

β -Cyclodextrin mediated synthesis of 1,8-dioxooctahydroxanthenes in water

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COMMUNICATION INFORMATION

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KEYWORDS

β -Cyclodextrin

Condensation

Aromatic aldehydes

1,3-Cyclohexanedione

5,5-Dimethyl-1,3-cyclohexanedione

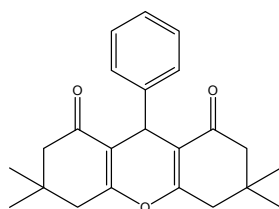
Water

ABSTRACT

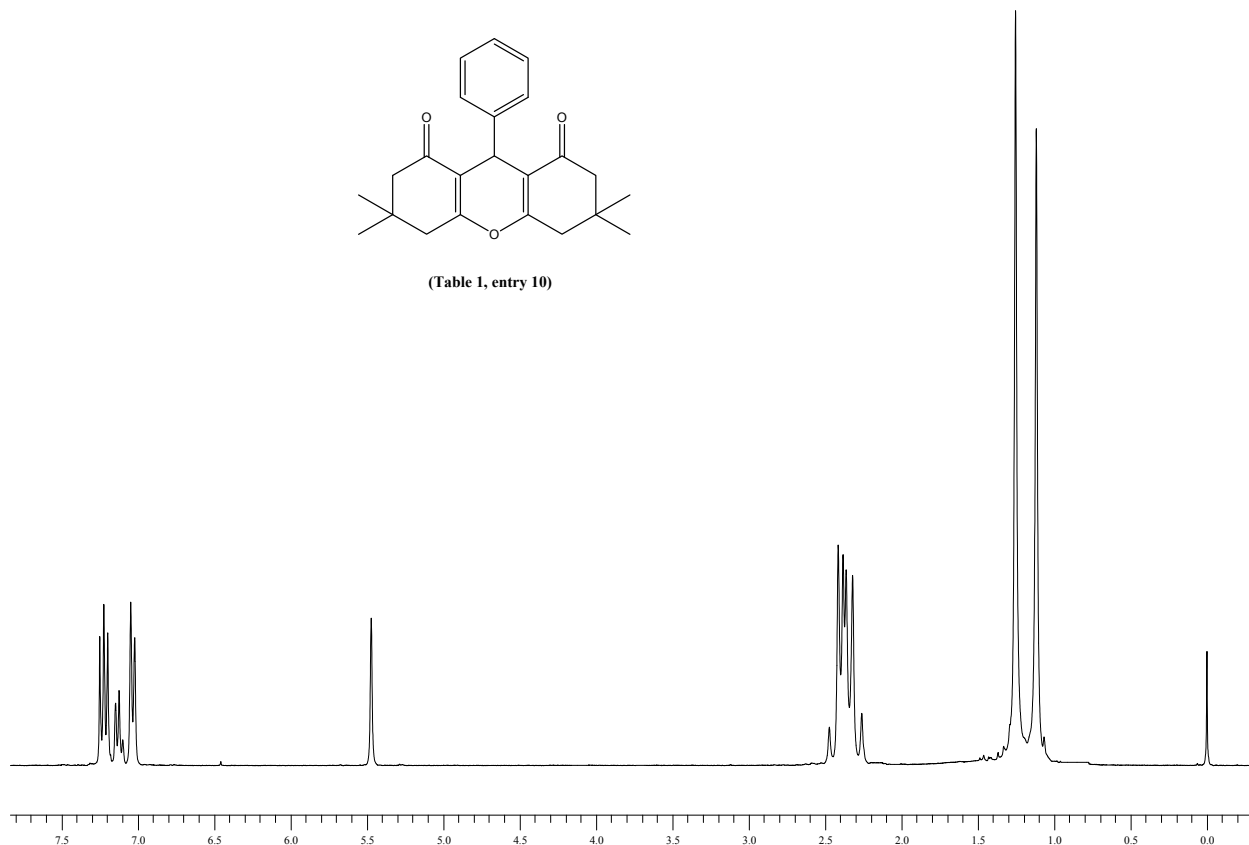
An experimentally simple, efficient Michael addition reaction was developed for the synthesis of various 1,8-dioxooctahydroxanthene derivatives with 1,3-cyclohexanedione/5,5-dimethyl 1,3-cyclohexane dione and different aldehydes by using β -cyclodextrin as a catalyst in water. A biomimetic approach was employed and the corresponding products were obtained in good to excellent yields. β -cyclodextrin can be recovered and reused upto four cycles without loss of catalytic activity.

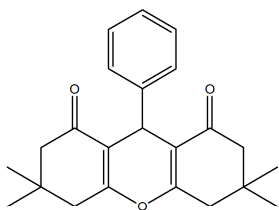
Supplementary Materials

Copies of ^1H & ^{13}C NMR spectra.

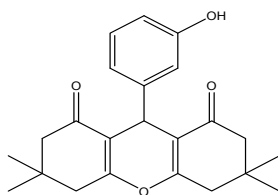
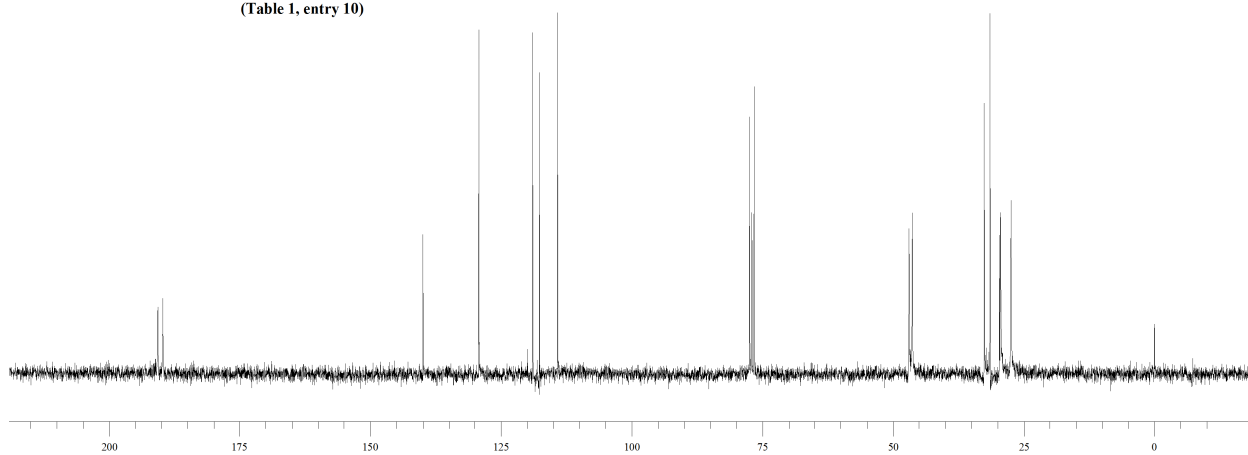


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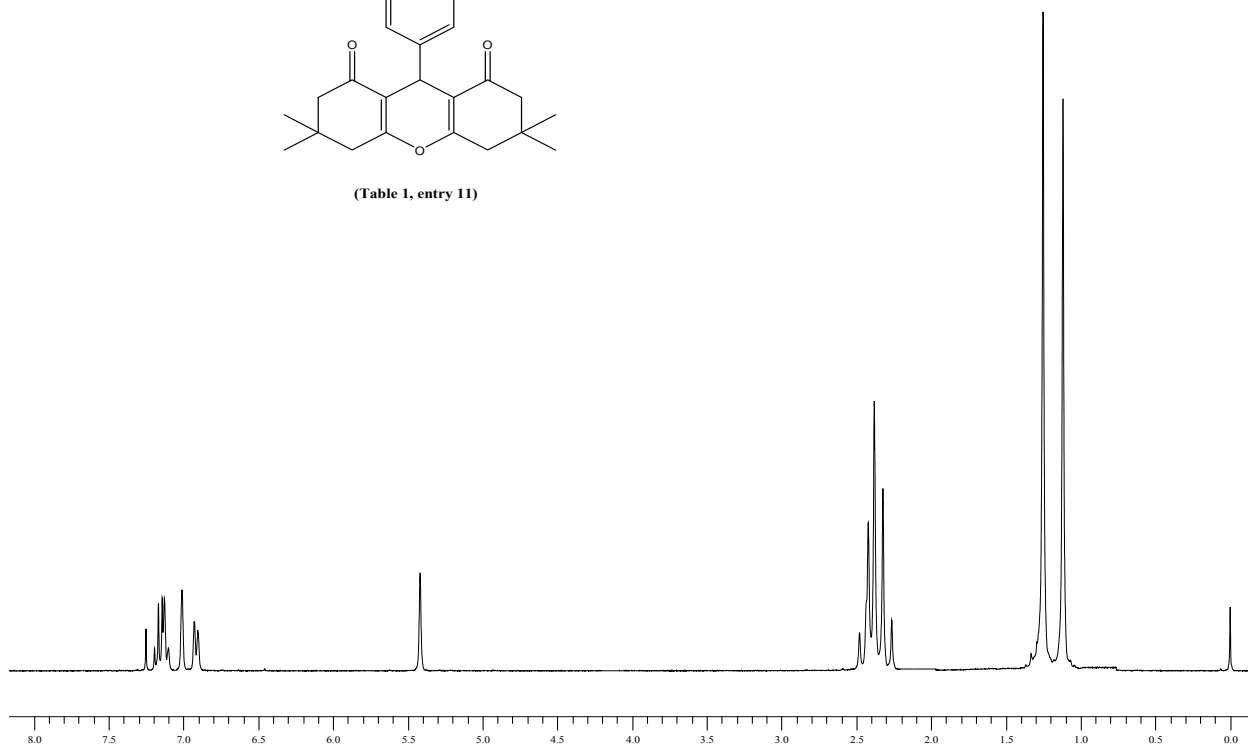


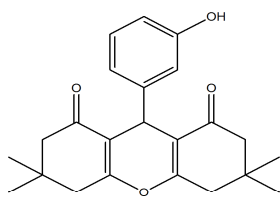


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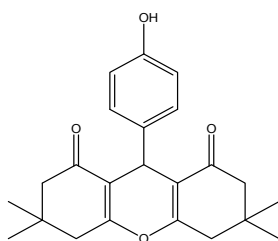
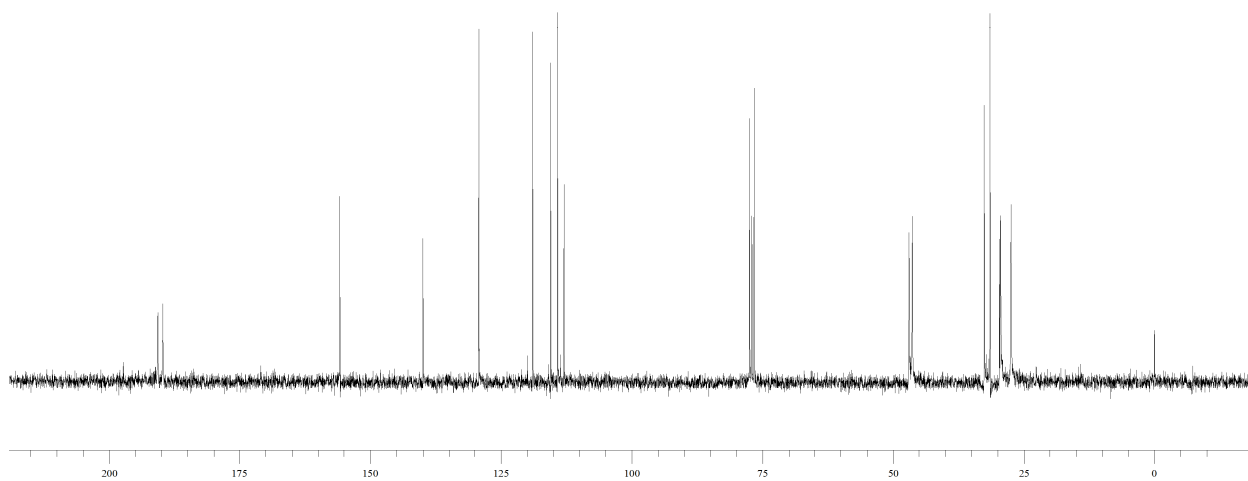


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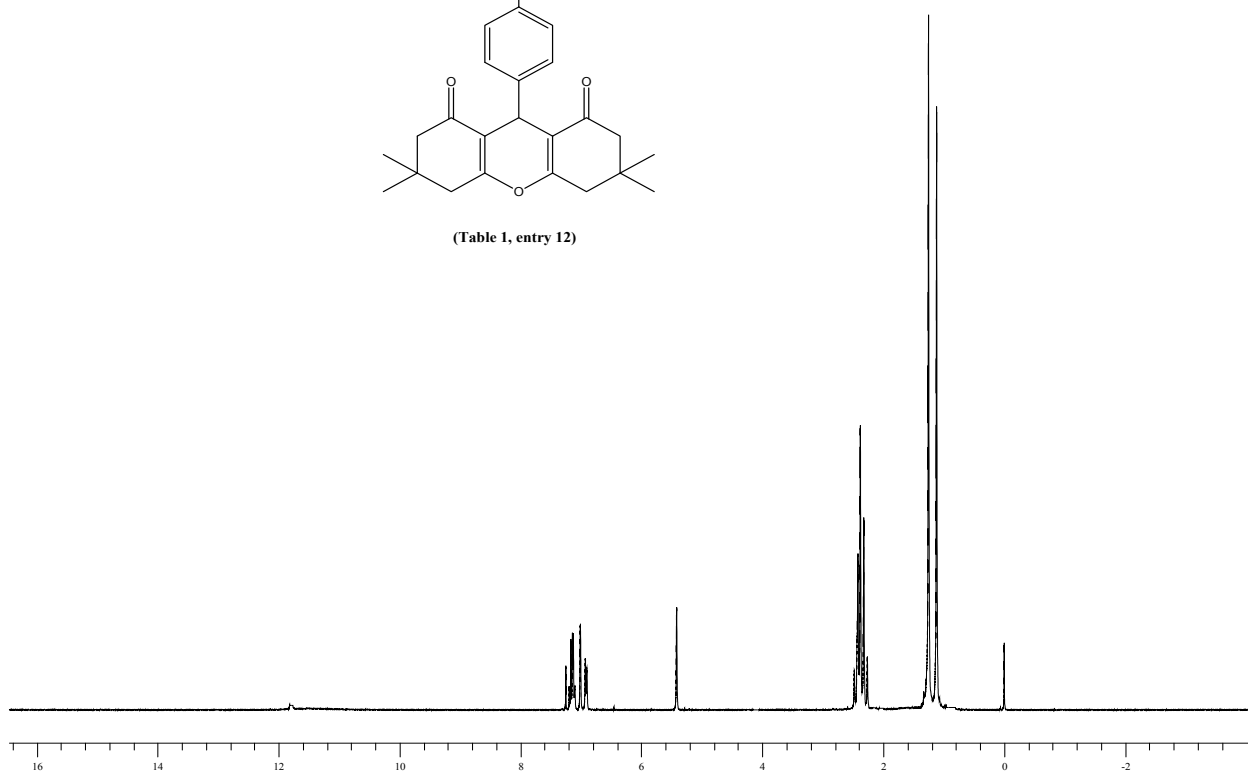


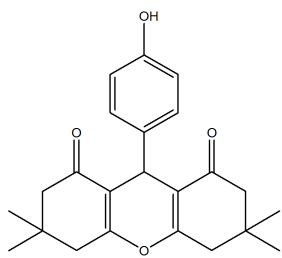


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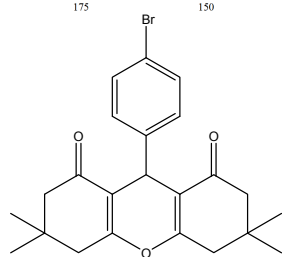
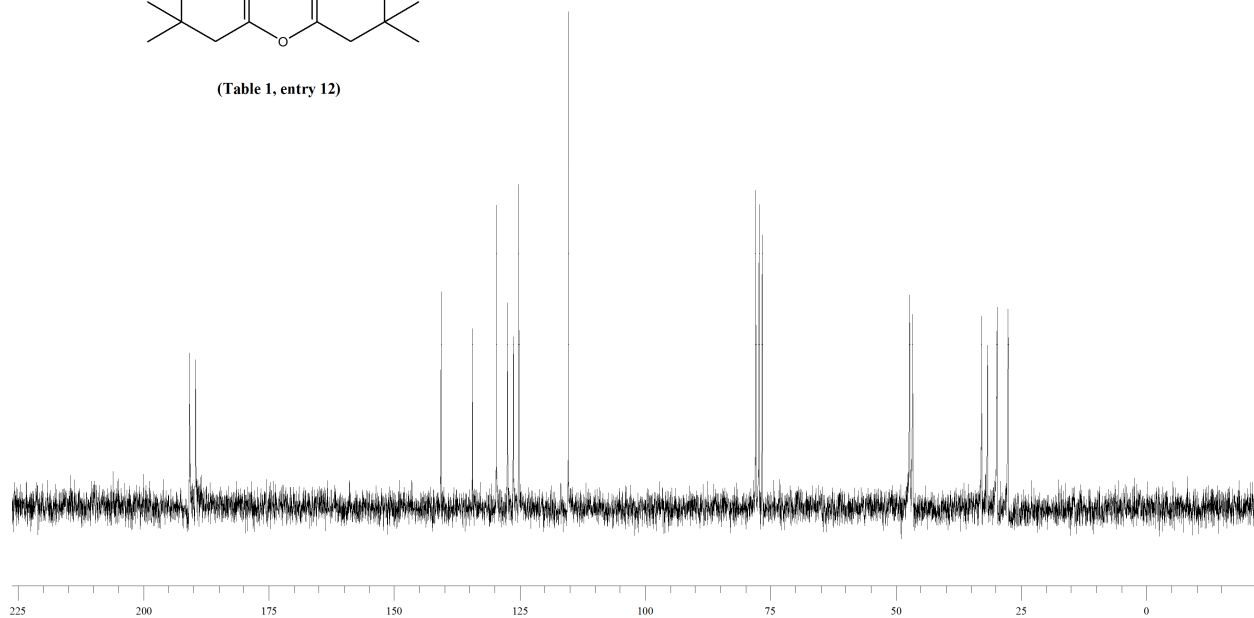


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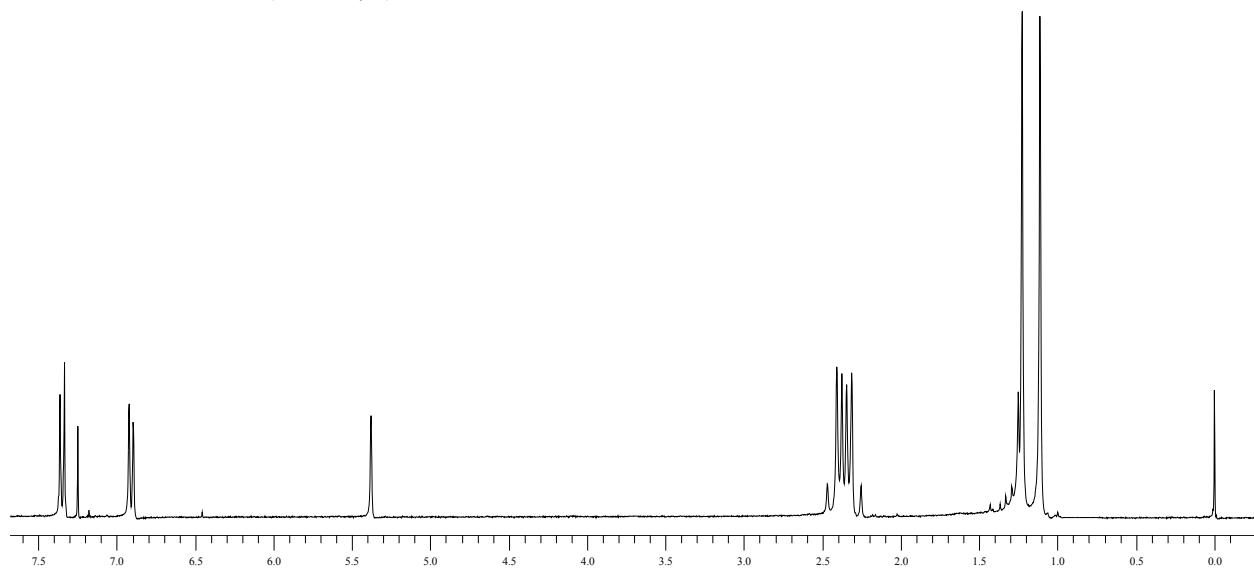


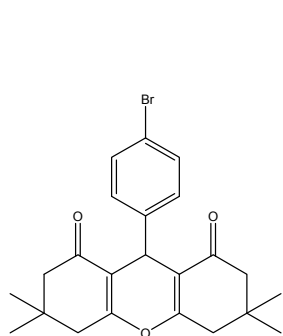


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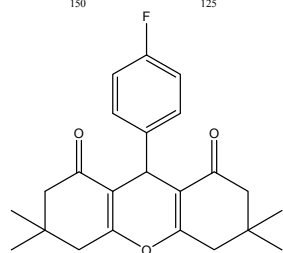
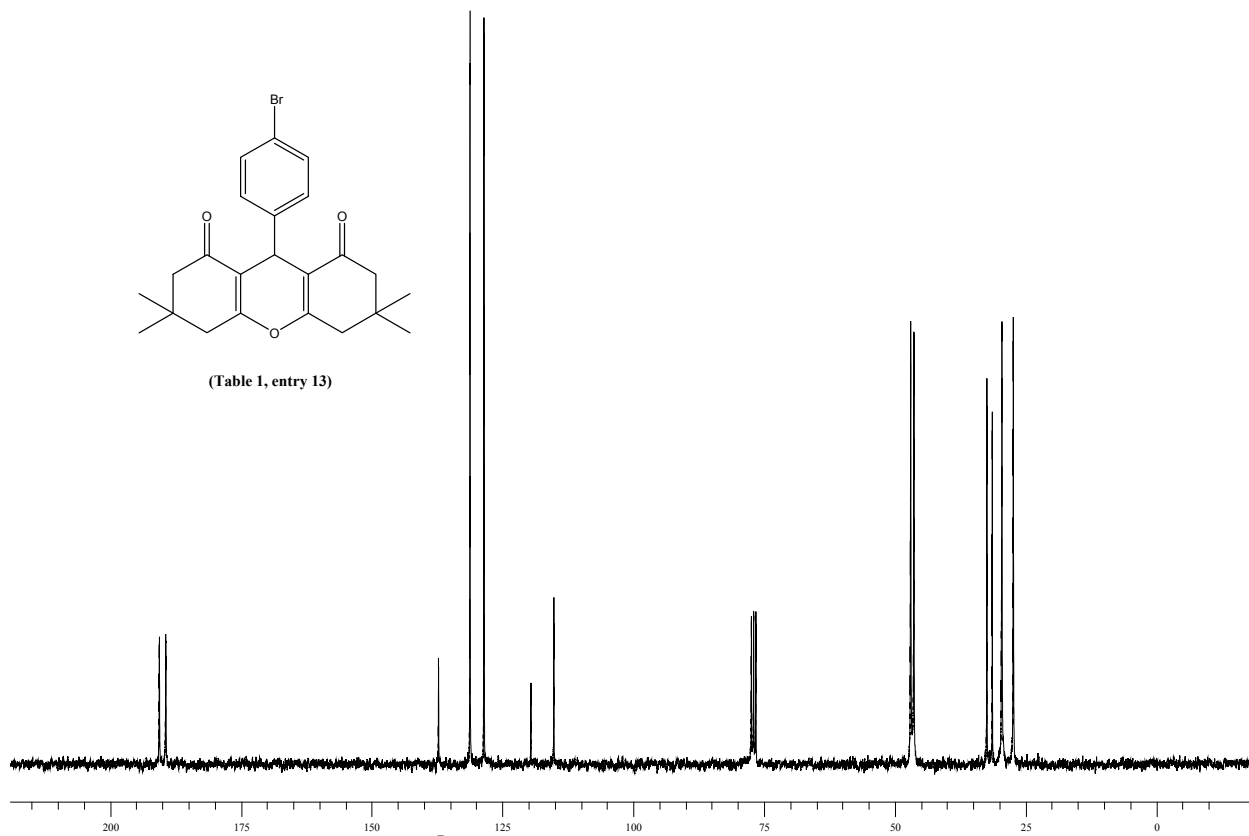


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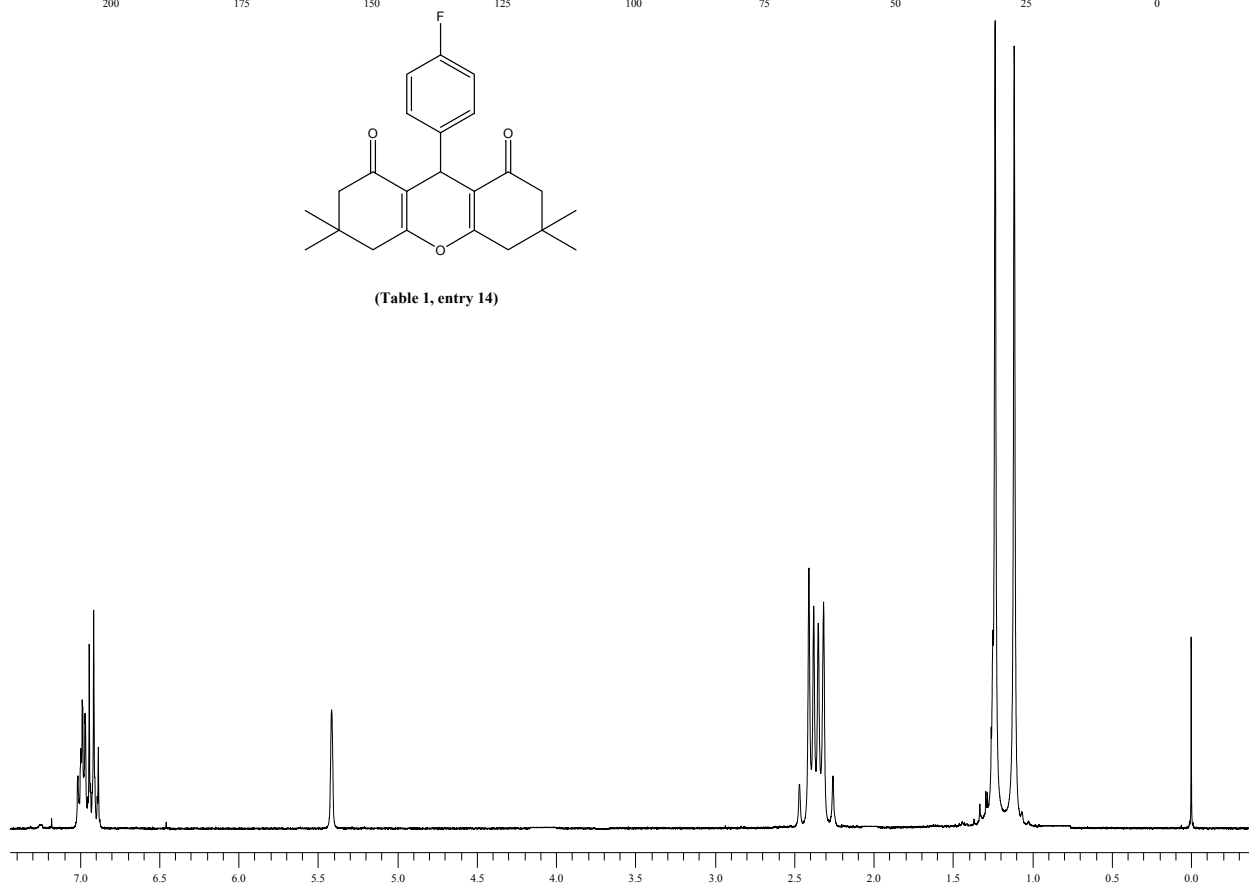


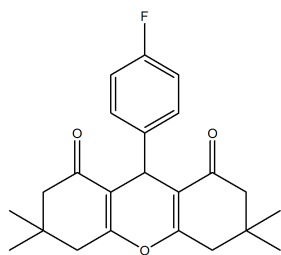


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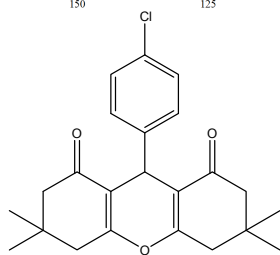
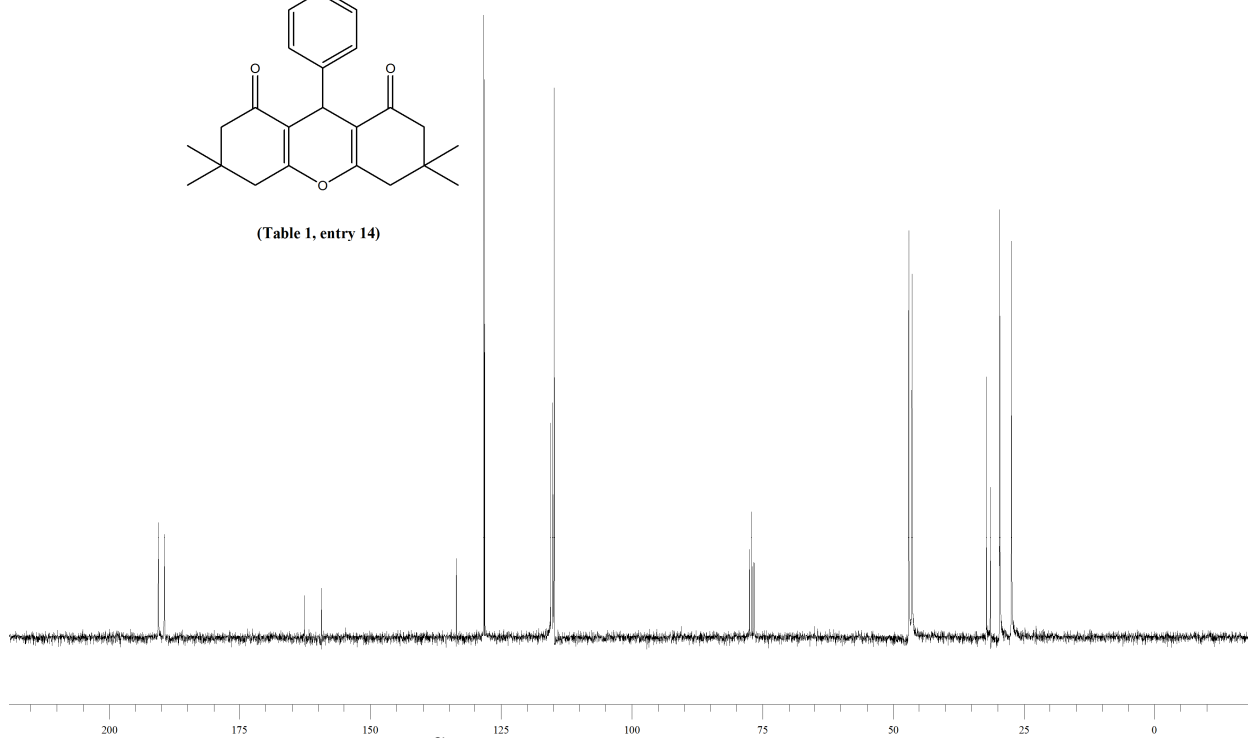


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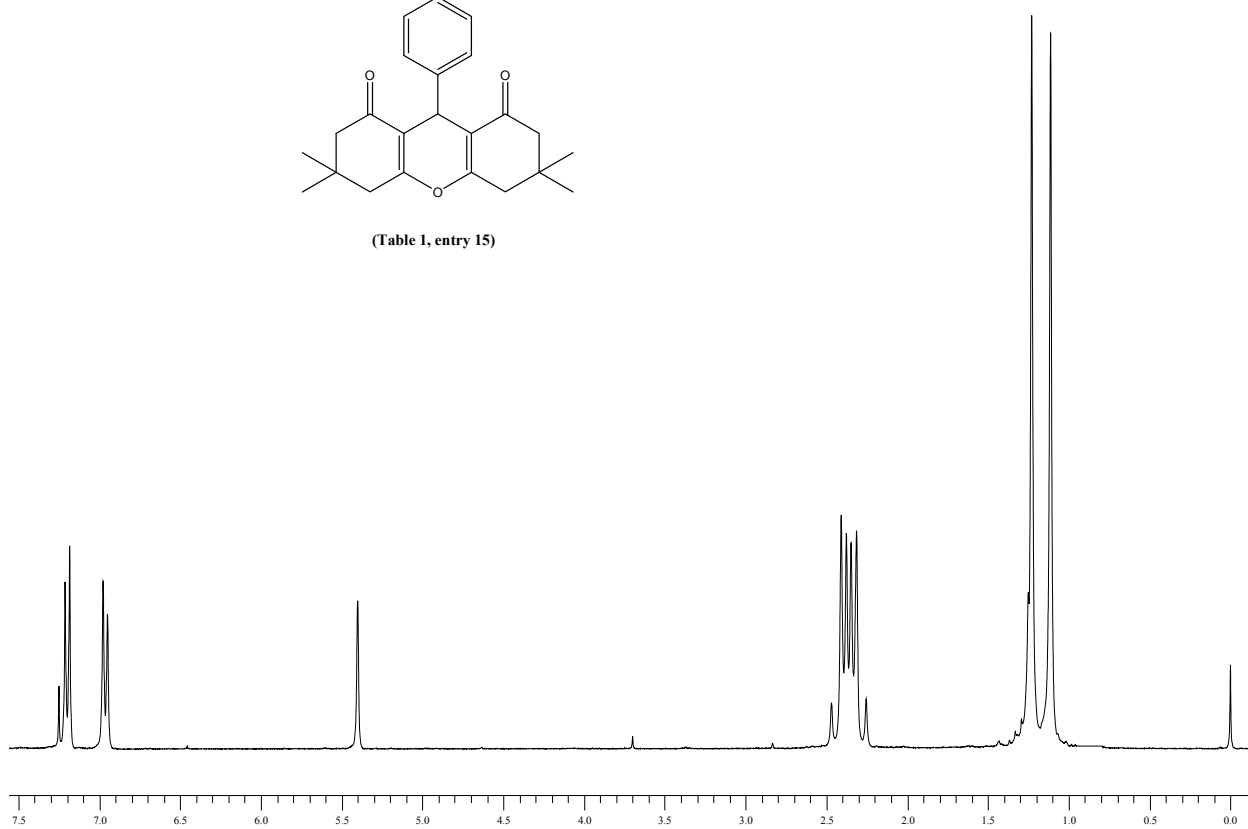


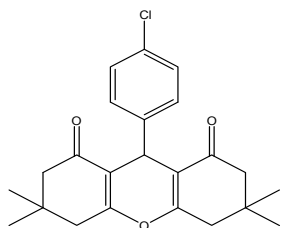


(Table 1, entry 14)



(Table 1, entry 15)





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