

## Supplementary Information

### **MnO<sub>2</sub> catalyzed formylation of amines and transamidation of amides under solvent-free condition**

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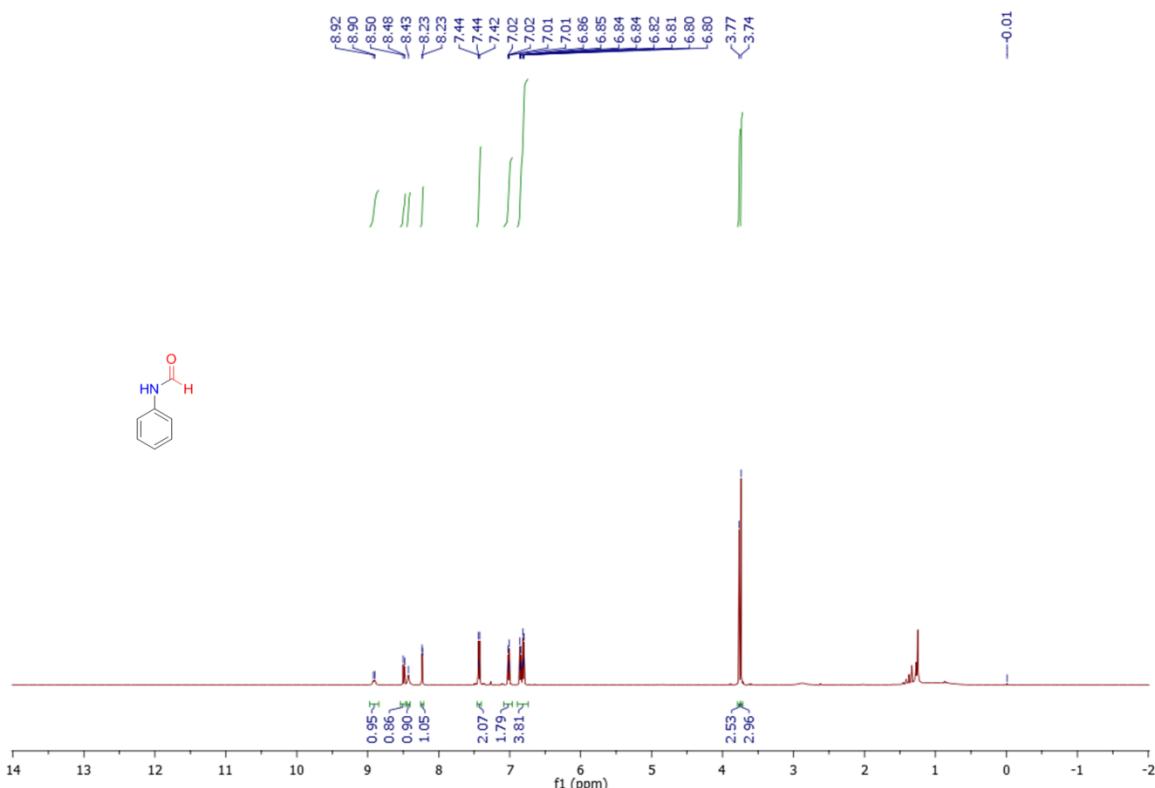
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Mumbai, 400 019, India.

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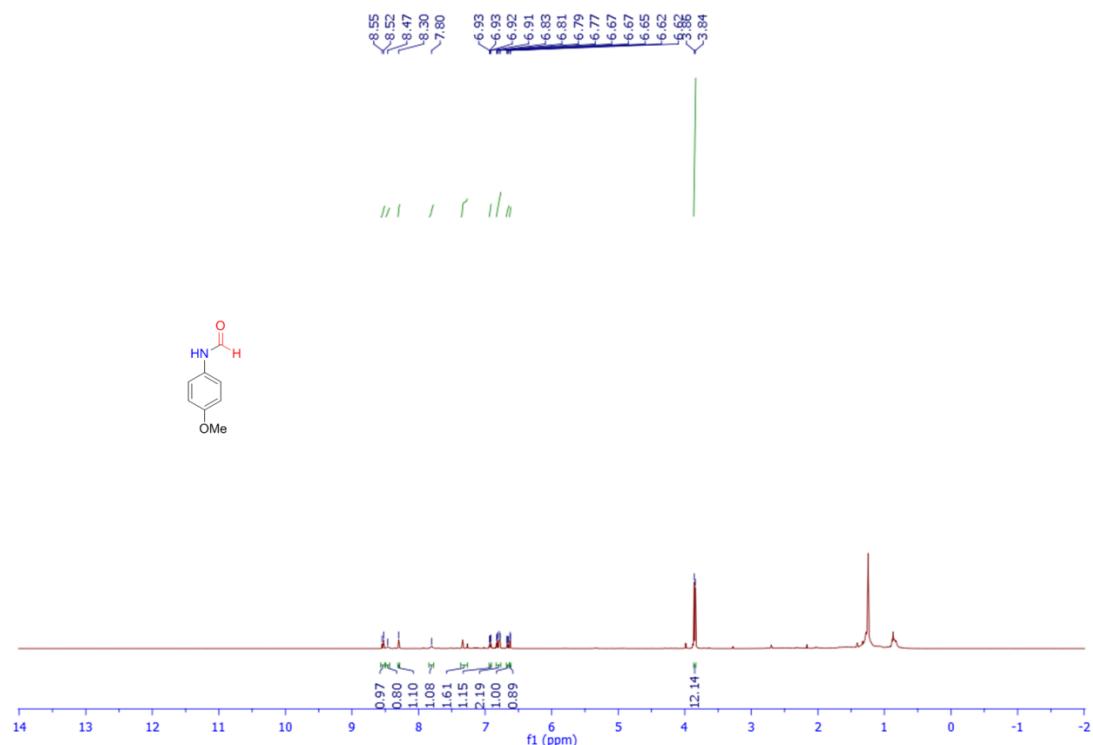
Copies of <sup>1</sup>H and <sup>13</sup>C NMR spectra.

2-26

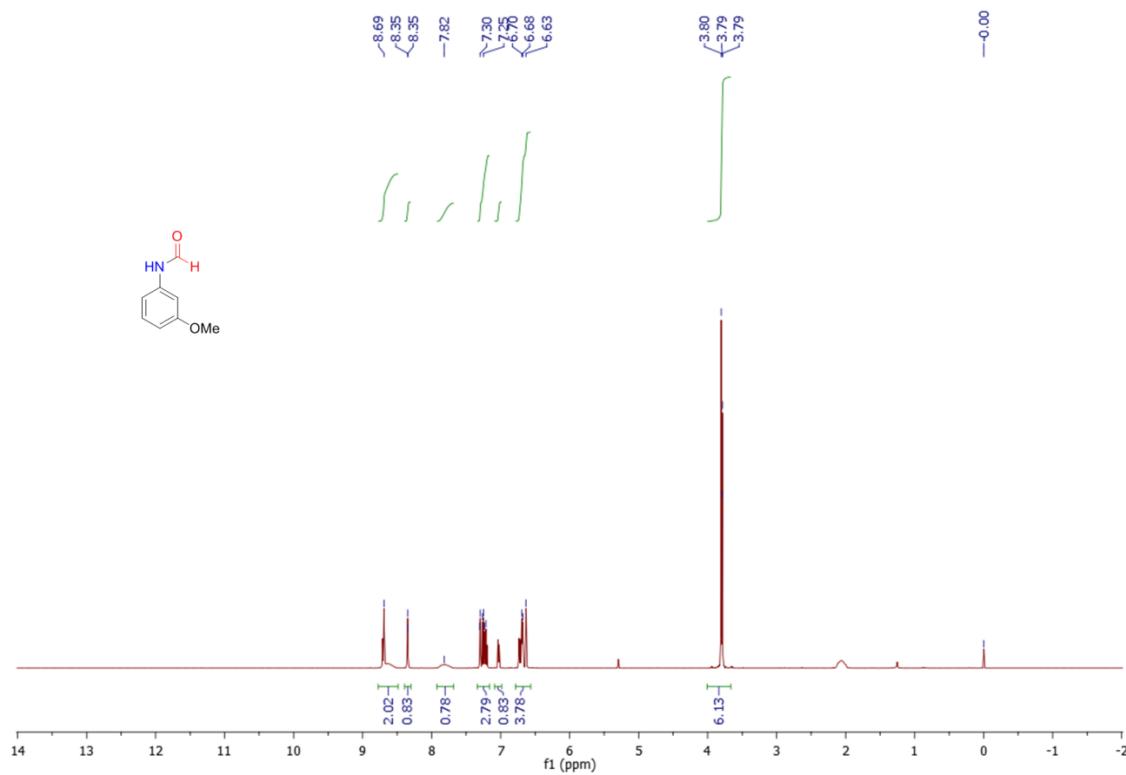
*N*-phenylformamide (**3aa**)  $^1\text{H}$  NMR



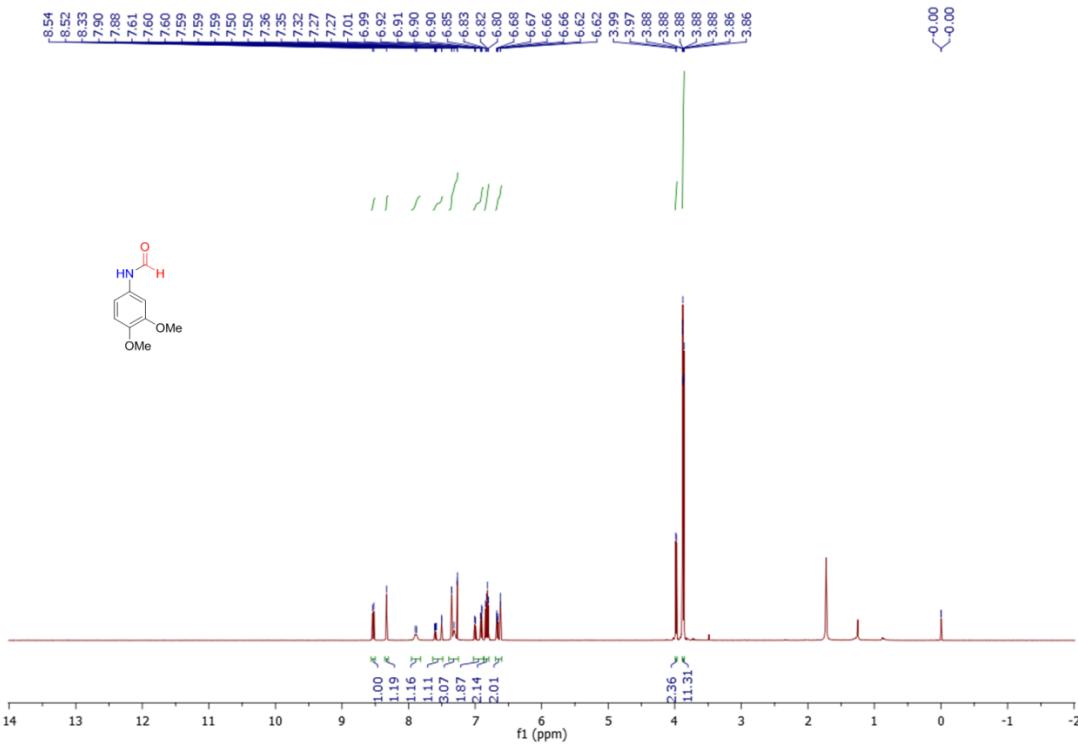
*N*-(4-methoxyphenyl)formamide (**3ba**)  $^1\text{H}$  NMR



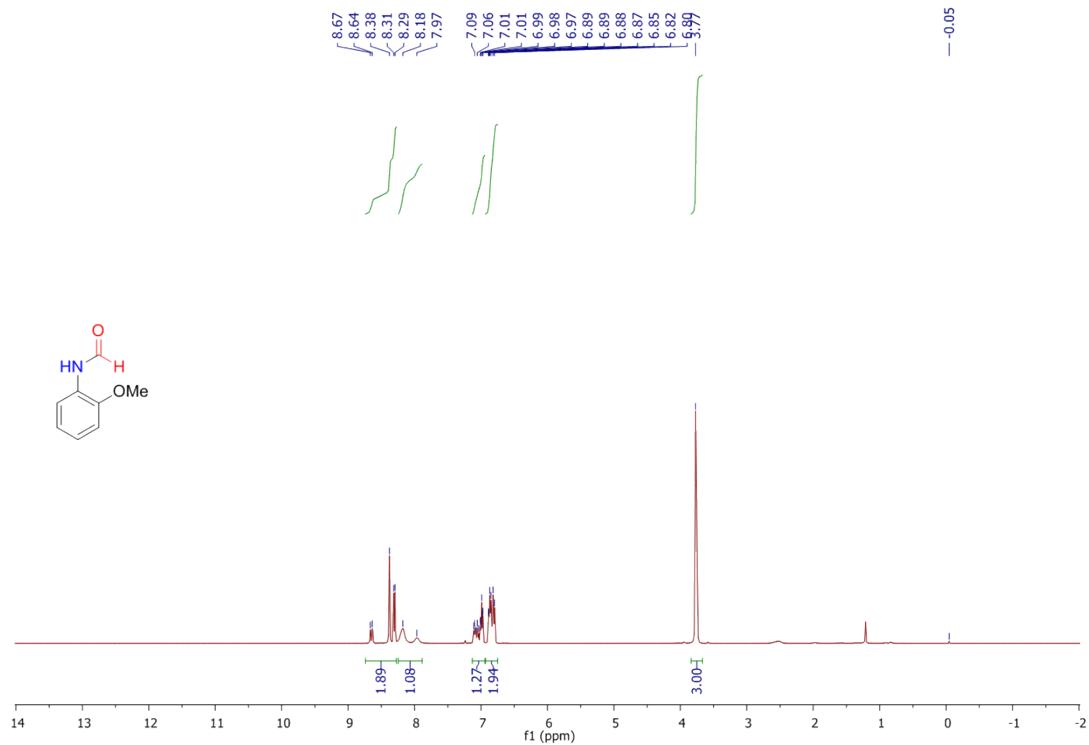
*N*-(3-methoxyphenyl)formamide (3ca)  $^1\text{H}$  NMR



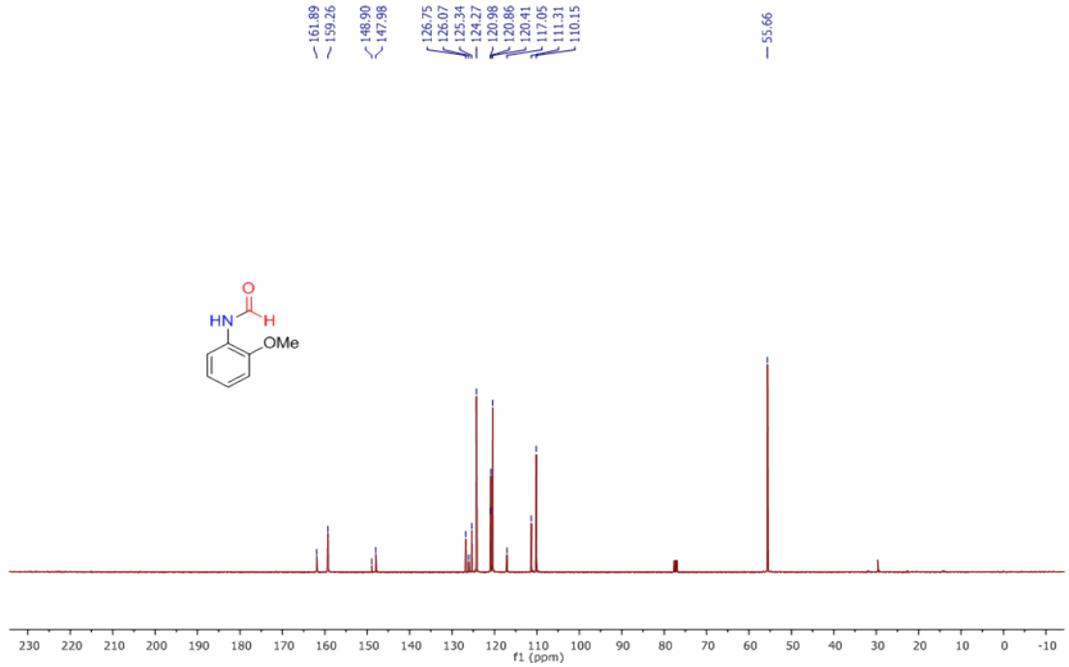
*N*-(3,4-dimethoxyphenyl)formamide (3da)  $^1\text{H}$  NMR



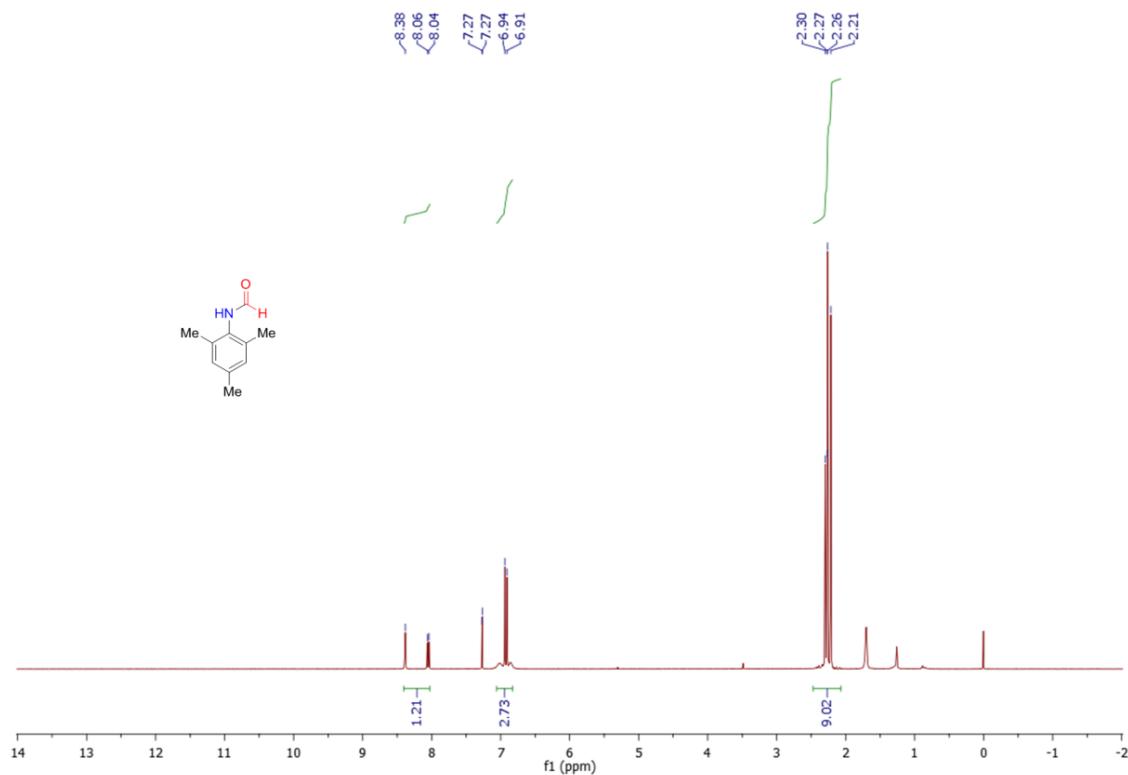
**N-(2-methoxyphenyl)formamide (3ea)  $^1\text{H}$  NMR**



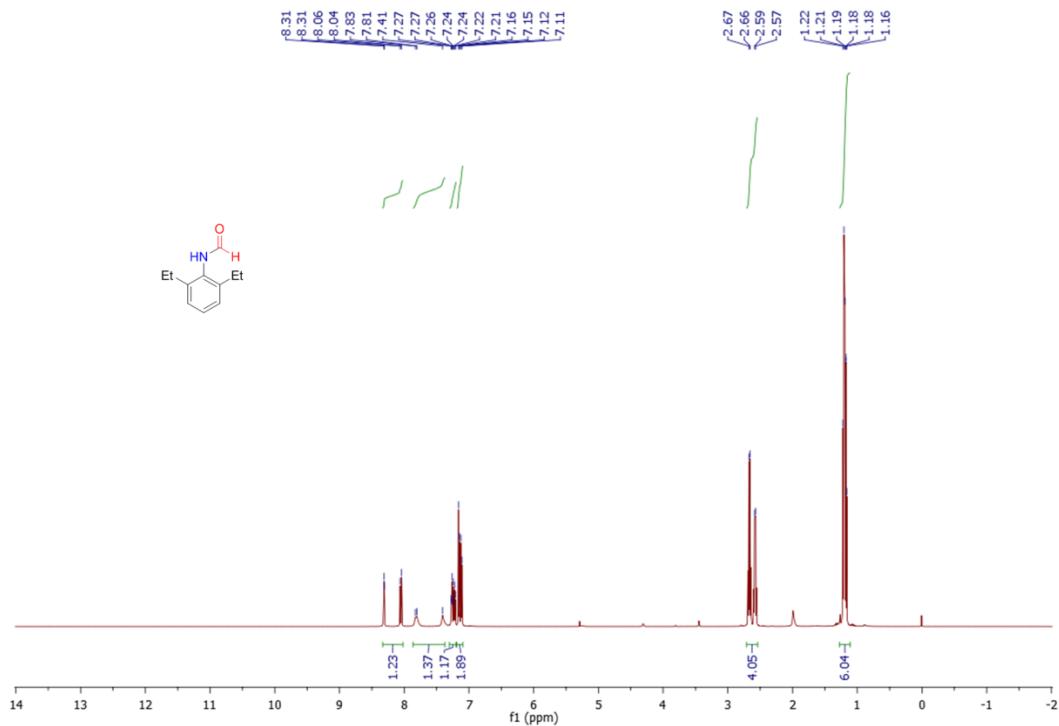
**N-(2-methoxyphenyl)formamide (3ea)  $^{13}\text{C}$  NMR**



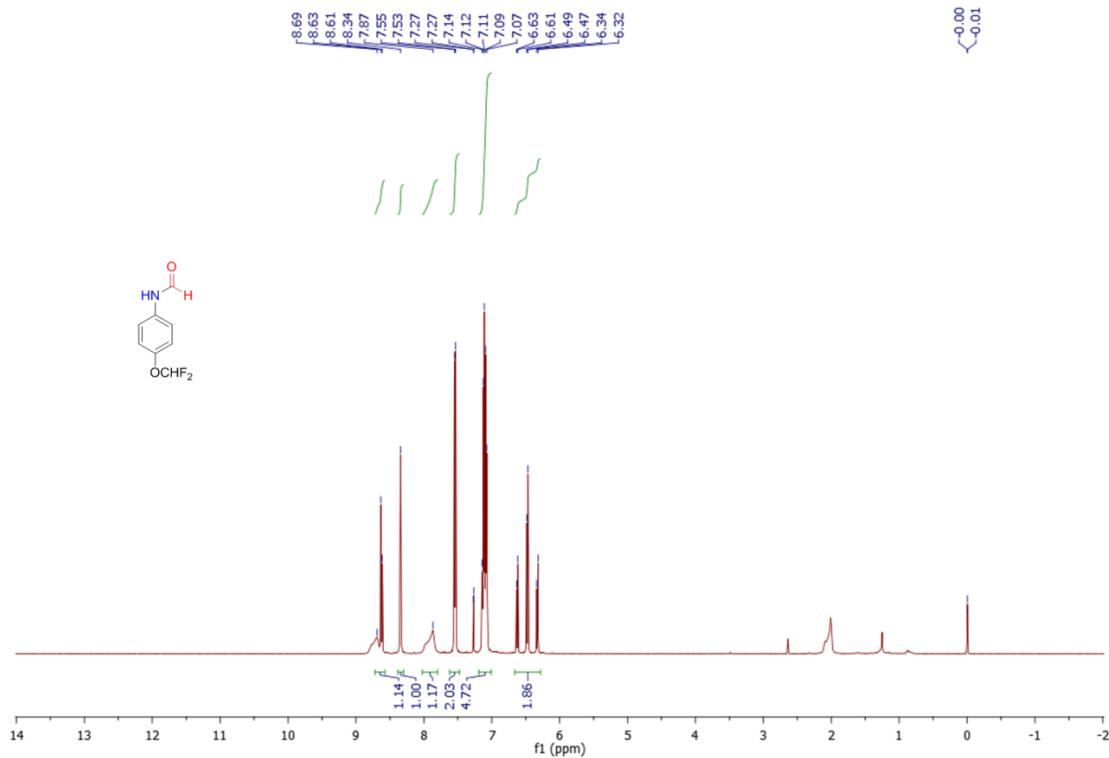
*N*-mesitylformamide (**3fa**)  $^1\text{H}$  NMR



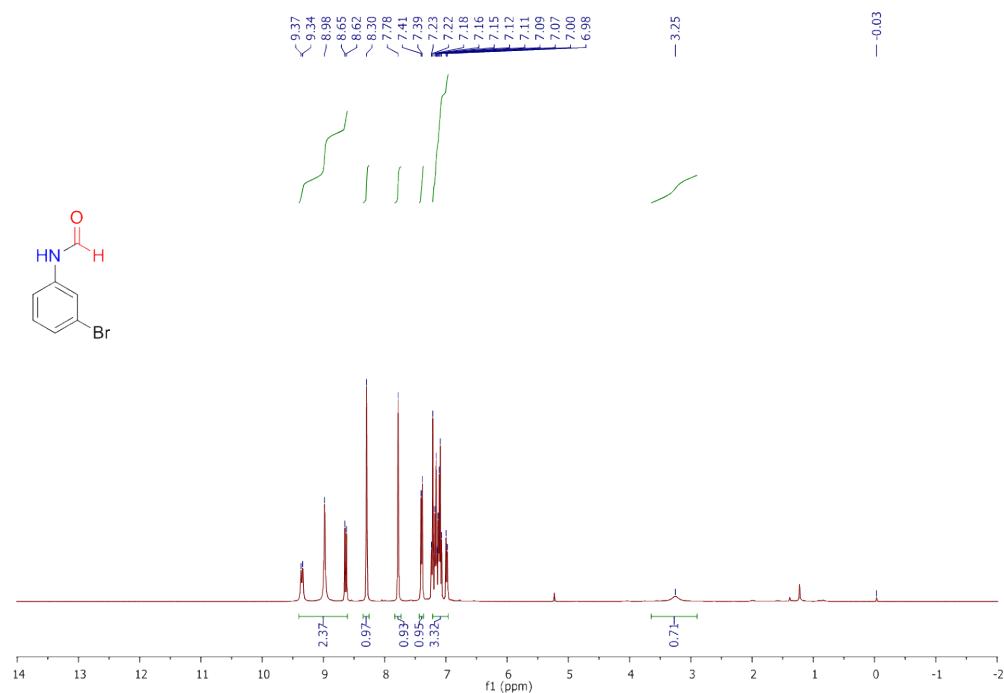
*N*-(2,6-diethylphenyl)formamide (**3ga**)  $^1\text{H}$  NMR



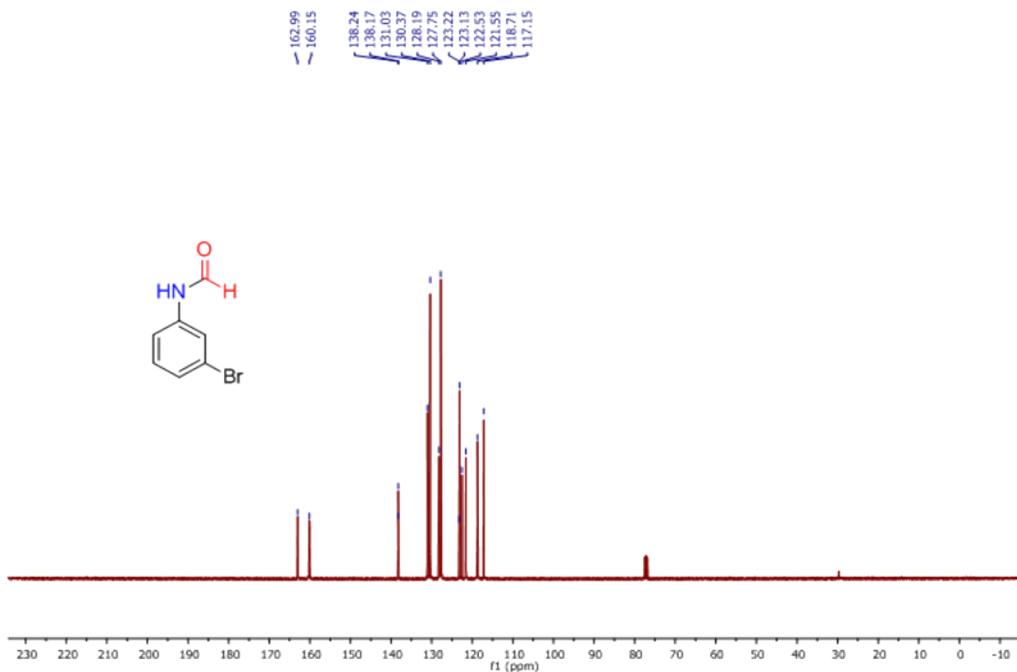
***N*-(4-(difluoromethoxy)phenyl)formamide (3ha)  $^1\text{H}$  NMR**



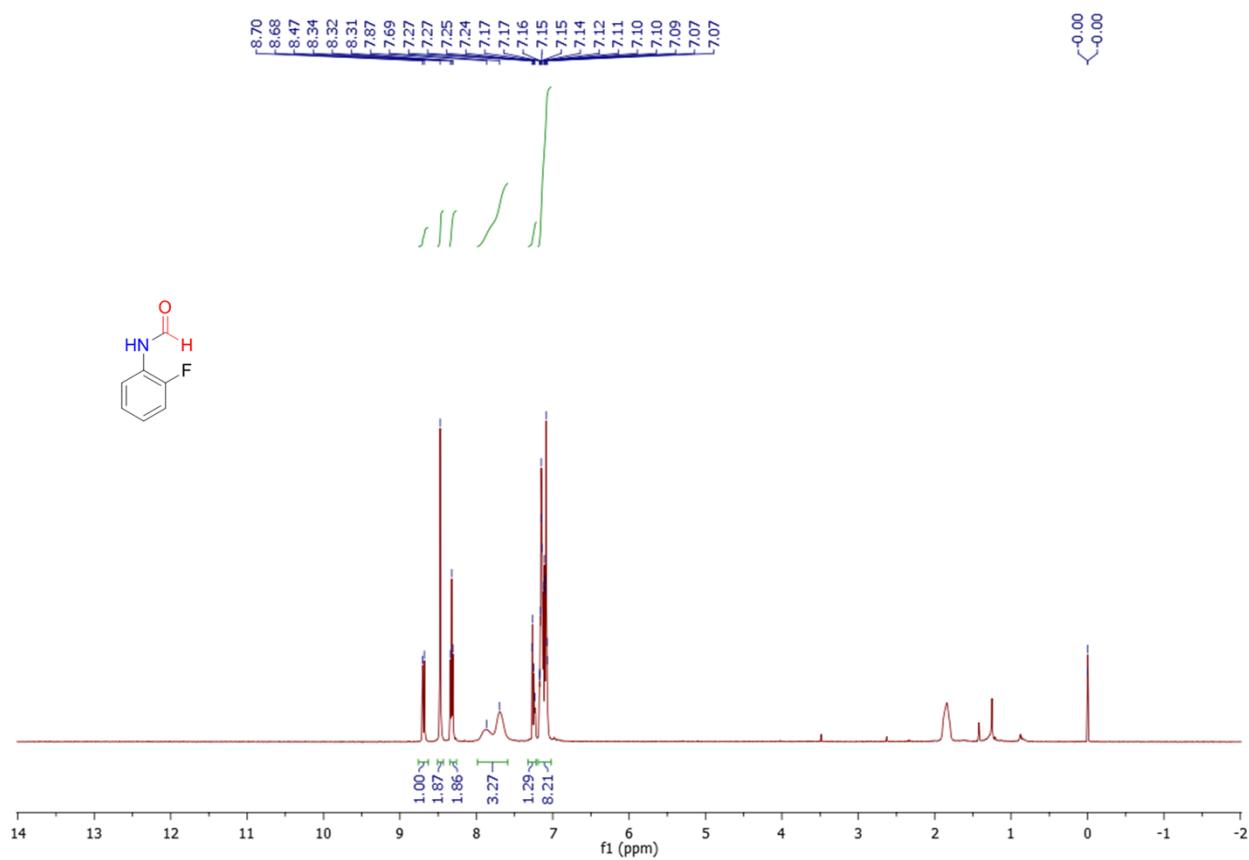
***N*-(3-bromophenyl)formamide (3ia)  $^1\text{H}$  NMR**



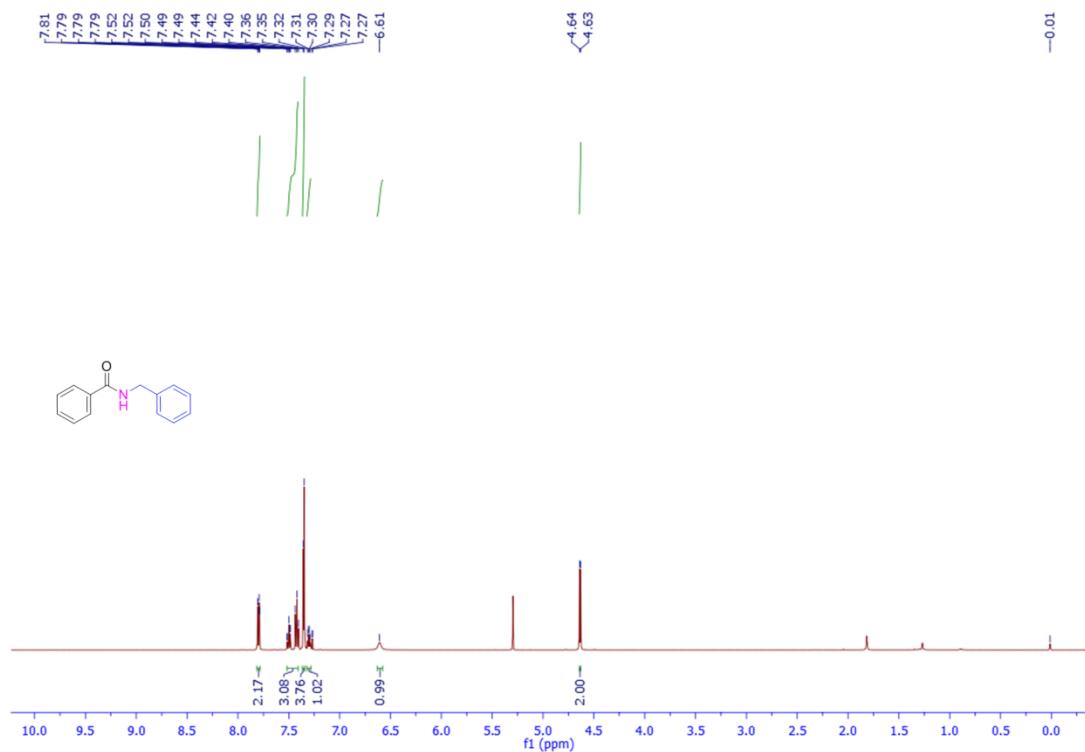
***N*-(3-bromophenyl)formamide (3ia)  $^{13}\text{C}$  NMR**



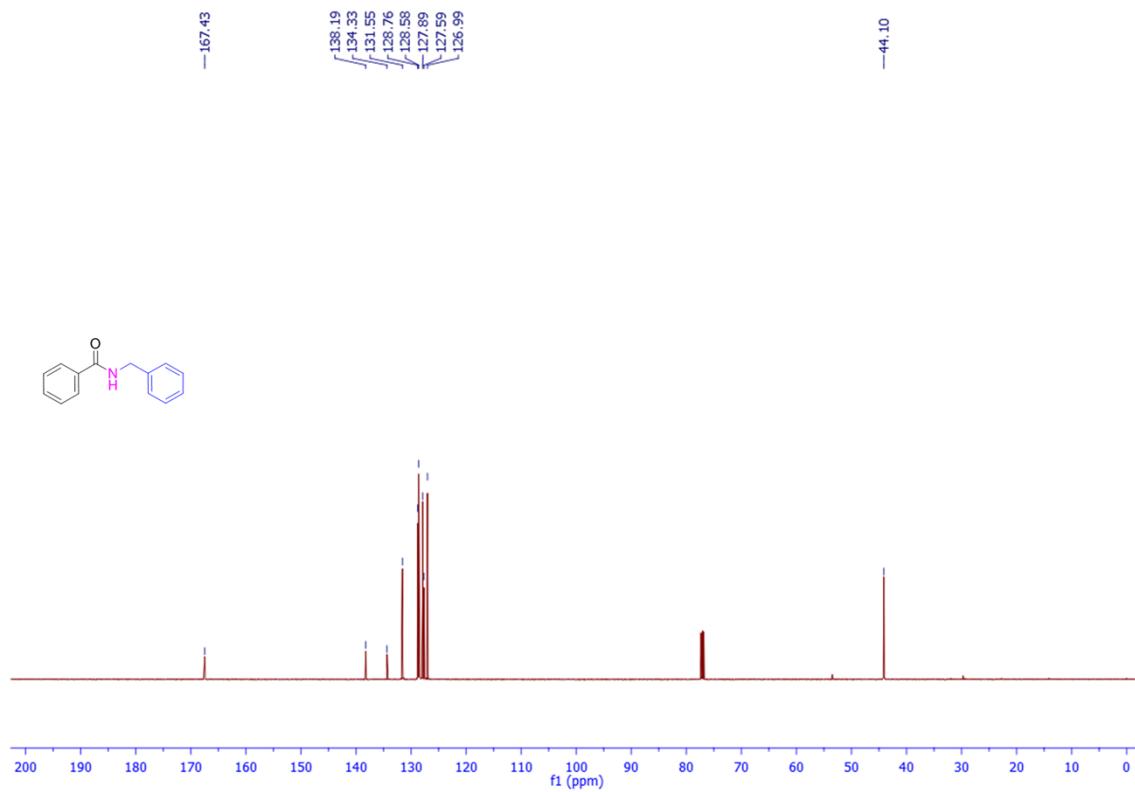
***N*-(2-fluorophenyl)formamide (3ja)  $^1\text{H}$  NMR**



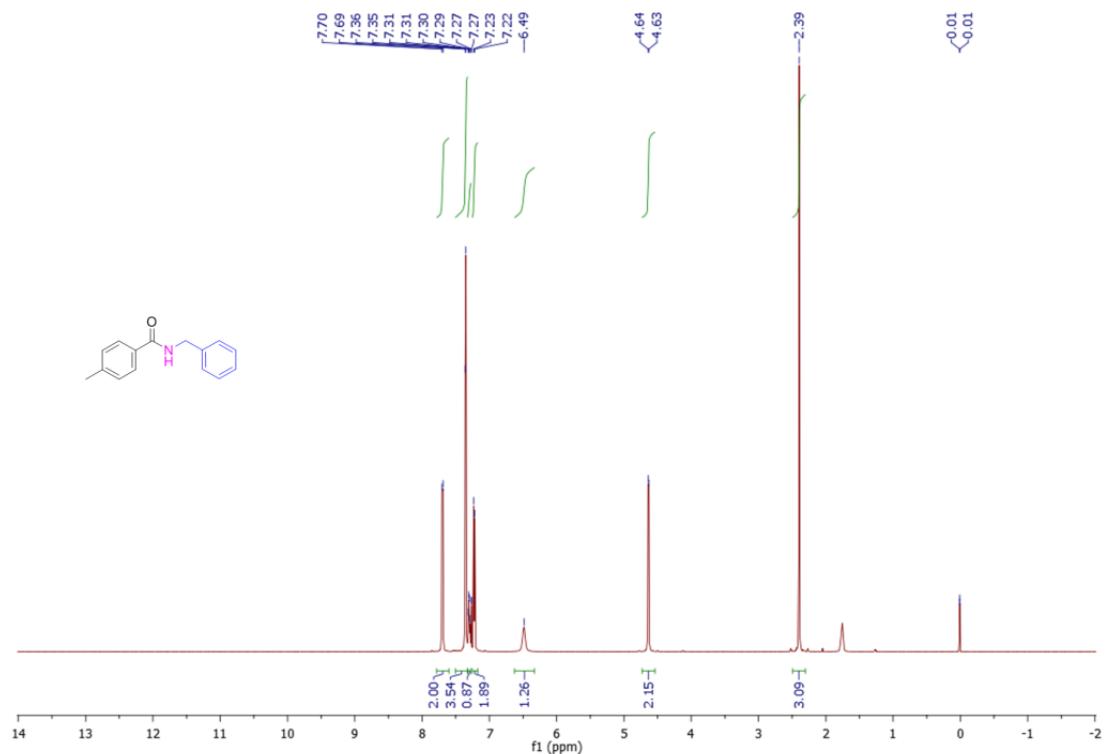
*N*-benzylbenzamide (**6aa**)  $^1\text{H}$  NMR



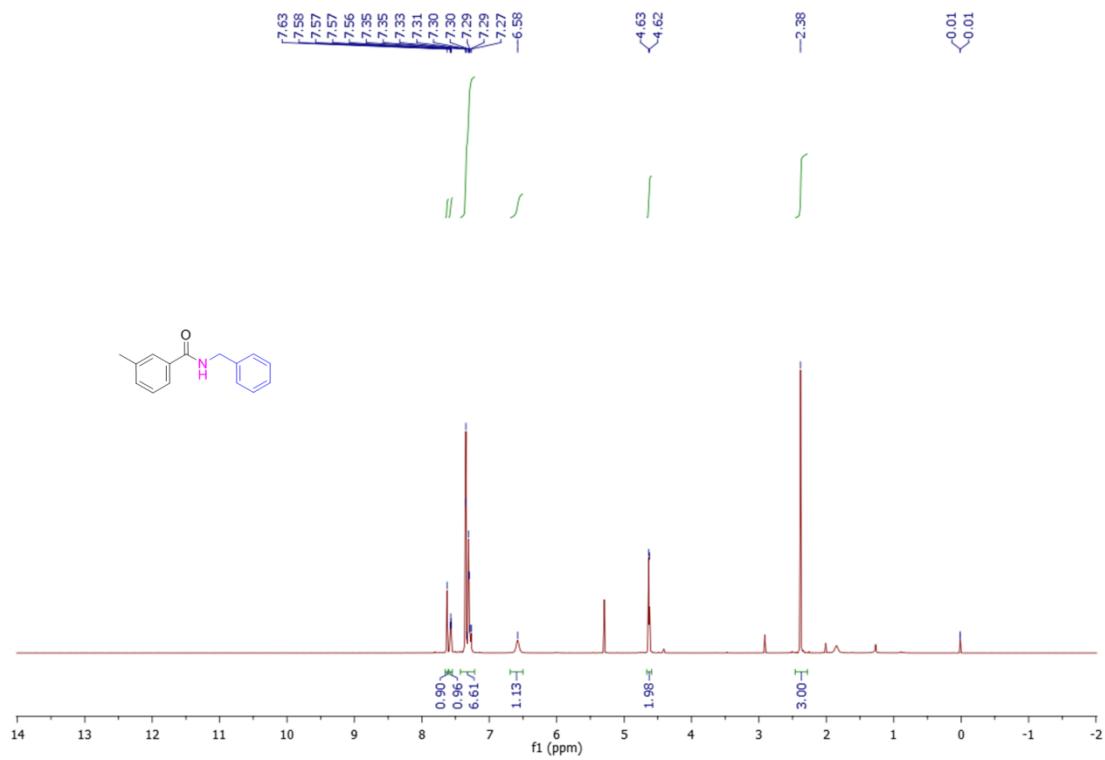
*N*-benzylbenzamide (**6aa**)  $^{13}\text{C}$  NMR



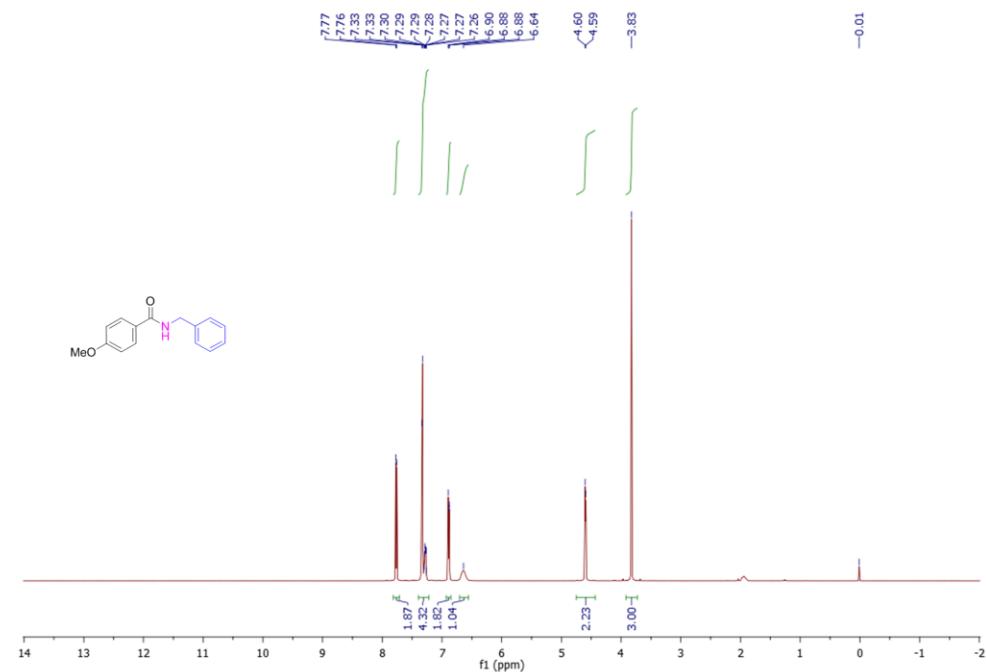
*N*-benzyl-4-methylbenzamide (**6ba**)  $^1\text{H}$  NMR



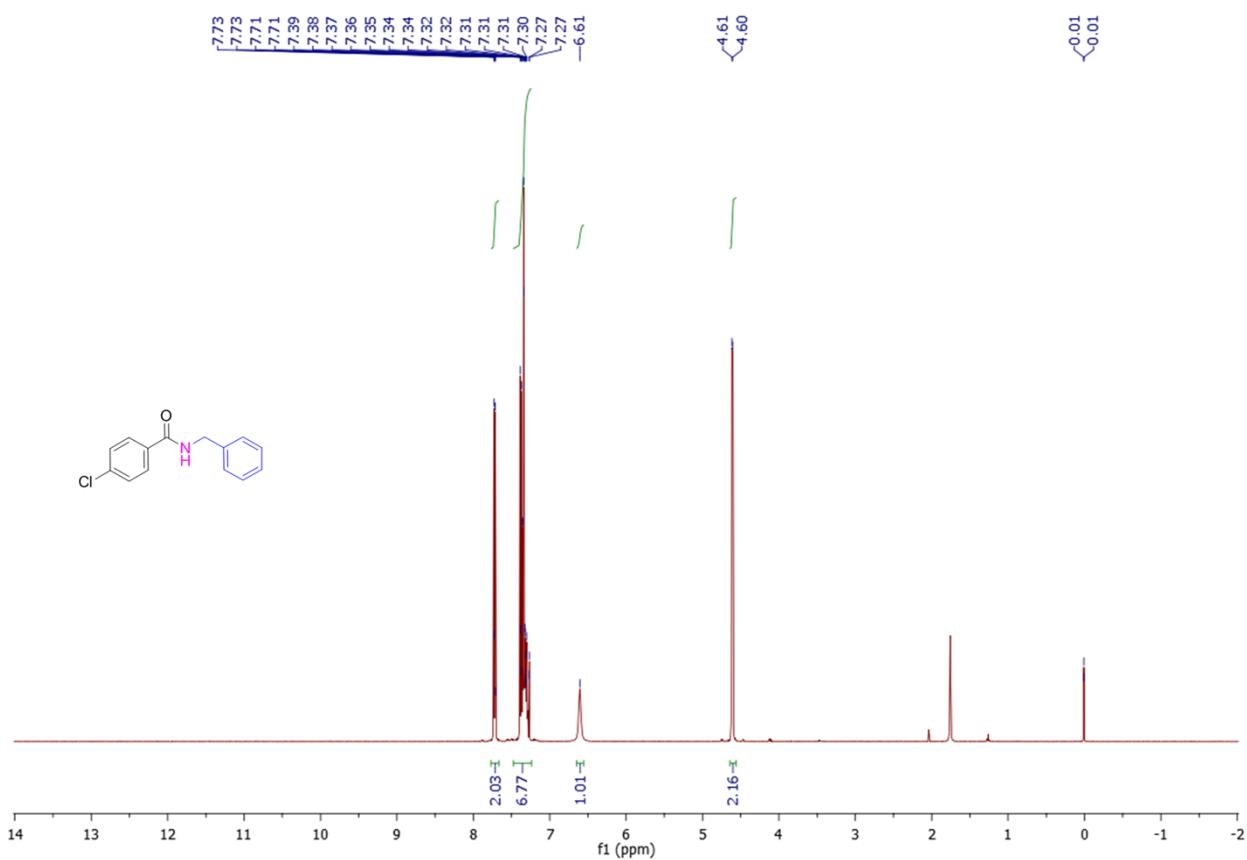
*N*-benzyl-3-methylbenzamide (**6ca**)  $^1\text{H}$  NMR



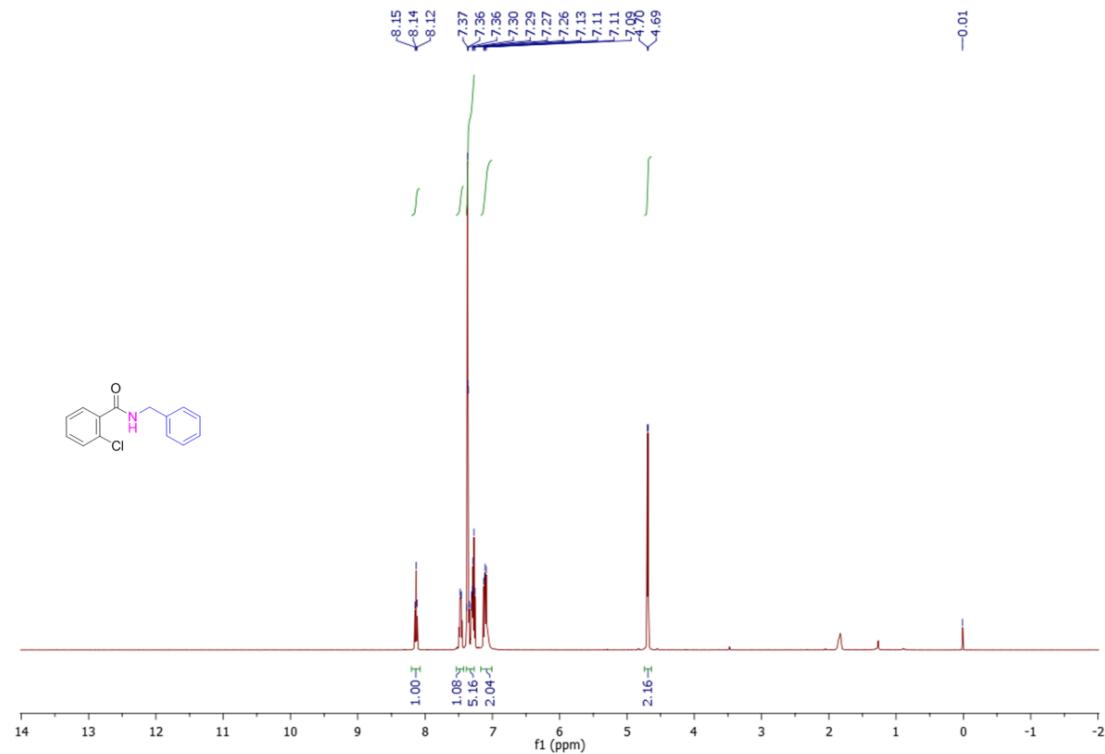
**N-benzyl-4-methoxybenzamide (6ea)  $^1\text{H}$  NMR**



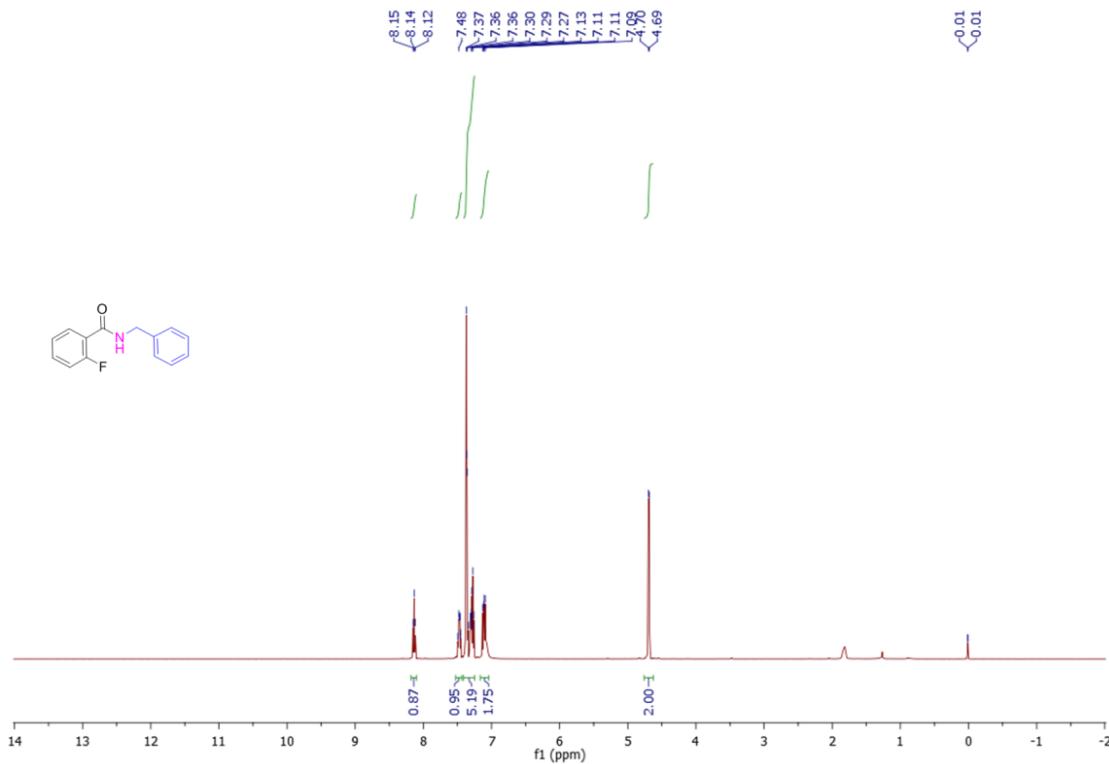
**N-benzyl-4-chlorobenzamide (6ga)  $^1\text{H}$  NMR**



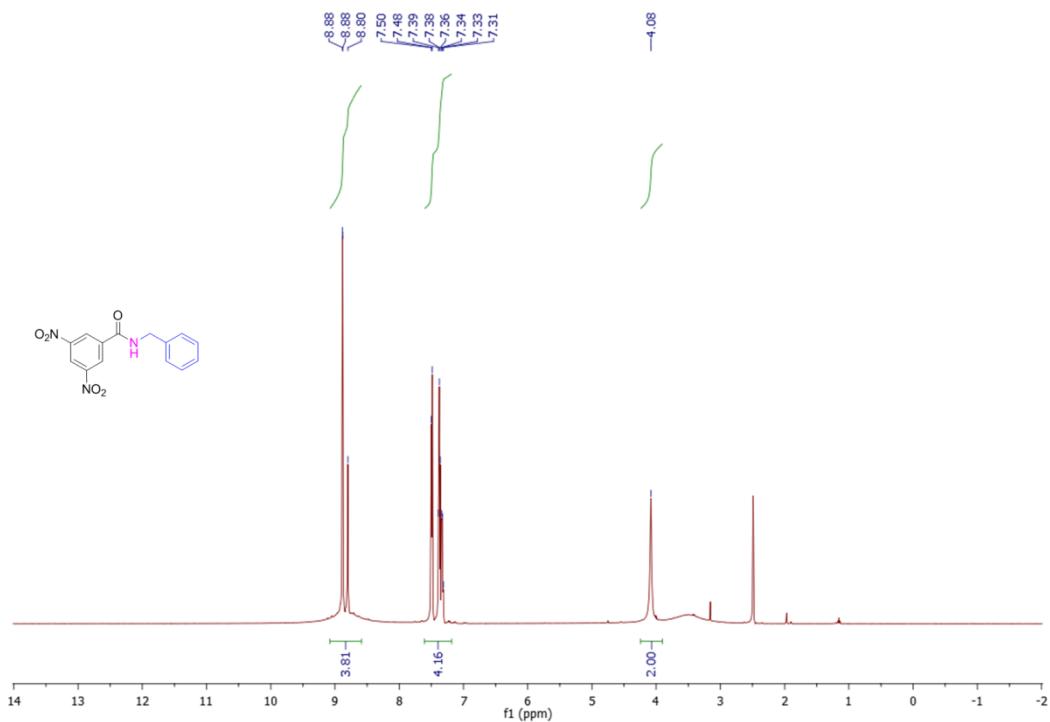
**N-benzyl-2-chlorobenzamide (6ha)  $^1\text{H}$  NMR**



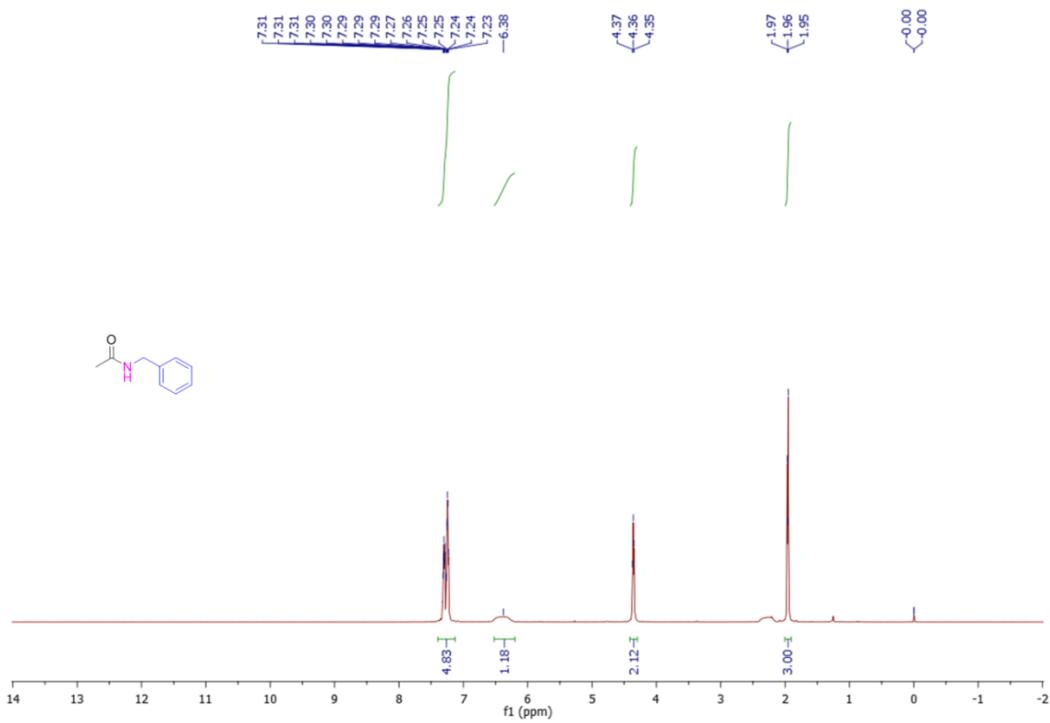
**N-benzyl-2-fluorobenzamide (6ia)  $^1\text{H}$  NMR**



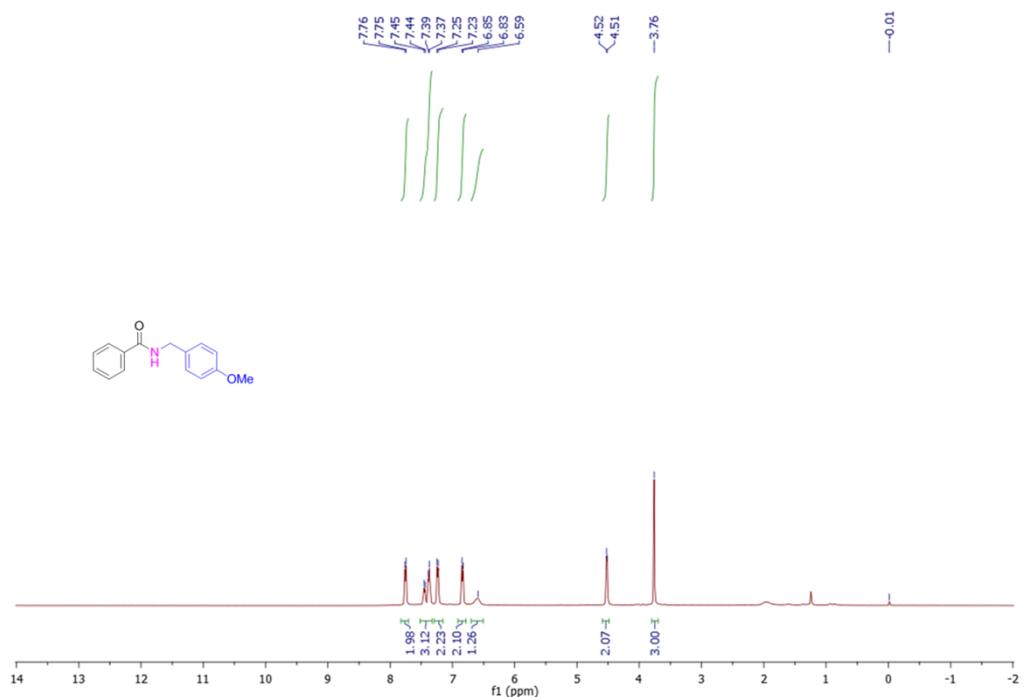
*N*-benzyl-3,5-dinitrobenzamide (6ka)  $^1\text{H}$  NMR



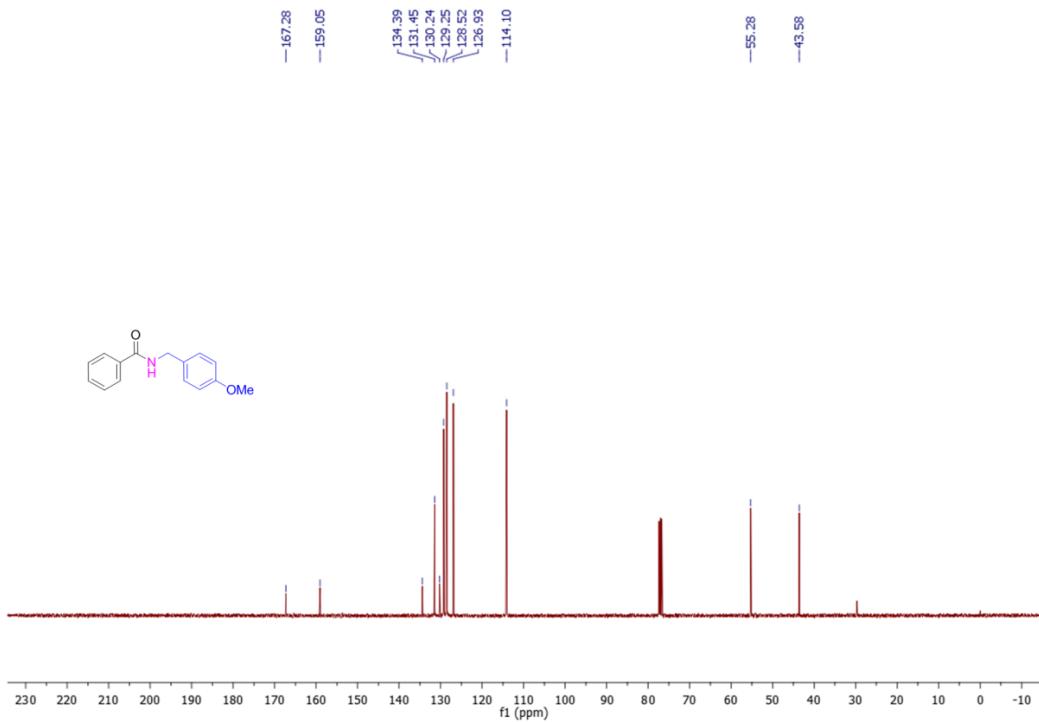
*N*-benzylacetamide (6la)  $^1\text{H}$  NMR



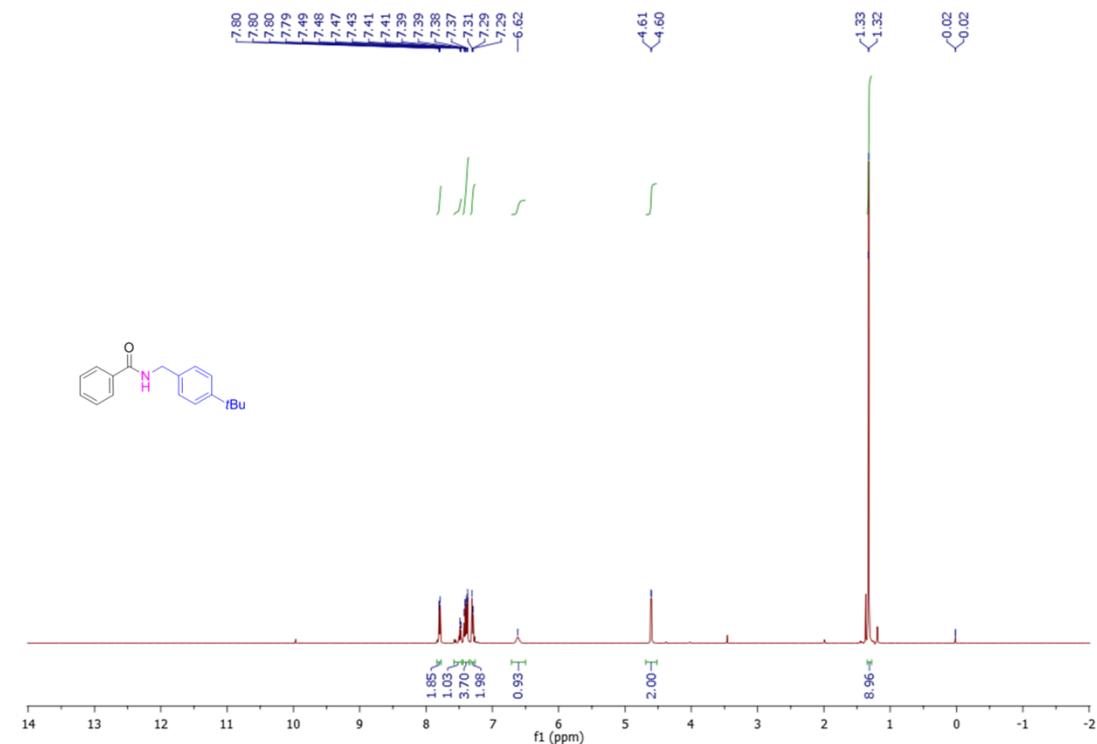
***N*-(4-methoxybenzyl)benzamide (6ab)  $^1\text{H}$  NMR**



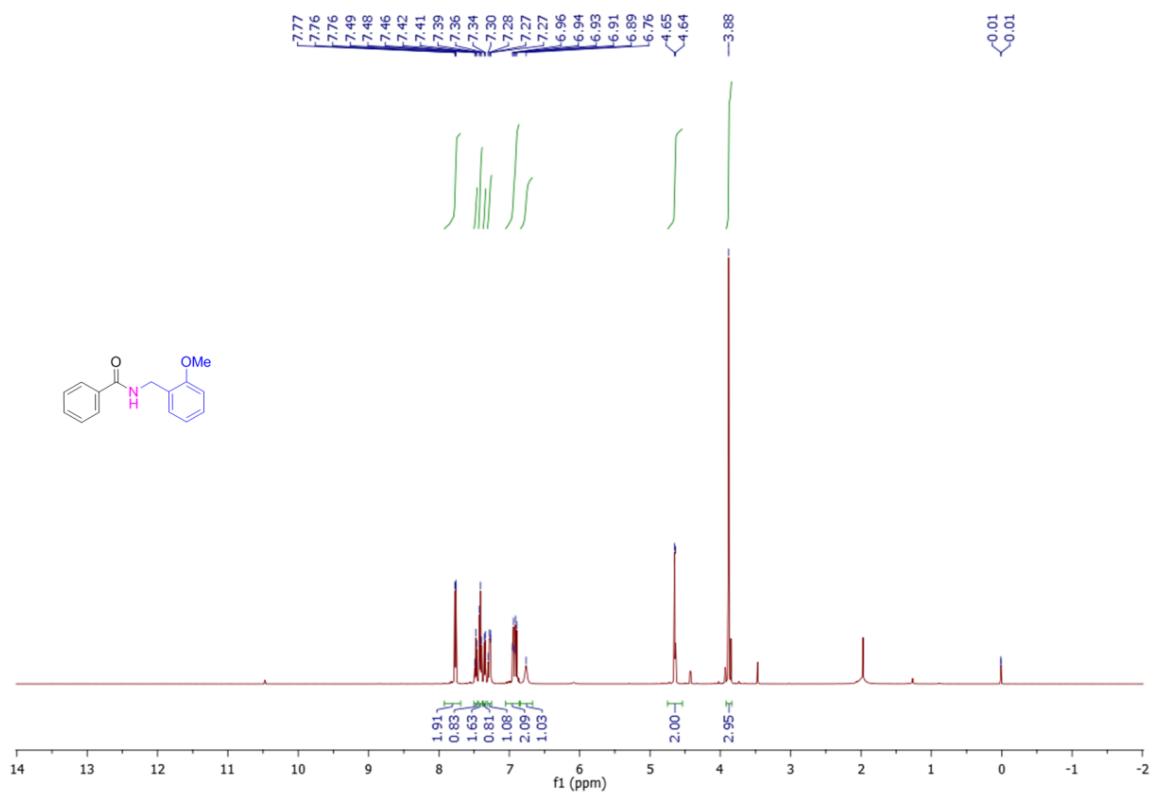
***N*-(4-methoxybenzyl)benzamide (6ab)  $^{13}\text{C}$  NMR**



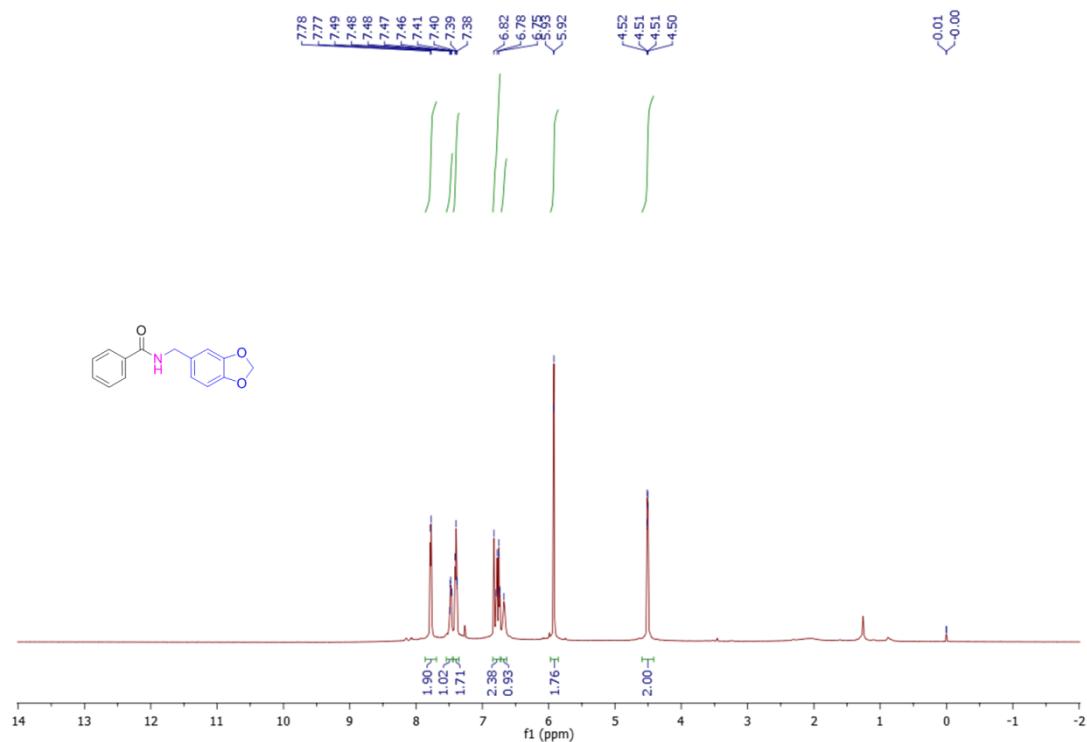
***N*-(4-(*tert*-butyl)benzyl)benzamide (6ac)  $^1\text{H}$  NMR**



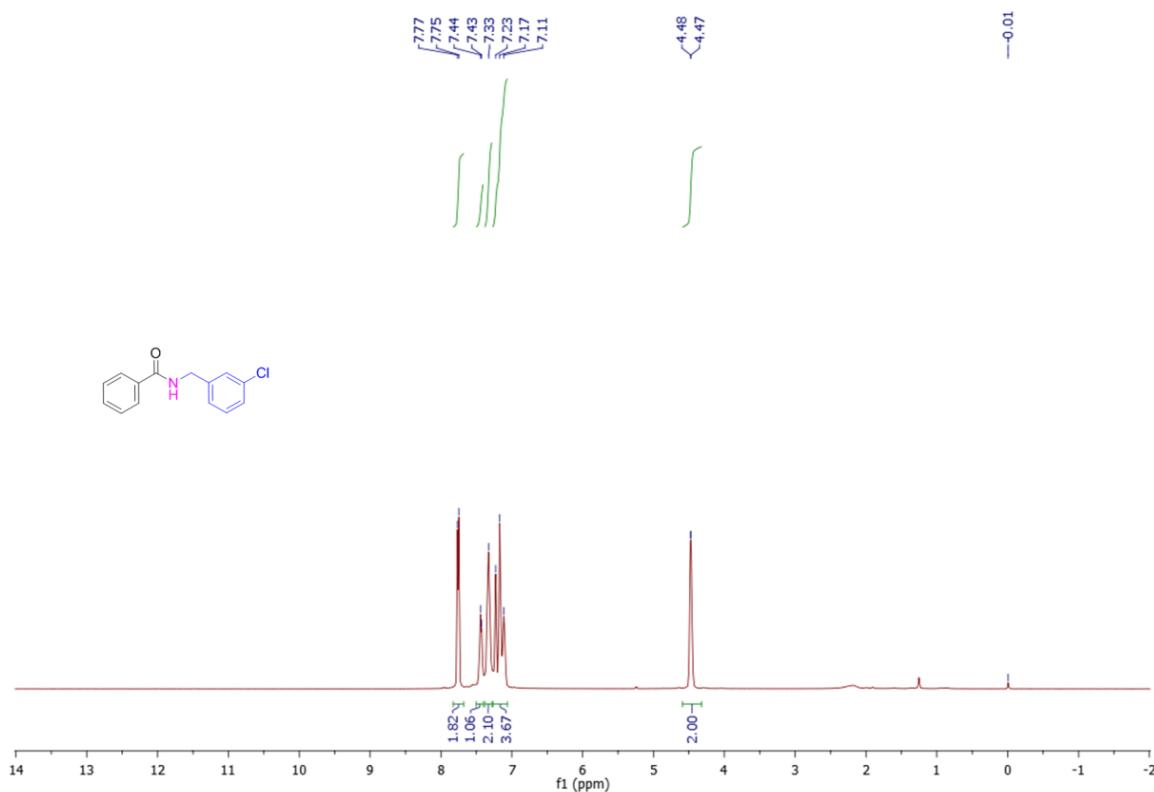
***N*-(2-methoxybenzyl)benzamide (6ad)  $^1\text{H}$  NMR**



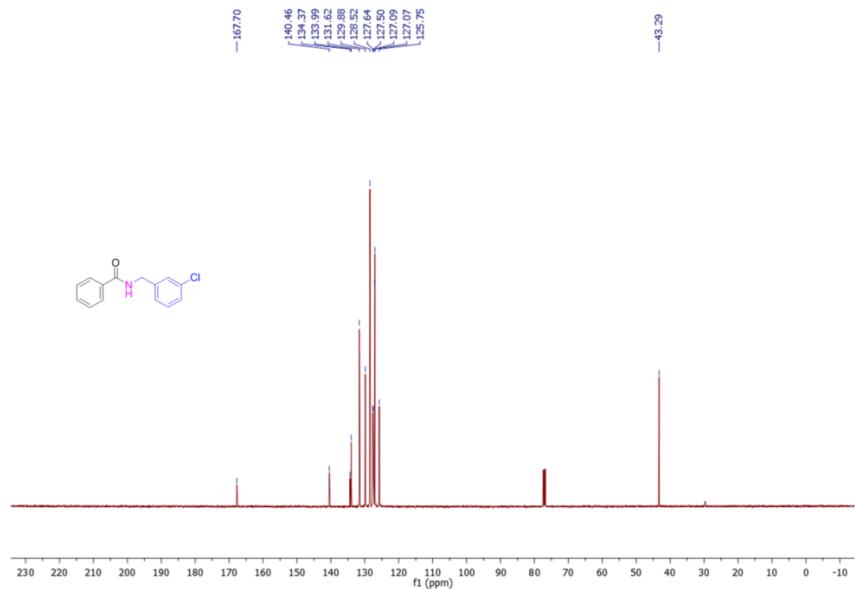
***N*-(benzo[d][1,3]dioxol-5-ylmethyl)benzamide (6ae)  $^1\text{H}$  NMR**



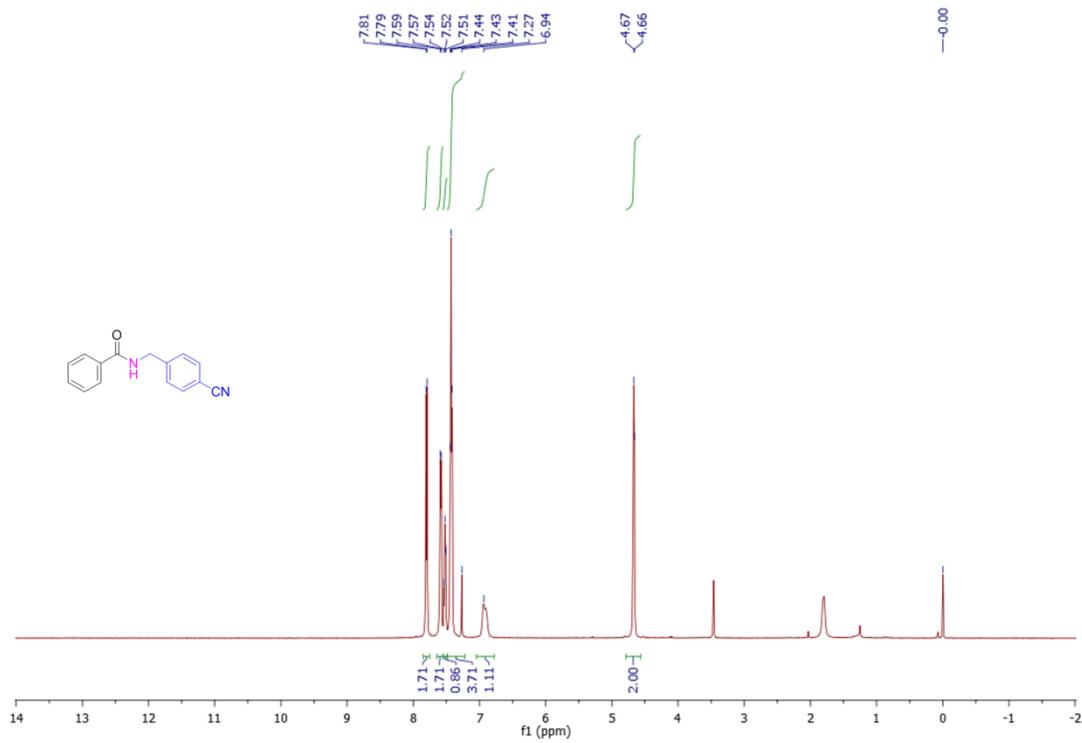
***N*-(3-chlorobenzyl)benzamide (6ag)  $^1\text{H}$  NMR**



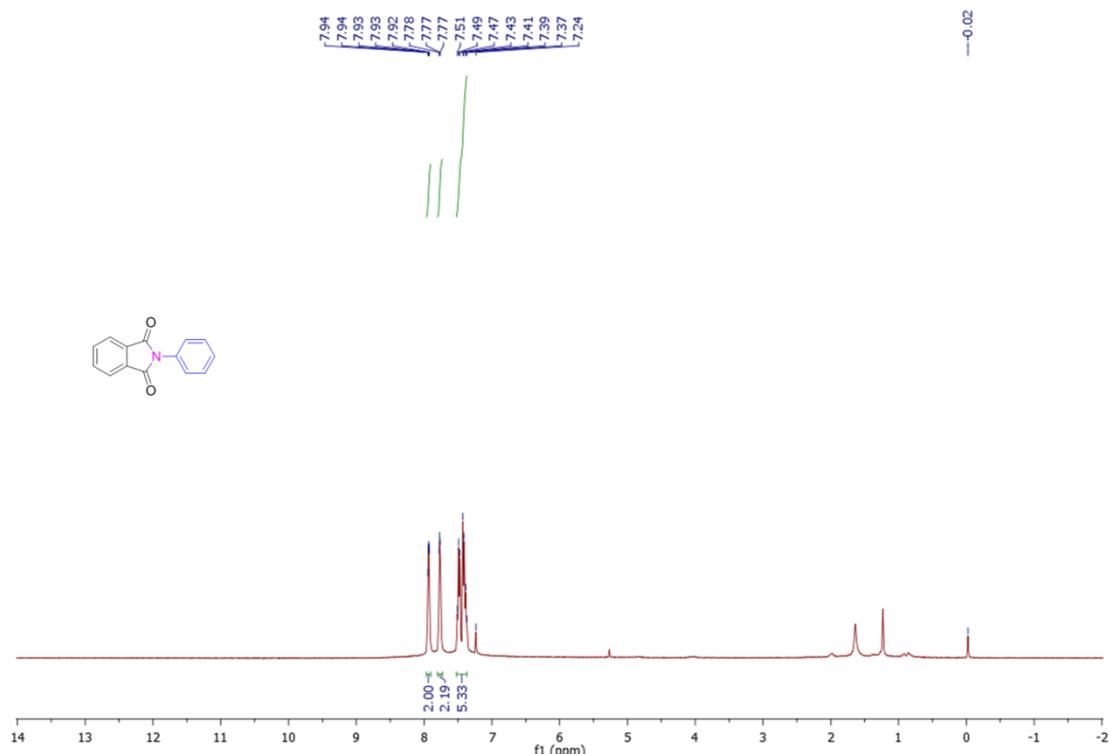
*N*-(3-chlorobenzyl)benzamide (**6ag**)  $^{13}\text{C}$  NMR



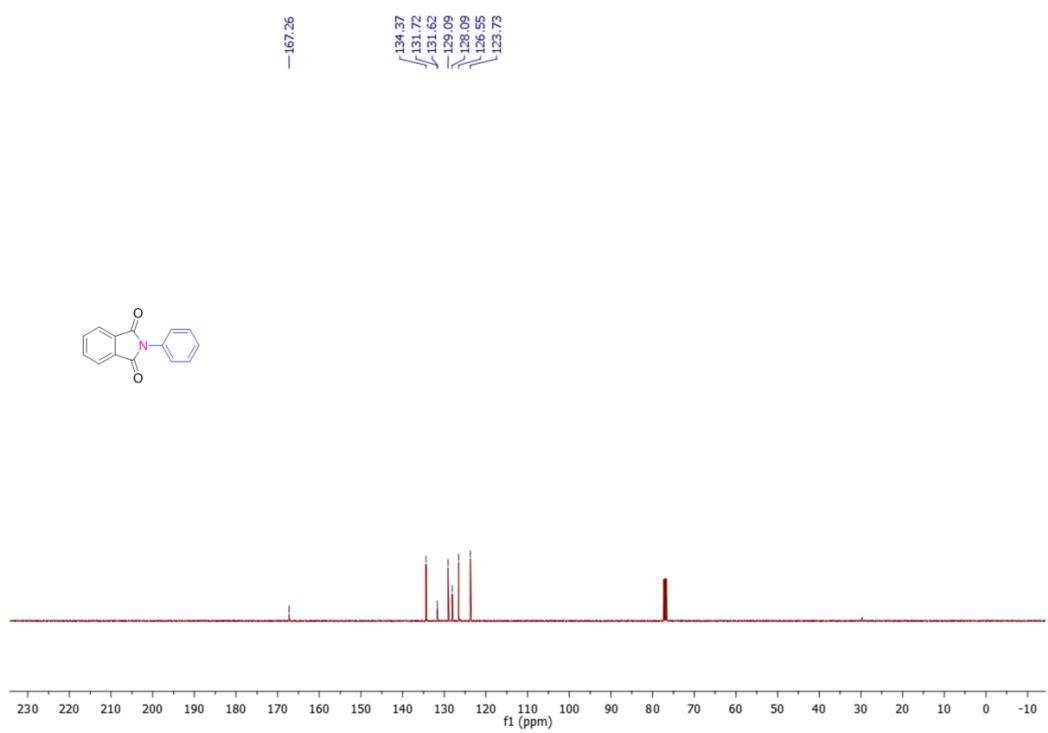
*N*-(4-cyanobenzyl)benzamide (**6ah**)  $^1\text{H}$  NMR



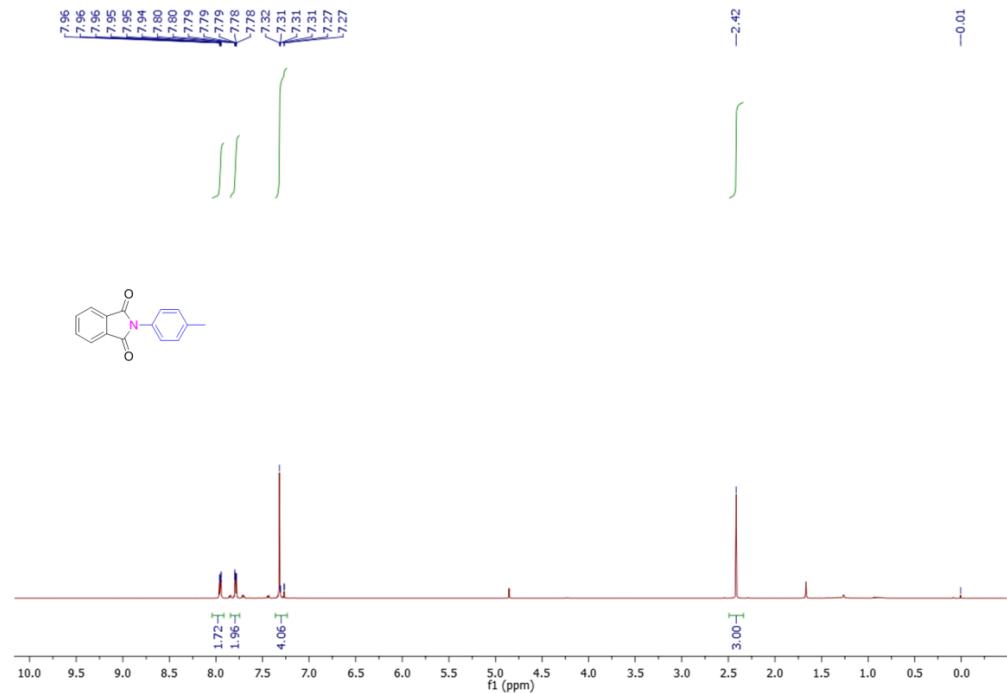
**2-phenylisoindoline-1,3-dione (9aa)  $^1\text{H}$  NMR**



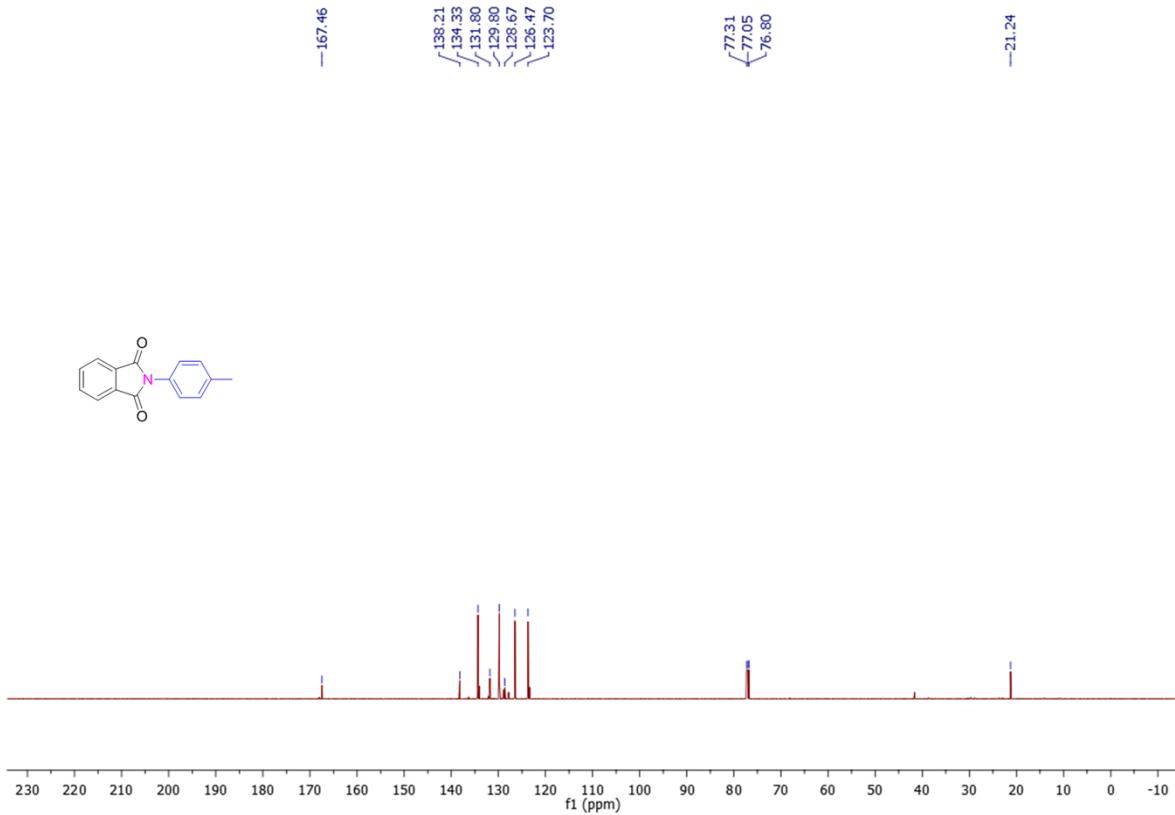
**2-phenylisoindoline-1,3-dione (9aa)  $^{13}\text{C}$  NMR**



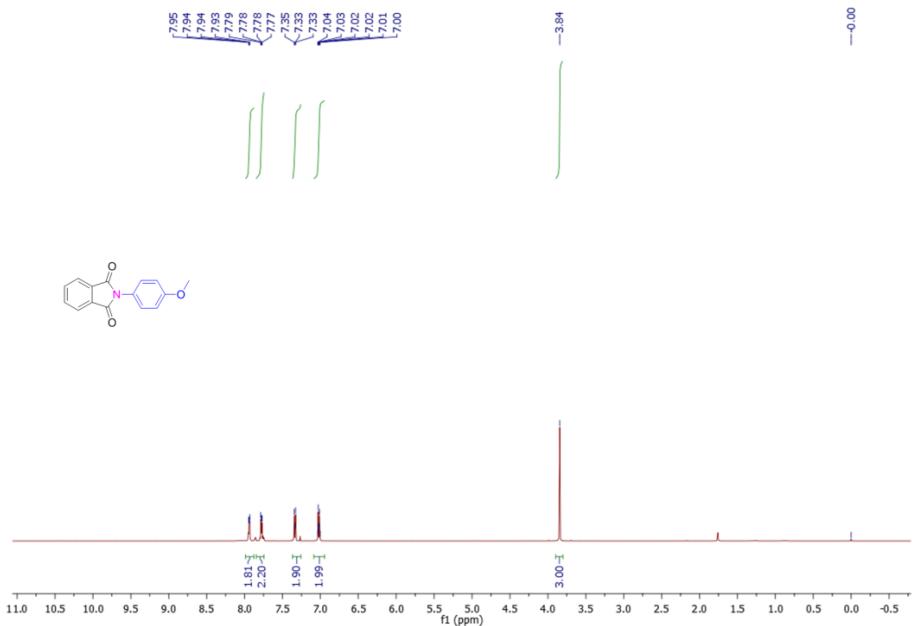
**2-(*p*-tolyl)isoindoline-1,3-dione (9ab)  $^1\text{H}$  NMR**



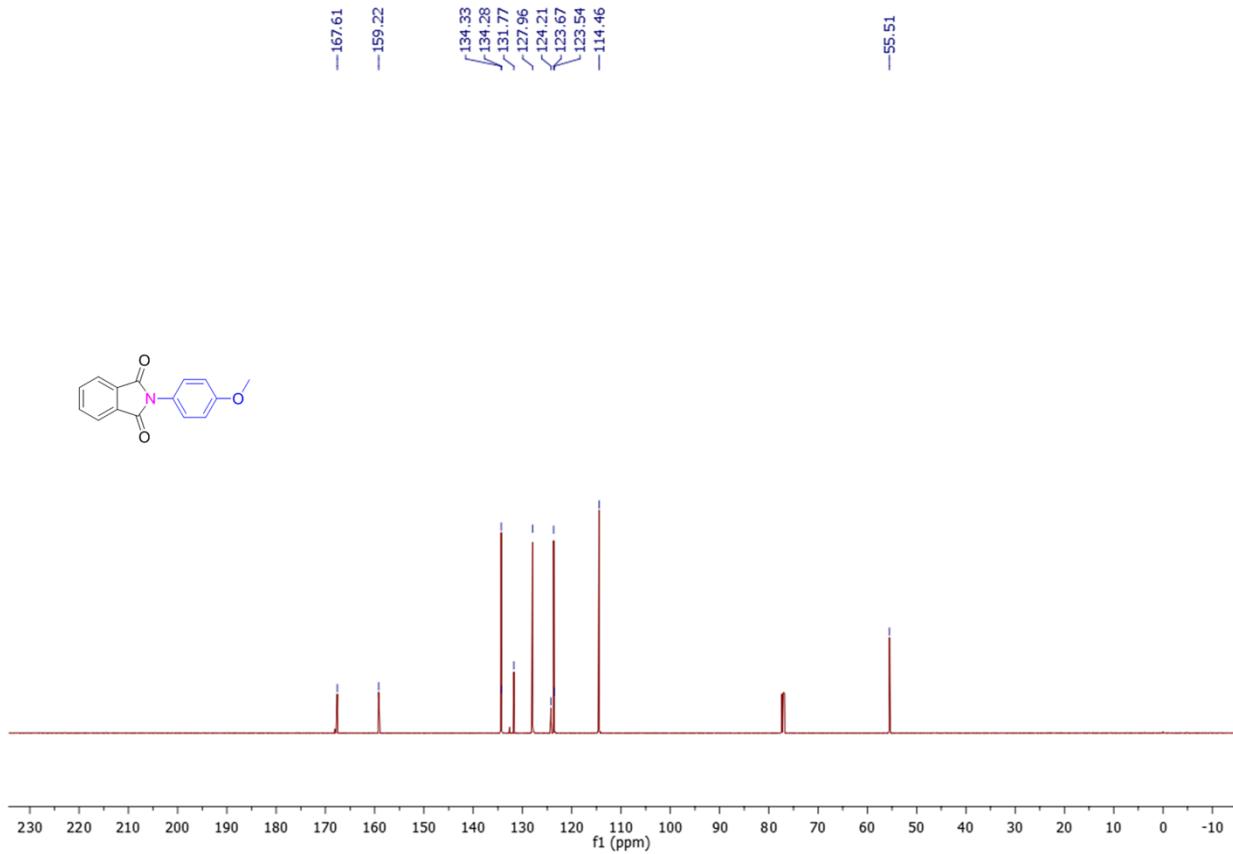
**2-(*p*-tolyl)isoindoline-1,3-dione (9ab)  $^{13}\text{C}$  NMR**



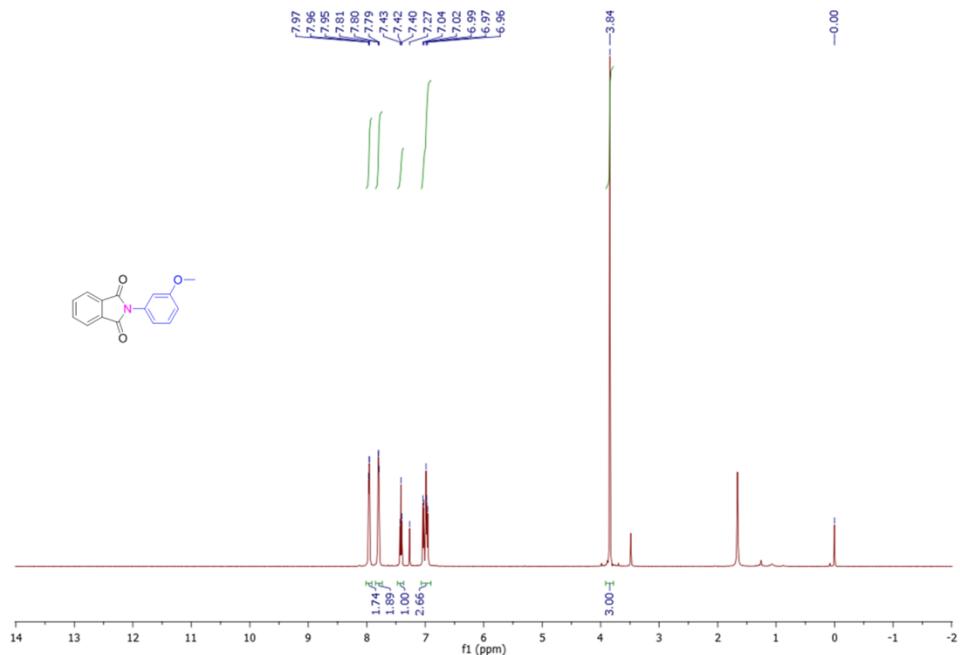
**2-(4-methoxyphenyl)isoindoline-1,3-dione (9ac)  $^1\text{H}$  NMR**



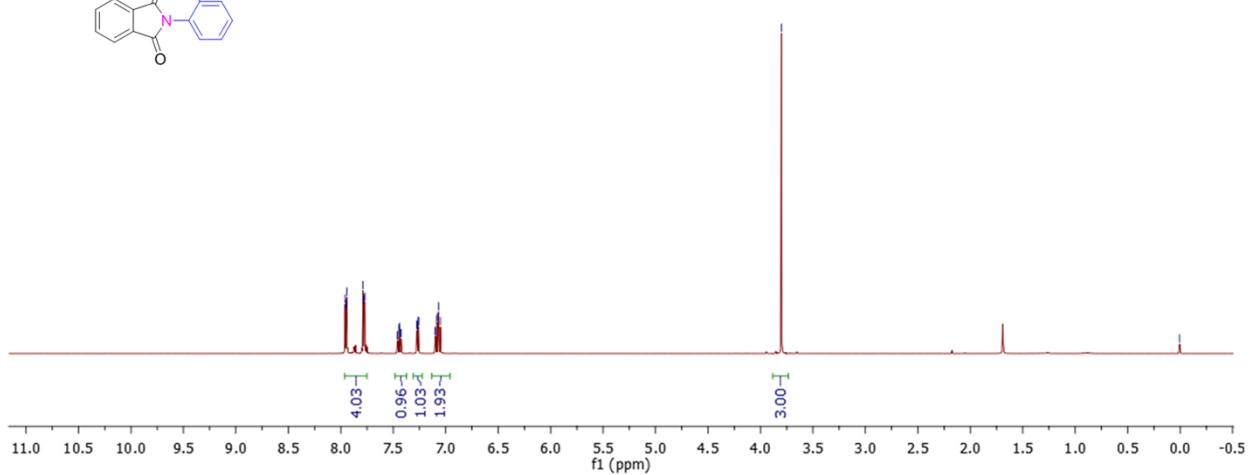
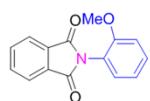
**2-(4-methoxyphenyl)isoindoline-1,3-dione (9ac)  $^{13}\text{C}$  NMR**



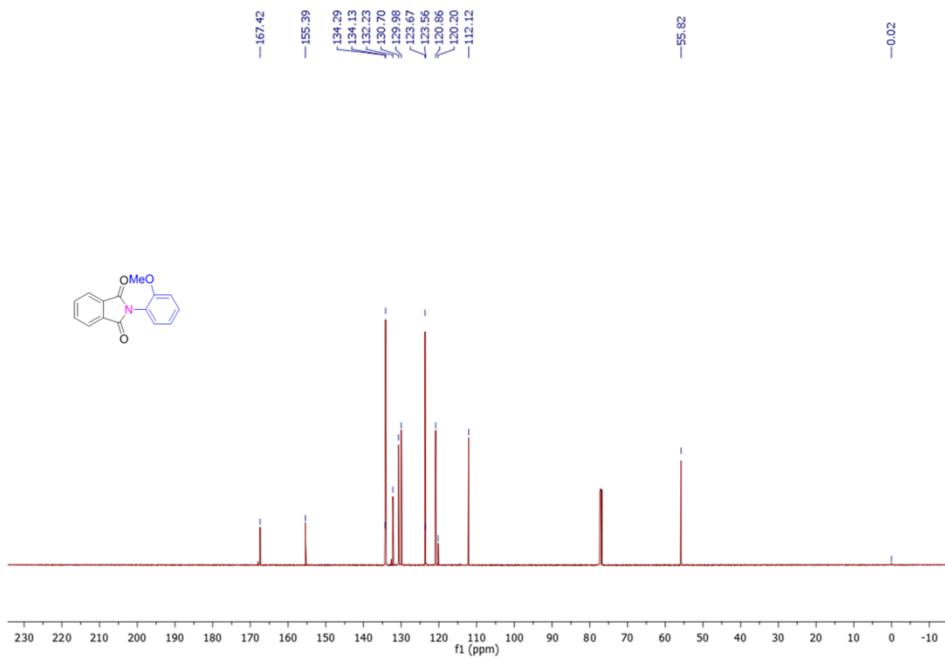
**2-(3-methoxyphenyl)isoindoline-1,3-dione (9ad)  $^1\text{H}$  NMR**



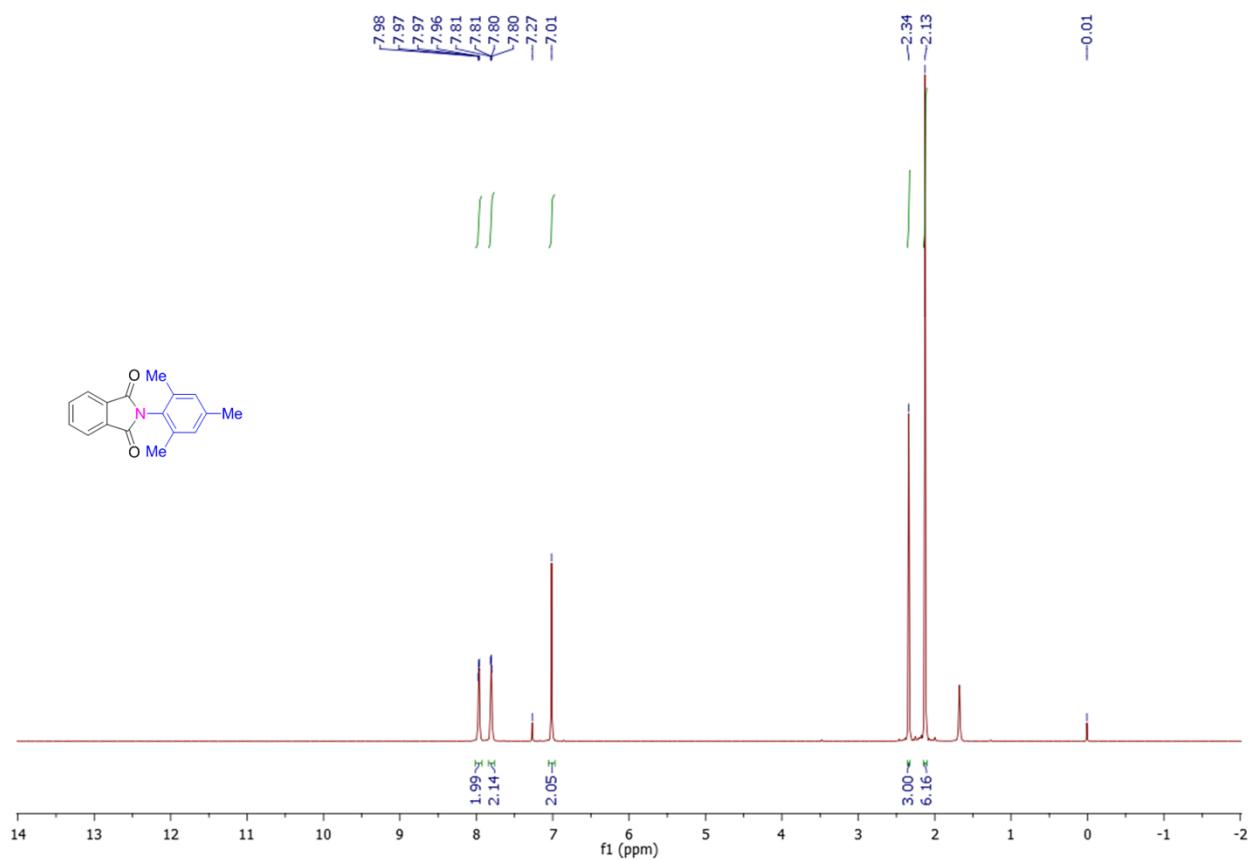
**2-(2-methoxyphenyl)isoindoline-1,3-dione (9ae)  $^1\text{H}$  NMR**



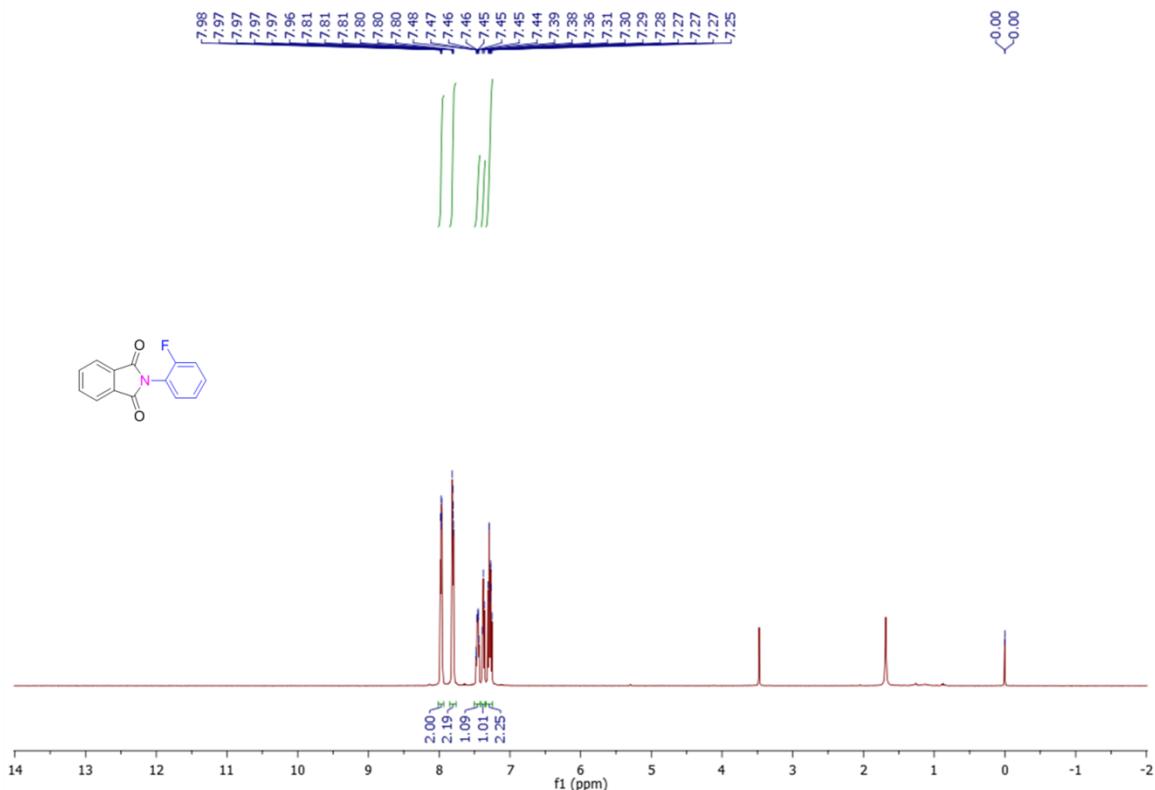
**2-(2-methoxyphenyl)isoindoline-1,3-dione (9ae)  $^{13}\text{C}$  NMR**



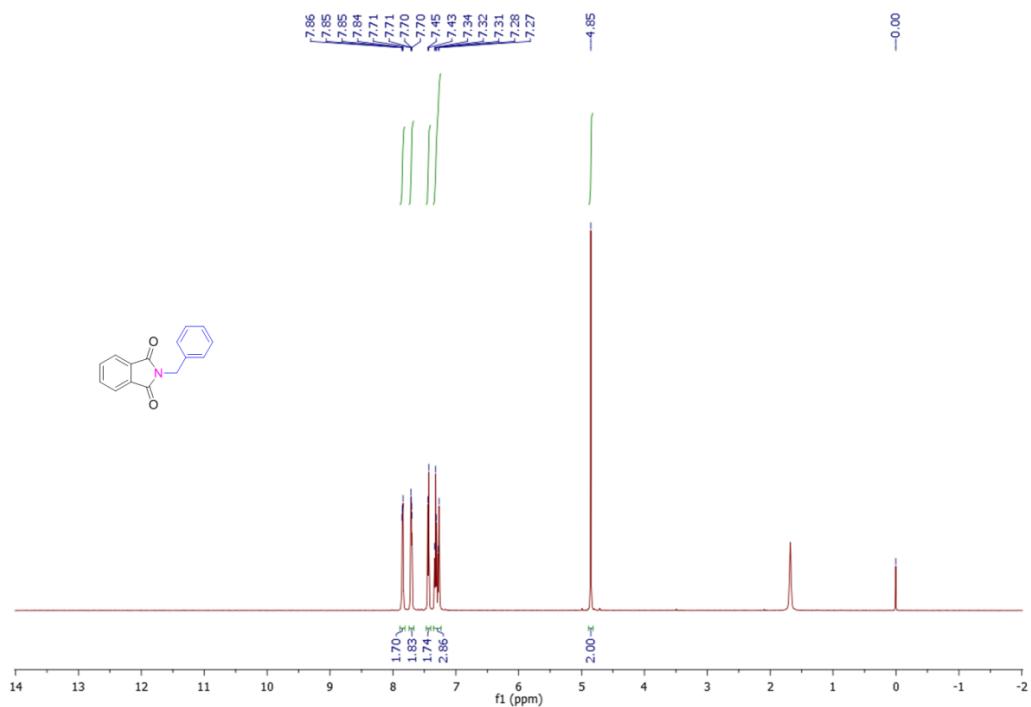
**2-mesitylisooindoline-1,3-dione (9af)  $^1\text{H}$  NMR**



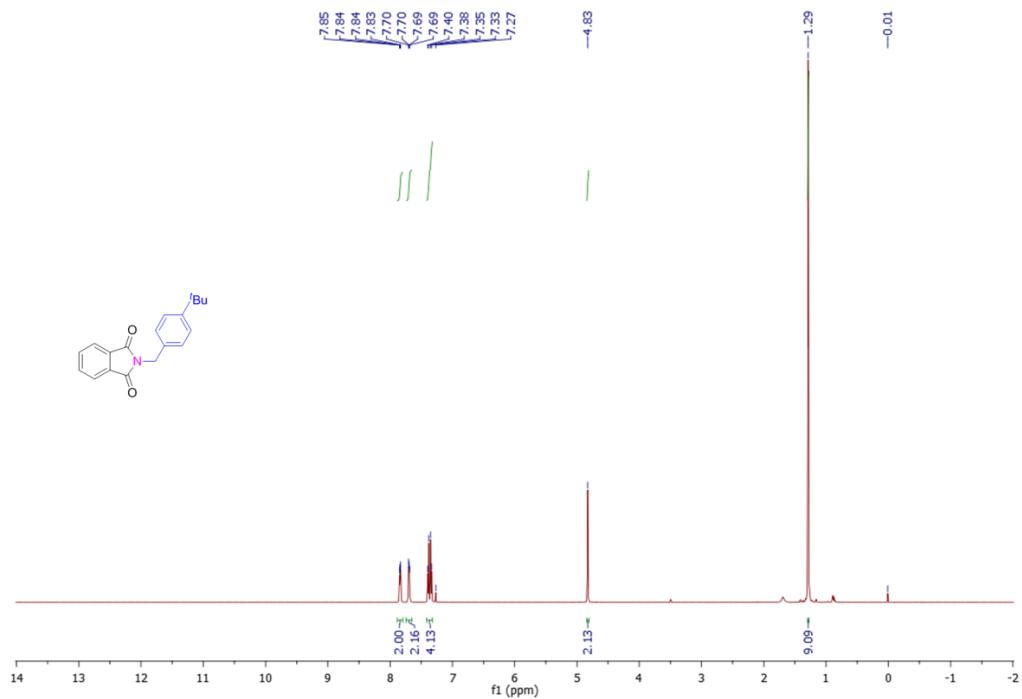
**2-(2-fluorophenyl)isoindoline-1,3-dione (9ag)  $^1\text{H}$  NMR**



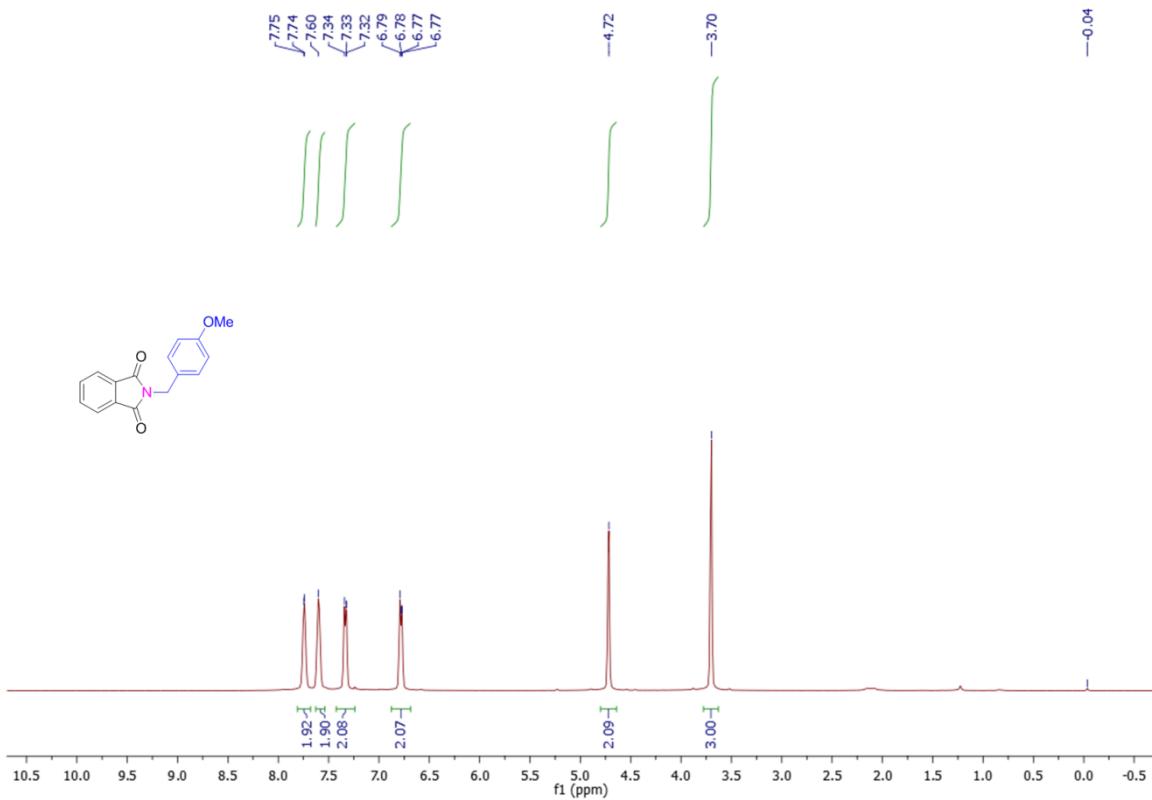
**2-benzylisoindoline-1,3-dione (9ah)  $^1\text{H}$  NMR**



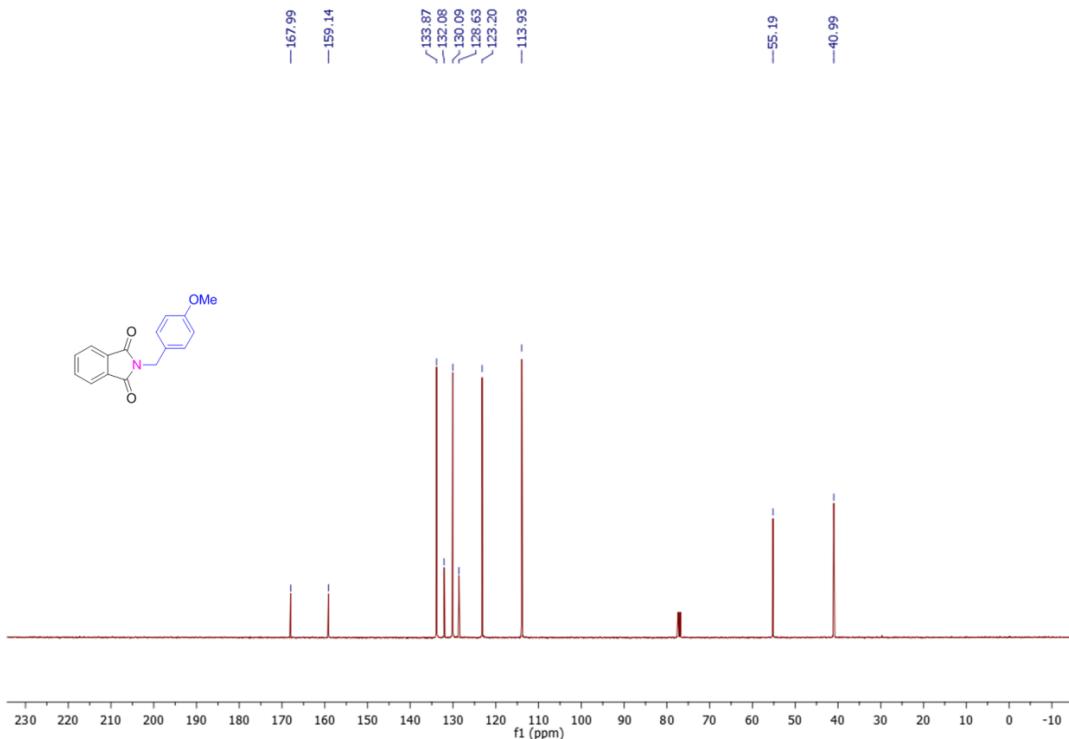
**2-(4-(*tert*-butyl)benzyl)isoindoline-1,3-dione (9ai)  $^1\text{H}$  NMR**



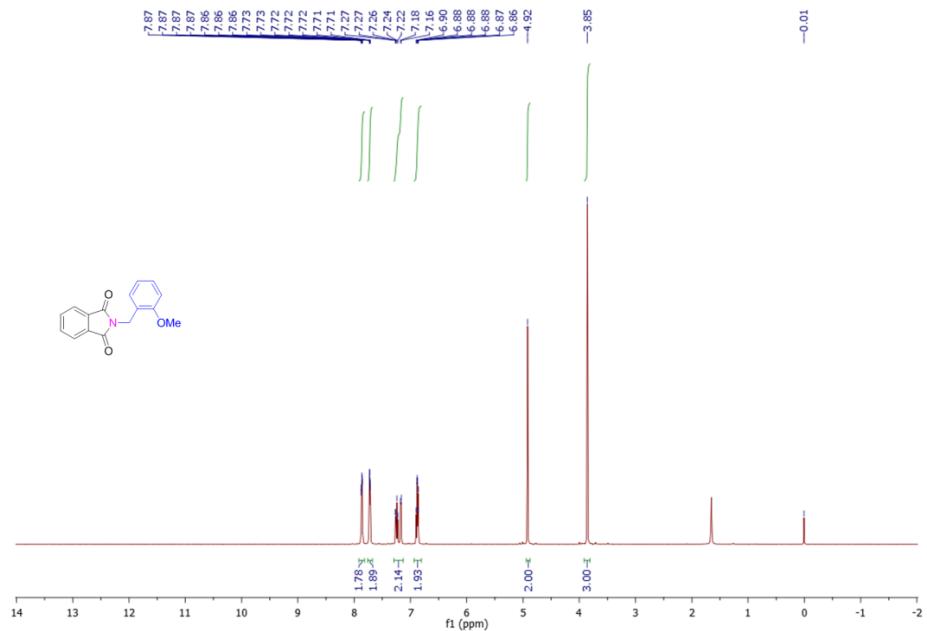
**2-(4-methoxybenzyl)isoindoline-1,3-dione (9aj)  $^1\text{H}$  NMR**



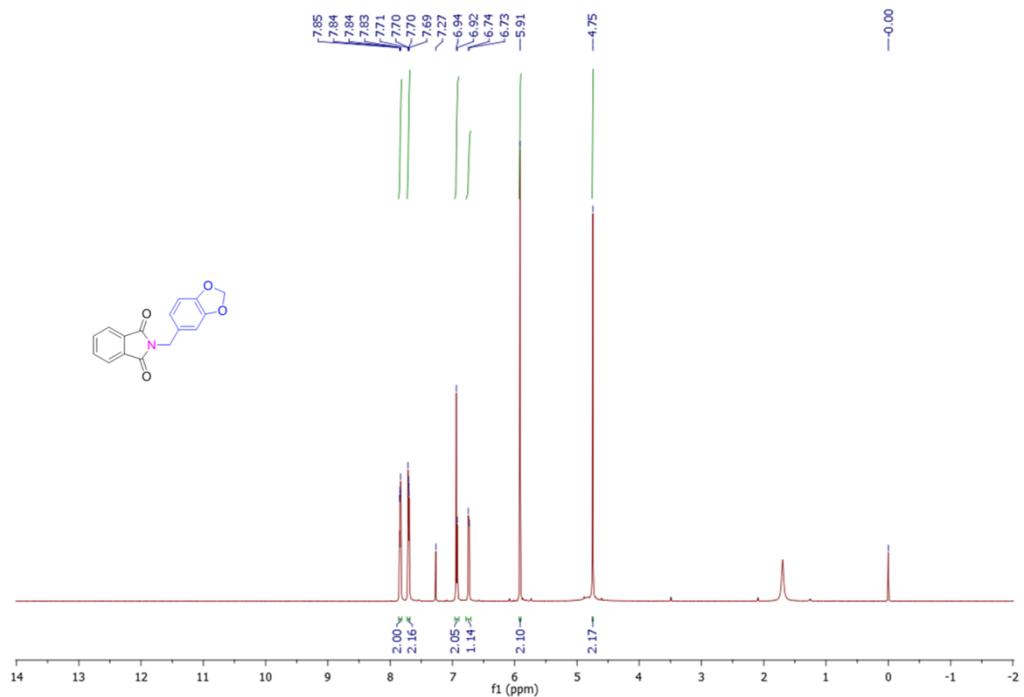
**2-(4-methoxybenzyl)isoindoline-1,3-dione (9aj)  $^{13}\text{C}$  NMR**



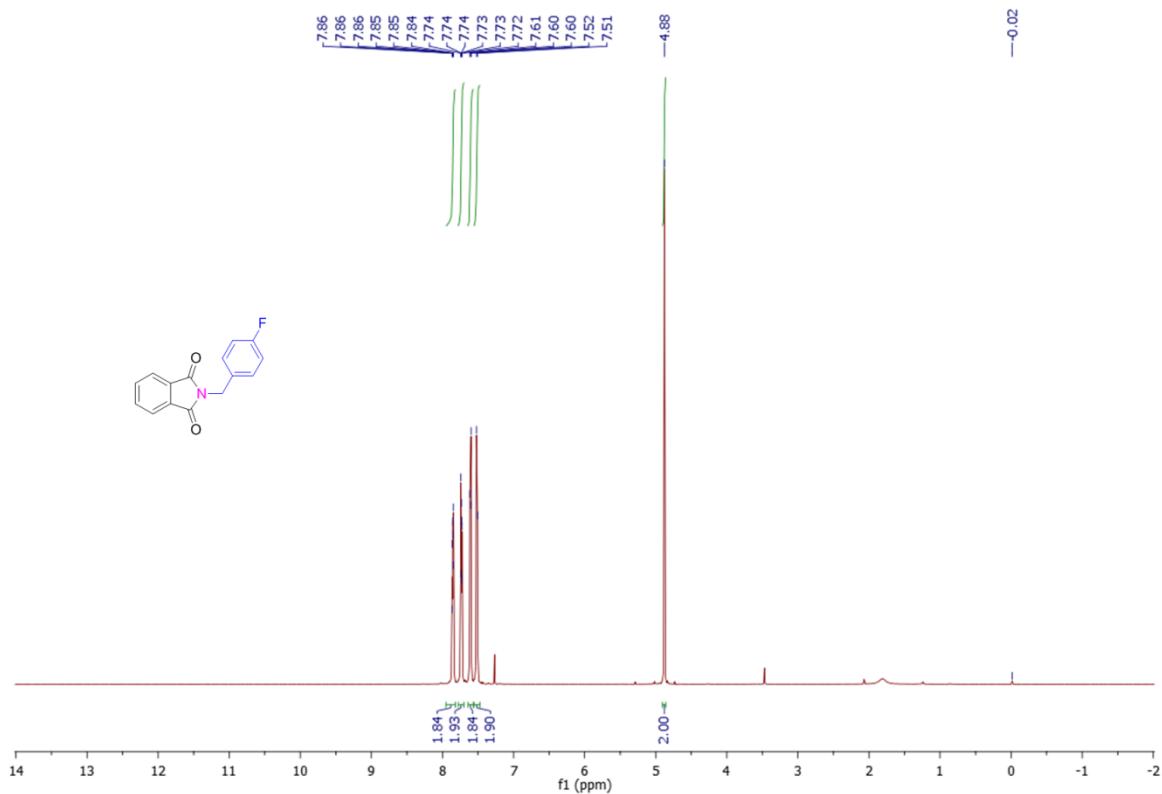
**2-(2-methoxybenzyl)isoindoline-1,3-dione (9ak)  $^1\text{H}$  NMR**



**2-(benzo[d][1,3]dioxol-5-ylmethyl)isoindoline-1,3-dione (9al)  $^1\text{H}$  NMR**



**2-(4-fluorobenzyl)isoindoline-1,3-dione (9an)  $^1\text{H}$  NMR**



**4-((1,3-dioxoisoindolin-2-yl)methyl)benzonitrile (9ao)  $^1\text{H}$  NMR**

