Electronic Supplementary Material (ESI) for RSC Advances.

A methanol and protic ionic liquid Ugi multicomponent reaction path to cytotoxic α-phenylacetamido amides

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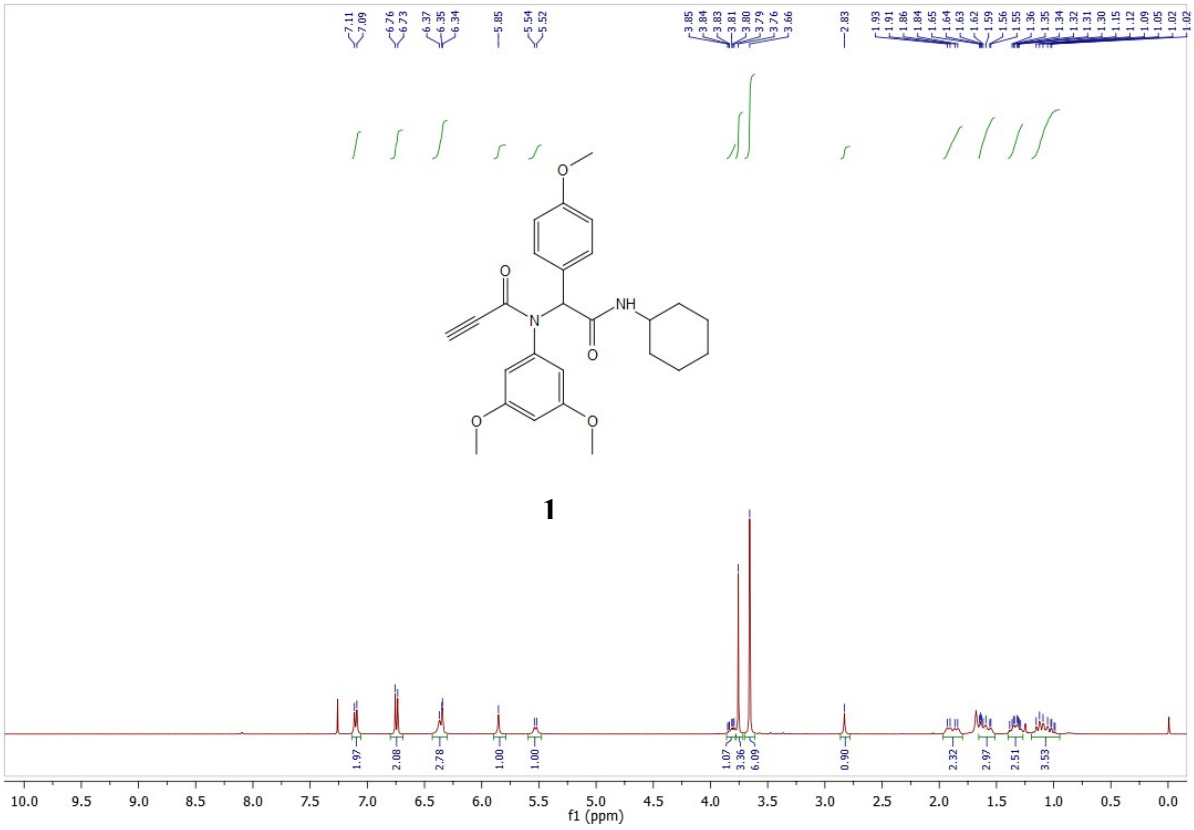
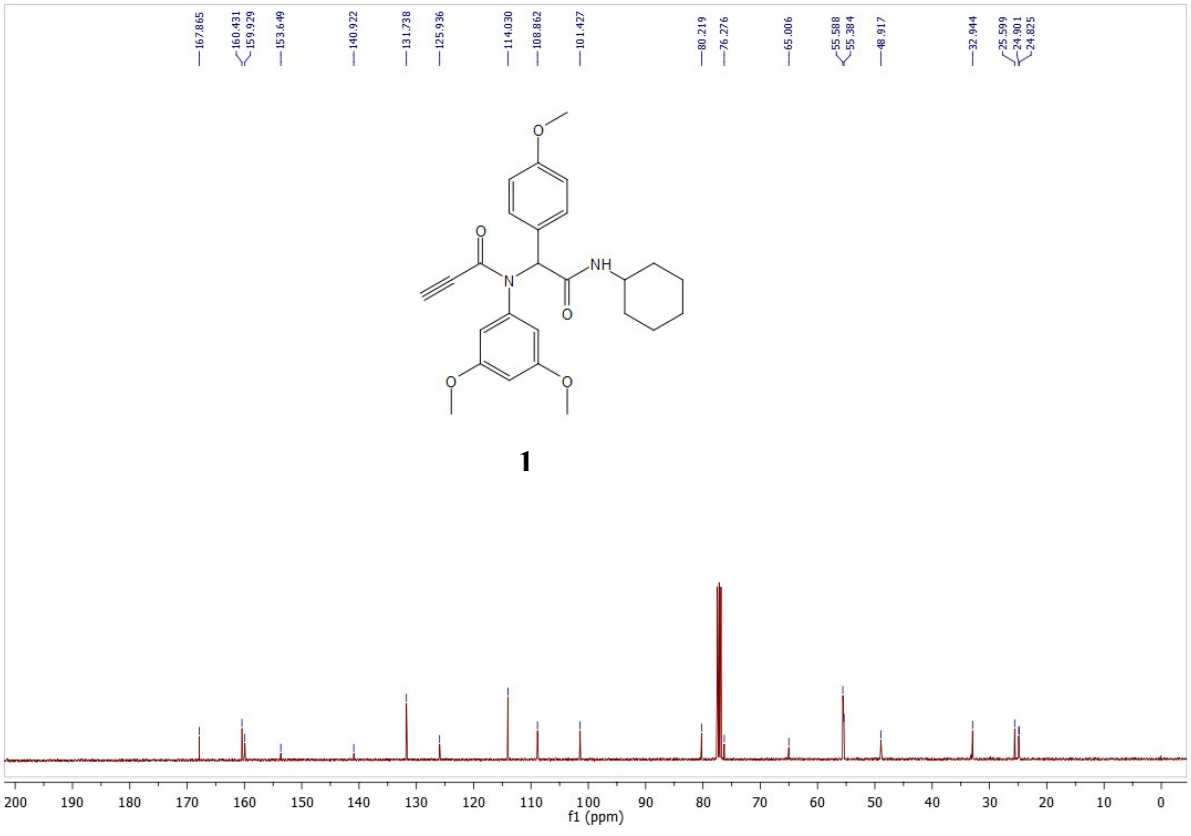
*(RS)-N-(2-(cyclohexylamino)-1-(4-methoxyphenyl)-2-oxoethyl)-N-(3,5-dimethoxyphenyl)propiolamide (**1**)*

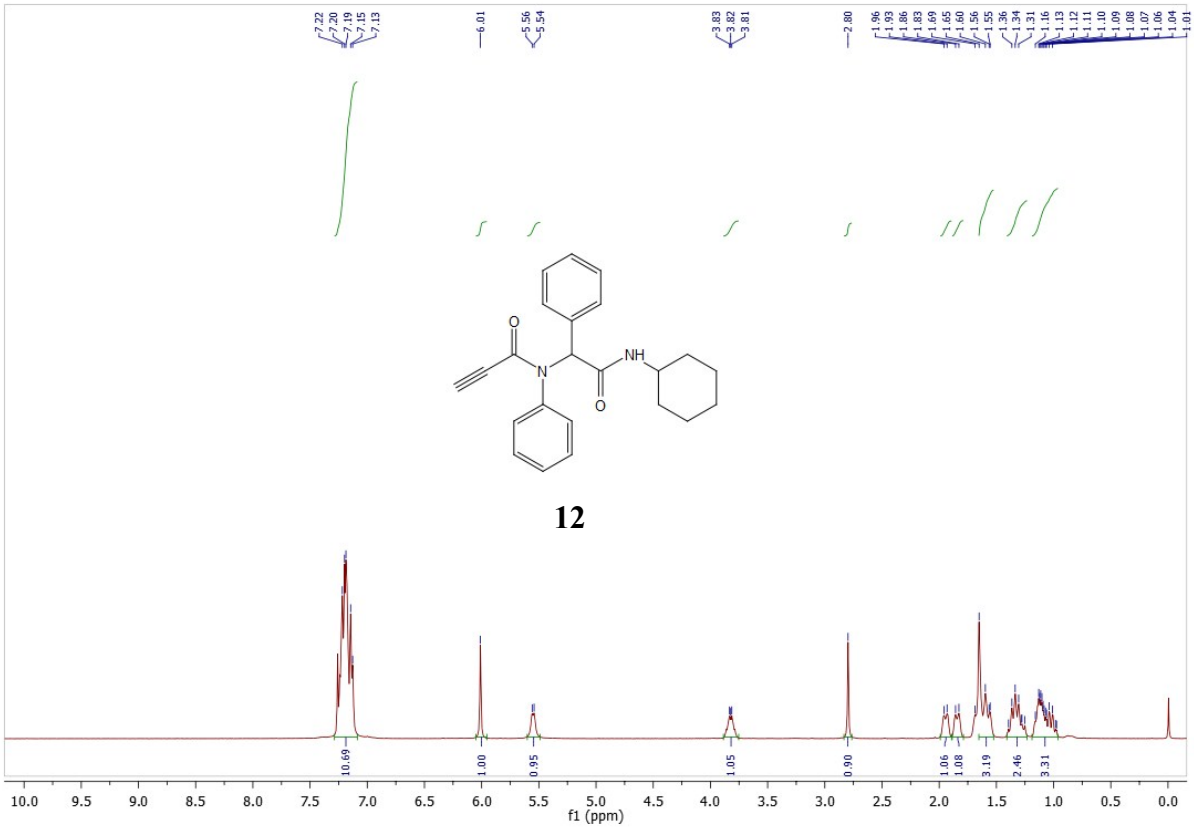


1

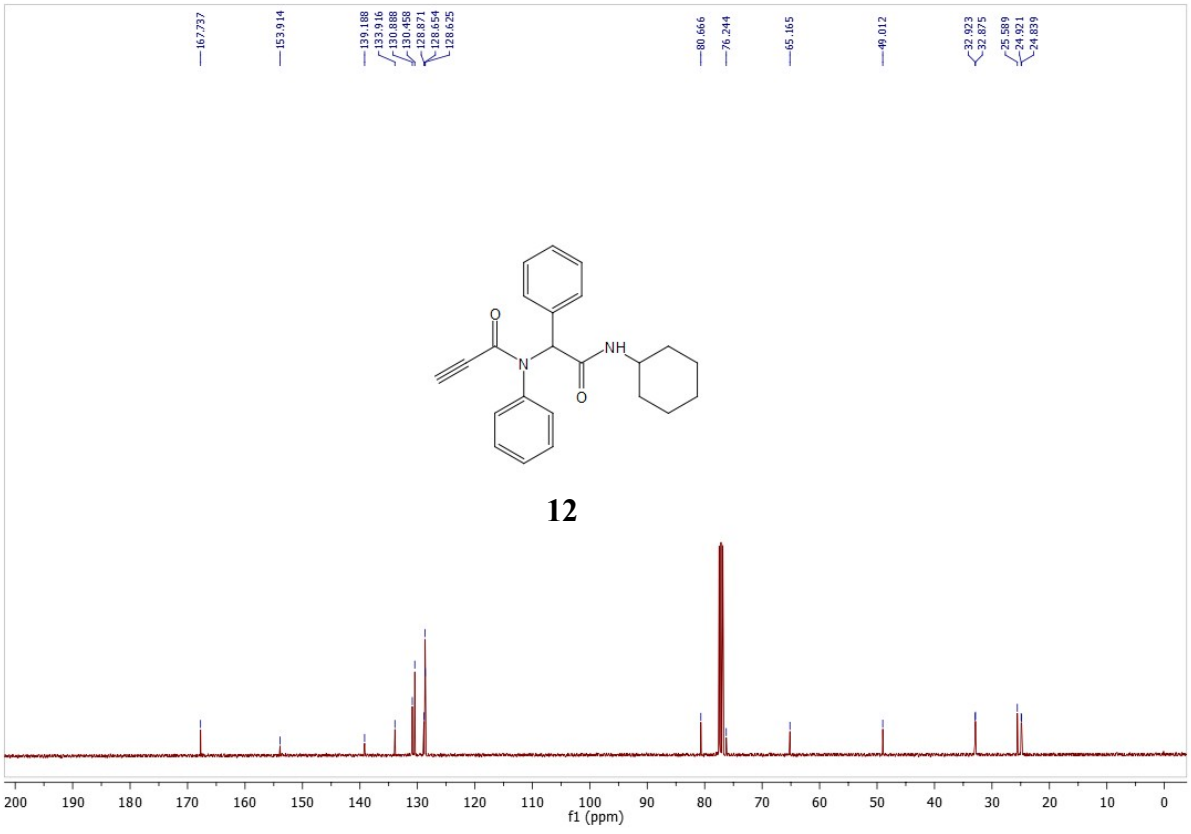


1

*(RS)-N-(2-(Cyclohexylamino)-2-oxo-1-phenylethyl)-N-phenylpropiolamide (**12**)*

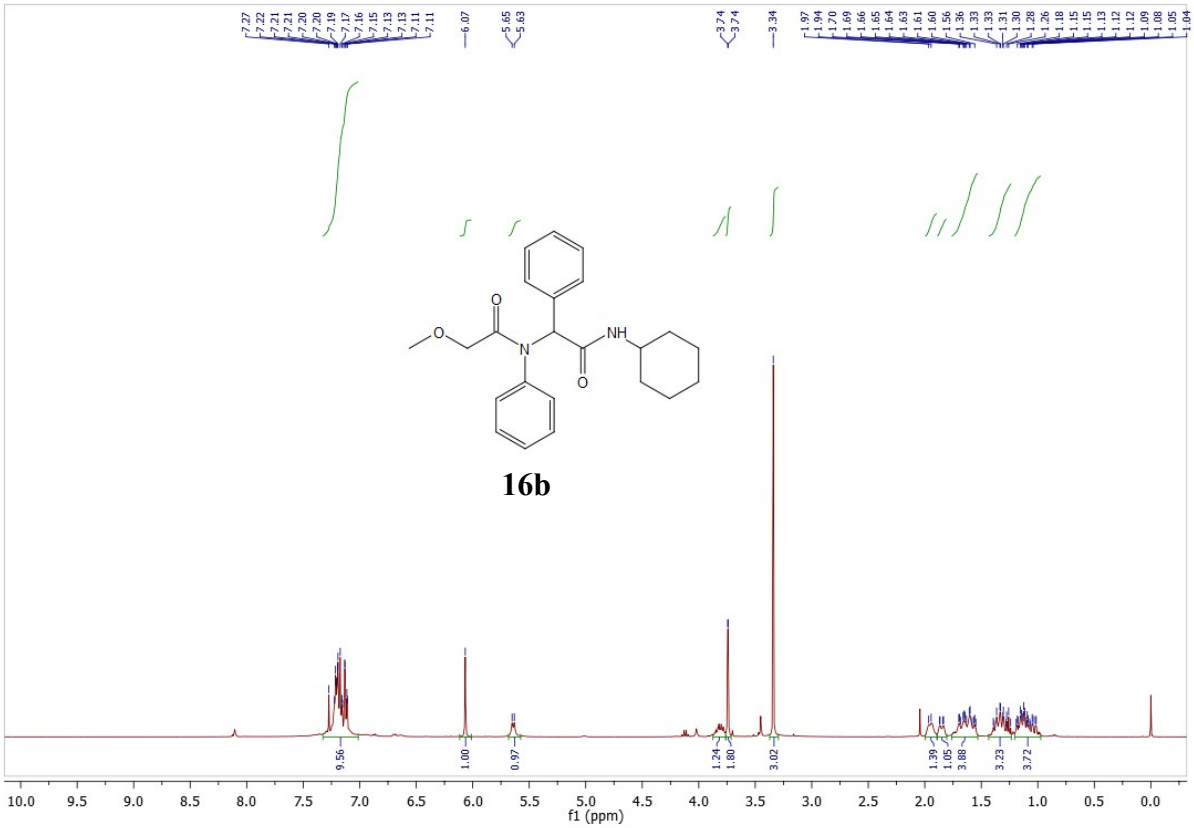


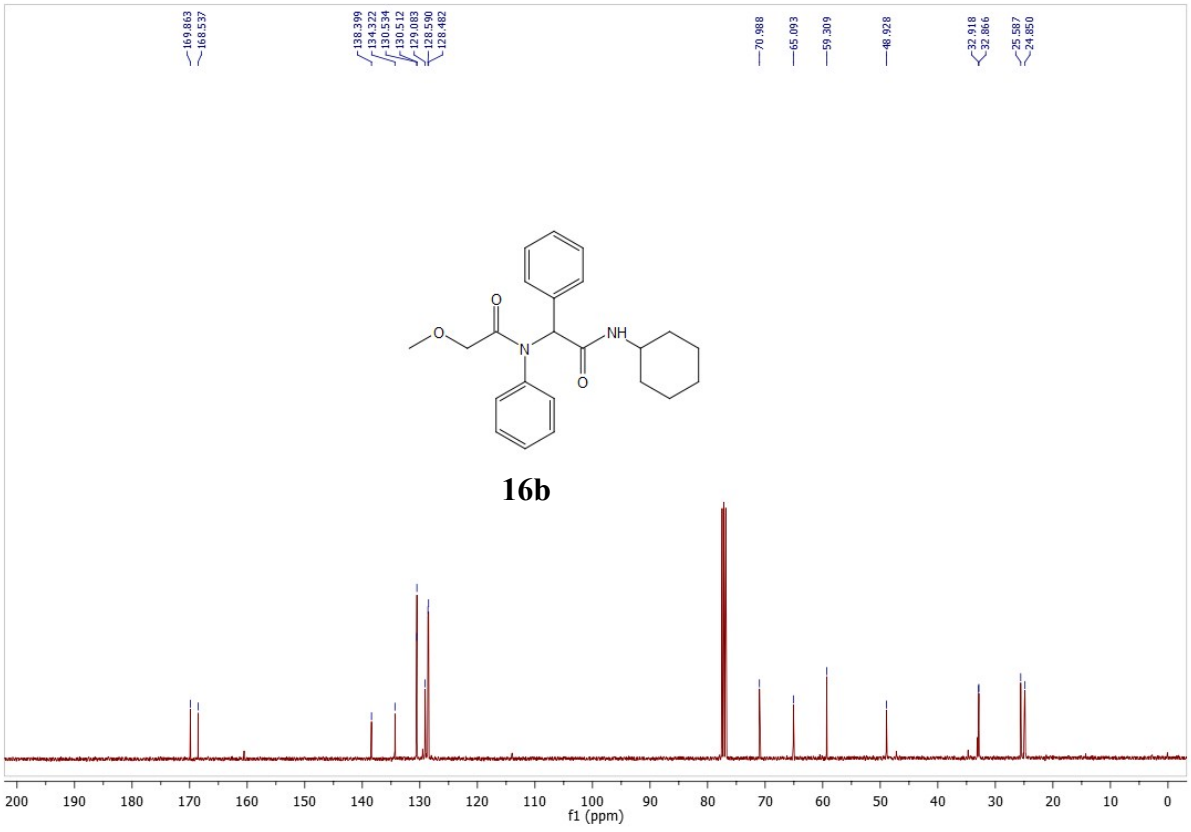
12



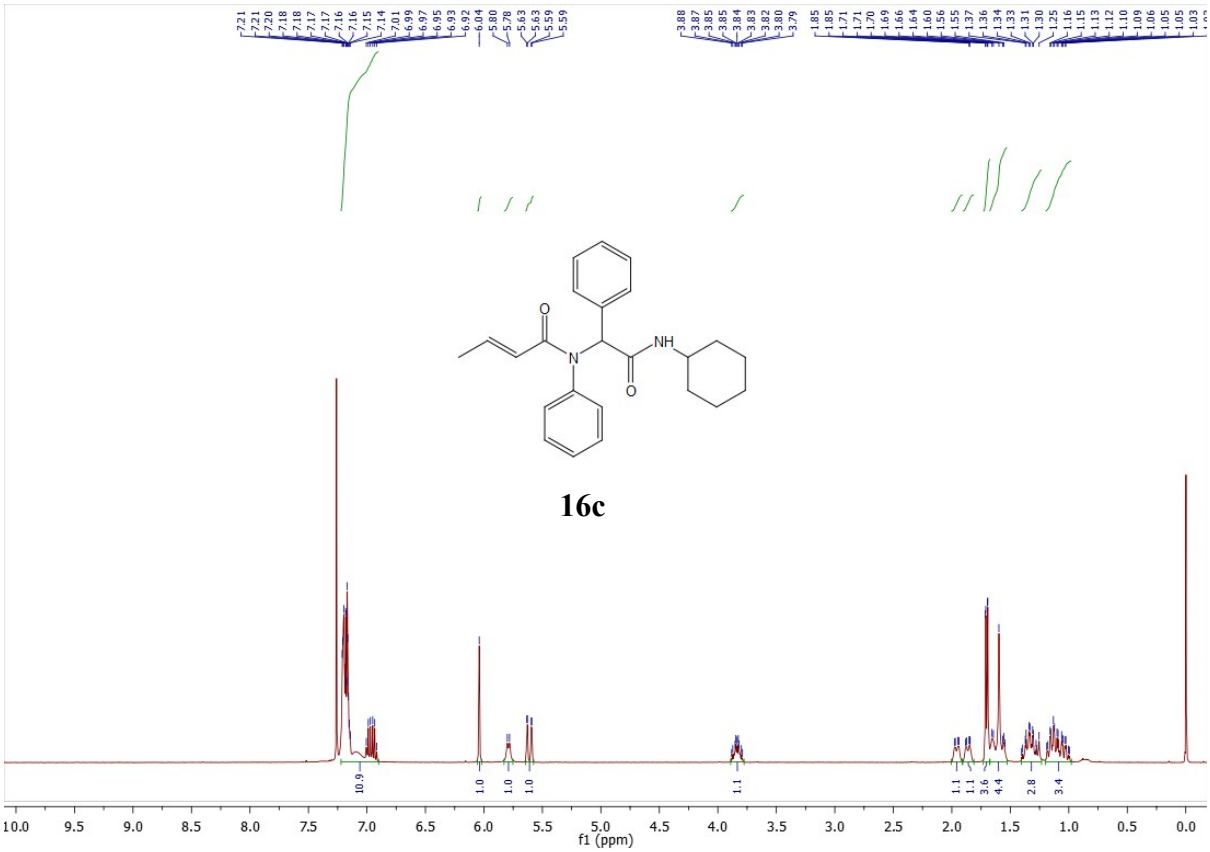
12

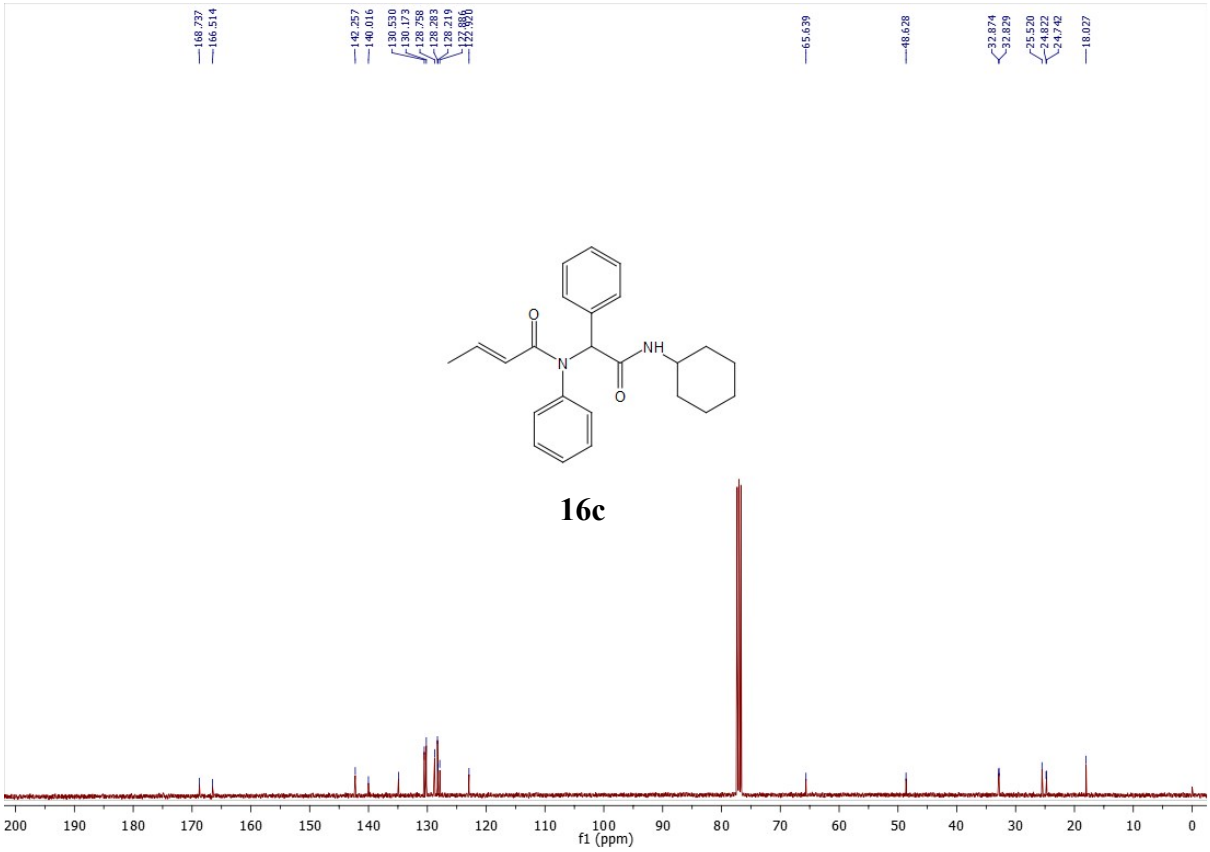
*(RS)-N-Cyclohexyl-2-(2-methoxy-N-phenylacetamido)-2-phenylacetamide (**16b**)*



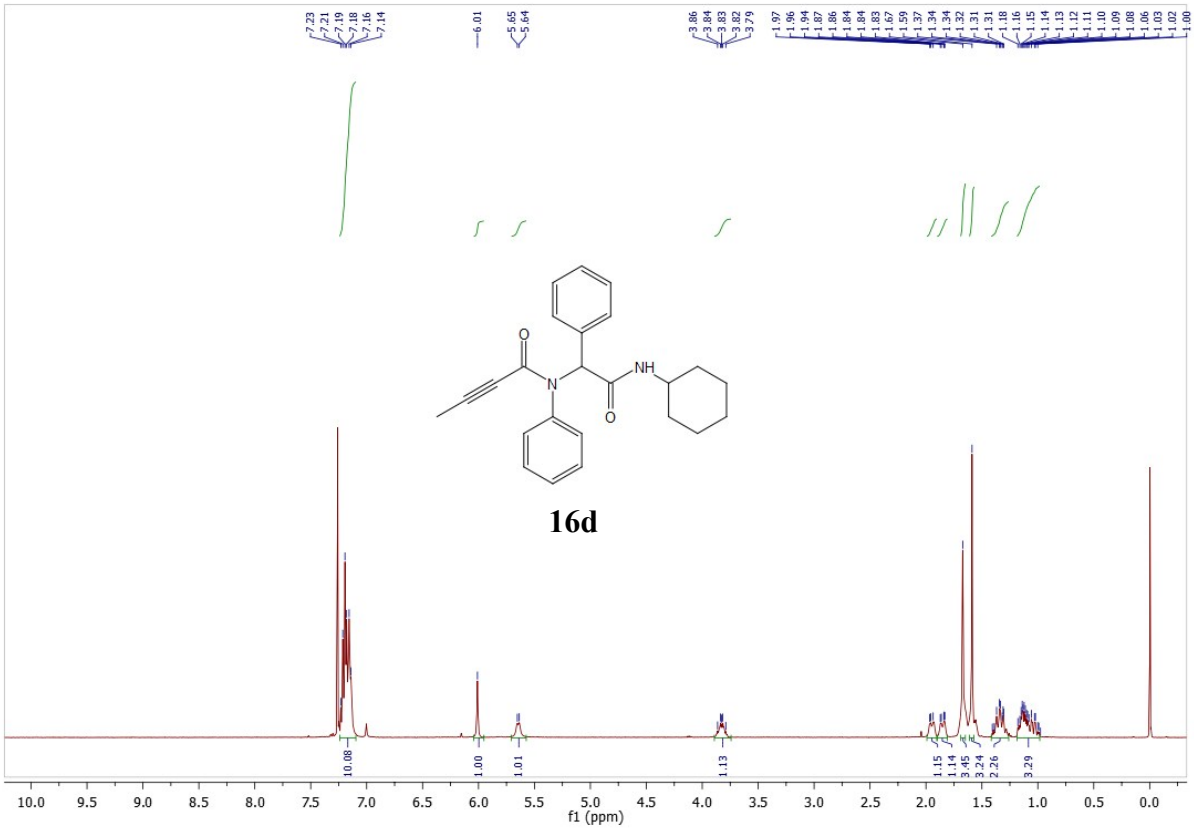


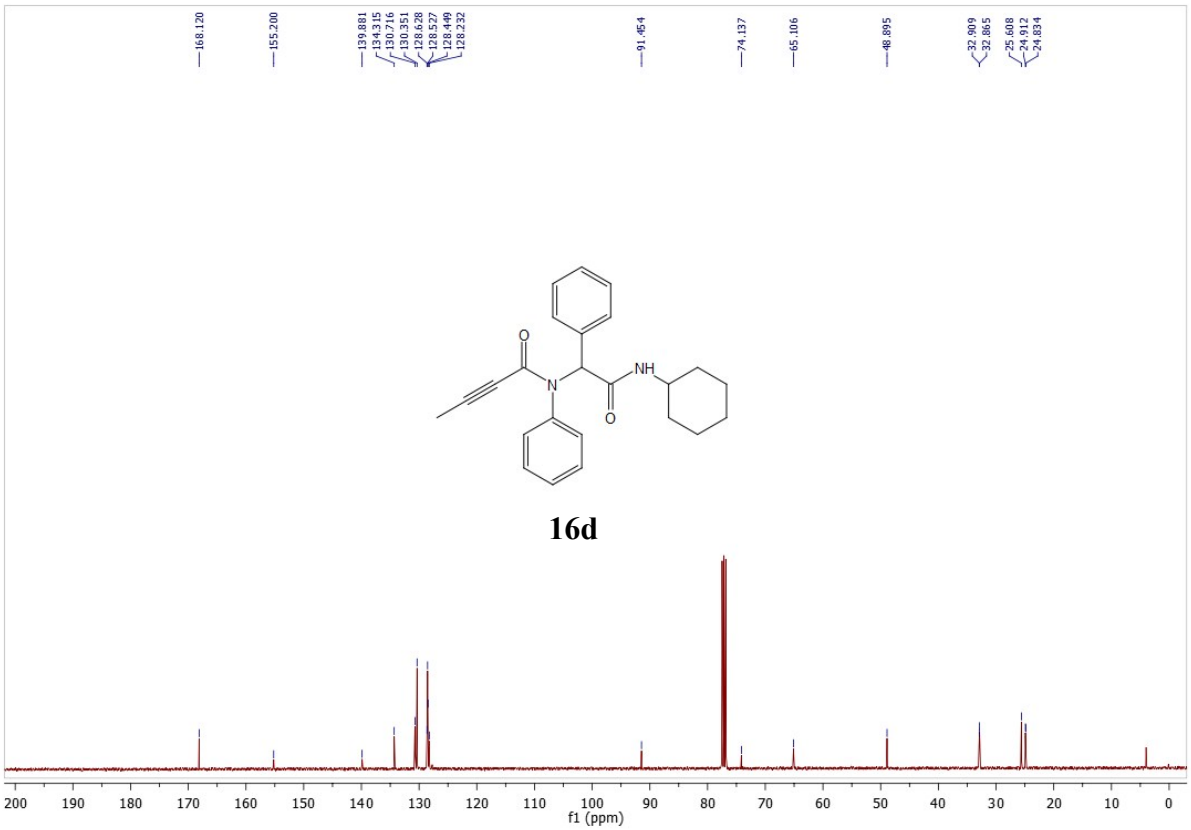
*(RS)- (E)-N-(2-(Cyclohexylamino)-2-oxo-1-phenylethyl)-N-phenylbut-2-enamide (**16c**)*



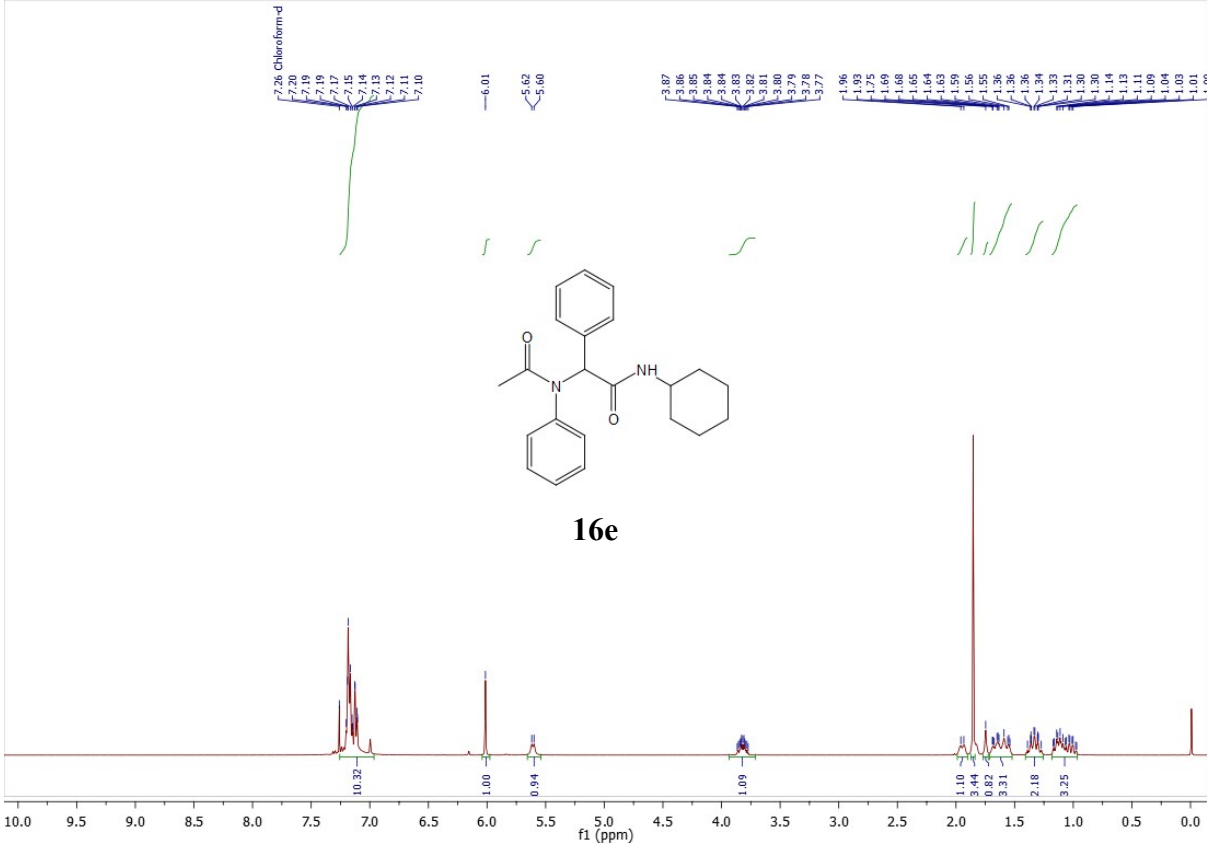


*(RS)-N-(2-(Cyclohexylamino)-2-oxo-1-phenylethyl)-N-phenylbut-2-enamide (**16d**)*

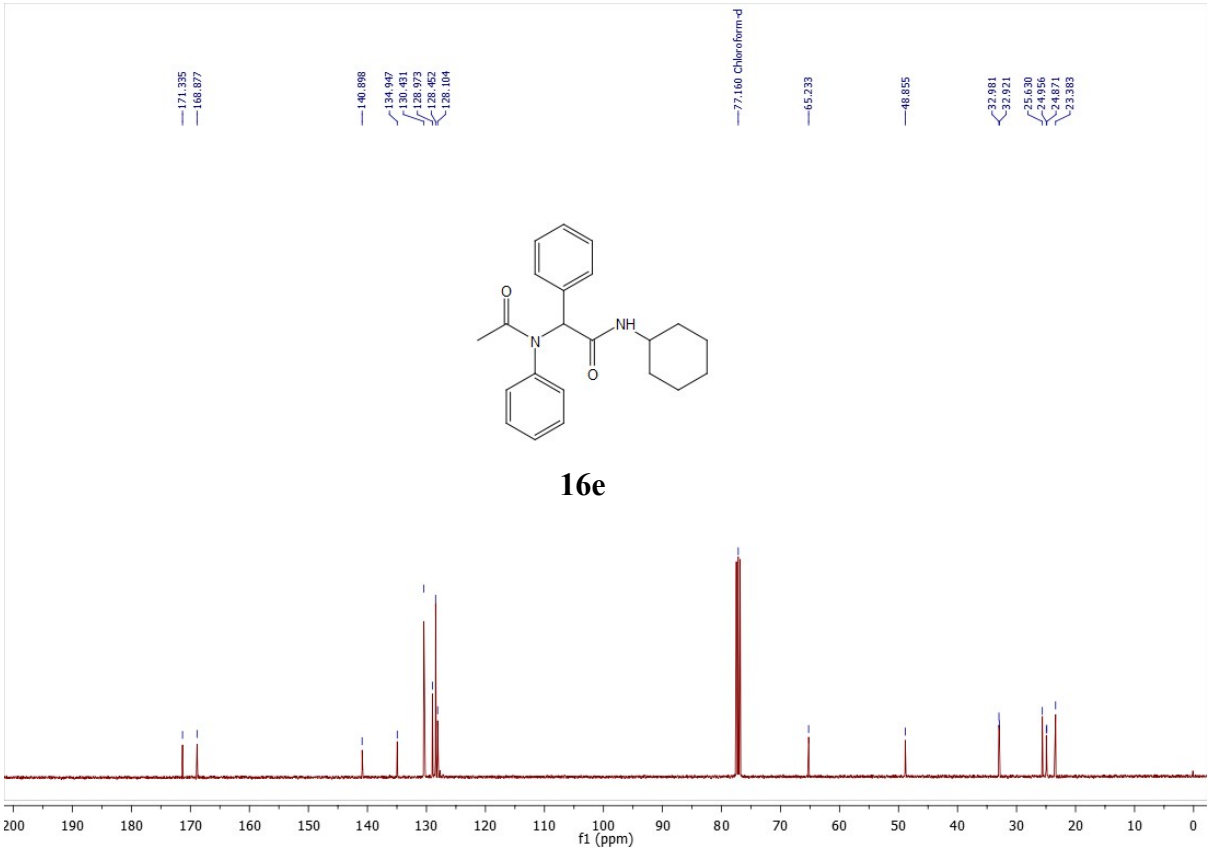




*(RS)-N-Cyclohexyl-2-phenyl-2-(N-phenylacetamido)acetamide (**16e**)*

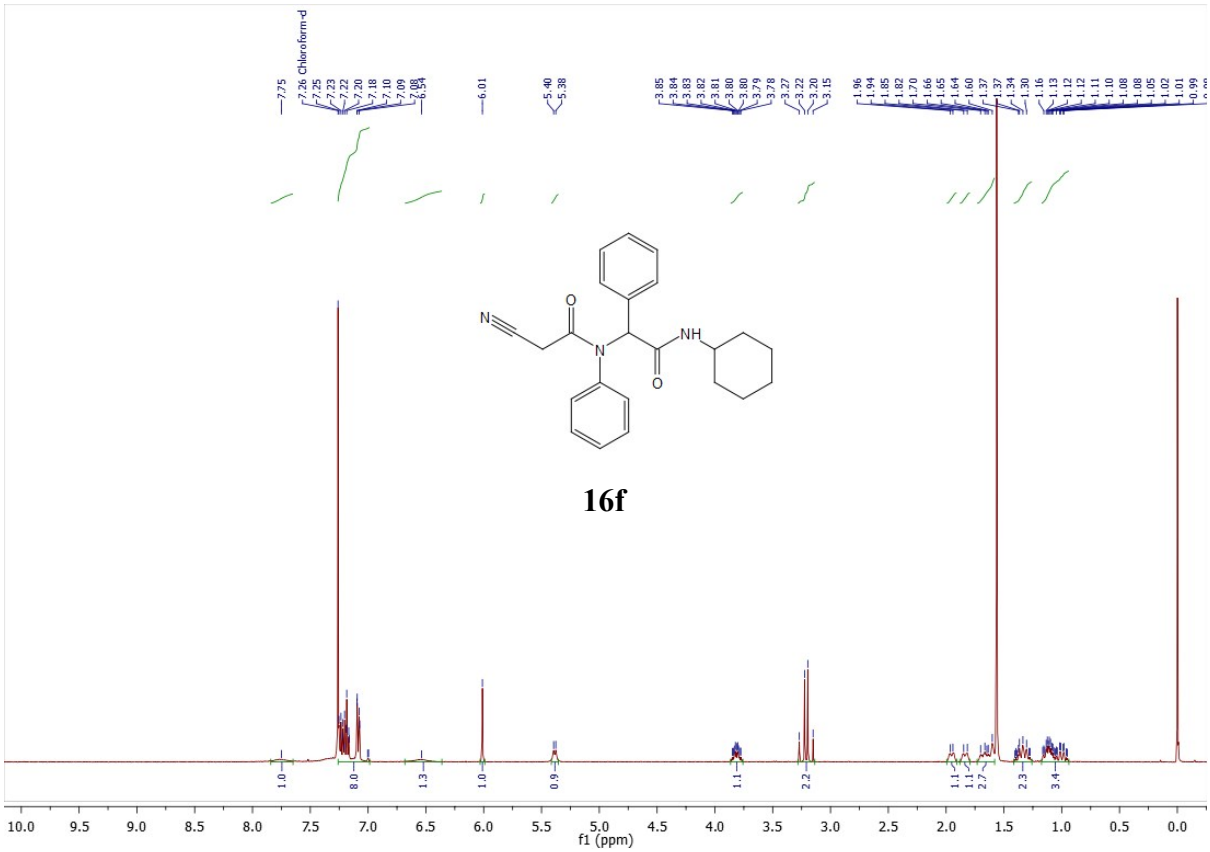


16e



16e

*(RS)-2-Cyano-N-(2-(cyclohexylamino)-2-oxo-1-phenylethyl)-N-phenylacetamide (**16f**)*



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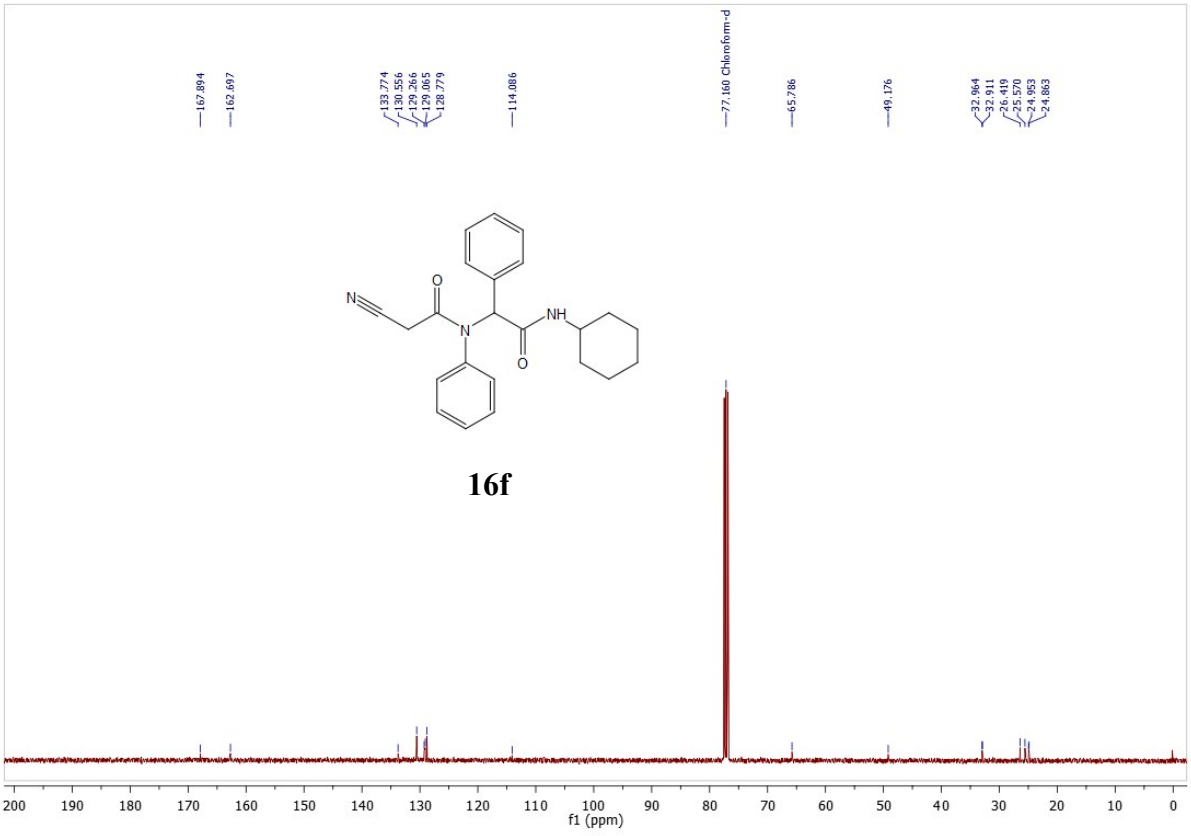
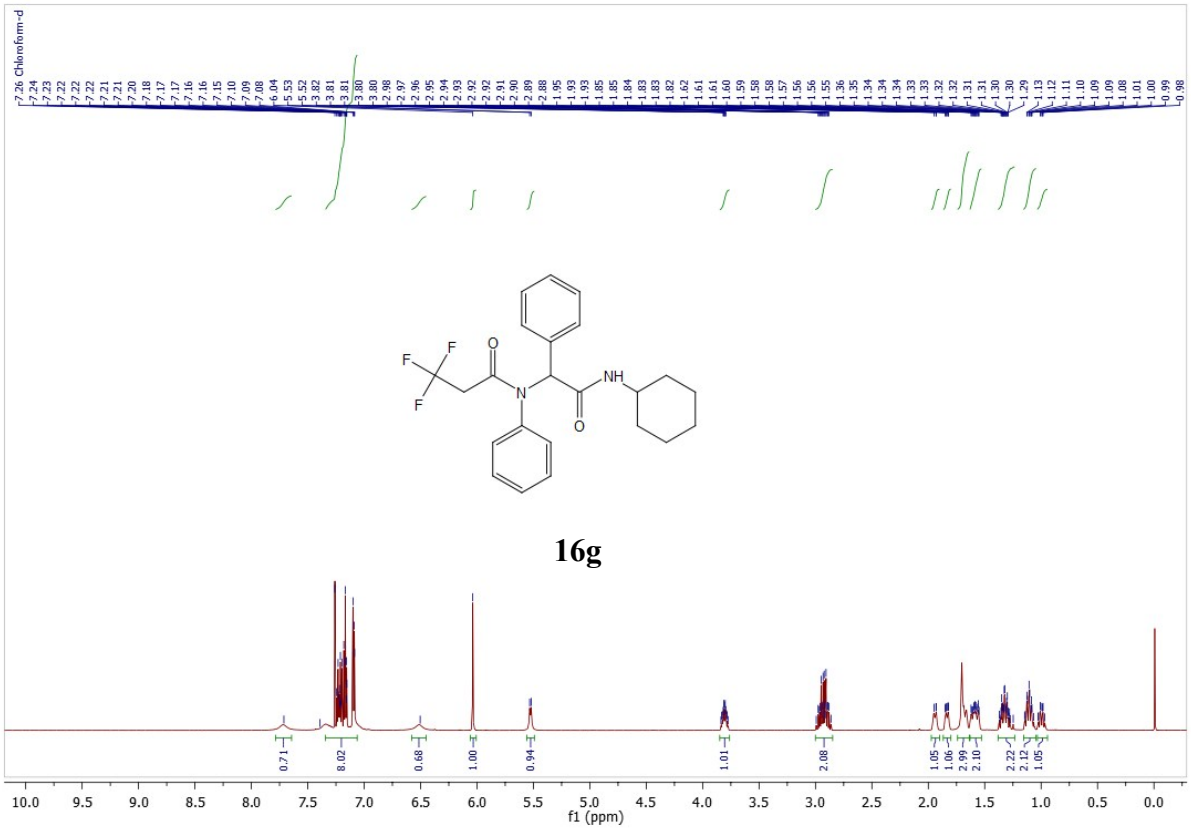
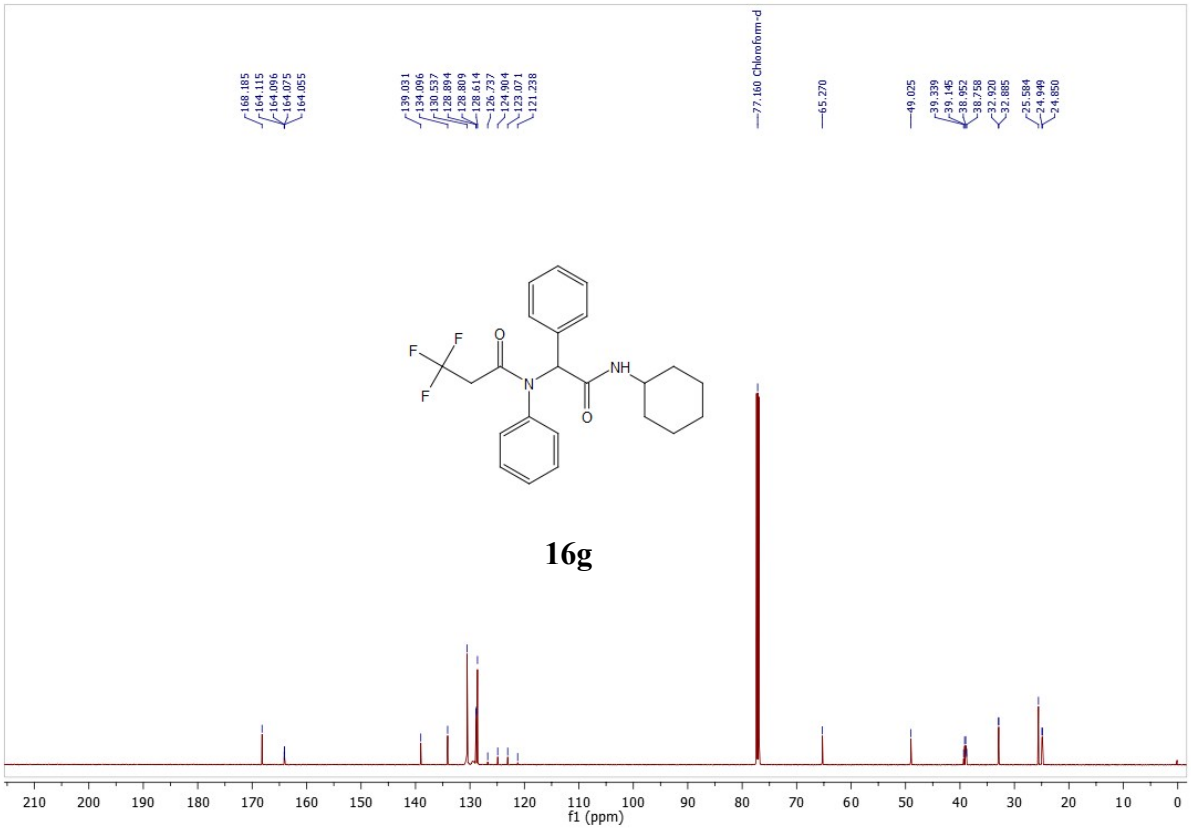


16f

*(RS)-N-(2-(cyclohexylamino)-2-oxo-1-phenylethyl)-3,3,3-trifluoro-N-phenylpropanamide (**16g**)*

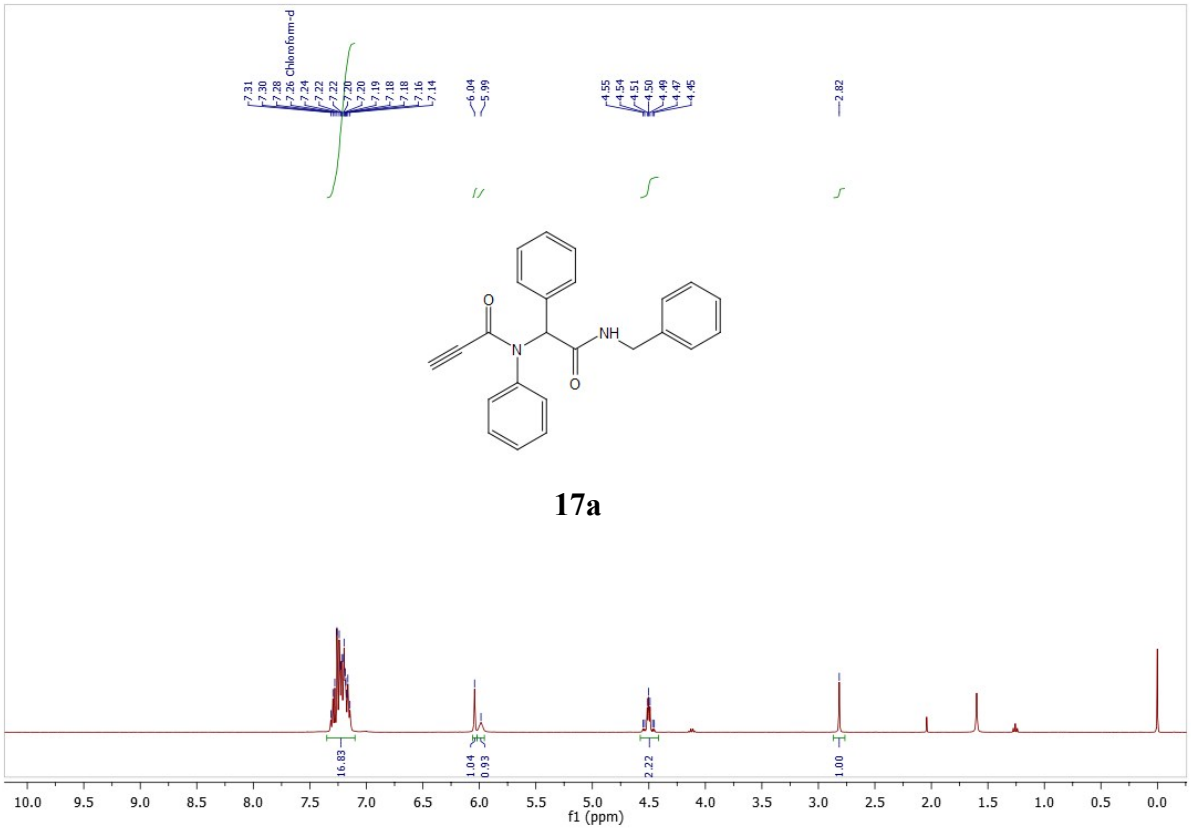


16g

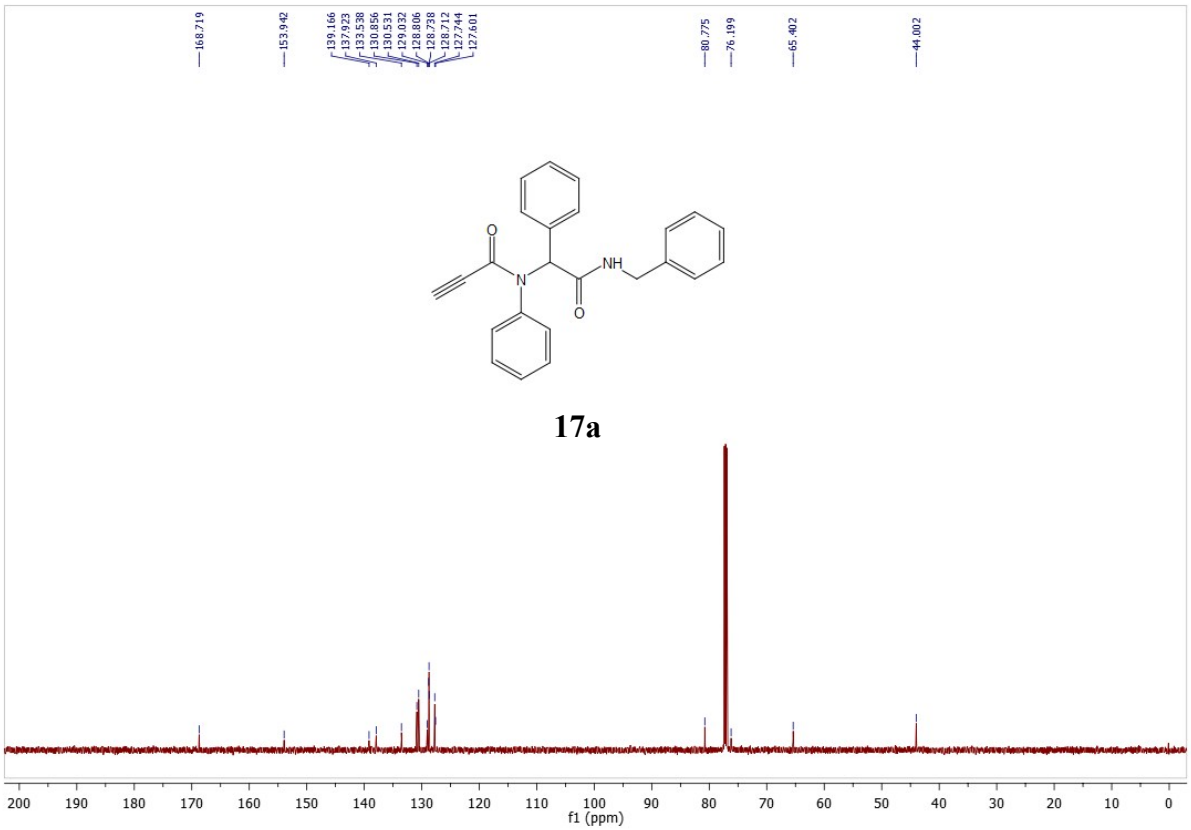


16g

*(RS)-N-(2-(Benzylamino)-2-oxo-1-phenylethyl)-N-phenylpropiolamide (**17a**)*

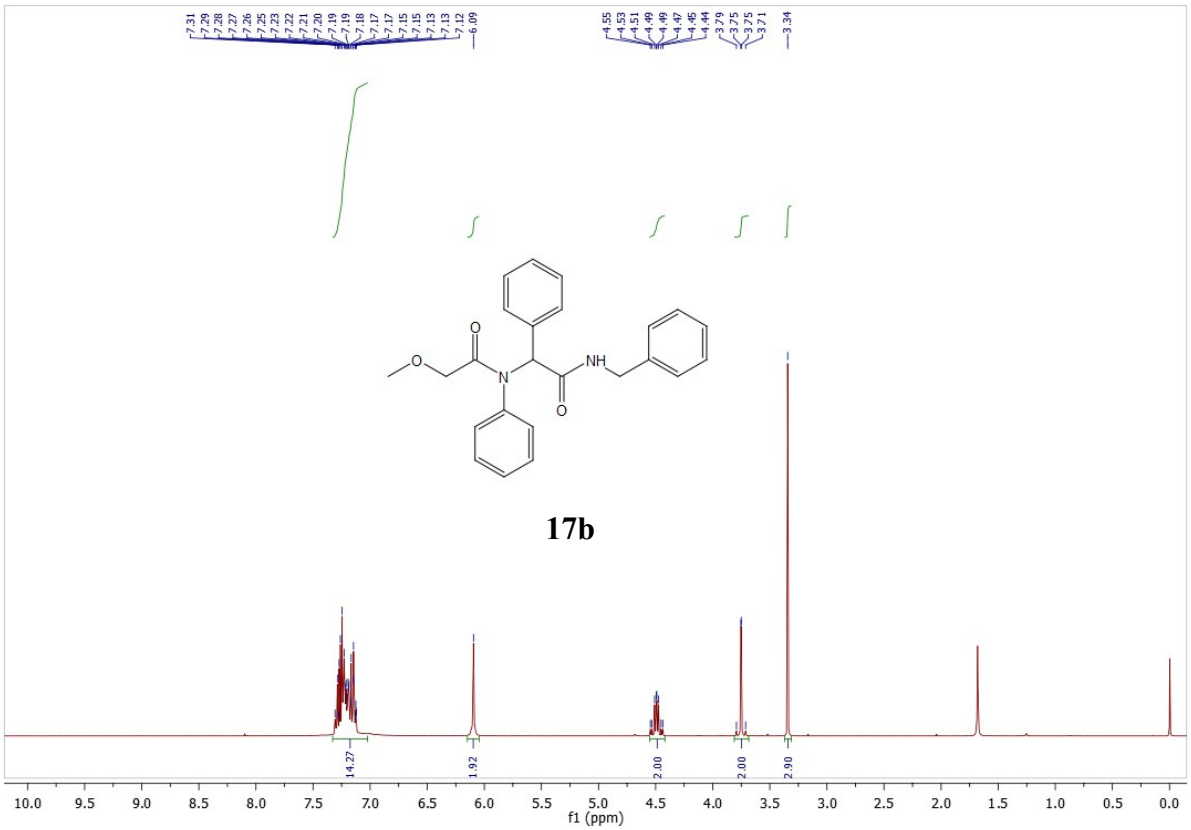


17a



17a

*(RS)-N-Benzyl-2-(2-methoxy-N-phenylacetamido)-2-phenylacetamide (**17b**)*



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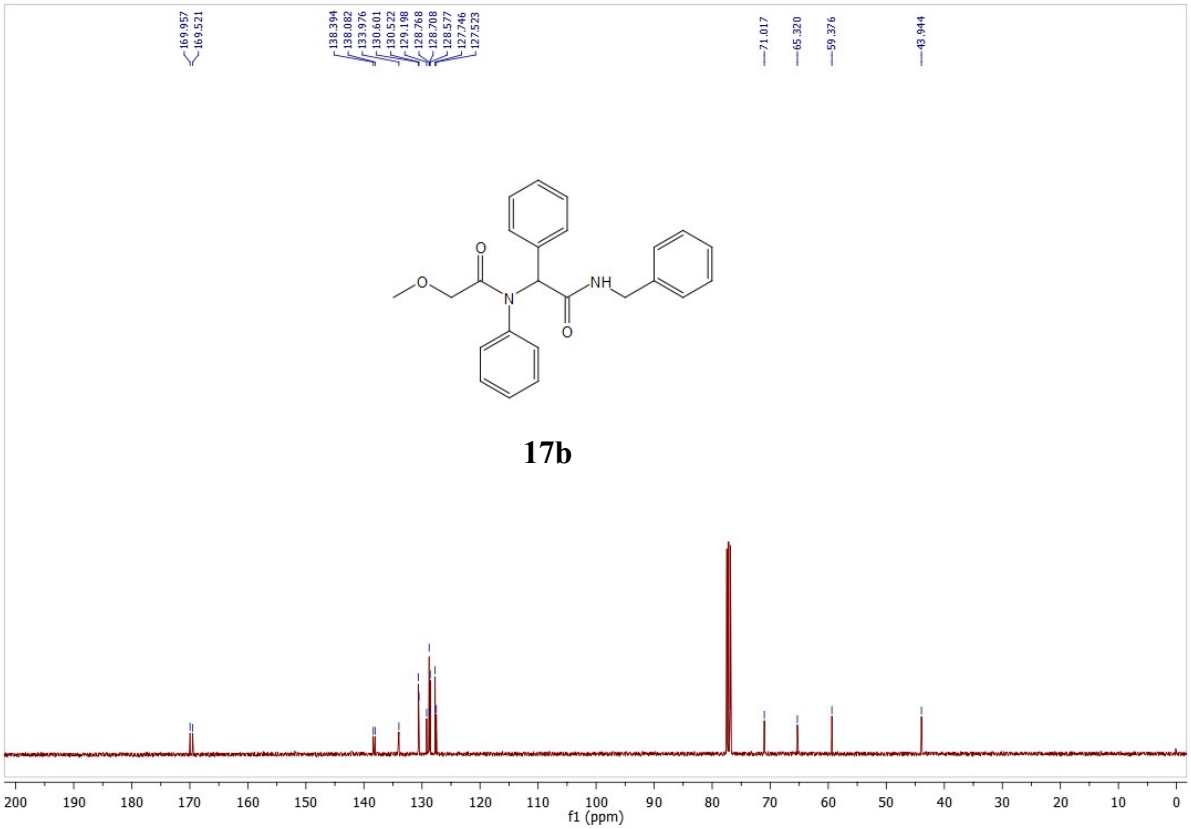
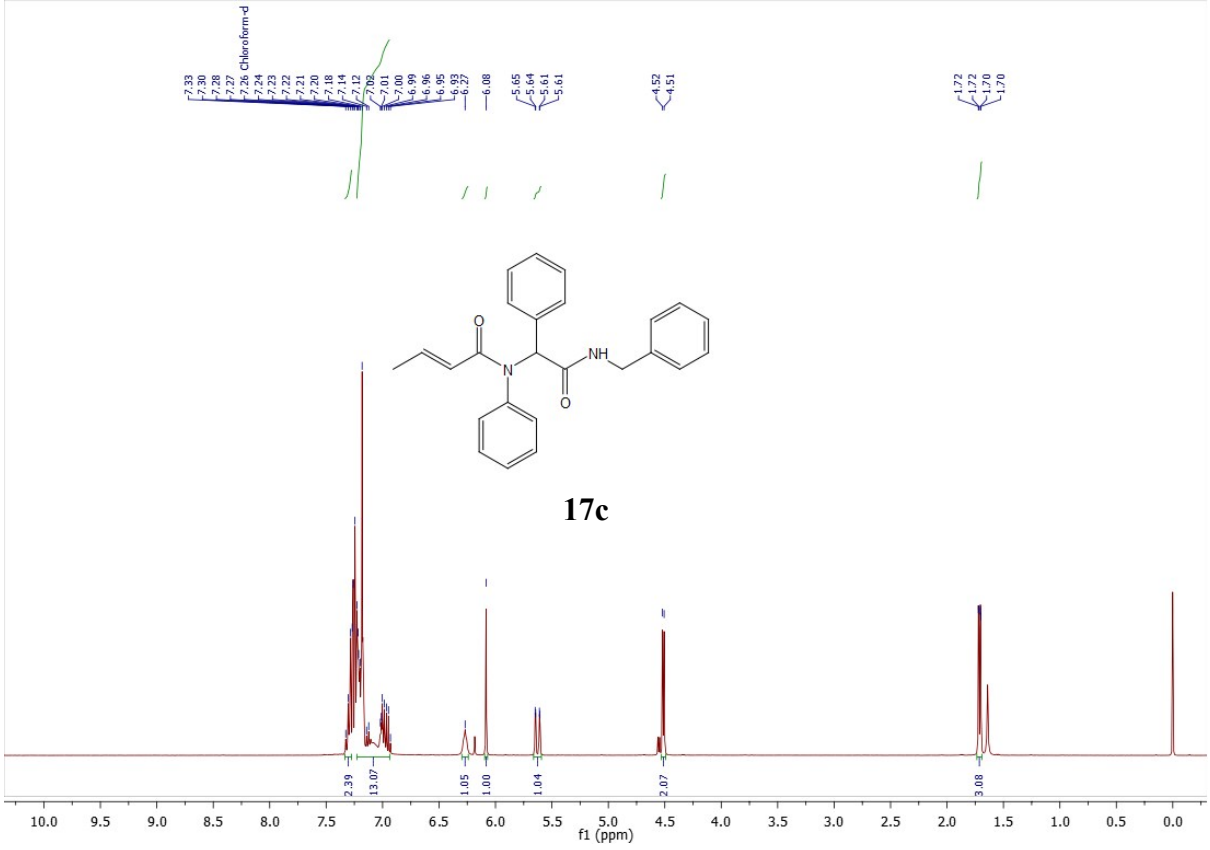
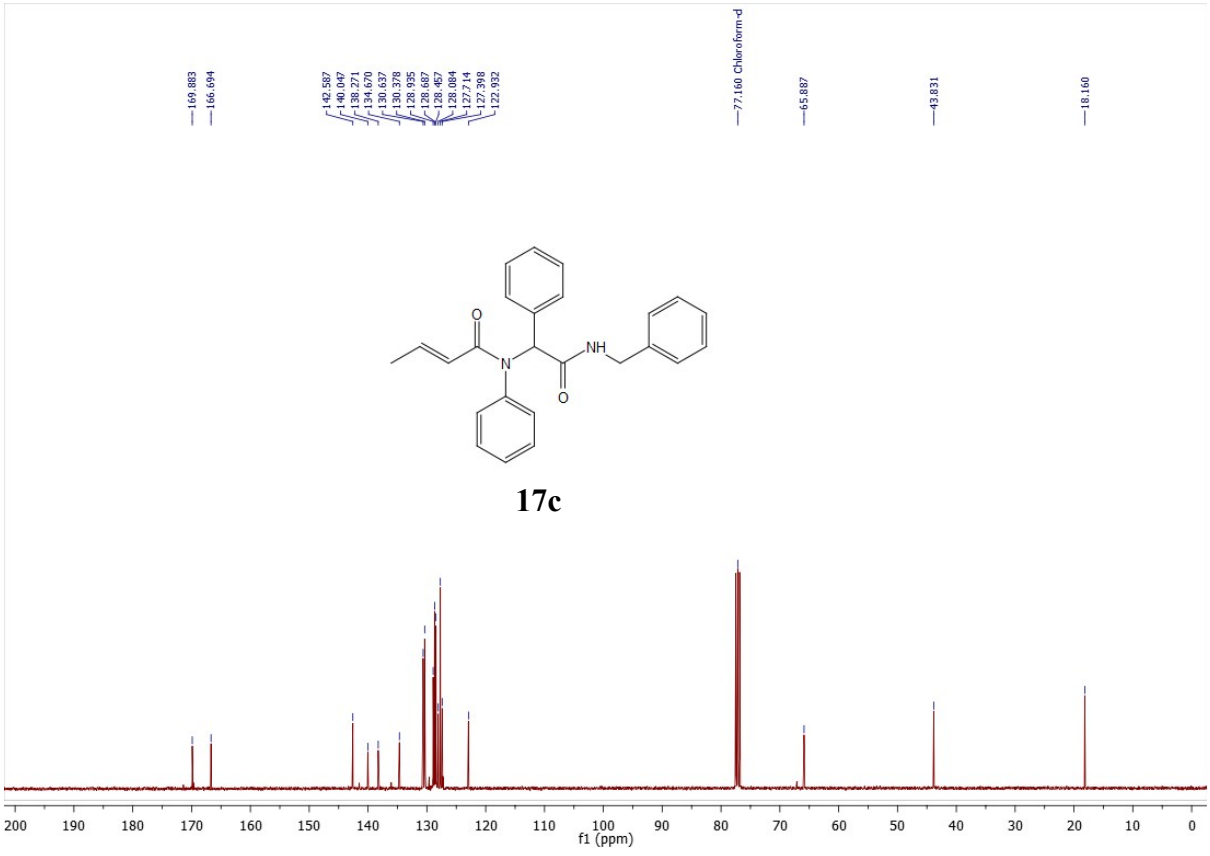


17b

*(RS)-(E)-N-(2-(benzylamino)-2-oxo-1-phenylethyl)-N-phenylbut-2-enamide (**17c**)*

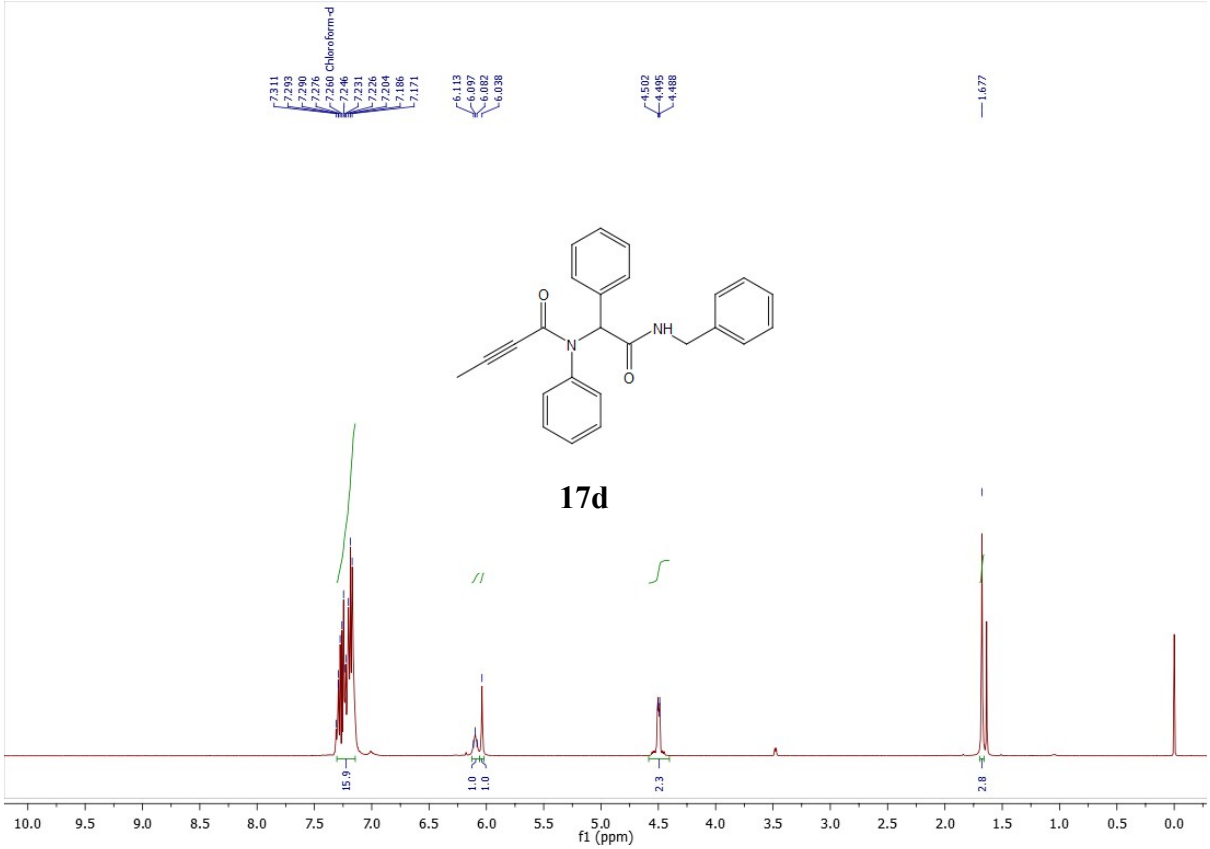


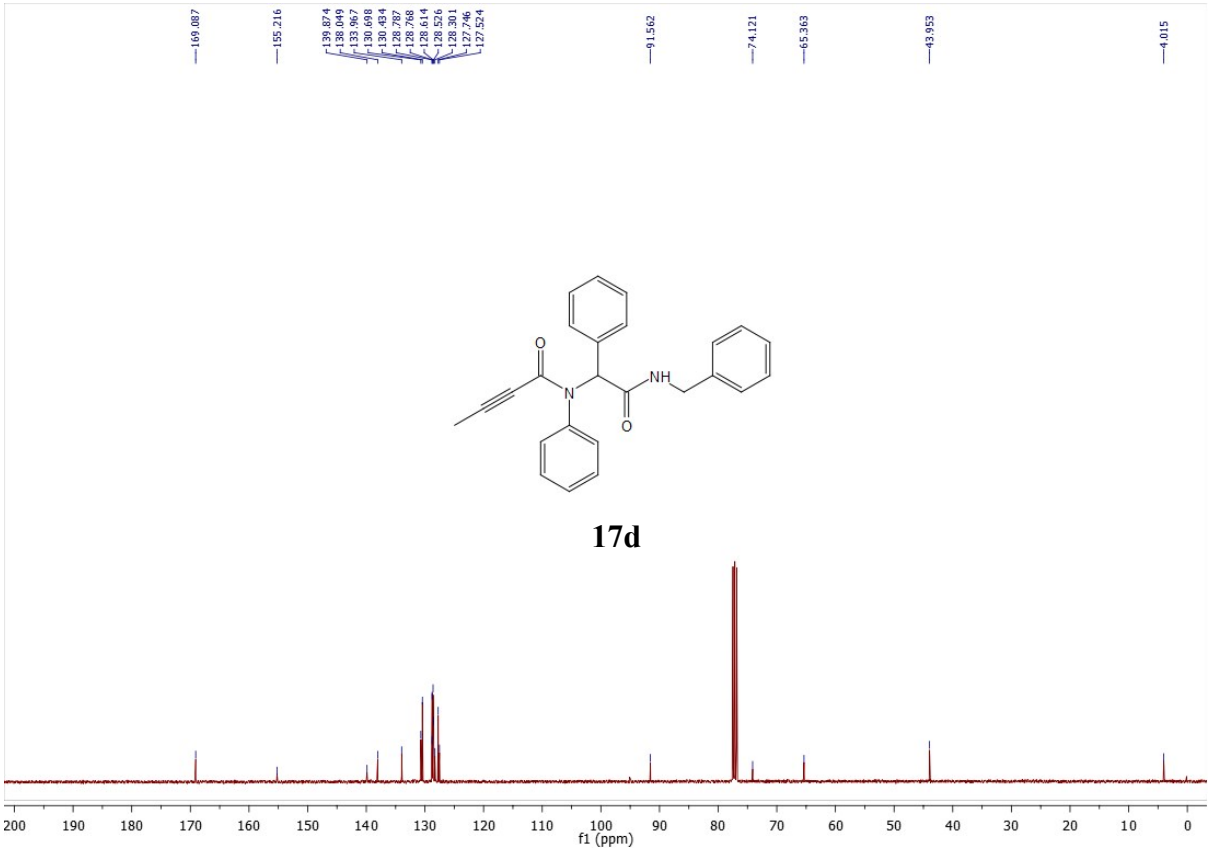
17c



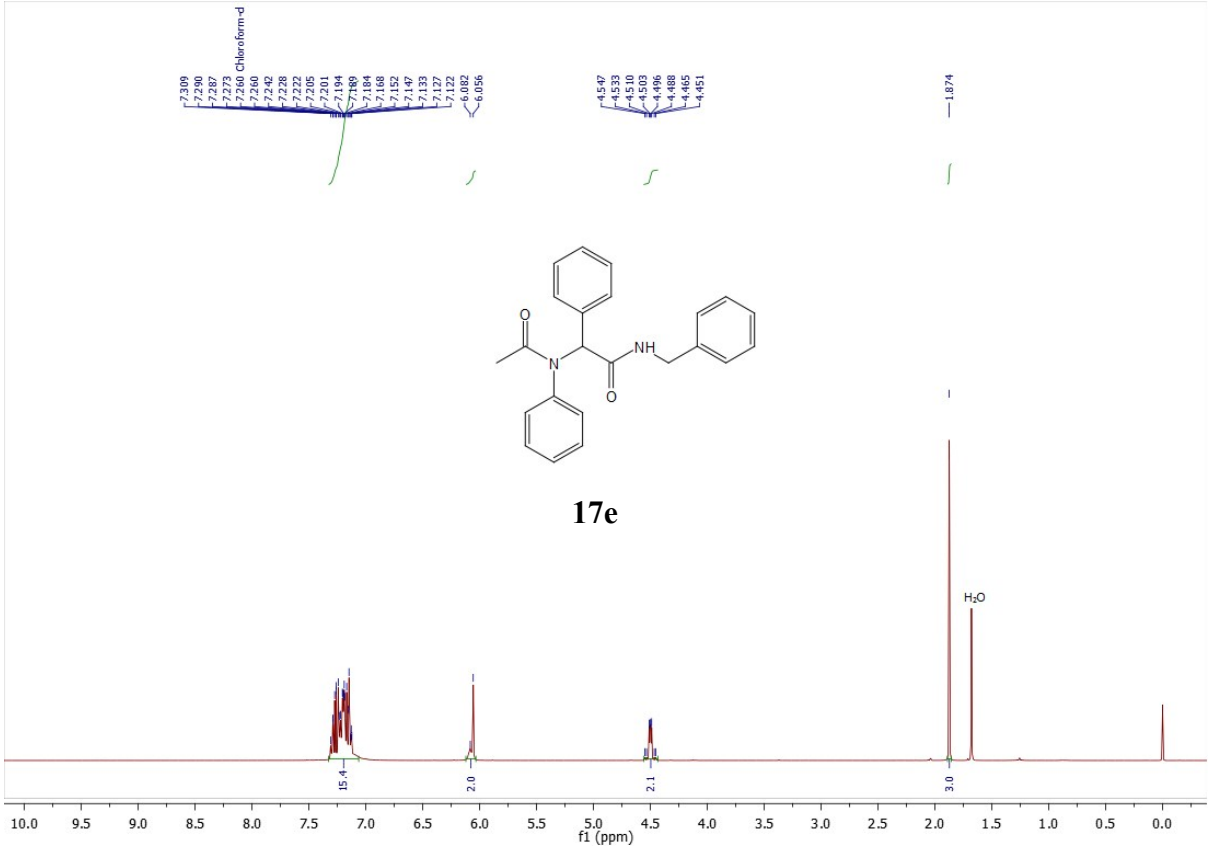
17c

*(RS)-N-(2-(Benzylamino)-2-oxo-1-phenylethyl)-N-phenylbut-2-ynamide (**17d**)*

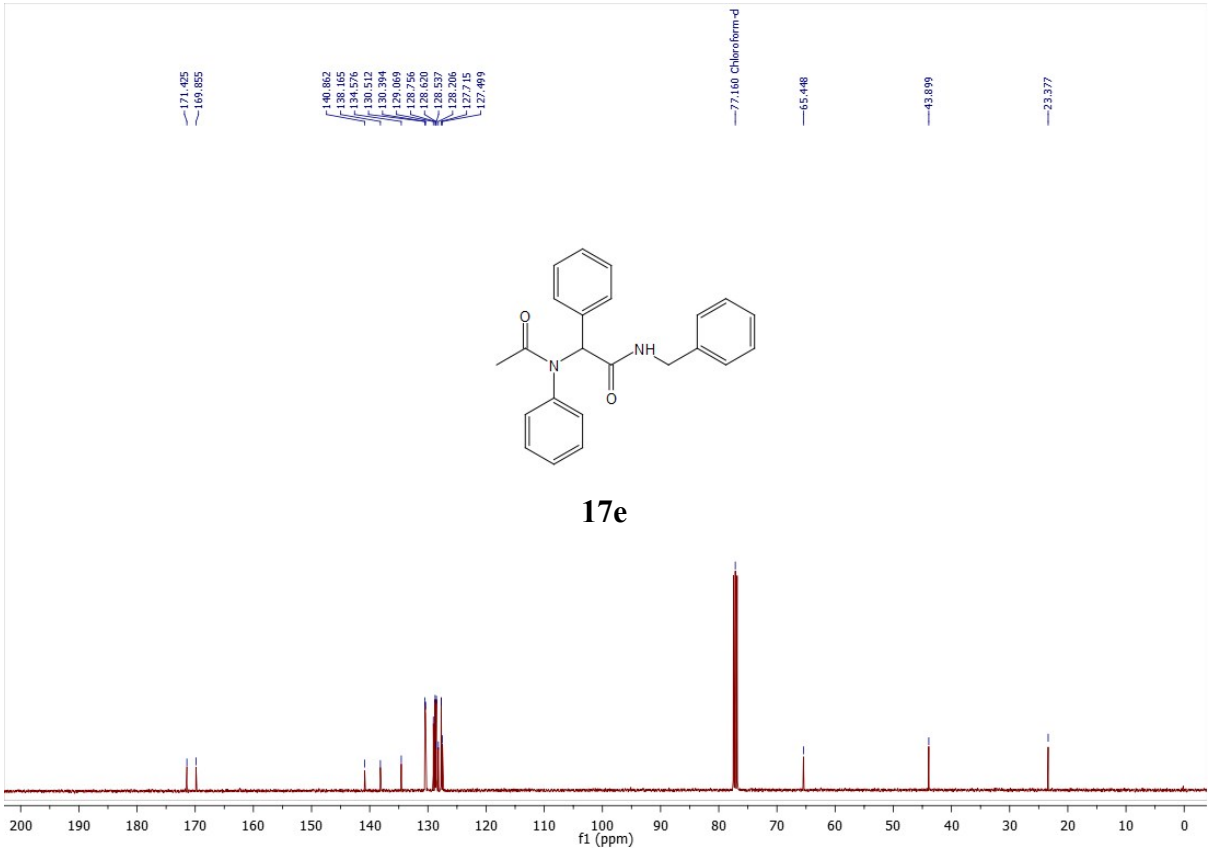




*(RS)-N-Benzyl-2-phenyl-2-(N-phenylacetamido)acetamide (**17e**)*

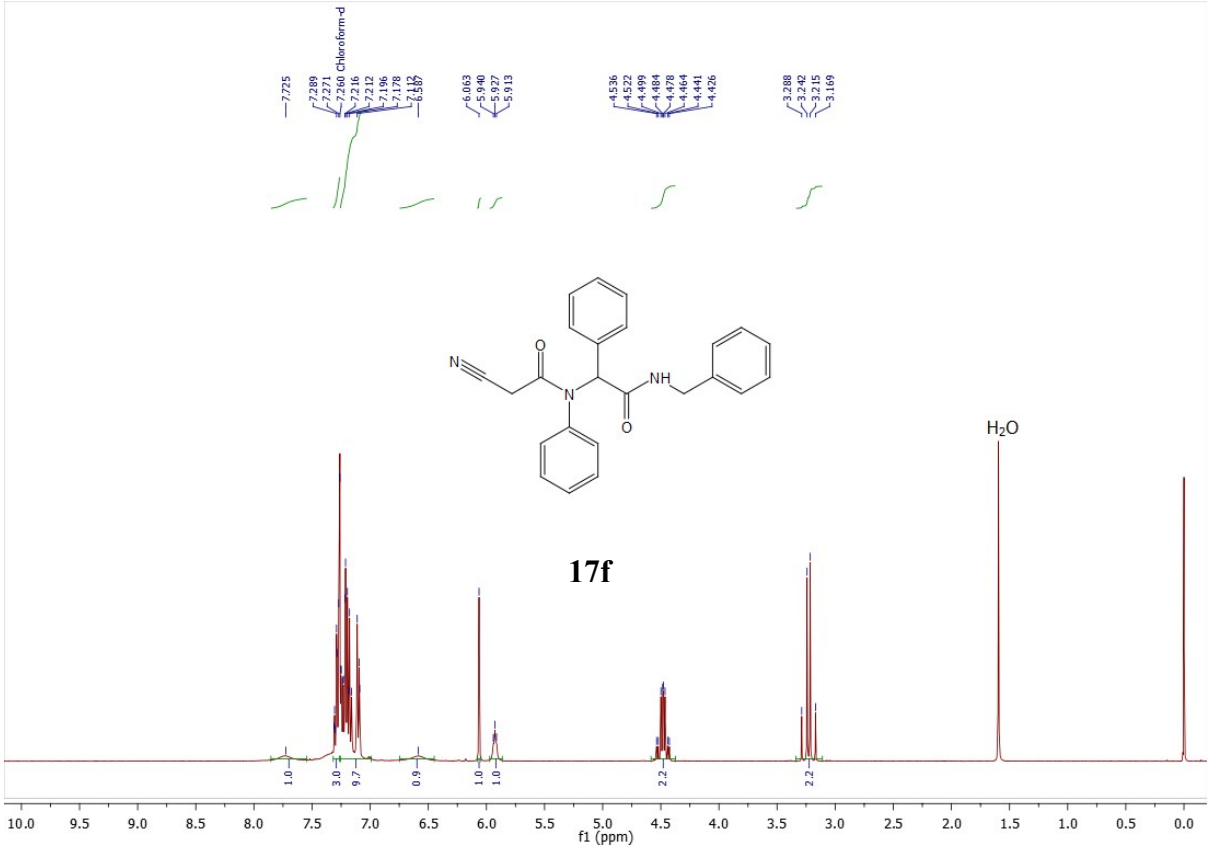


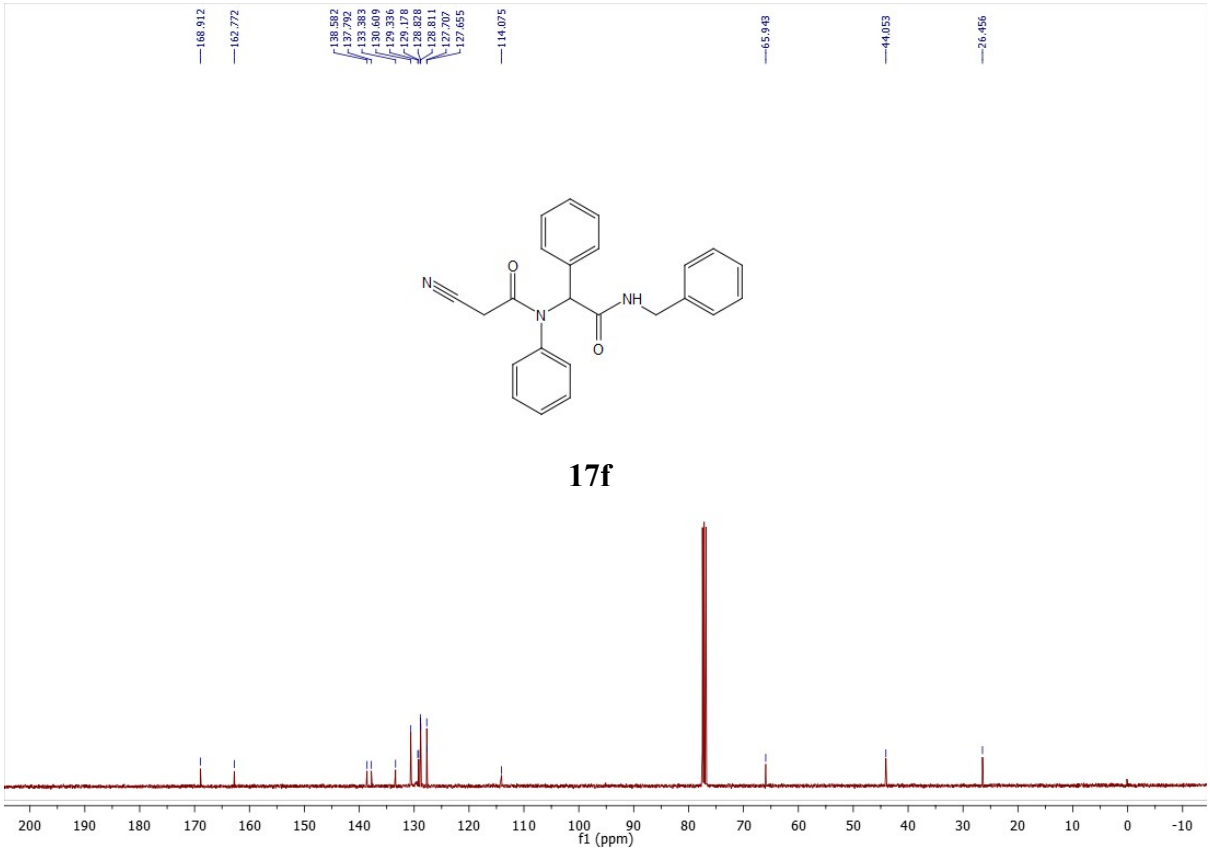
17e



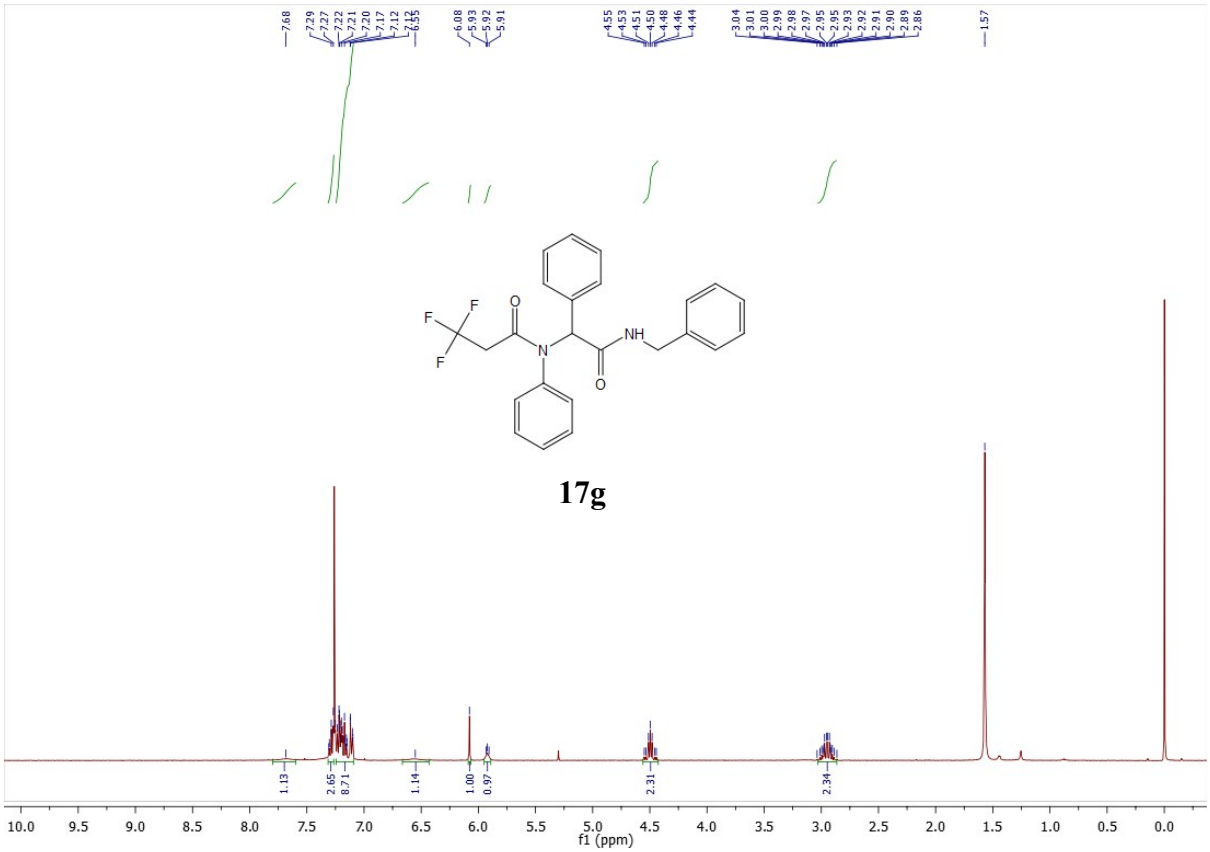
17e

*(RS)-N-Benzyl-2-(2-cyano-N-phenylacetamido)-2-phenylacetamide (**17f**)*





*(RS)-N-(2-(Benzylamino)-2-oxo-1-phenylethyl)-3,3,3-trifluoro-N-phenylpropanamide (**17g**)*



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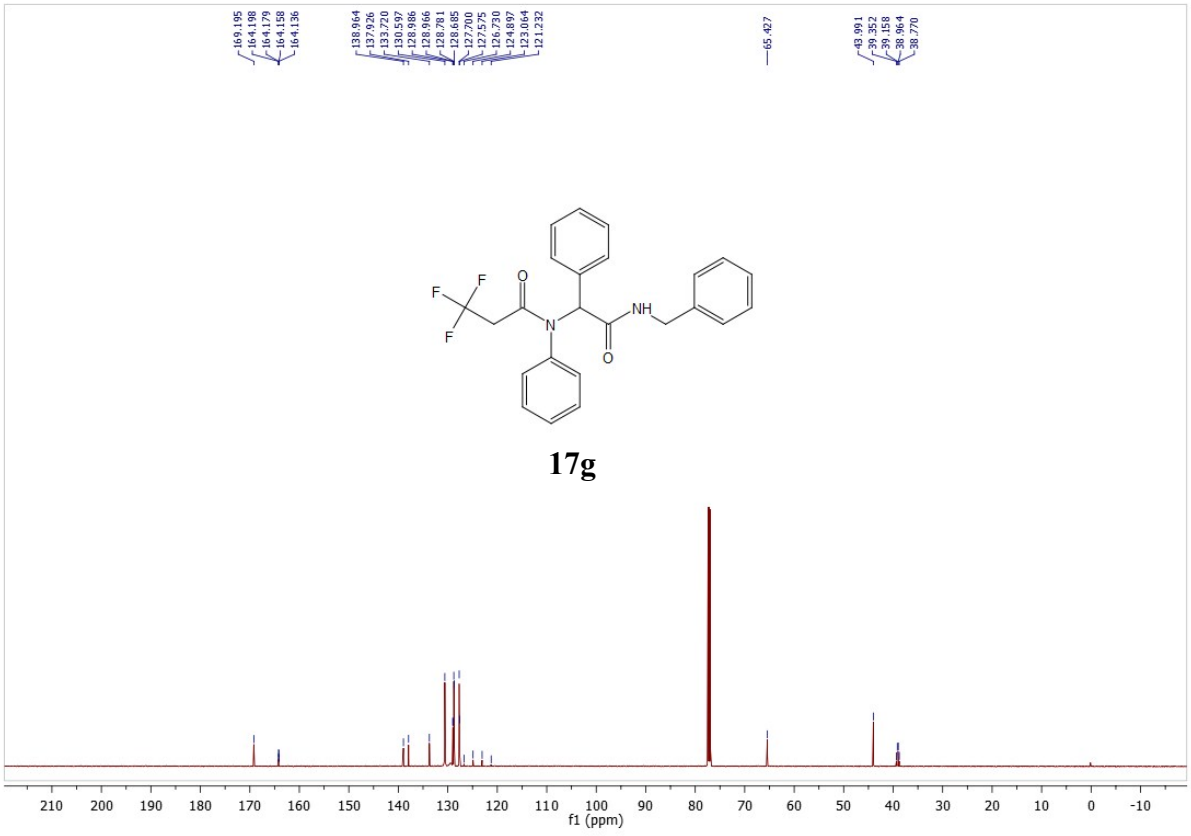
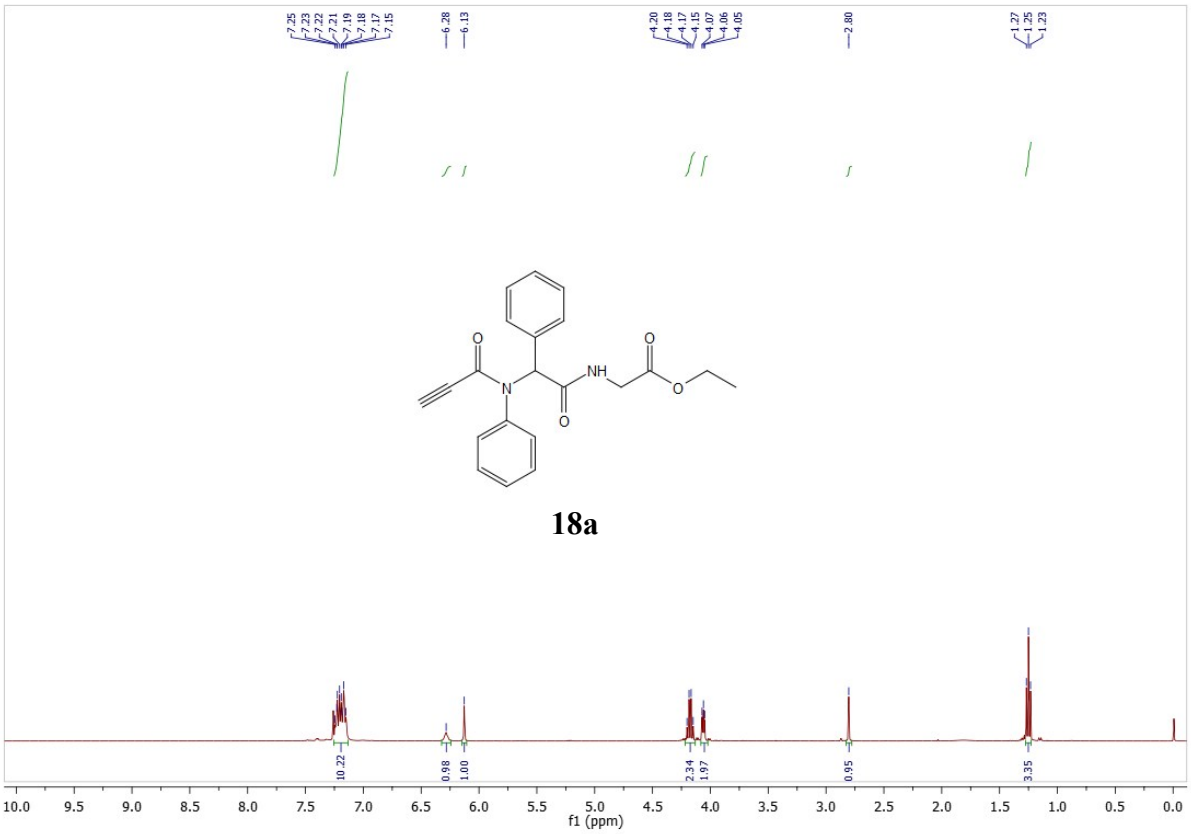
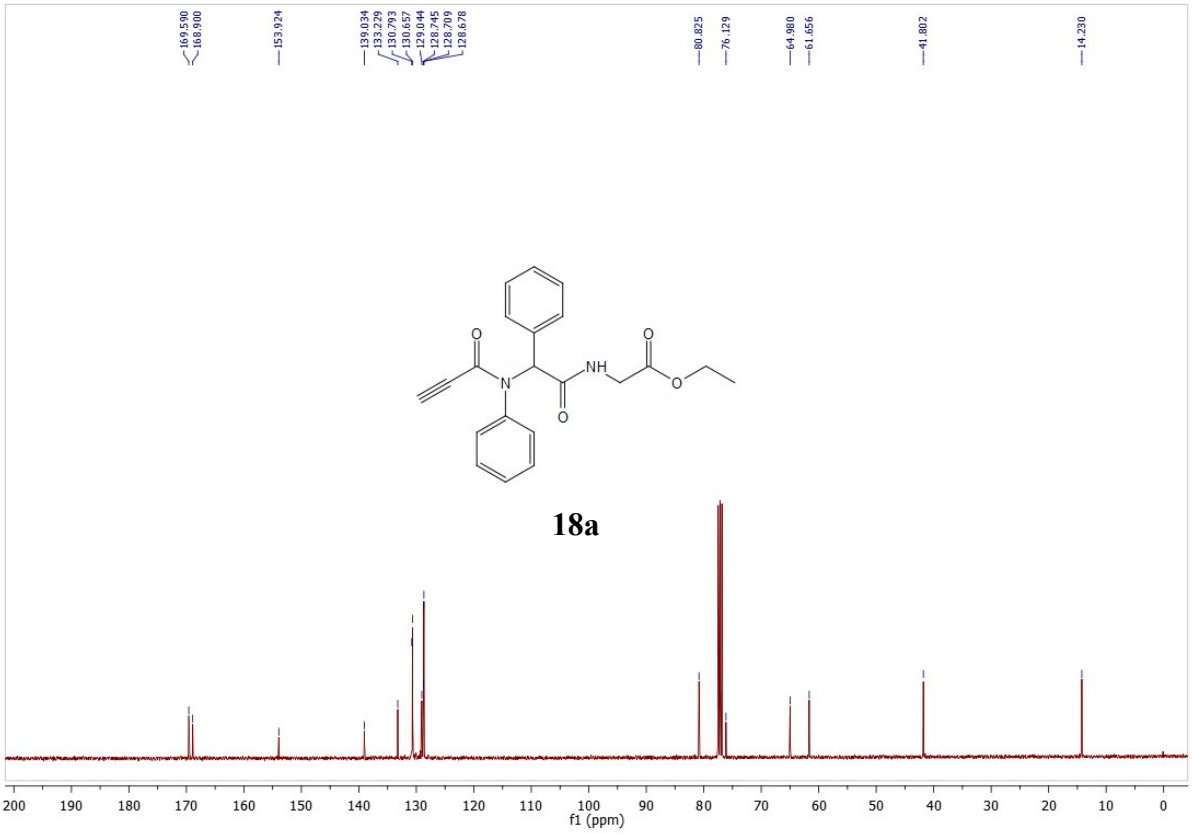


17g

*(RS)-Ethyl (2-phenyl-2-(N-phenylpropiolamido)acetyl)glycinate (**18a**)*

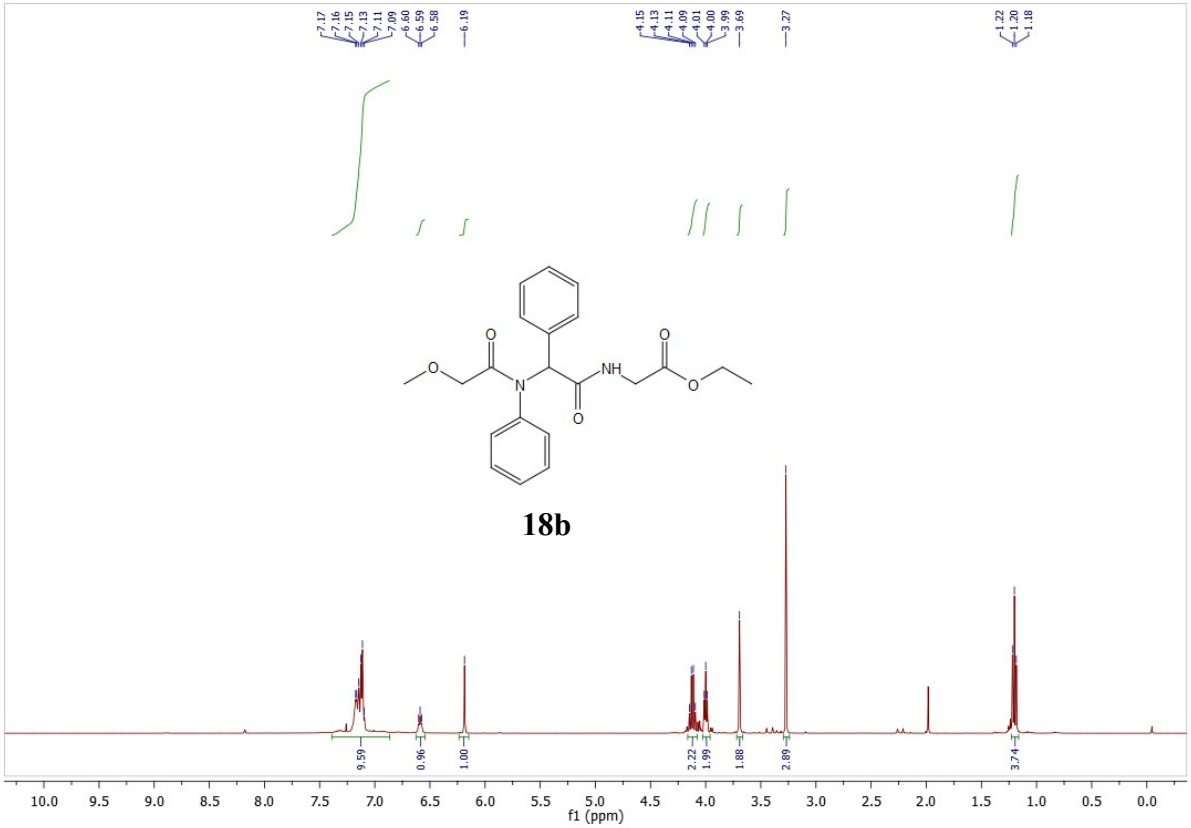


18a

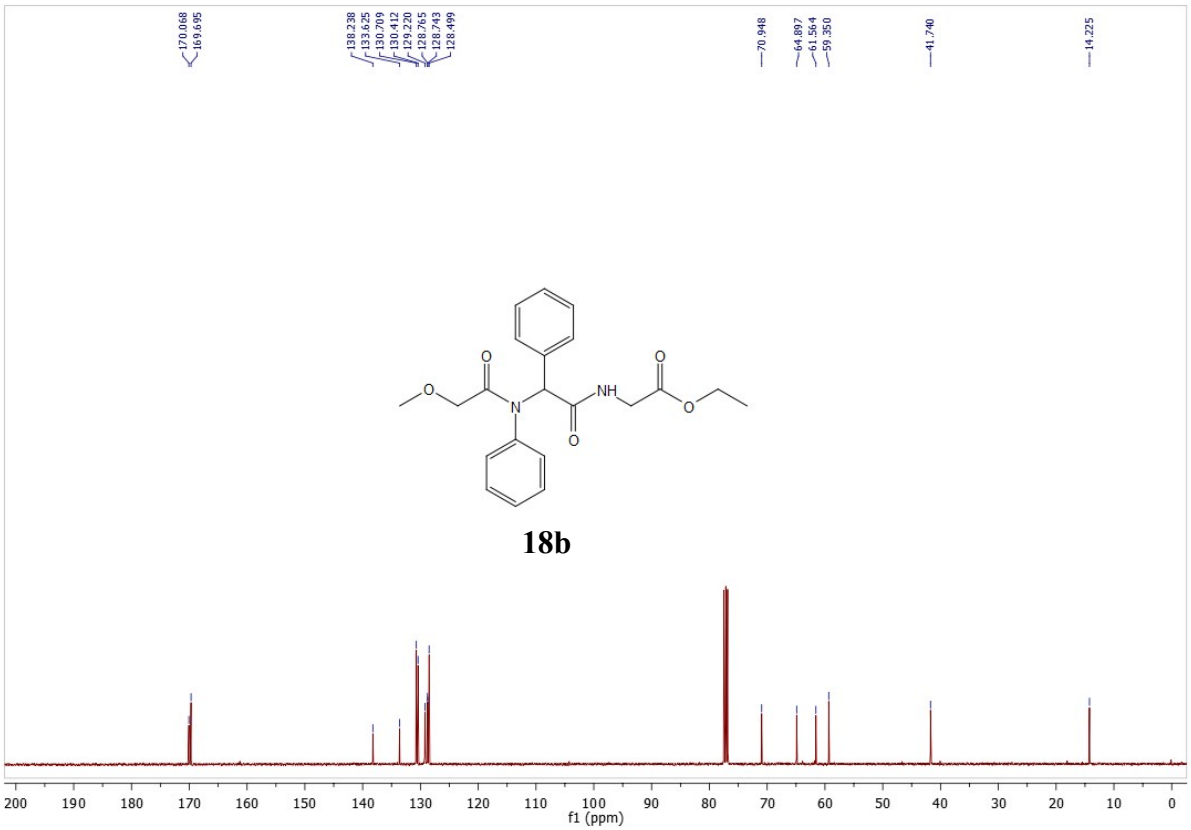


18a

*(RS)-Ethyl (2-(2-methoxy-N-phenylacetamido)-2-phenylacetyl)glycinate (**18b**)*

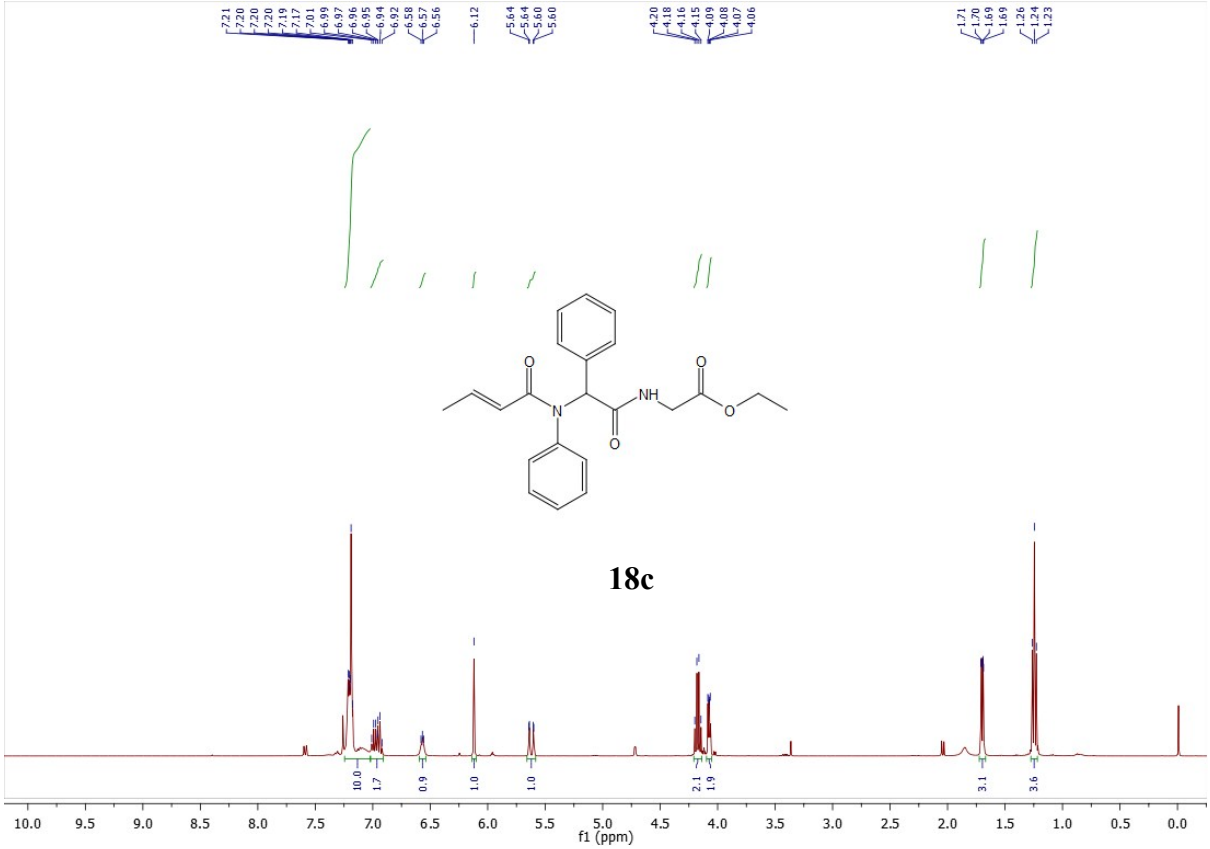


18b



18b

*(RS)-(E)-Ethyl 2-(2-phenyl-2-(N-phenylbut-2-enamido)acetamido)acetate (**18c**)*



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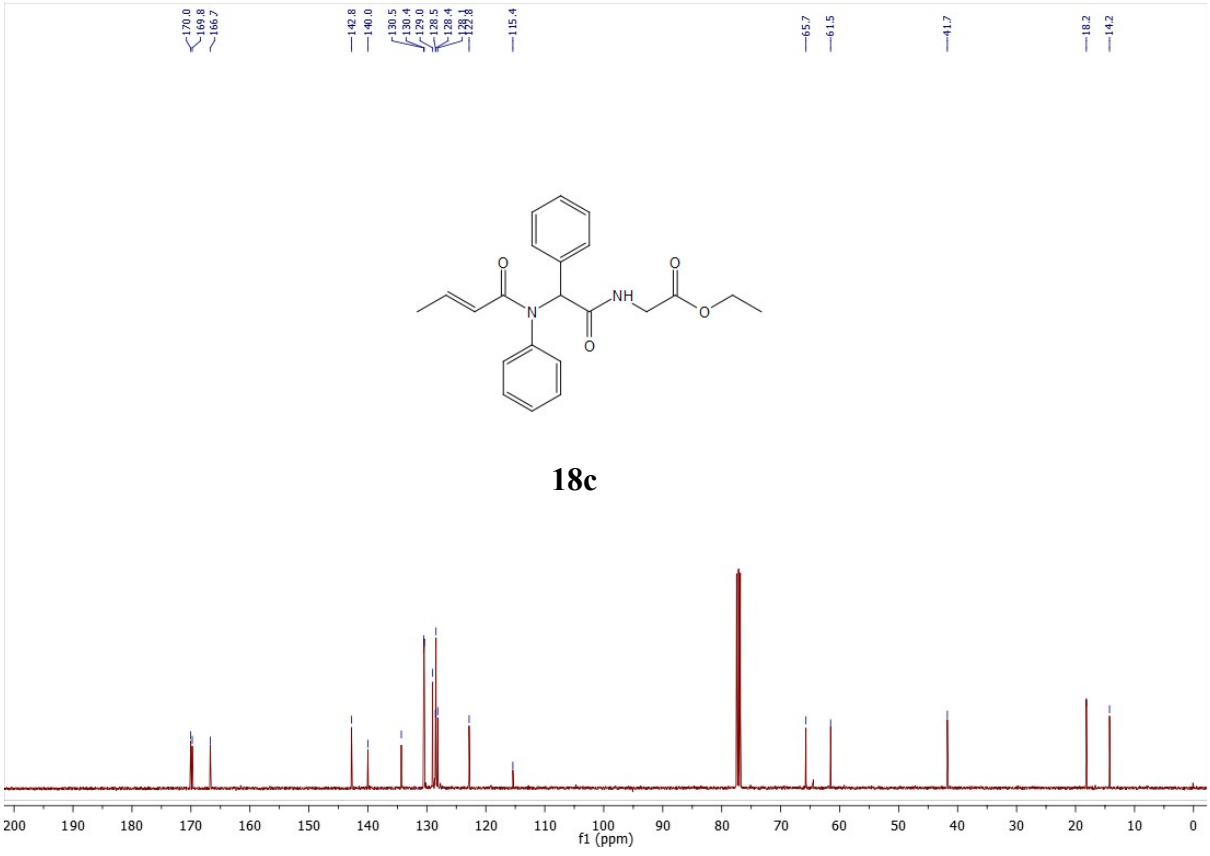
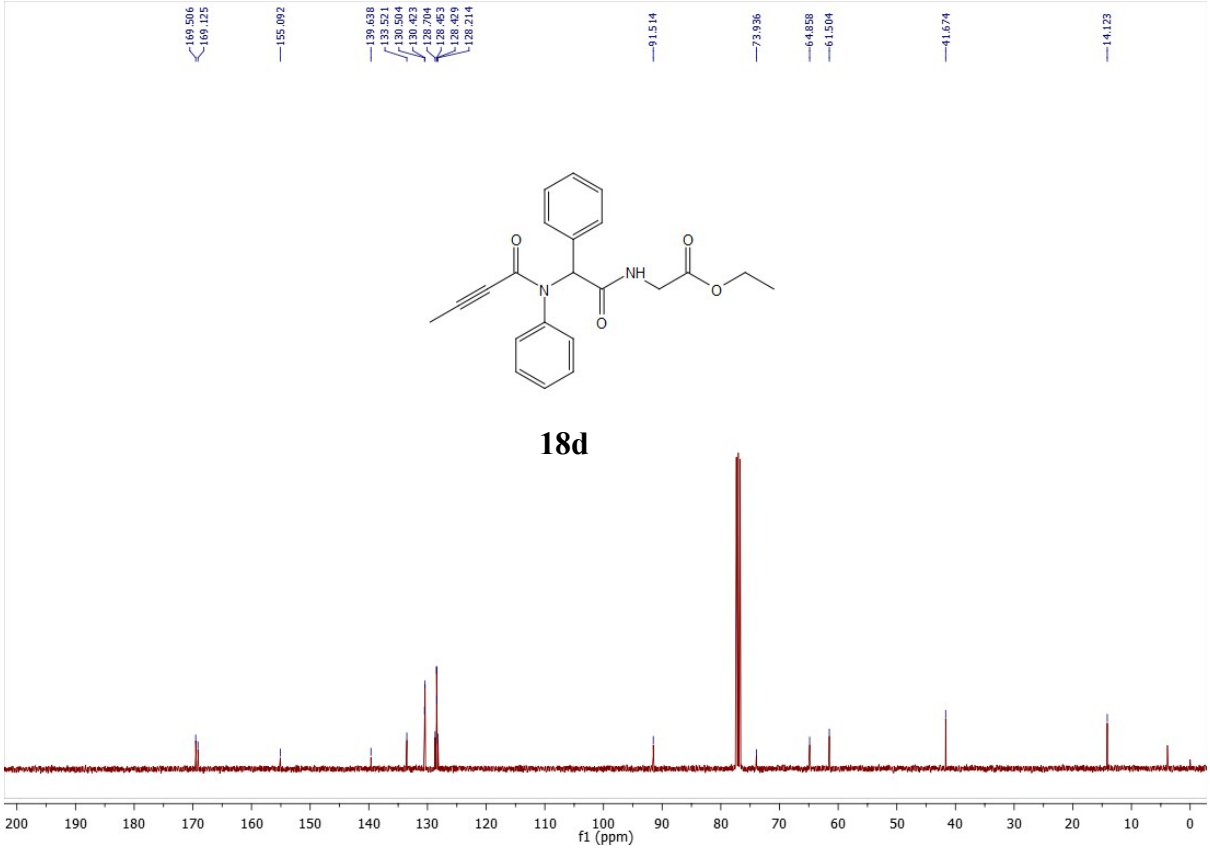
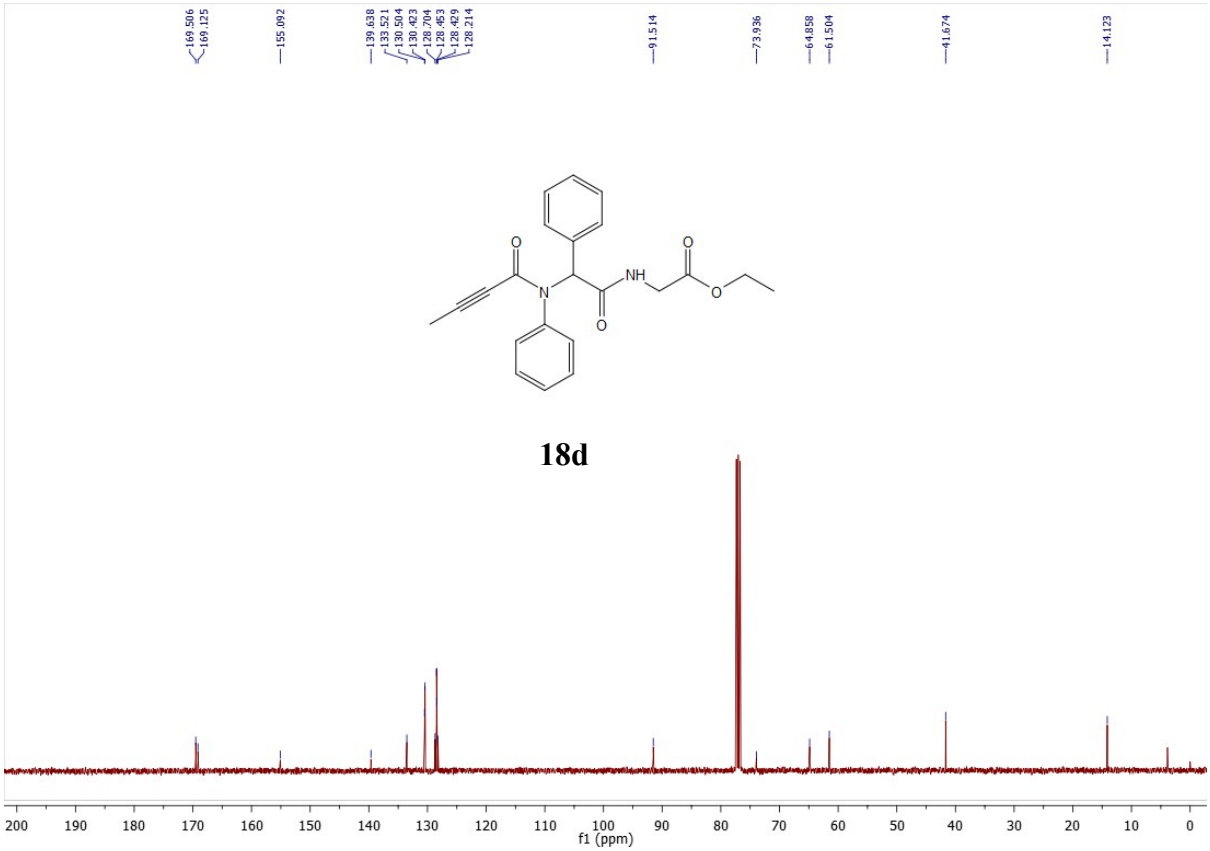


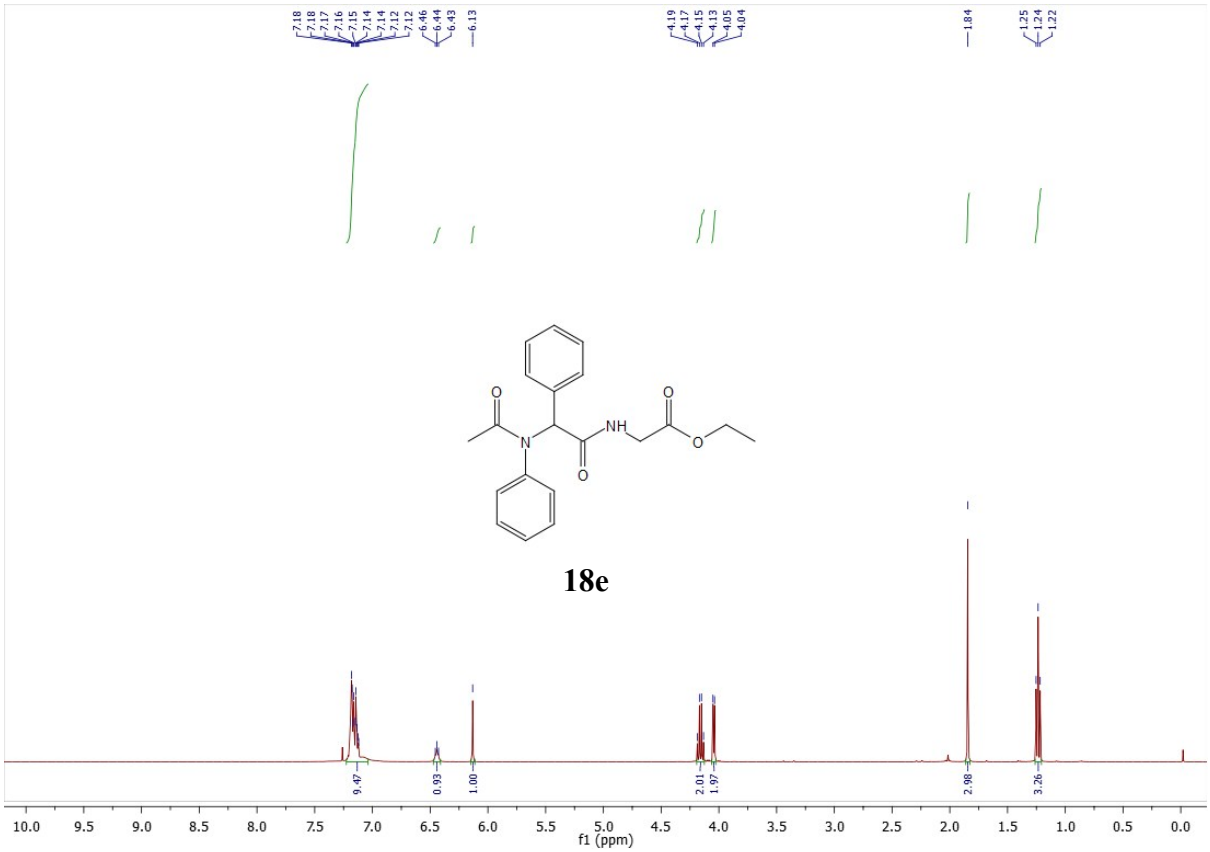
18c

*(RS)-Ethyl (2-phenyl-2-(N-phenylbut-2-ynamido)acetyl)glycinate (**18d**)*

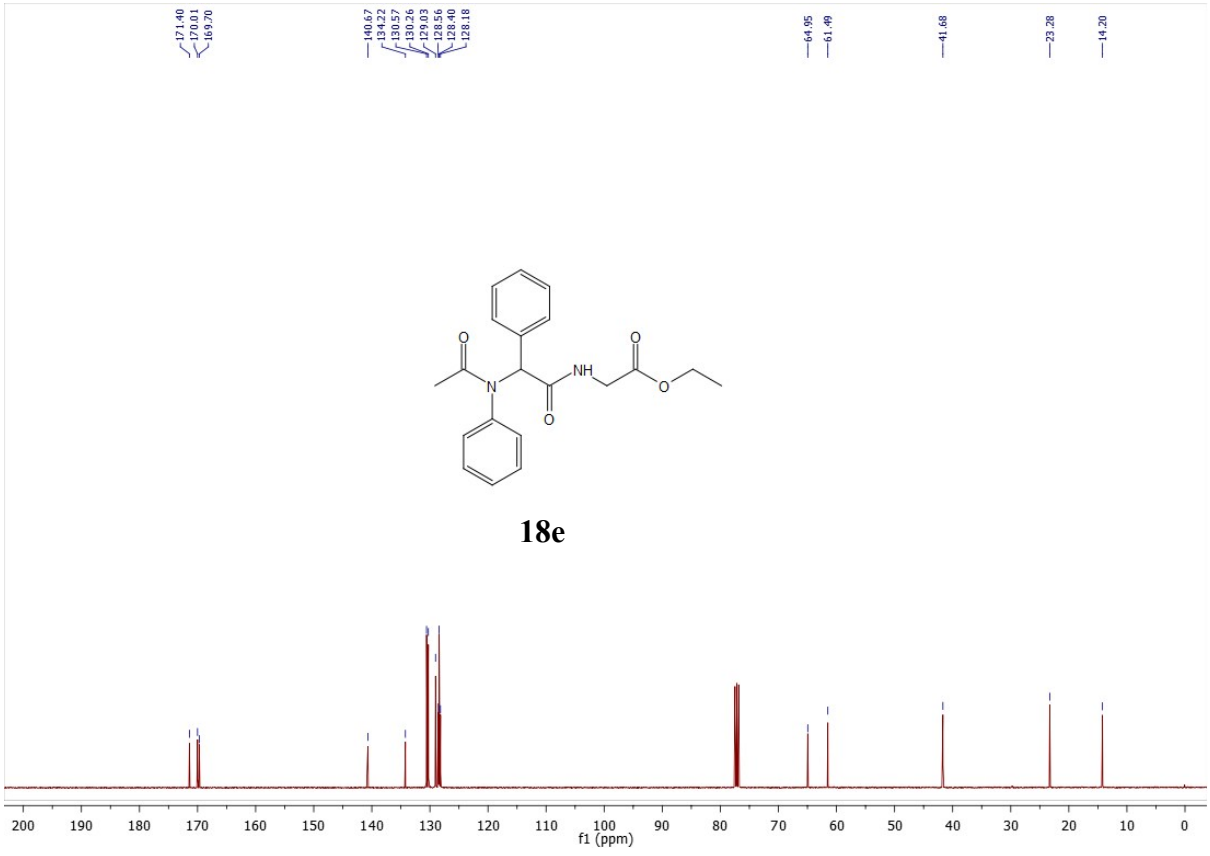




*(RS)-Ethyl (2-(2-methoxy-N-phenylacetamido)-2-phenylacetyl)glycinate (**18e**)*

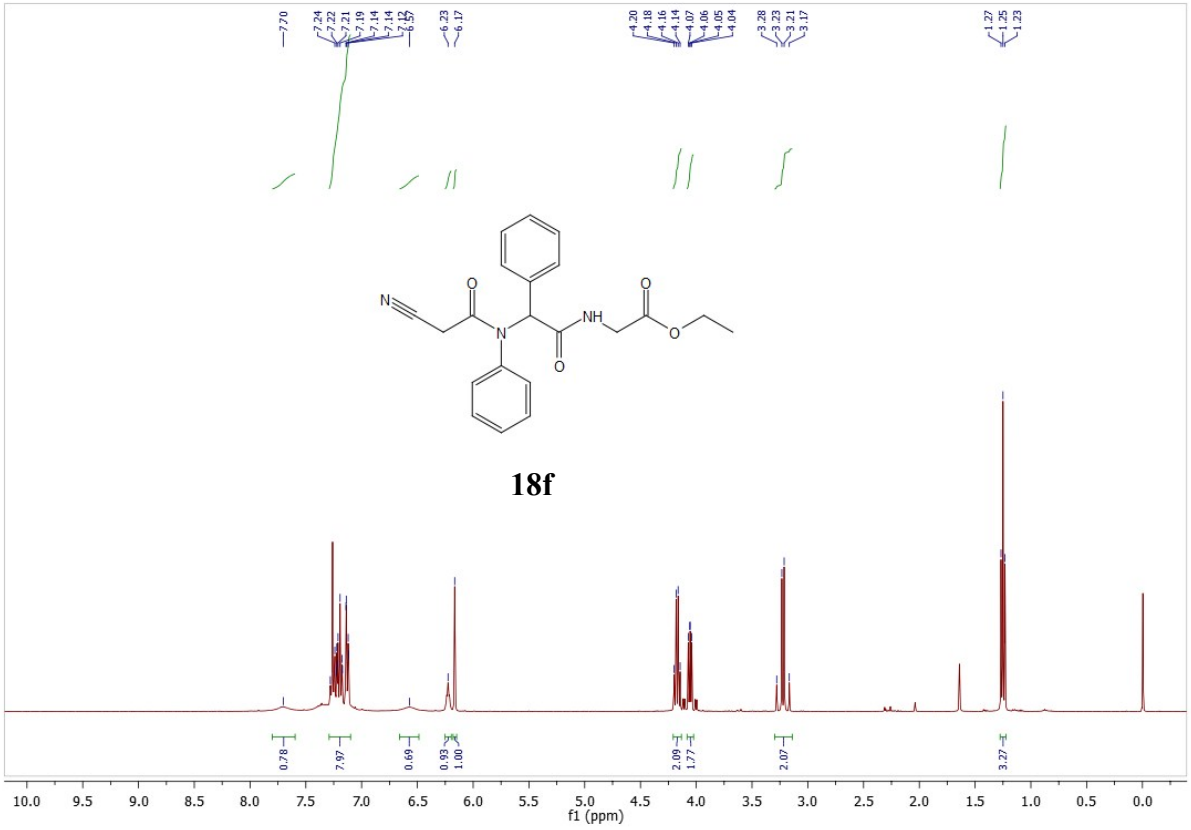


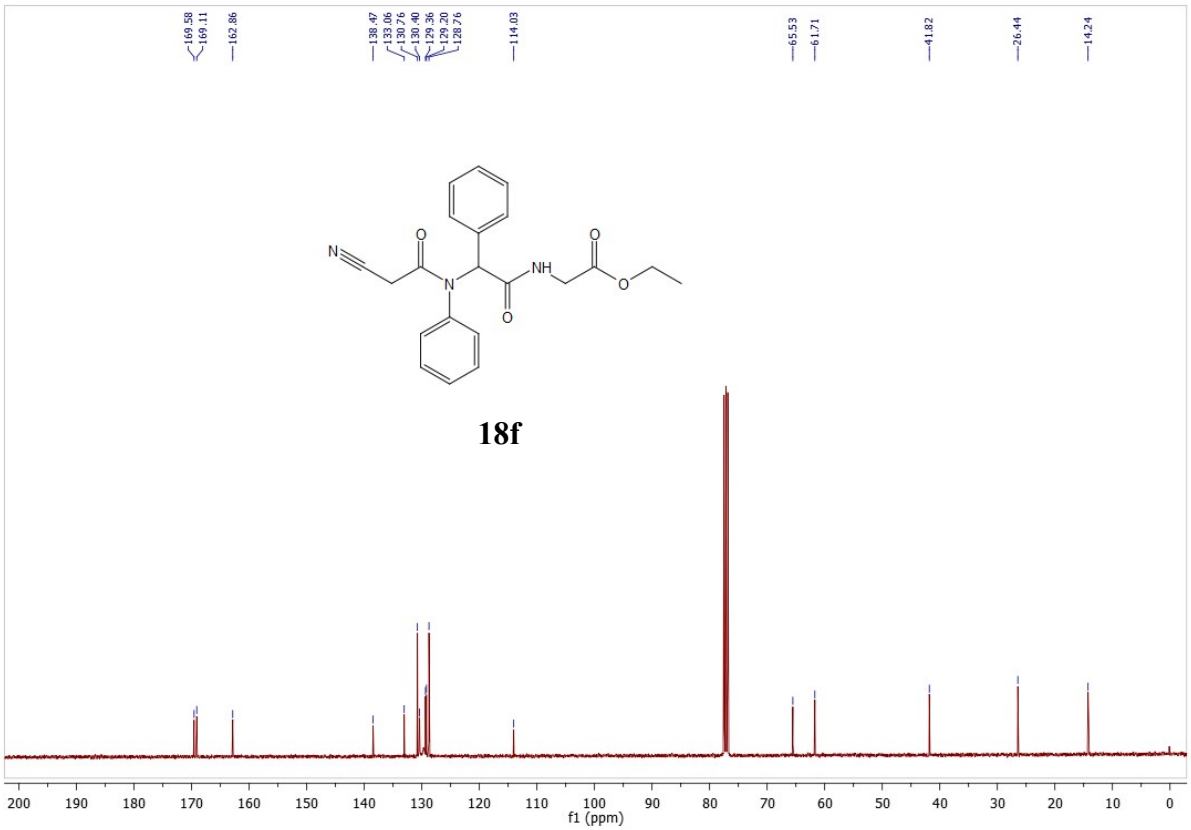
18e



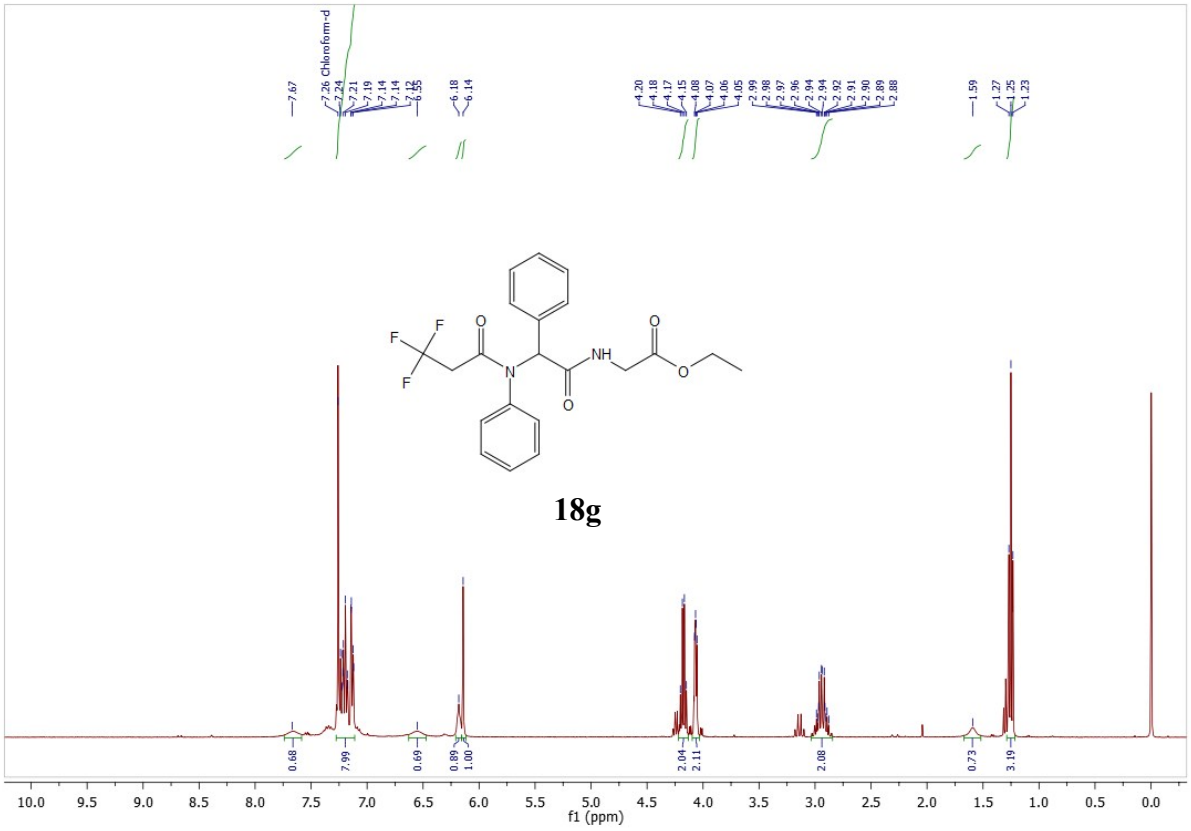
18e

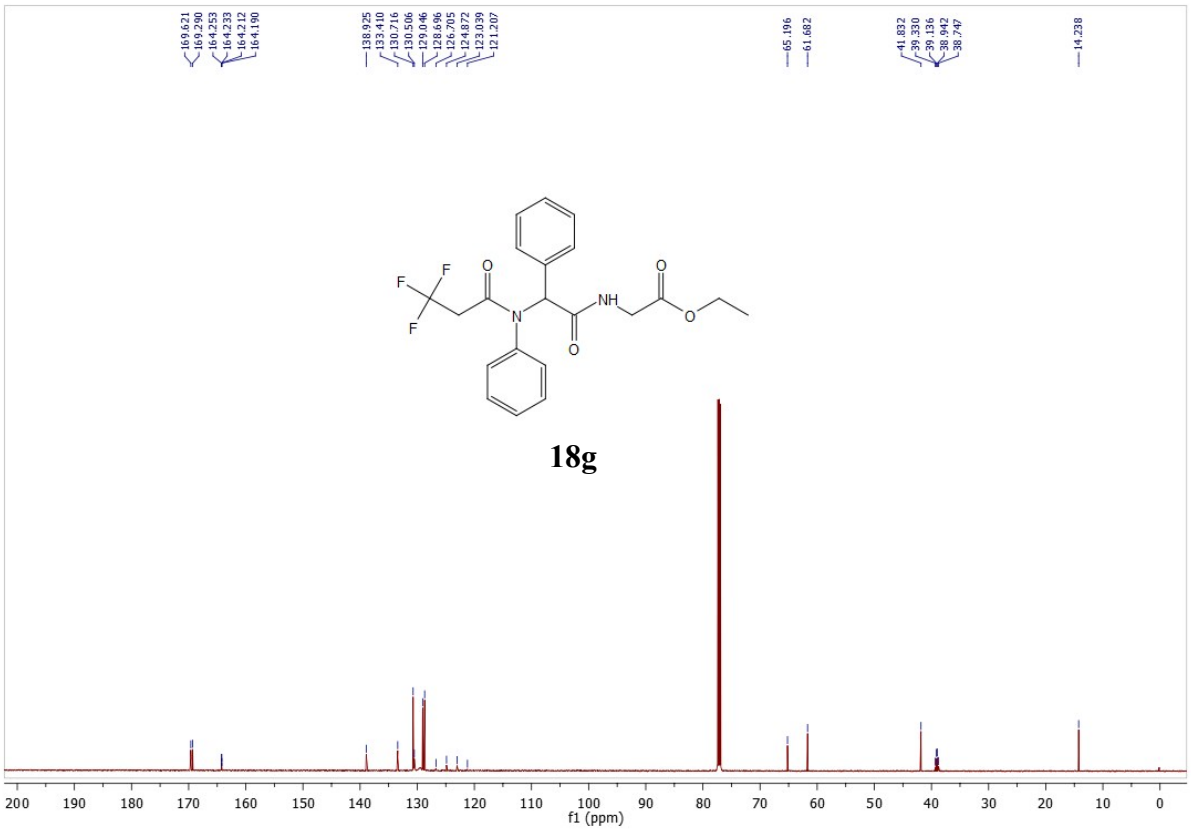
*(RS)-Ethyl 2-(2-(2-cyano-N-phenylacetamido)-2-phenylacetamido)acetate (**18f**)*



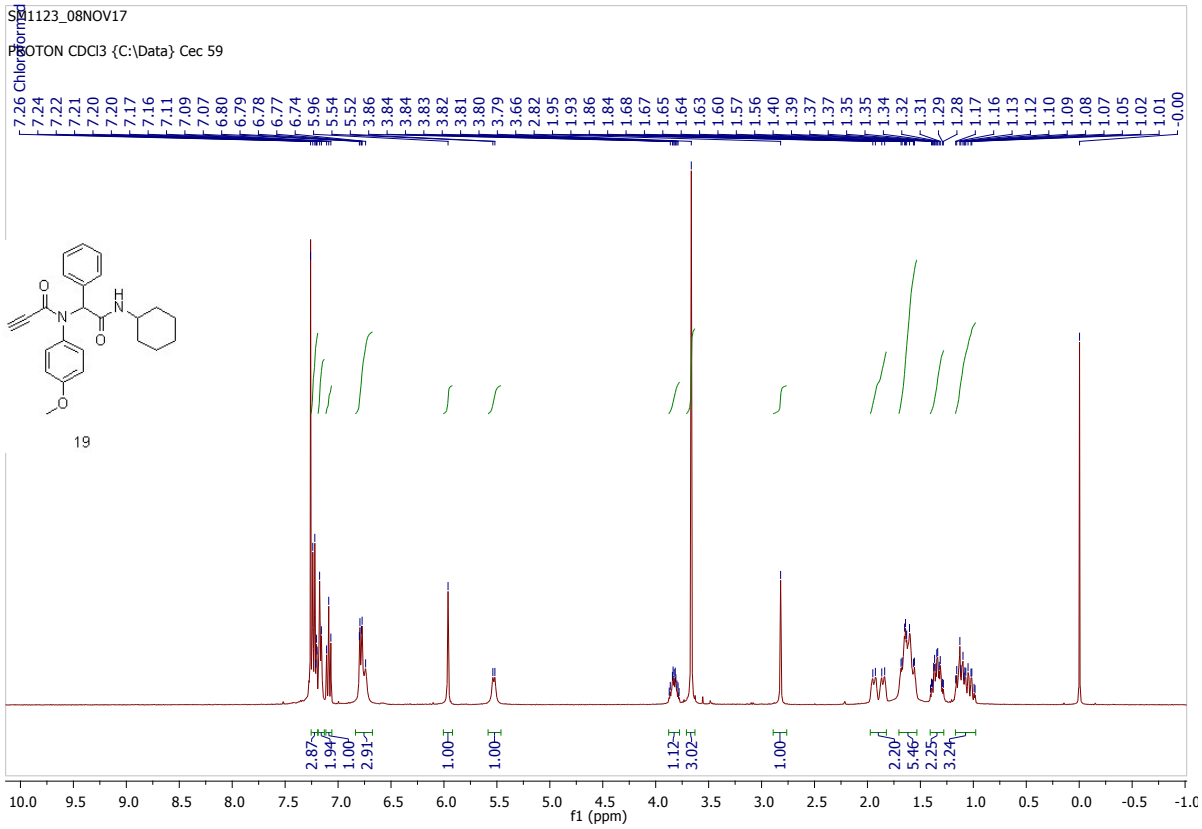


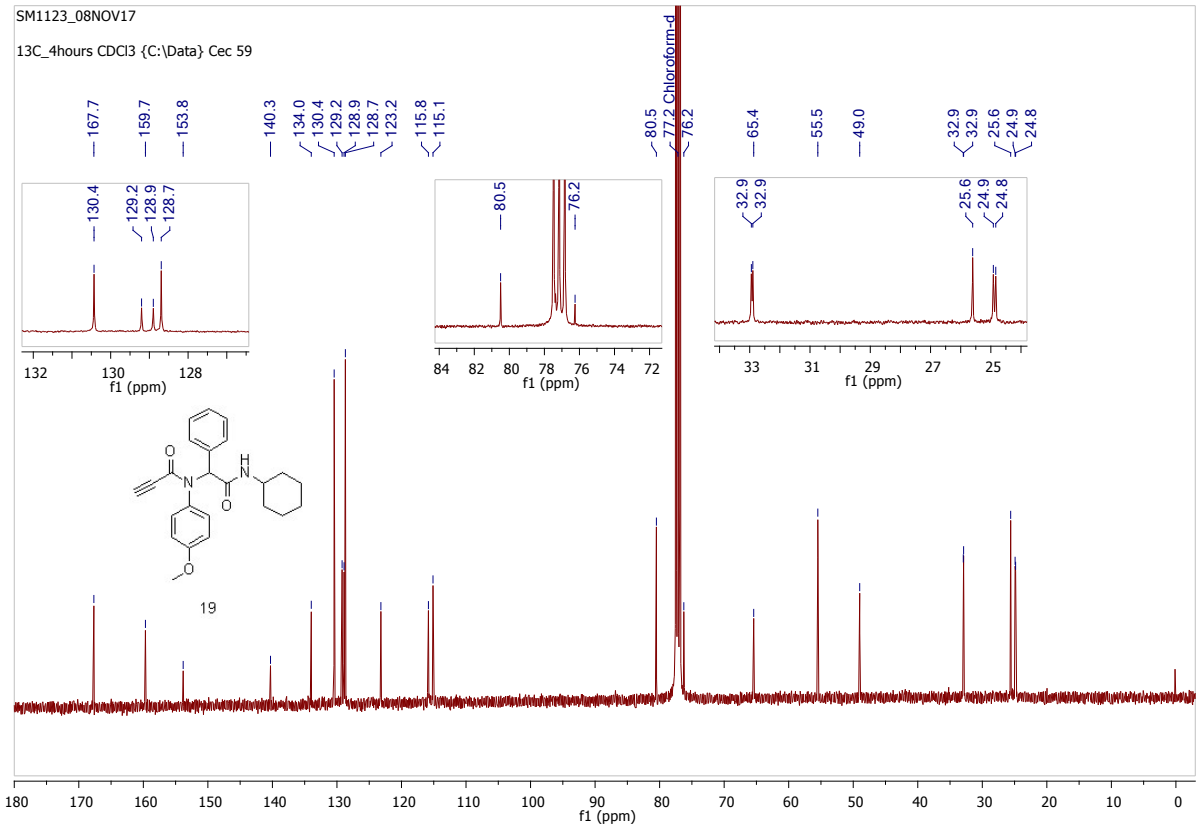
*(RS)-Ethyl (2-phenyl-2-(3,3,3-trifluoro-N-phenylpropanamido)acetyl)glycinate (**18g**)*



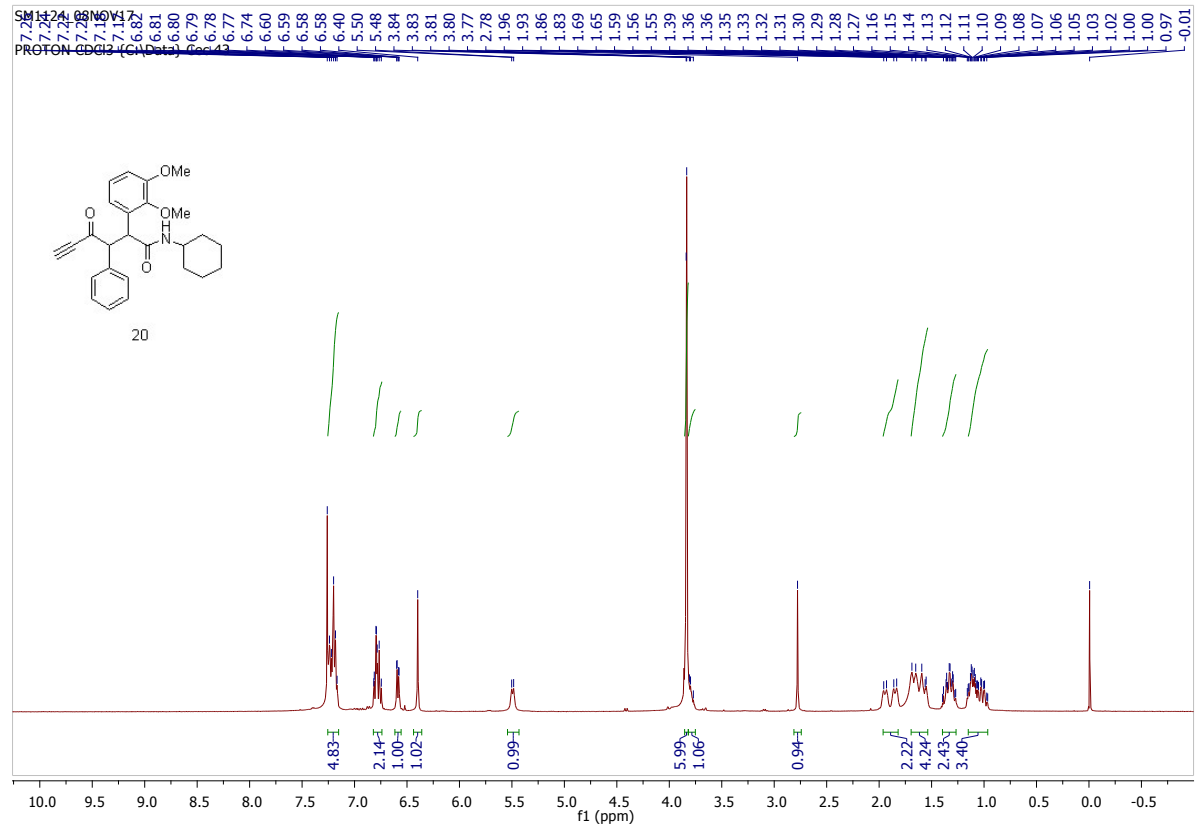


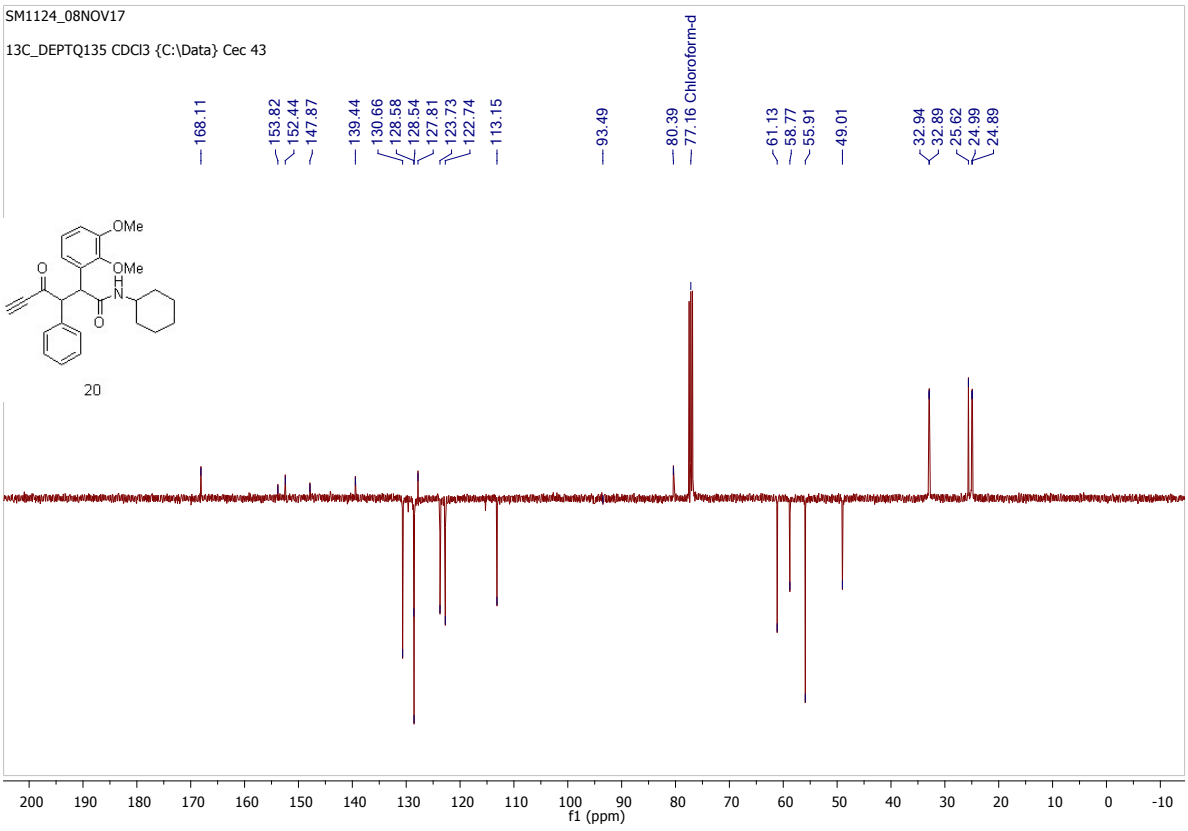
*(RS)-N-(2-(cyclohexylamino)-2-oxo-1-phenylethyl)-N-(4-methoxyphenyl)propiolamide (**19**)*





*(RS)-N-(2-(cyclohexylamino)-1-(2,3-dimethoxyphenyl)-2-oxoethyl)-N-phenylpropiolamide (**20**)*





*(RS)-N-(2-(cyclohexylamino)-1-(3,4-dimethoxyphenyl)-2-oxoethyl)-N-phenylpropiolamide (**21**)*