

Electronic Supplementary Information

Regioselective Synthesis of N1-Substituted-4-nitropyrazole-5-carboxylates via the Cyclocondensation of Ethyl 4-(Dimethylamino)-3-nitro-2-oxobut-3-enoate with Substituted Hydrazines

Rulin Zhao,* Zhenqiu Hong, Bei Wang, James Kempson, Lyndon Cornelius, Jianqing Li, Yi-Xin
Li and Arvind Mathur*

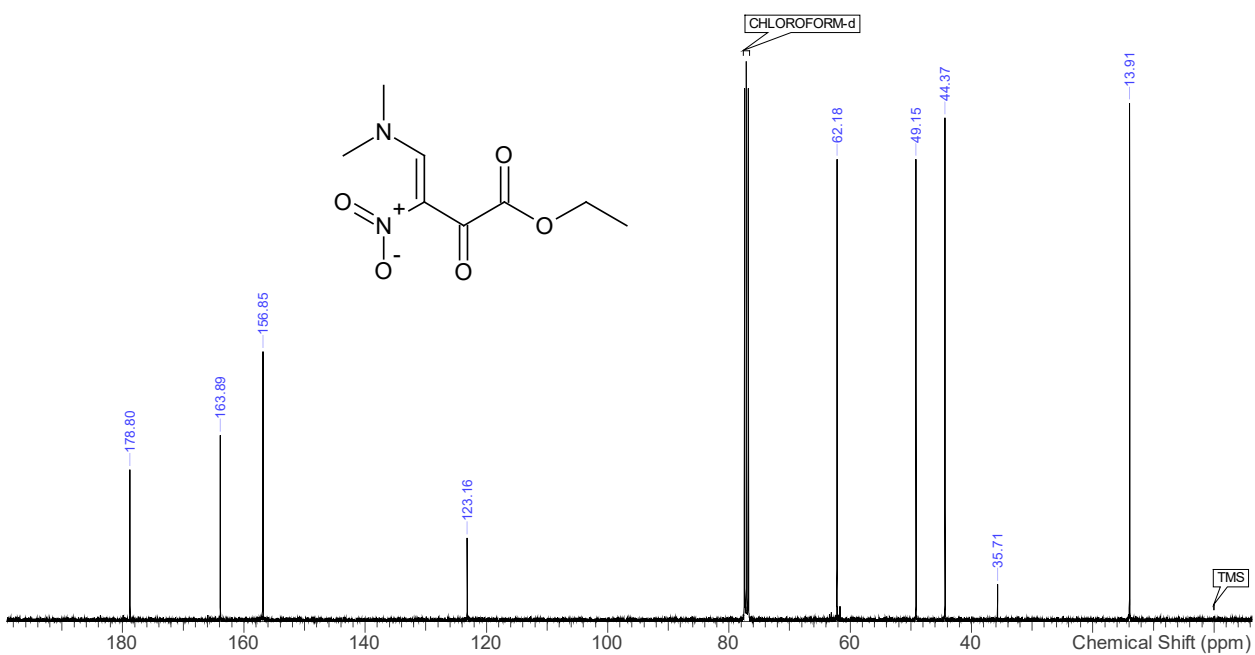
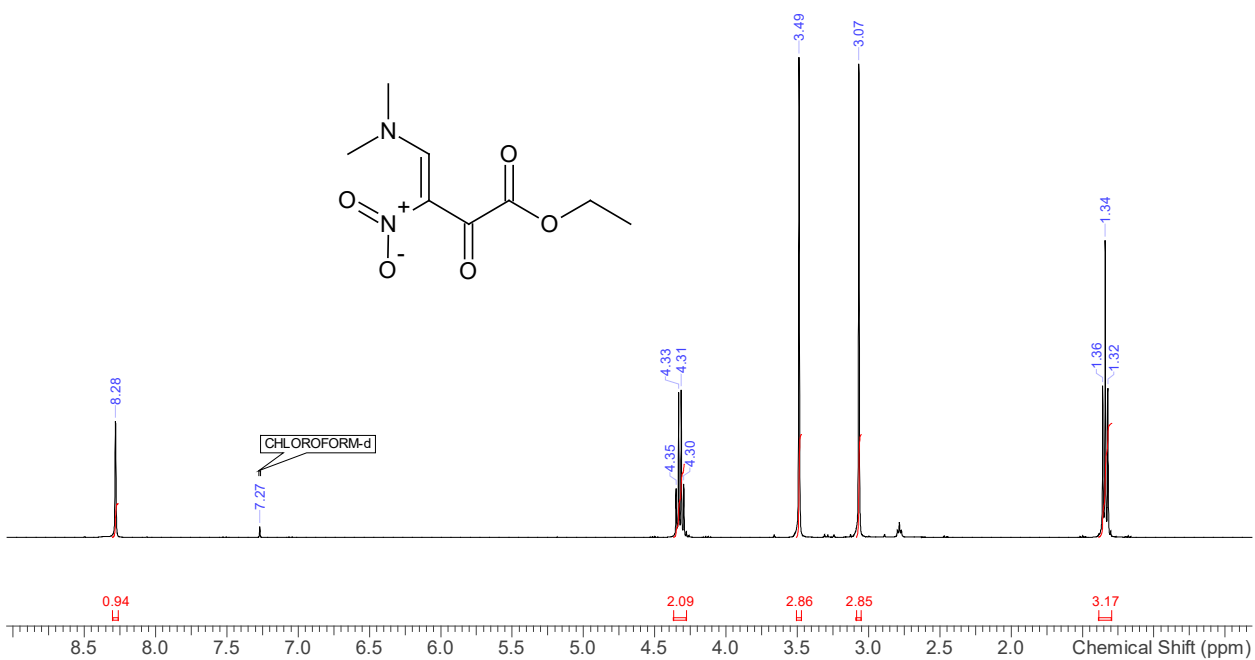
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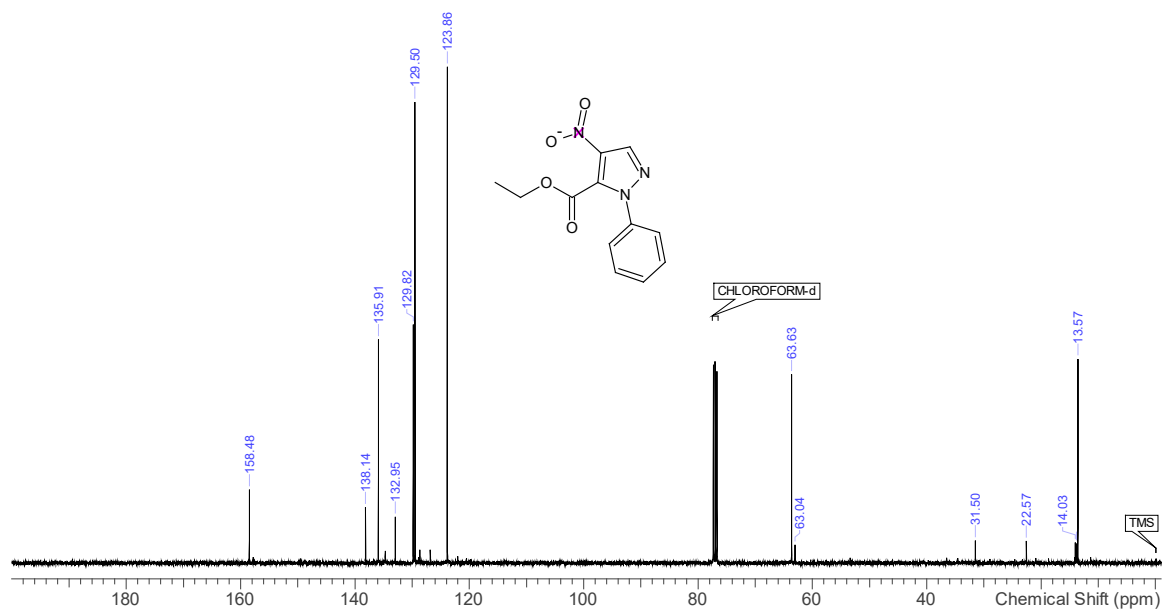
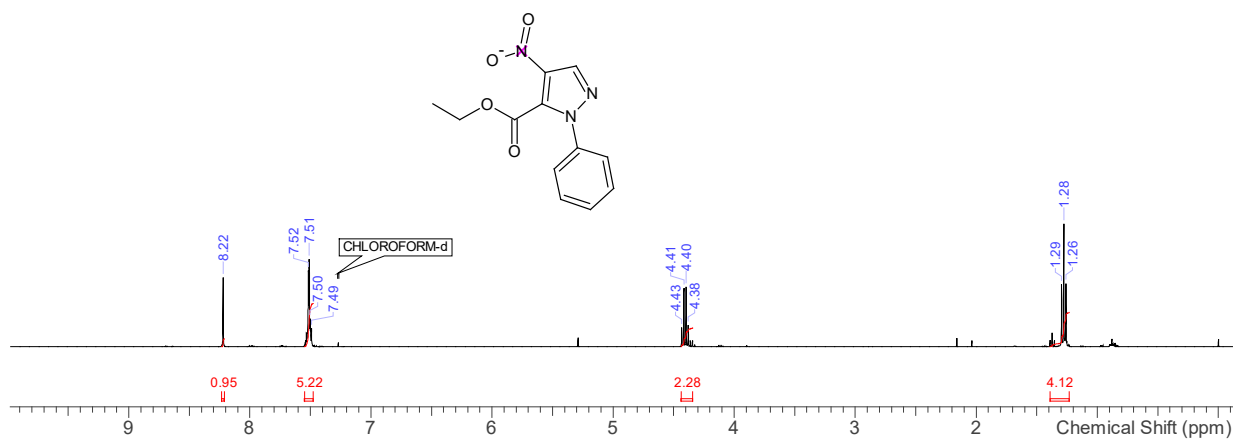
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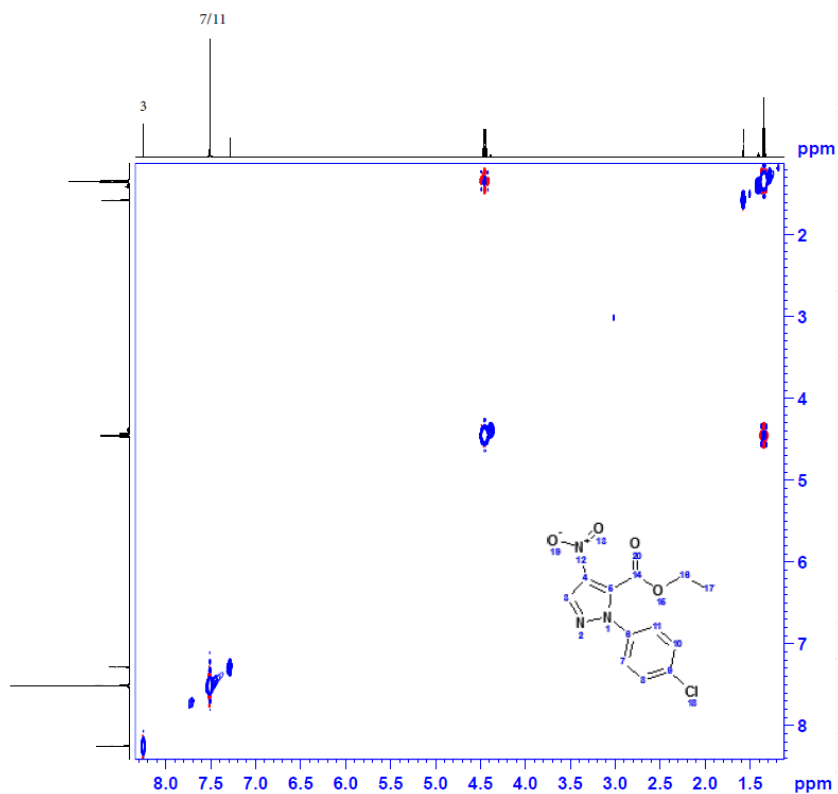
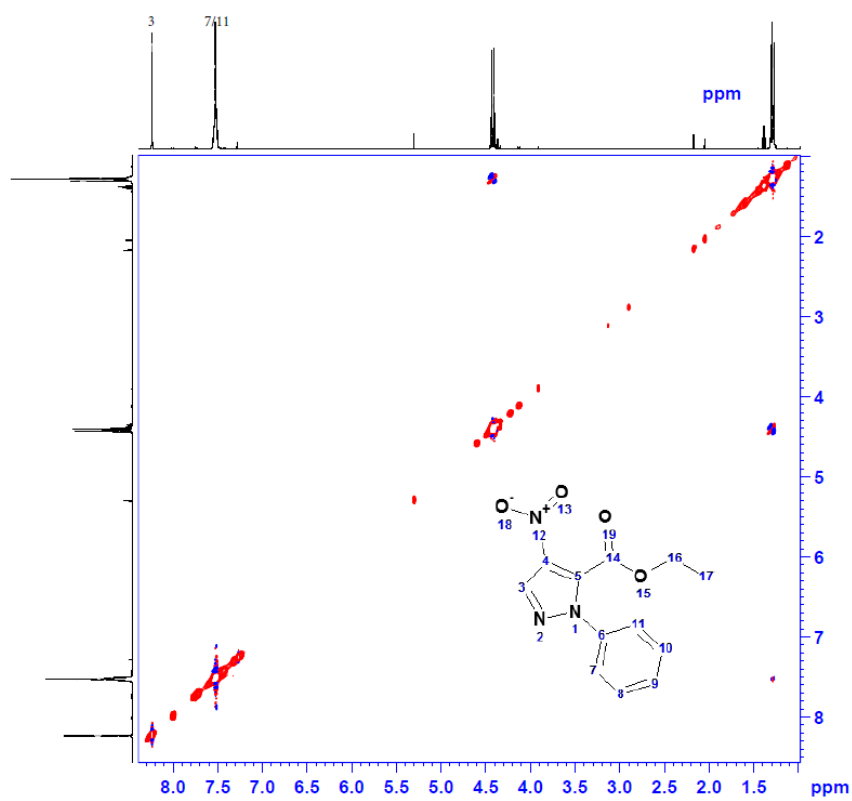
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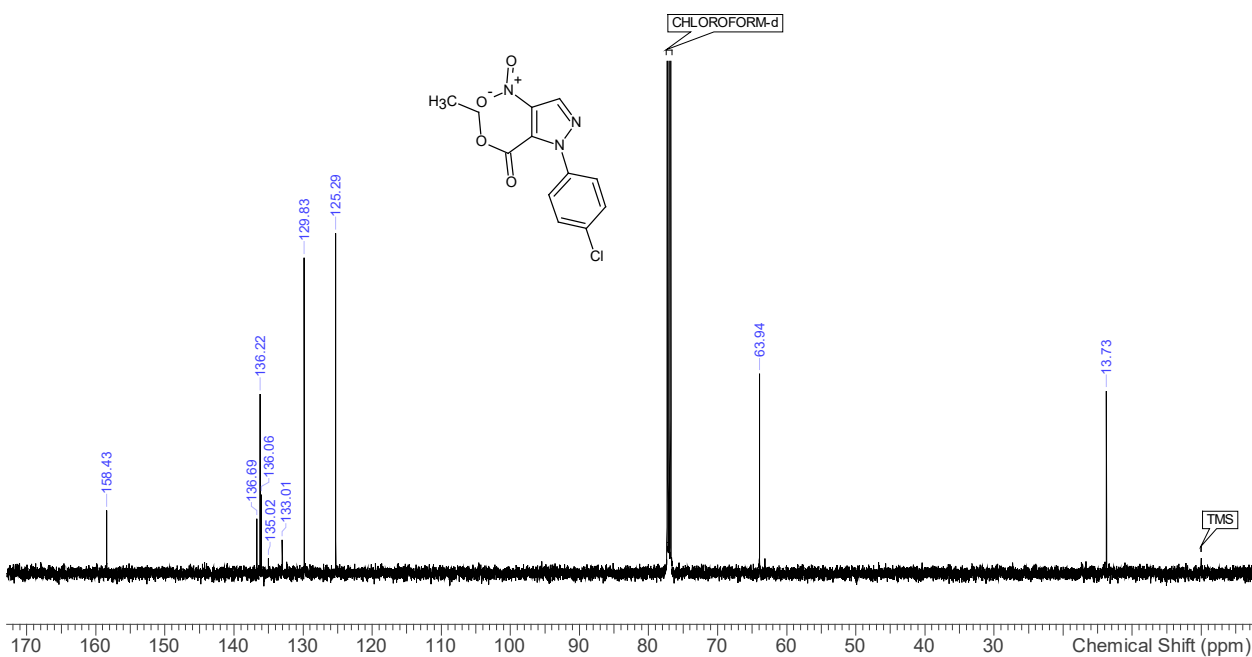
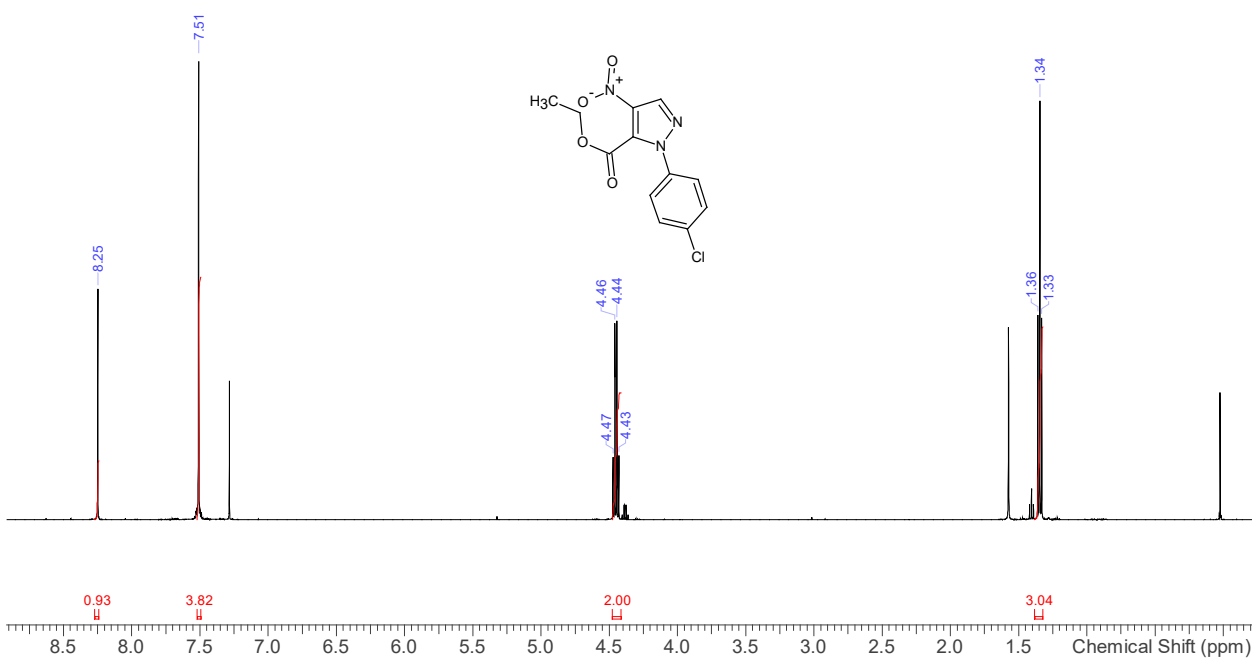
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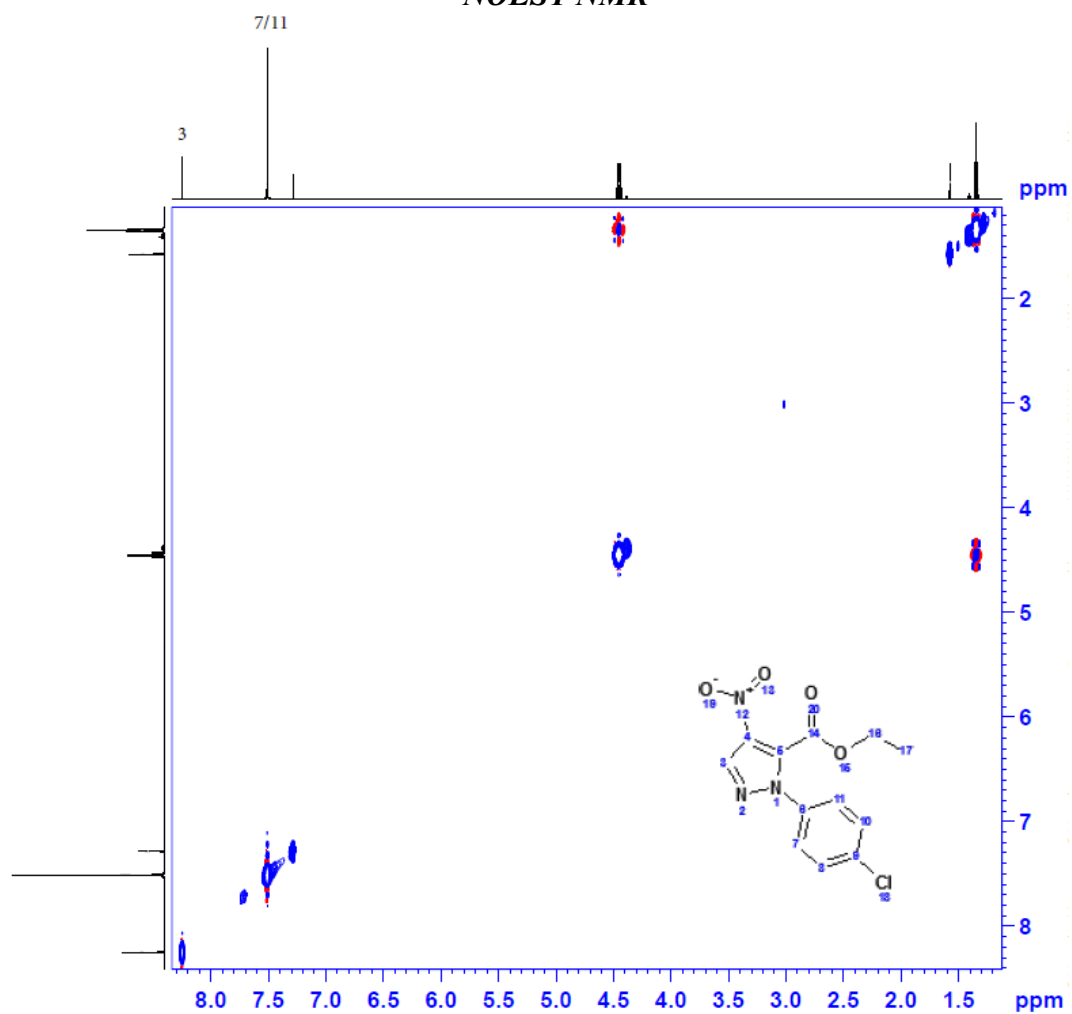
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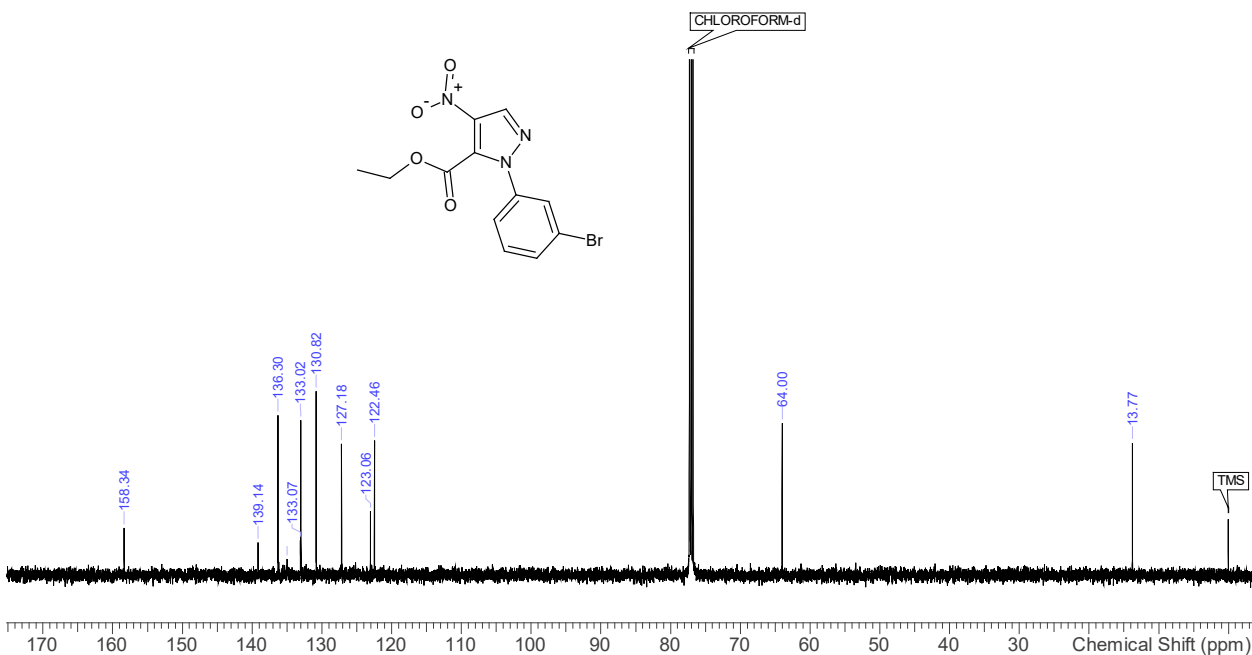
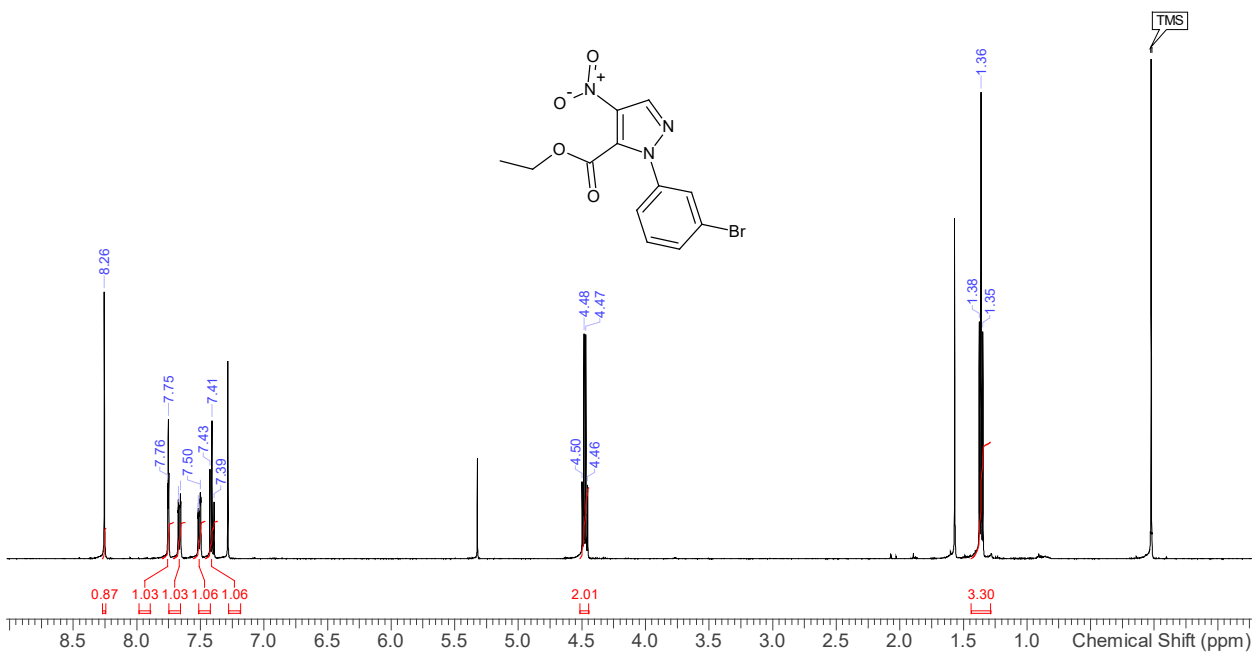
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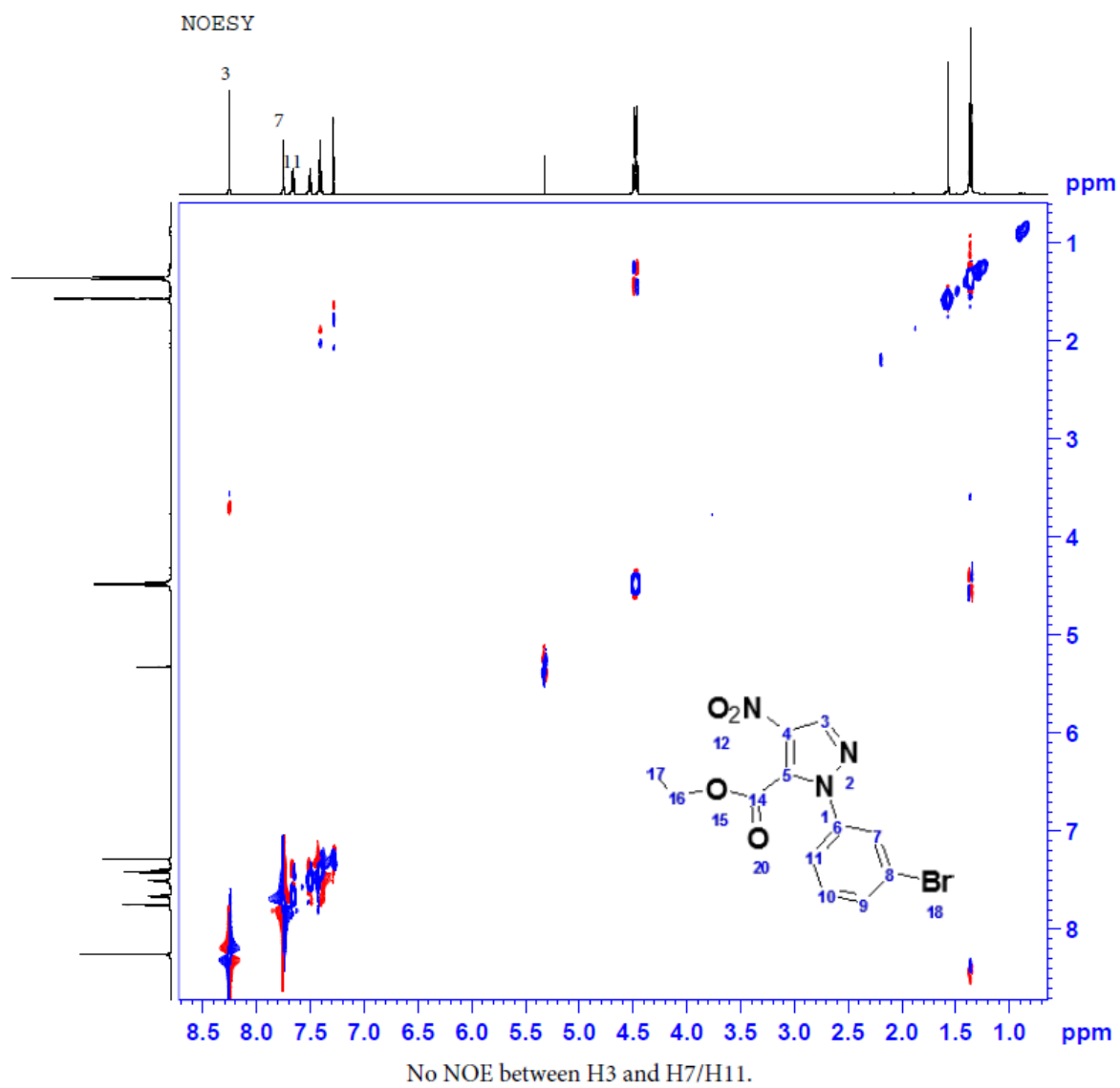


NOESY NMR

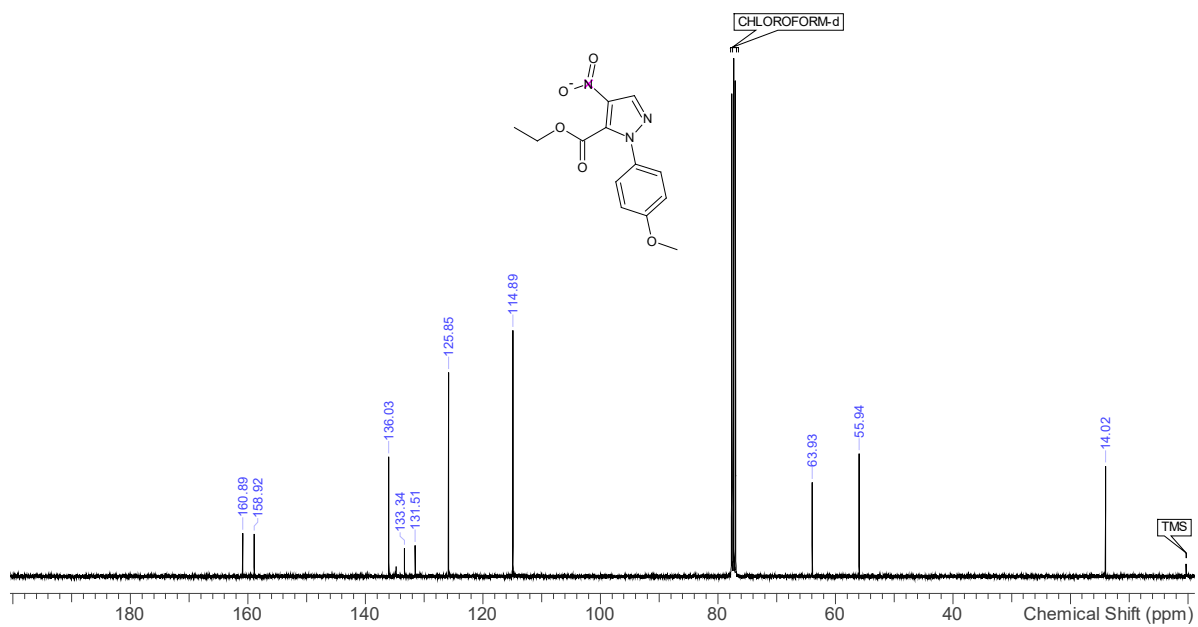
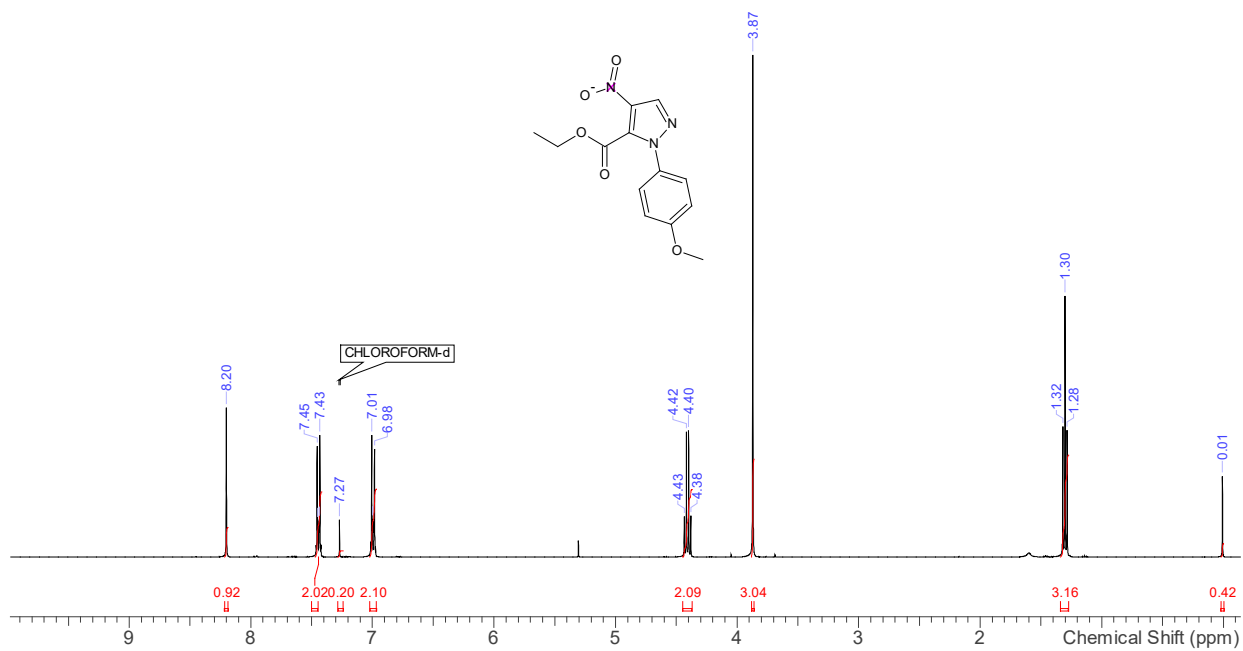


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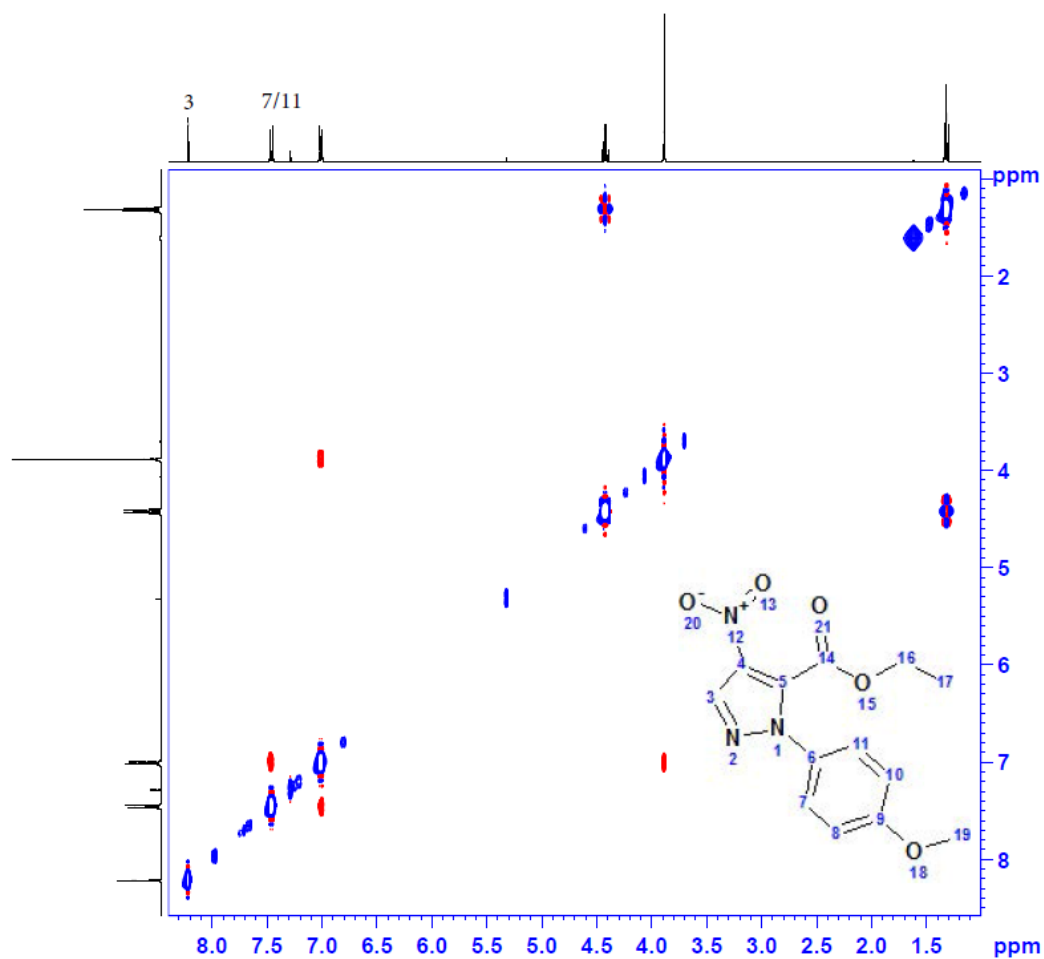




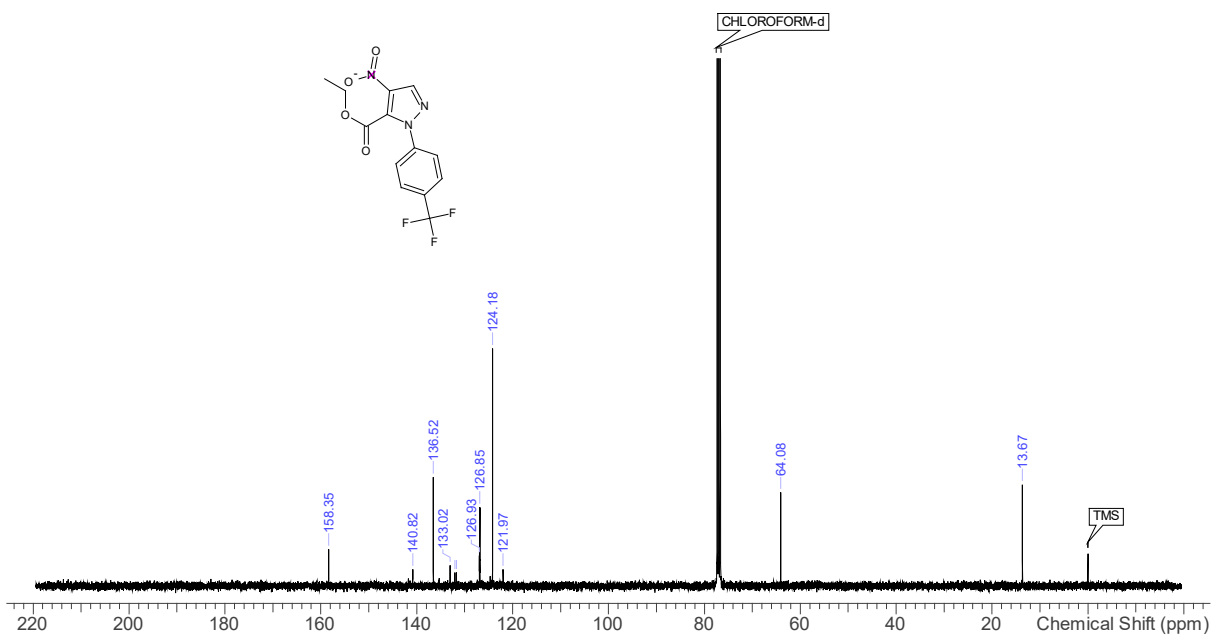
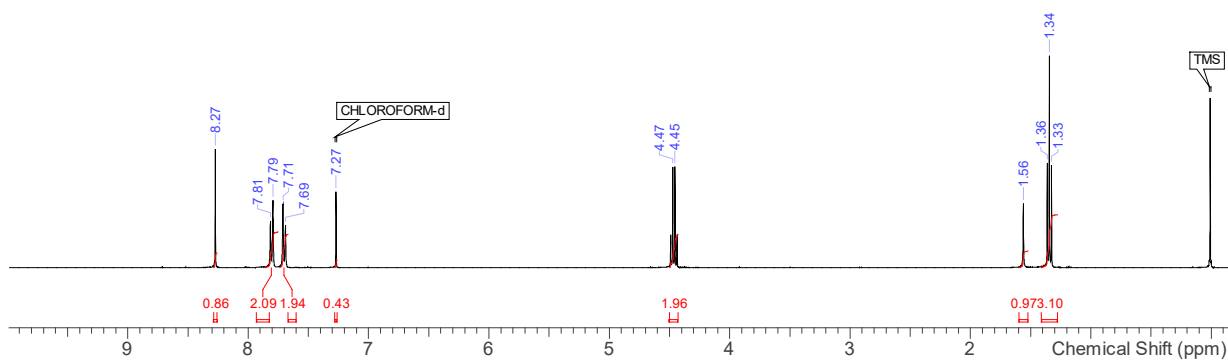
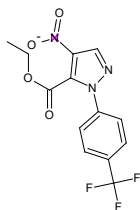
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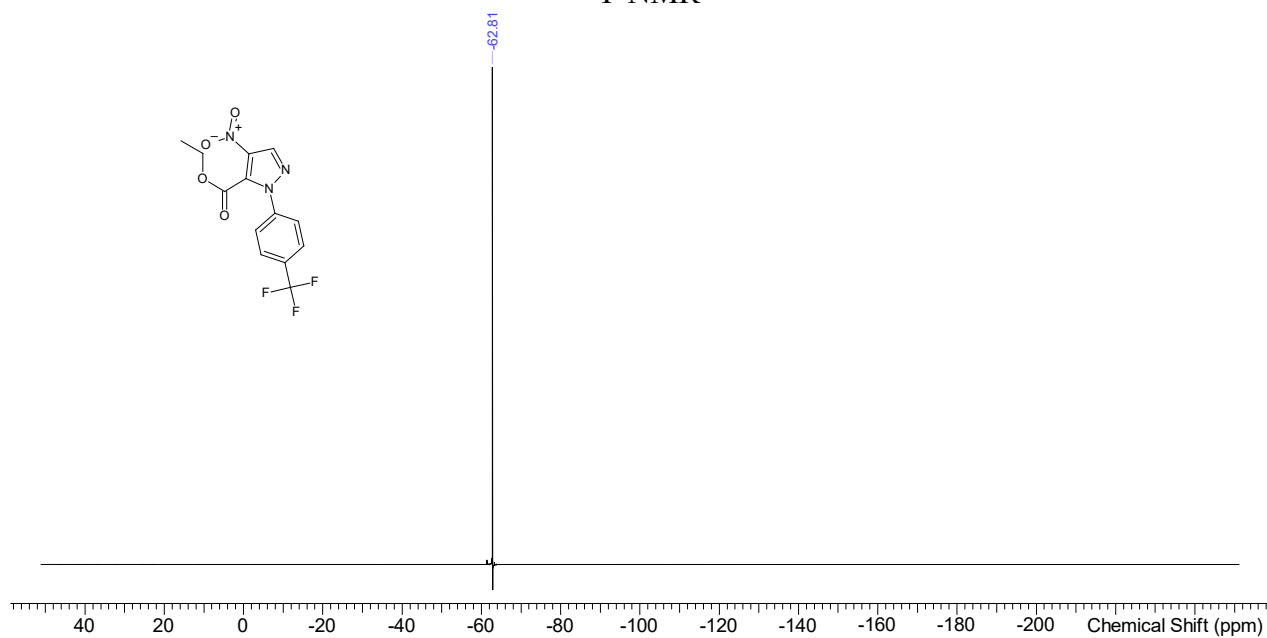
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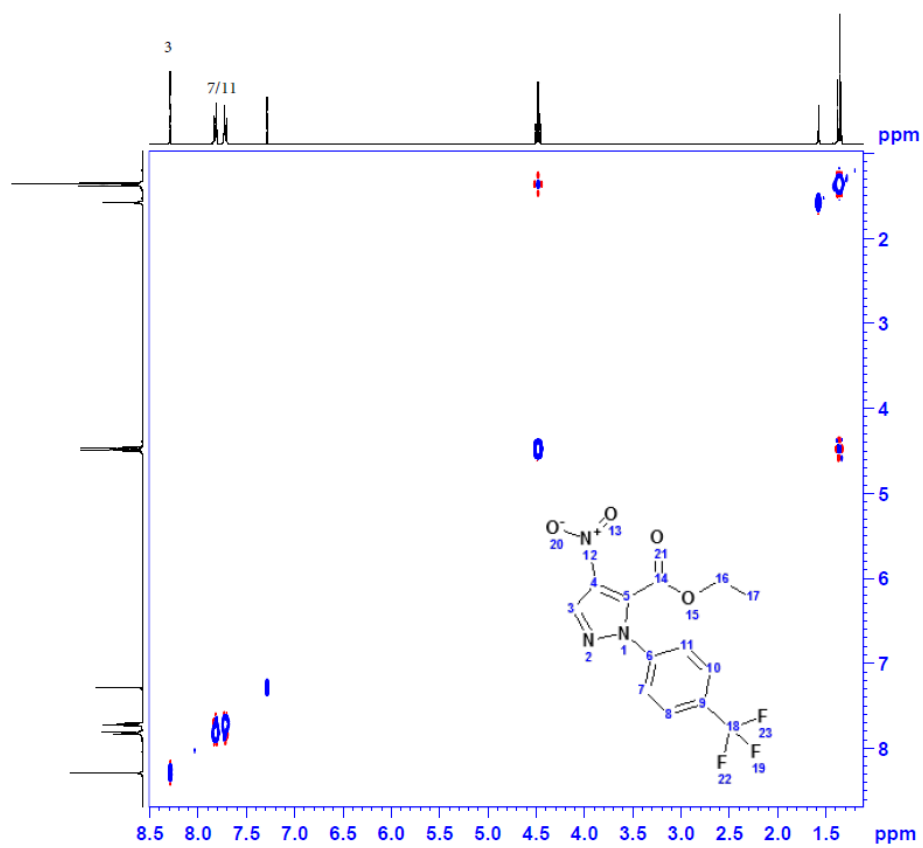
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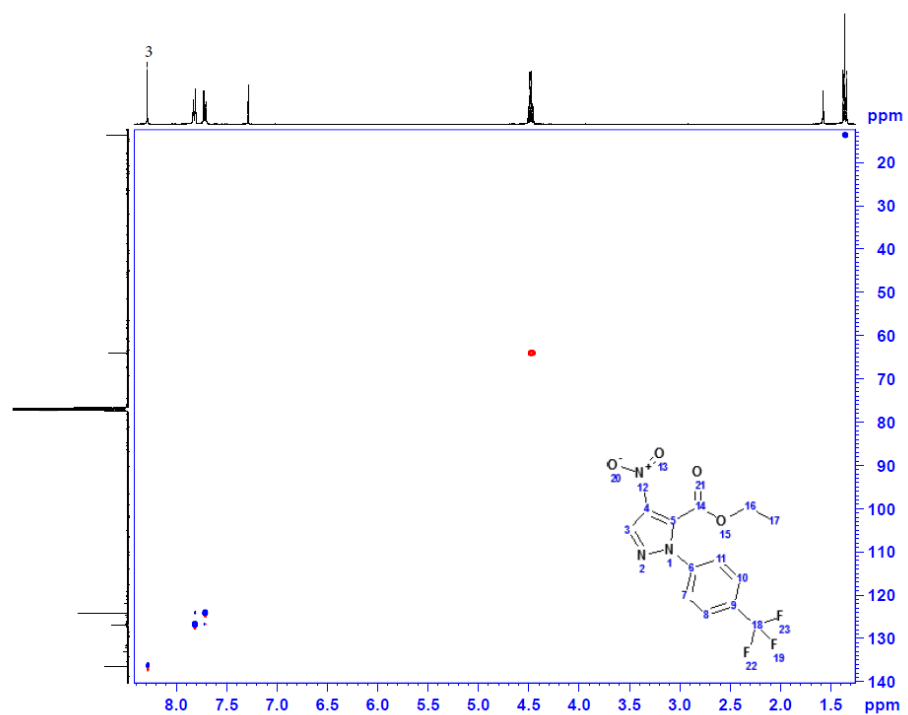
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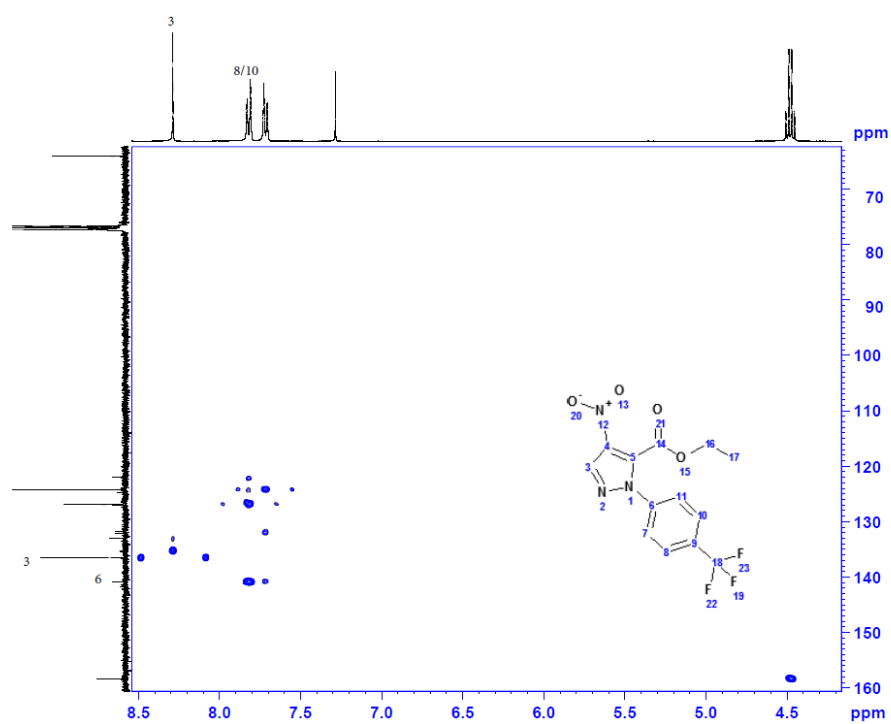
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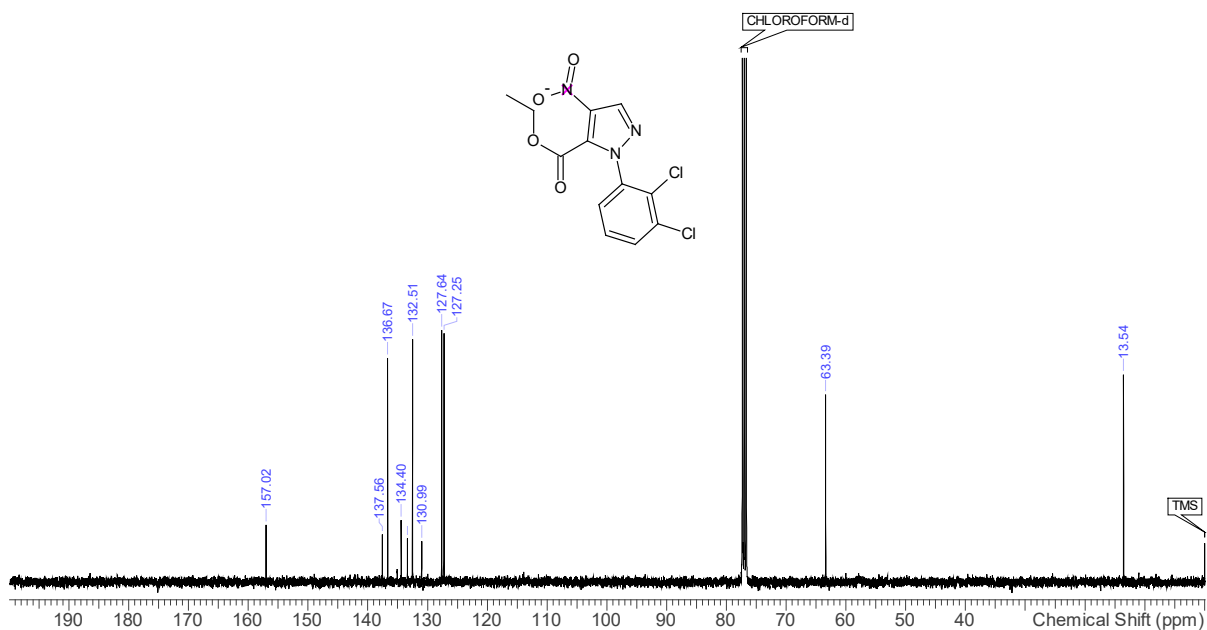
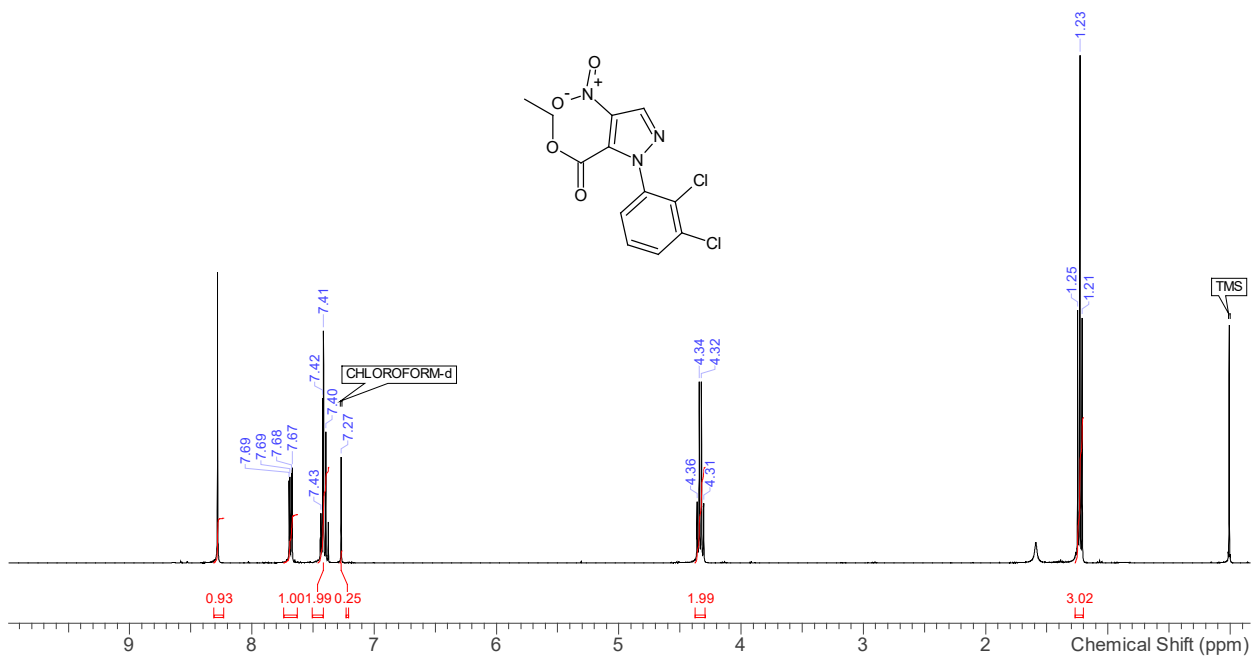
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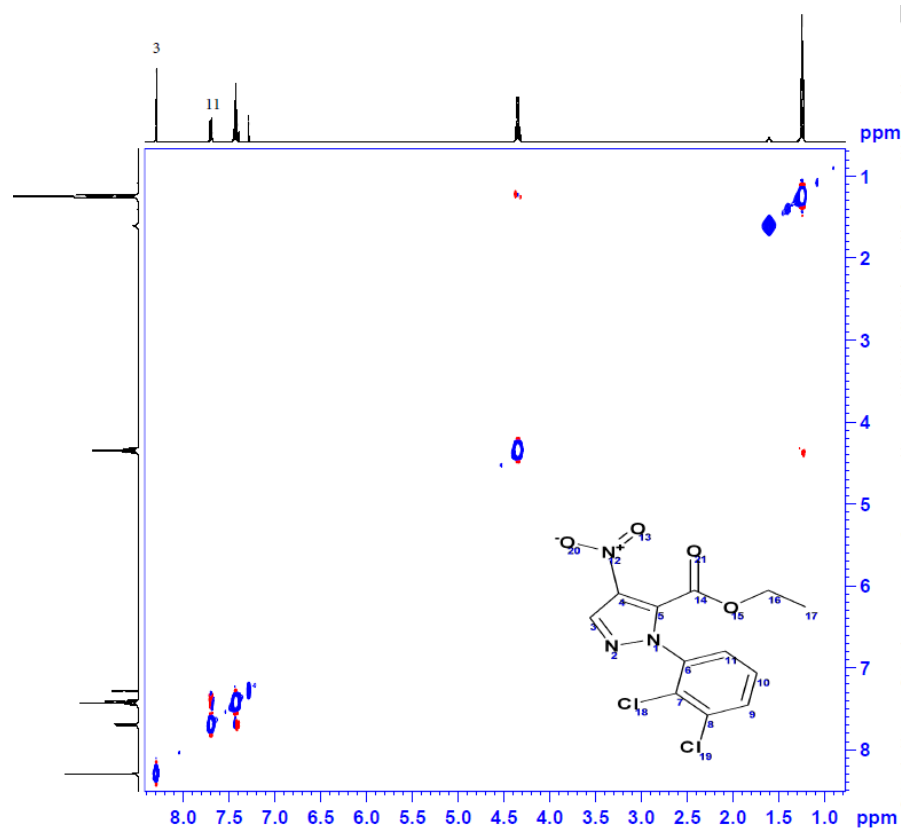
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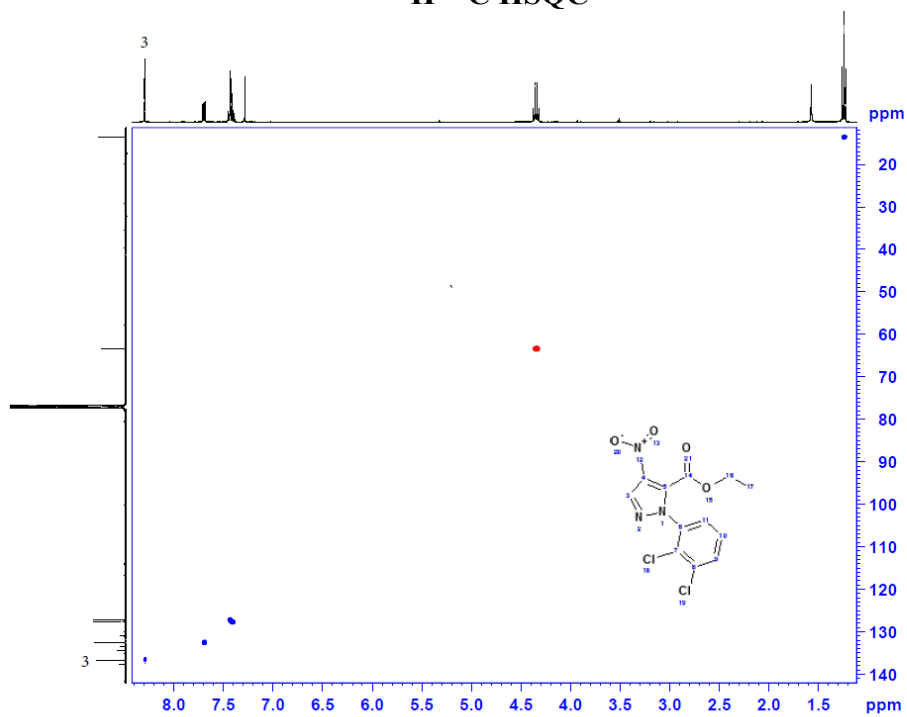
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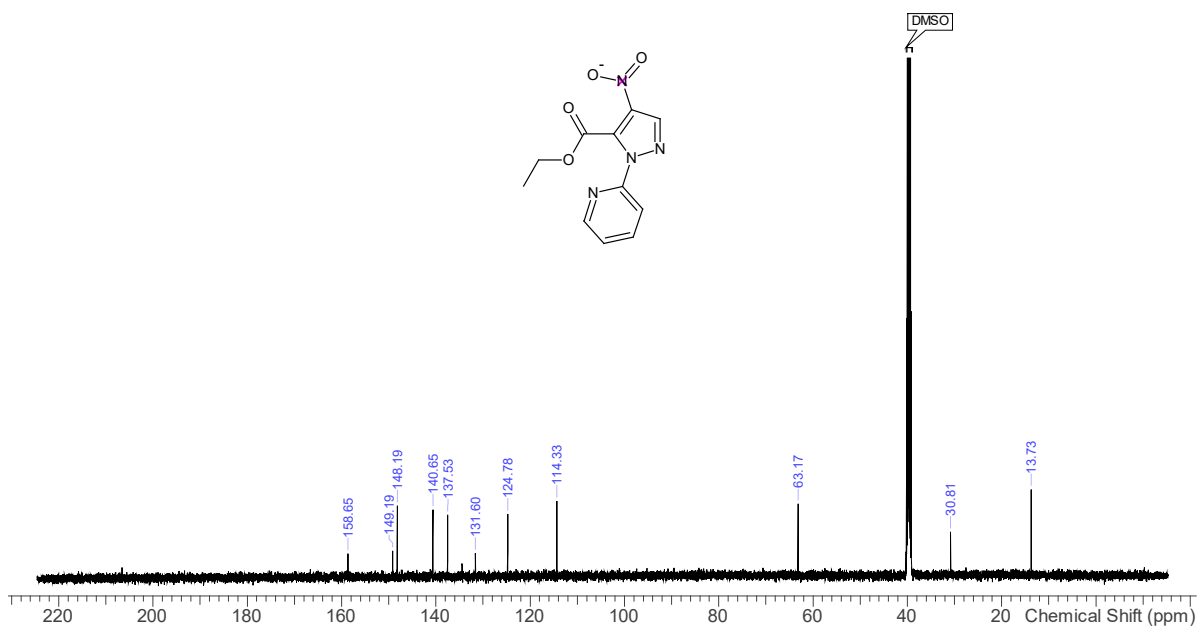
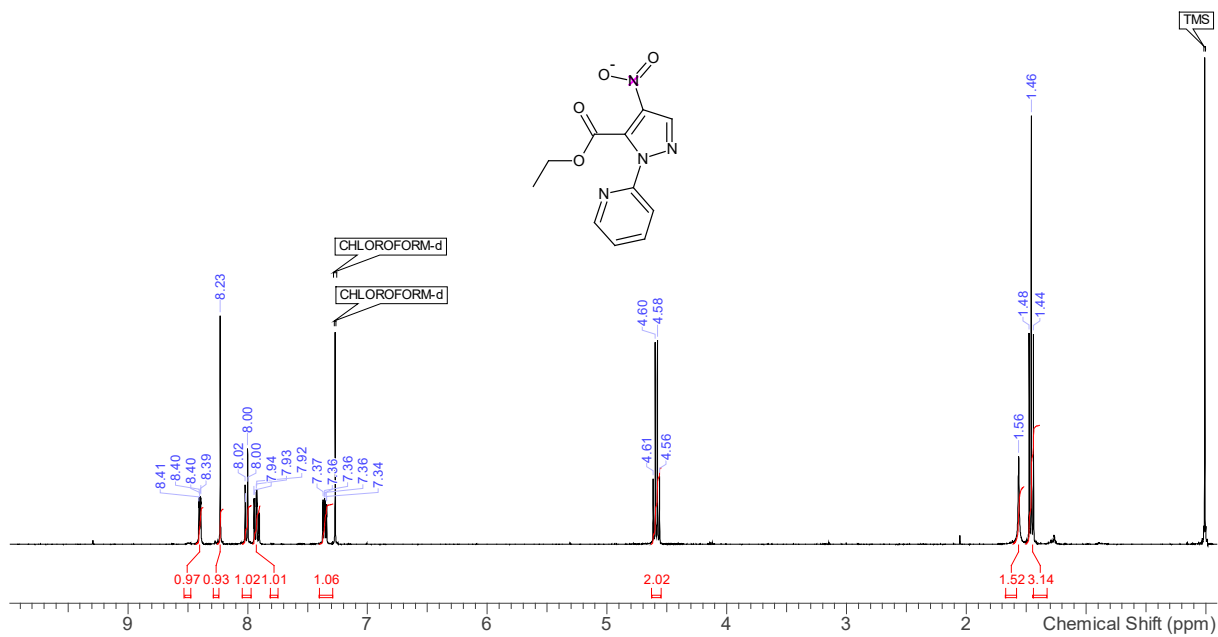
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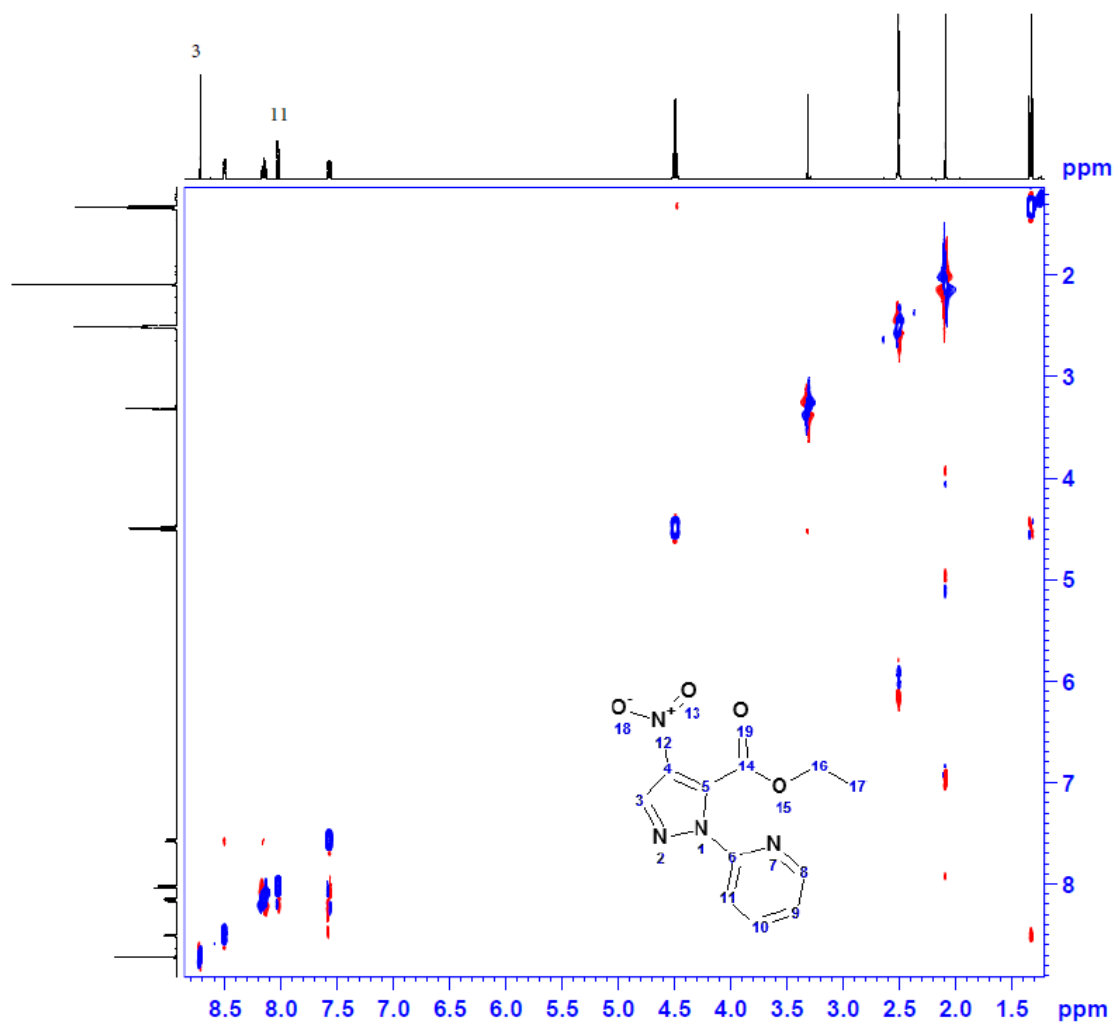
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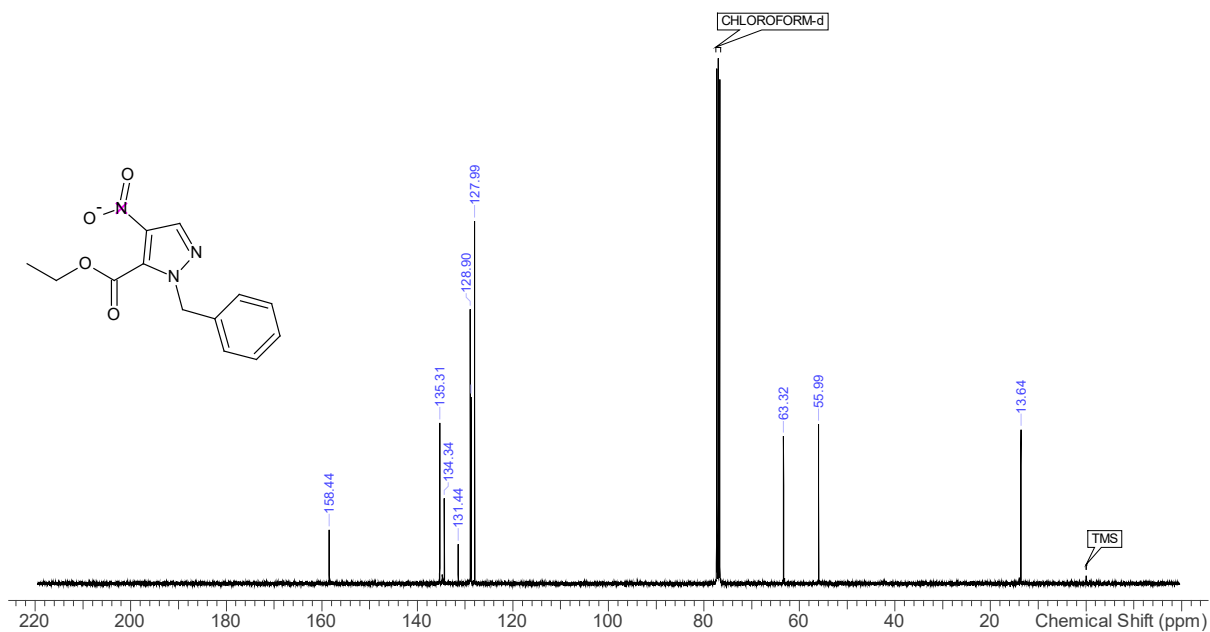
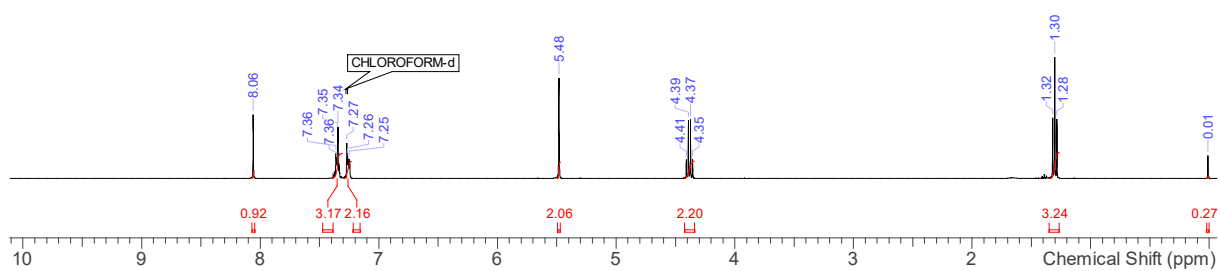
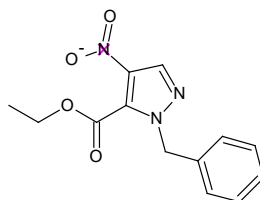
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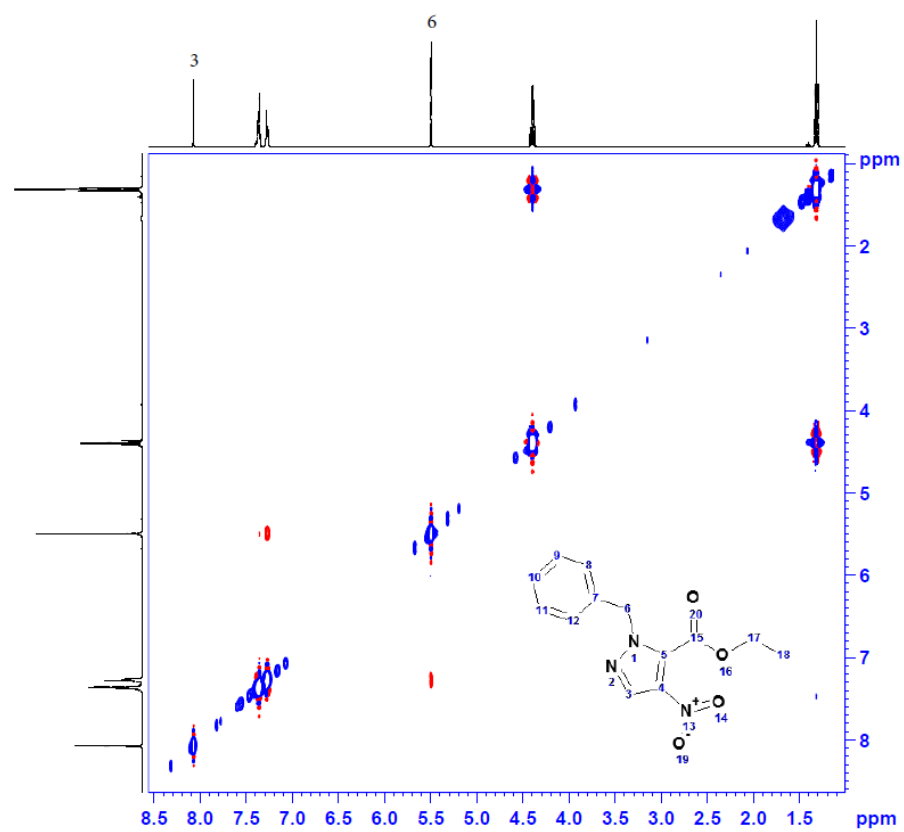
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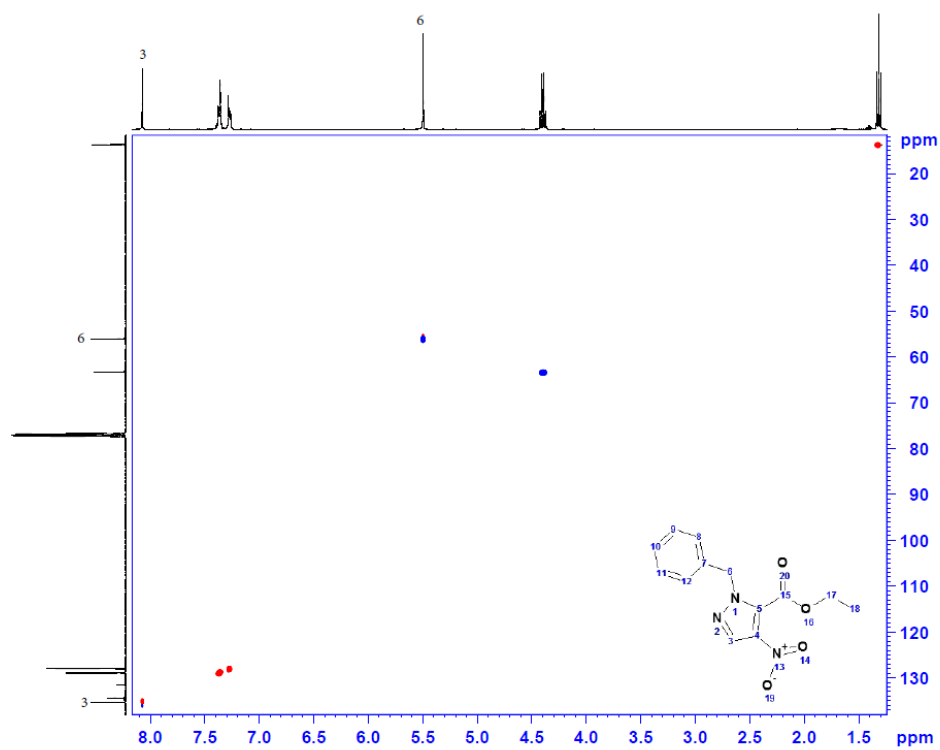
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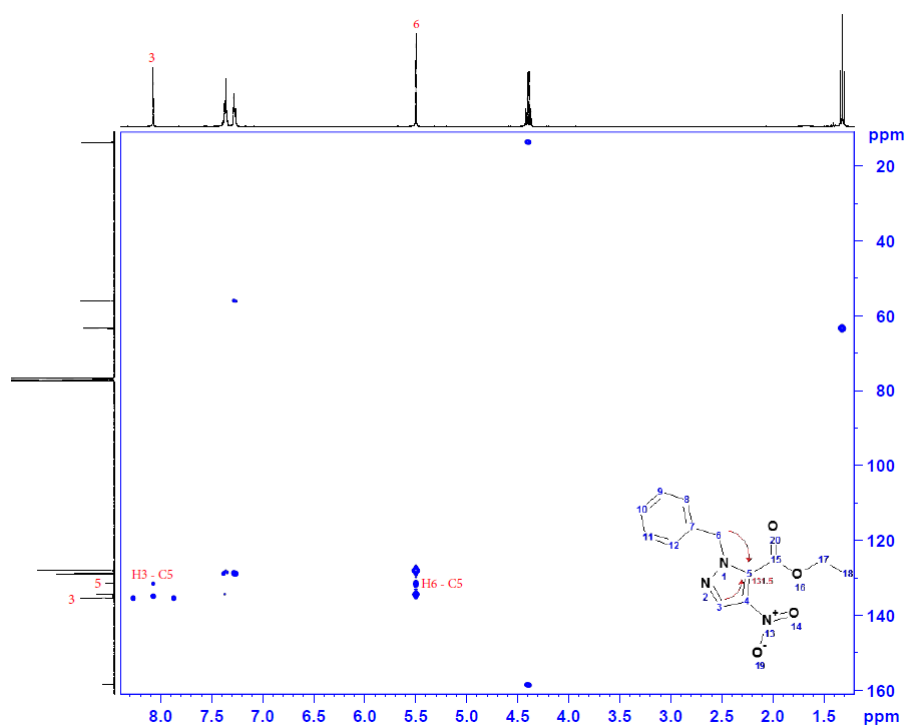
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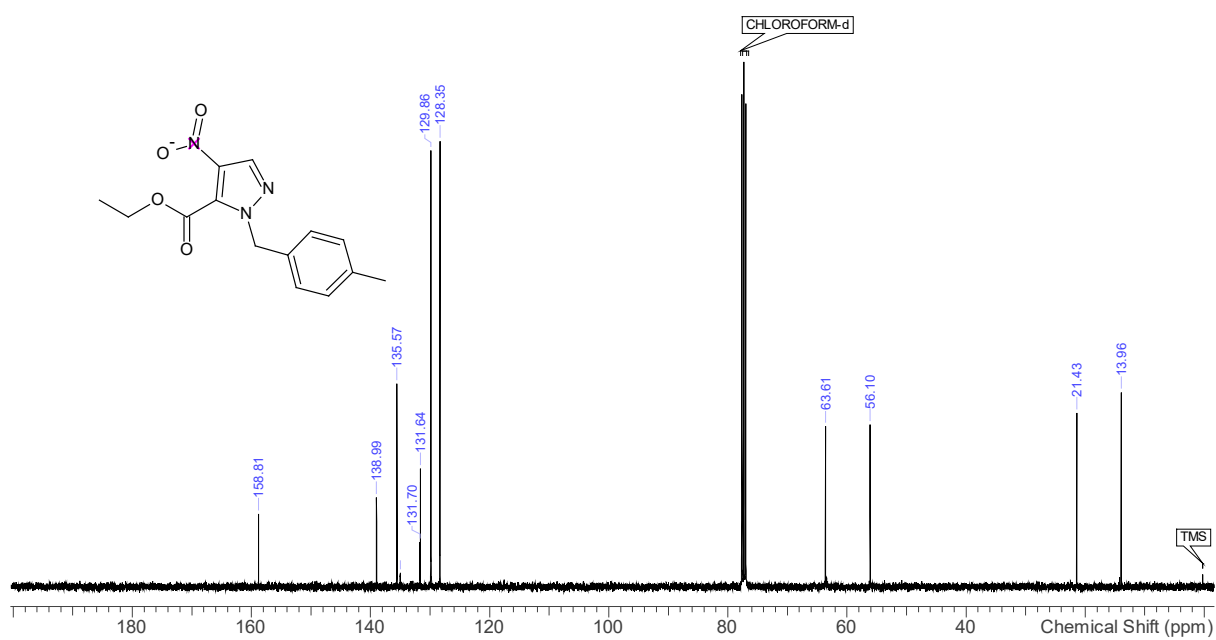
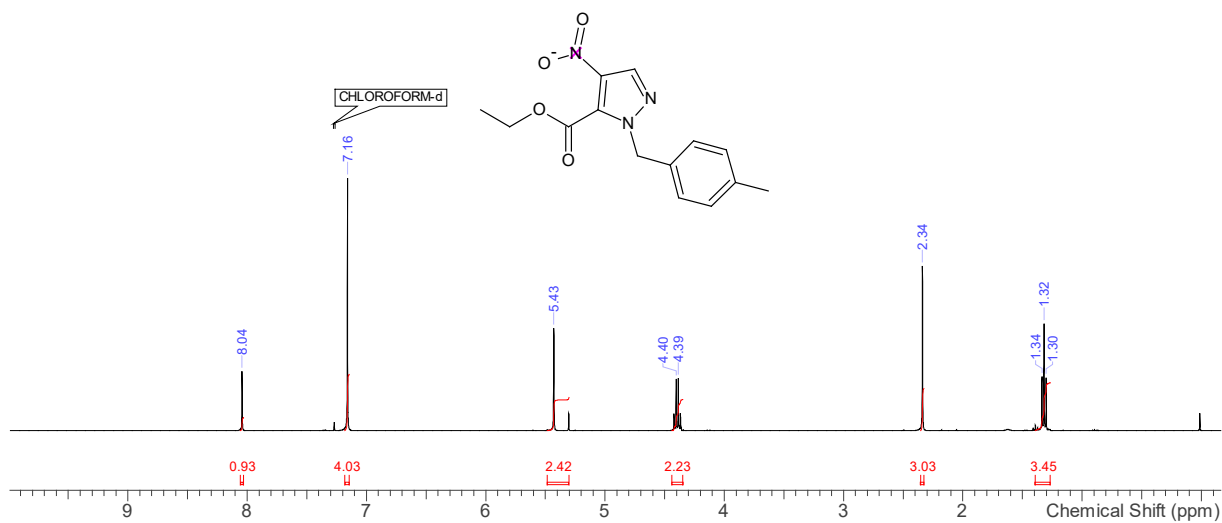
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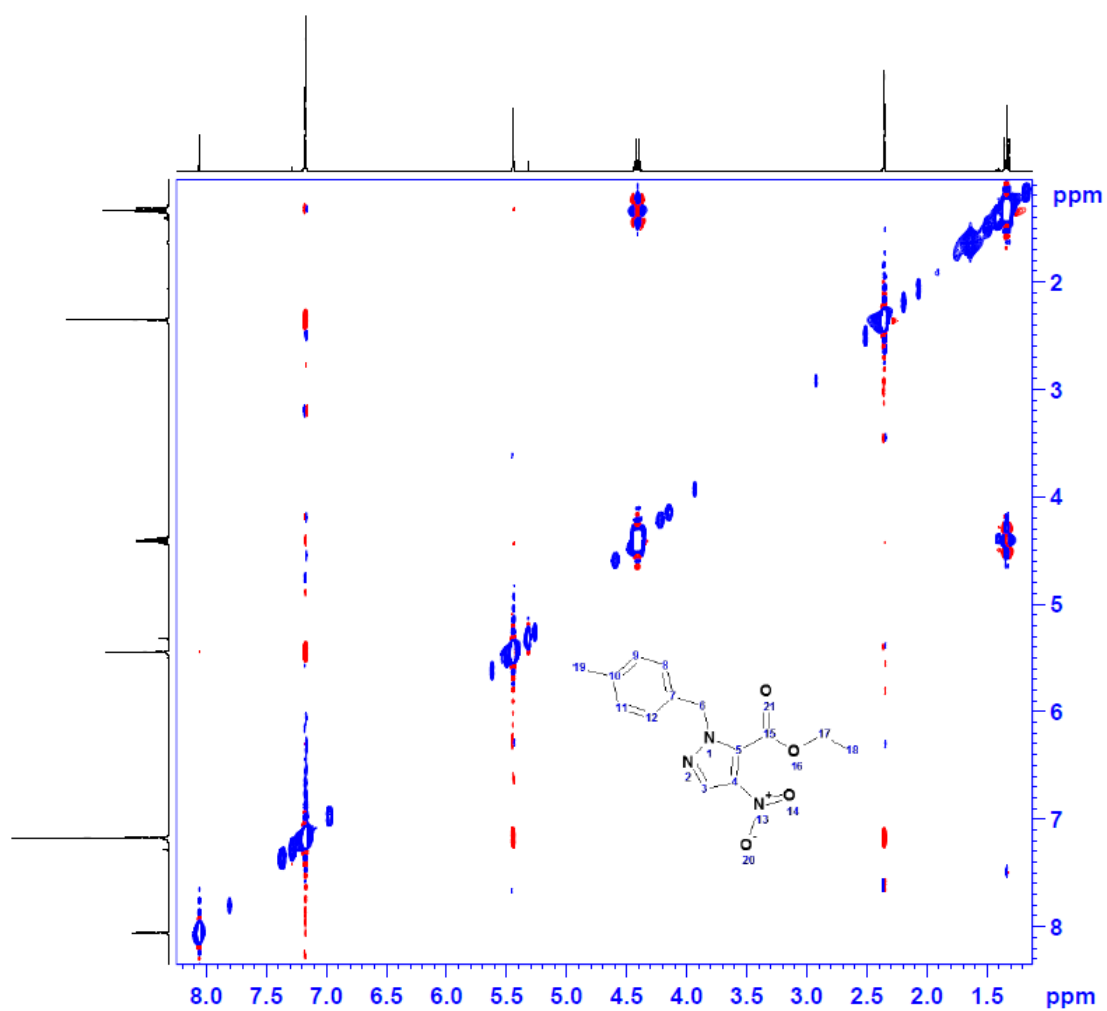
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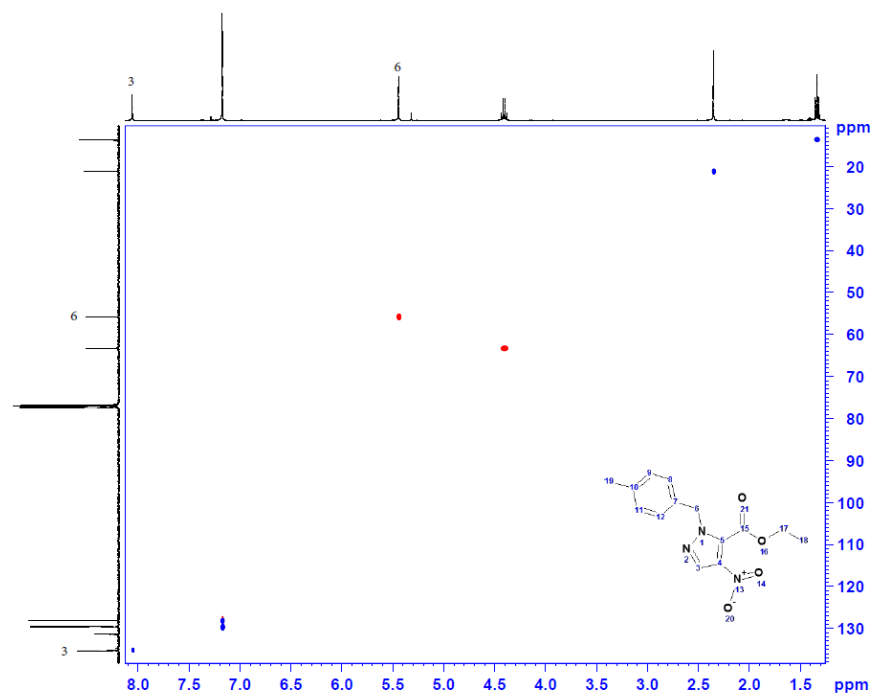
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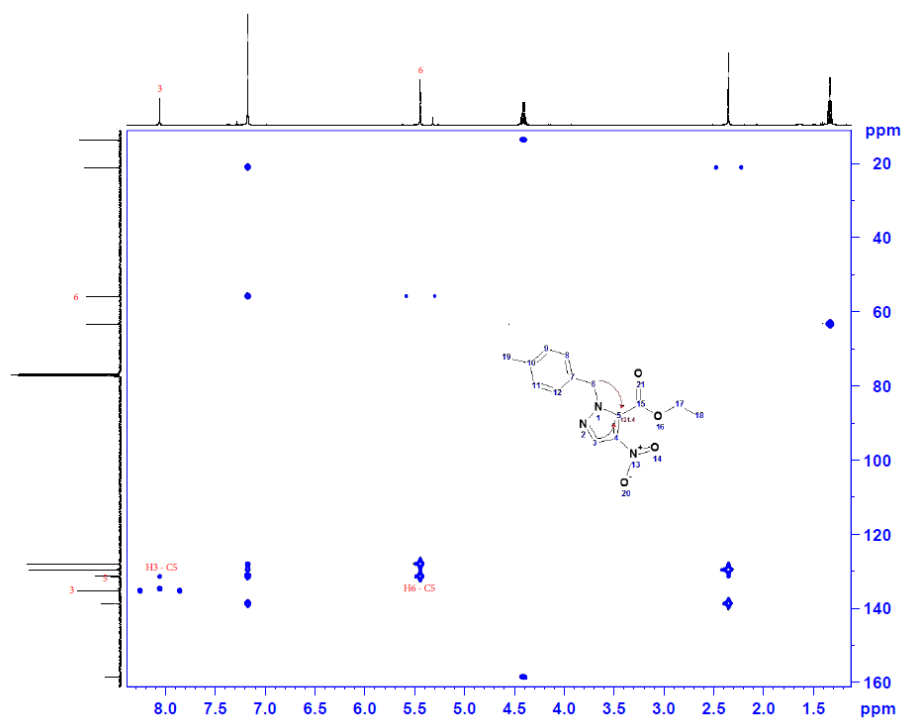
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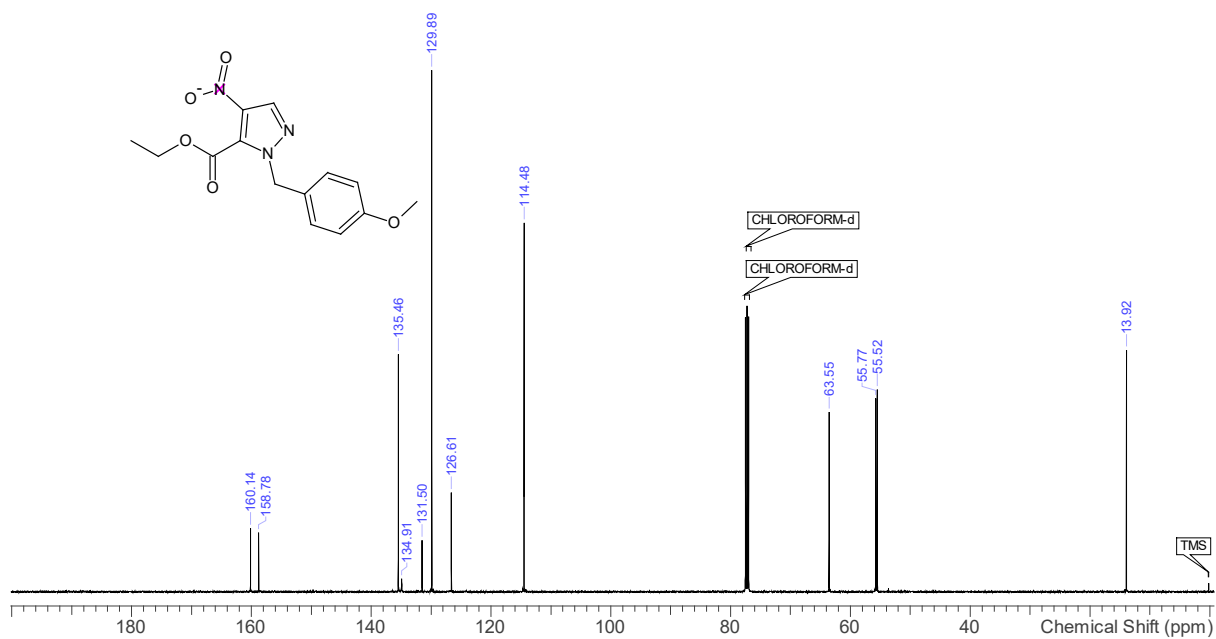
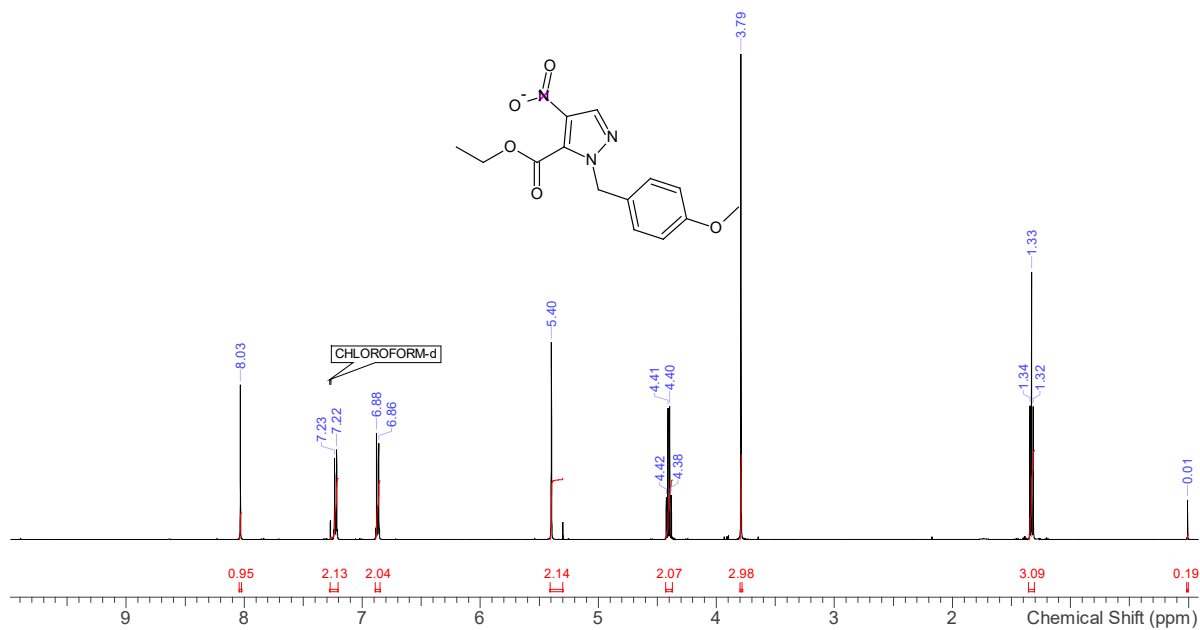
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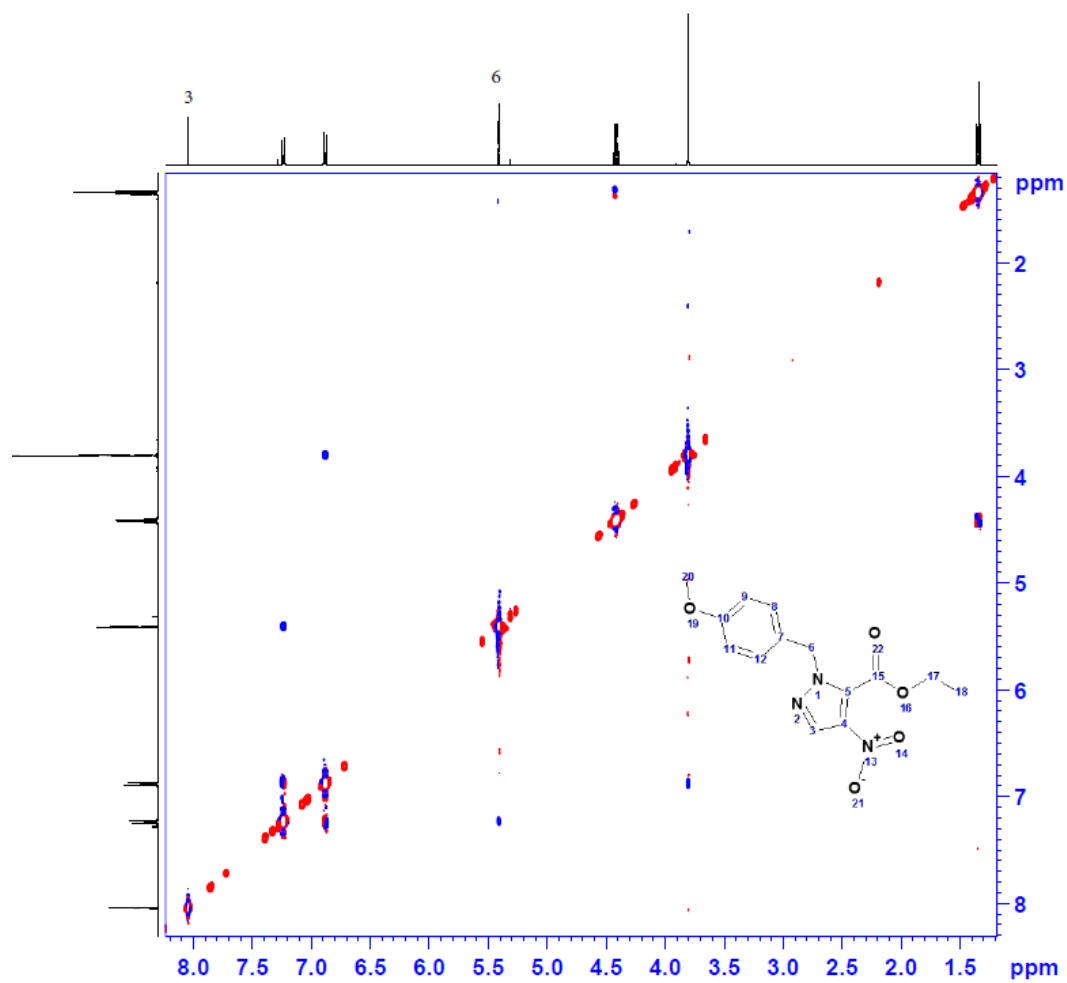
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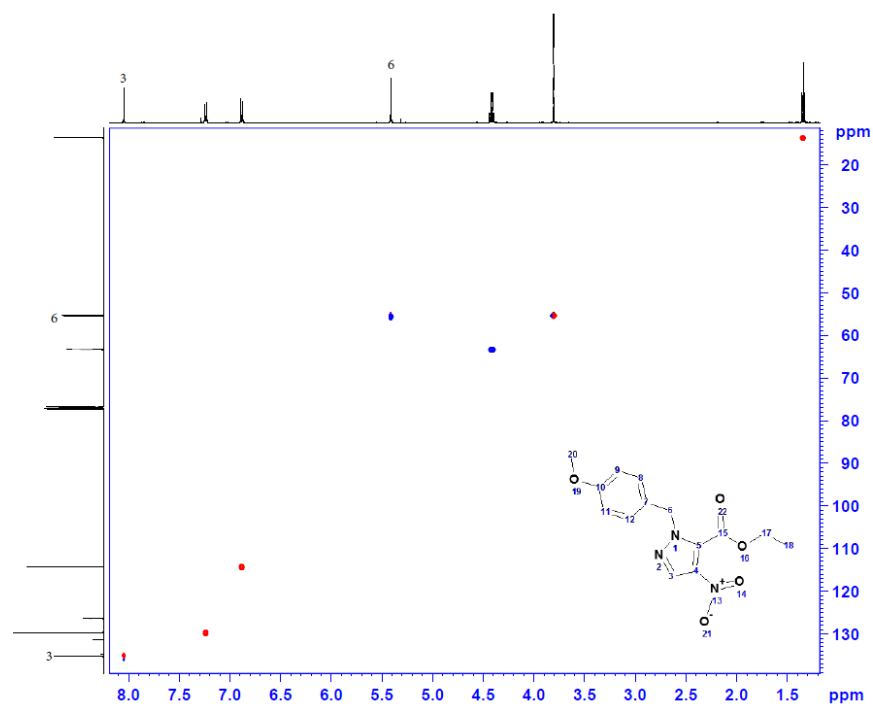
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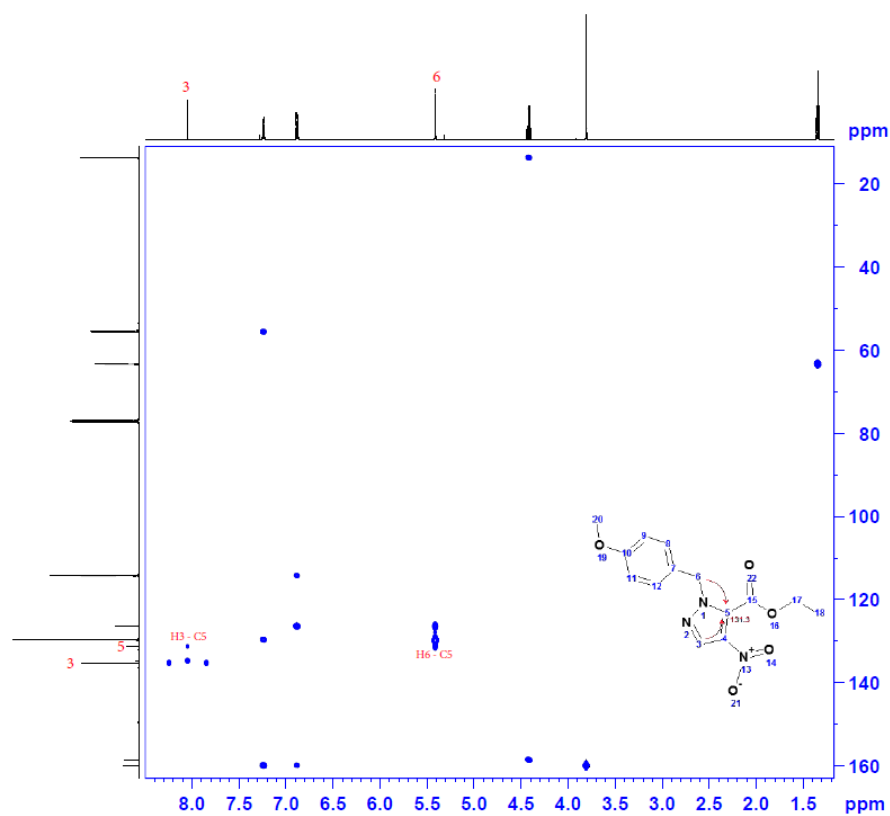
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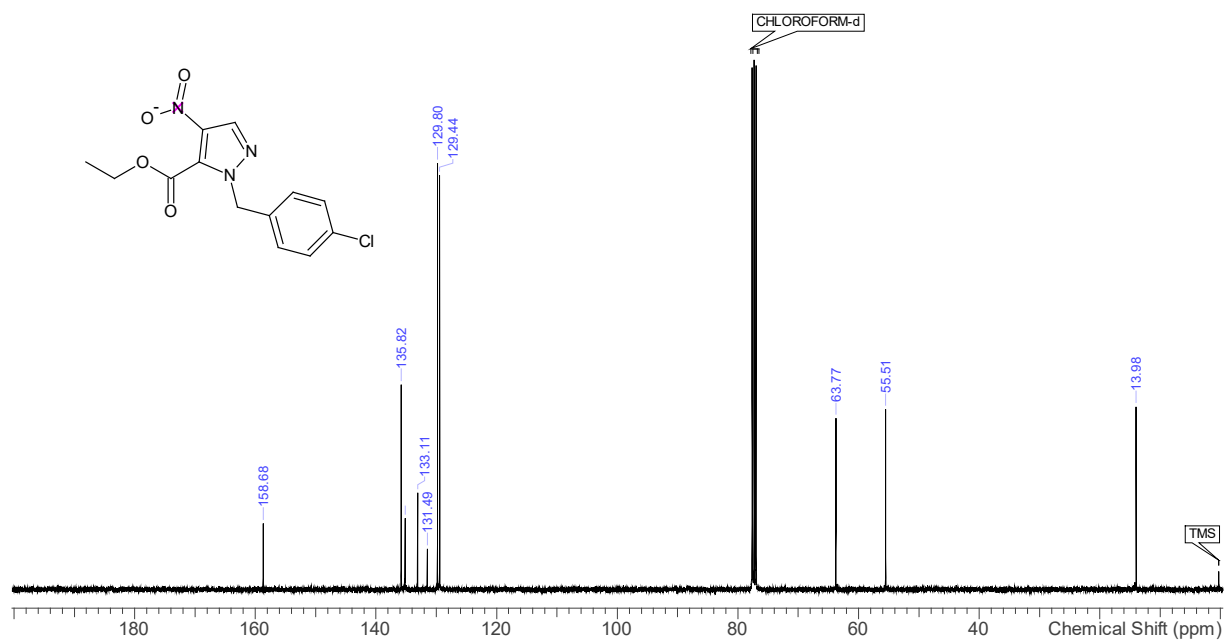
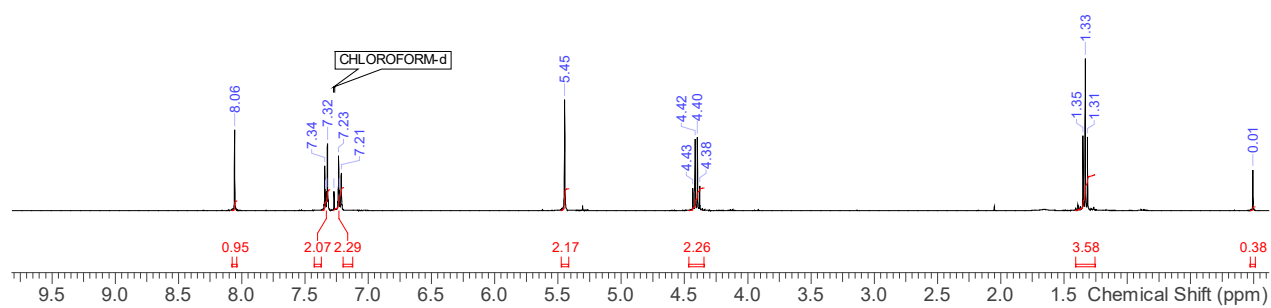
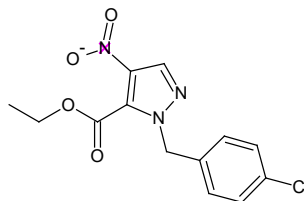
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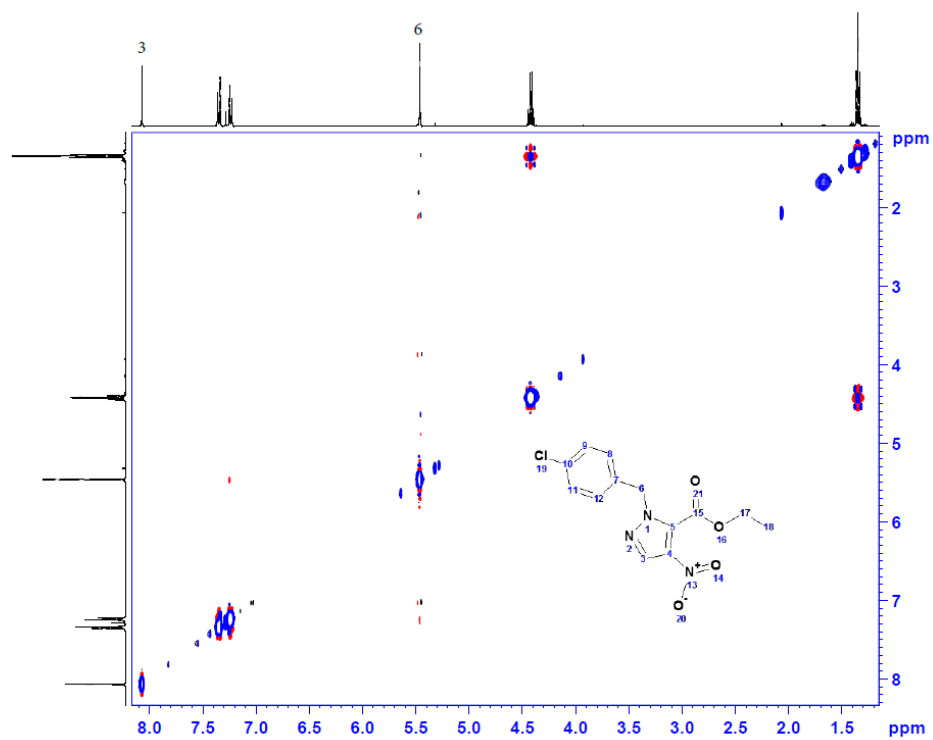
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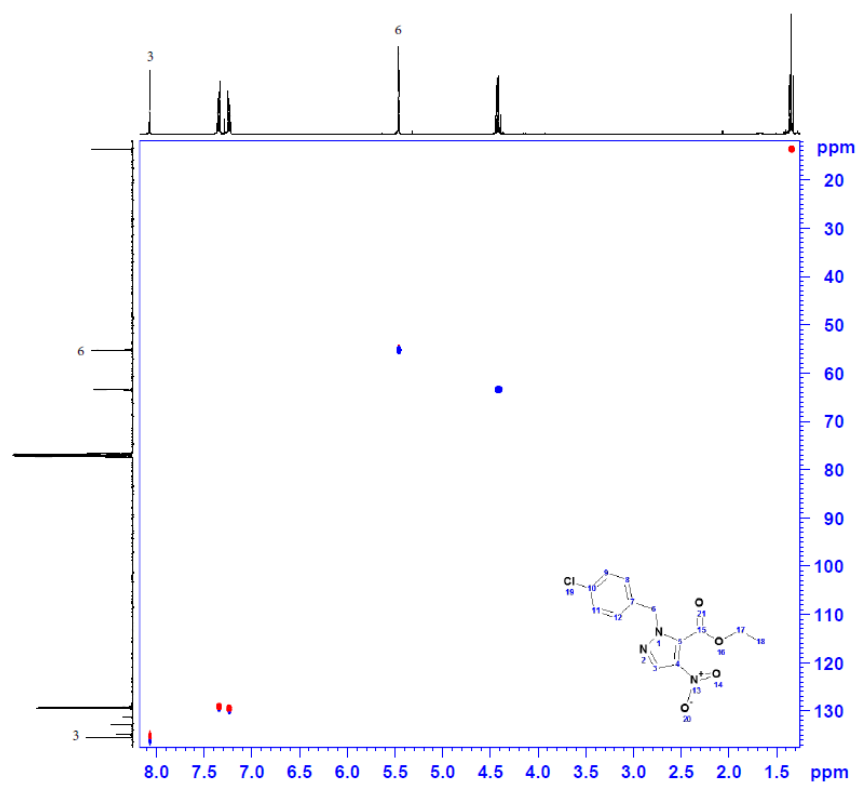
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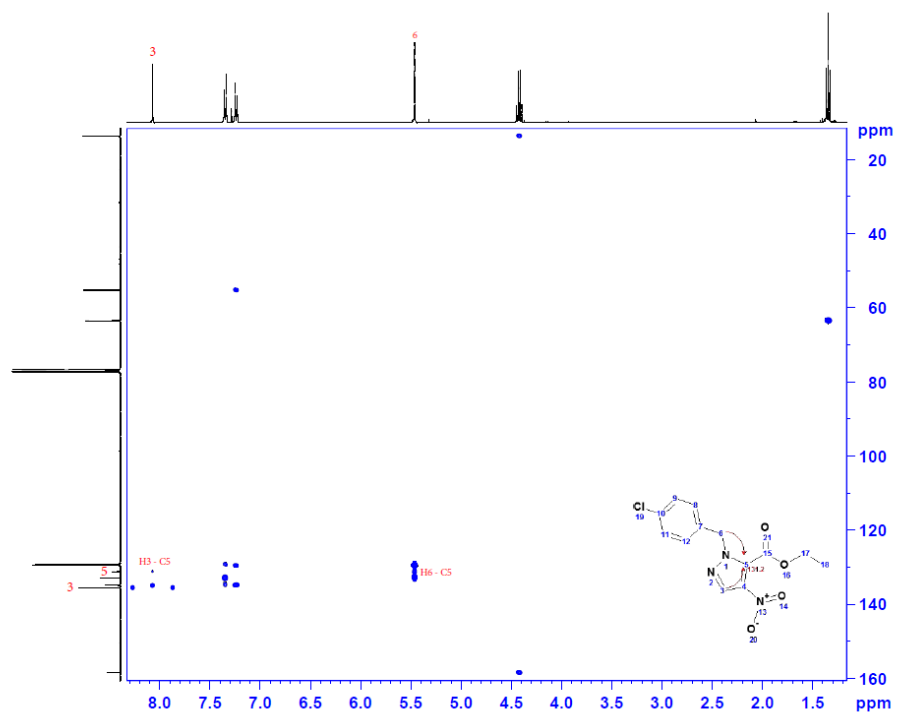
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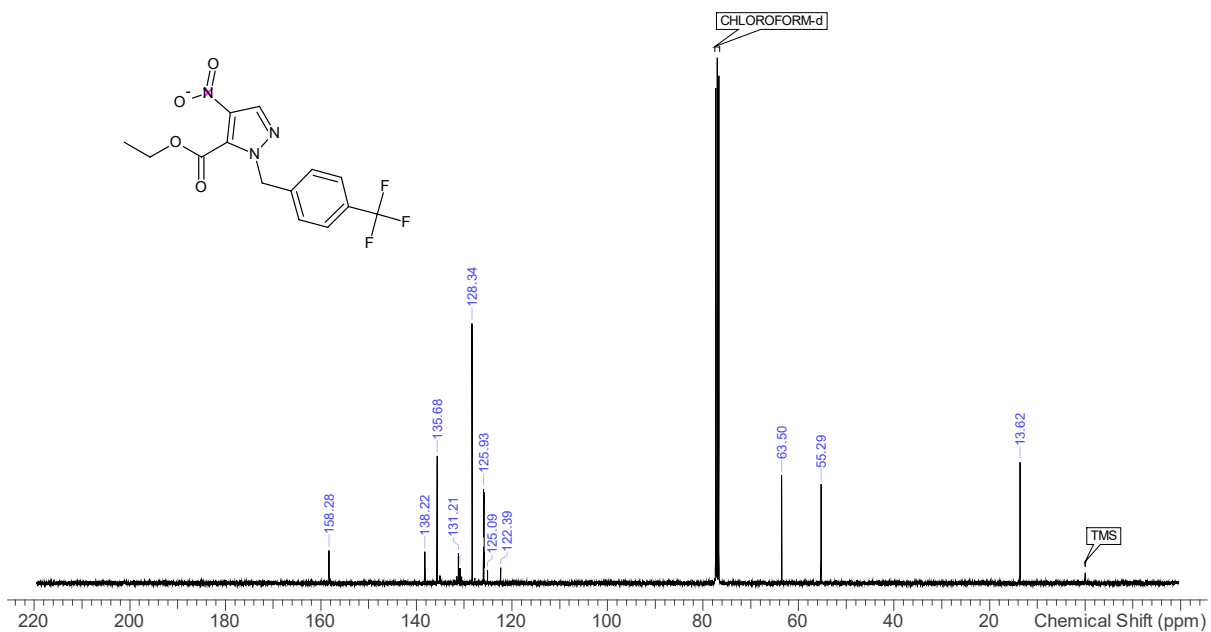
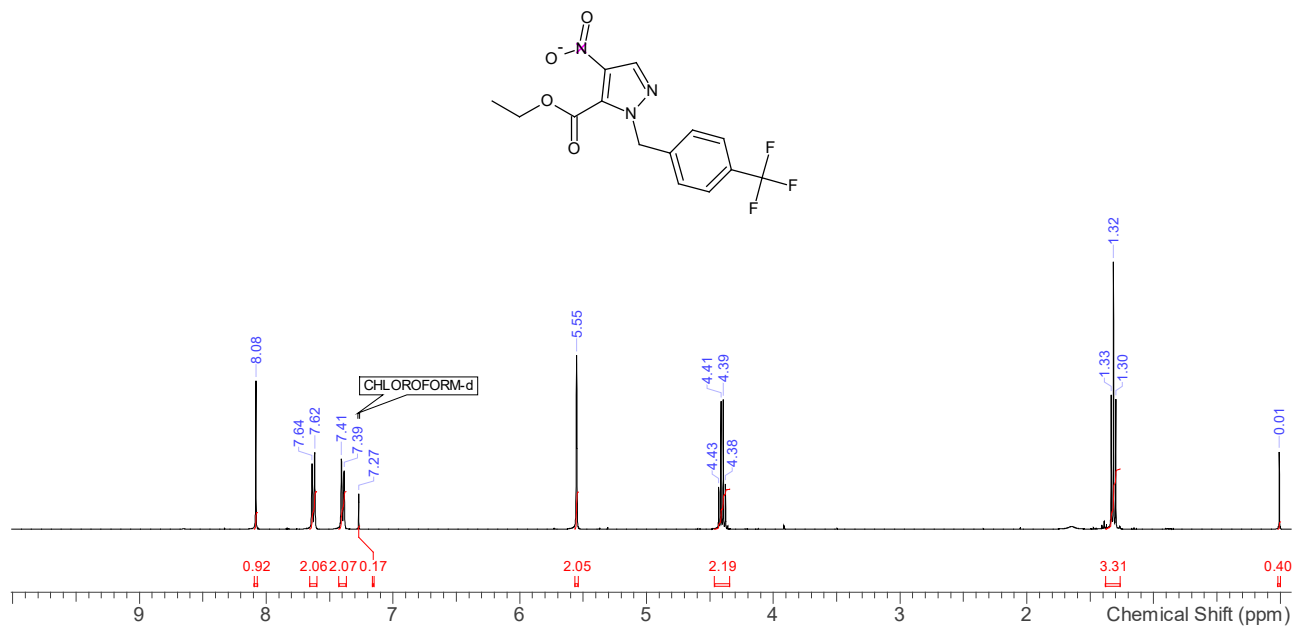
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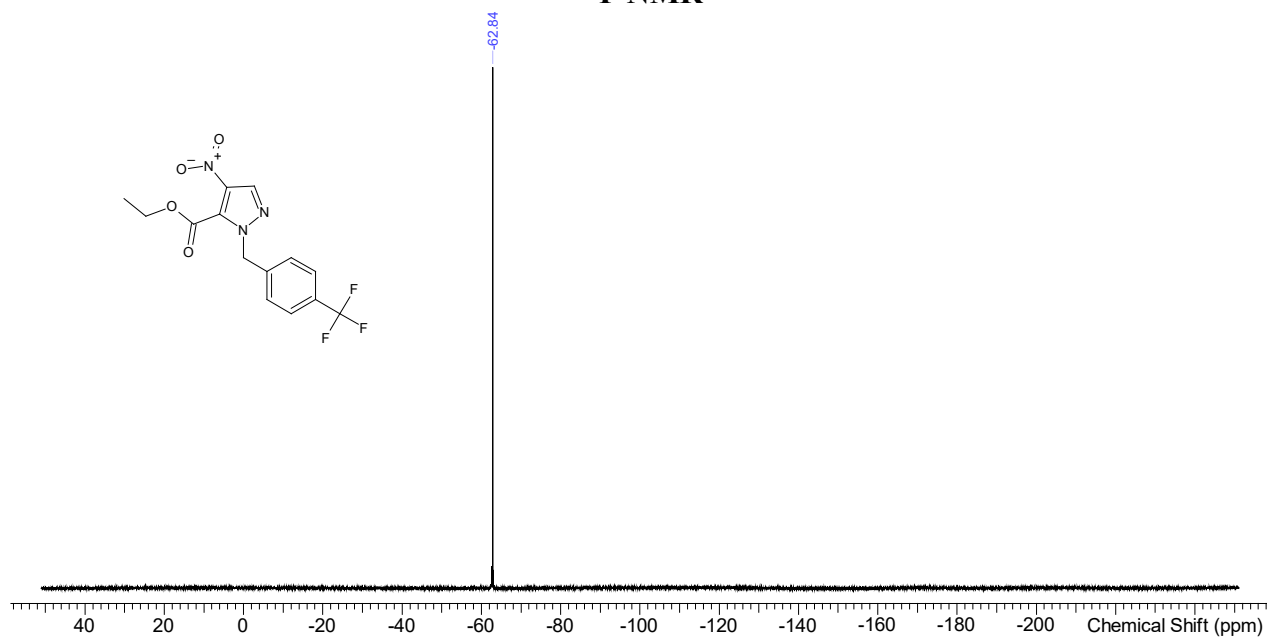
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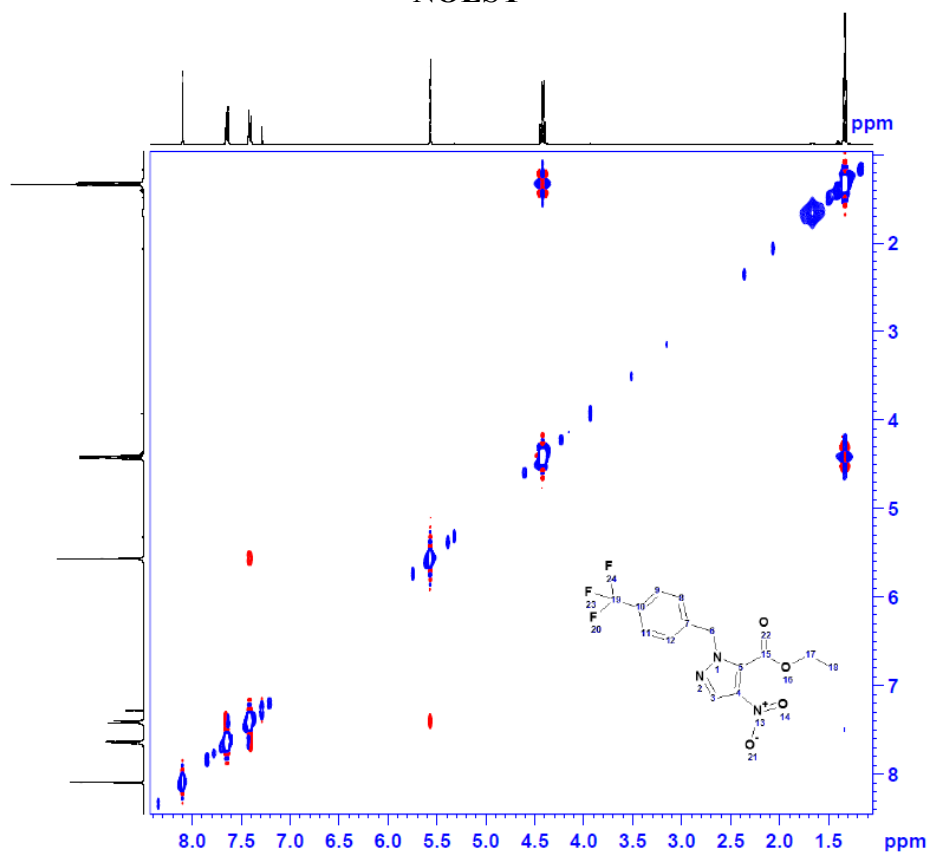
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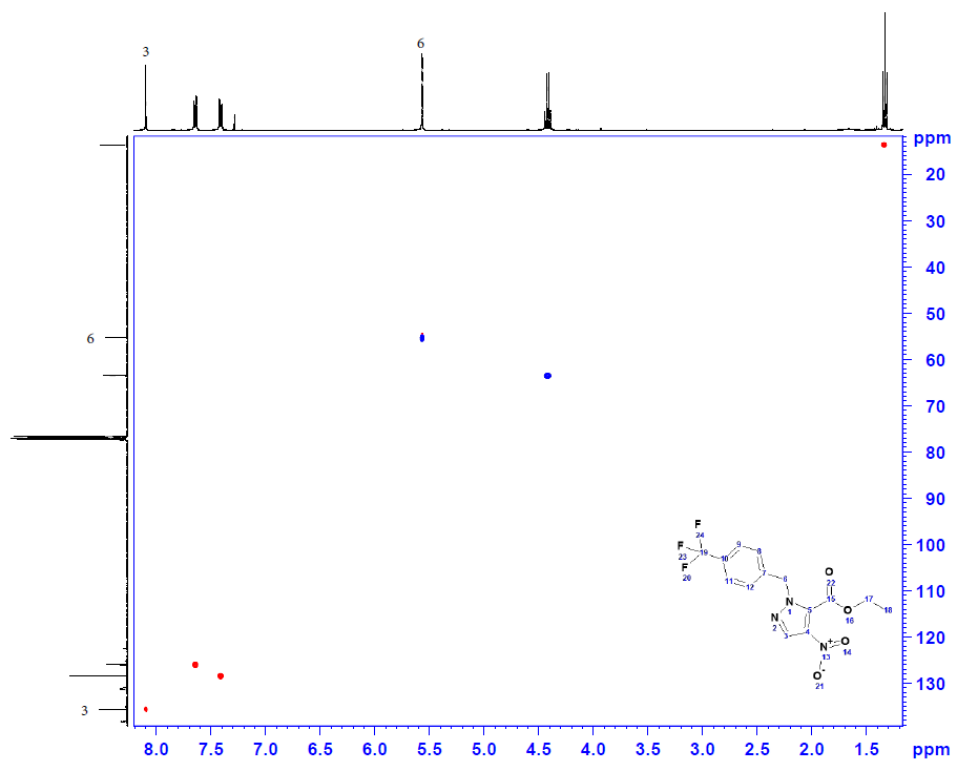
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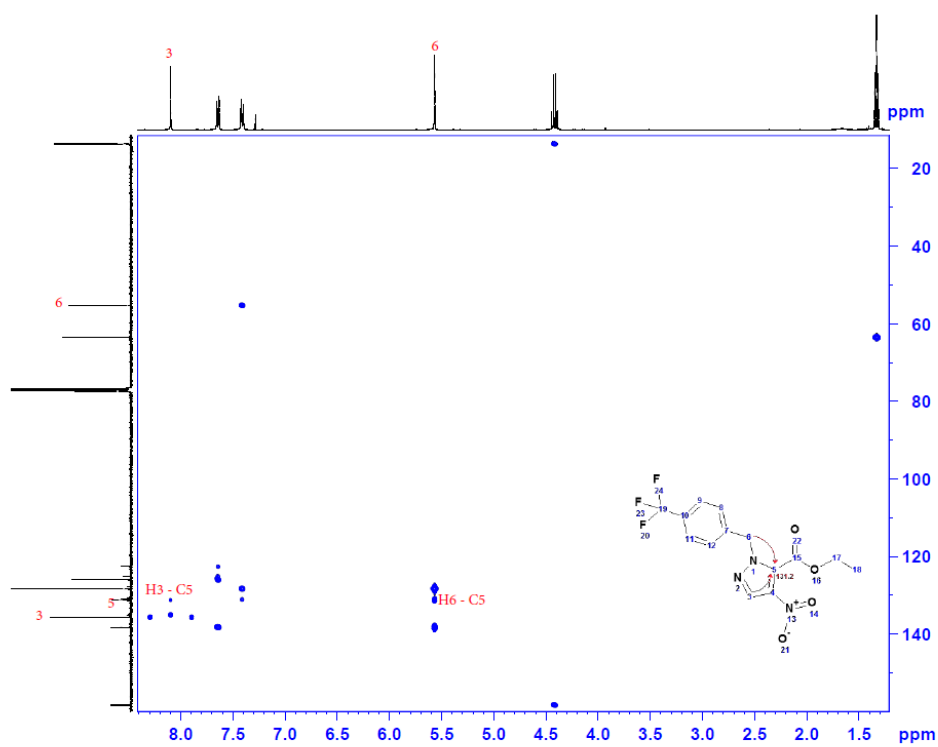
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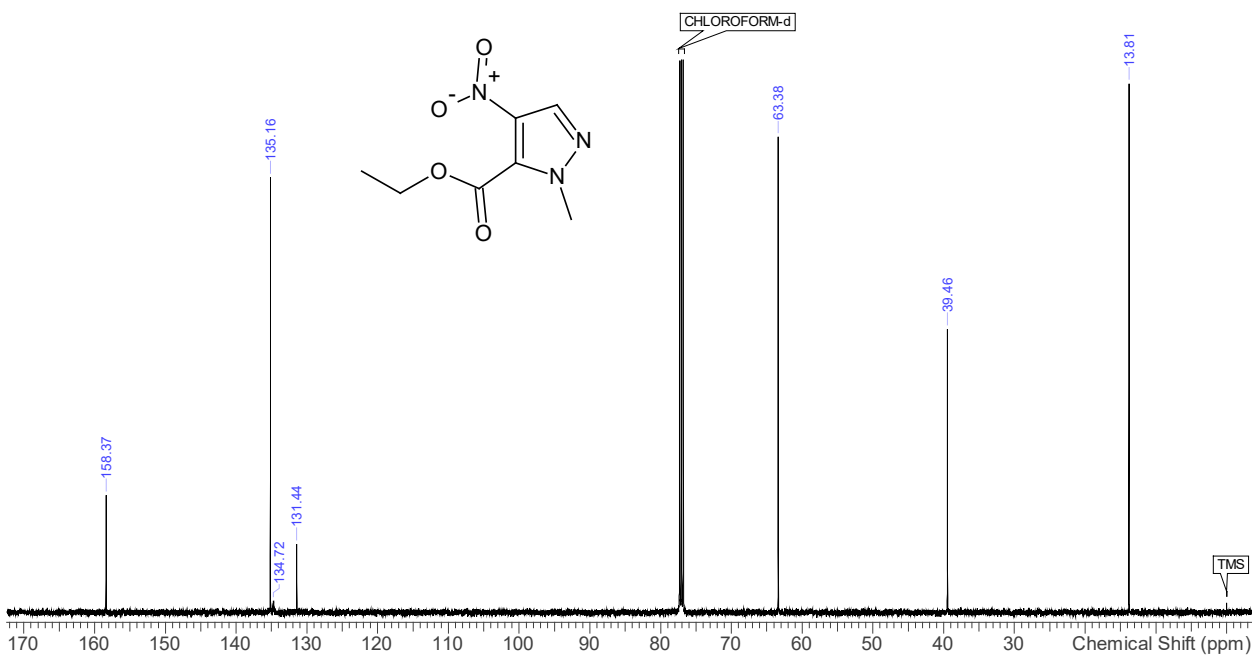
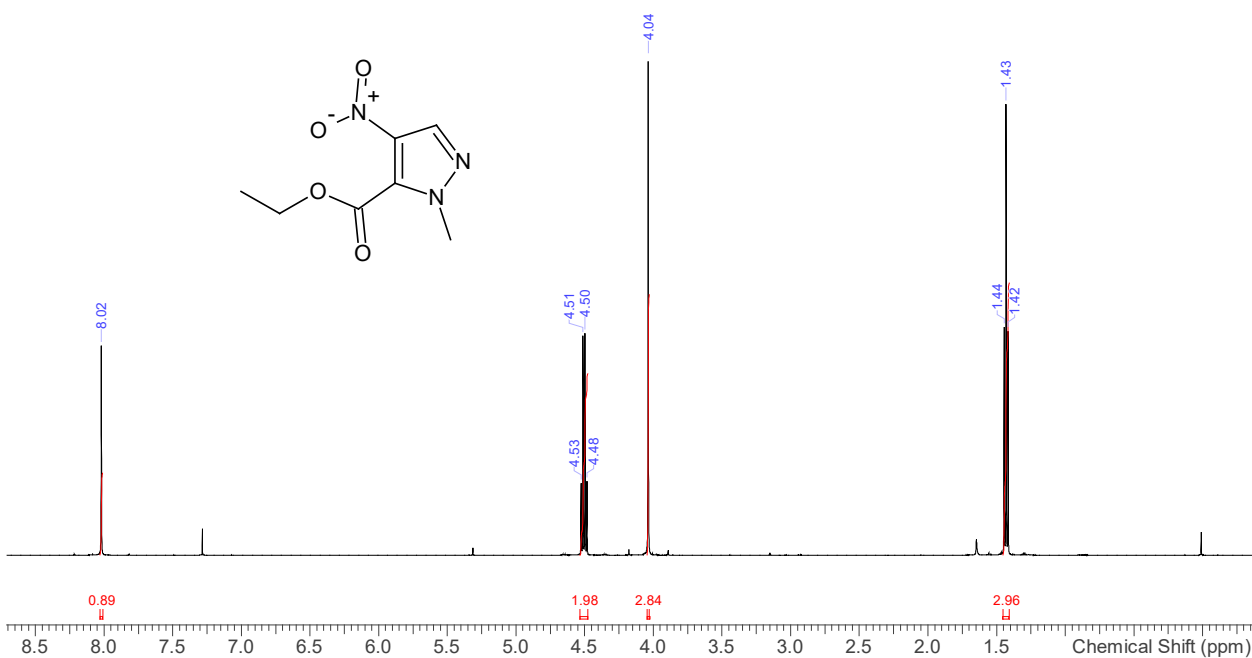
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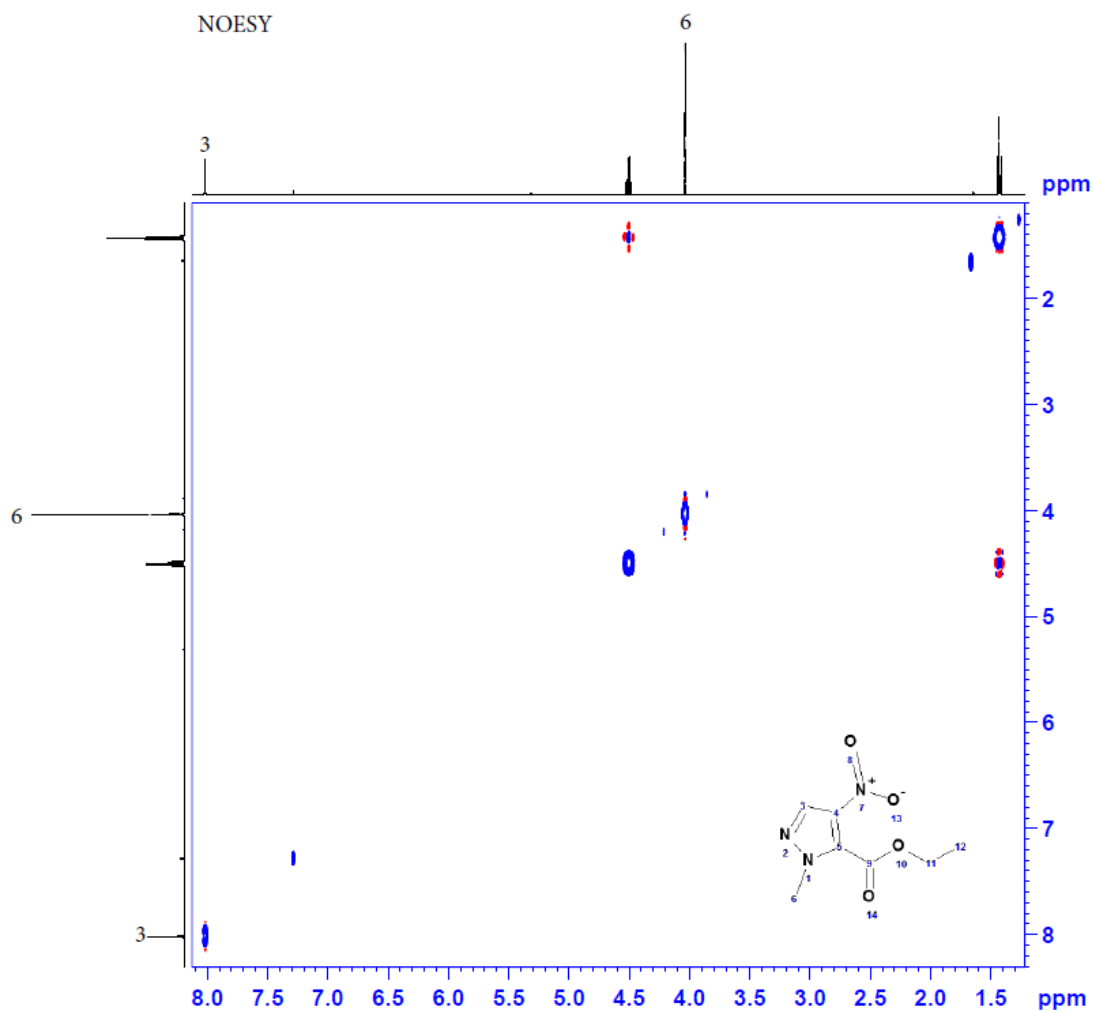


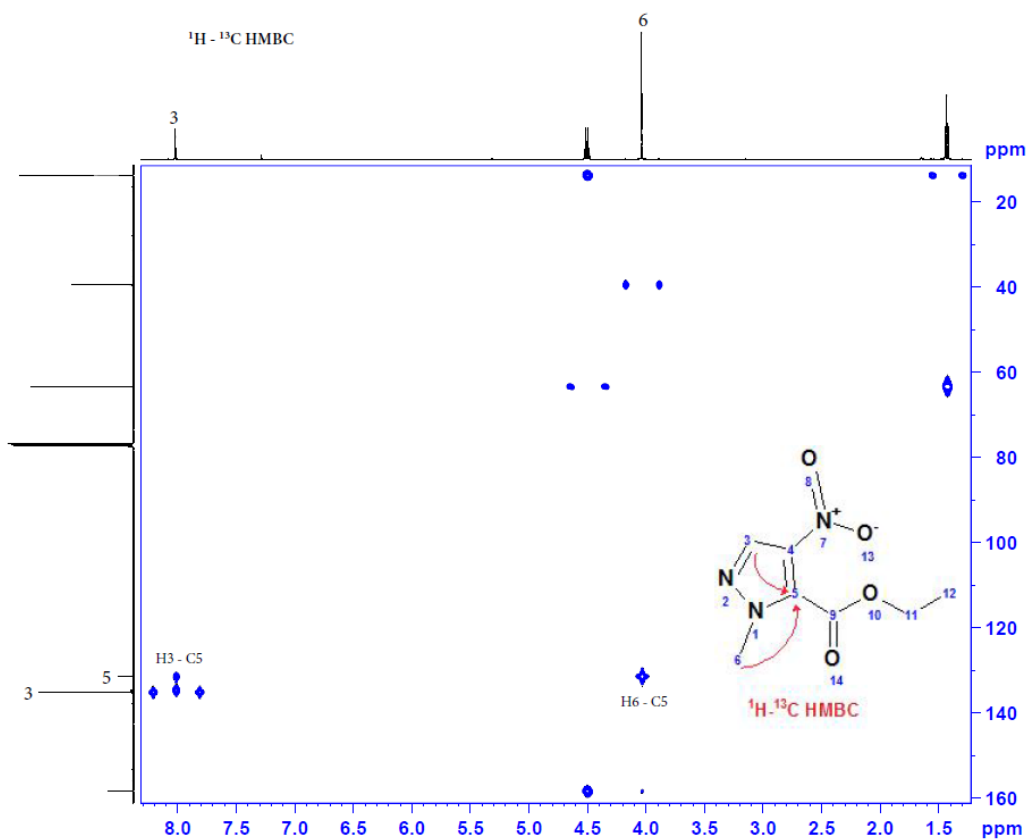
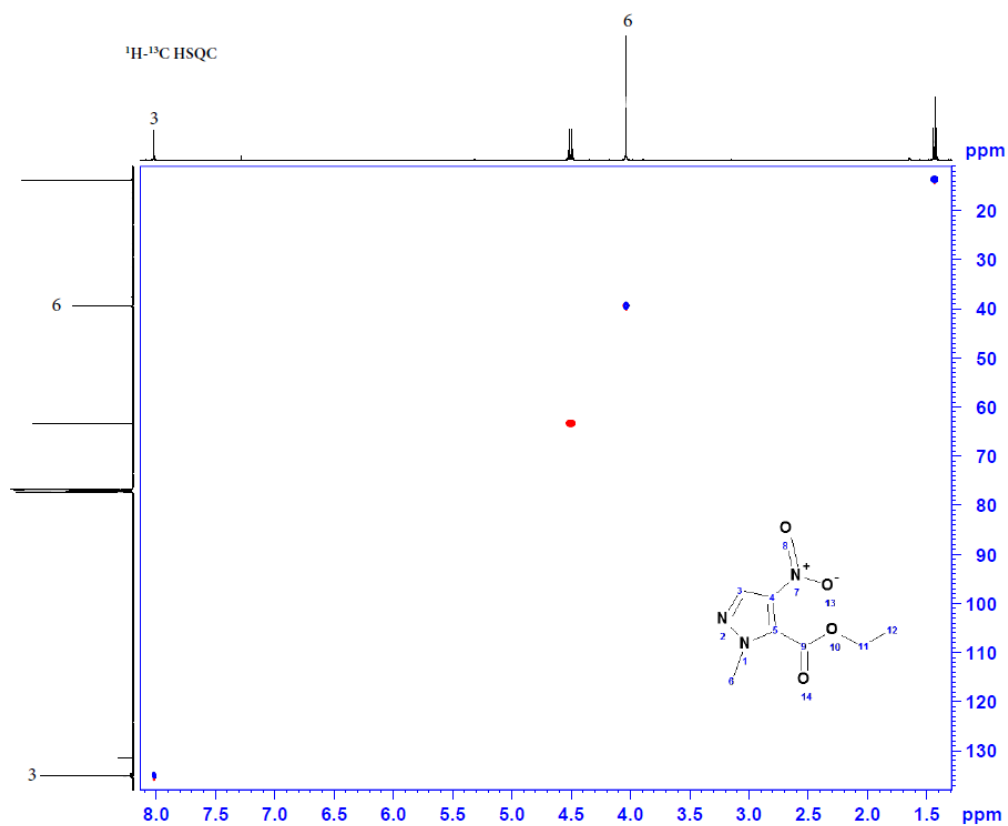
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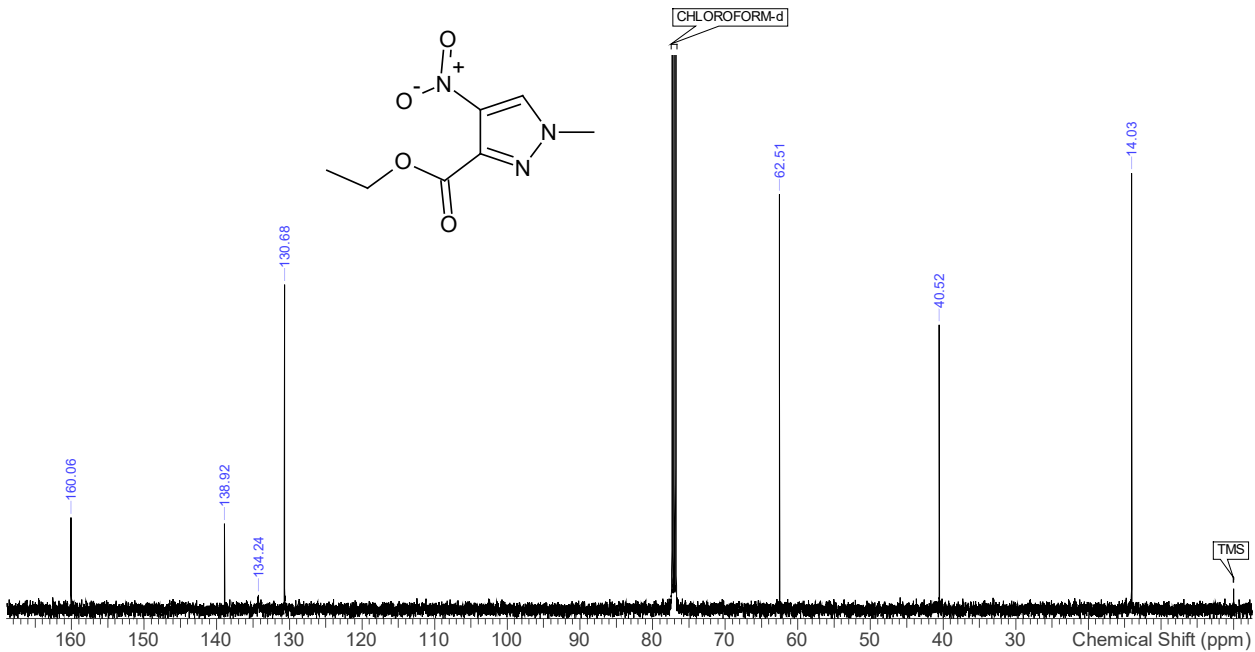
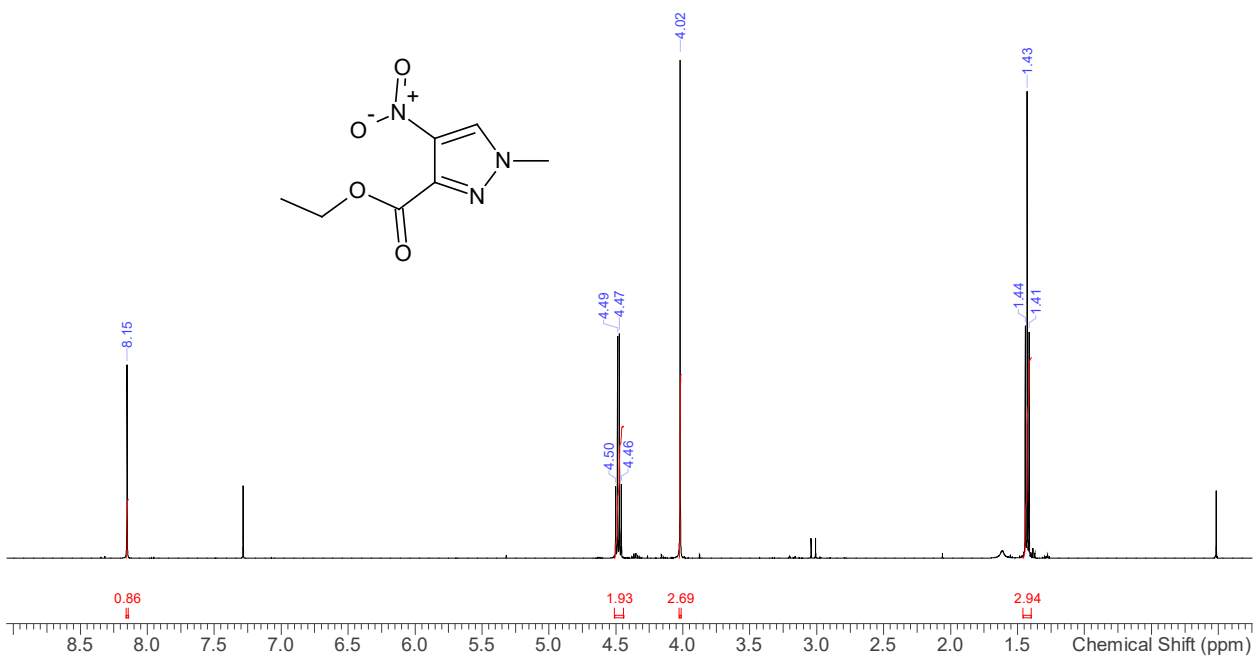
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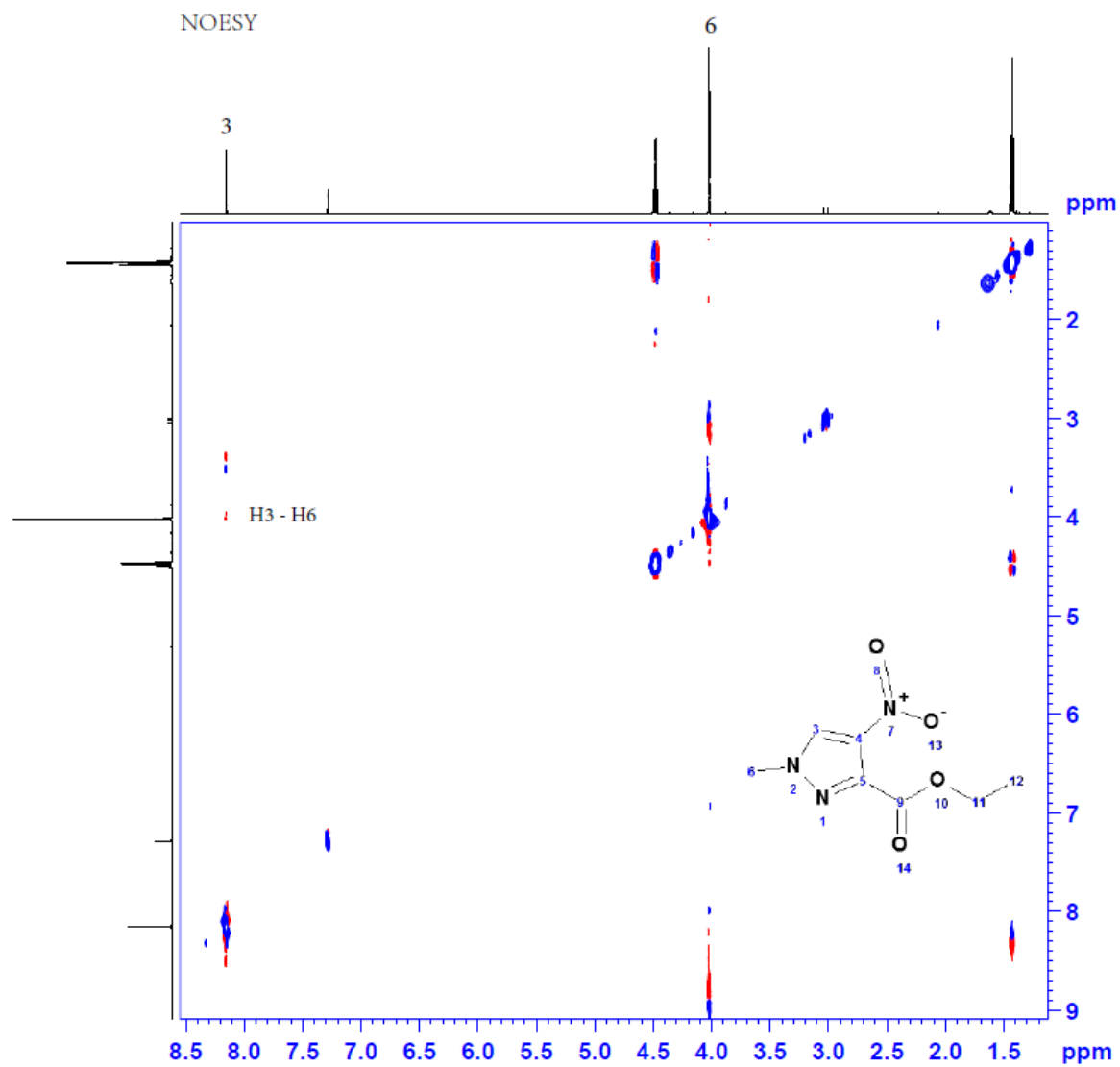


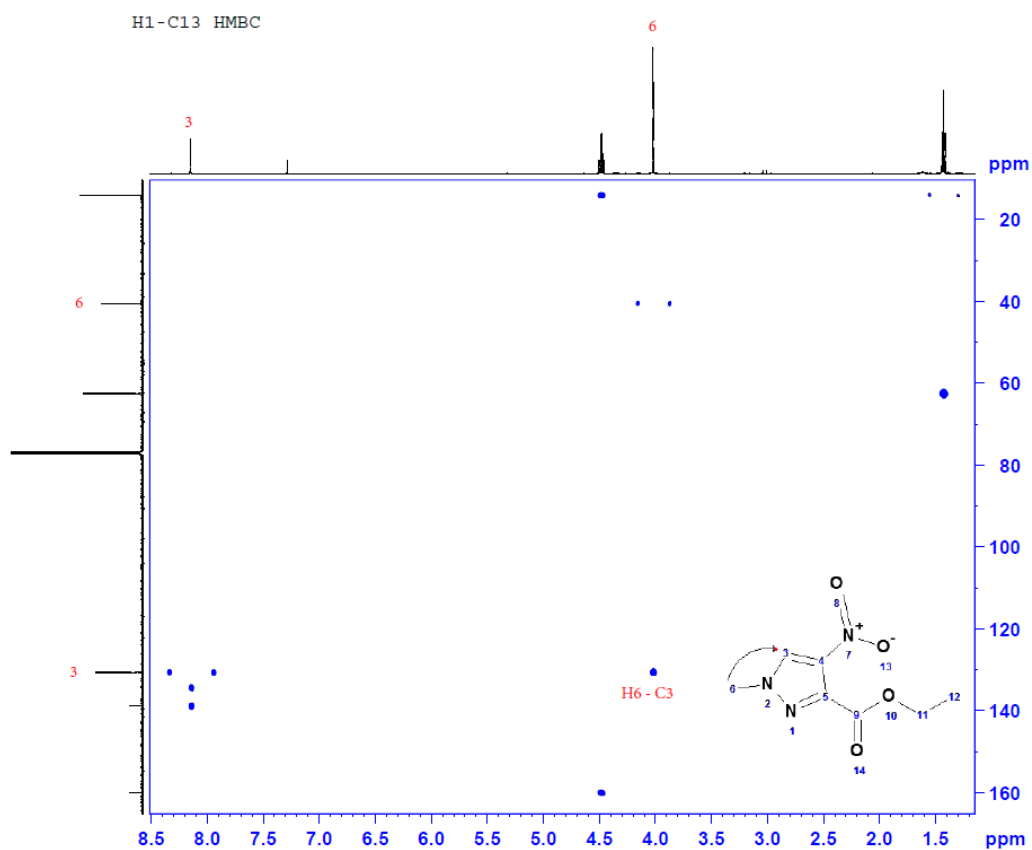
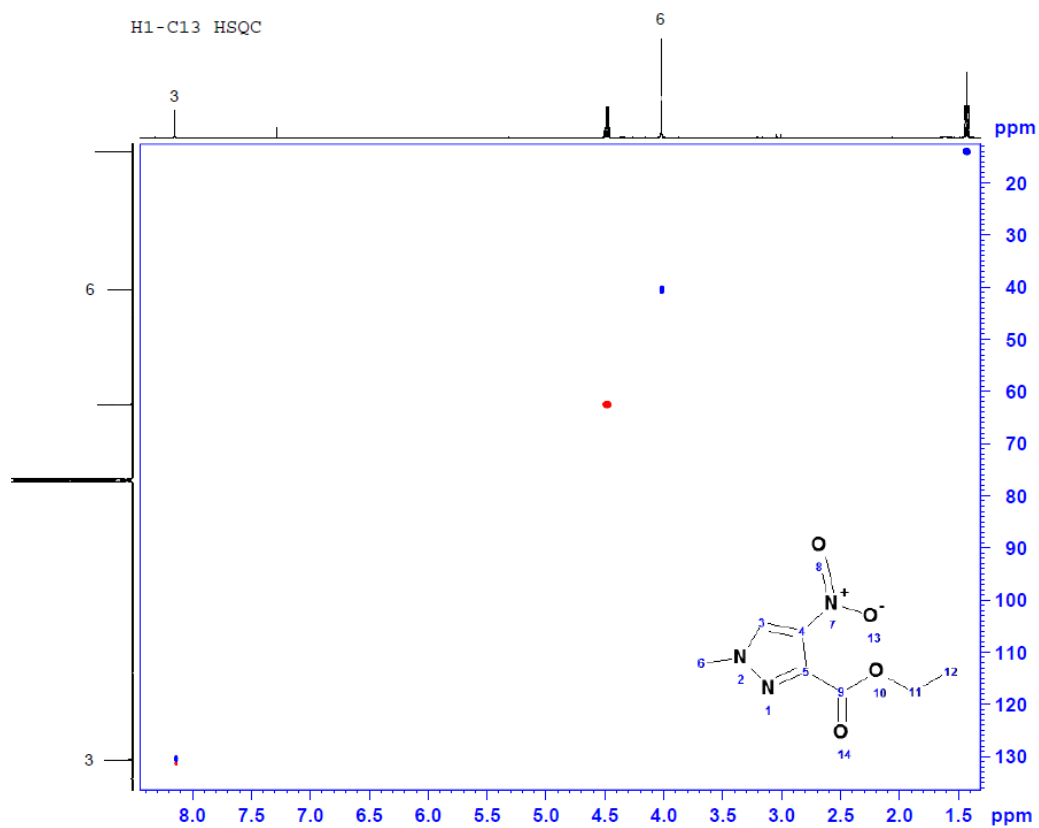




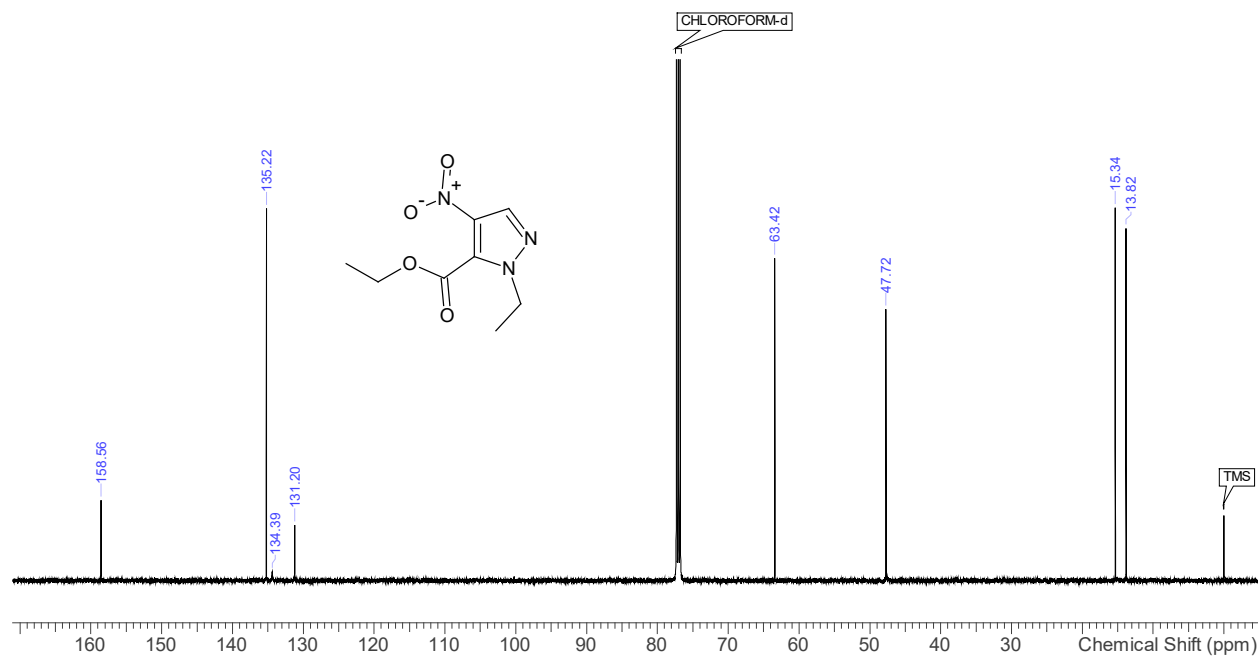
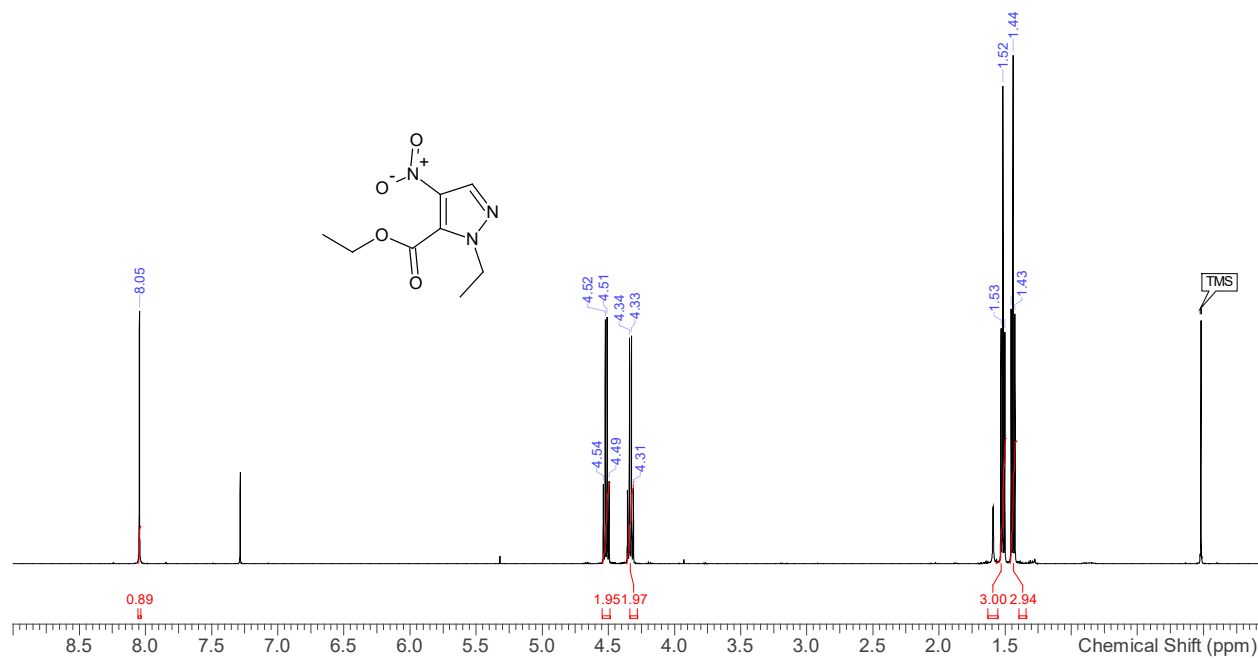
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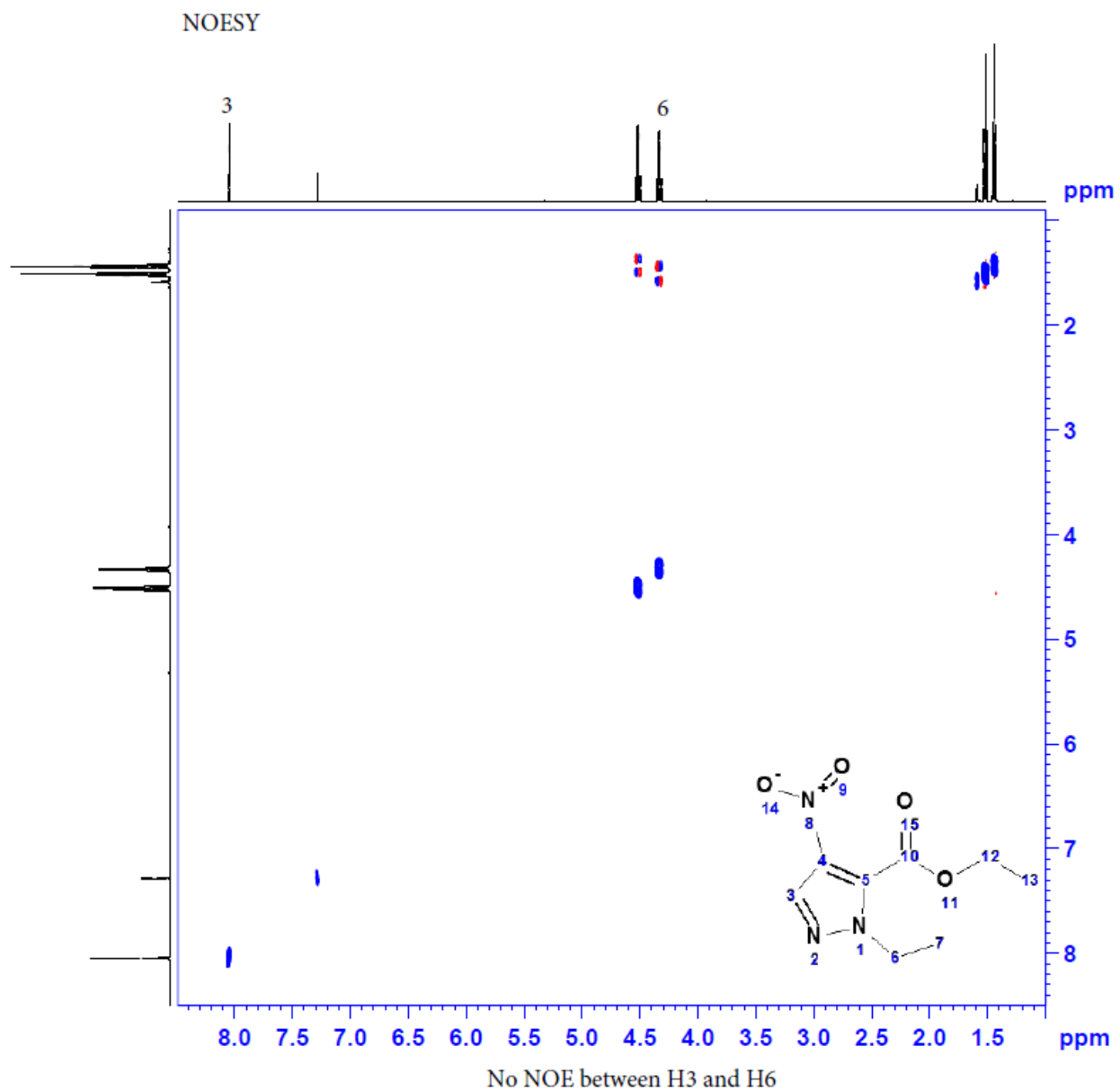


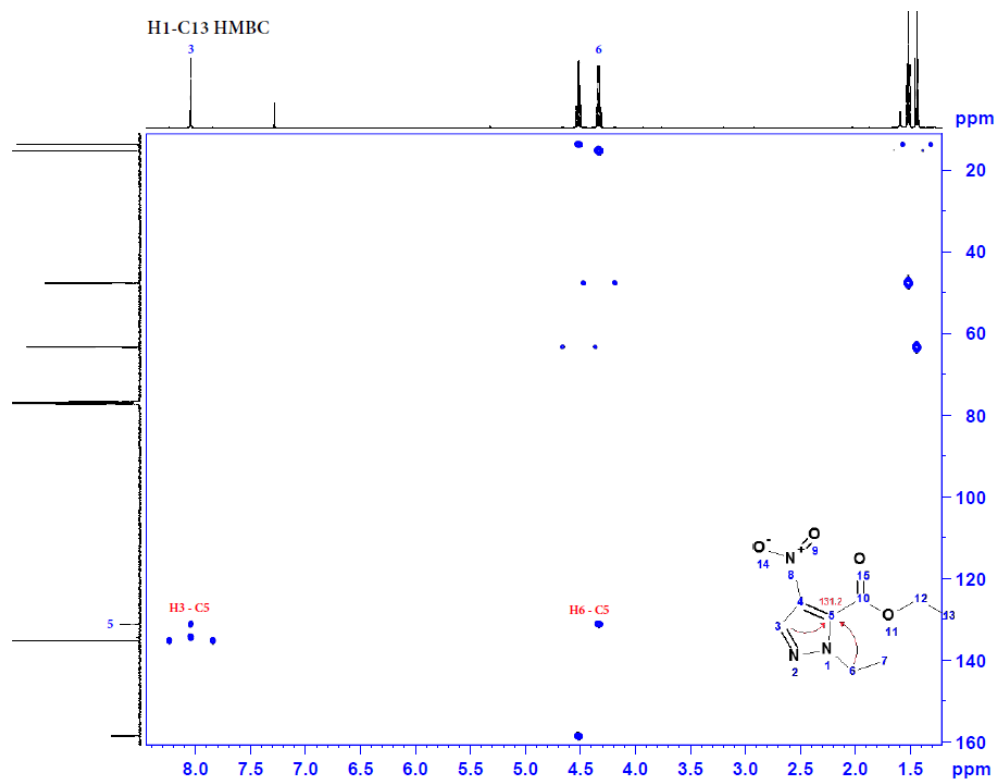
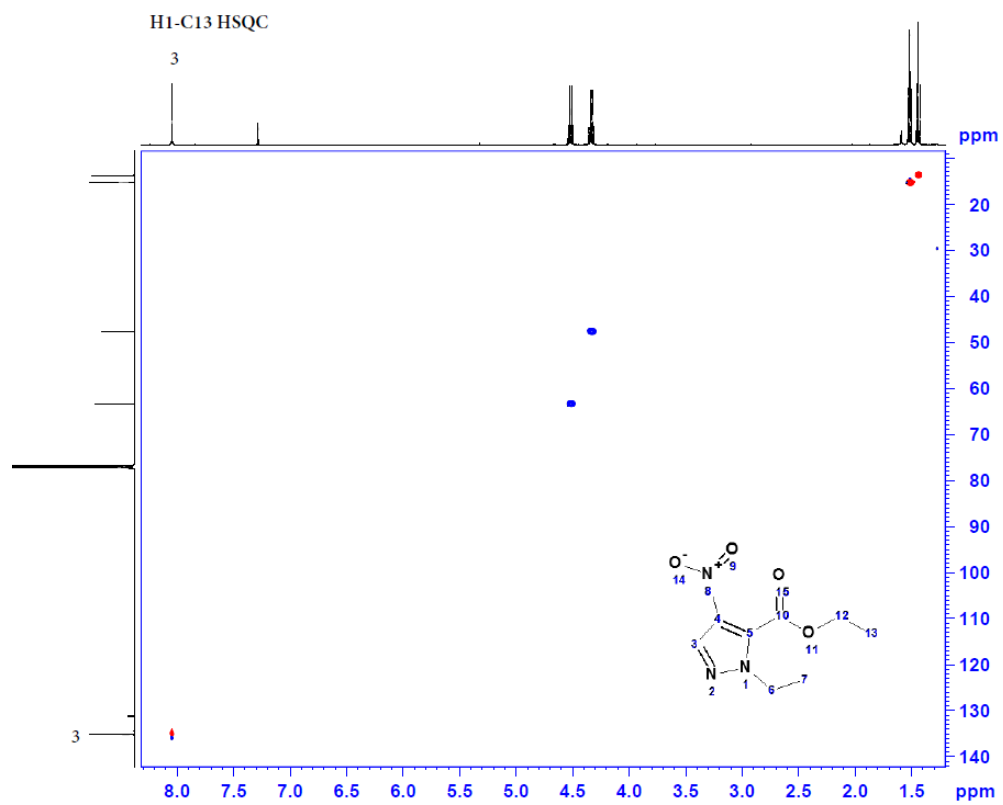




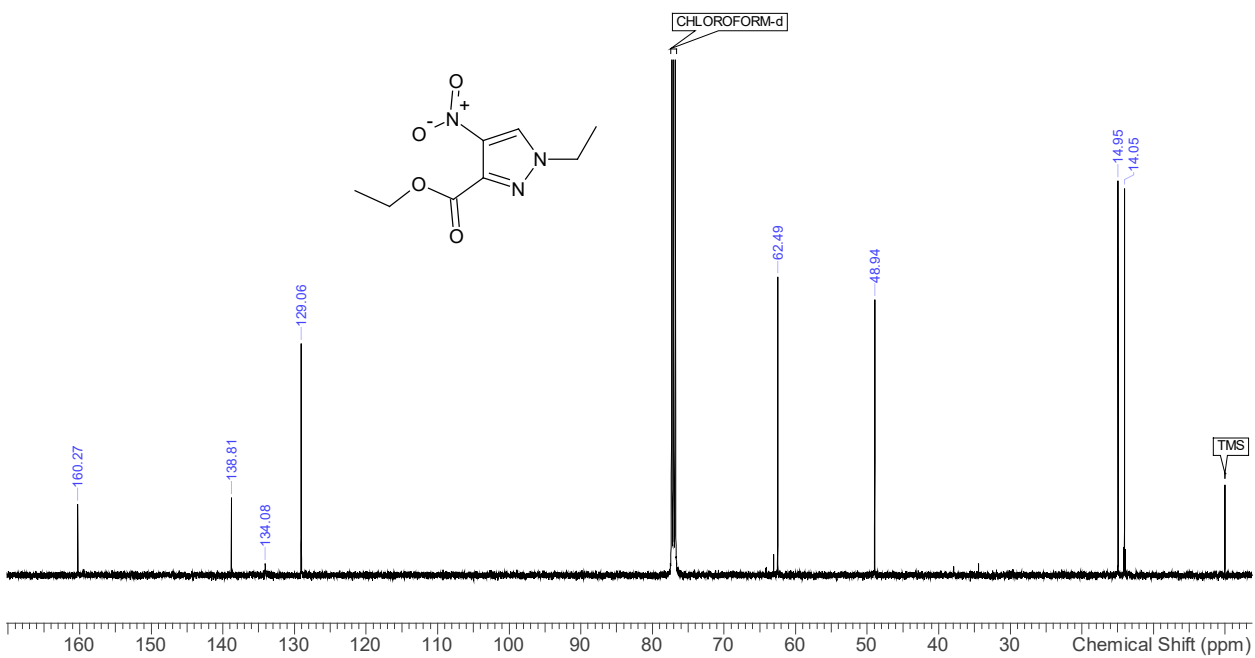
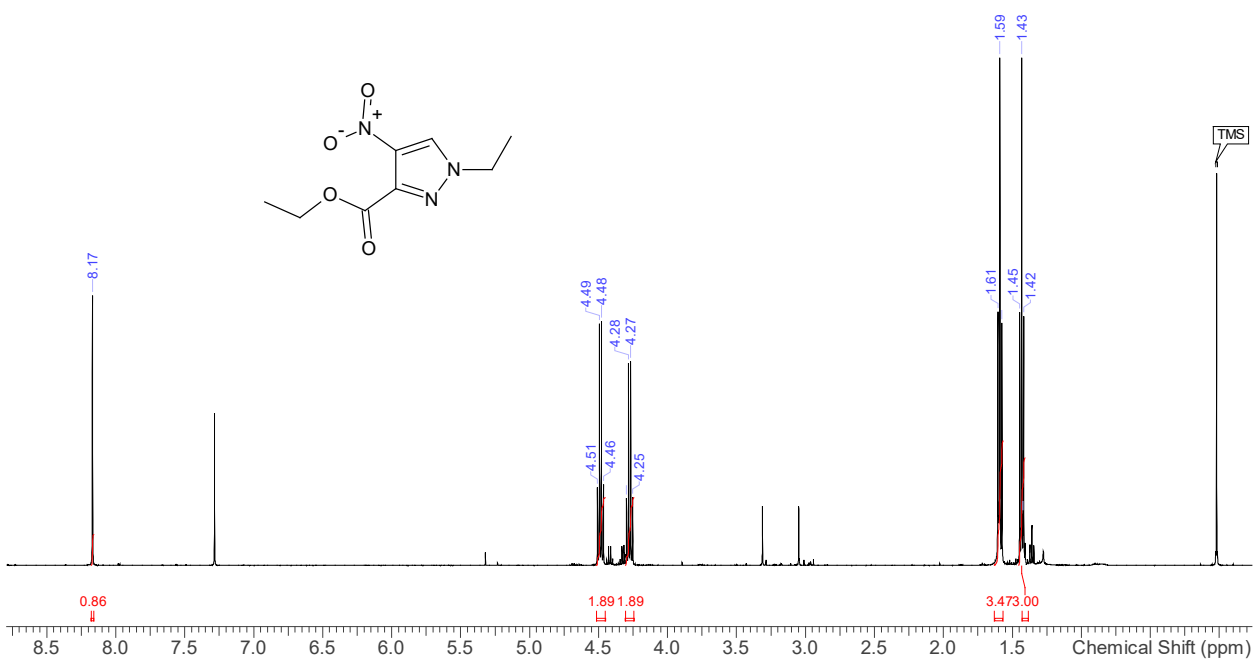
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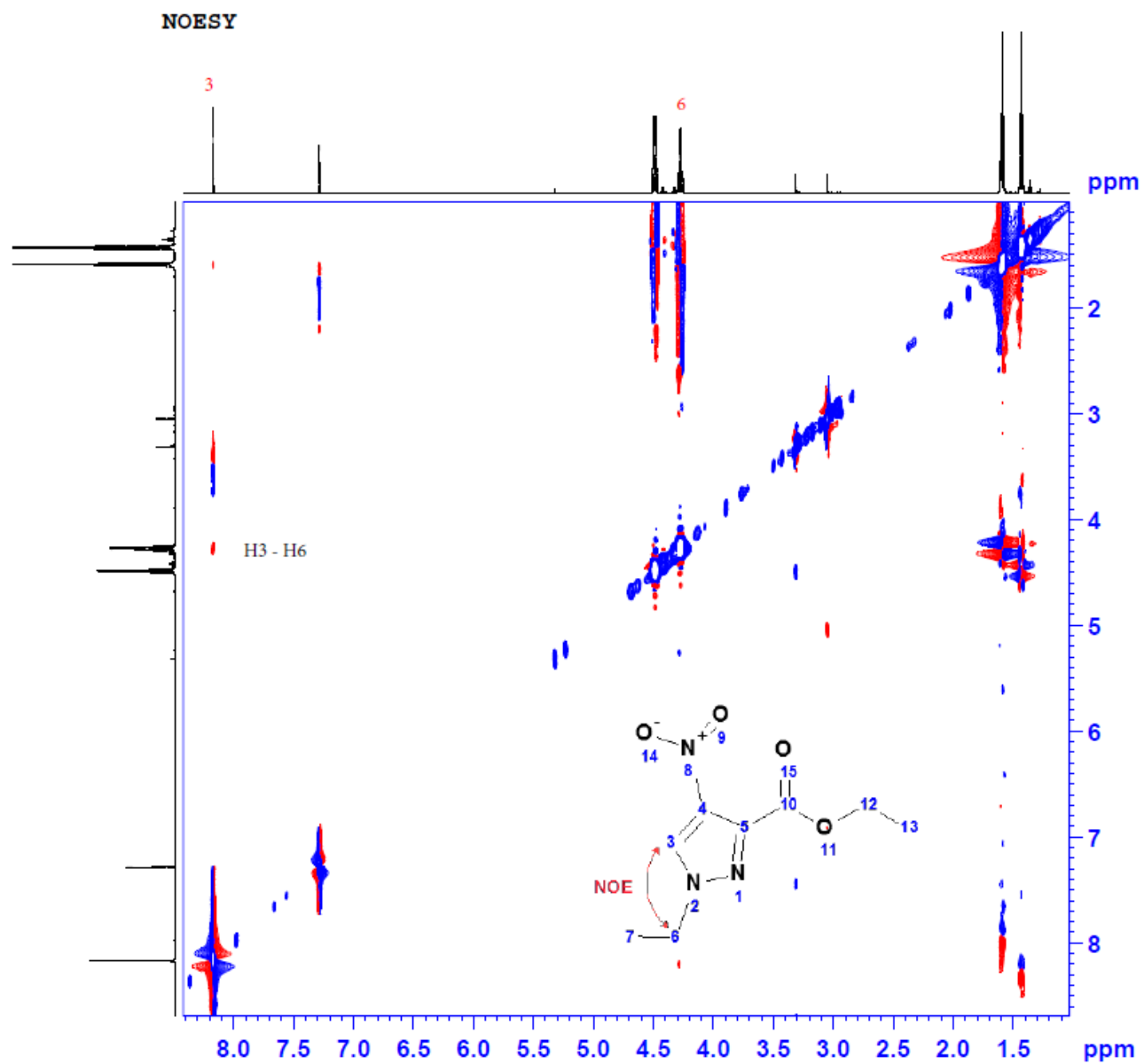


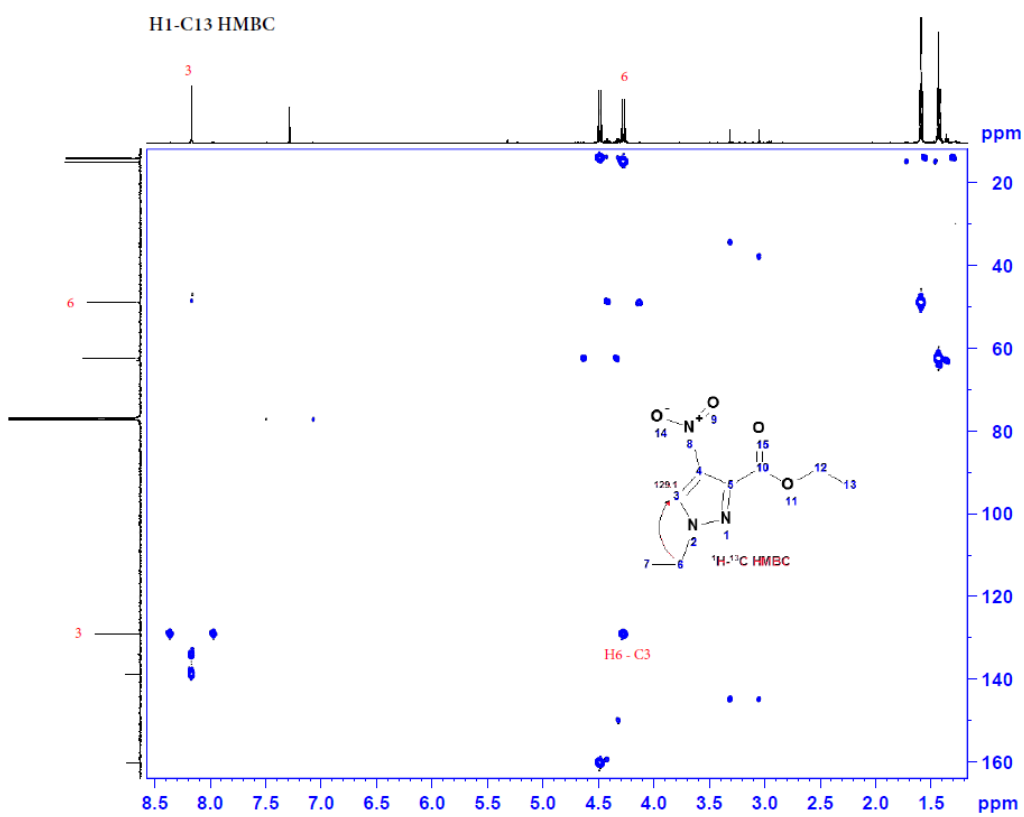
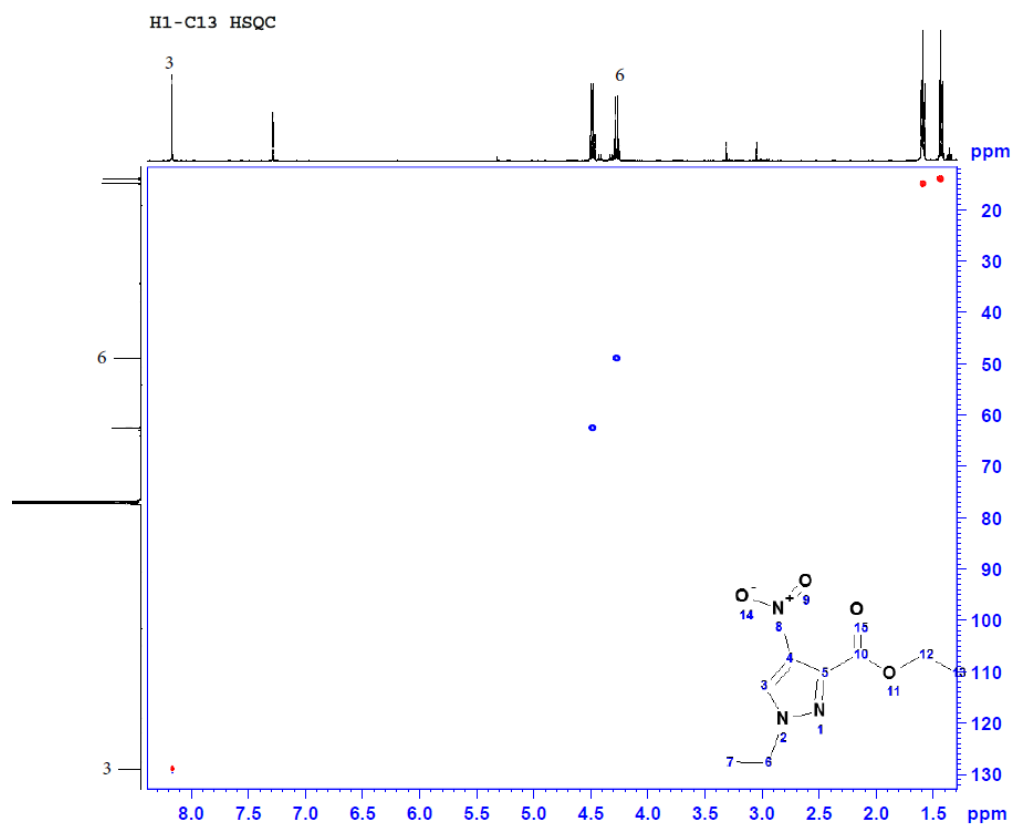




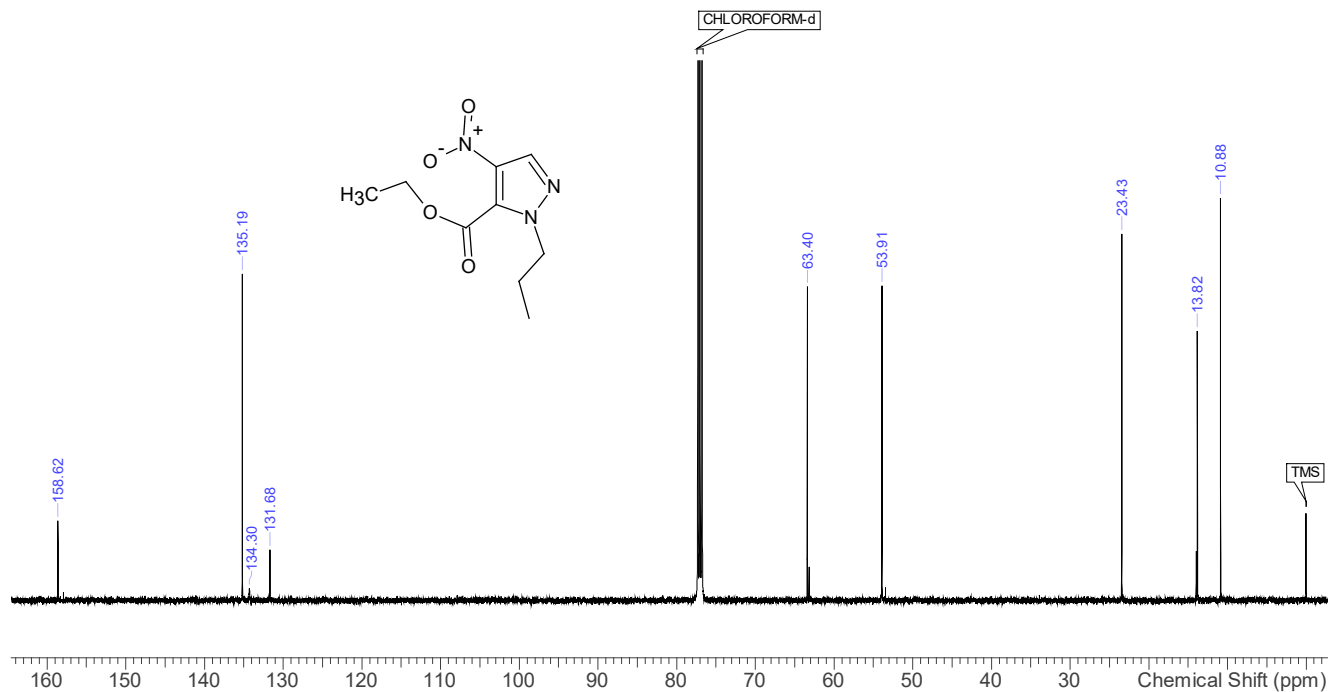
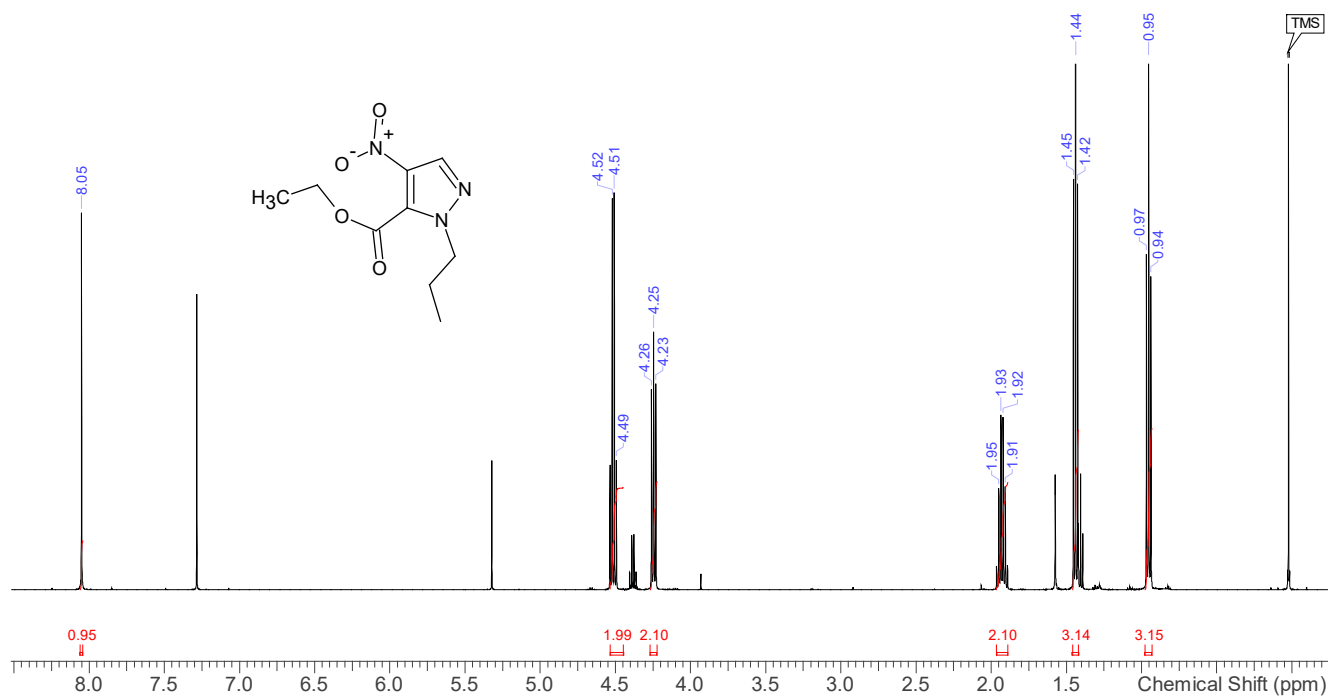
ethyl 1-ethyl-4-nitro-1H-pyrazole-3-carboxylate (3n)

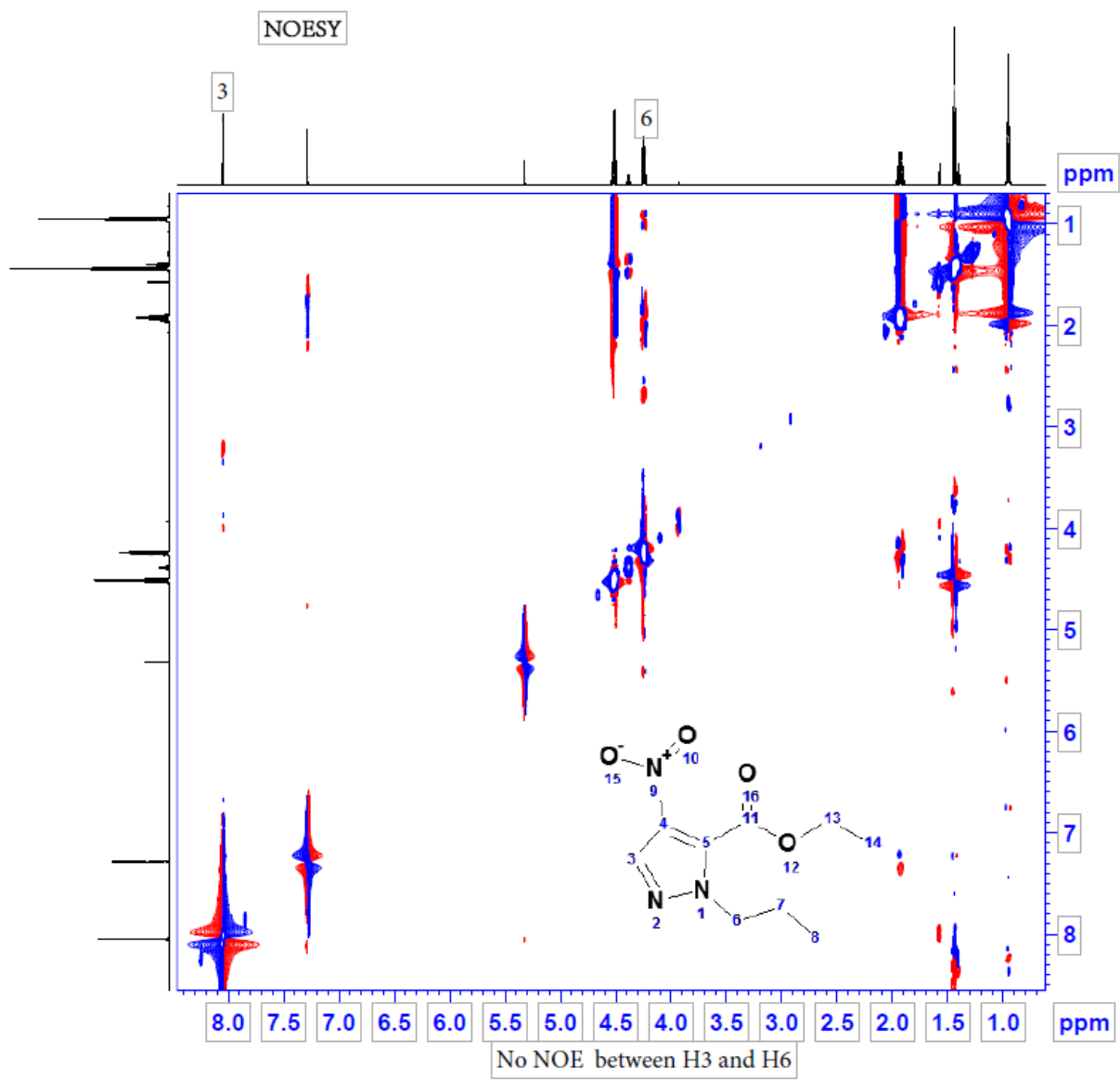


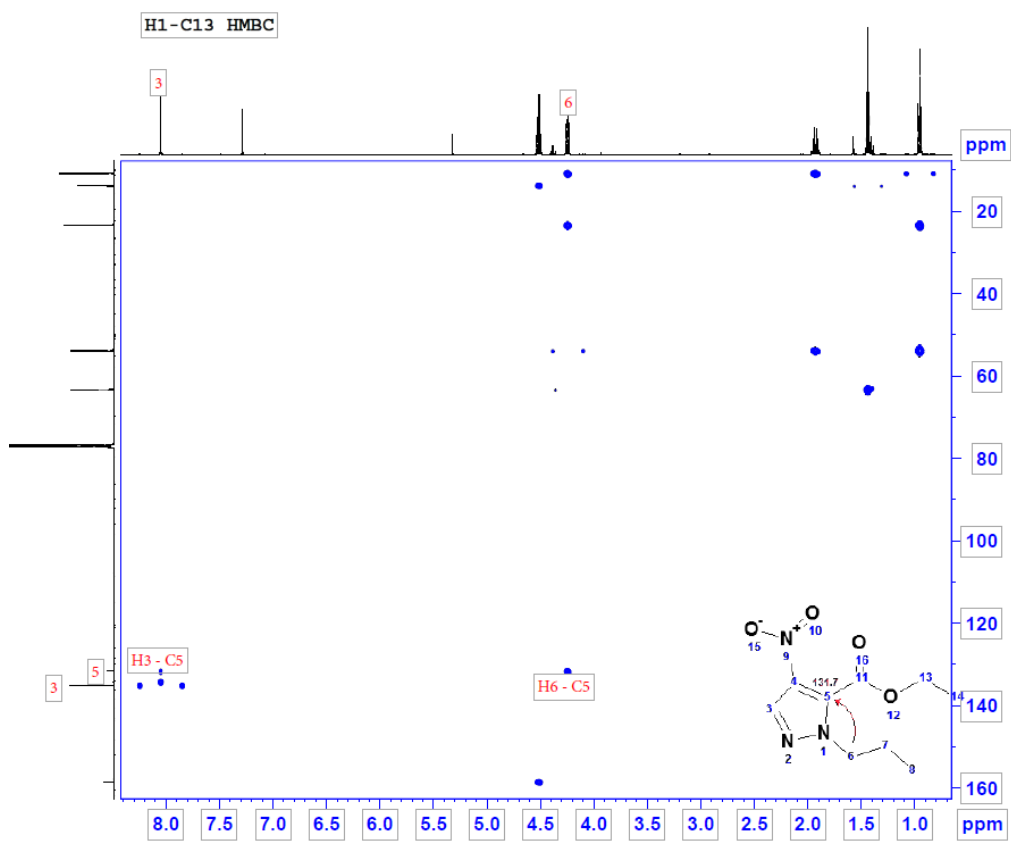
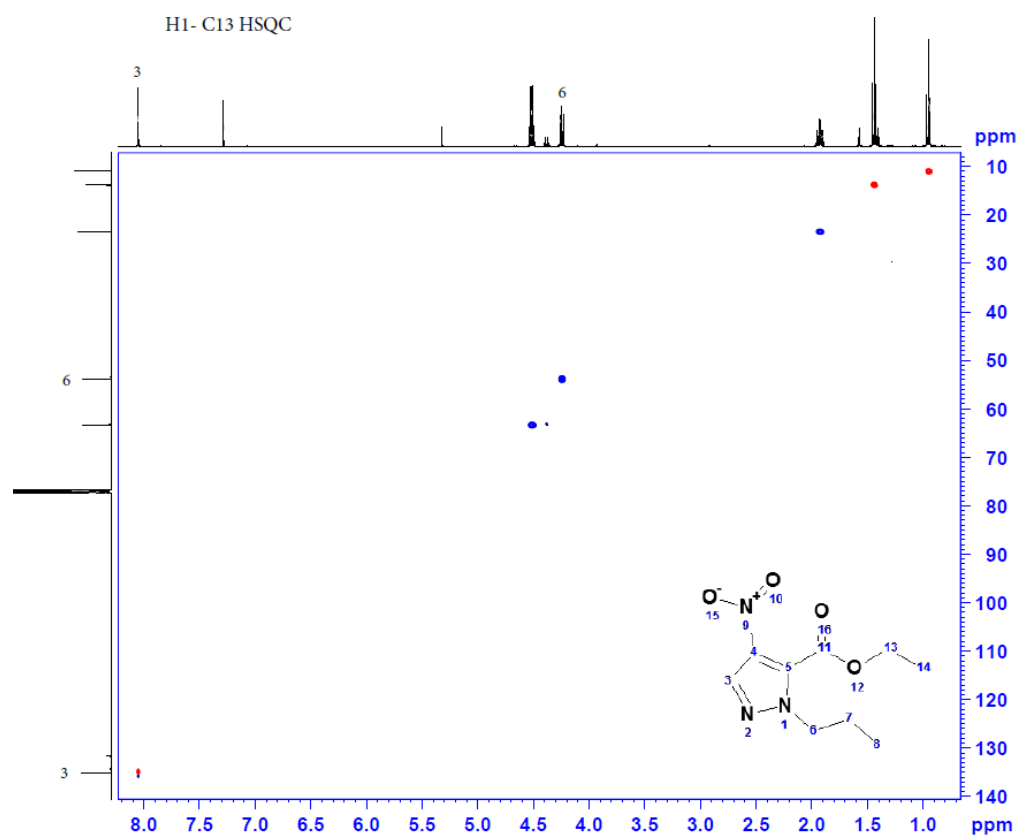




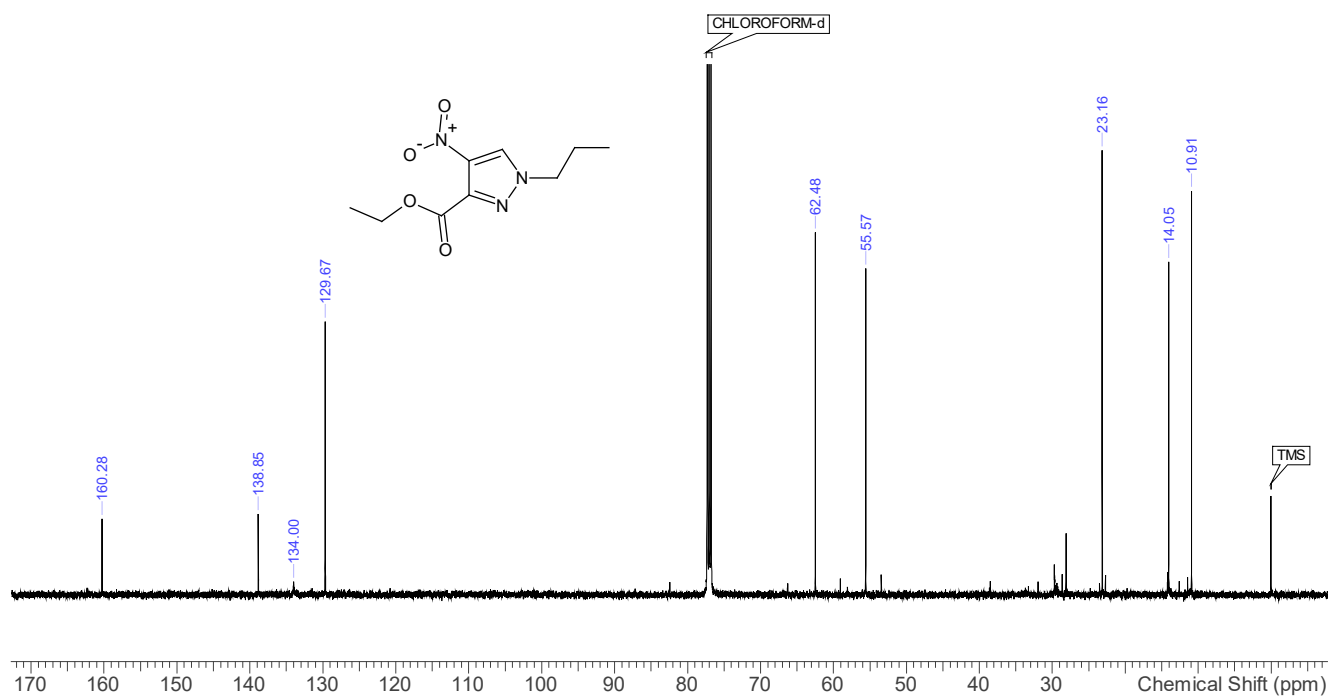
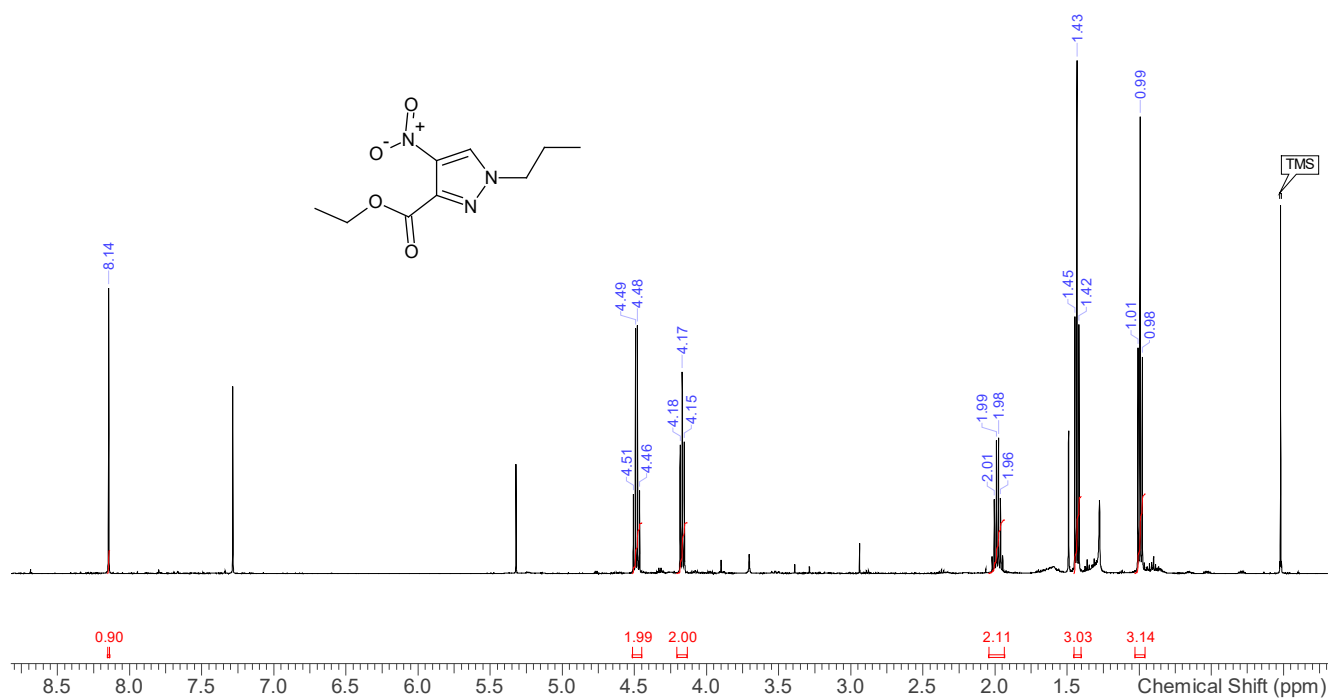
ethyl 4-nitro-1-propyl-1H-pyrazole-5-carboxylate (2o)

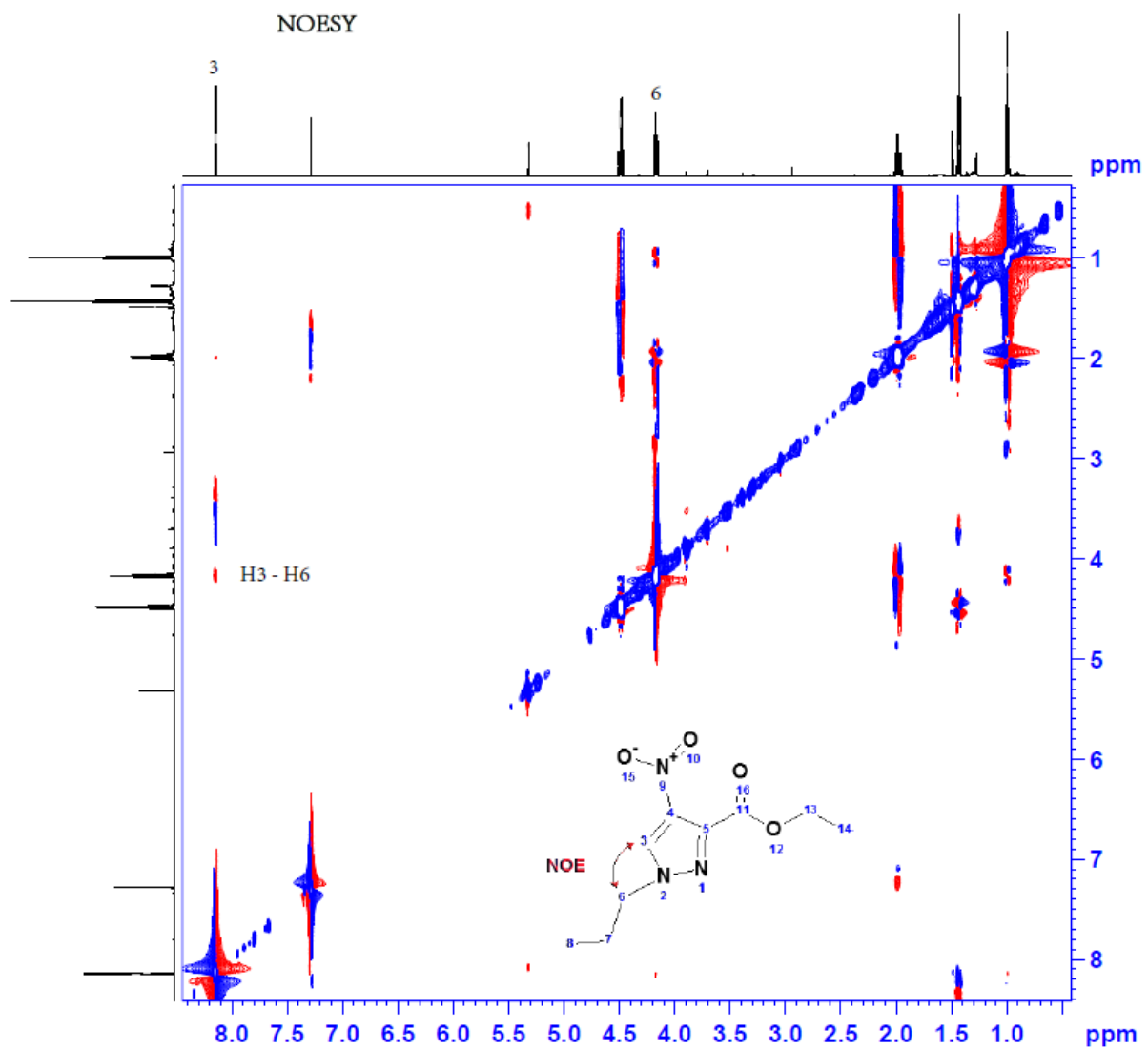


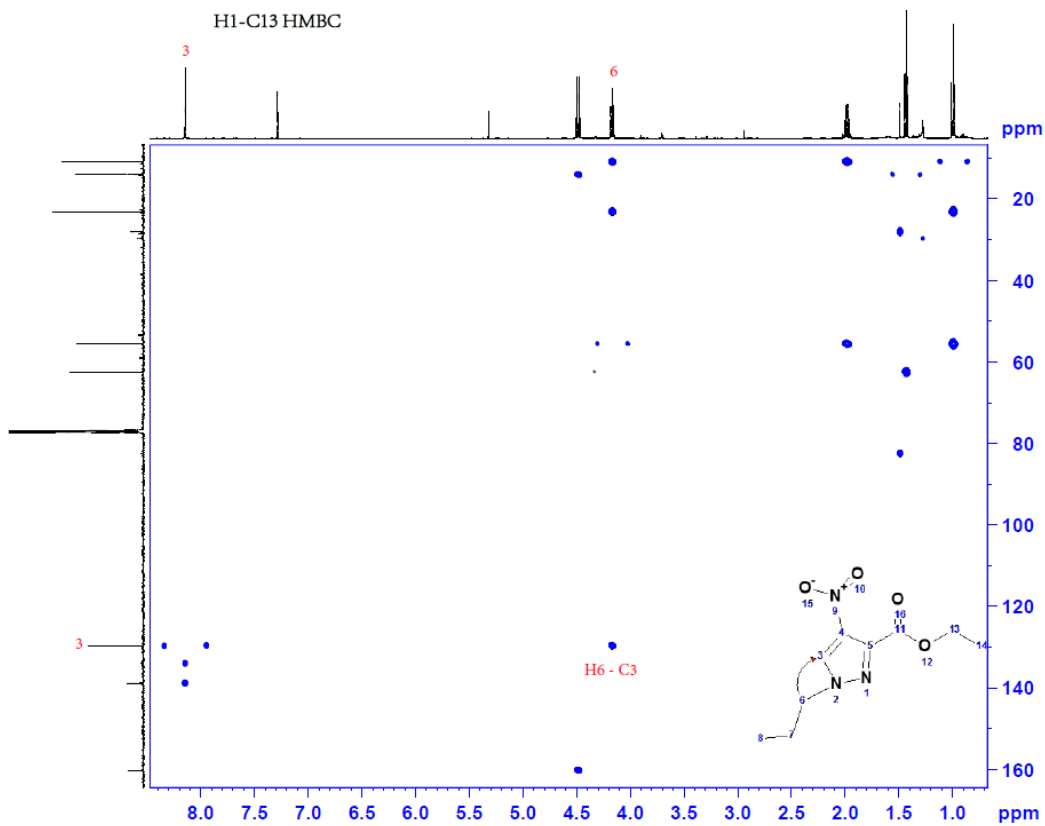
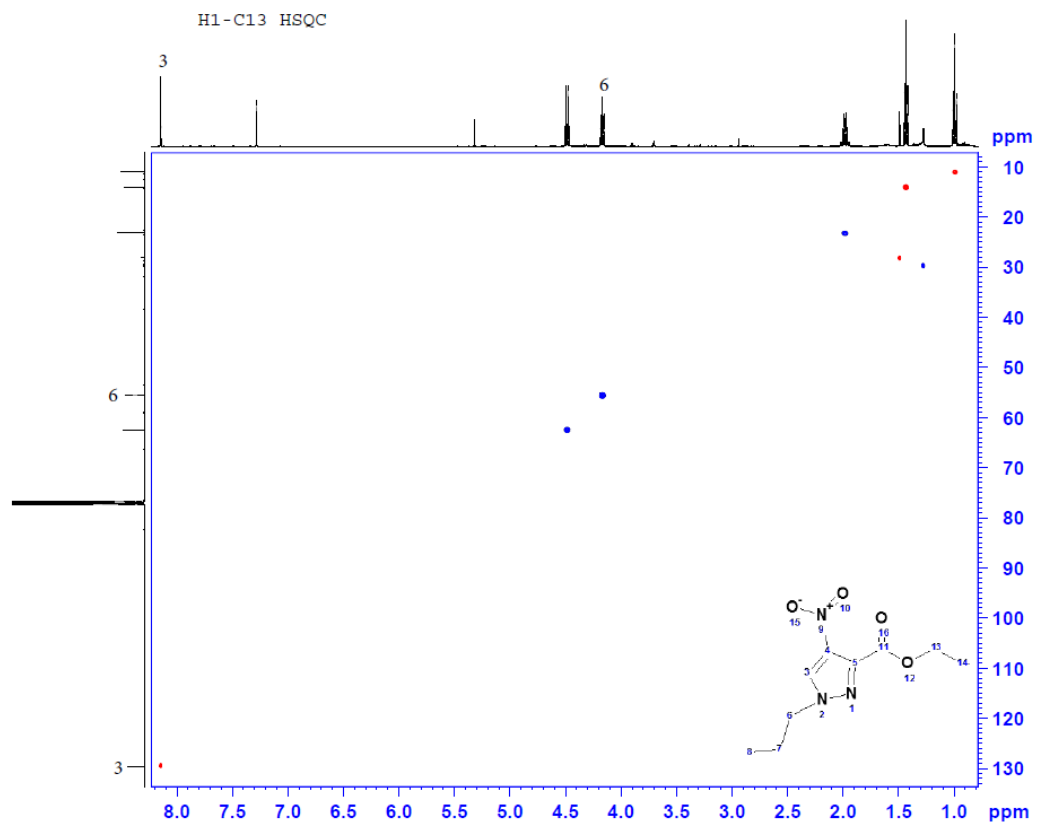




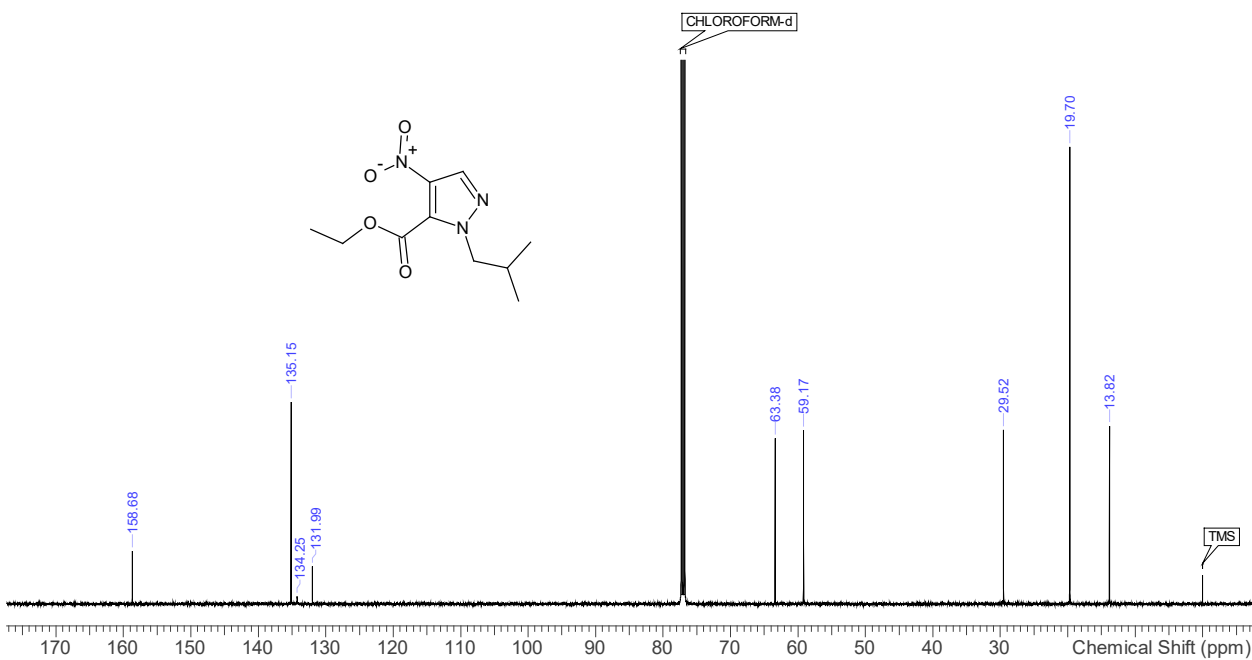
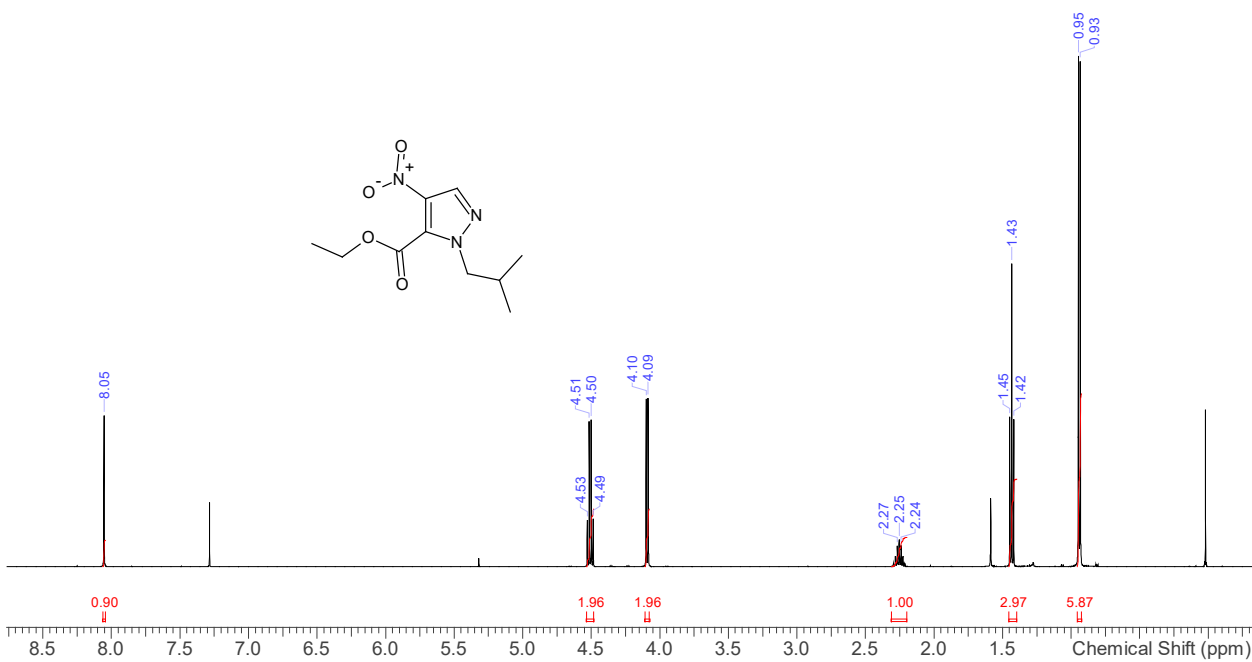
ethyl 4-nitro-1-propyl-1H-pyrazole-3-carboxylate (3o)

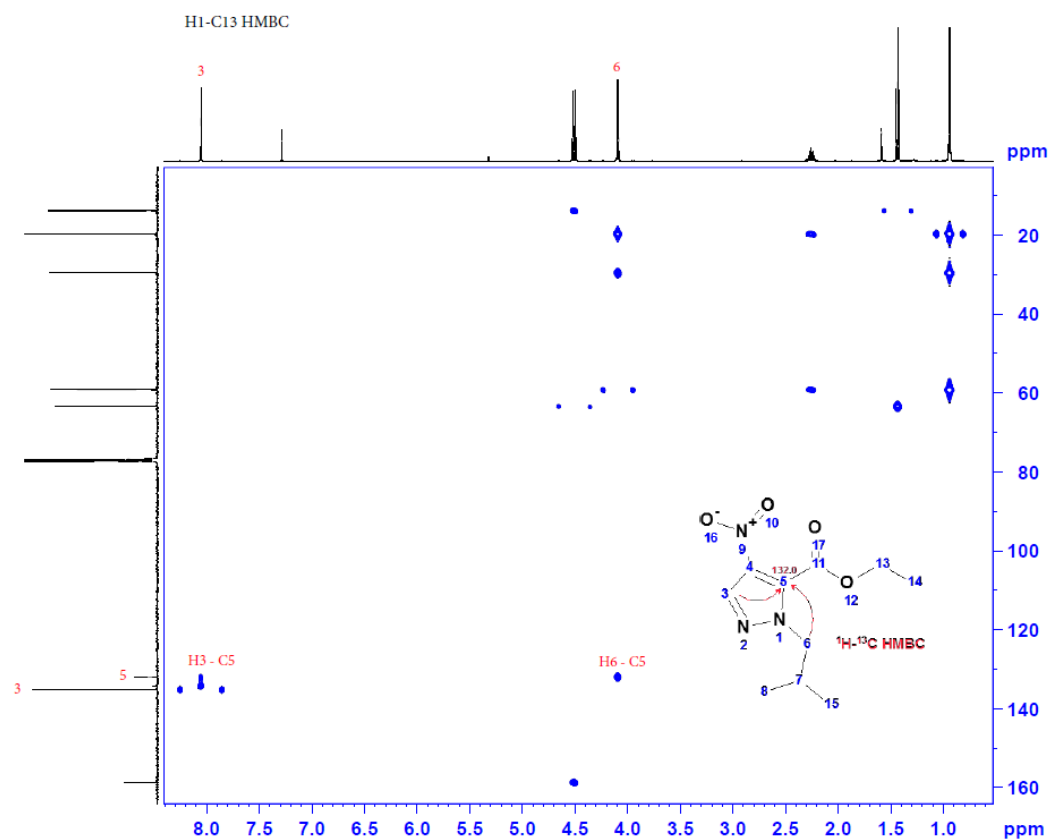
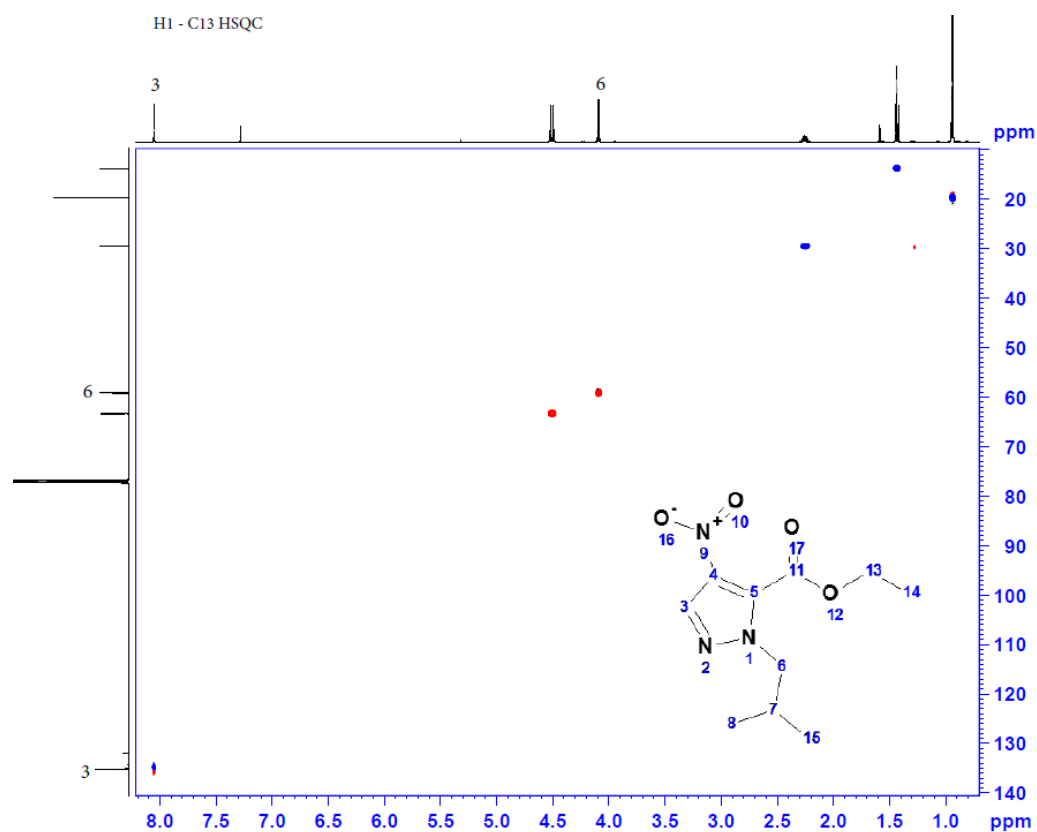




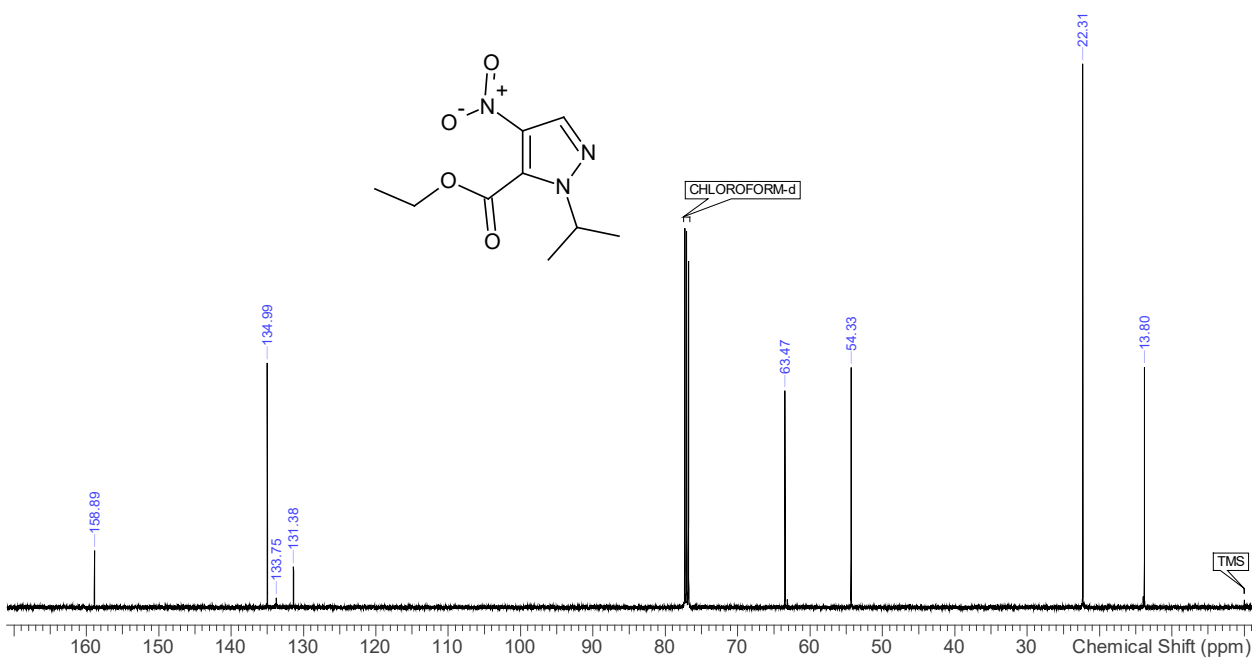
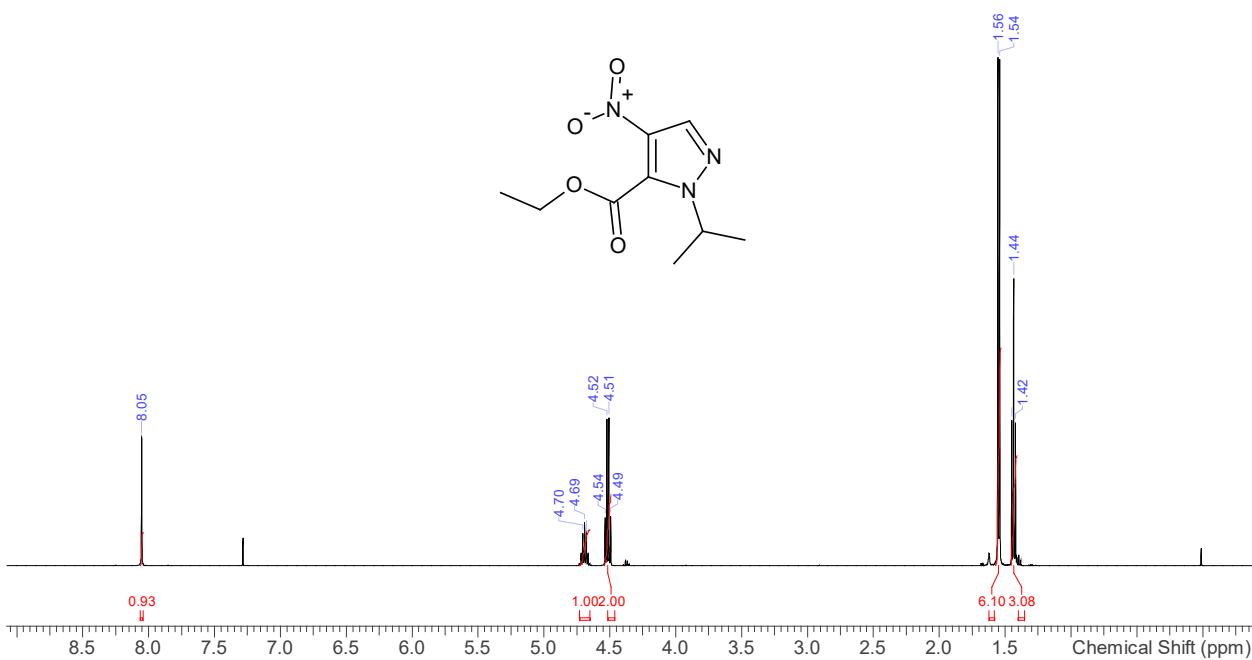


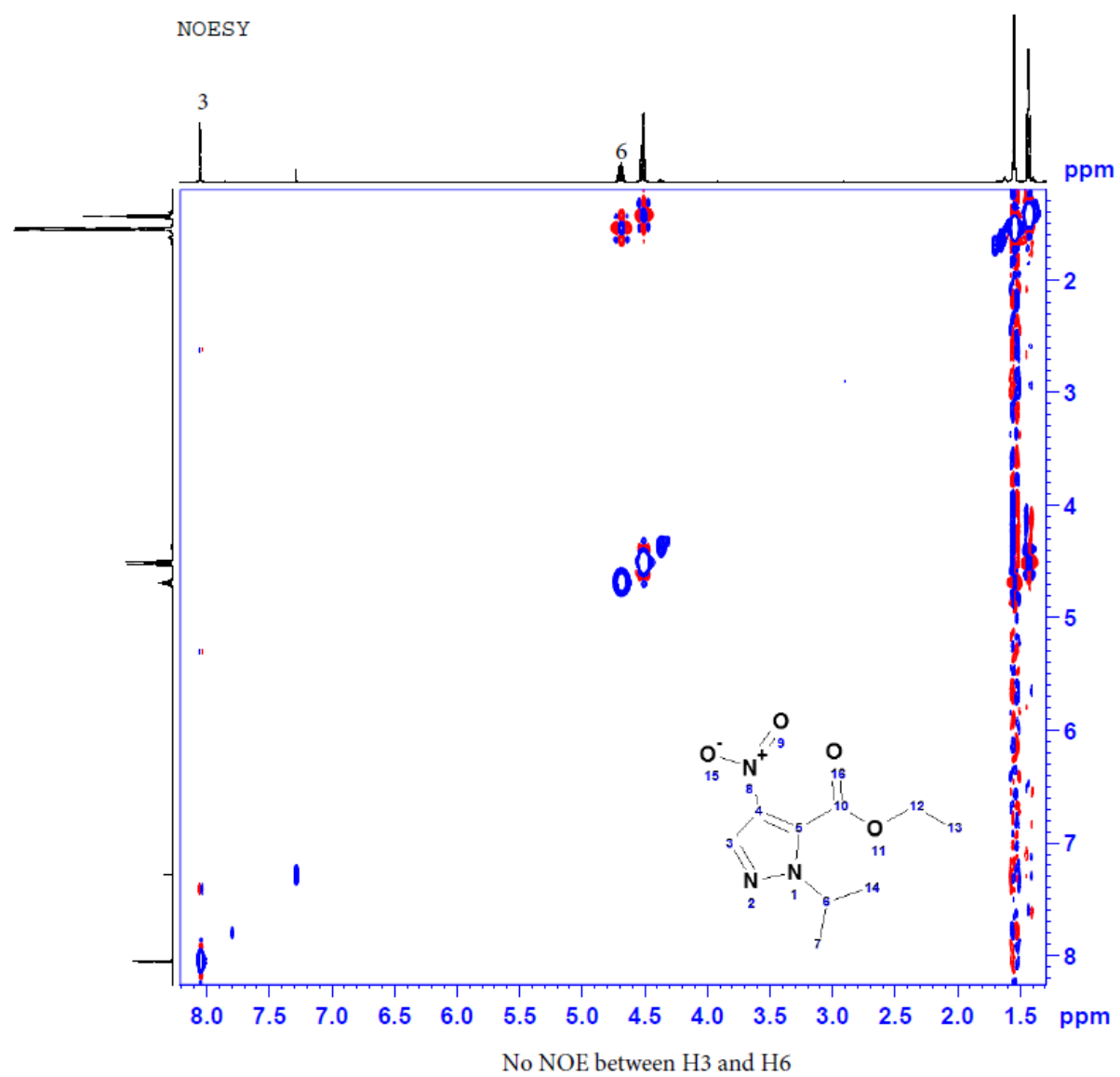
ethyl 1-isobutyl-4-nitro-1H-pyrazole-5-carboxylate (2p)

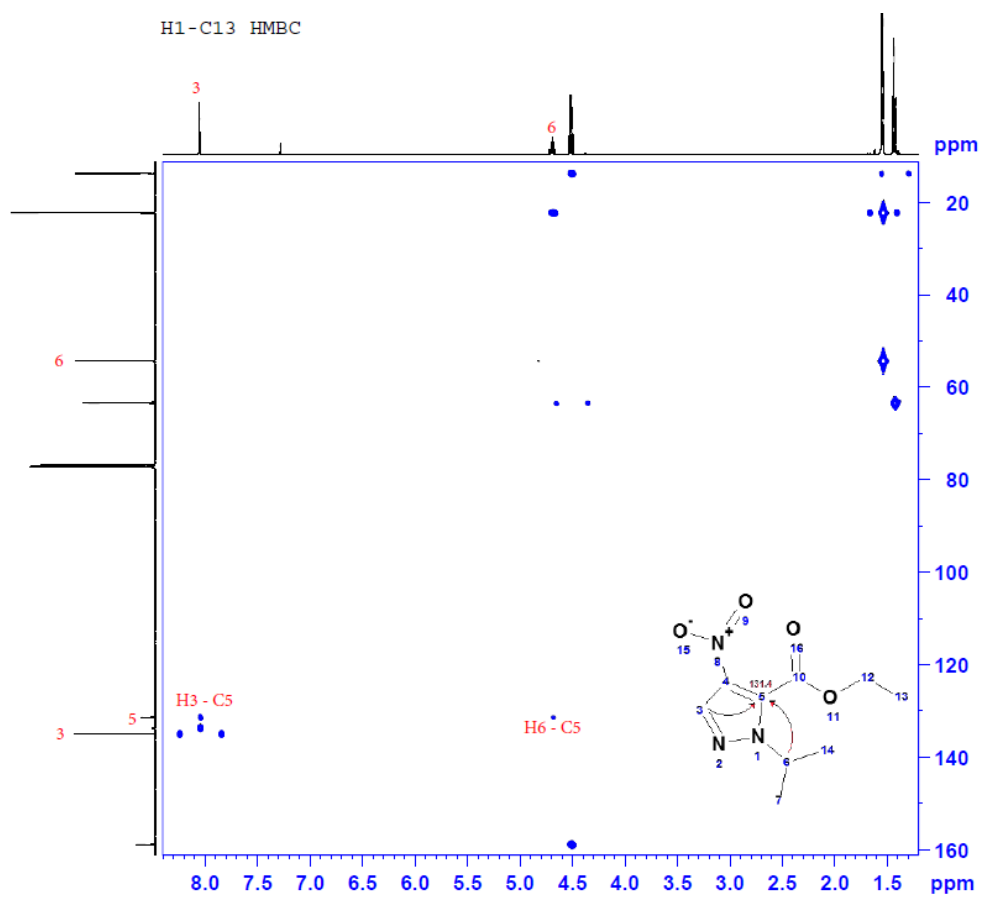
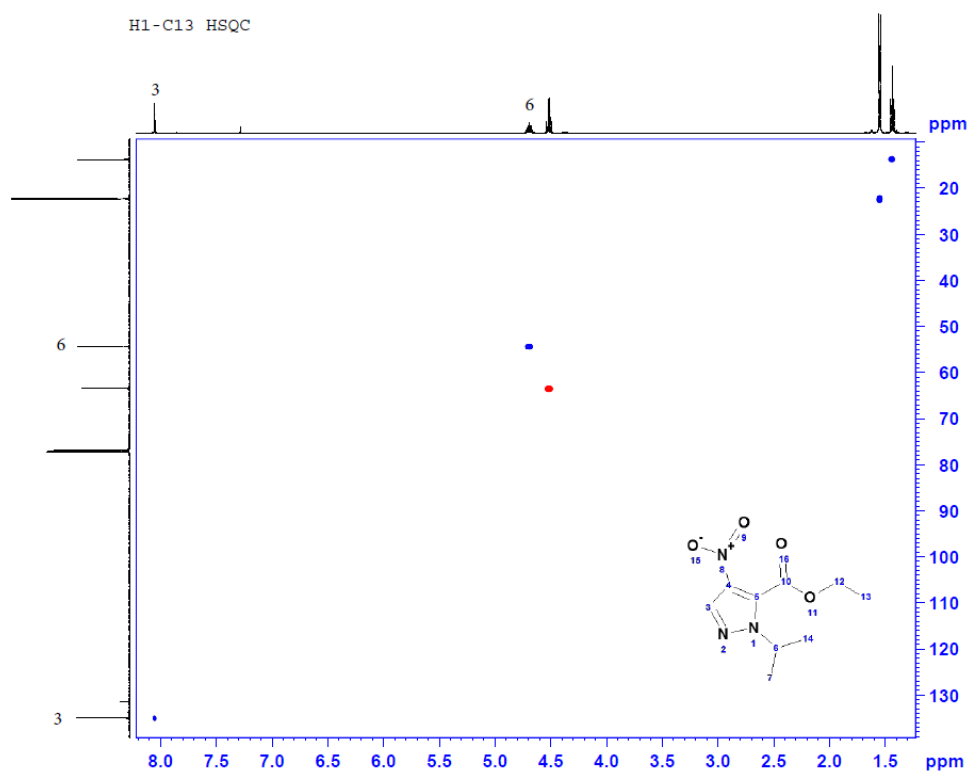




ethyl 1-isopropyl-4-nitro-1H-pyrazole-5-carboxylate (2q)







ethyl 1-(tert-butyl)-4-nitro-1H-pyrazole-5-carboxylate (2r)

