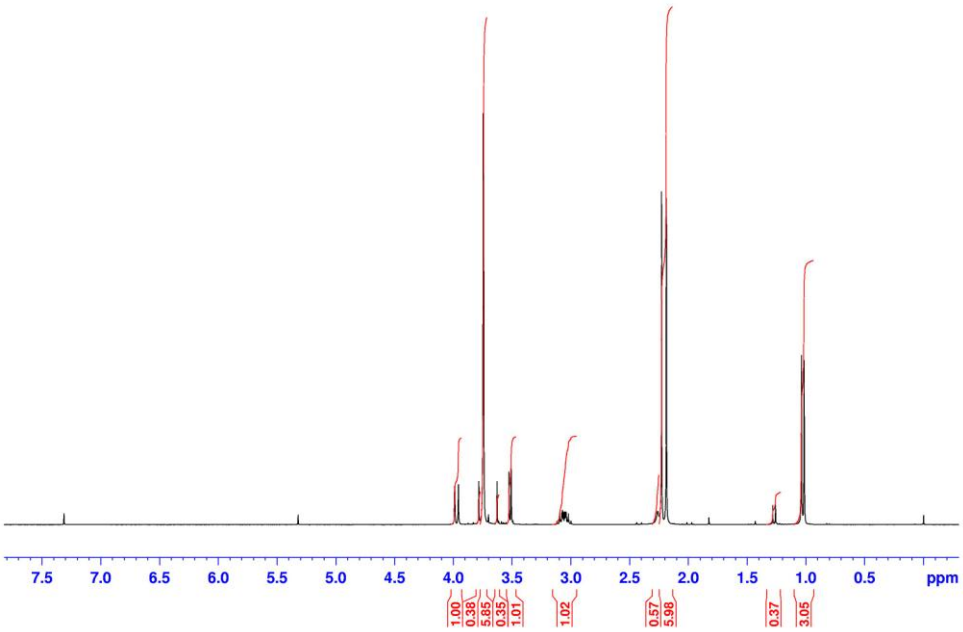
Supplementary Material

Selective Michael additions to alkylidenemalonates using thiourea-based bifunctional organocatalysts

Declan P. Gavin and John C. Stephens*

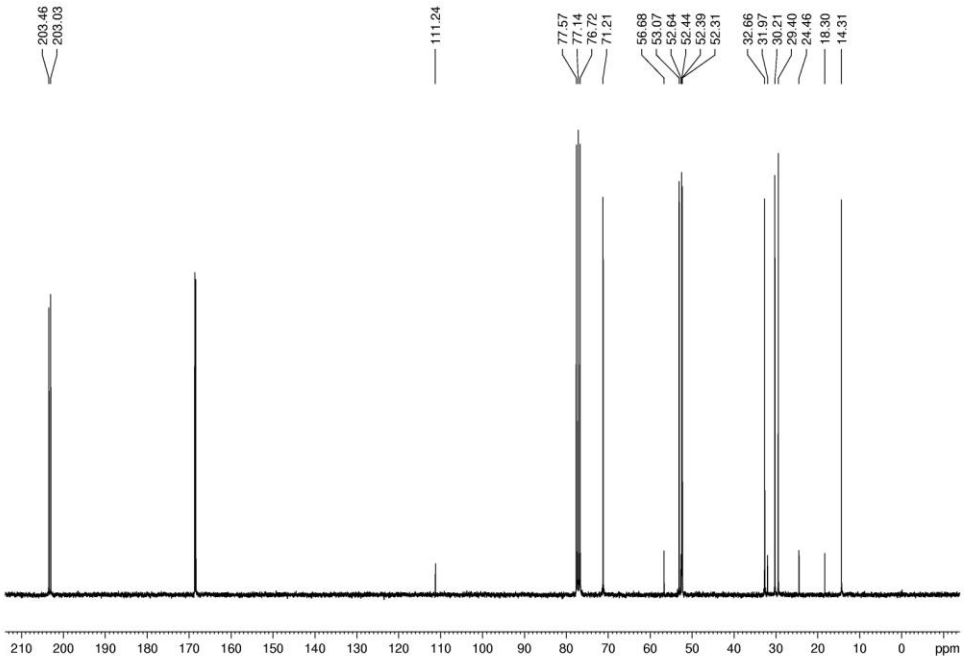
Department of Chemistry, National University of Ireland Maynooth, Co. Kildare, Ireland
E-mail: john.stephens@nuim.ie

NMR Spectra

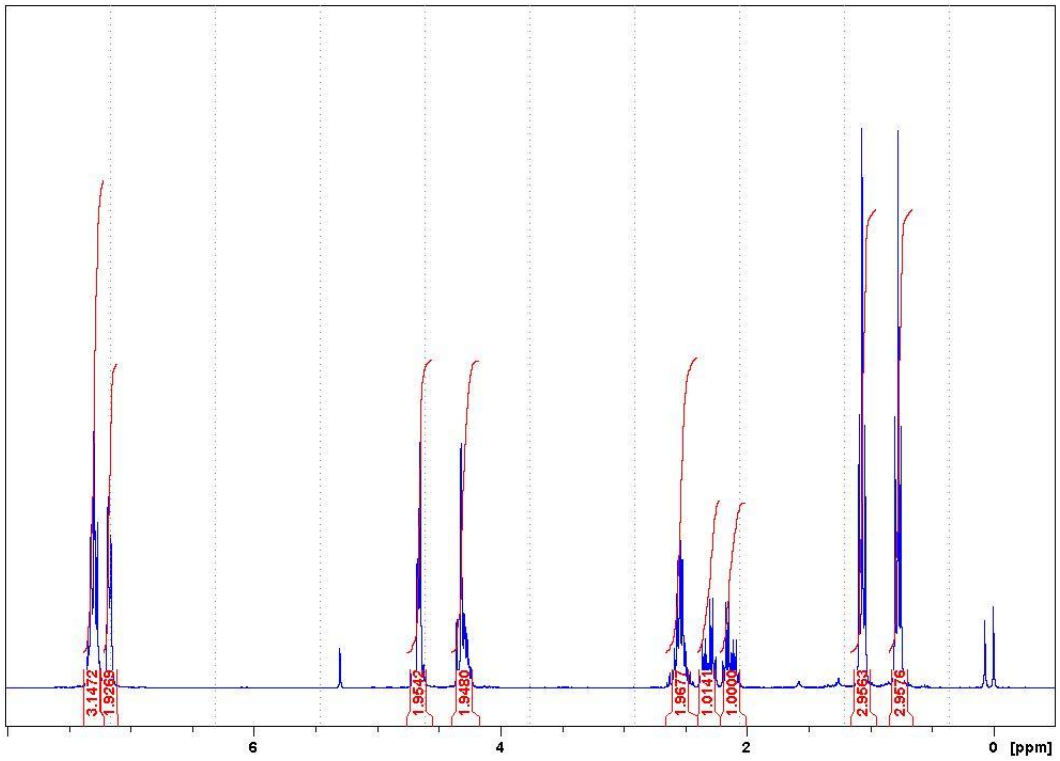


^{1}H NMR spectrum for **6a**

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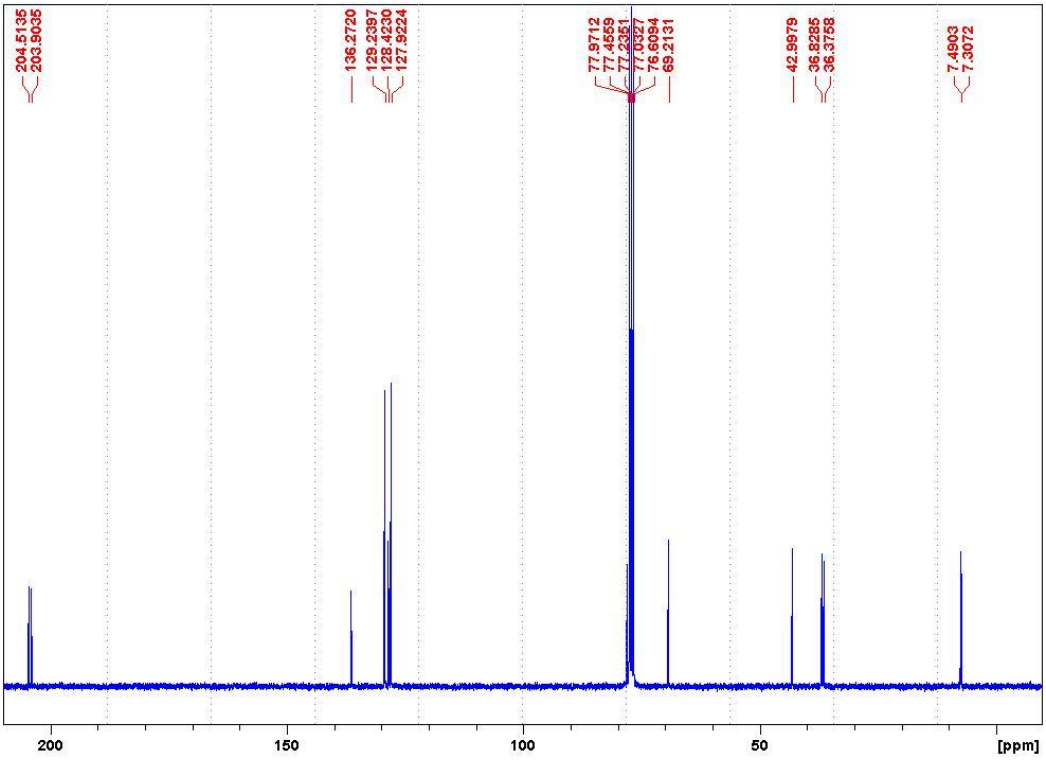


^{13}C NMR spectrum for **6a**

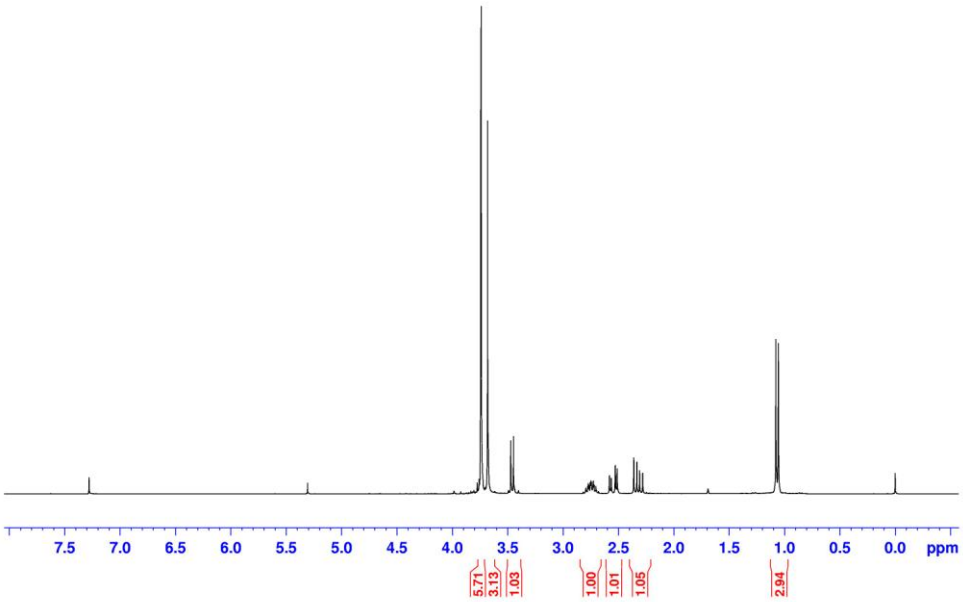


^{1}H NMR spectrum for **6b**

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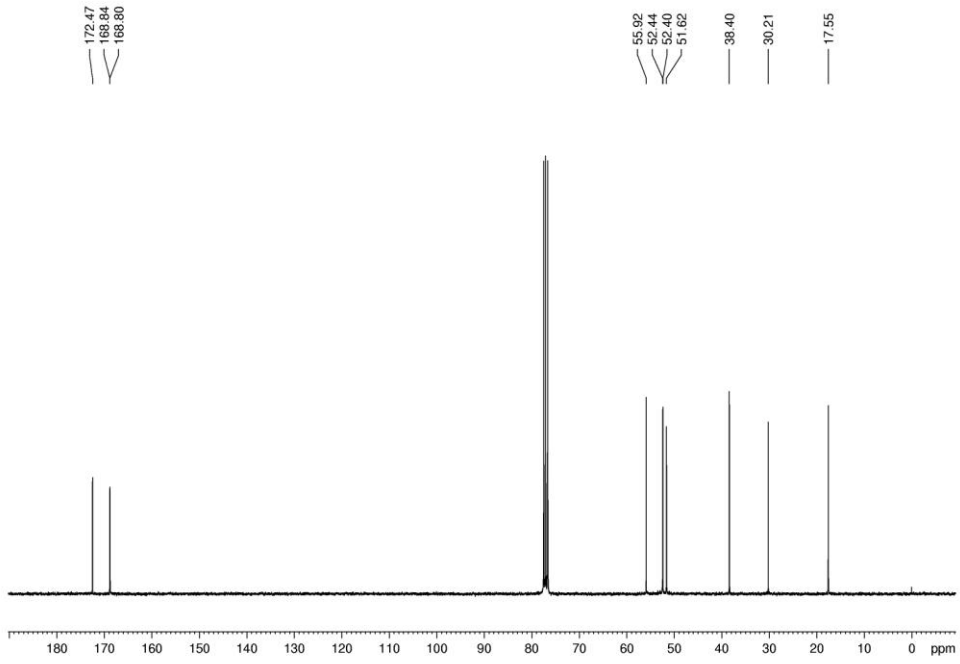


^{13}C NMR spectrum for **6b**

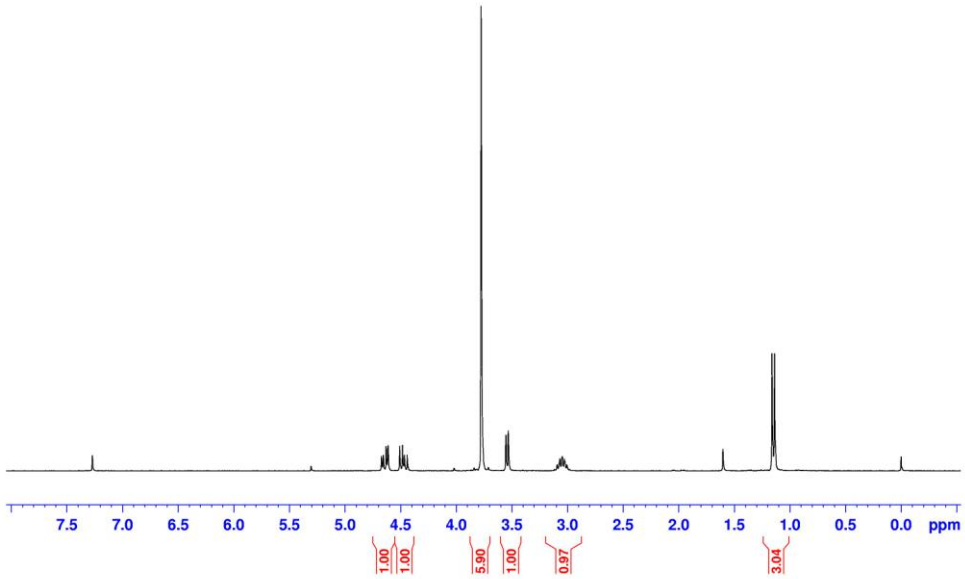


^{1}H NMR spectrum for **9**

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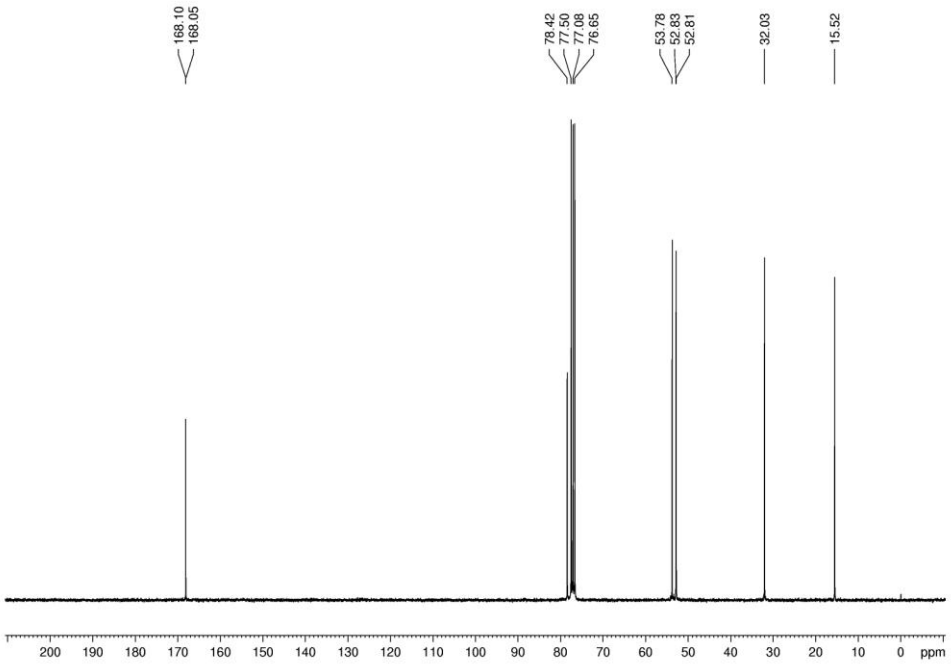


^{13}C NMR spectrum for **9**

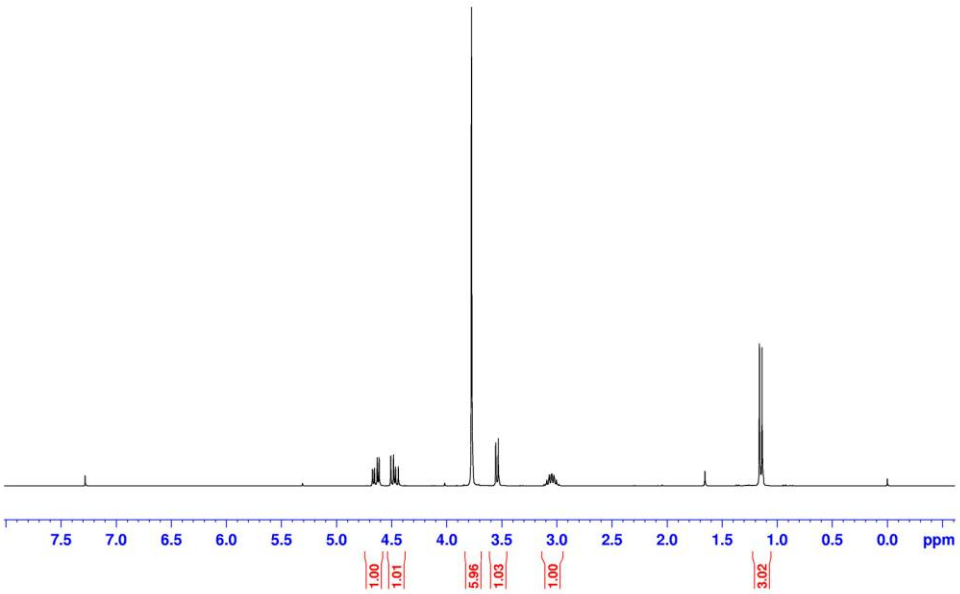


^{1}H NMR spectrum for **11a**

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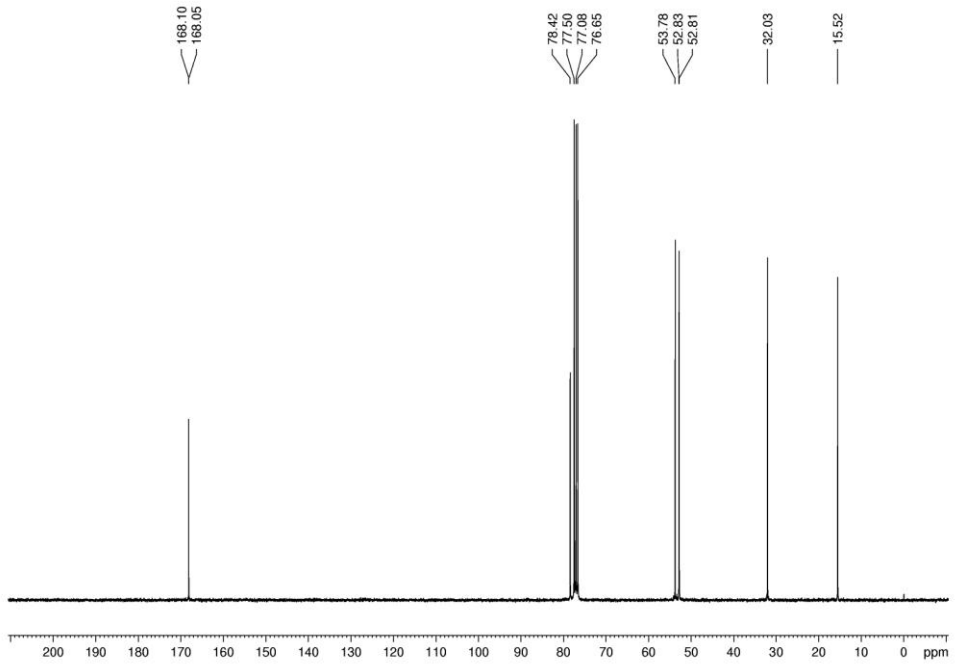


^{13}C NMR spectrum for **11a**

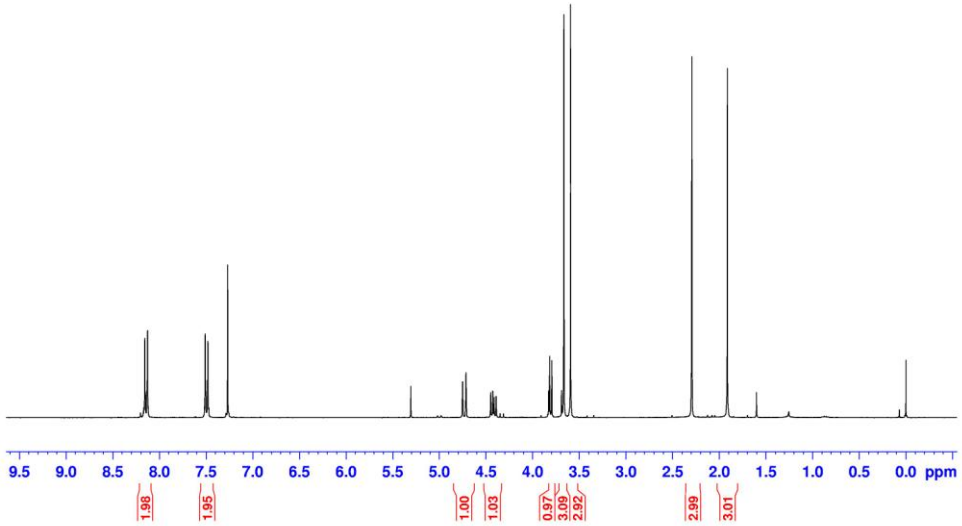


^{1}H NMR spectrum for **11b**

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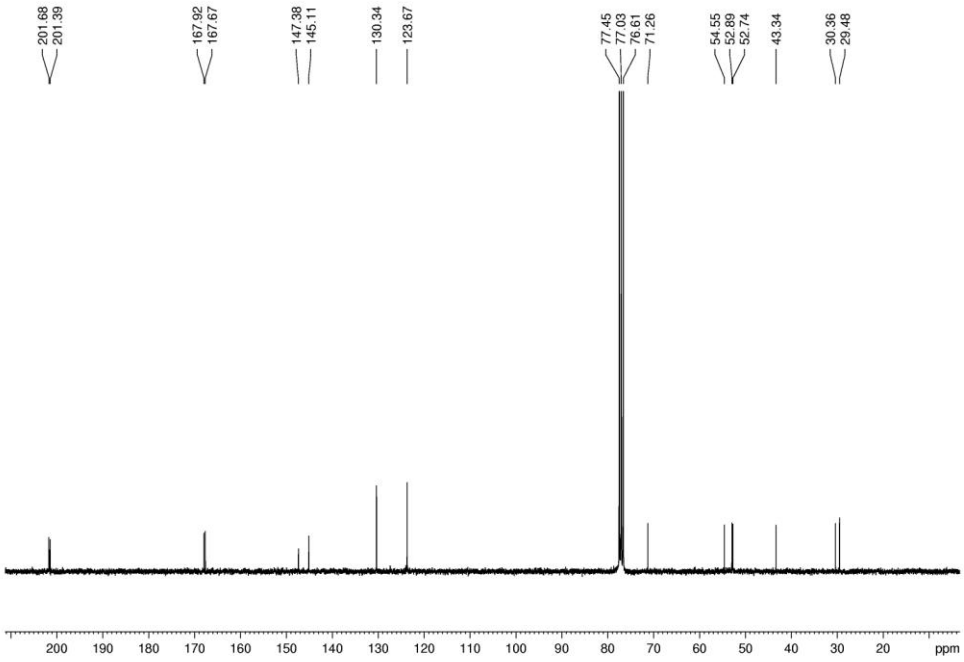


^{13}C NMR spectrum for **11b**



^{1}H NMR spectrum for **13b**

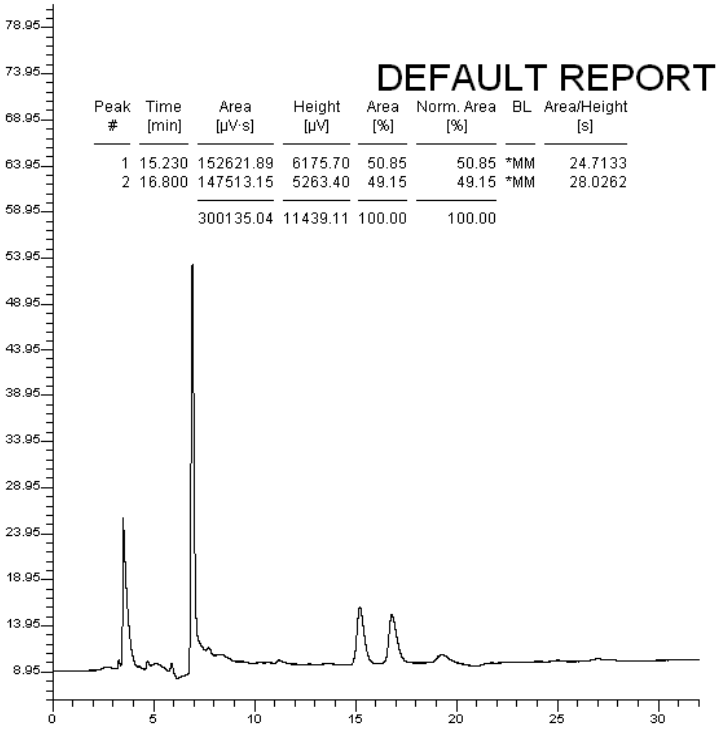
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^{13}C NMR spectrum for **13b**

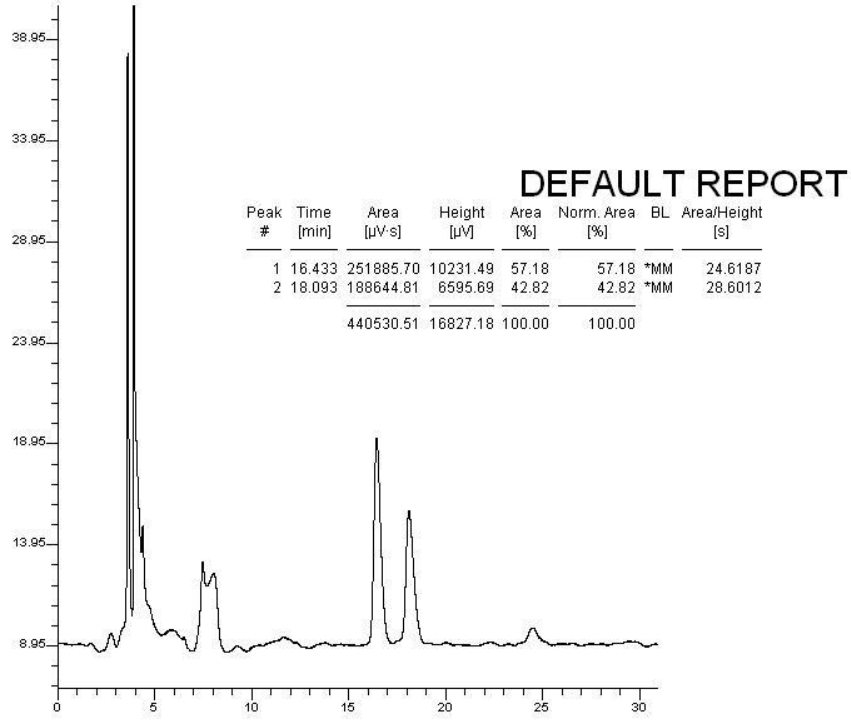
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HPLC Chromatograms

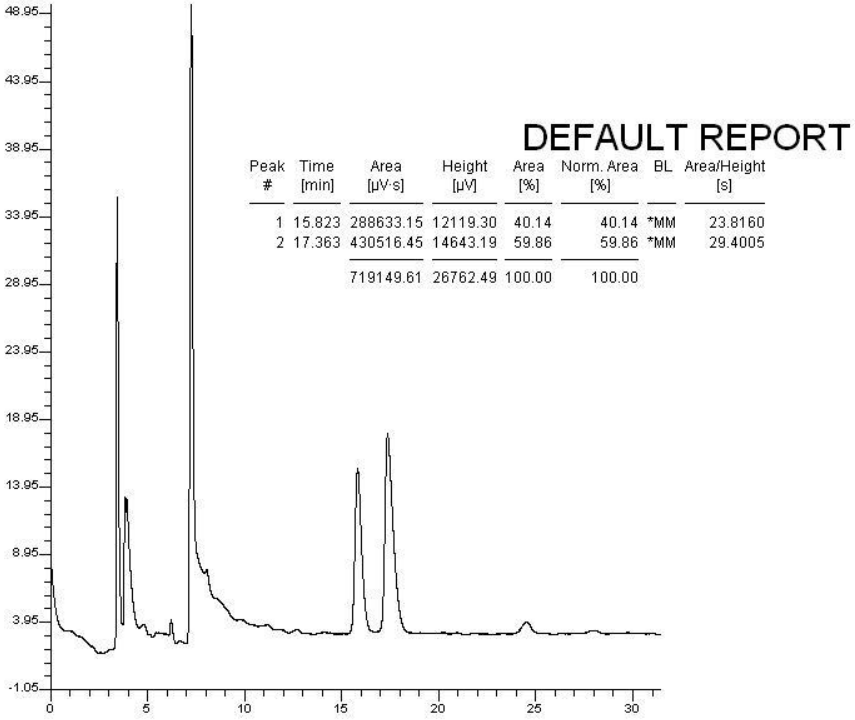


Racemic product **6a**

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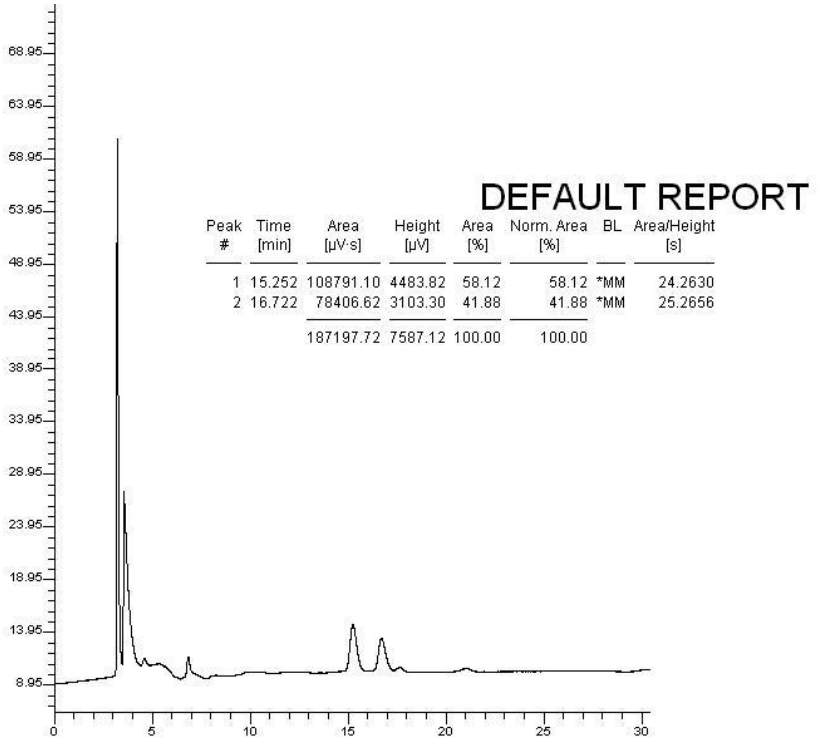


Product **6a** resulting from reaction catalysed by organocatalyst **1**



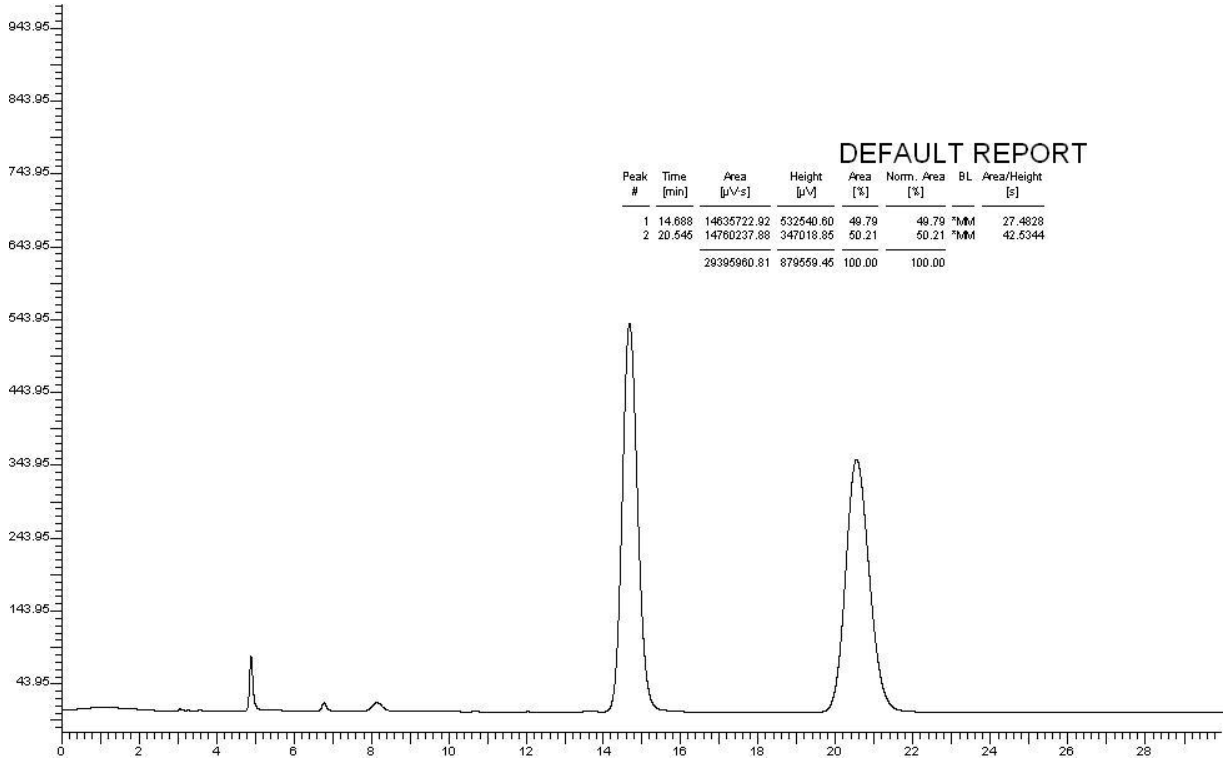
Product **6a** resulting from reaction catalysed by organocatalyst **2**

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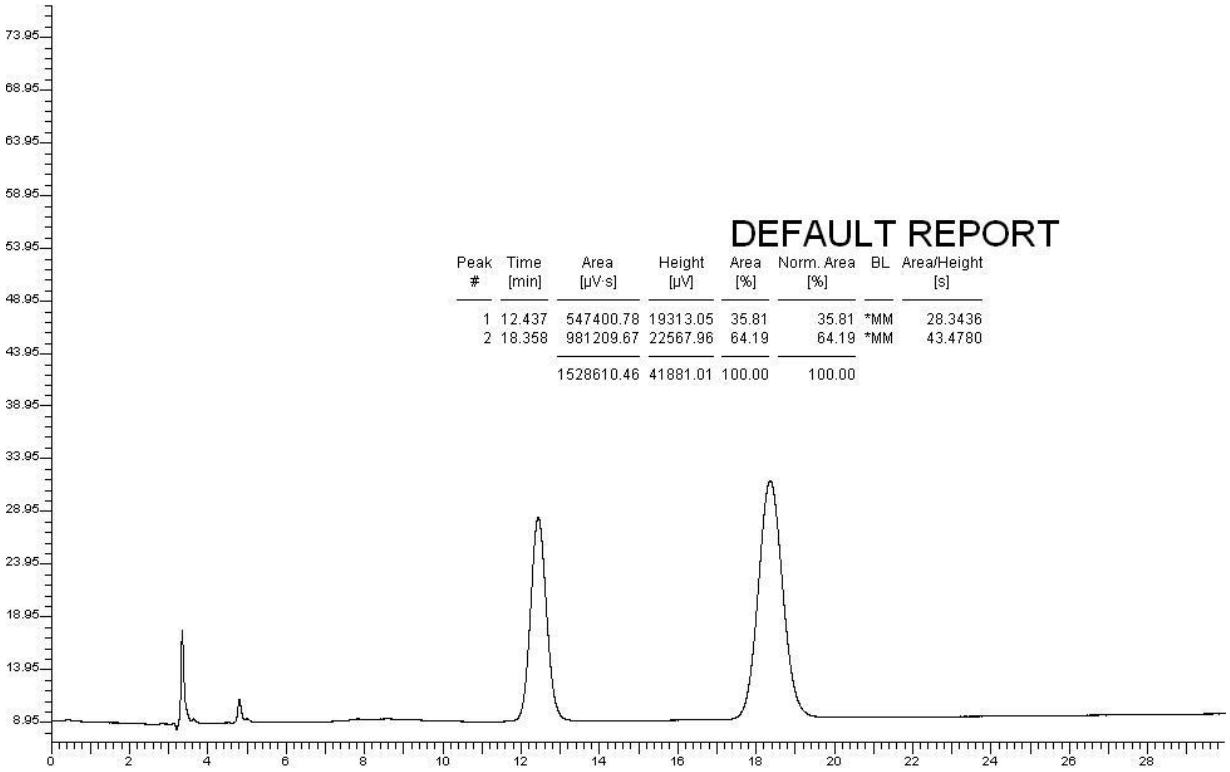


Product **6a** resulting from reaction catalysed by organocatalyst **3**

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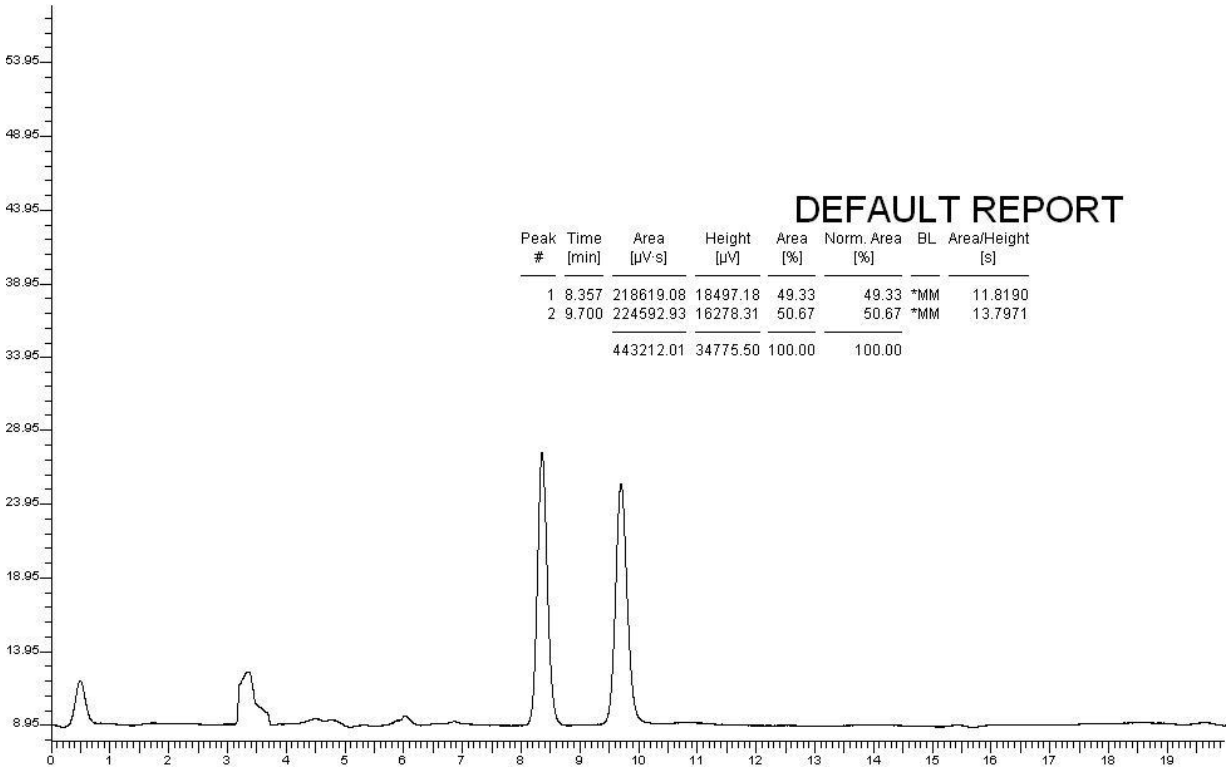


Racemic product **6b**



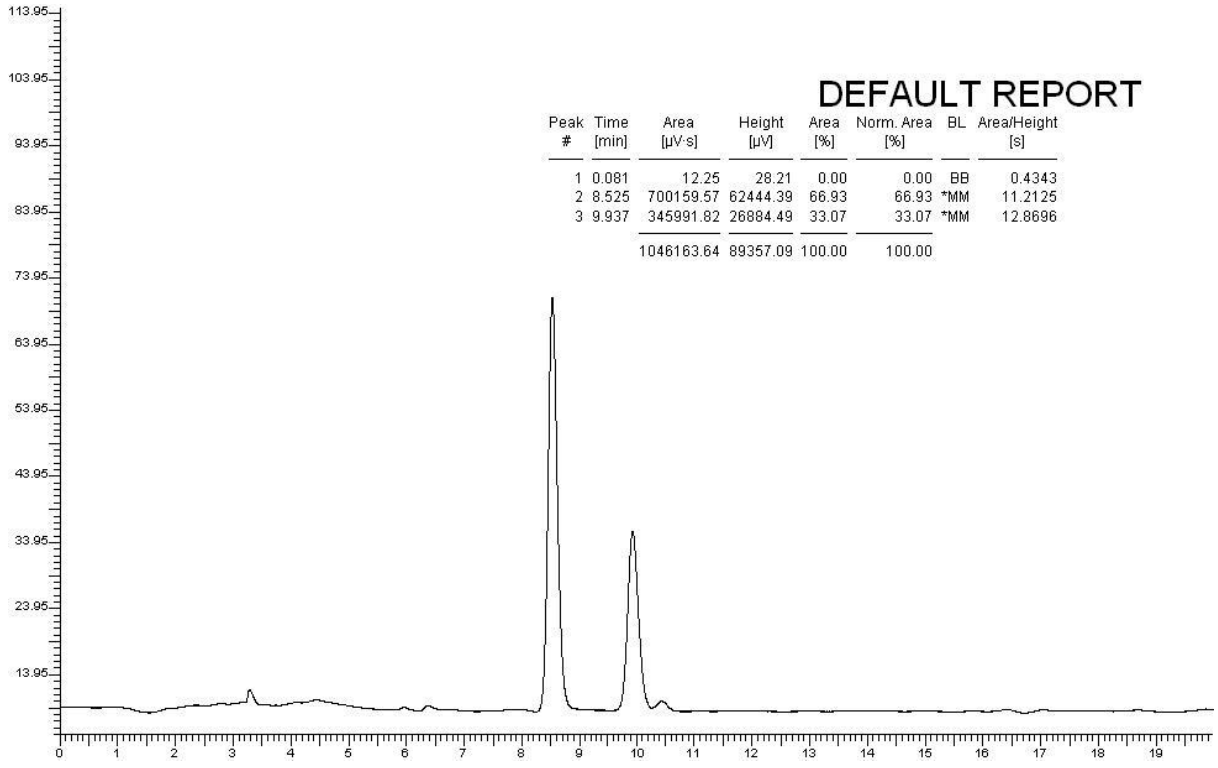
Product **6b** resulting from reaction catalysed by organocatalyst **2**

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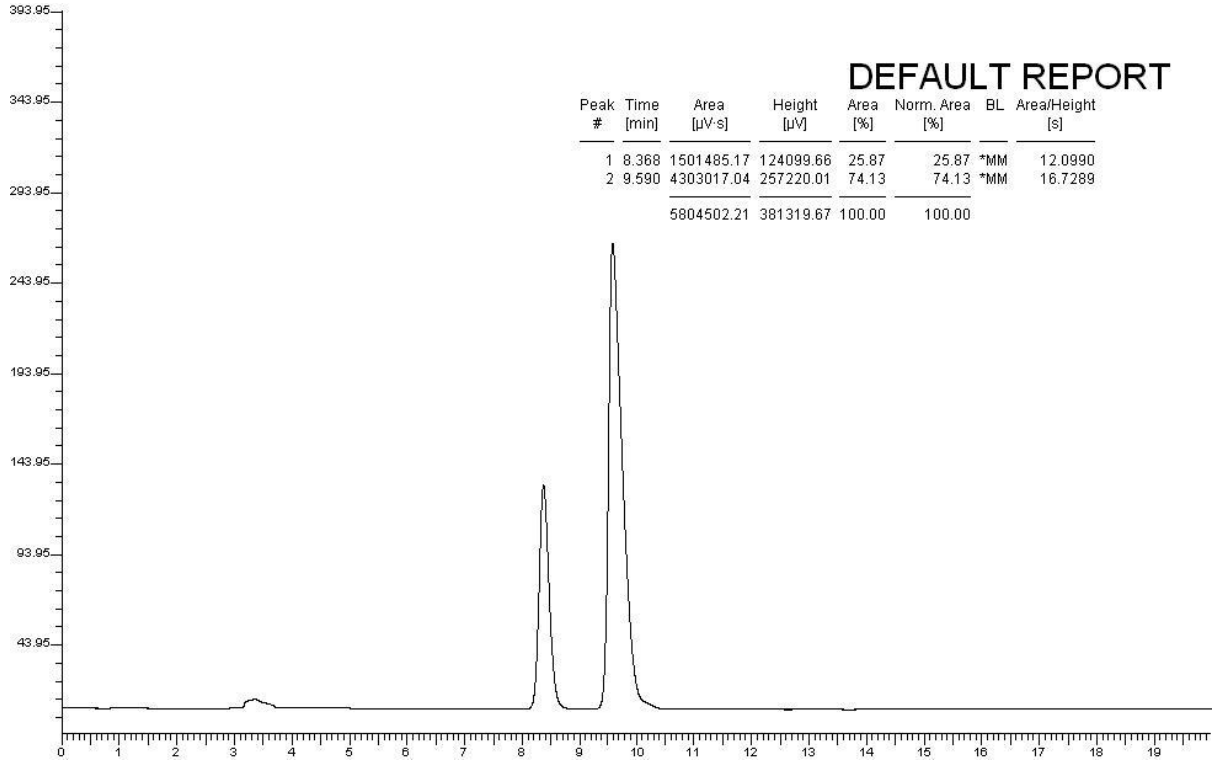


Racemic product **11a**

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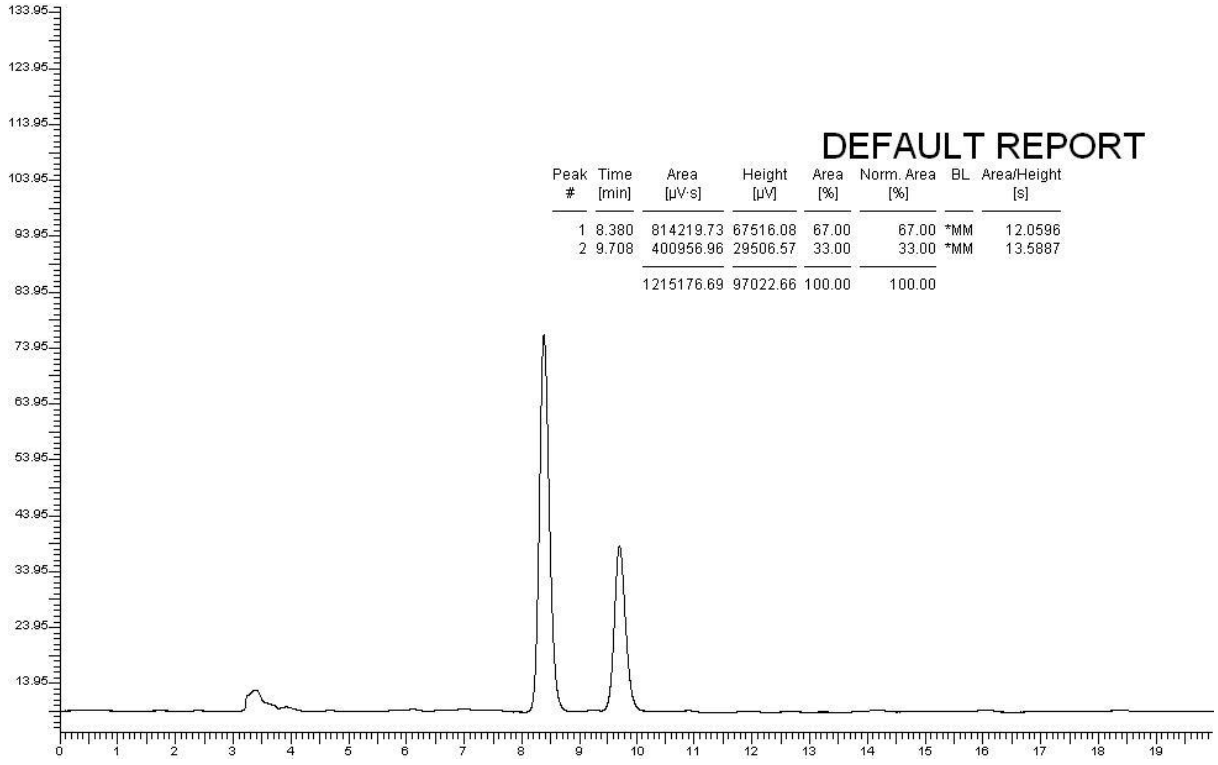


Product **11a** resulting from reaction catalysed by organocatalyst **1**



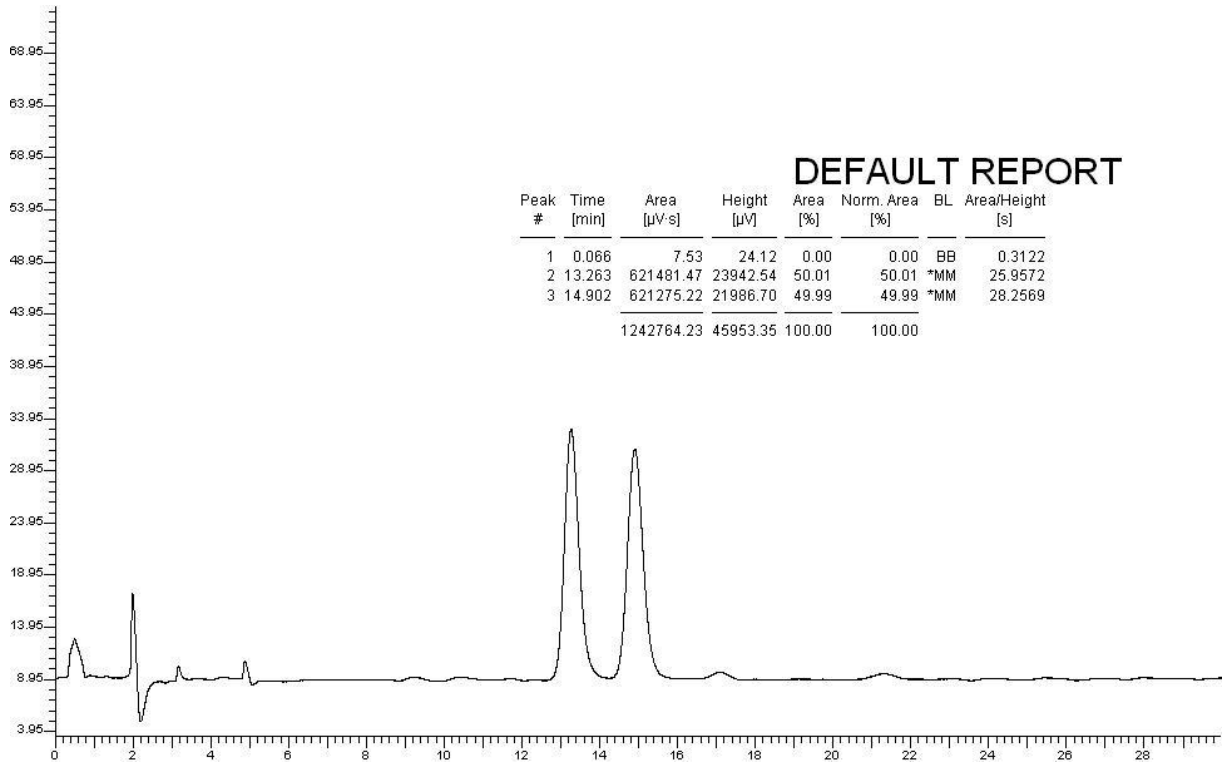
Product **11a** resulting from reaction catalysed by organocatalyst **2**

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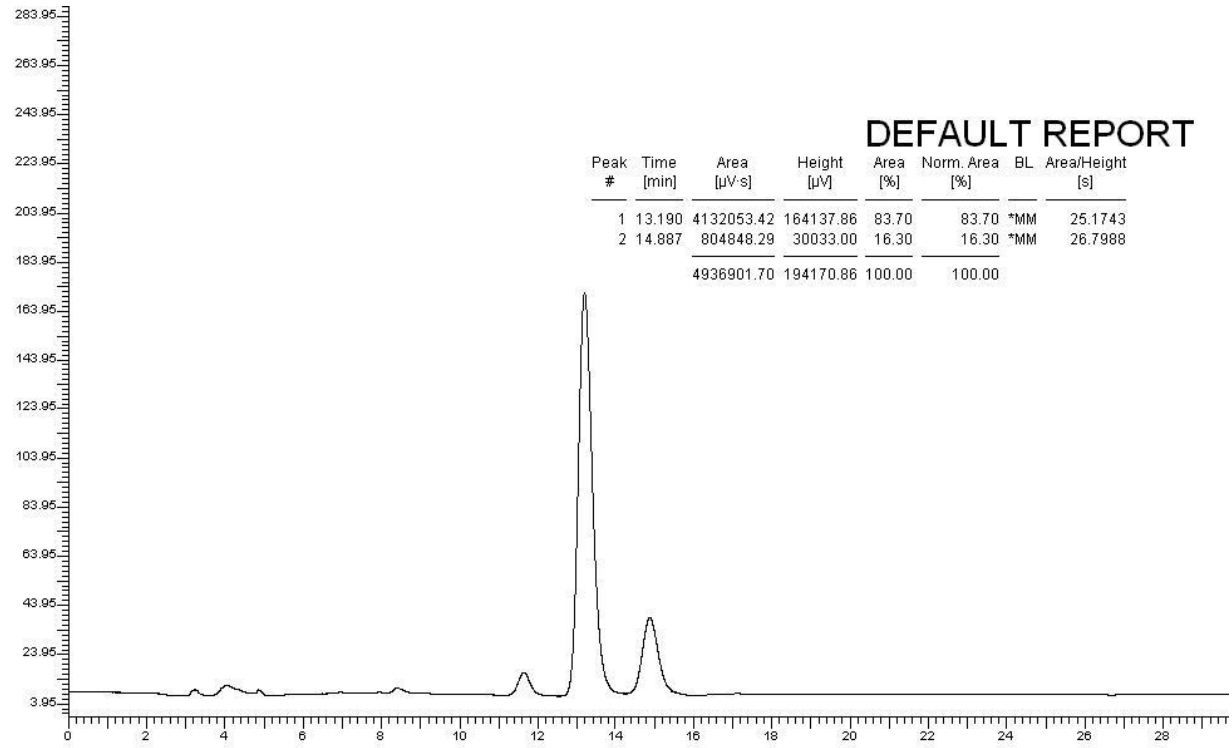


Product **11a** resulting from reaction catalysed by organocatalyst **3**

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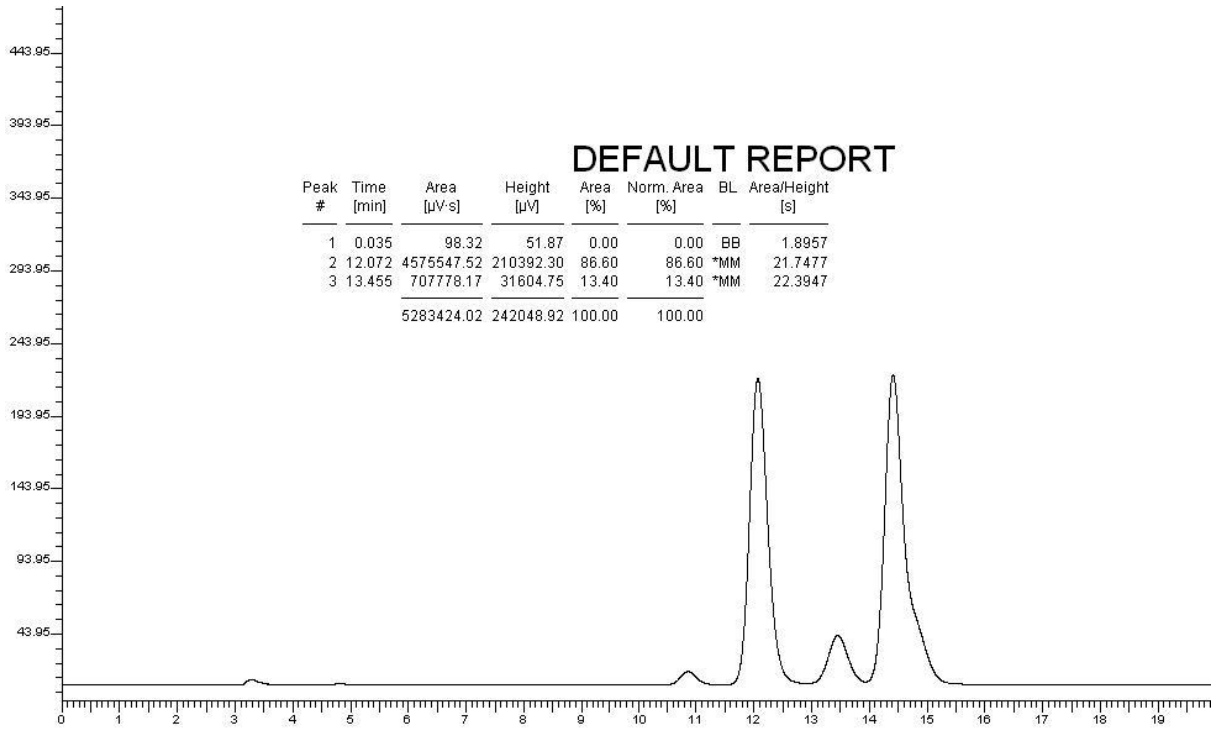


Racemic product **13b**

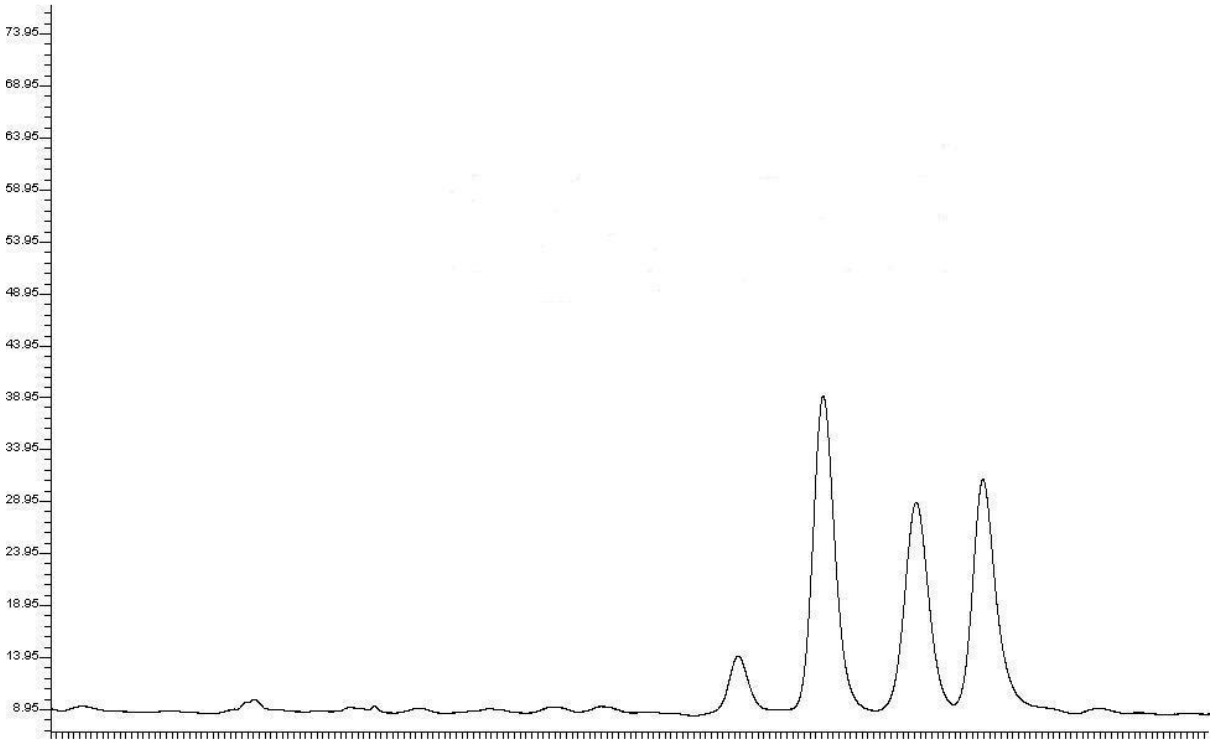


Product **13b** resulting from reaction catalysed by organocatalyst **1**

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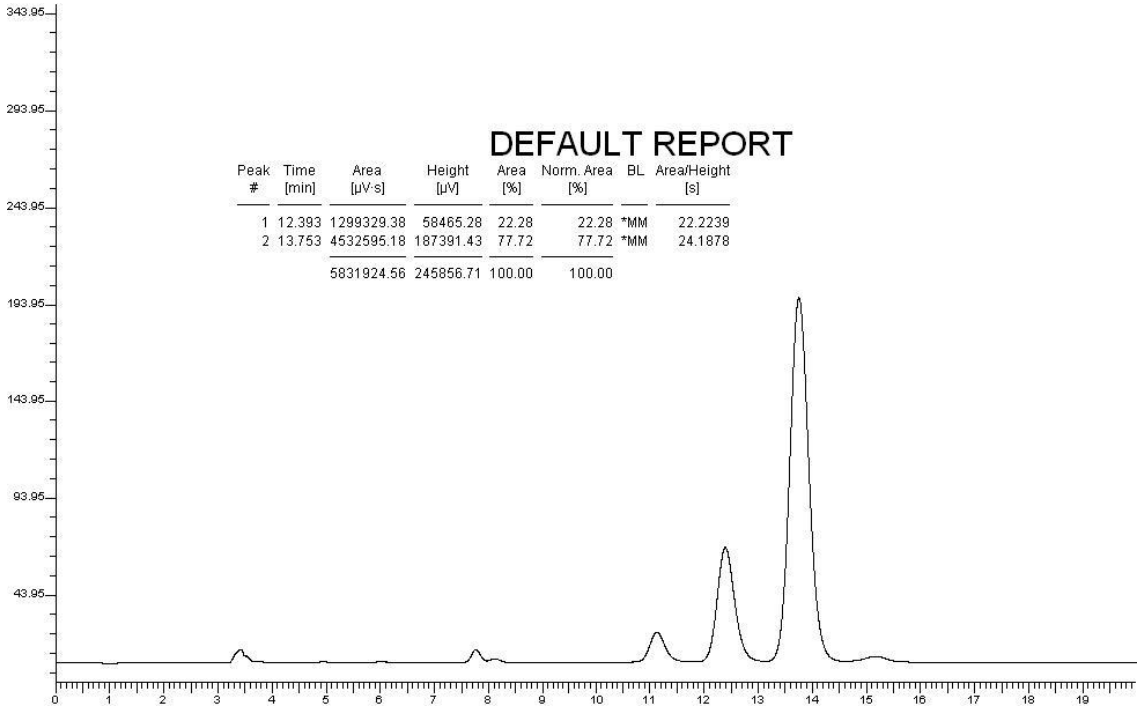


Product **13b** resulting from reaction catalysed by organocatalyst **2**



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Product **13b** resulting from reaction catalysed by organocatalyst **2** and subsequently spiked with racemic product



Product **13b** resulting from reaction catalysed by organocatalyst **3**

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