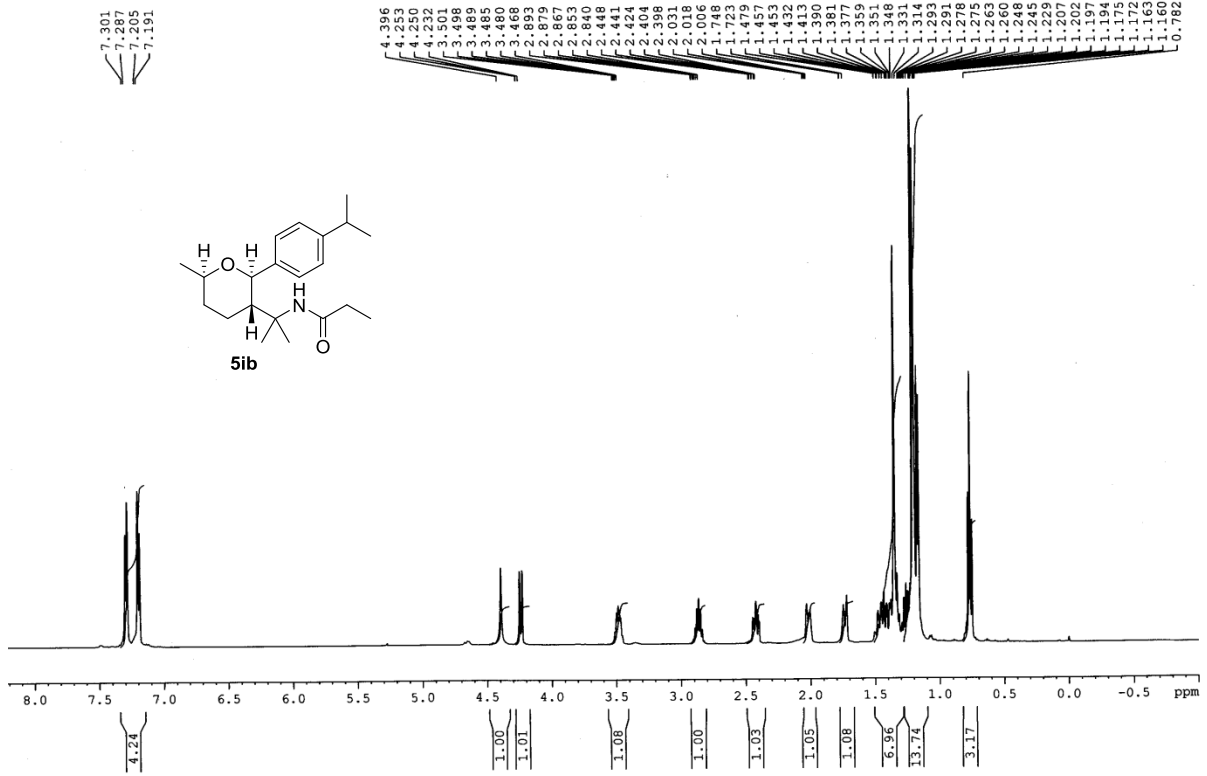
NH-allylnitrile-p-tolualdehyde  
8064



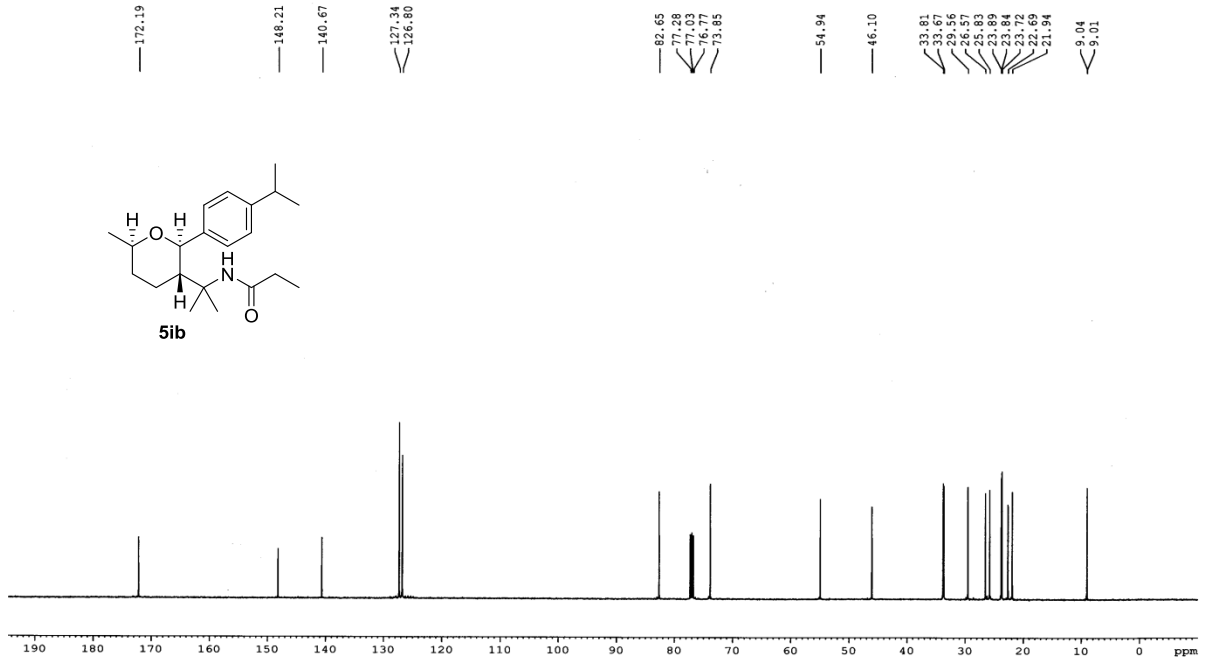
NH-allylnitrile-p-tolu  
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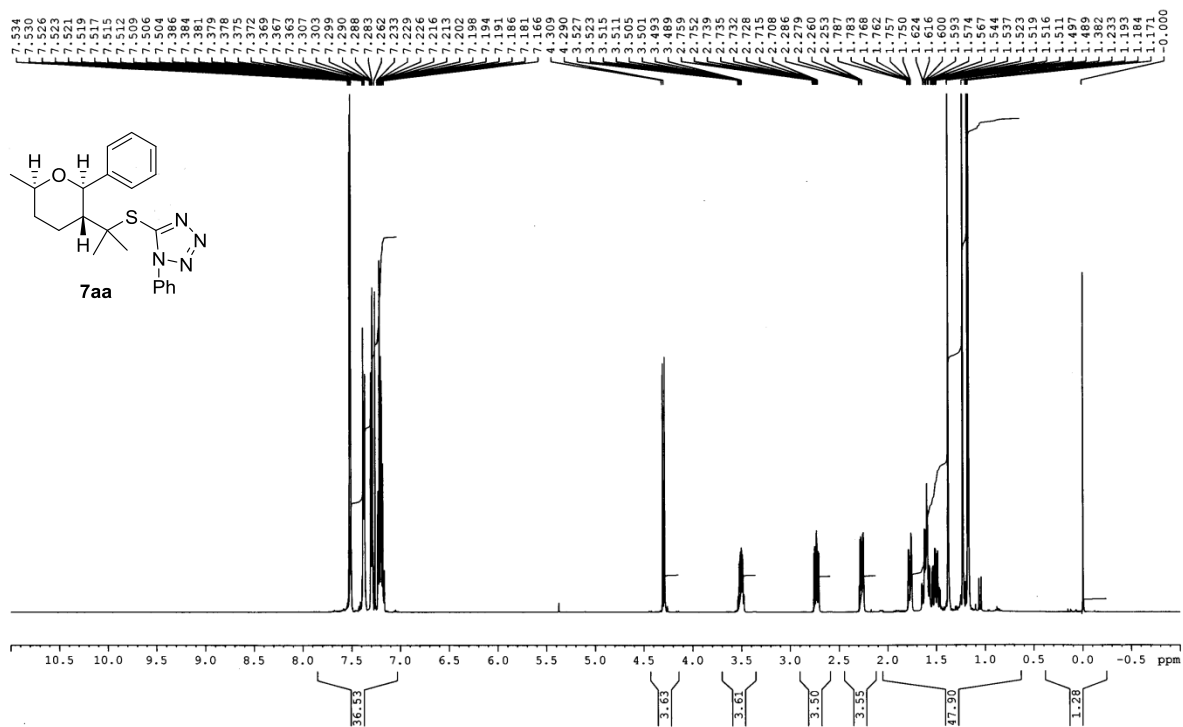
NH-Ritter-isopropyl-propionitrile  
9701



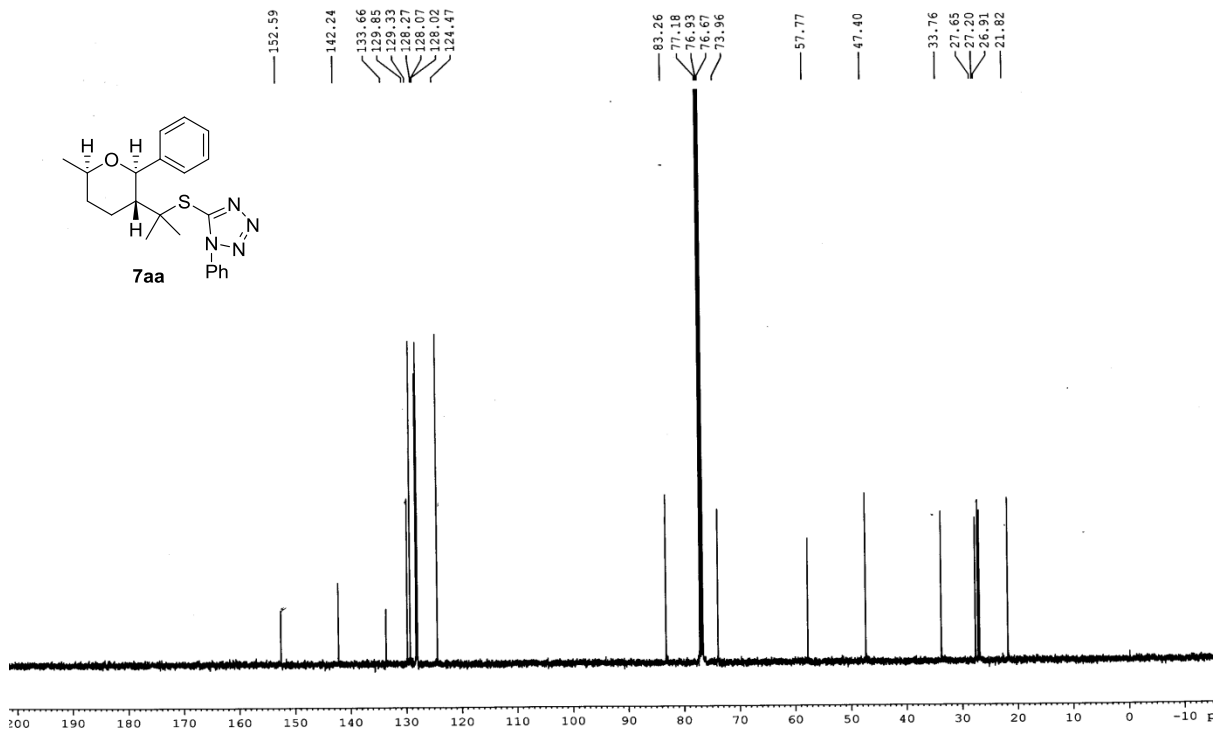
NH-Ritter-isopropyl-propionitrile  
9702



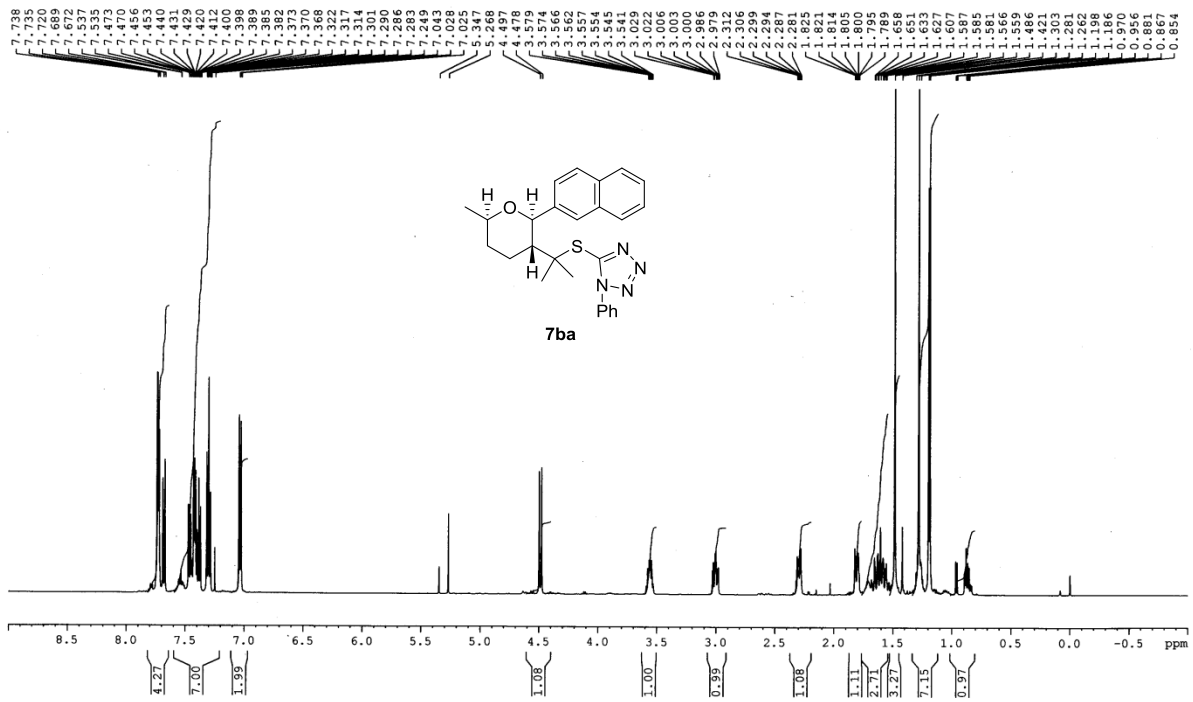
Name of Sample: NIT-659-26-02  
Spectrum No.: 8625



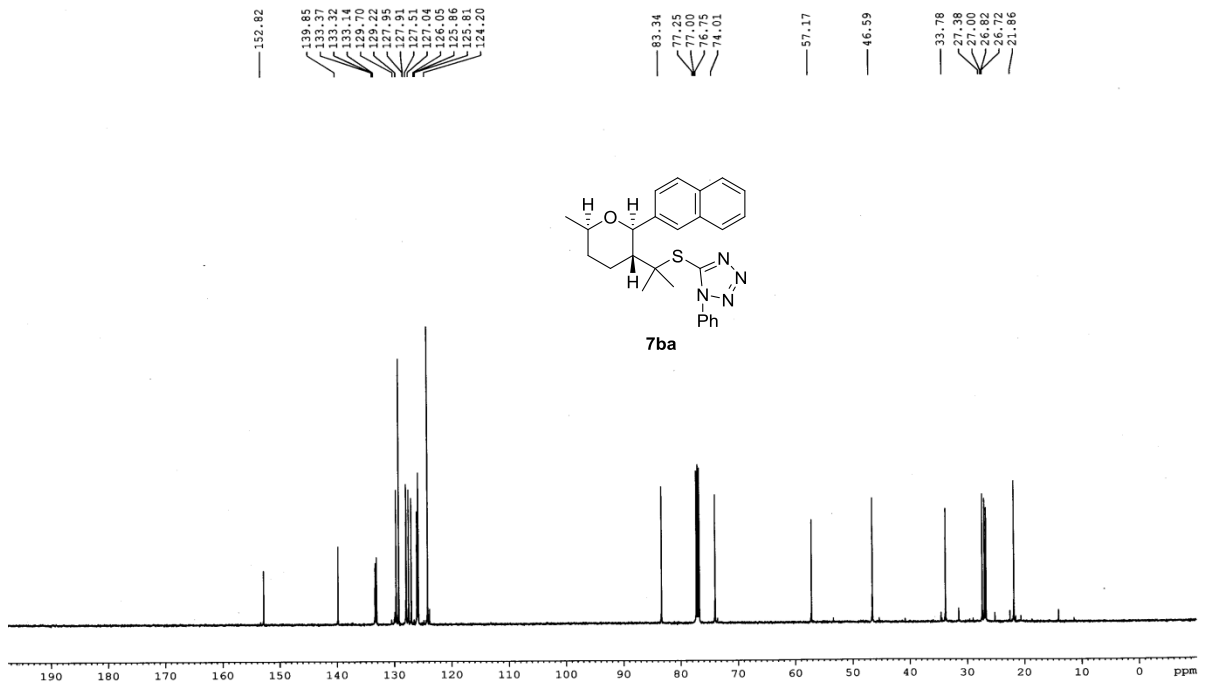
Name of Sample: NH-Thio  
Spectrum No.: 8673



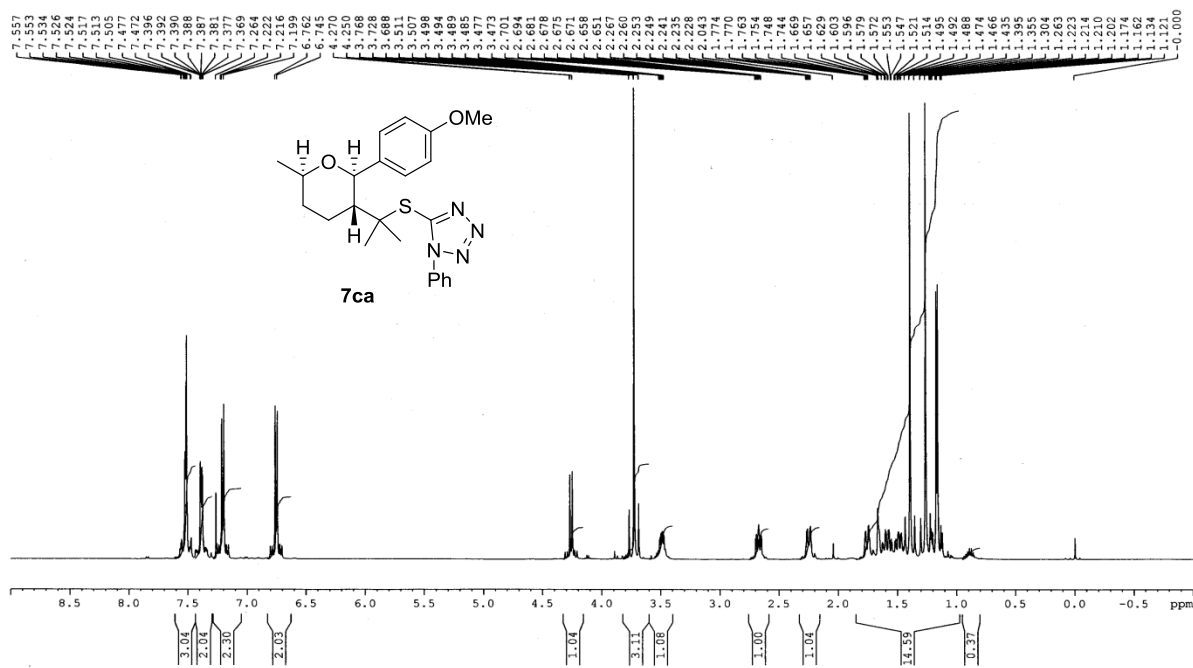
Name of Sample: NH-TNAPH  
Spectrum No : 8710



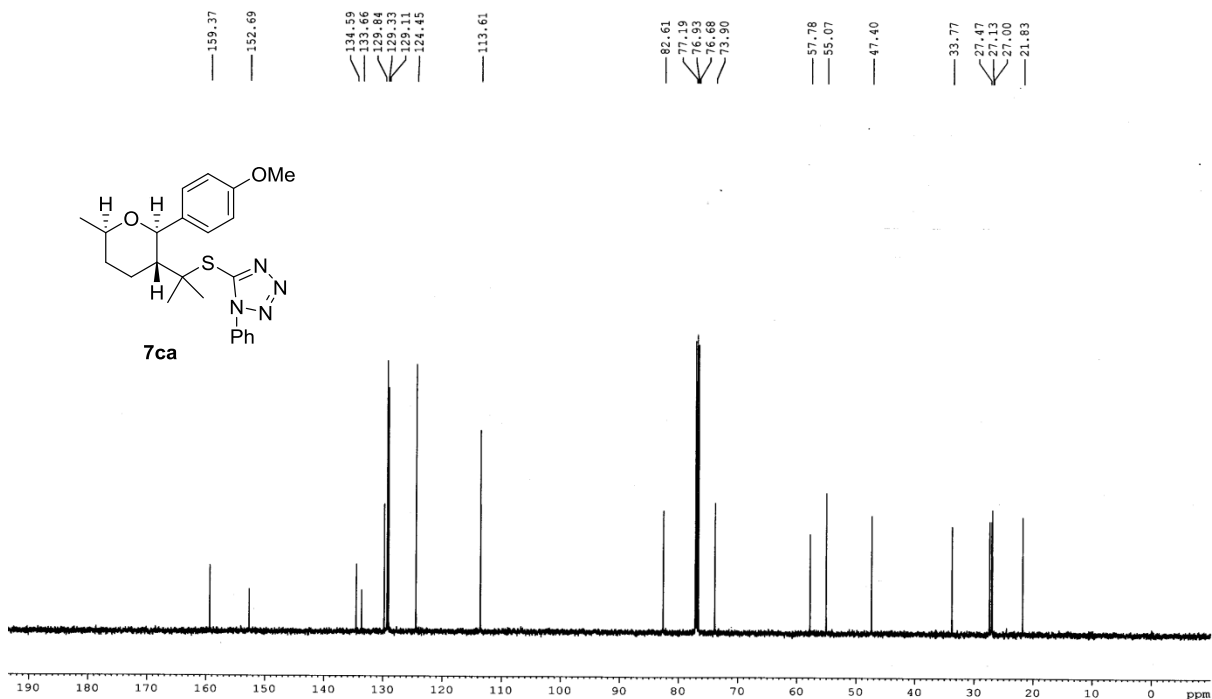
Name of Sample: NH-TNAP  
Spectrum No.: 8769



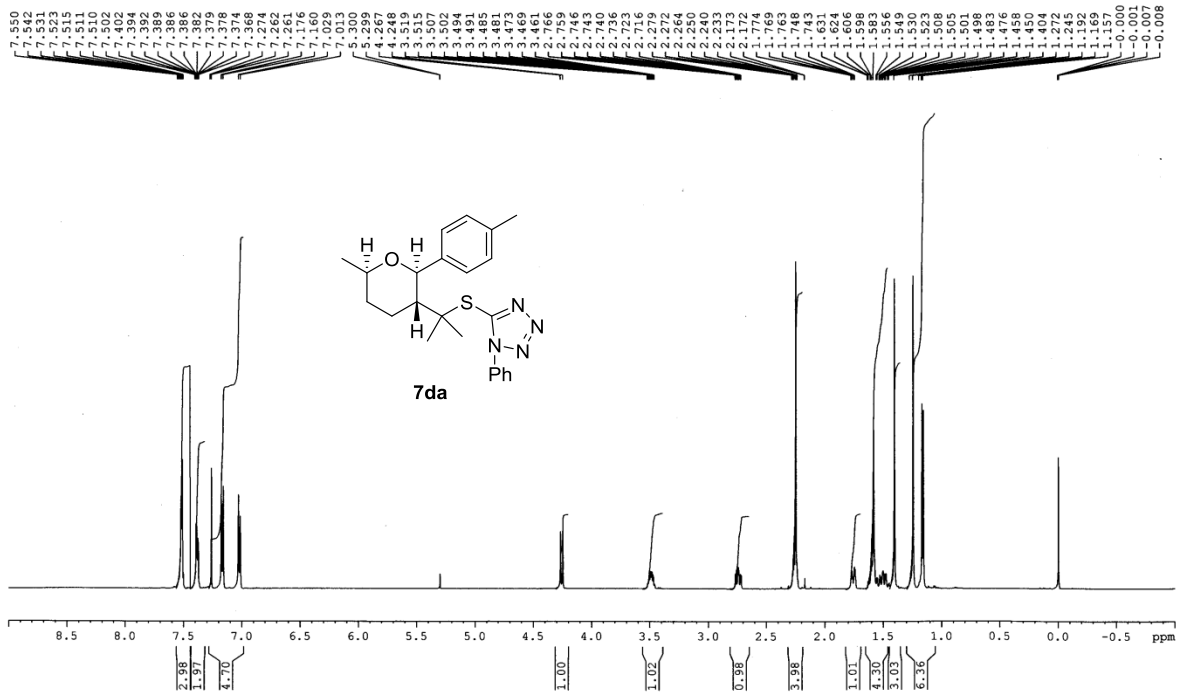
NH-Thiol-Anisalde  
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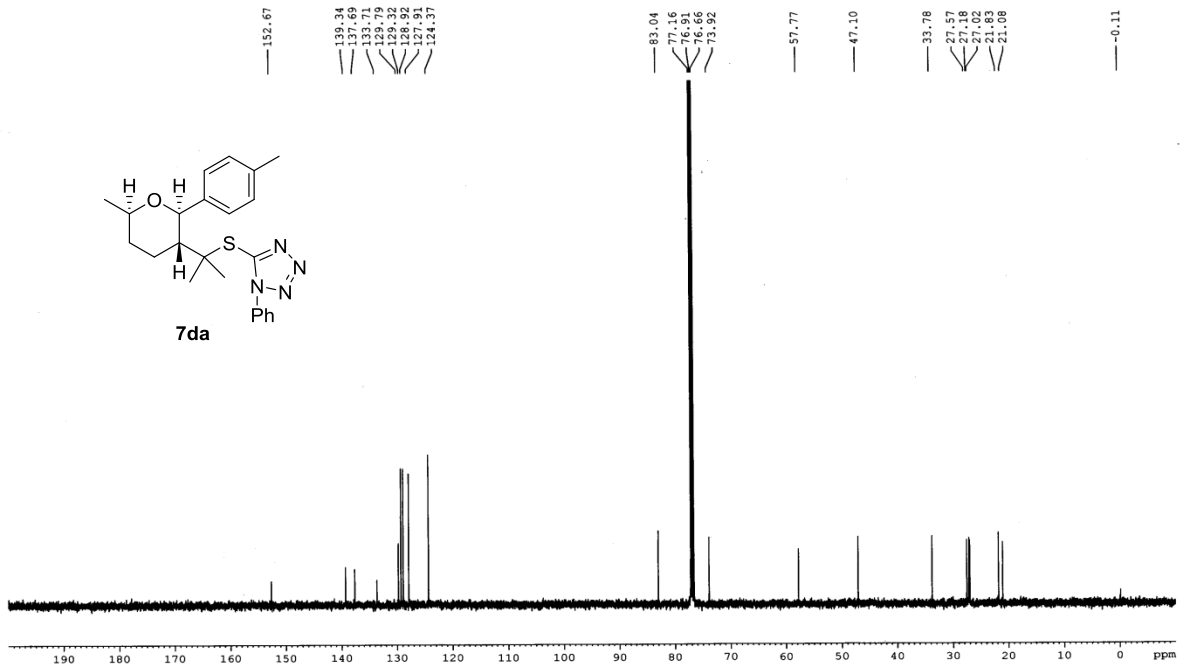
NH-Thiol-anisalde  
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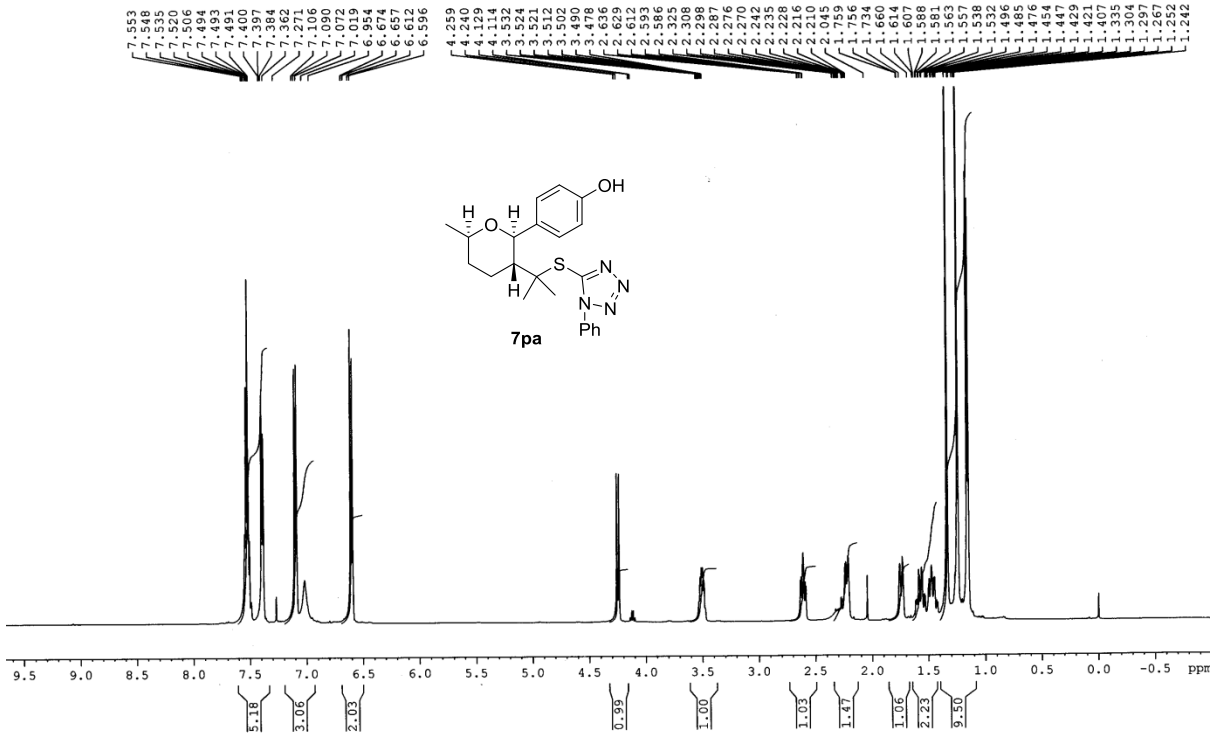
Sample Name: NH-tolu-thiol  
Spectrum No.: 8751



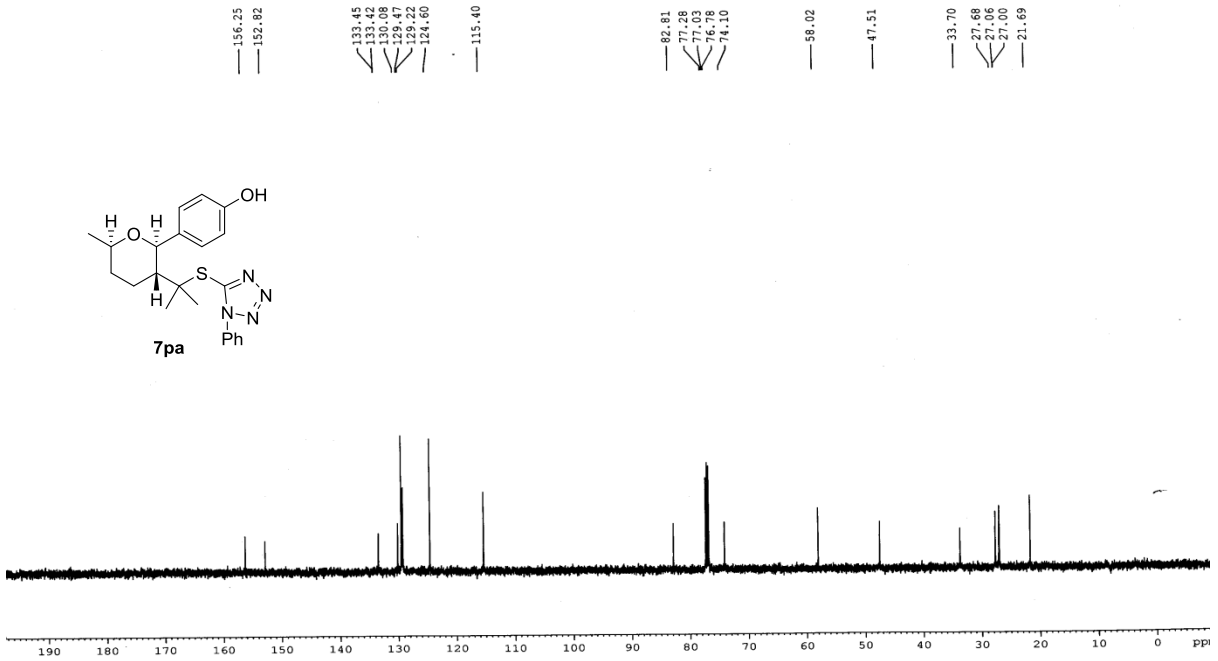
Name of Sample: NH-tolu-thi  
Spectrum No.: 8752



Name of Sample: NH-TPOH  
Spectrum No : 8709

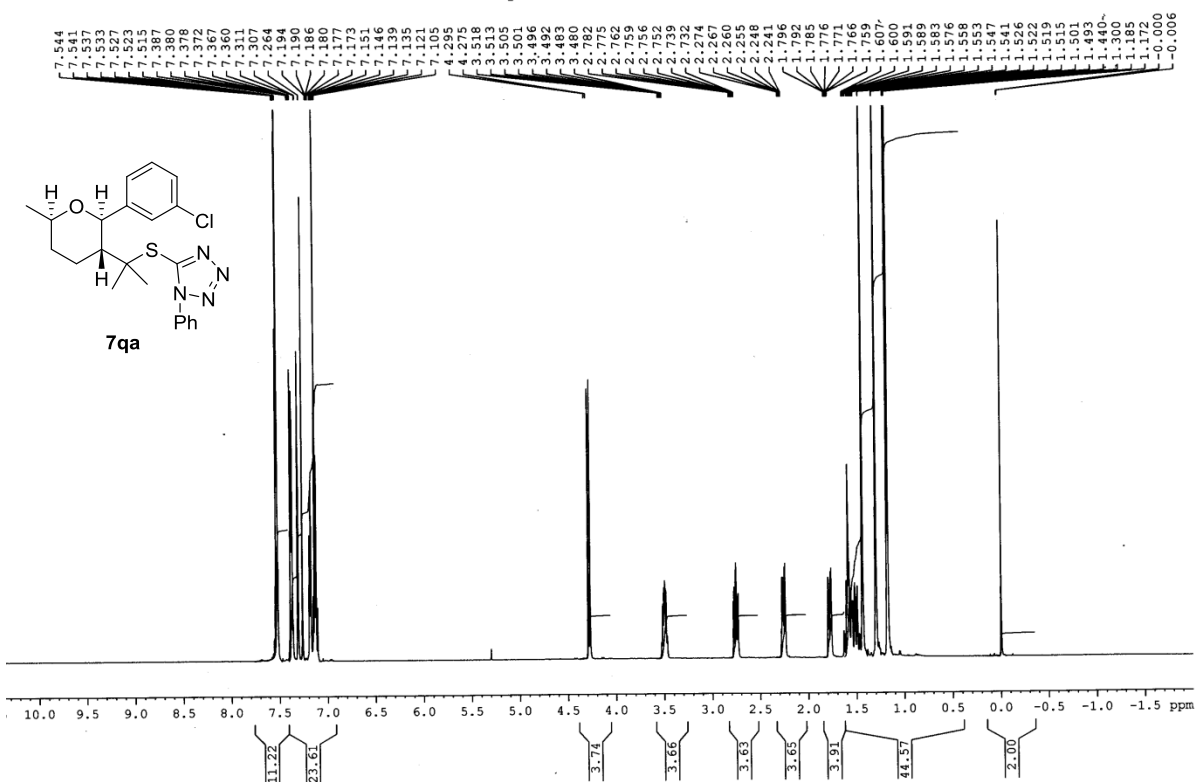


Name of Sample: NH-TPOH  
Spectrum No.: 8768

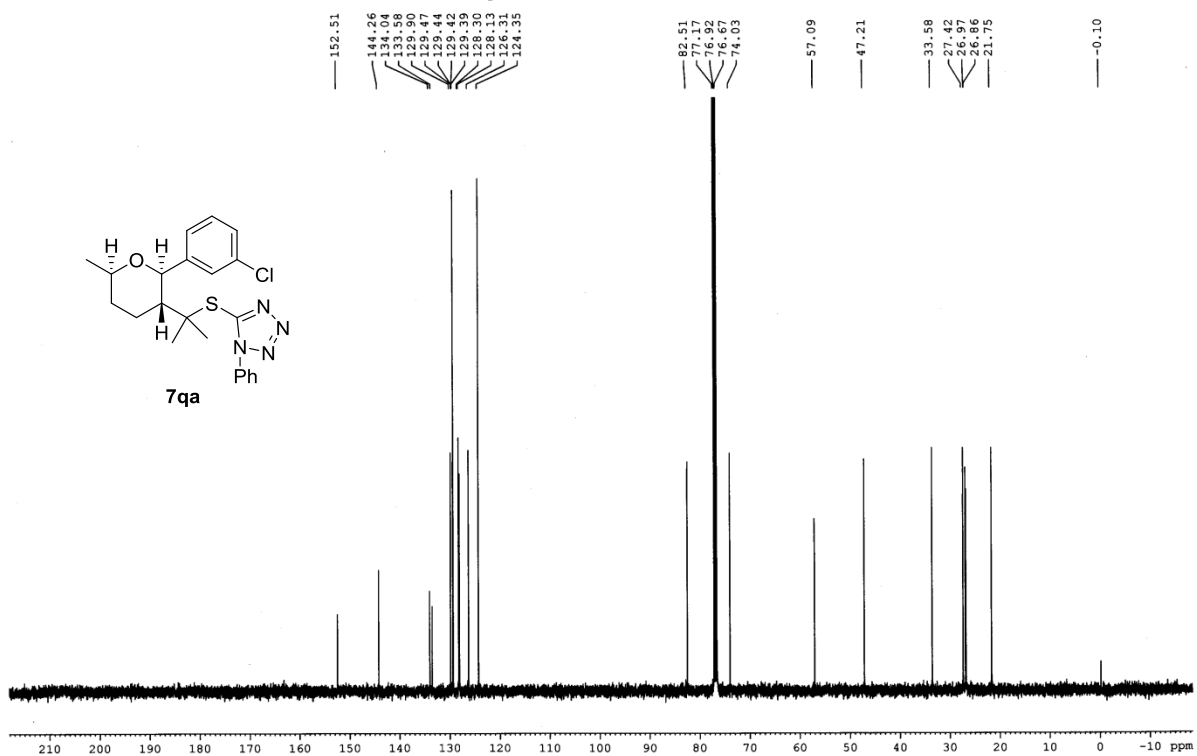




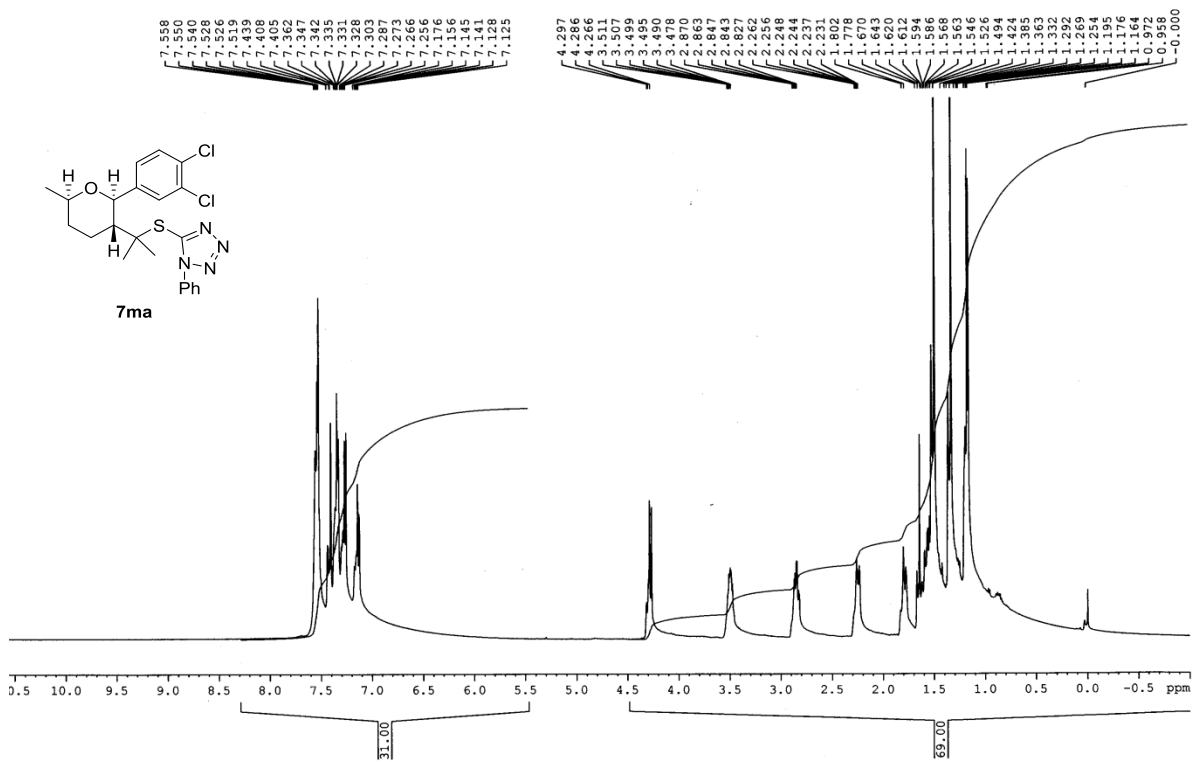
Name of Sample: NS11  
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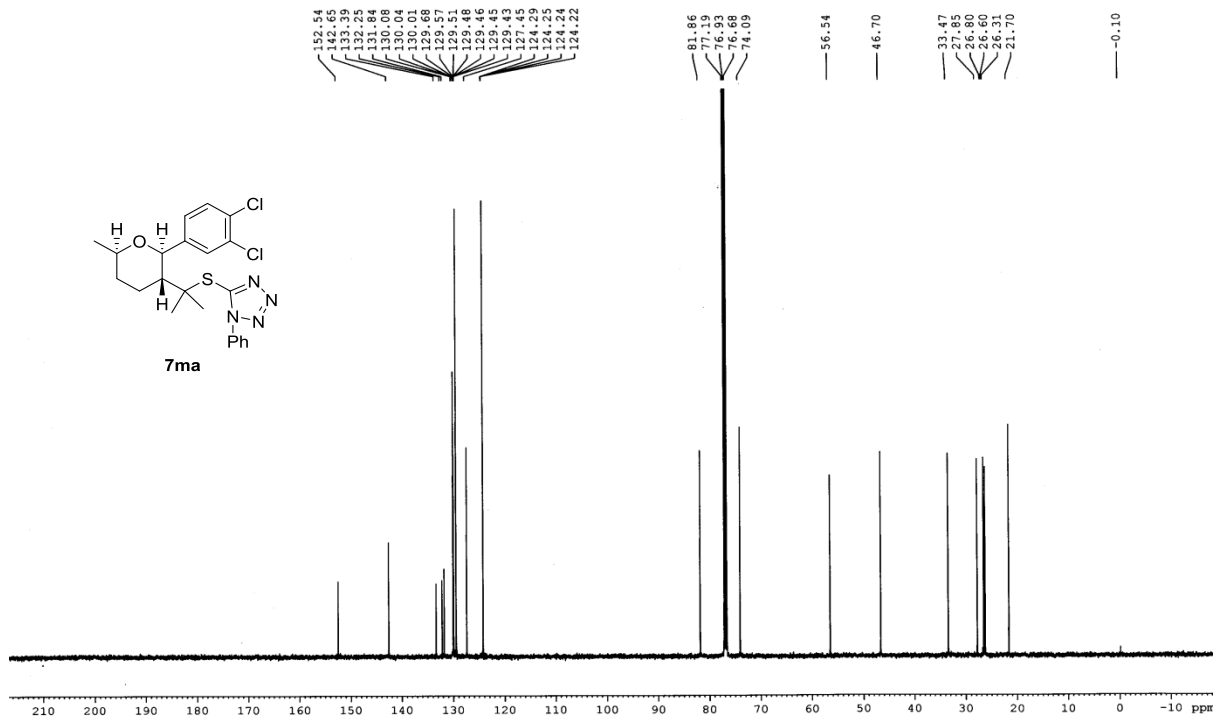
Name of Sample: NH-11  
Spectrum No : 8952

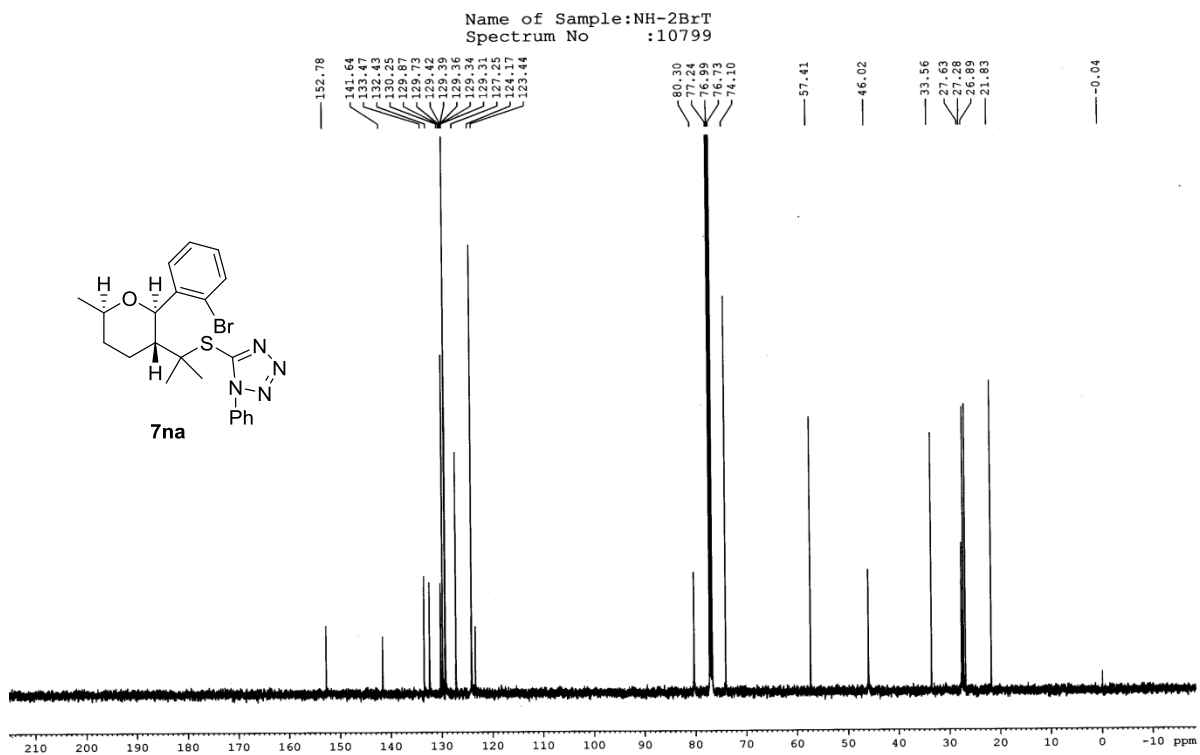
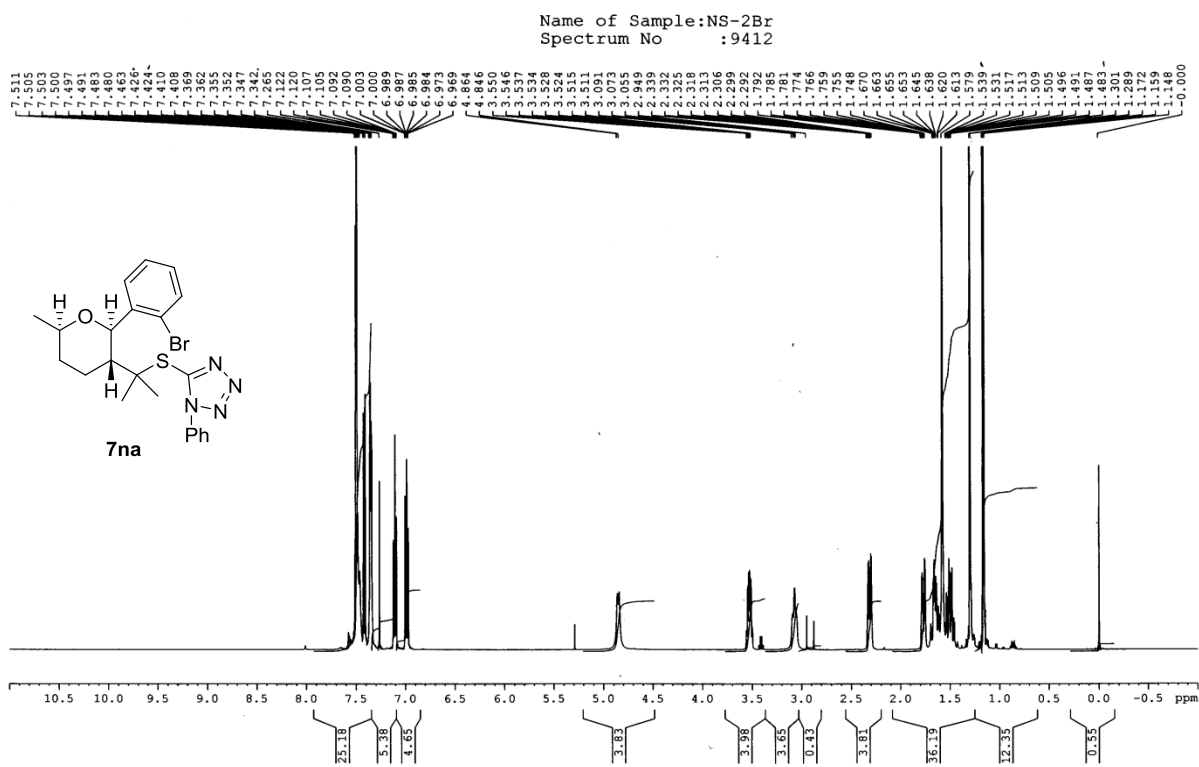


Name of Sample: NS-12  
Spectrum No : 9181

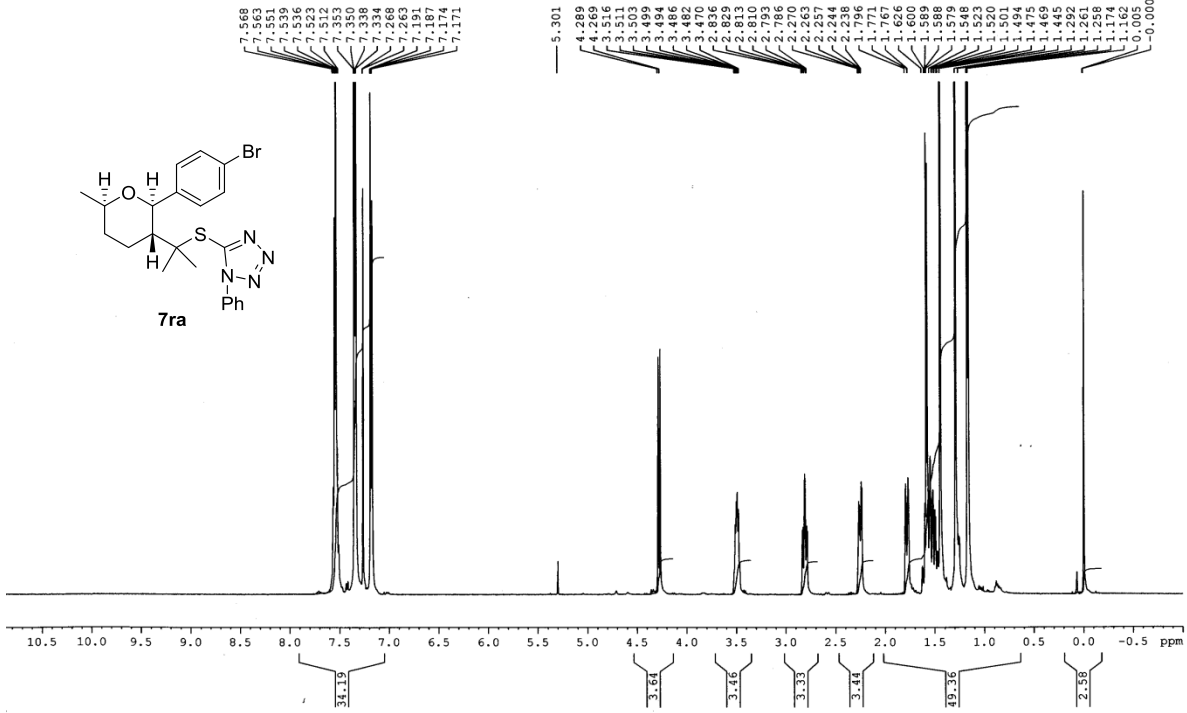


Name of Sample: NH-12  
Spectrum No : 9258

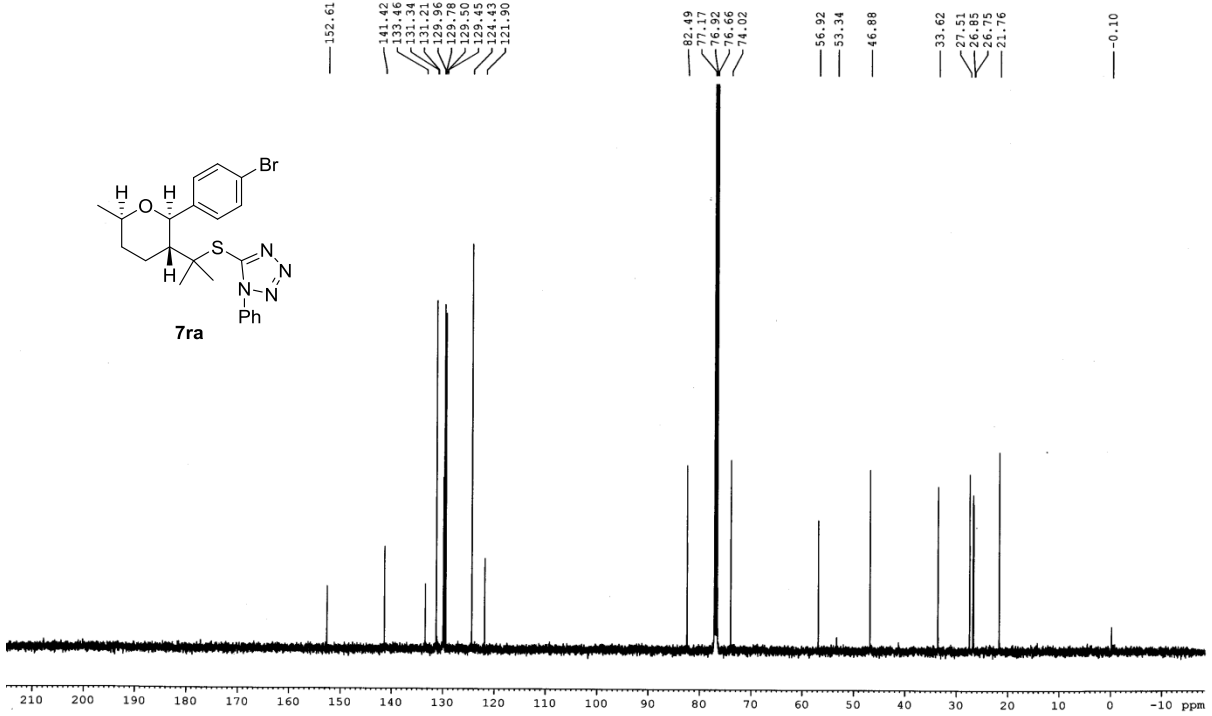


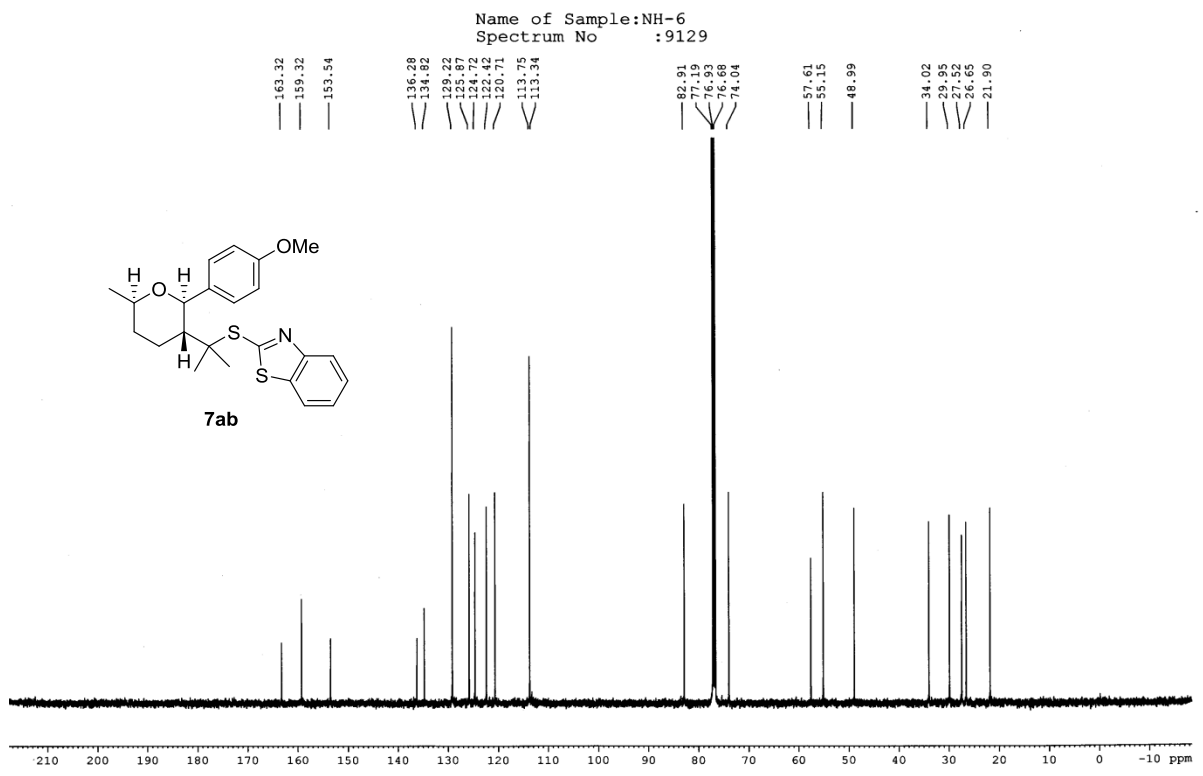
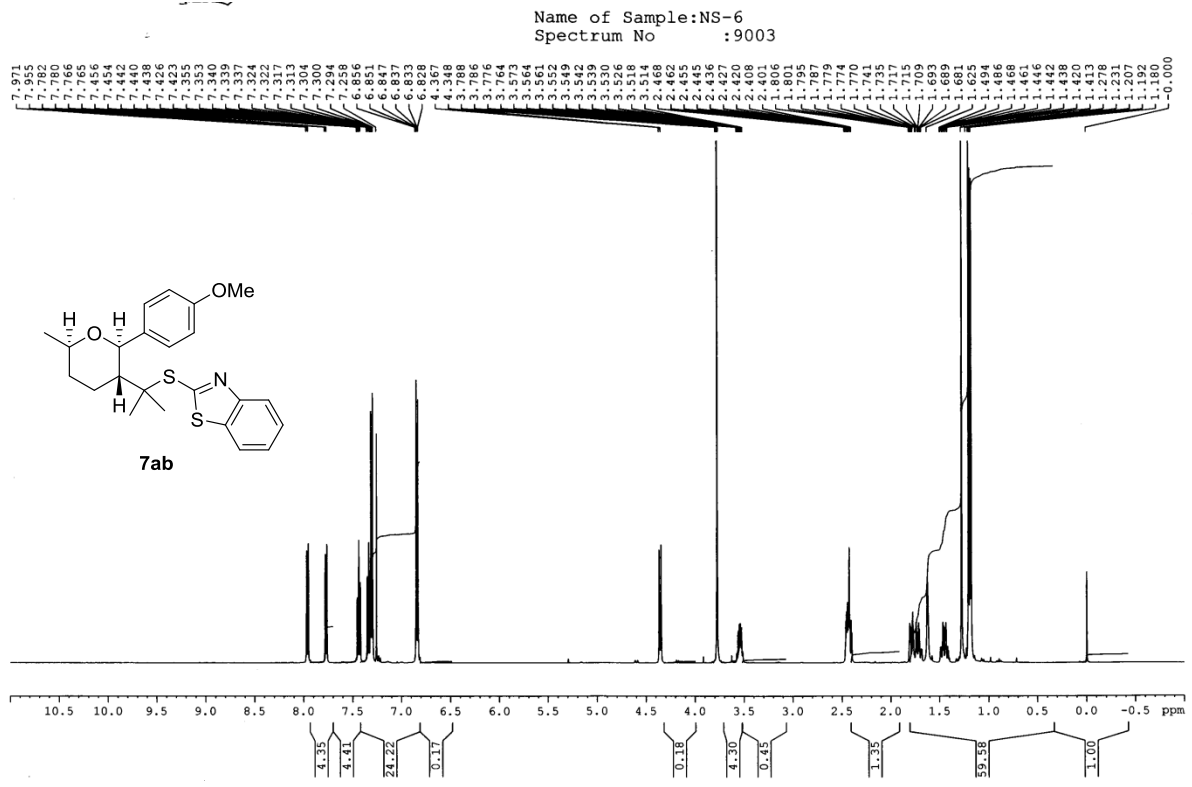


Name of Sample: NS-4  
Spectrum No : 8787

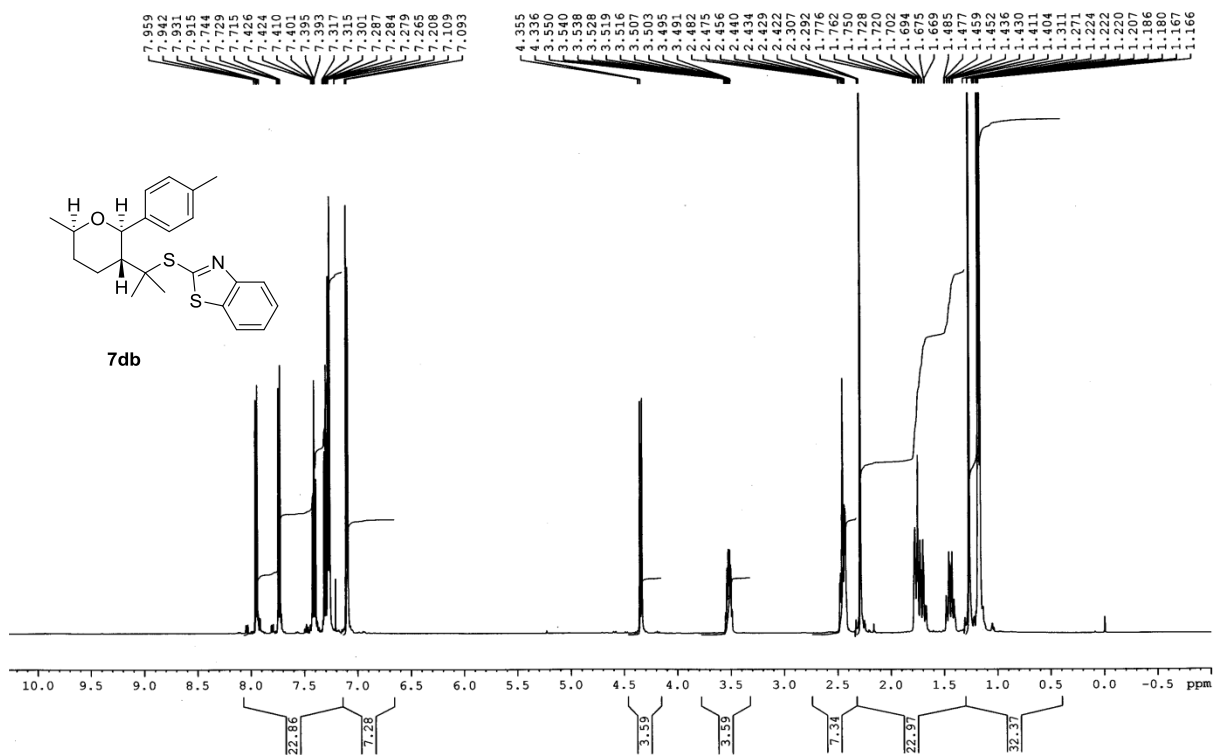


Name of Sample: NH-PBrTH  
Spectrum No : 8812

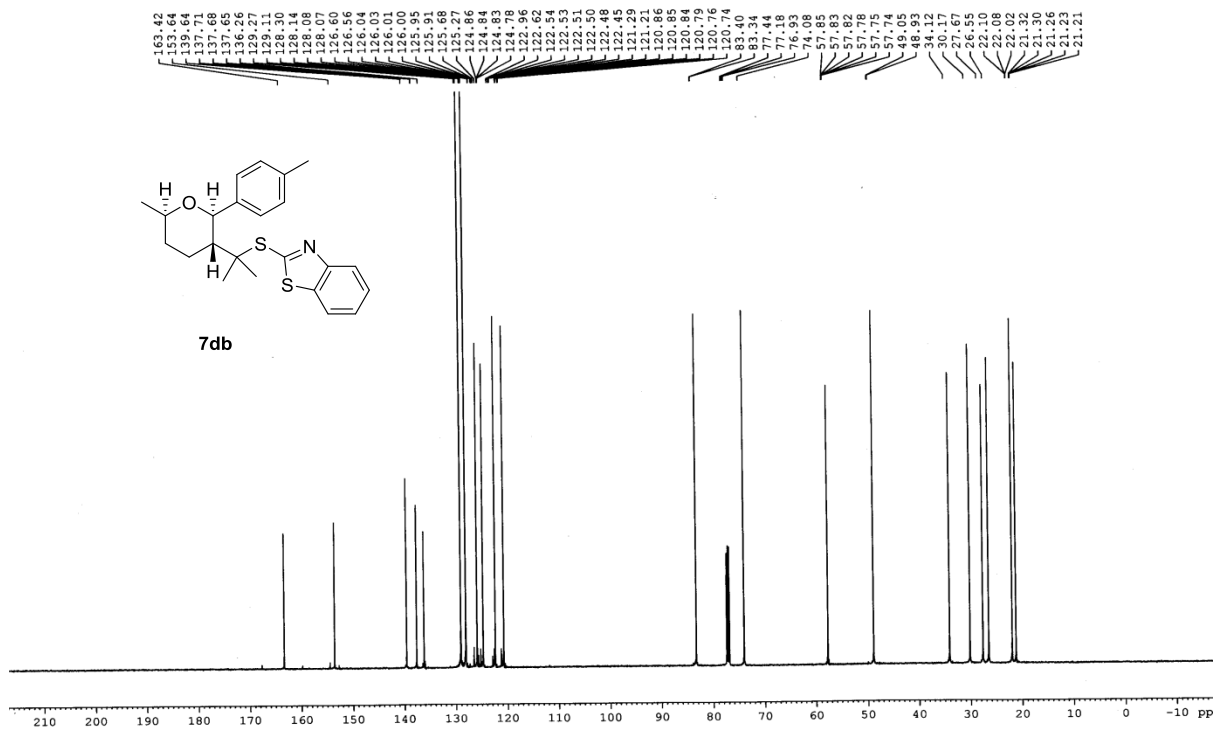




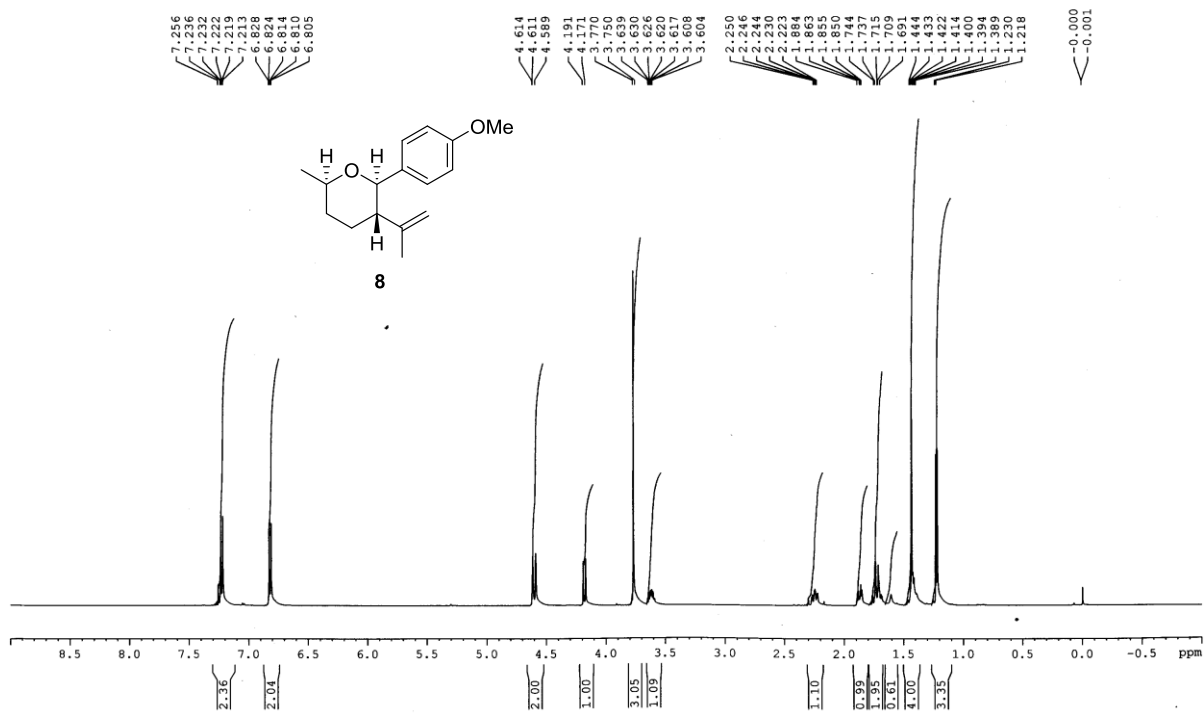
Name of Sample: NS-MPT  
Spectrum No :9443



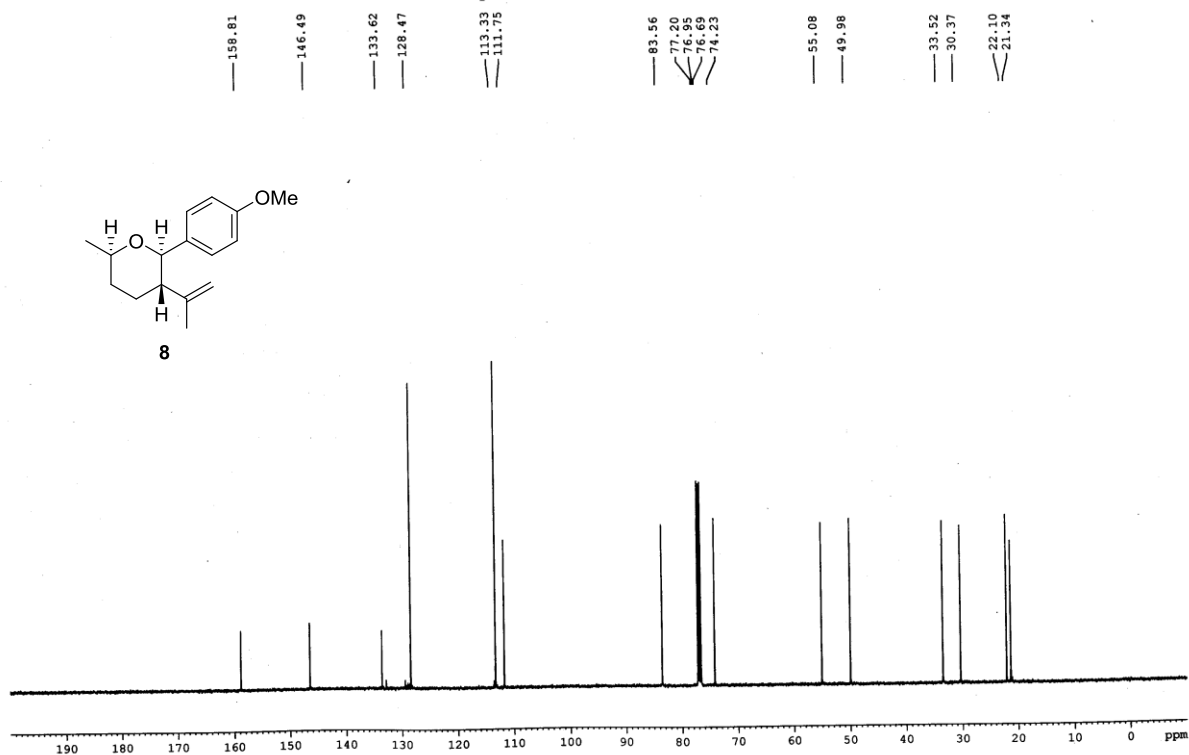
Name of Sample: NH-MPT  
Spectrum No :9404



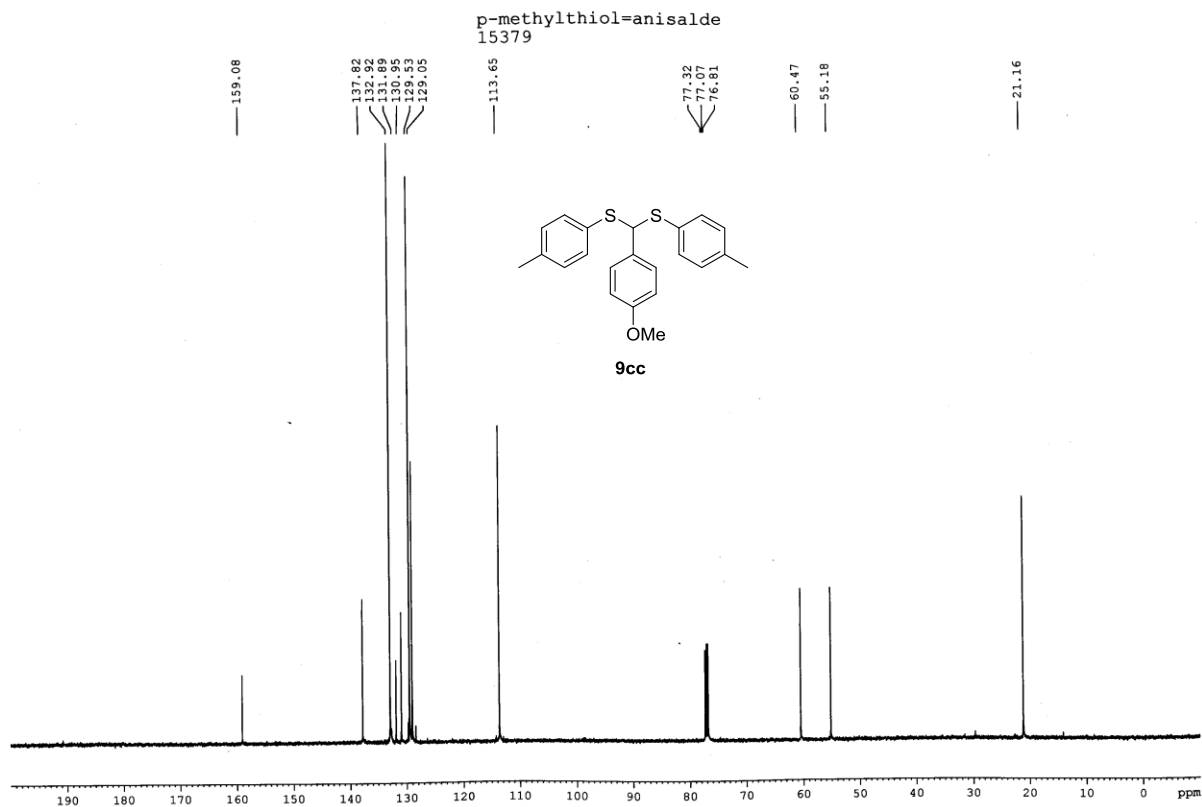
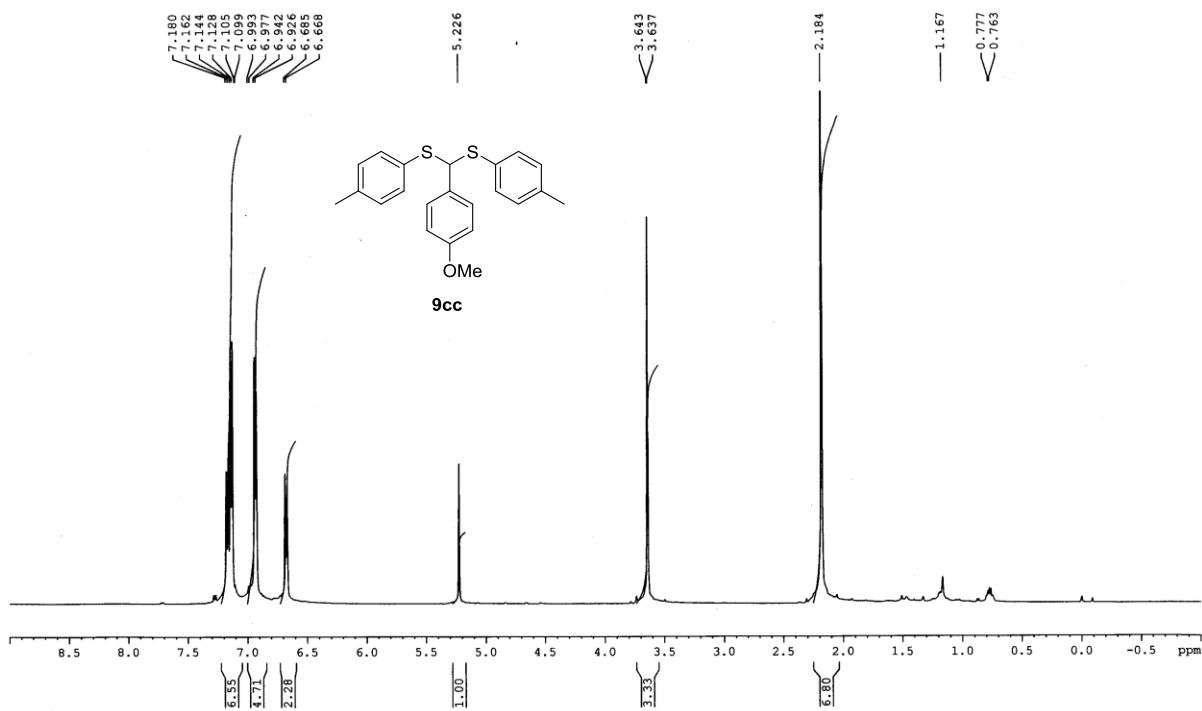
15712  
NH-1



Name of Sample: NH-1  
Spectrum No : 1538

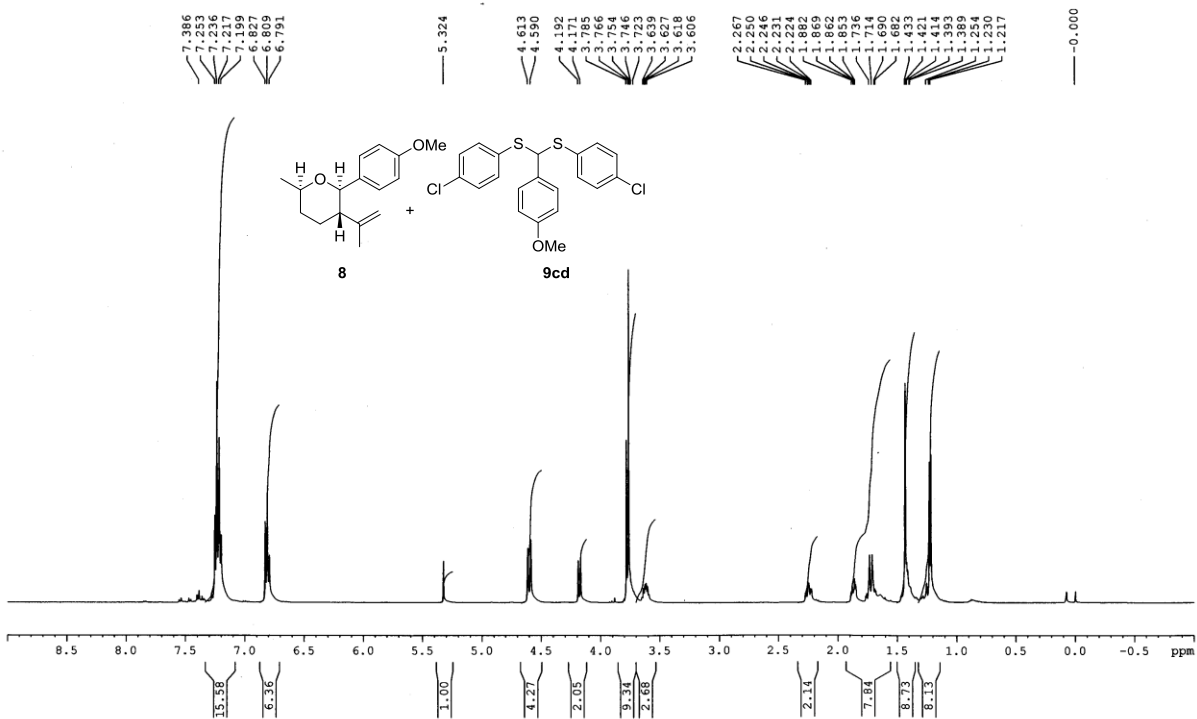


Name of Sample: p-methyl-anisaldehyde  
Spectrum No : 15378

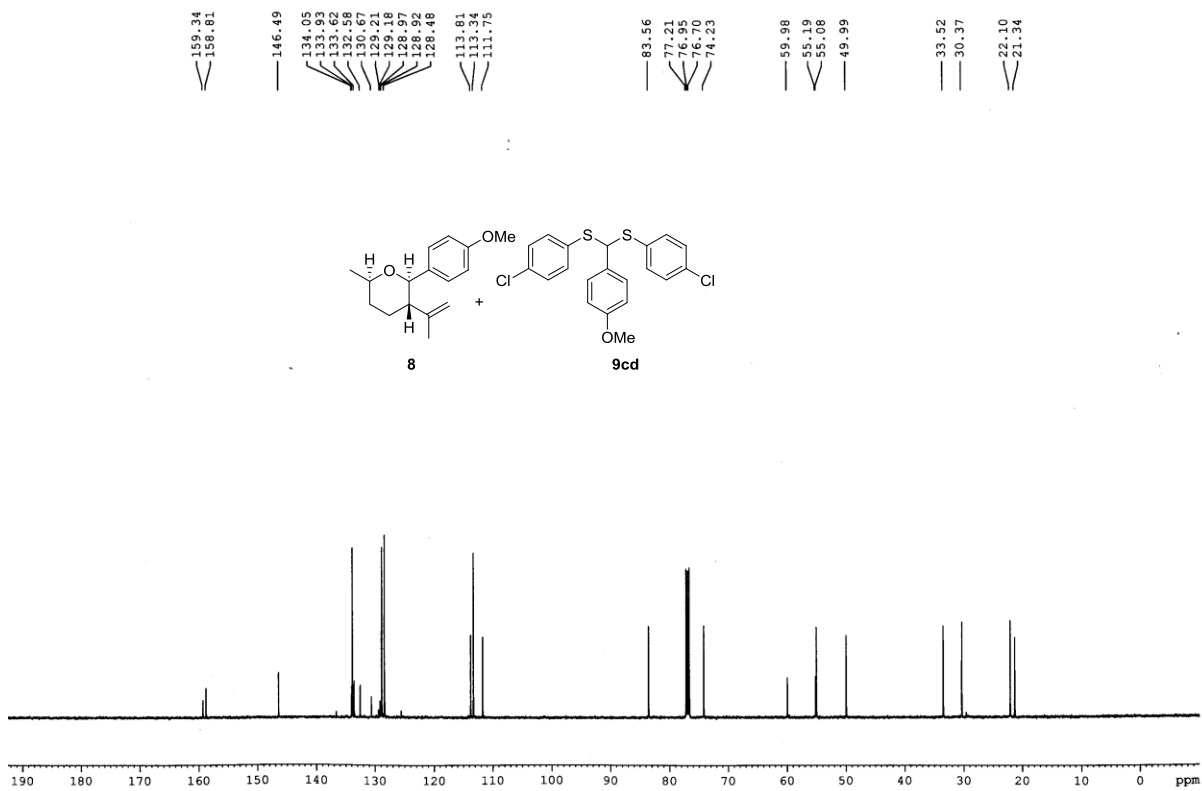




15713  
NH-4-liq



15714  
NH-4-liq



# NOESY Spectrum of the compound **7da**

