Supporting Information

Gold(III)-catalyzed decarboxylative C3-benzylation of indole-3-carboxylic acids with benzylic alcohols in water

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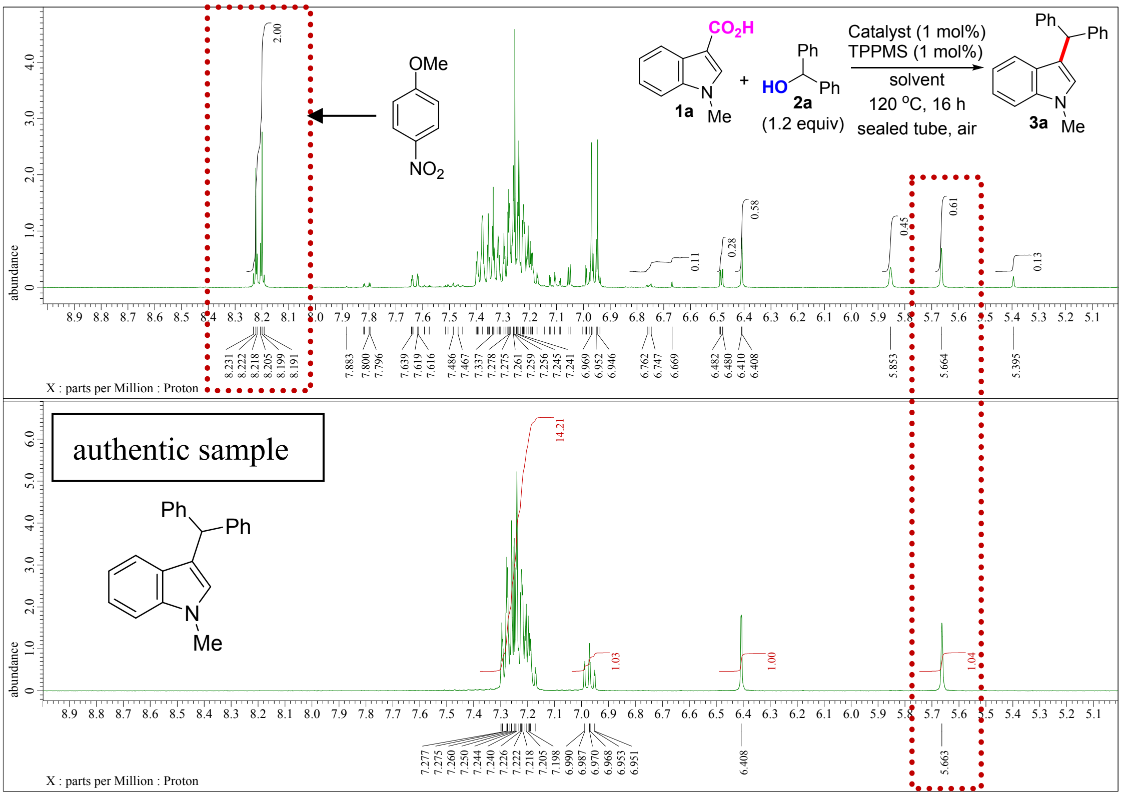
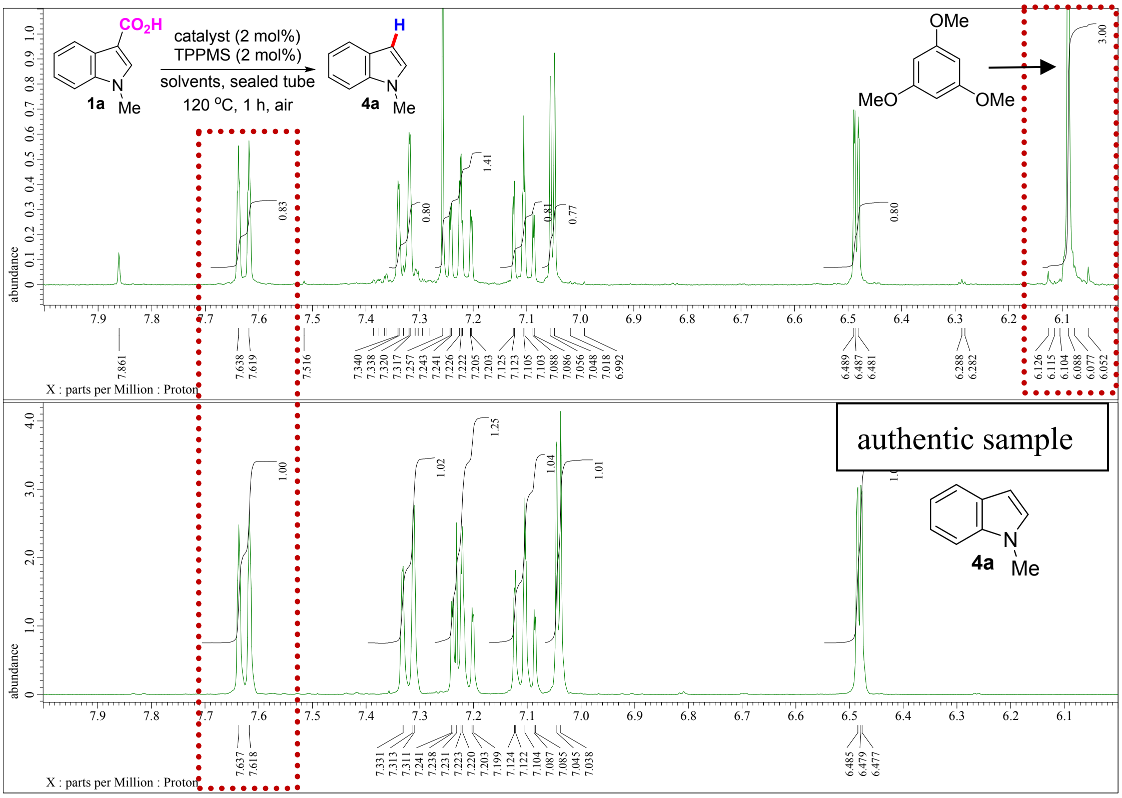
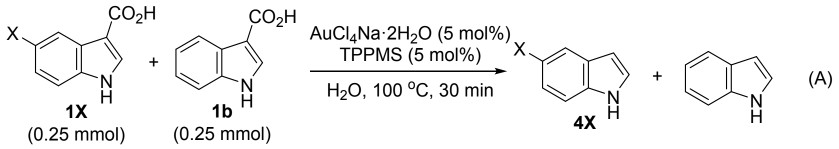
Scheme S1. Effects of catalysts and solvents.

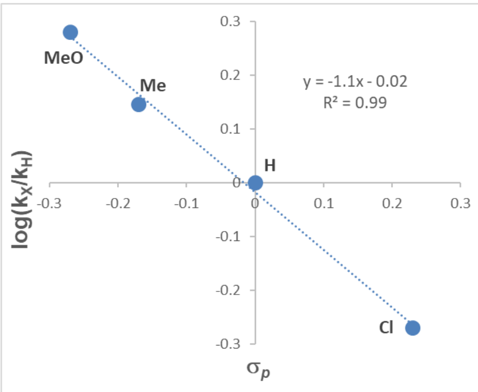


Scheme S2. Catalytic decarboxylative activation.

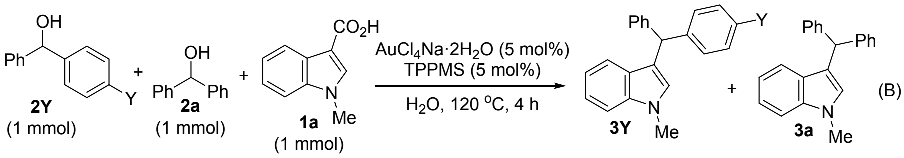


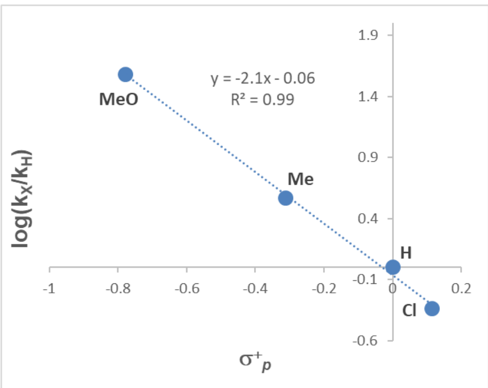
Scheme S3. Hammett studies.





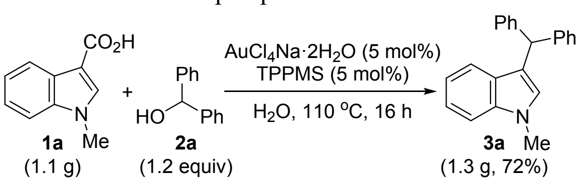
	σ_p	$\log(k_X/k_H)$
OMe	-0.27	0.28
Me	-0.17	0.146
H	0	0
Cl	0.23	-0.27





	σ^+_p	$\log(k_X/k_H)$
OMe	-0.778	1.58
Me	-0.311	0.57
H	0	0
Cl	0.114	-0.34

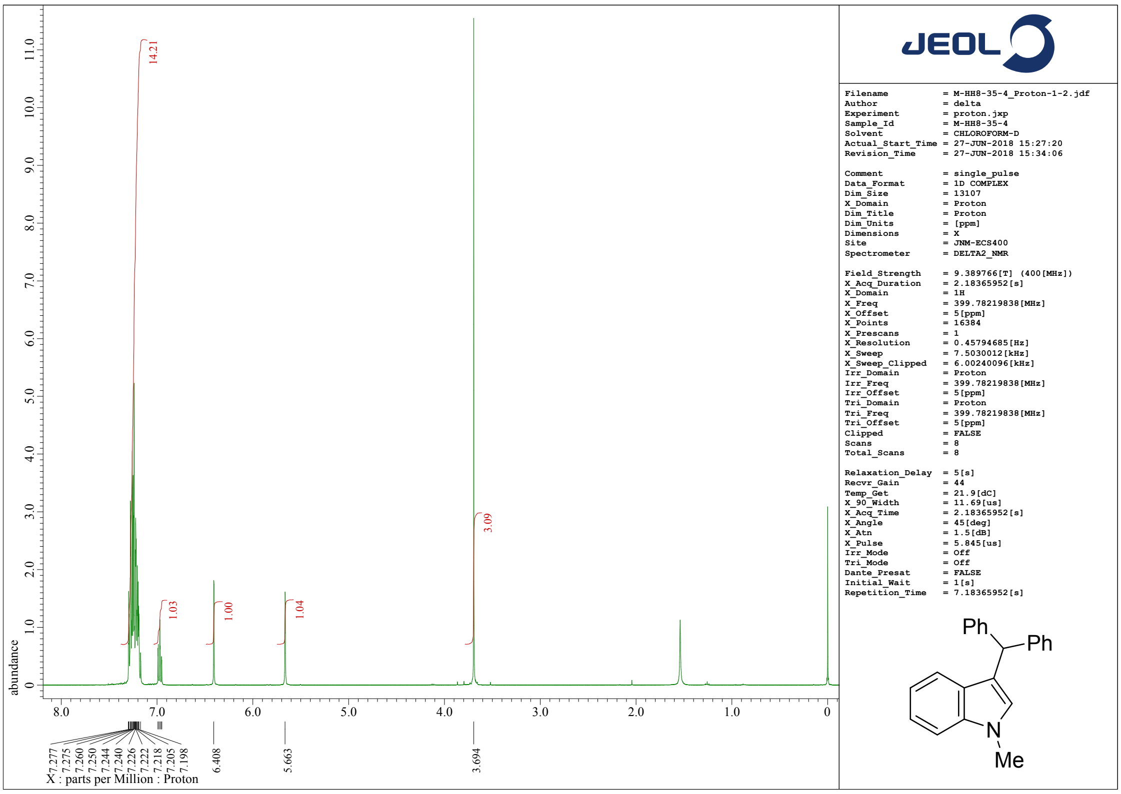
Scheme S4. Scale-up experiment.

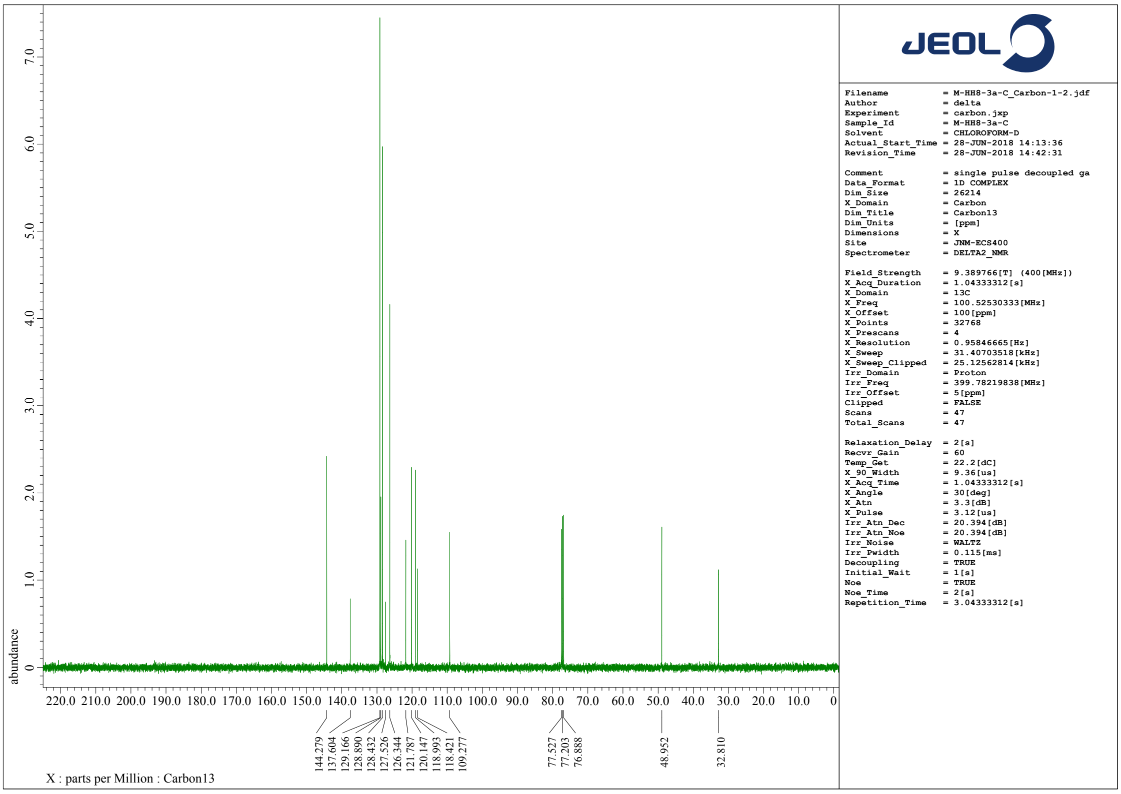


0 h

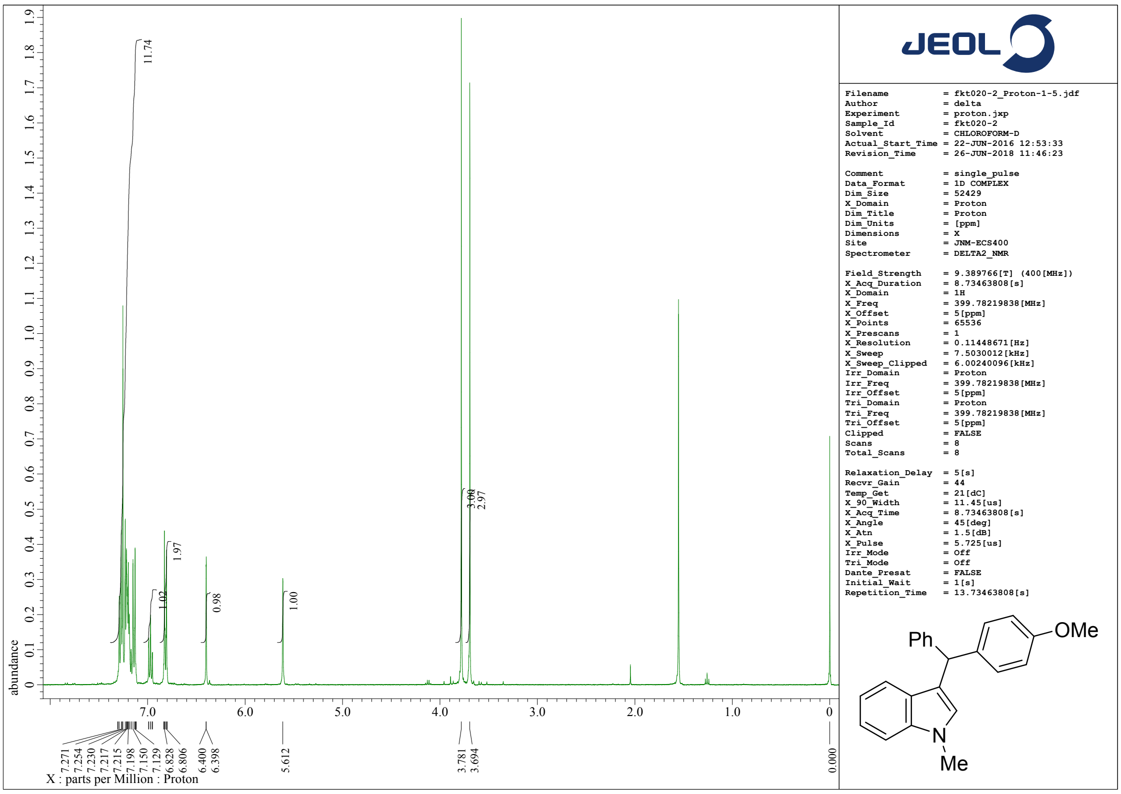
16 h

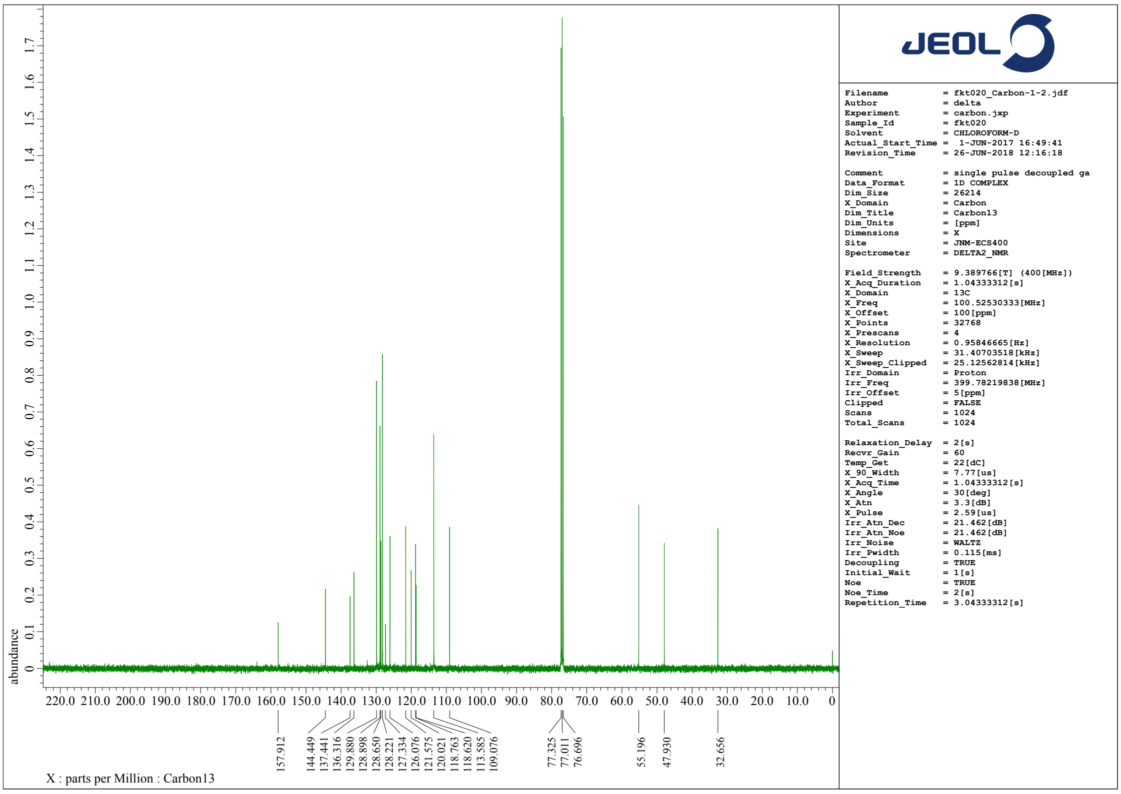
3-Benzhydryl-1-methyl-1*H*-indole 3a



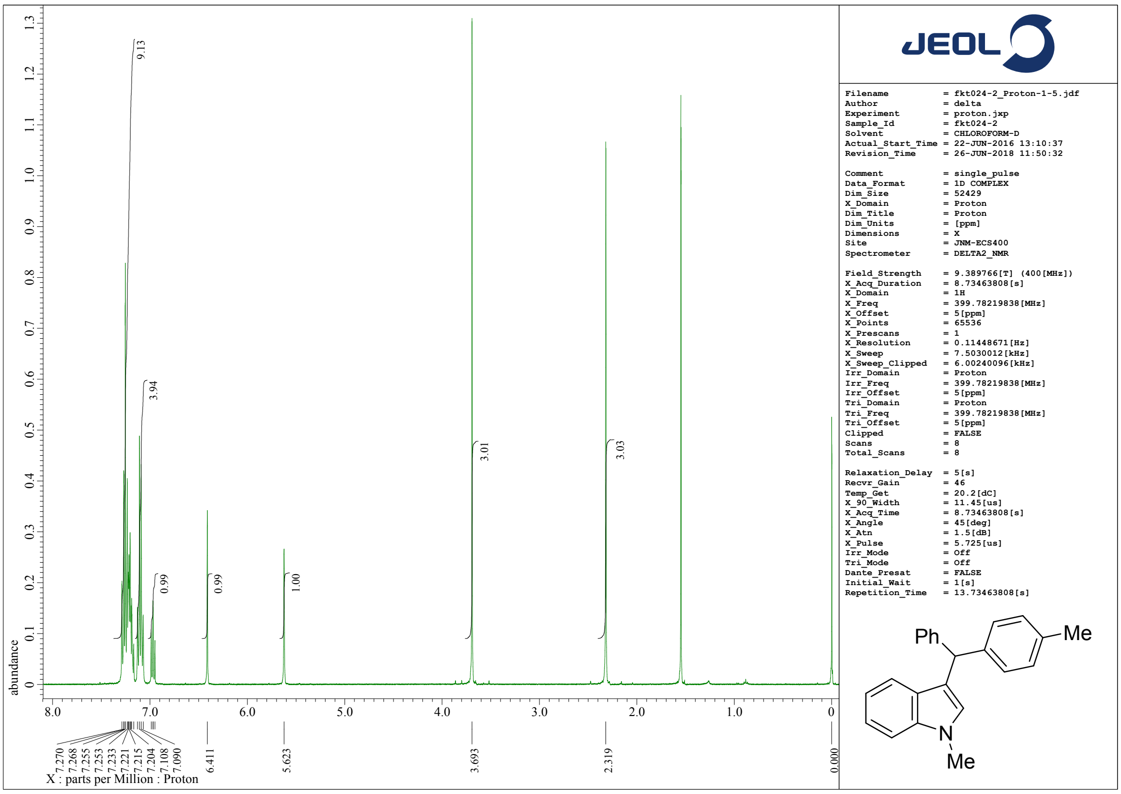


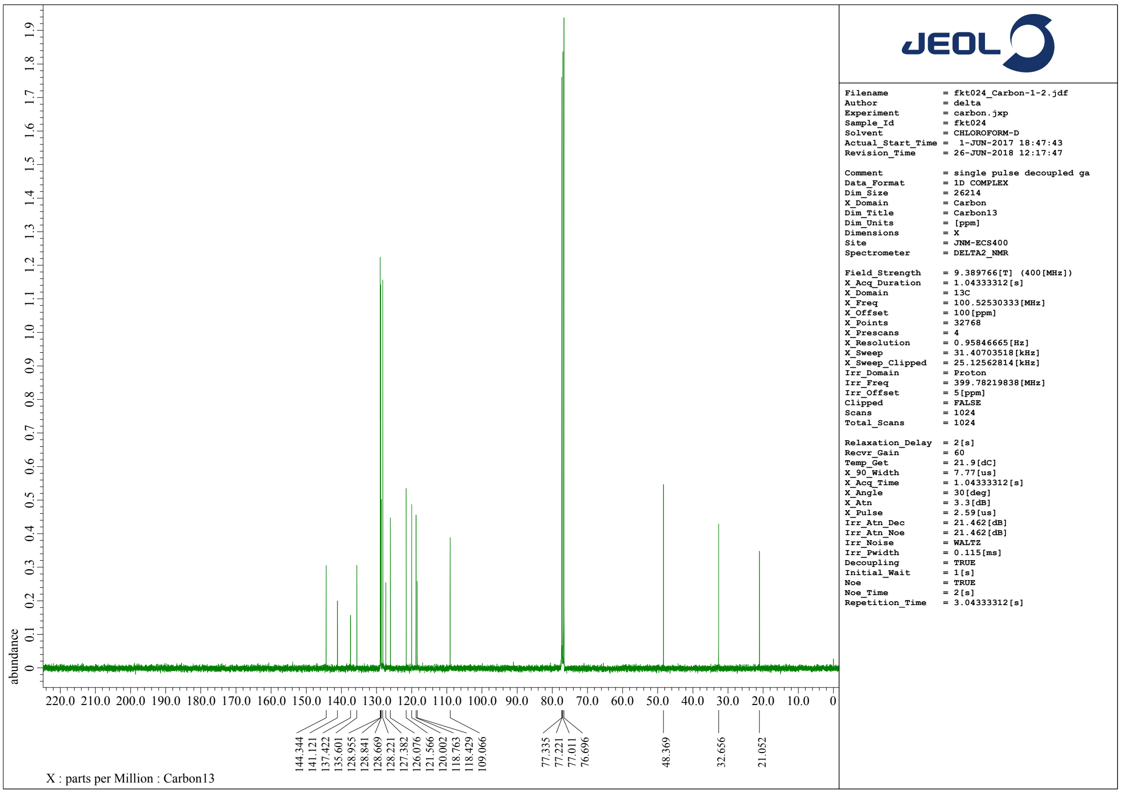
3-[(4-Methoxyphenyl)(phenyl)methyl]-1-methyl-1*H*-indole 3b





1-Methyl-3-[phenyl(*p*-tolyl)methyl]-1*H*-indole 3c





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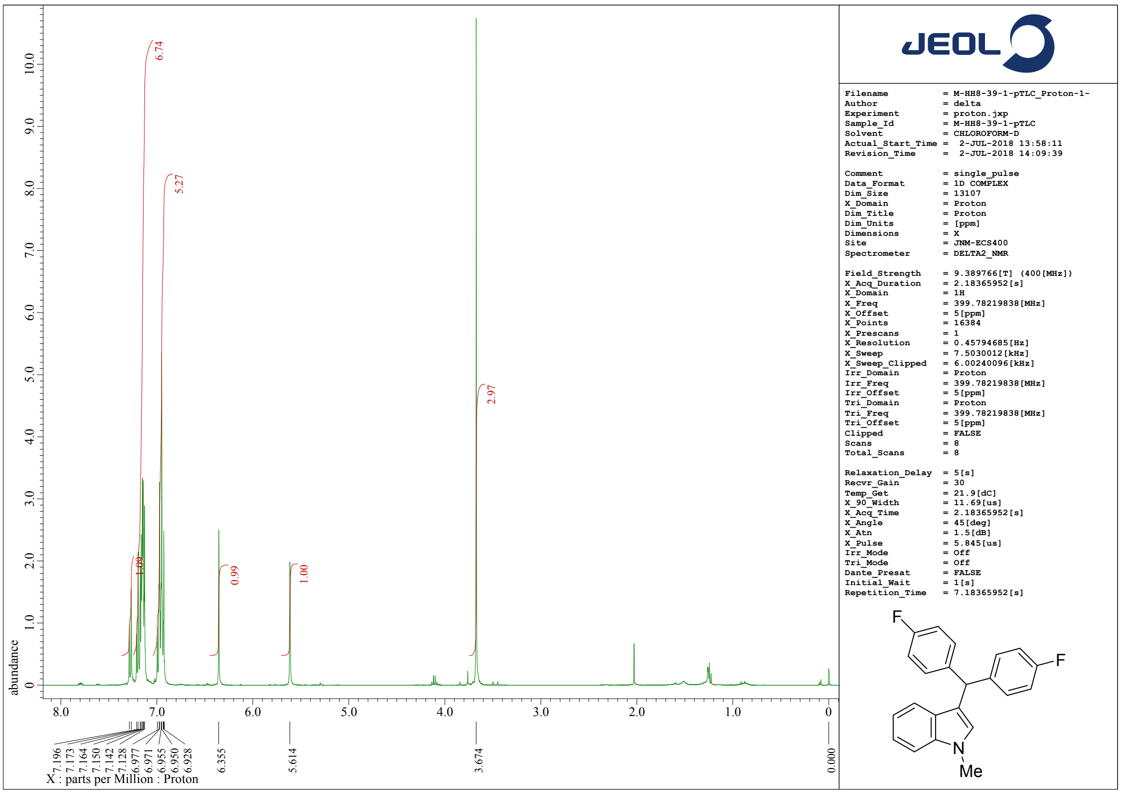

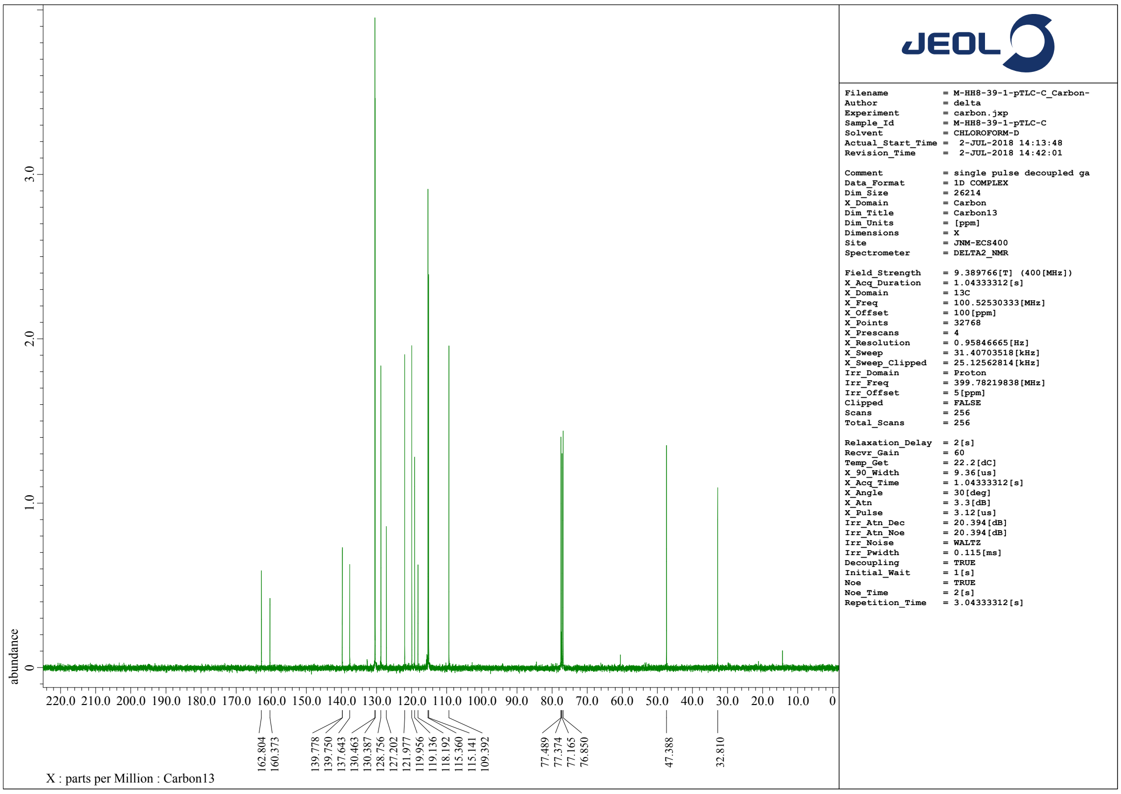

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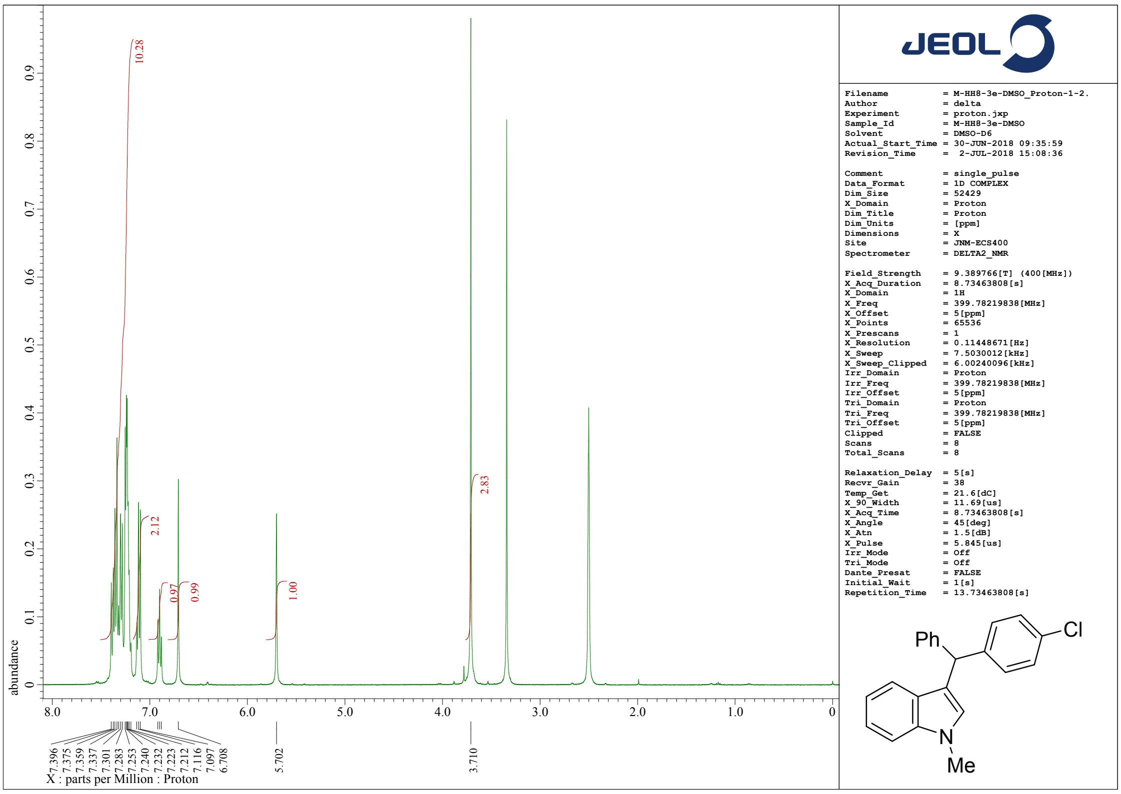

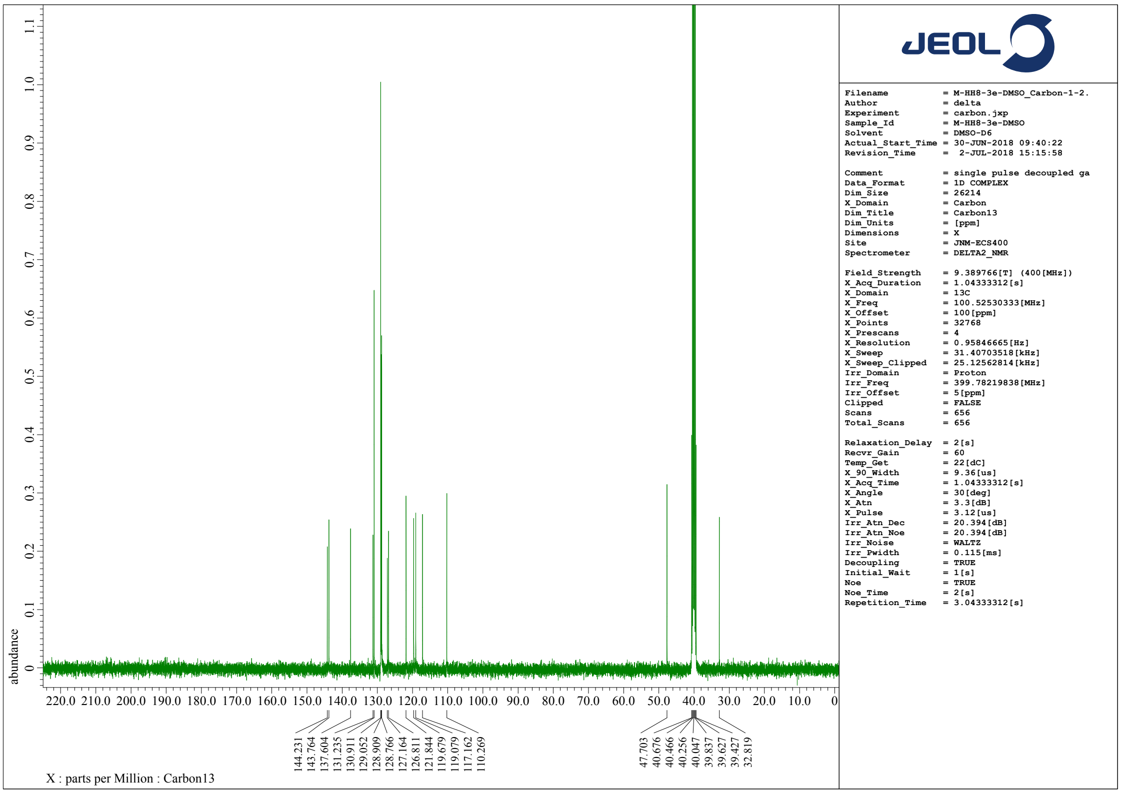

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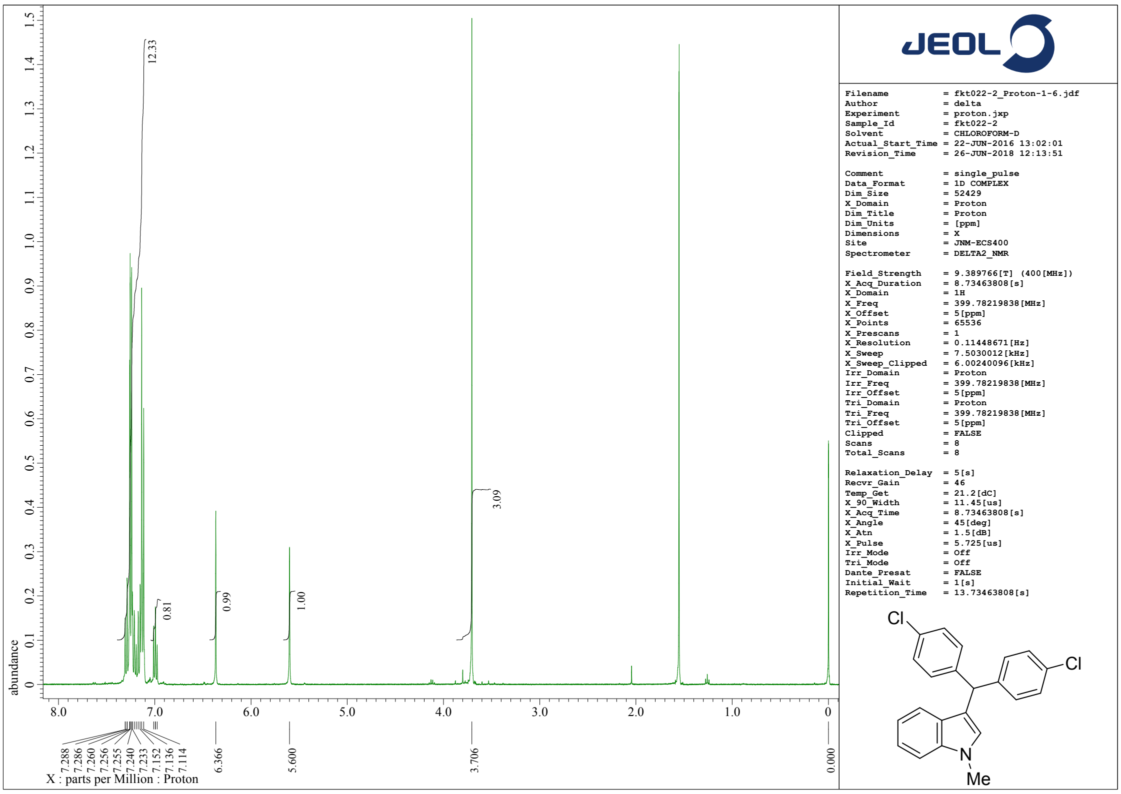
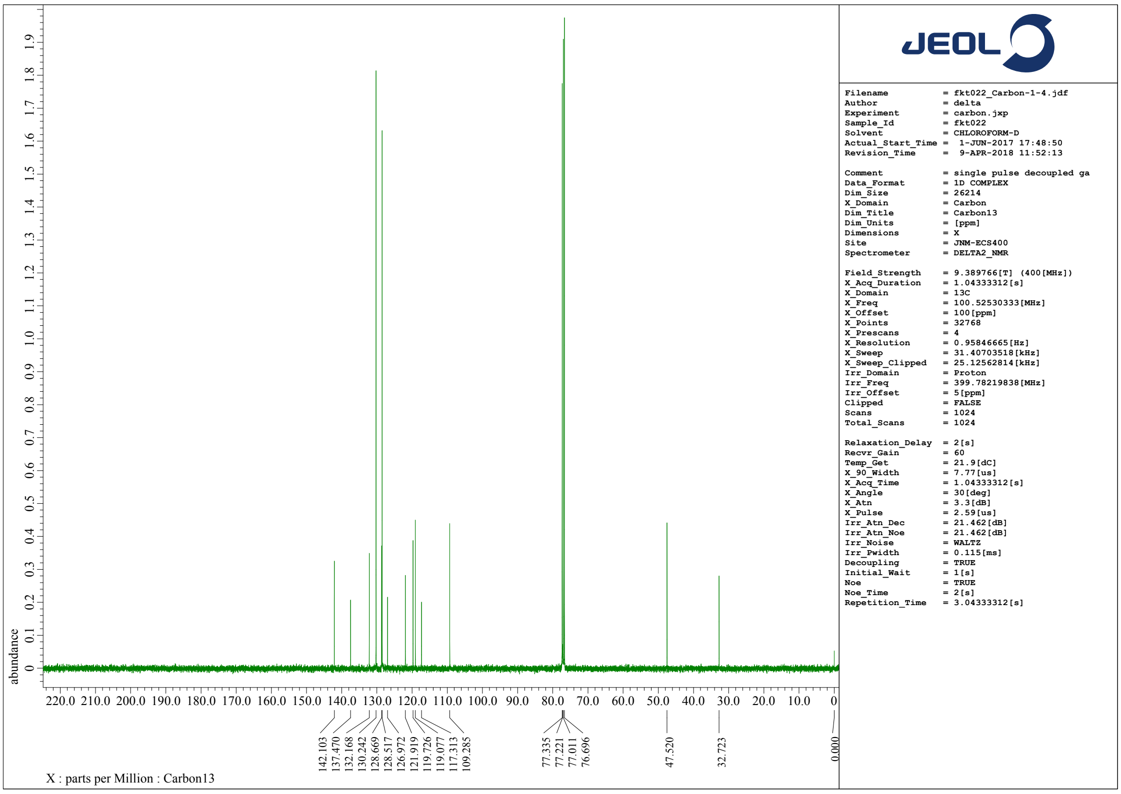
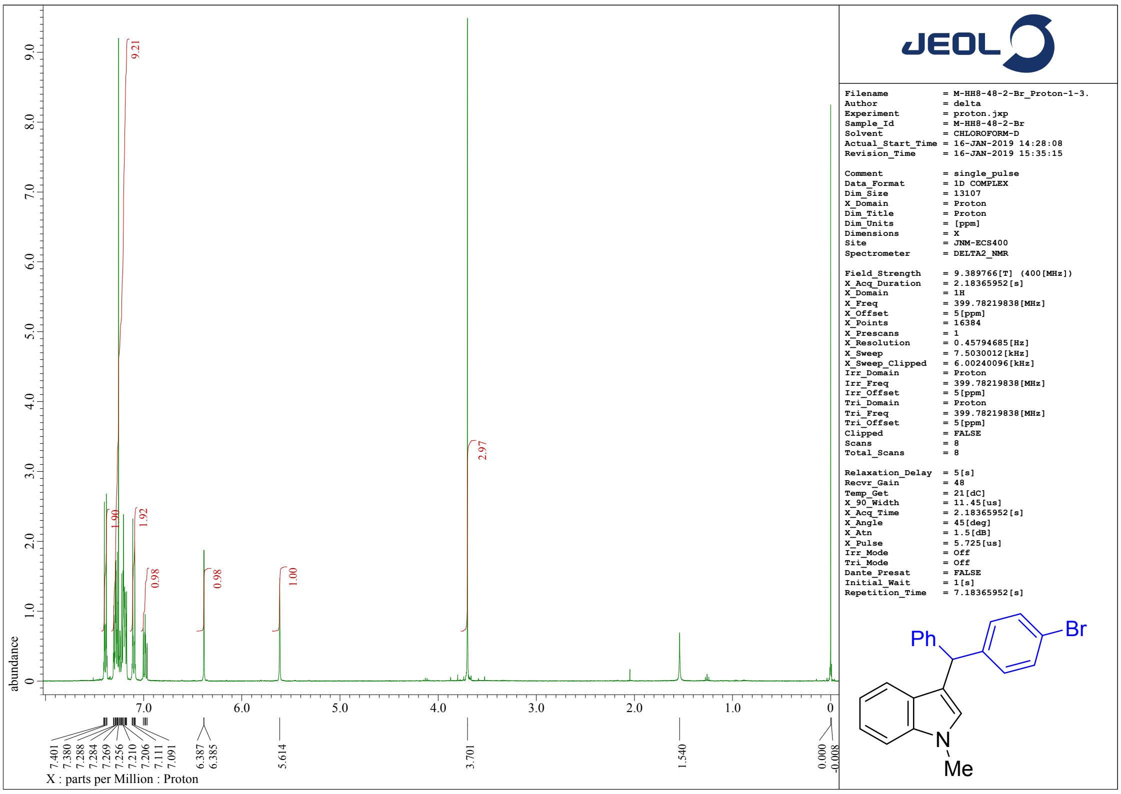
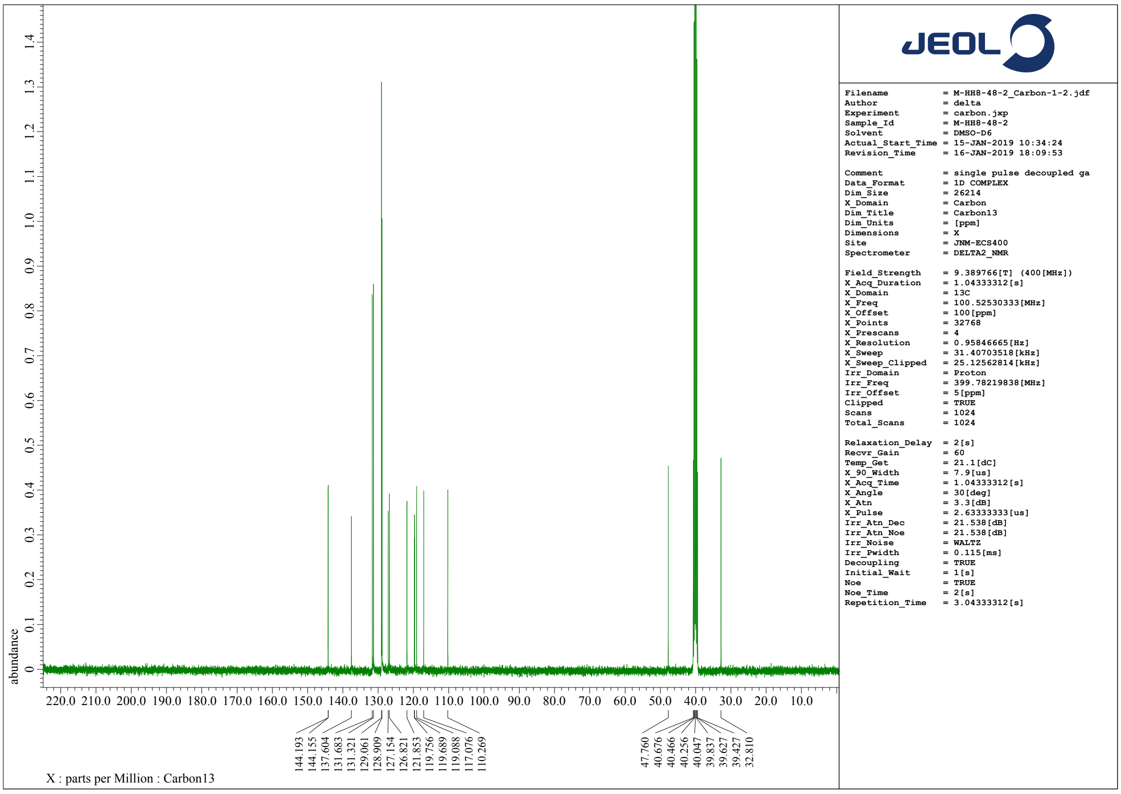




3-[(4-Bromophenyl)(phenyl)methyl]-1-methyl-1*H*-indole 3g





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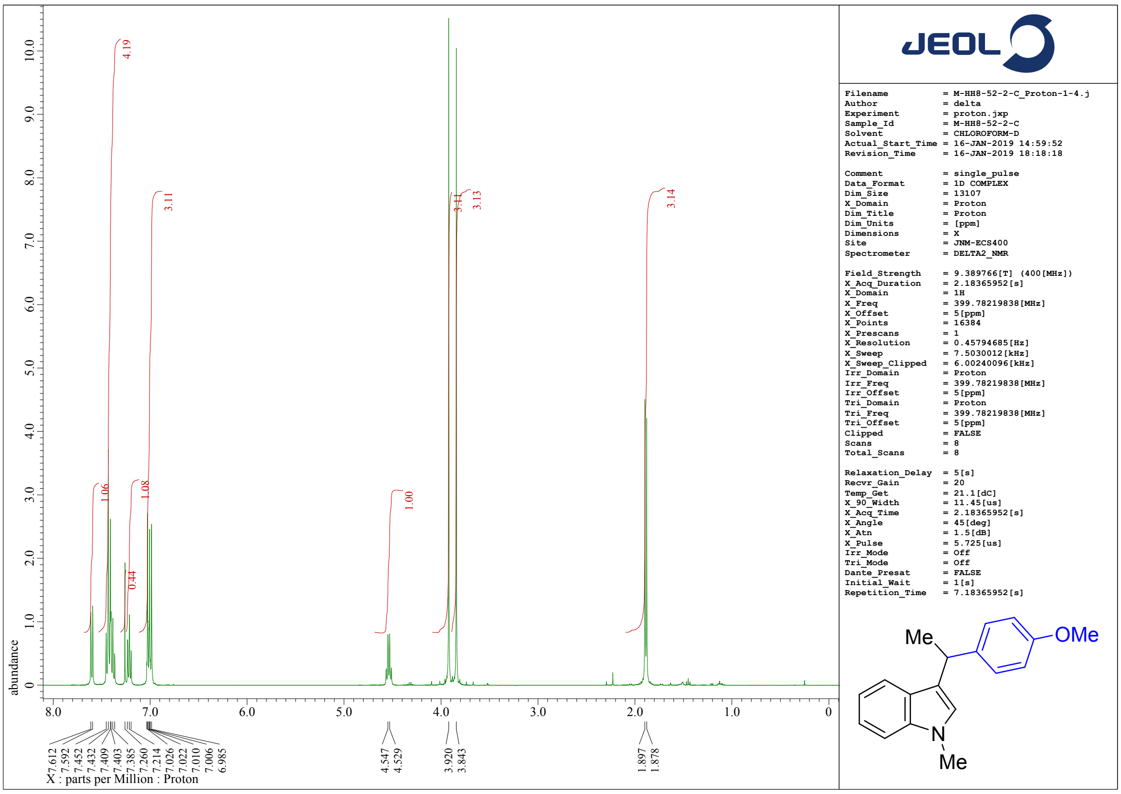
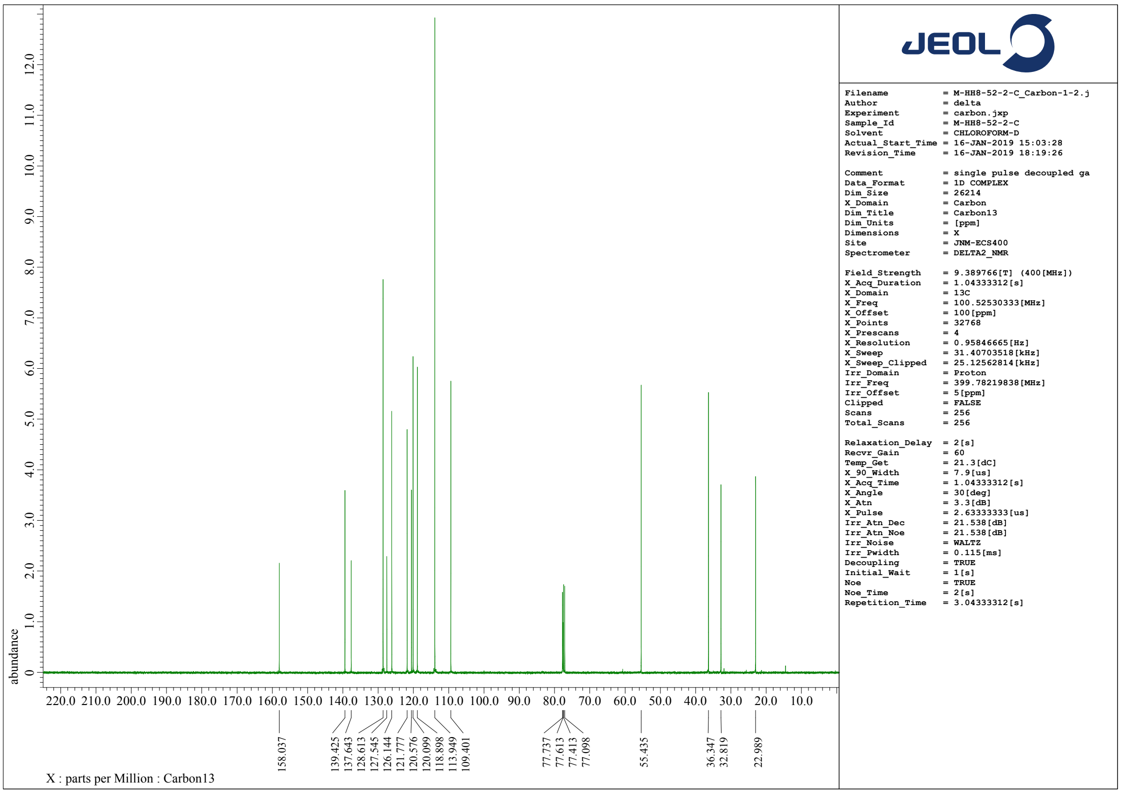
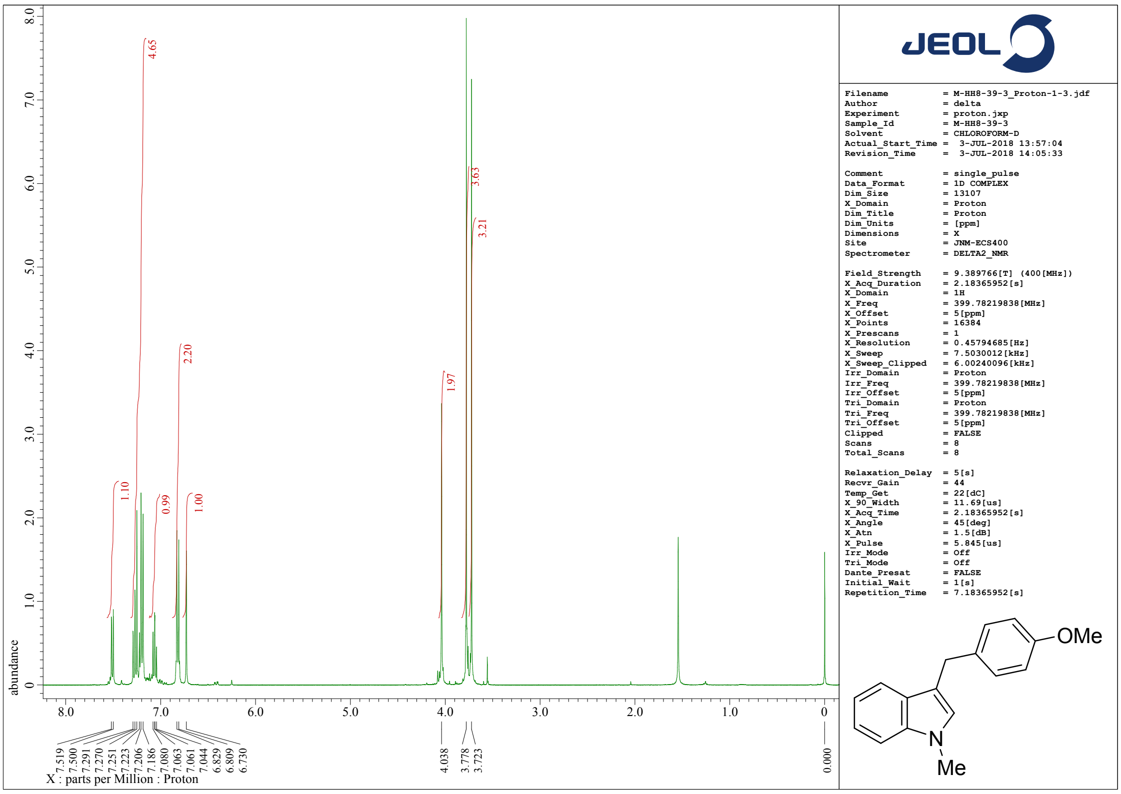
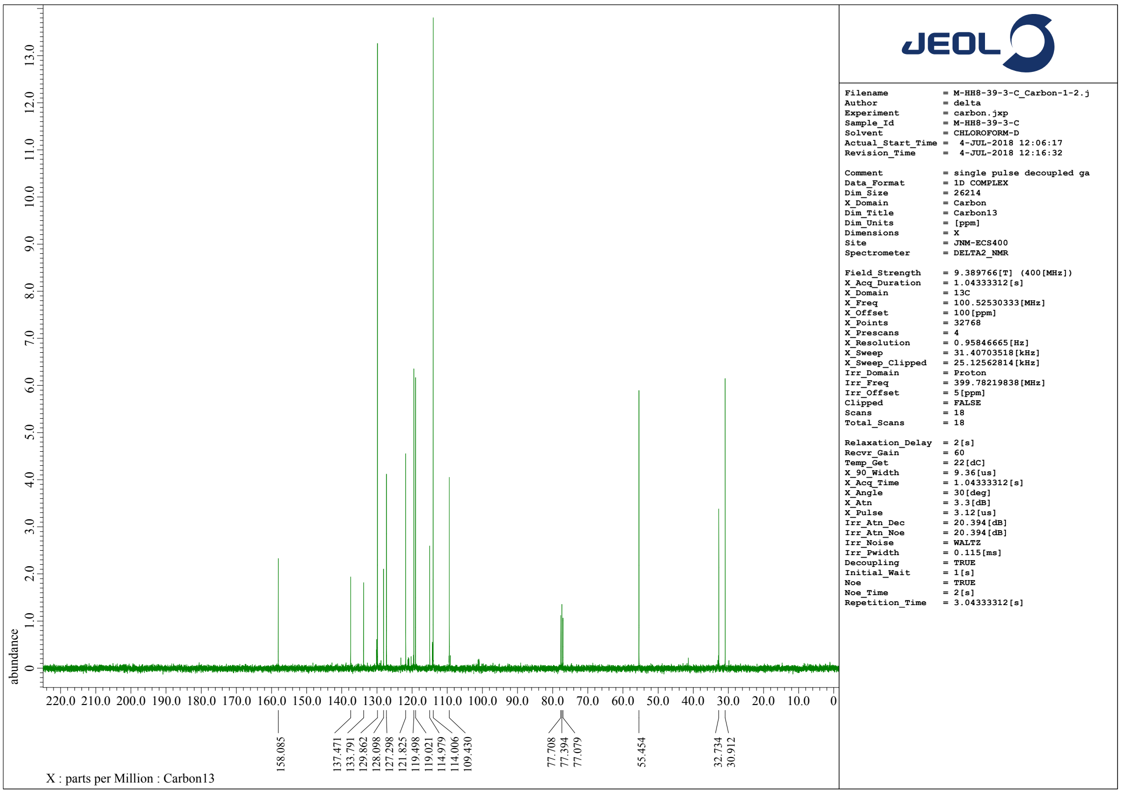


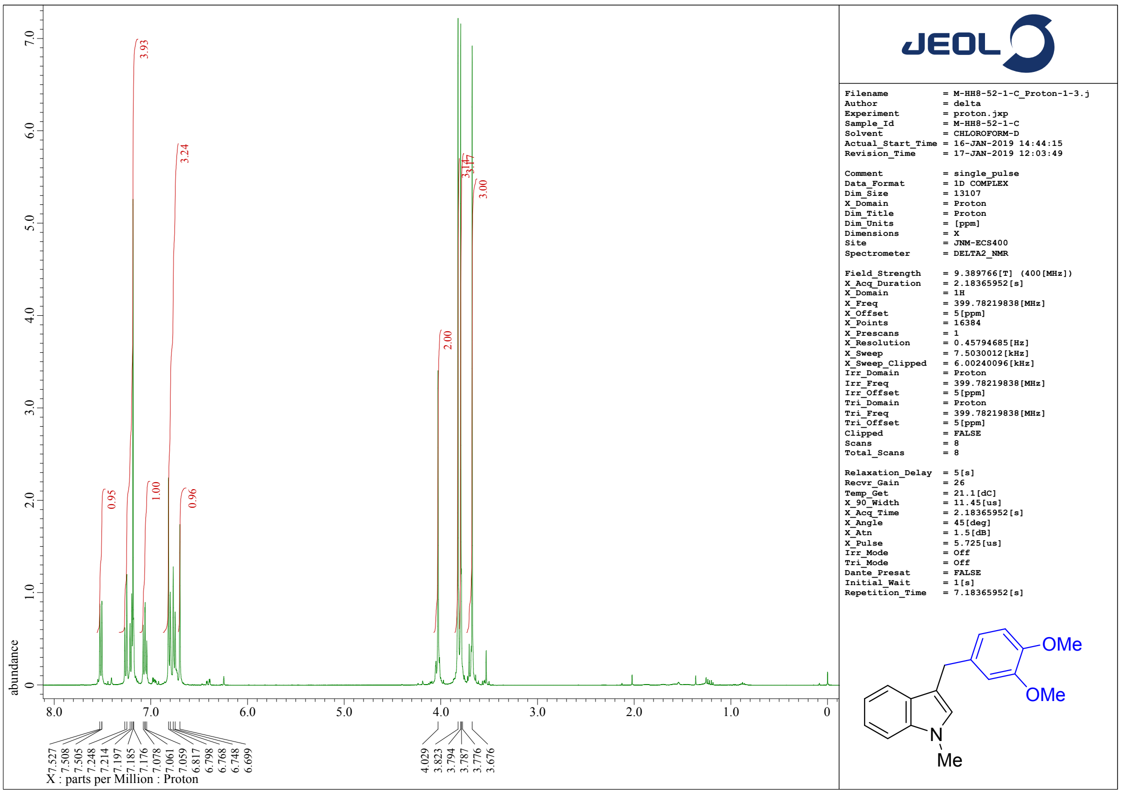


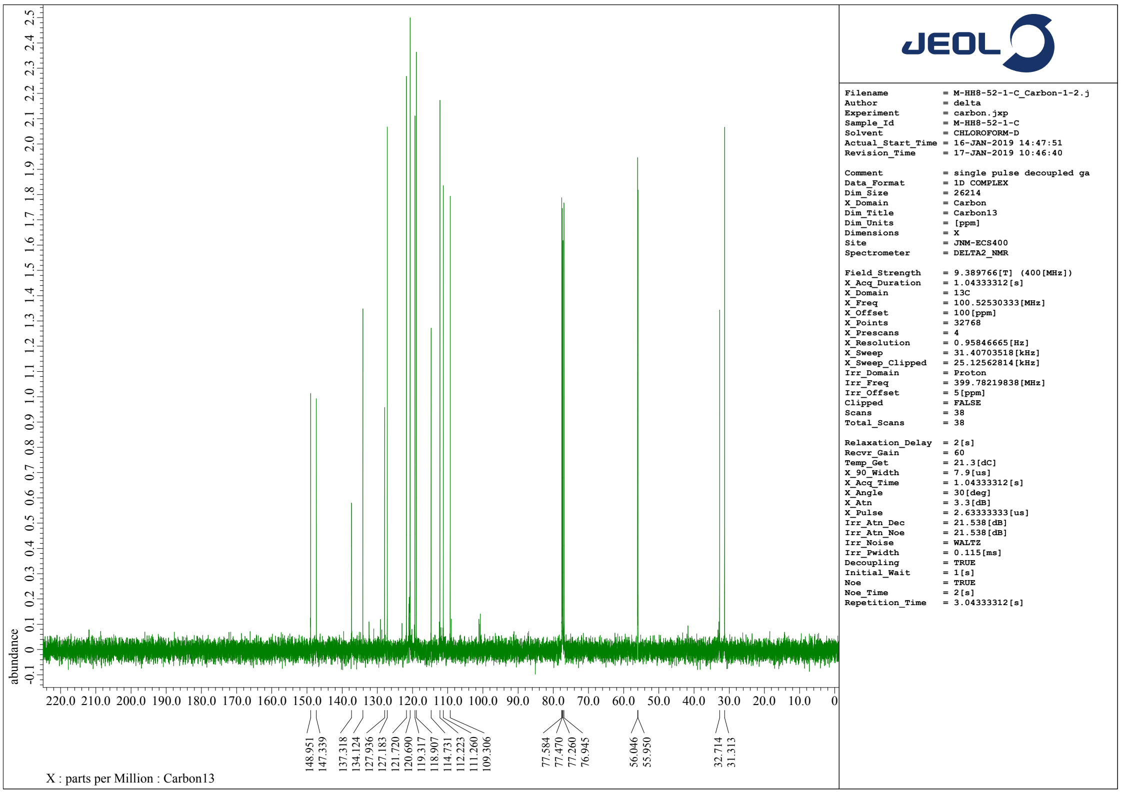
3-(4-Methoxybenzyl)-1-methyl-1*H*-indole 3i



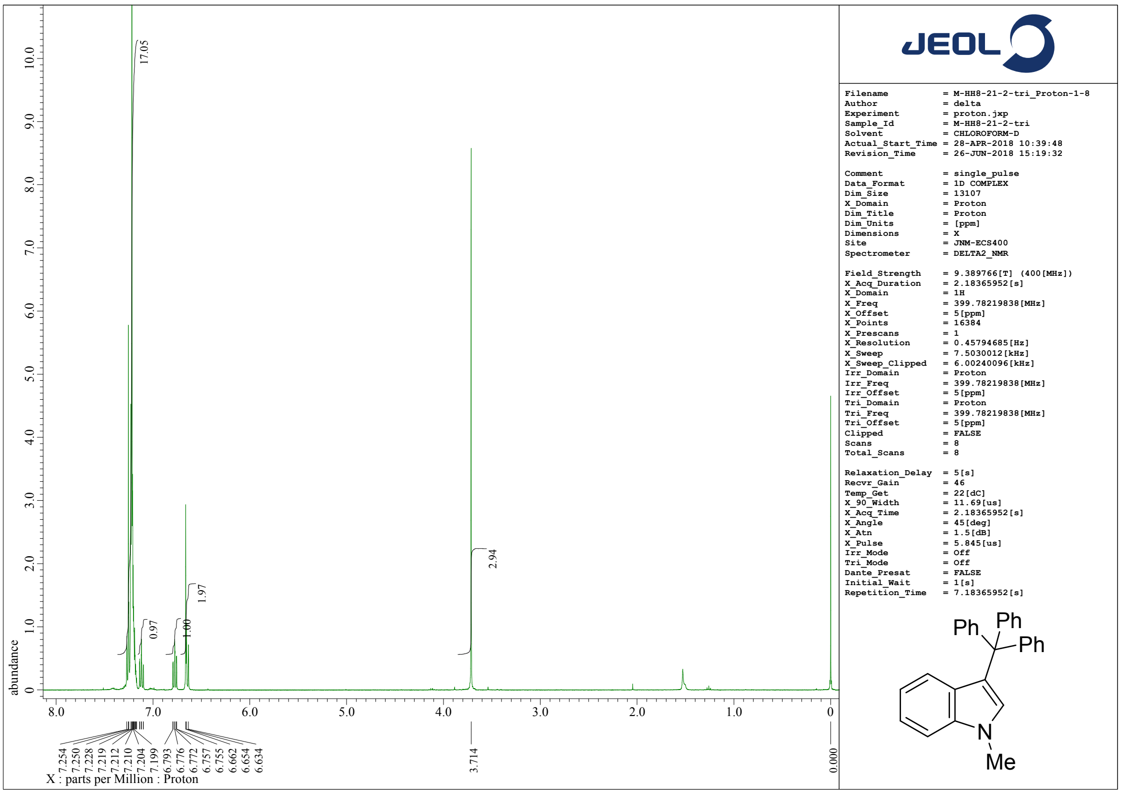


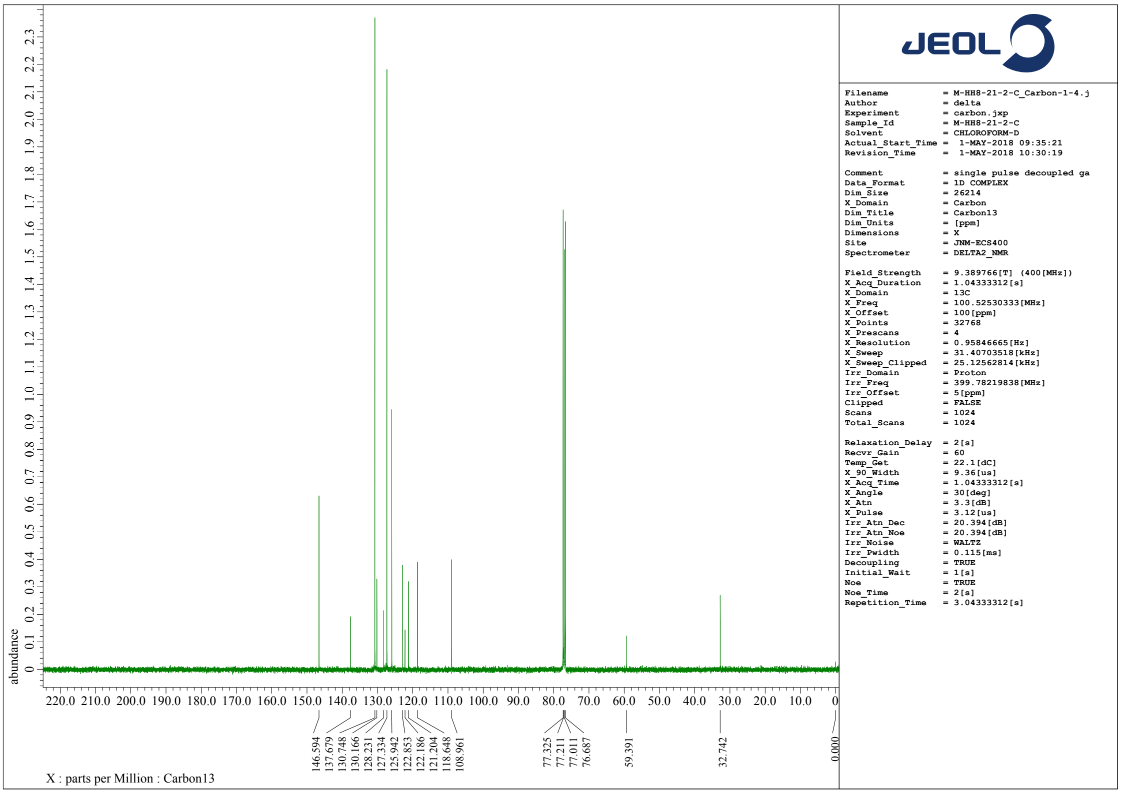
3-(3,4-Dimethoxybenzyl)-1-methyl-1*H*-indole 3j



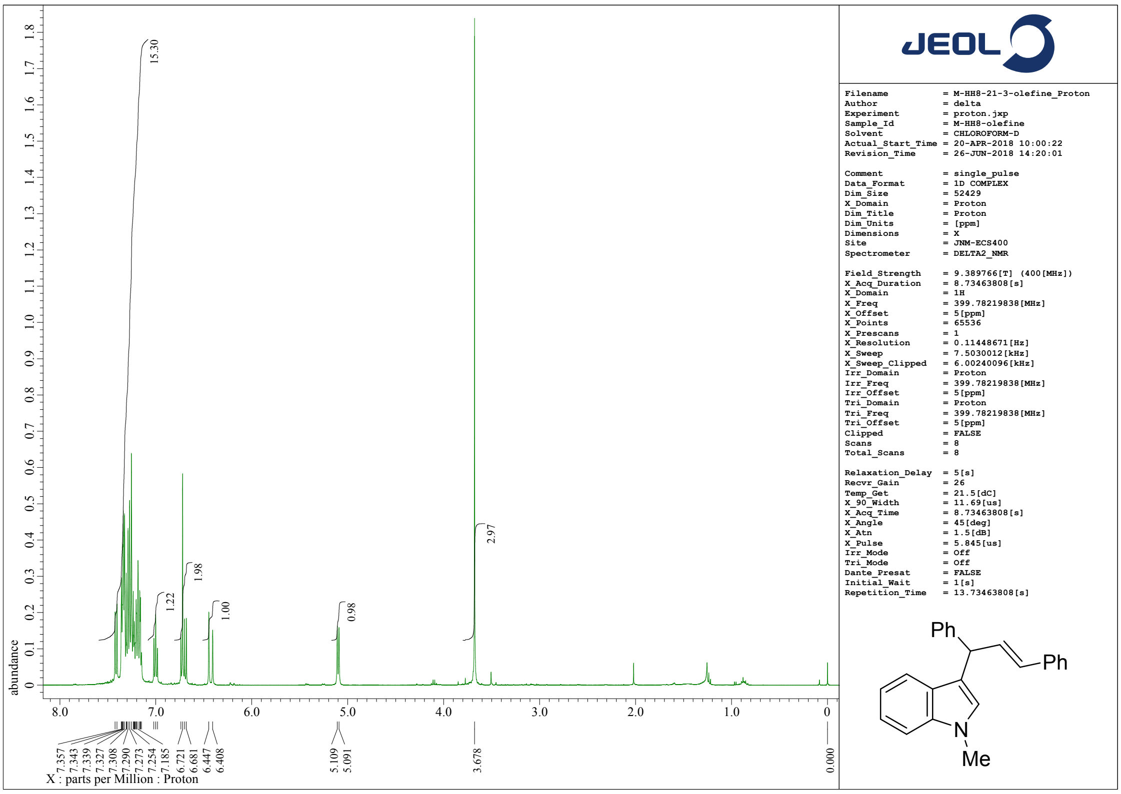


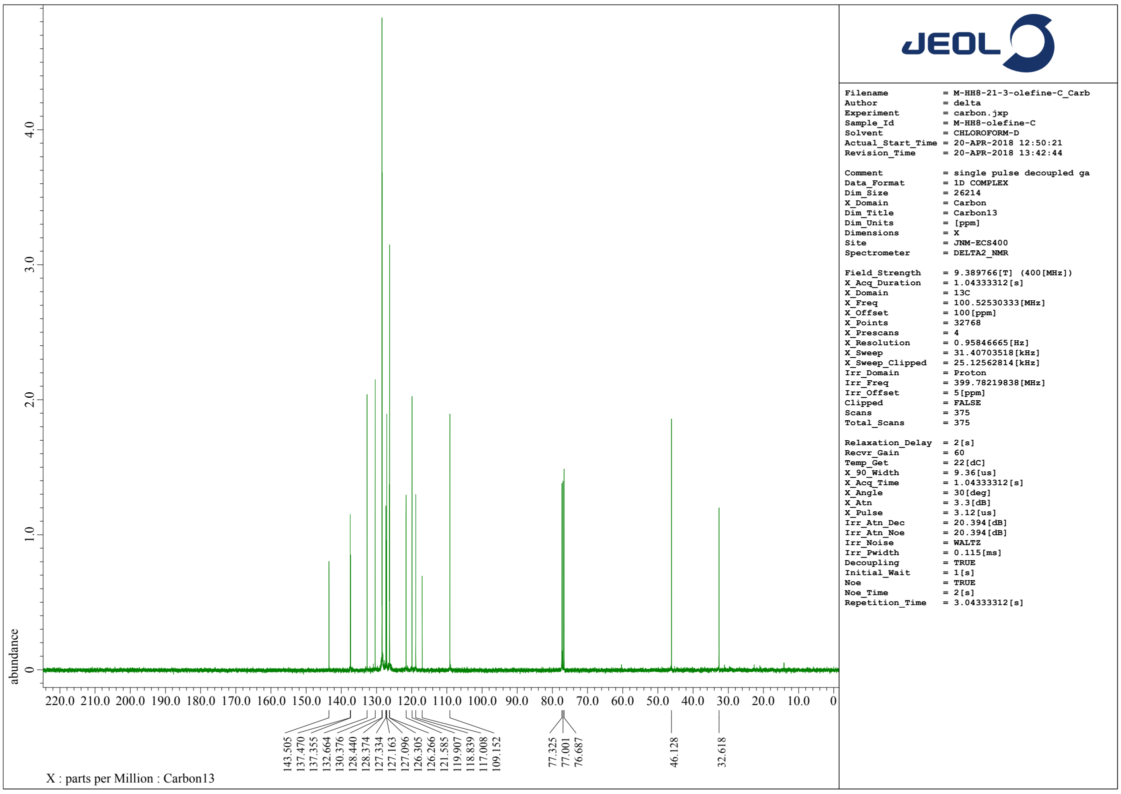
1-Methyl-3-trityl-1*H*-indole 3k



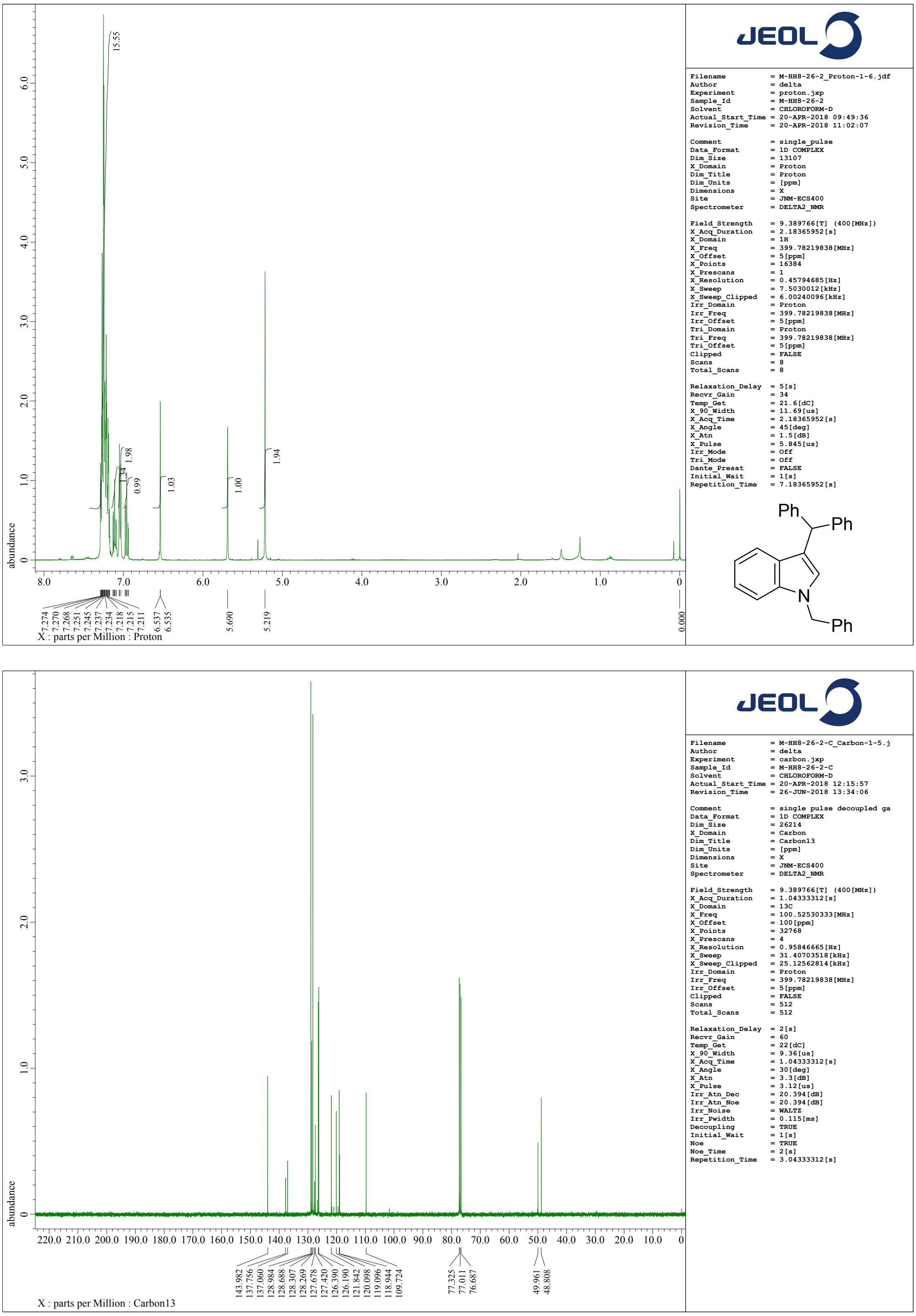


(*E*)-3-(1,3-Diphenylallyl)-1-methyl-1*H*-indole 3l

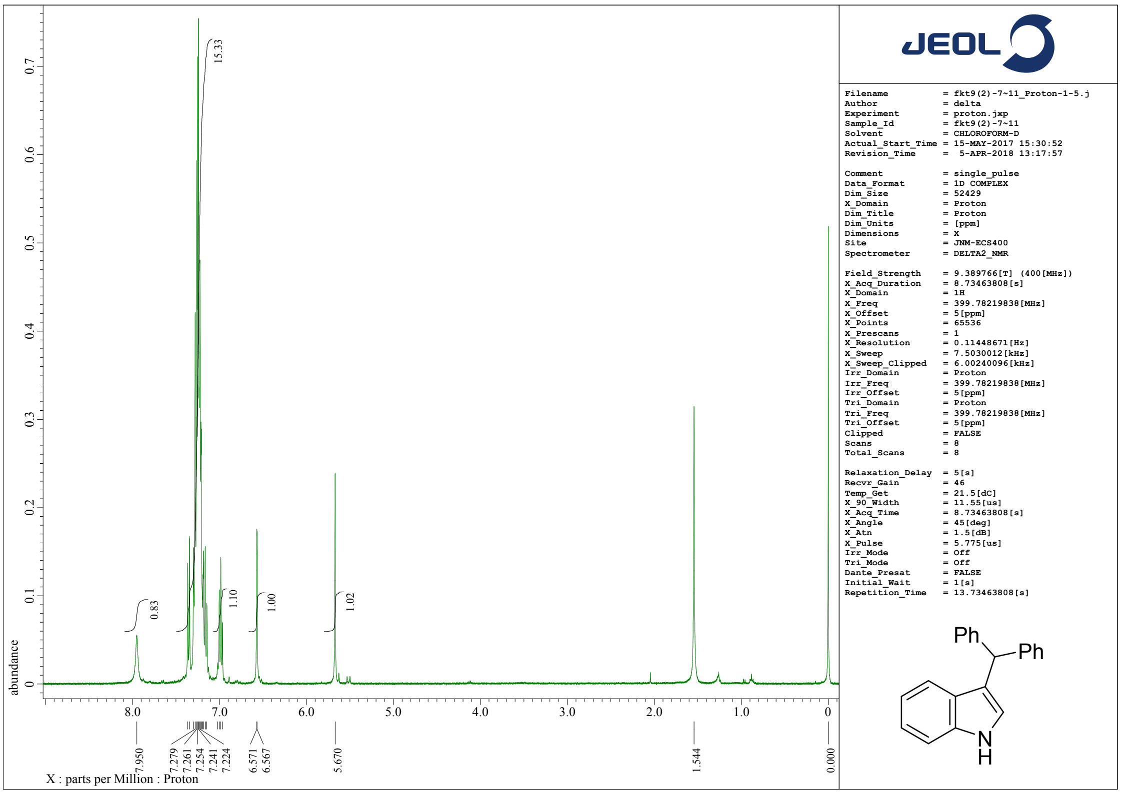


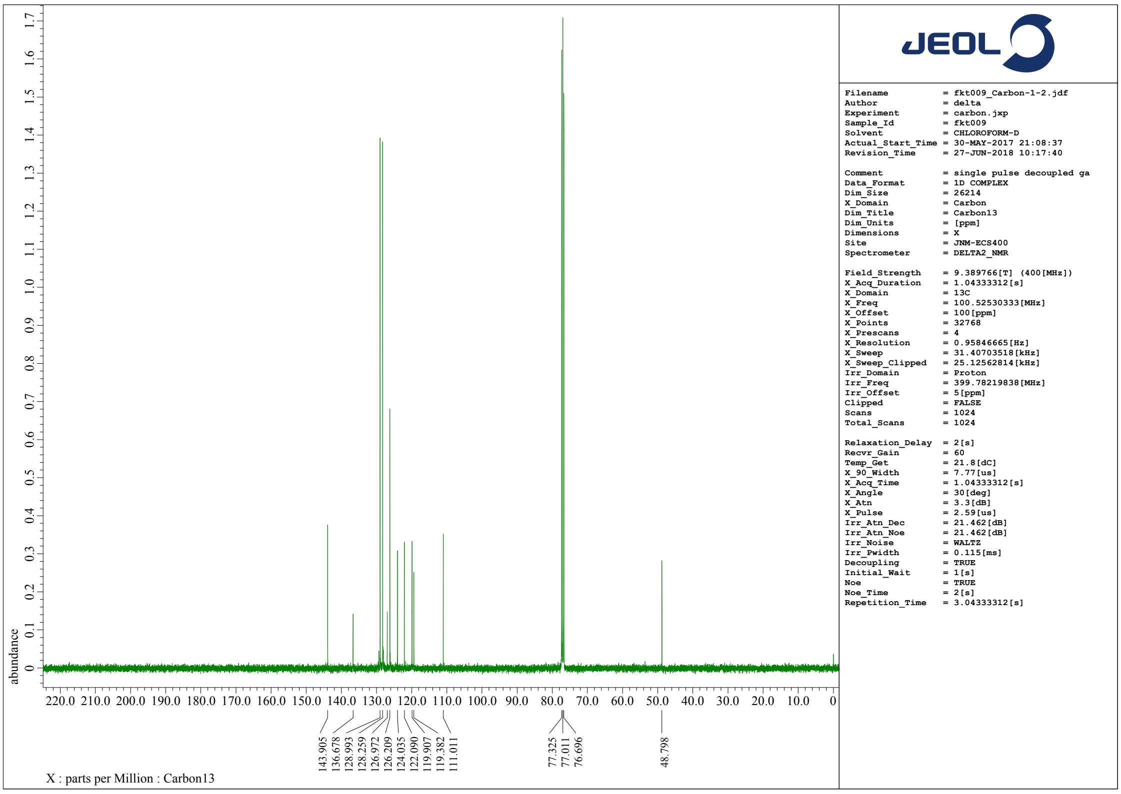


3-Benzhydryl-1-benzyl-1*H*-indole 3m

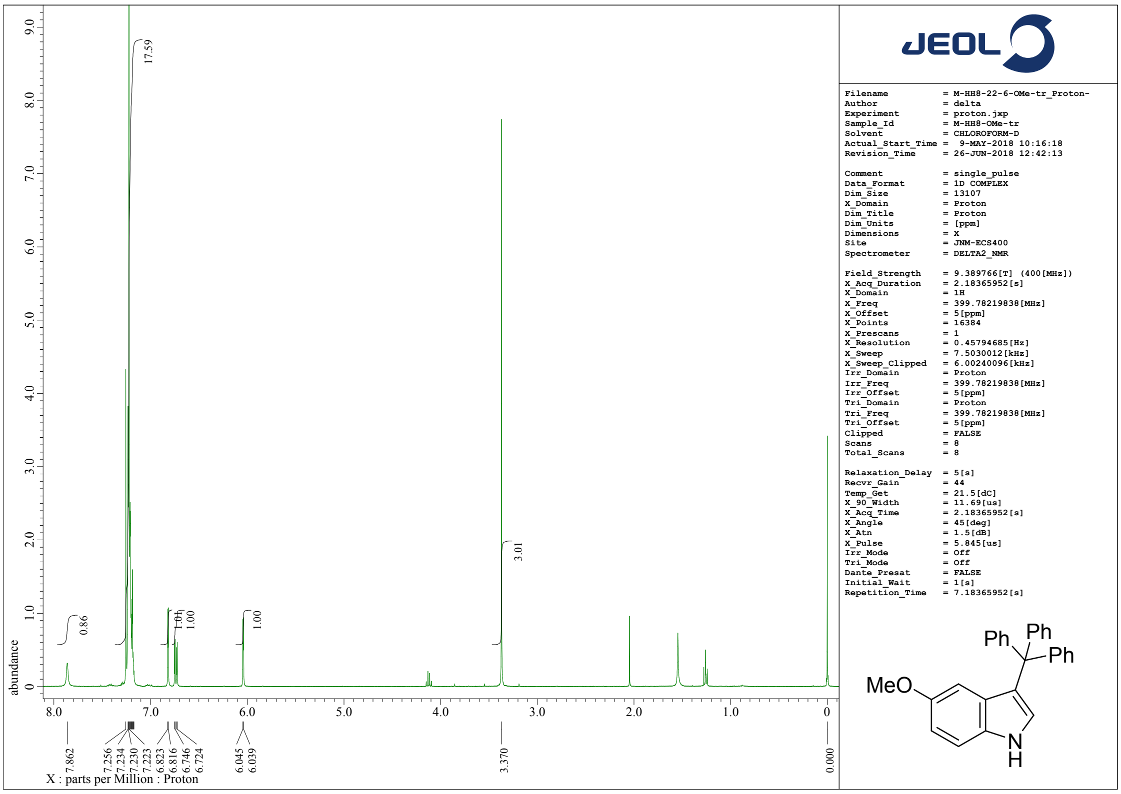


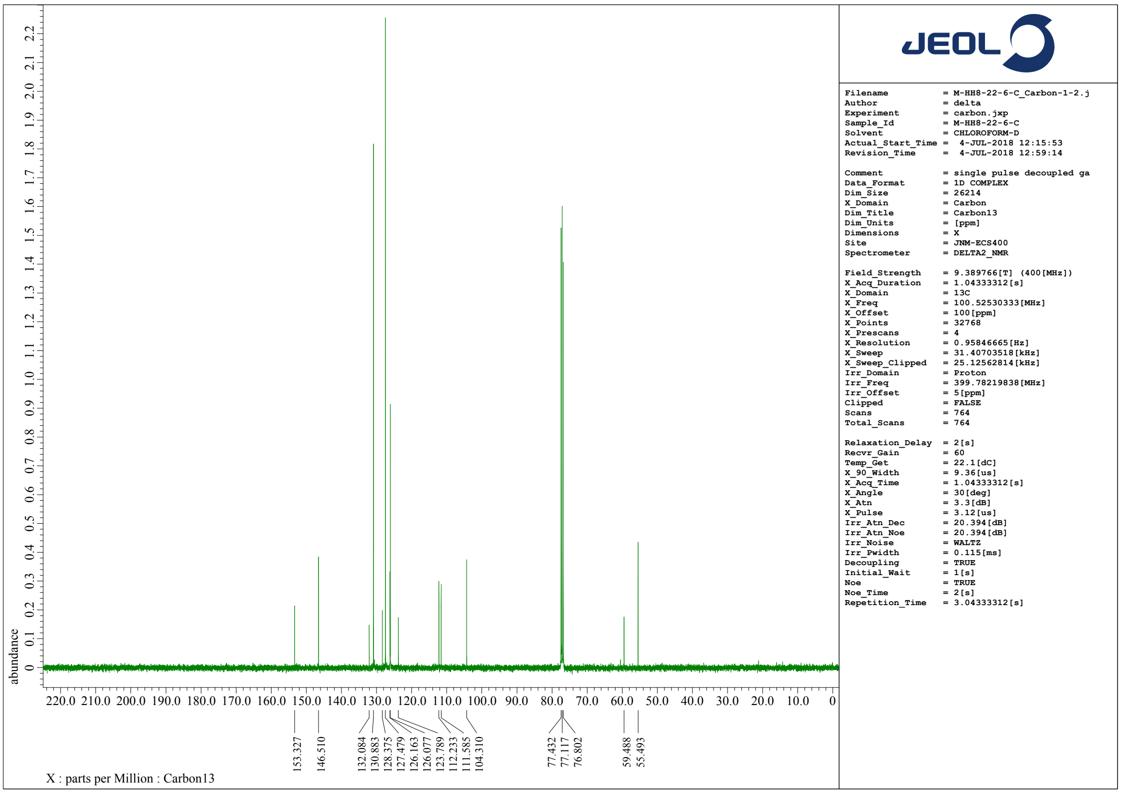
3-Benzhydryl-1*H*-indole 3n



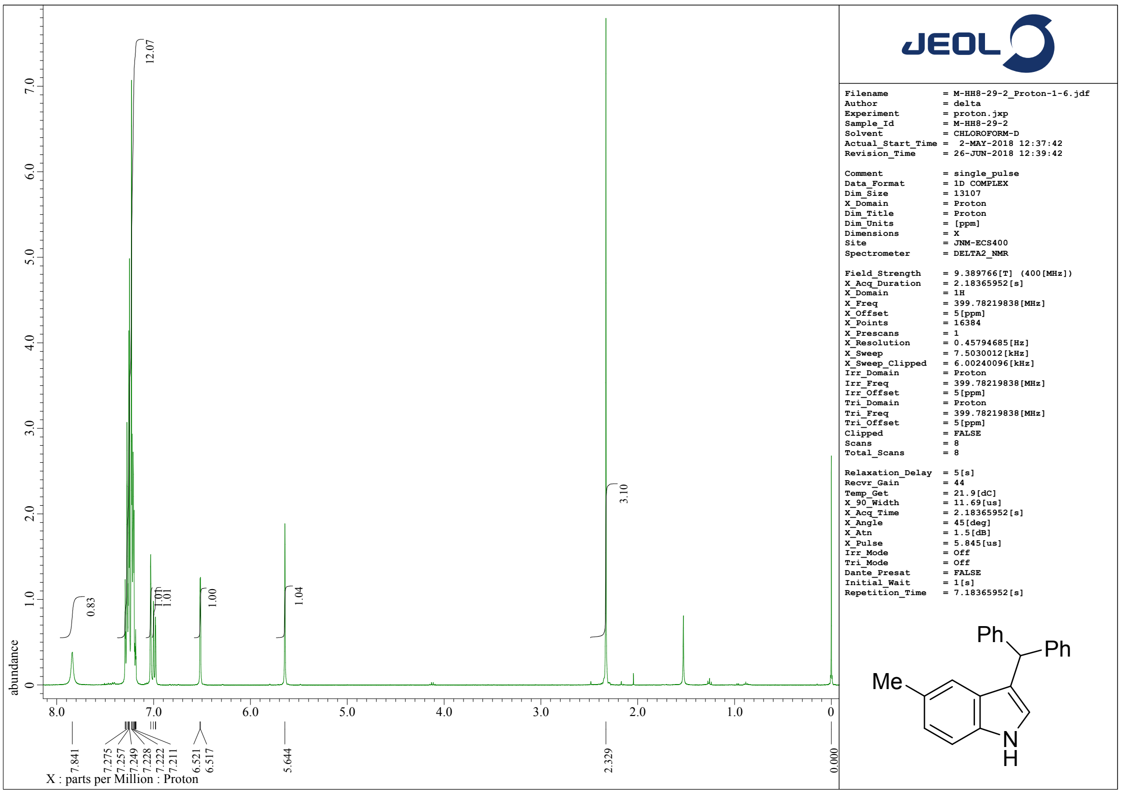


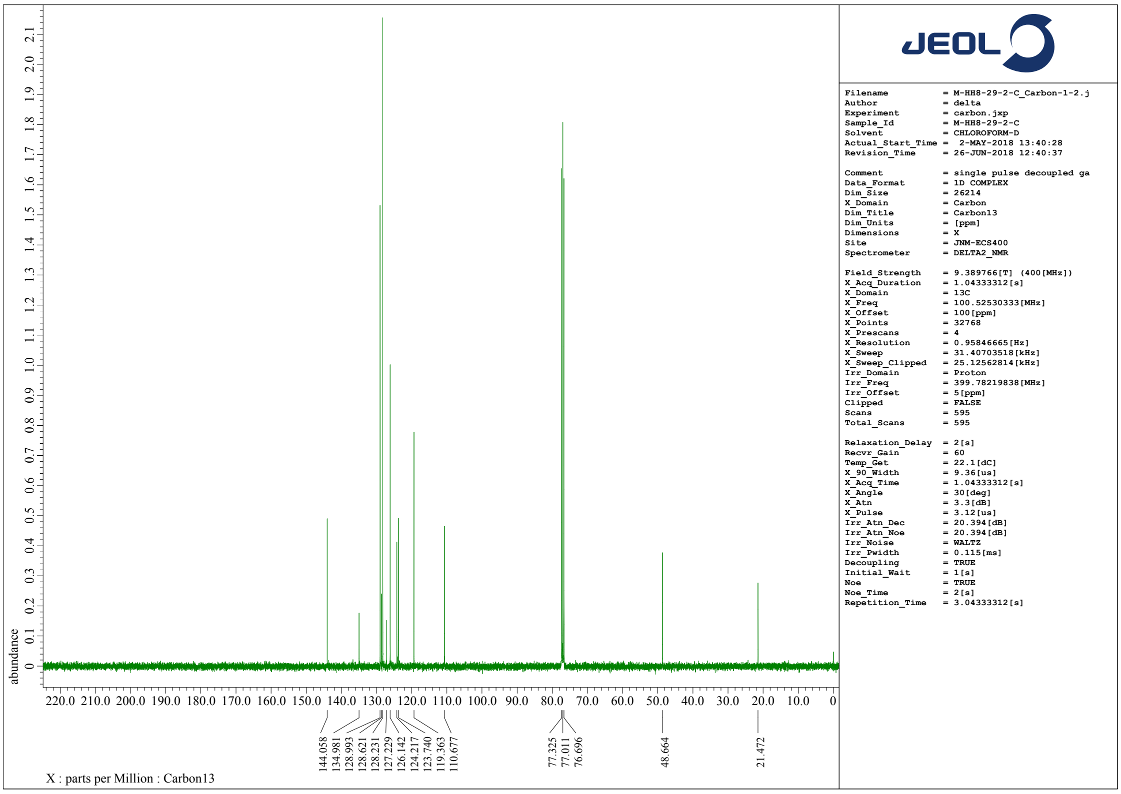
5-Methoxy-3-trityl-1*H*-indole 3o



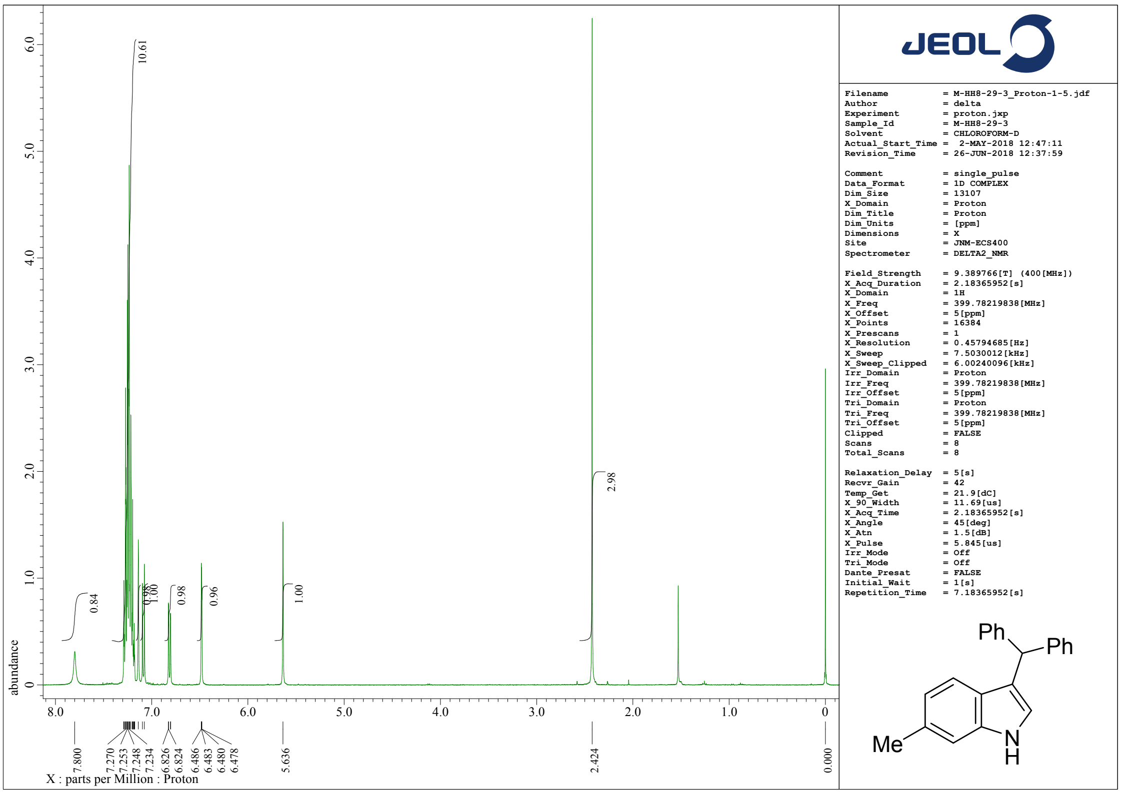


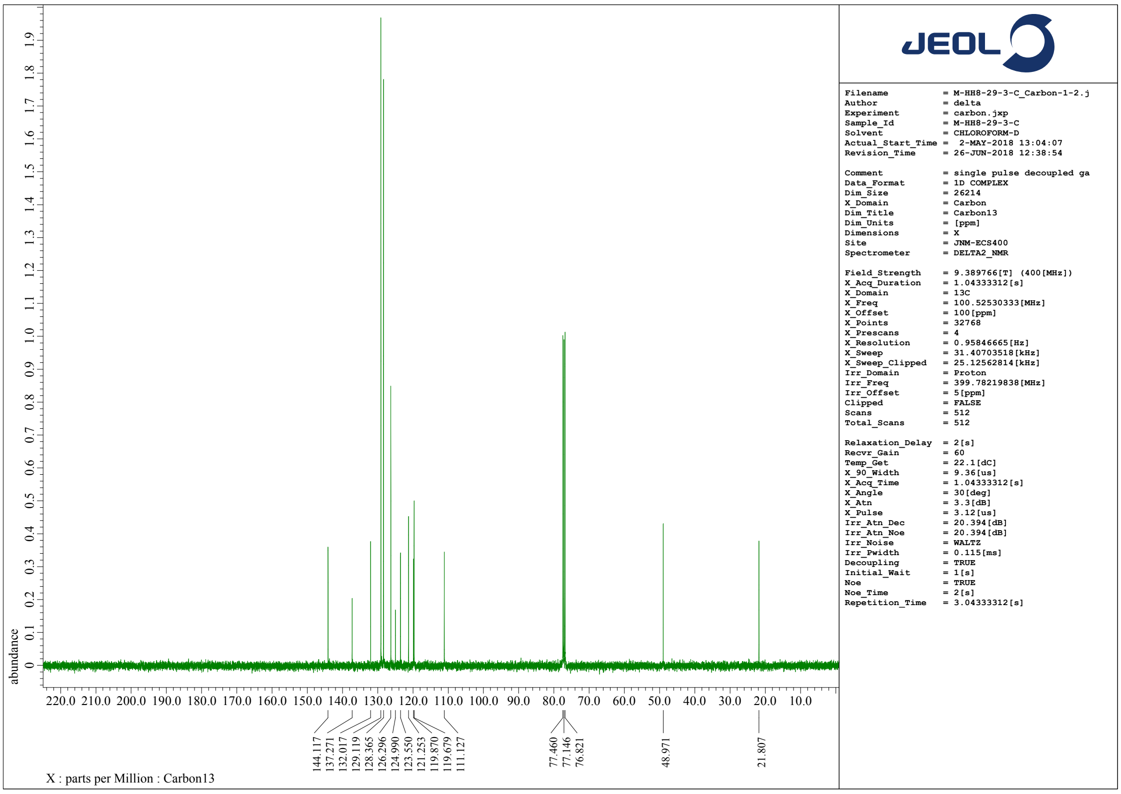
3-Benzhydryl-5-methyl-1*H*-indole 3p



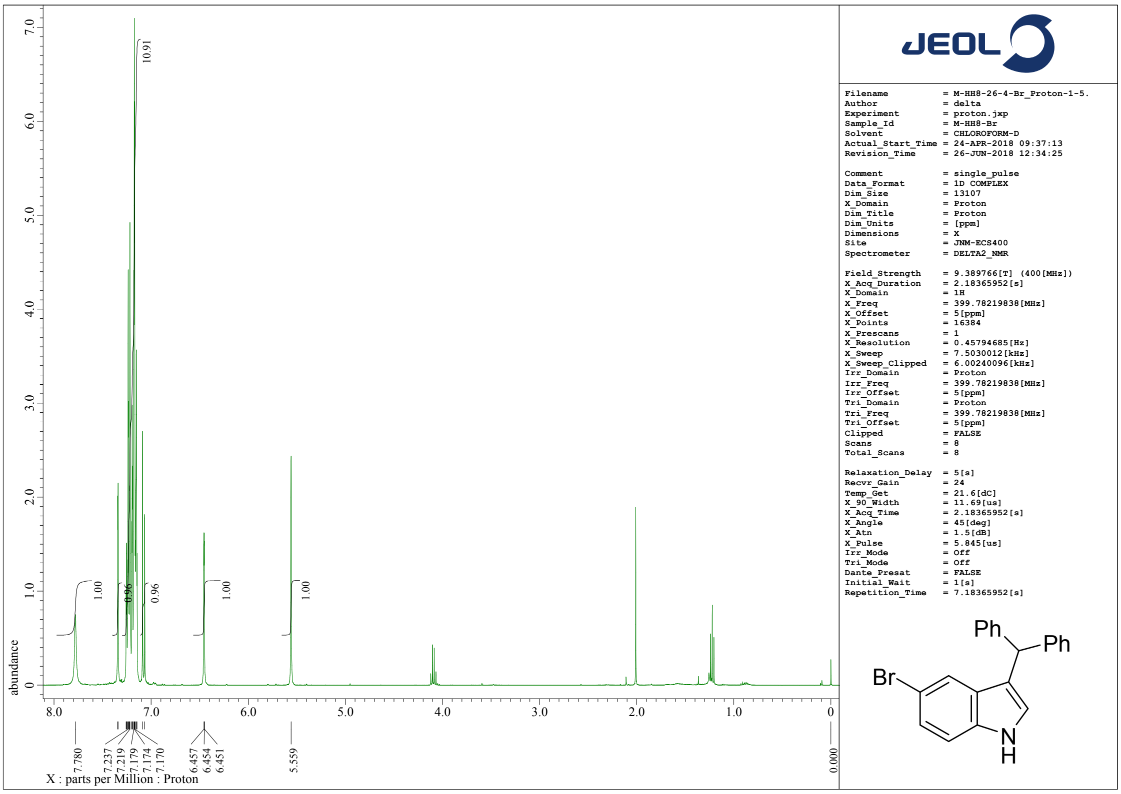


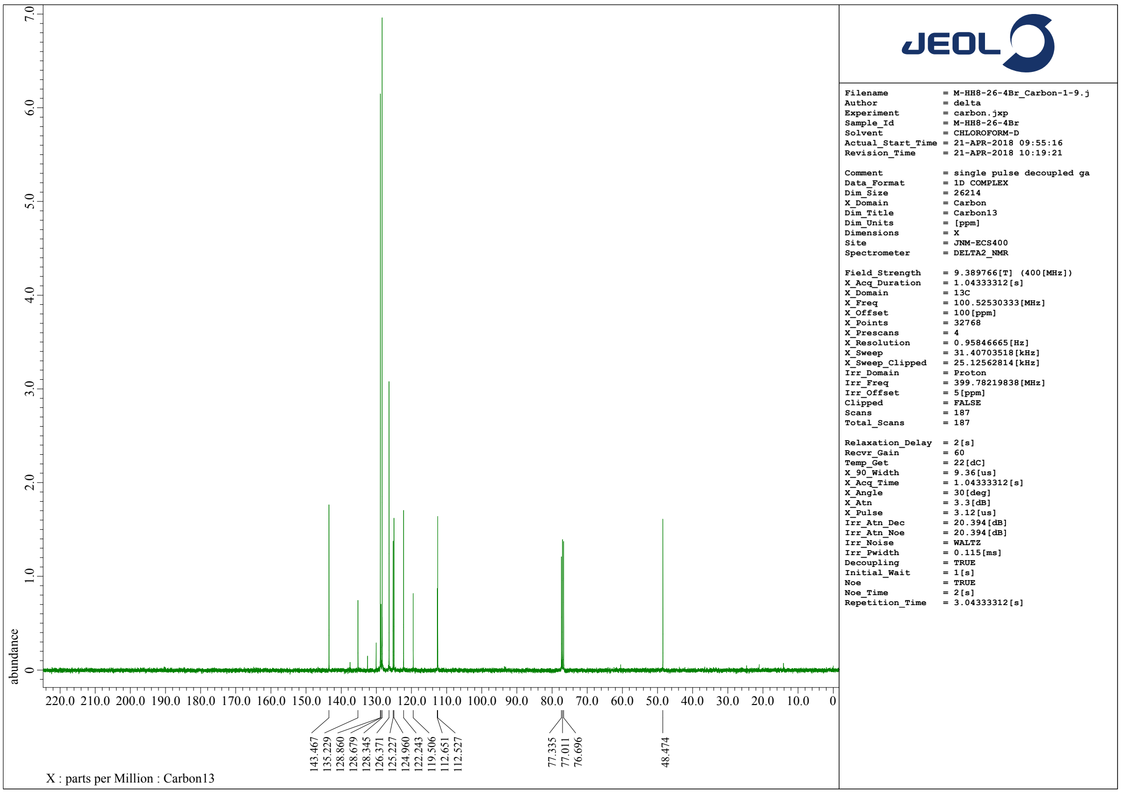
3-Benzhydryl-6-methyl-1*H*-indole 3q



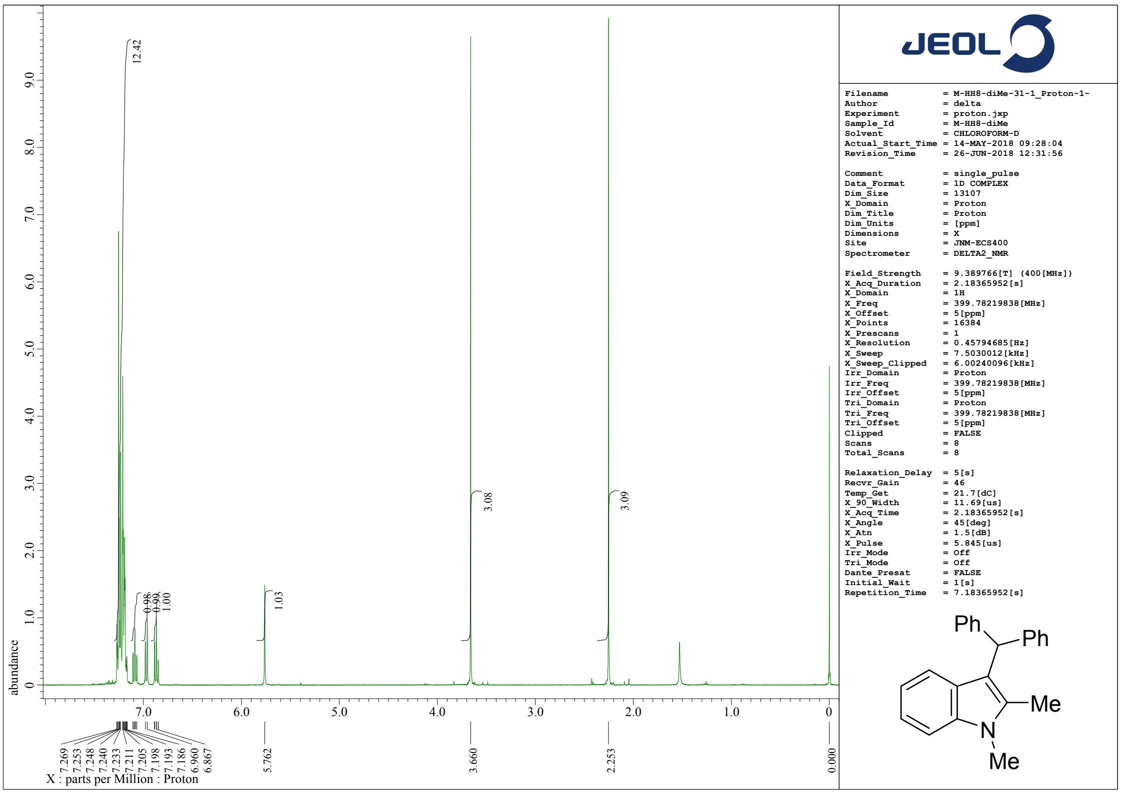


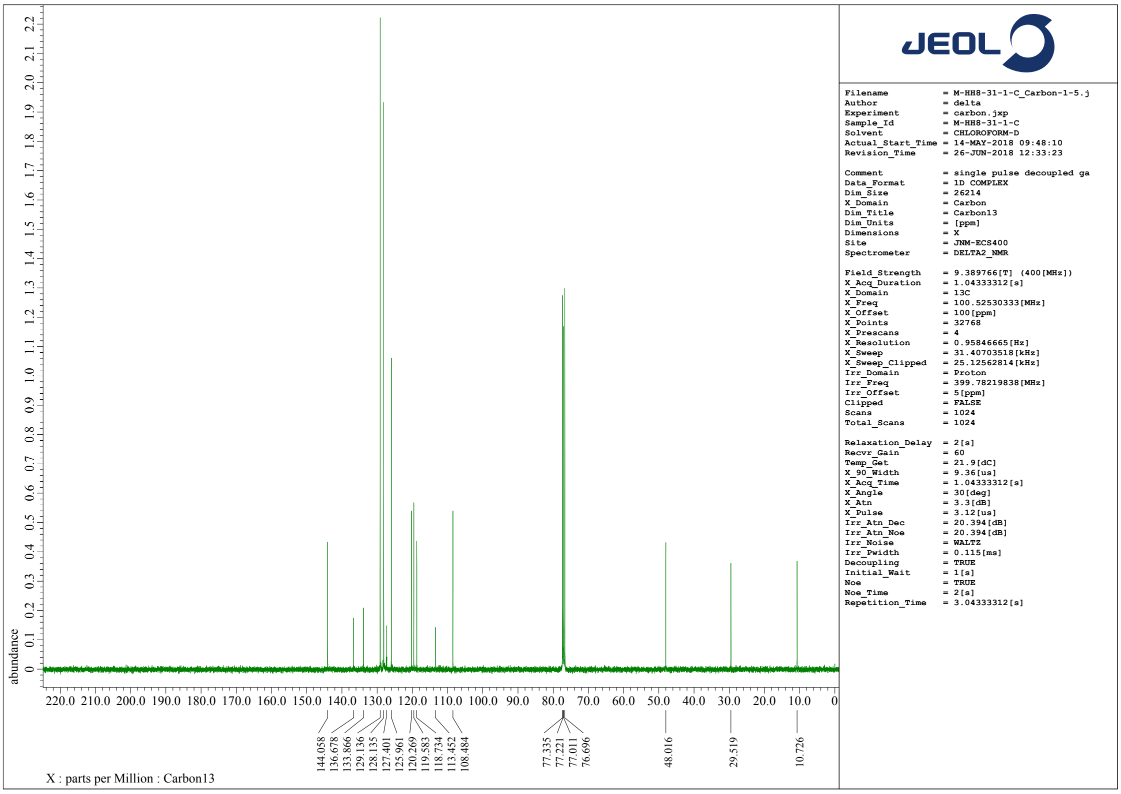
3-Benzhydryl-5-bromo-1*H*-indole 3r



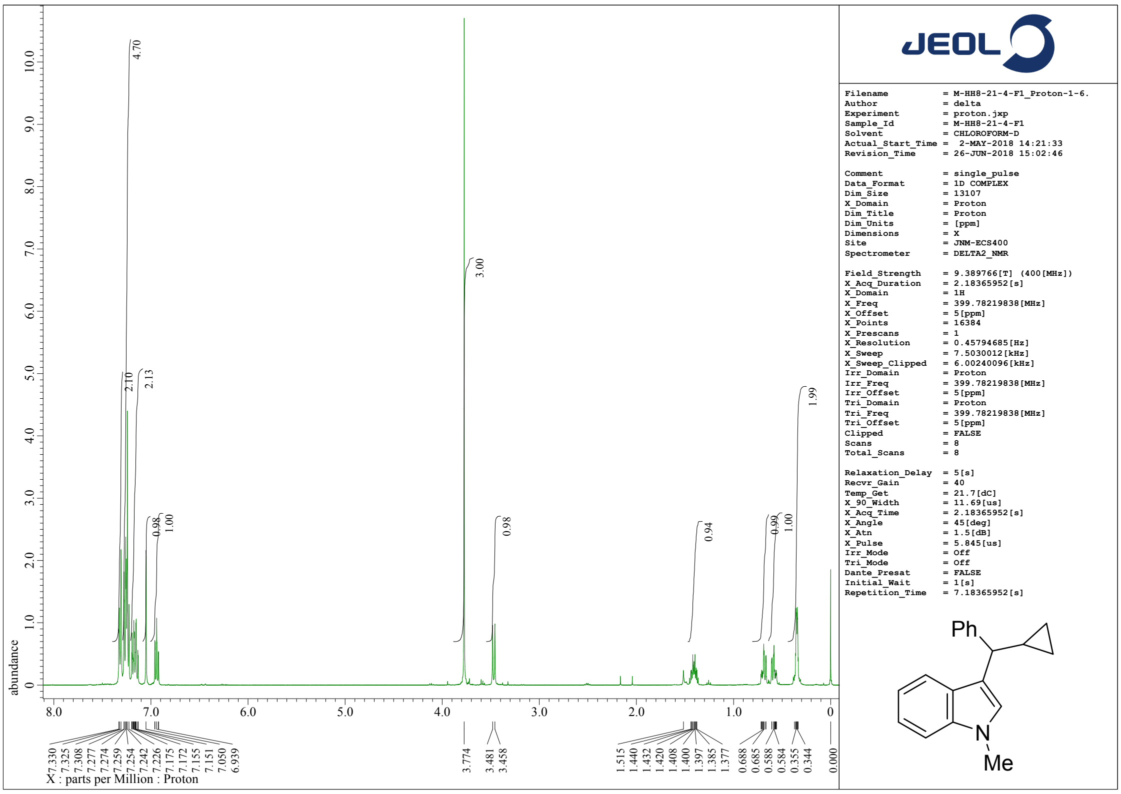


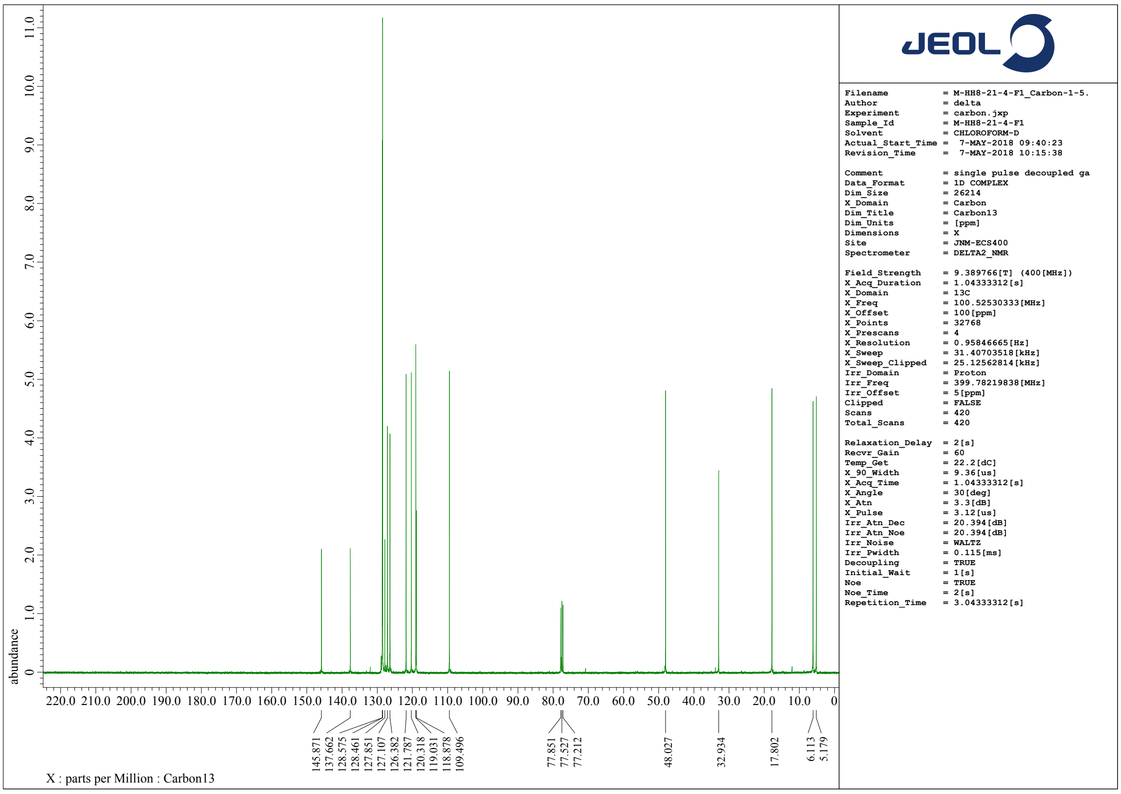
3-Benzhydryl-1,2-dimethyl-1*H*-indole 3s



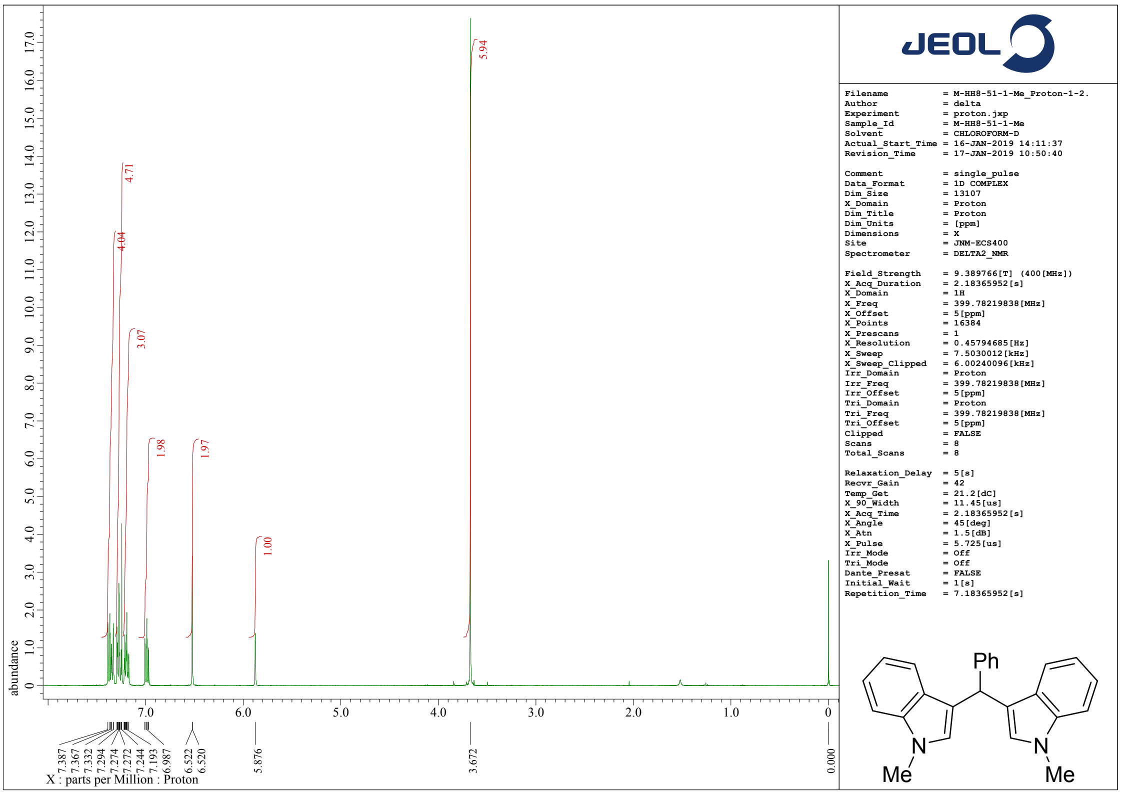


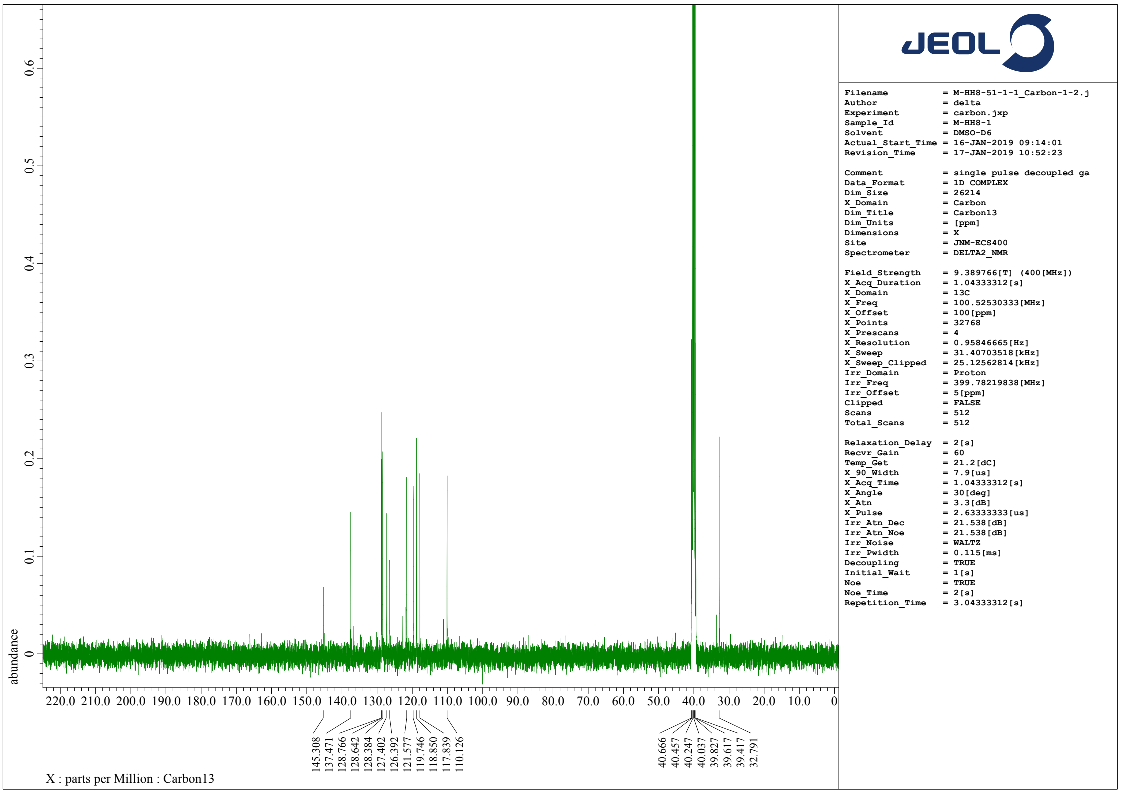
3-Benzhydryl-5-bromo-1*H*-indole 3t





Bis(1-methylindol-3-yl)(phenyl)methane 5a





Bis(indol-3-yl)(phenyl)methane 5b