Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Microwave Assisted Chemoselective Peptide Alcohol Synthesis from *C*-terminal Amide

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1 Copies of NMR (^{1}H and ^{13}C) and HRMS spectra:

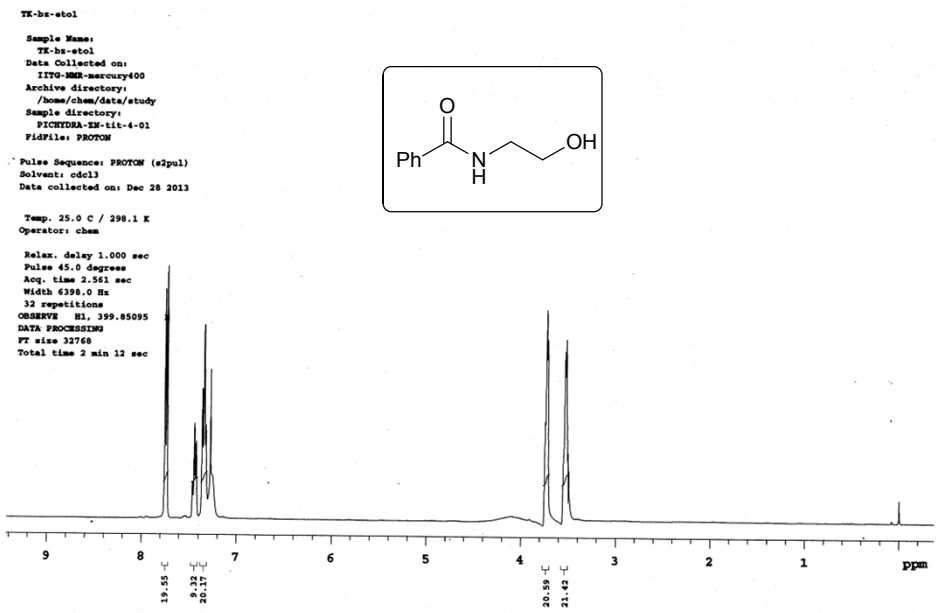


Figure S1. ^{1}H NMR spectra of the product of entry 1 in table 2

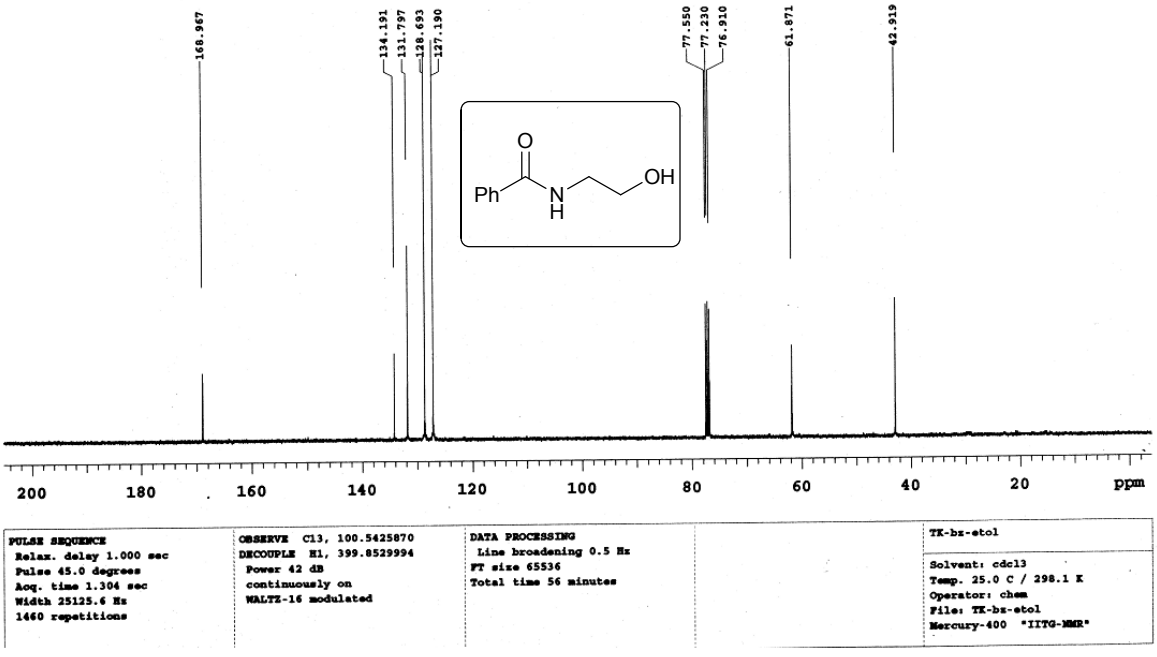


Figure S2. ^{13}C NMR spectra of the product of entry 1 in table 2

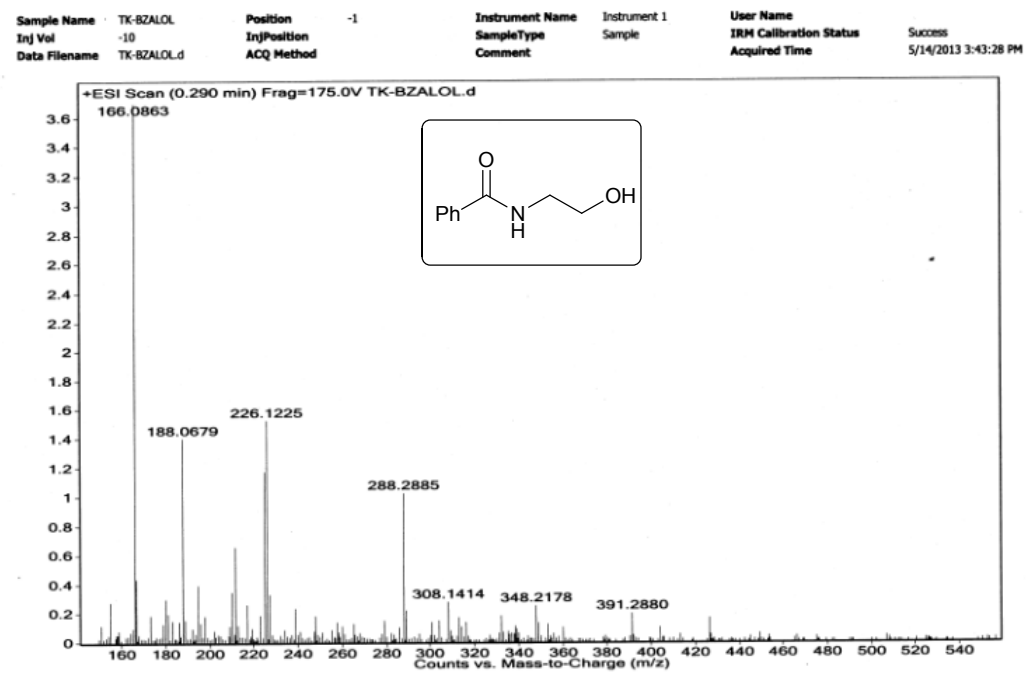


Figure S3. HRMS spectra of the product of entry 1 in table 2

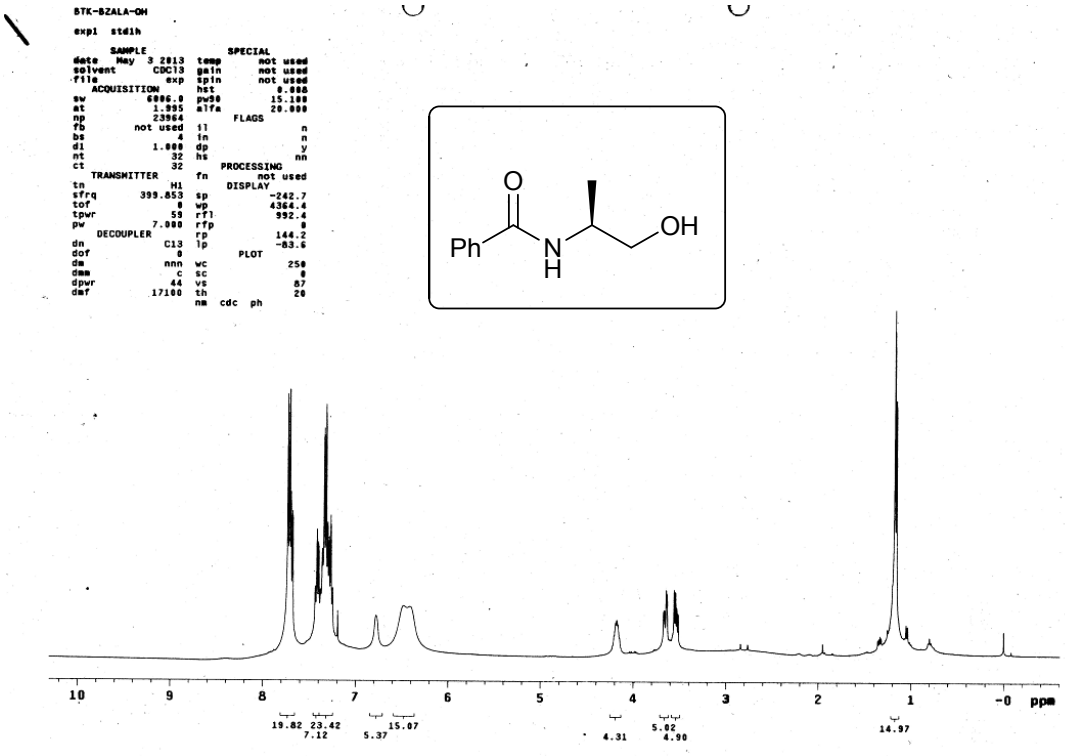


Figure S4. ^{1}H NMR spectra of the product of entry 2 in table 2

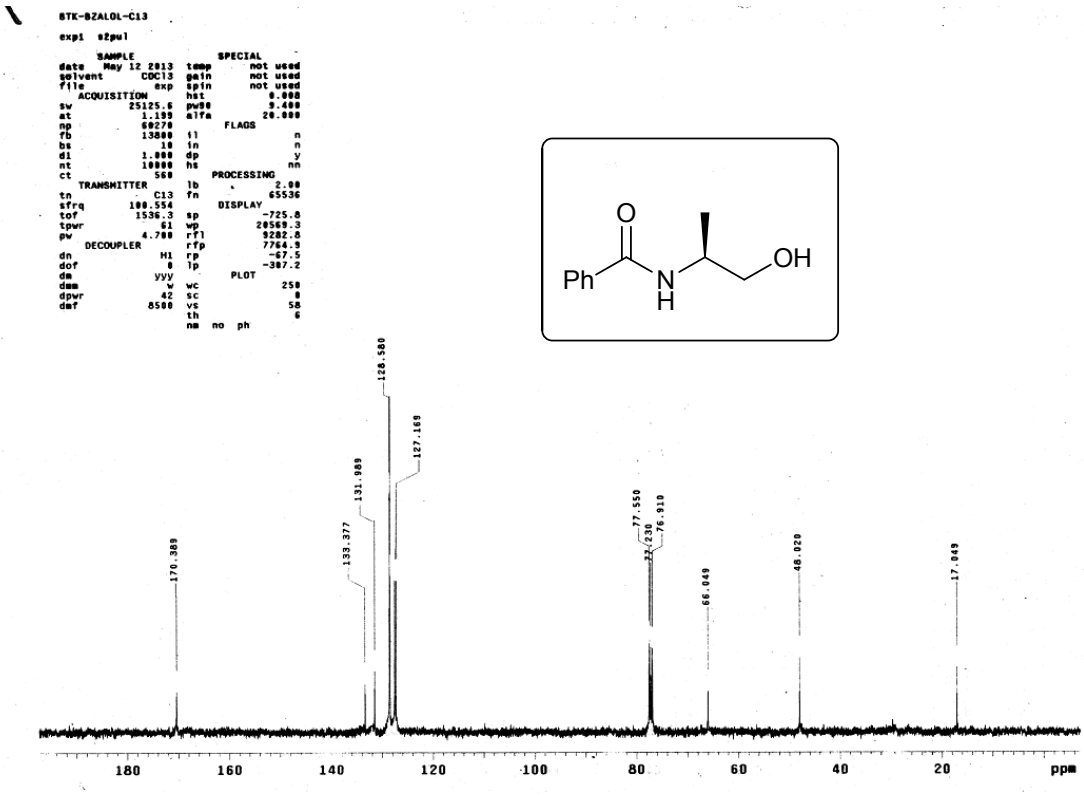


Figure S5. ^{13}C NMR spectra of the product of entry 2 in table 2

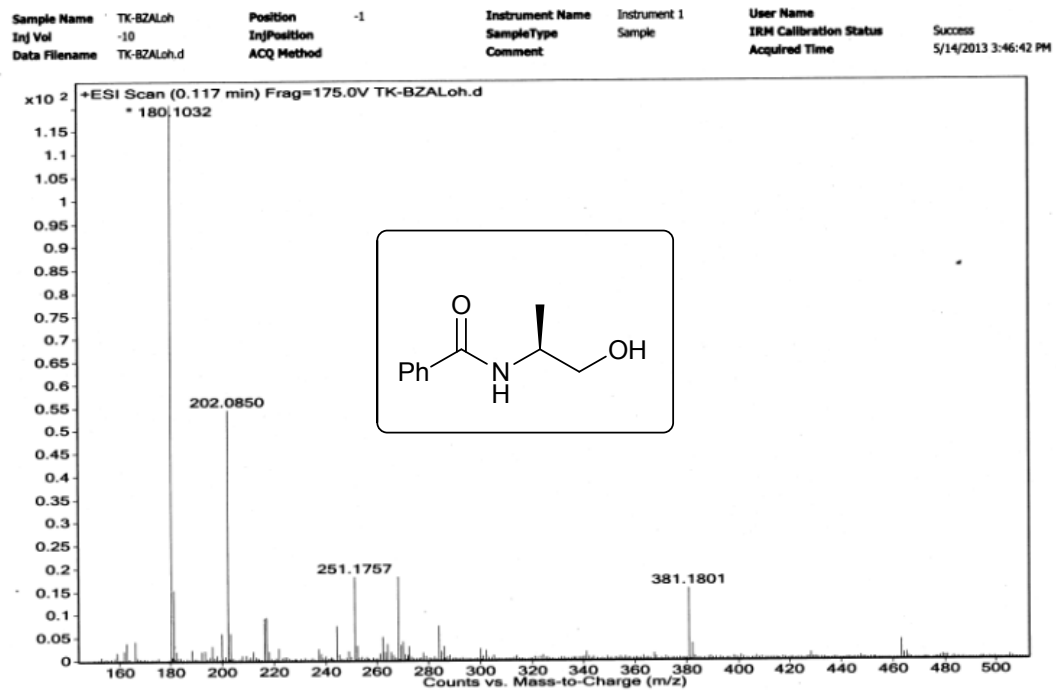


Figure S6. HRMS spectra of the product of entry 2 in table 2

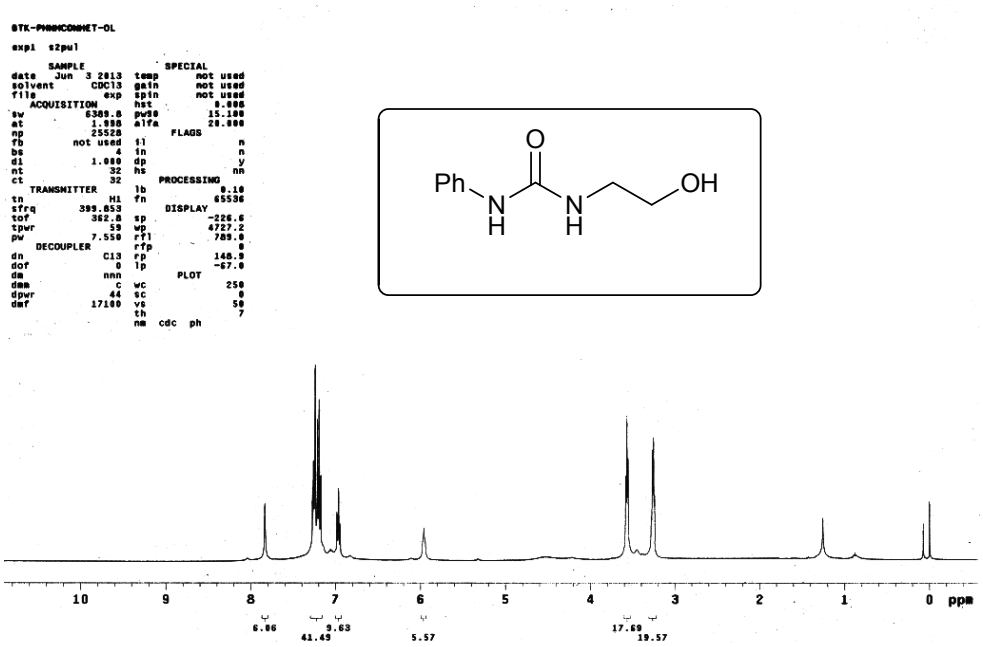


Figure S7. ^{1}H NMR spectra of the product of entry 3 in table 2

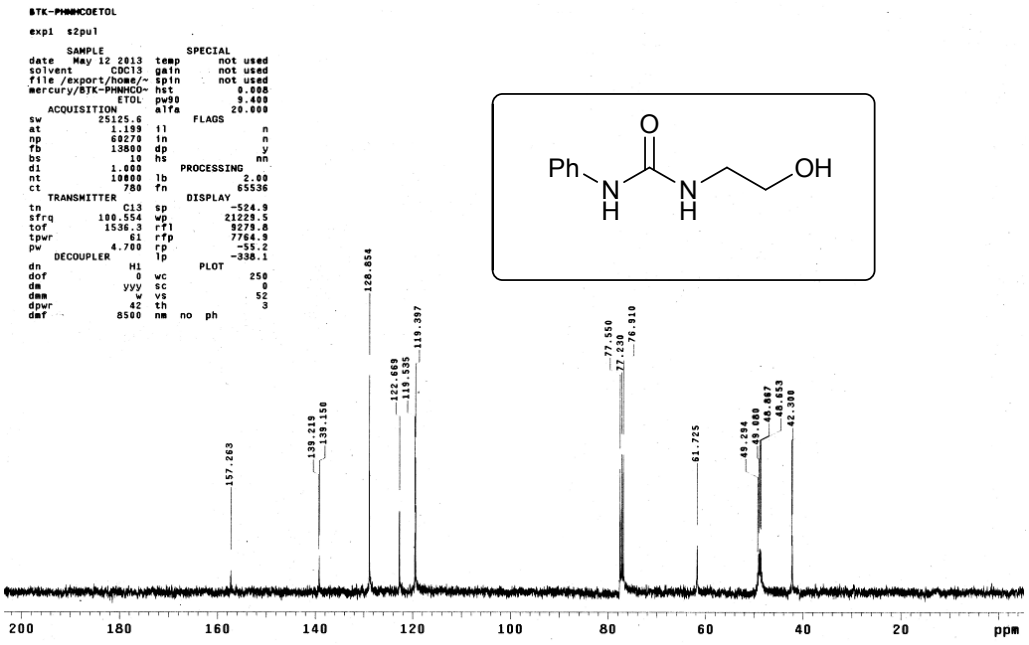


Figure S8. ^{13}C NMR spectra of the product of entry 3 in table 2

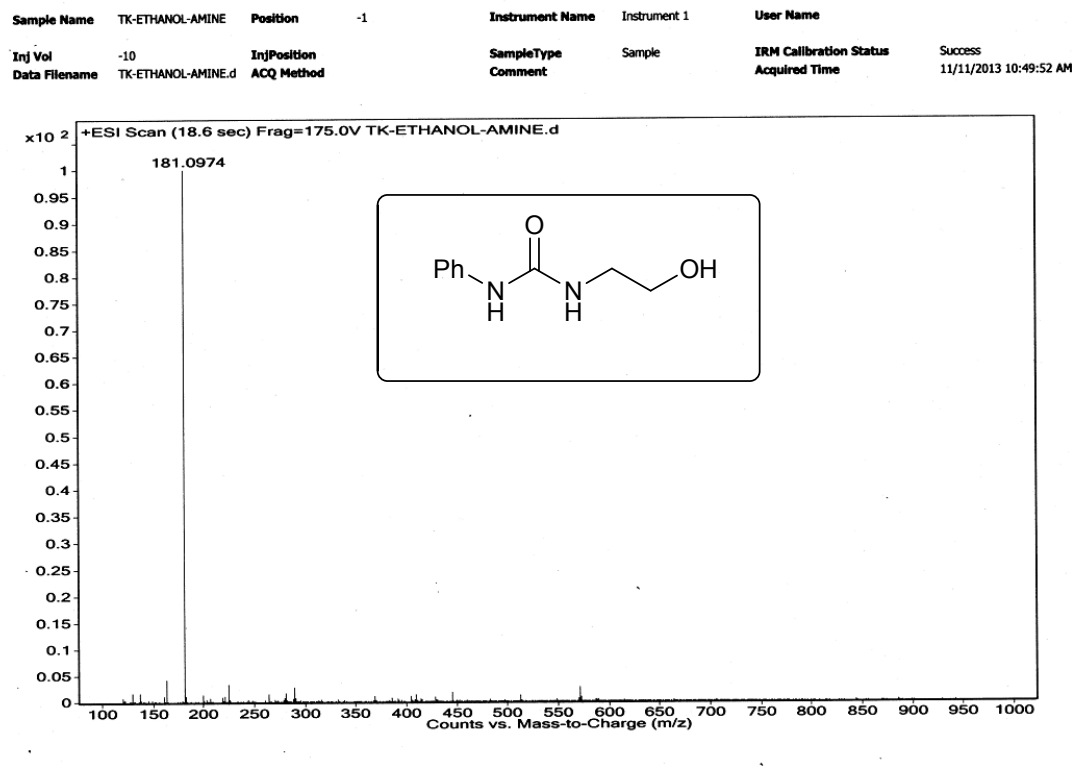


Figure S9. HRMS spectra of the product of entry 3 in table 2

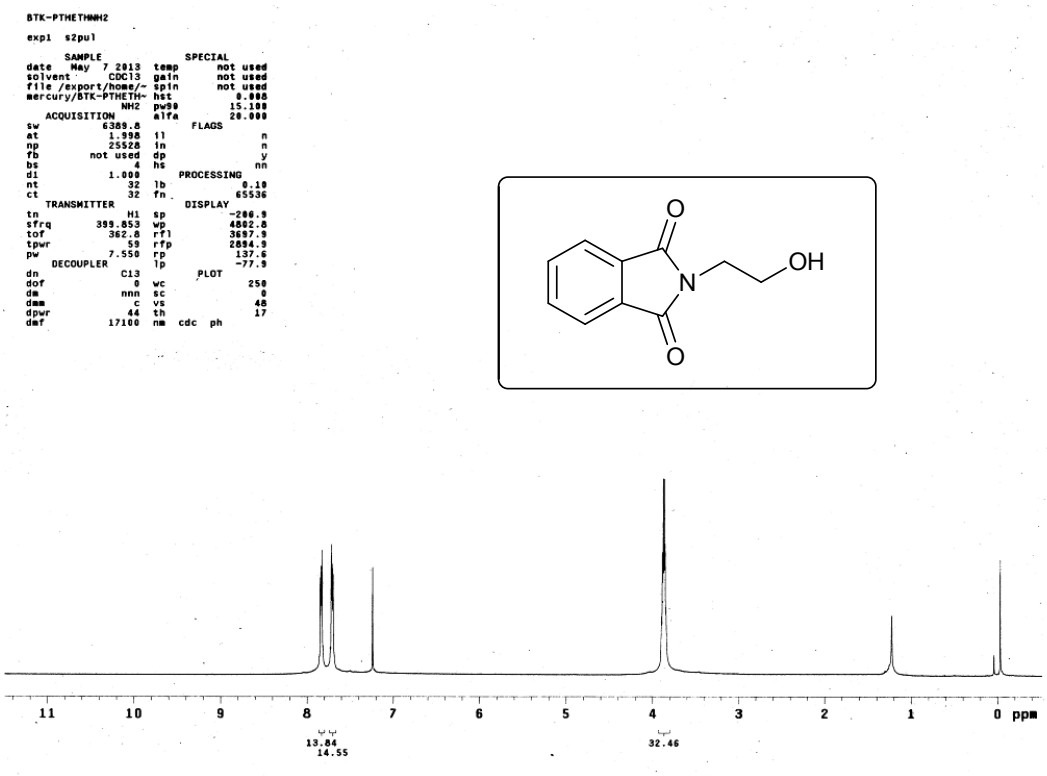
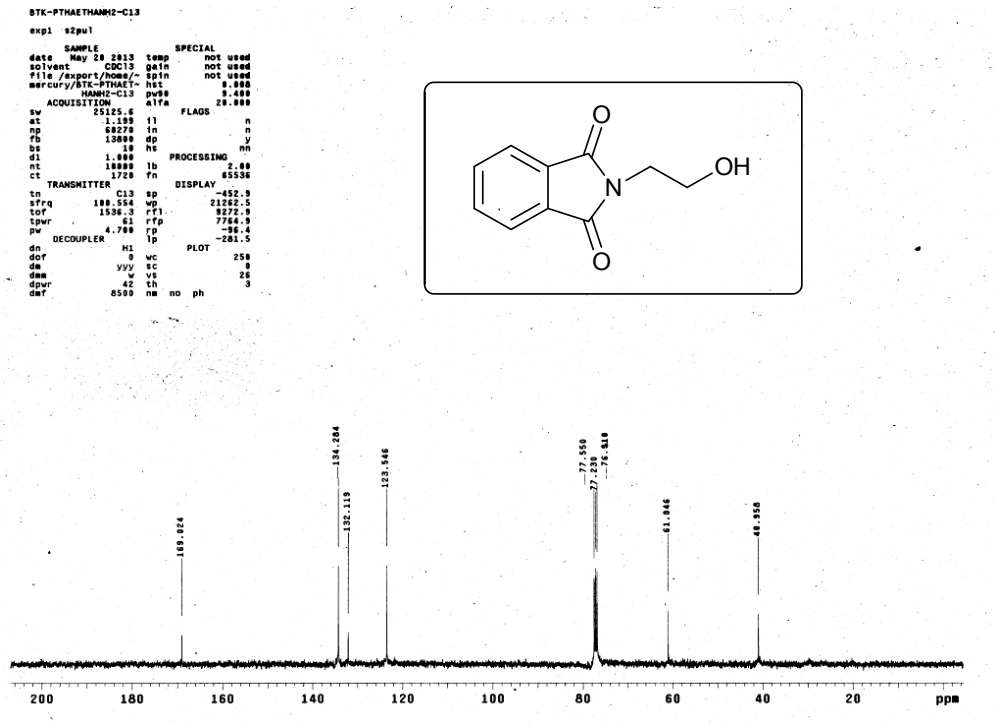


Figure S10. ^{1}H NMR spectra of the product of entry 4 in table 2



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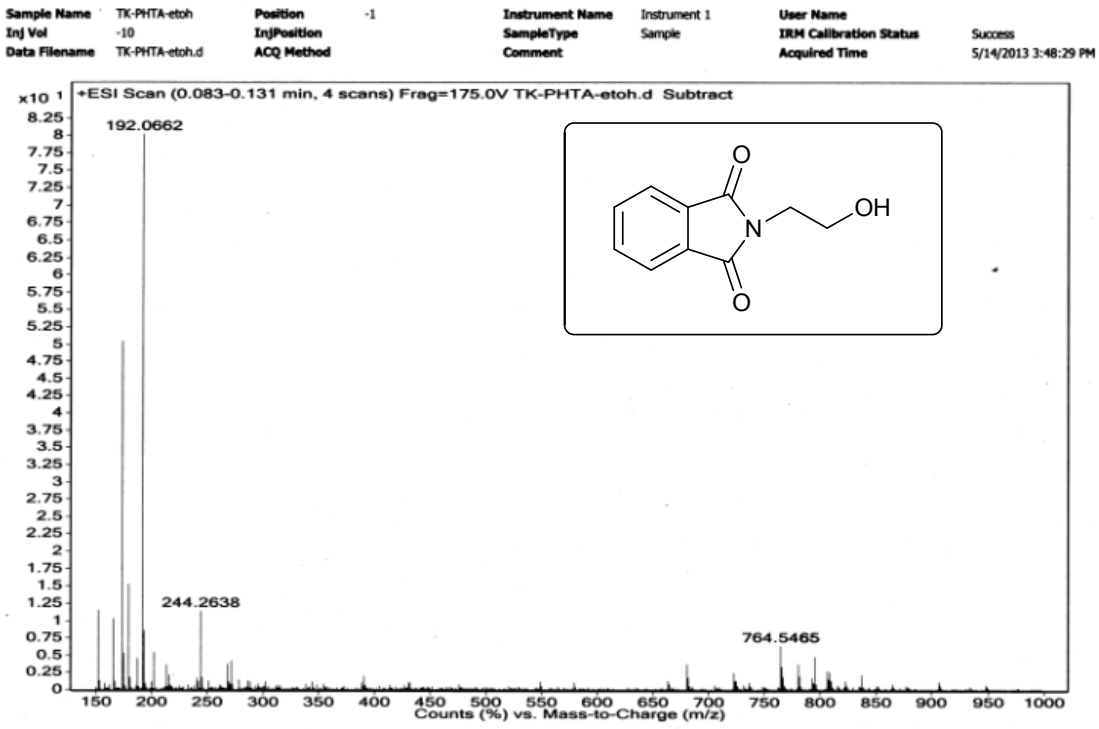


Figure S12. HRMS spectra of the product of entry 4 in table 2

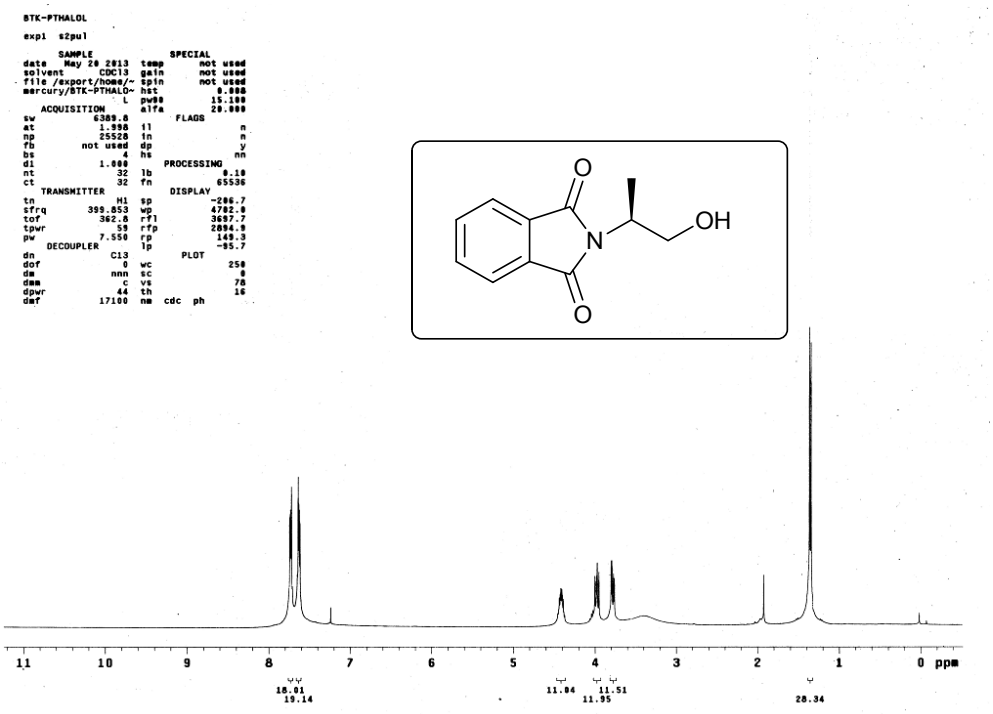


Figure S13. [1]H NMR spectra of the product of entry 5 in table 2

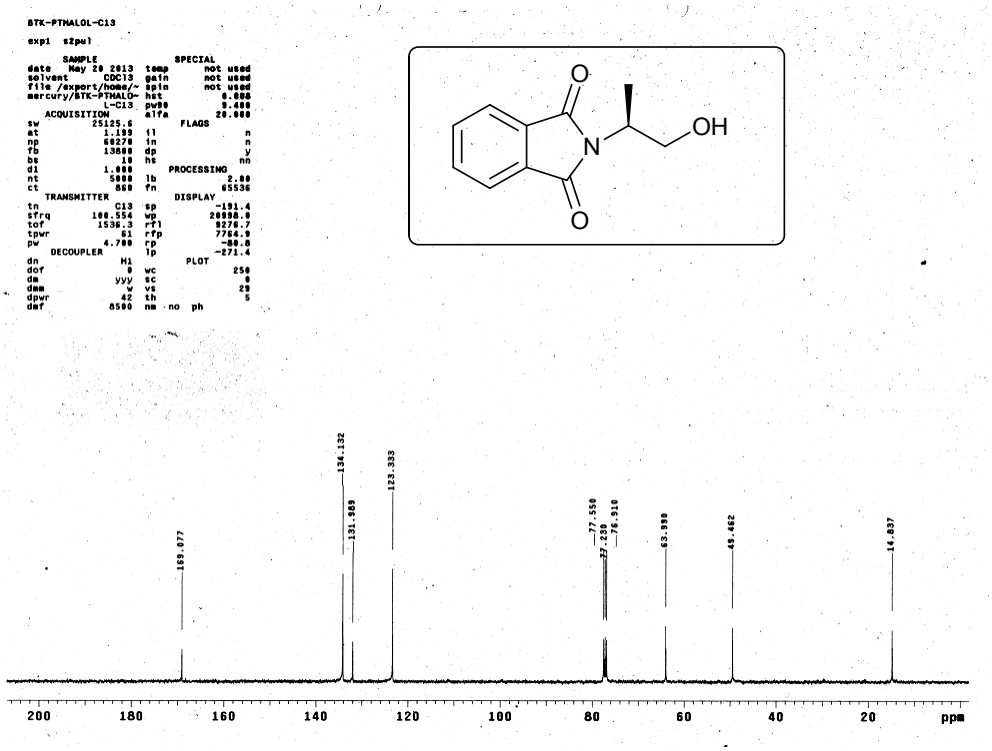


Figure S14. [13]C NMR spectra of the product of entry 5 in table 2

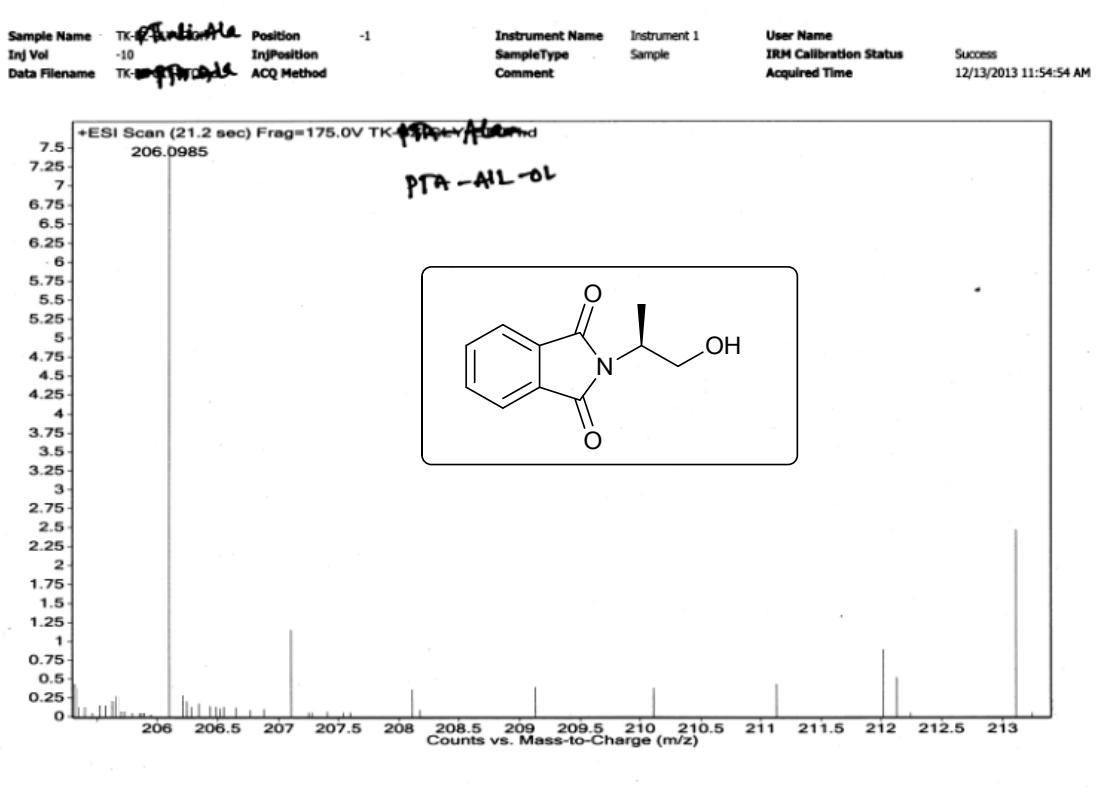


Figure S15. HRMS spectra of the product of entry 5 in table 2

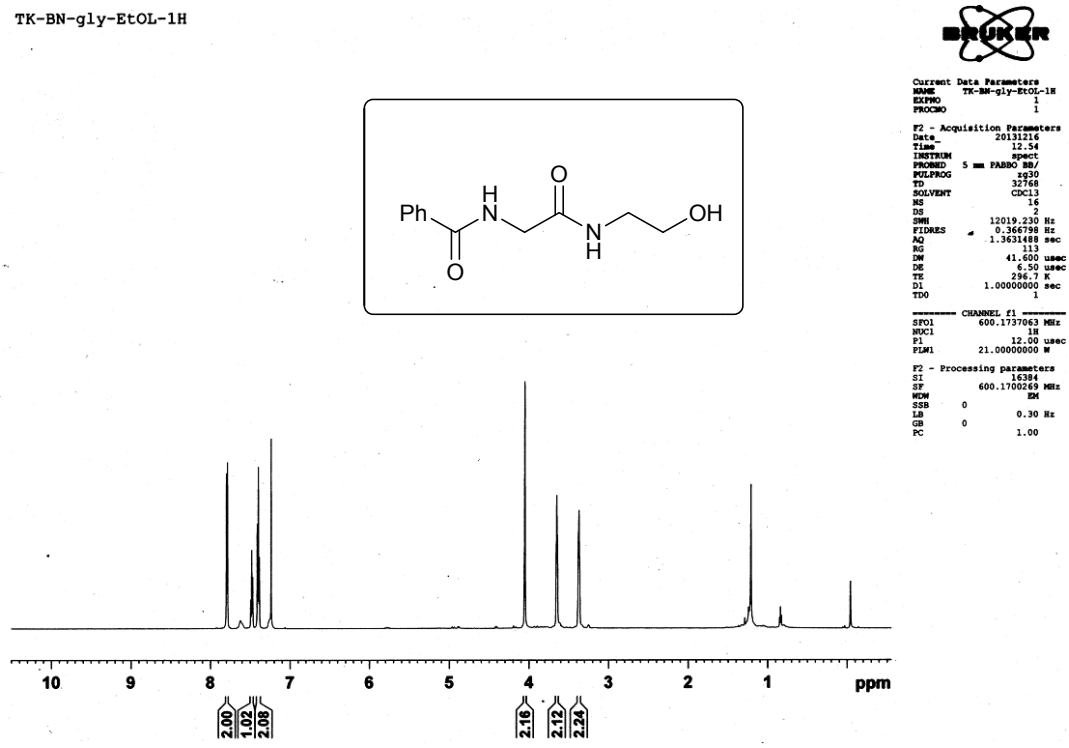


Figure S16. ^{1}H NMR spectra of the product of entry 6 in table 2

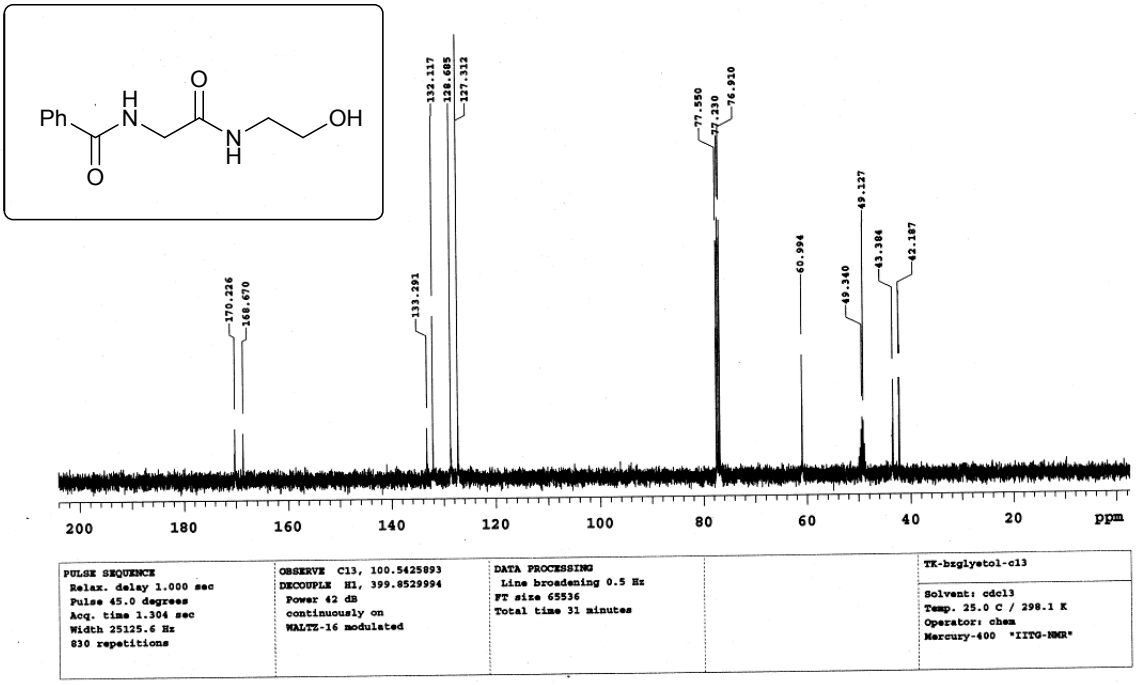
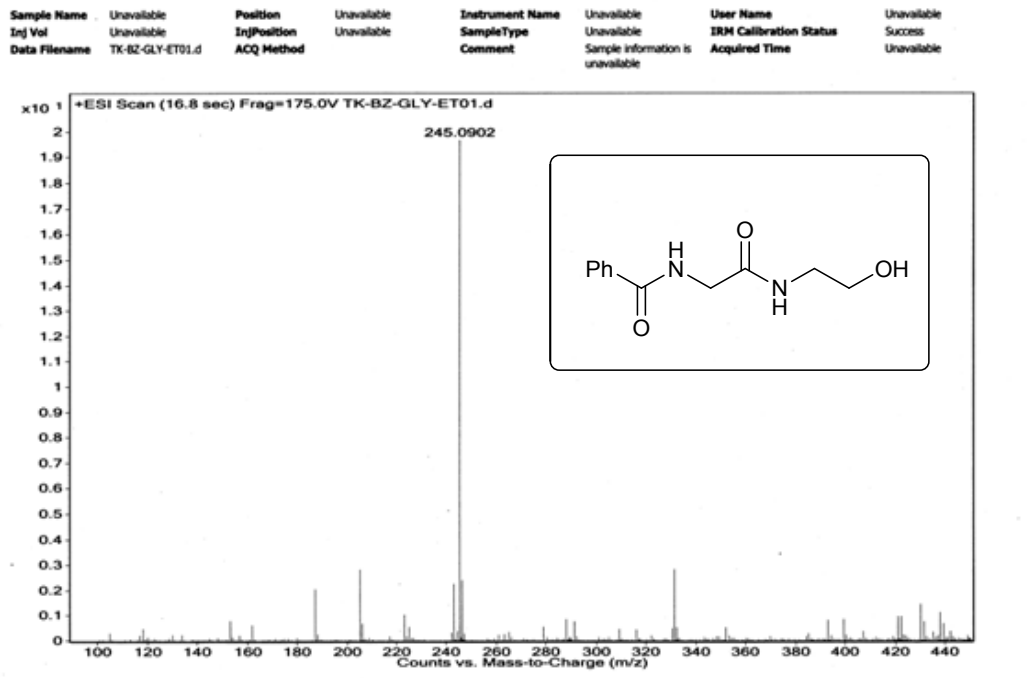


Figure S17. ^{13}C NMR spectra of the product of entry 6 in table 2



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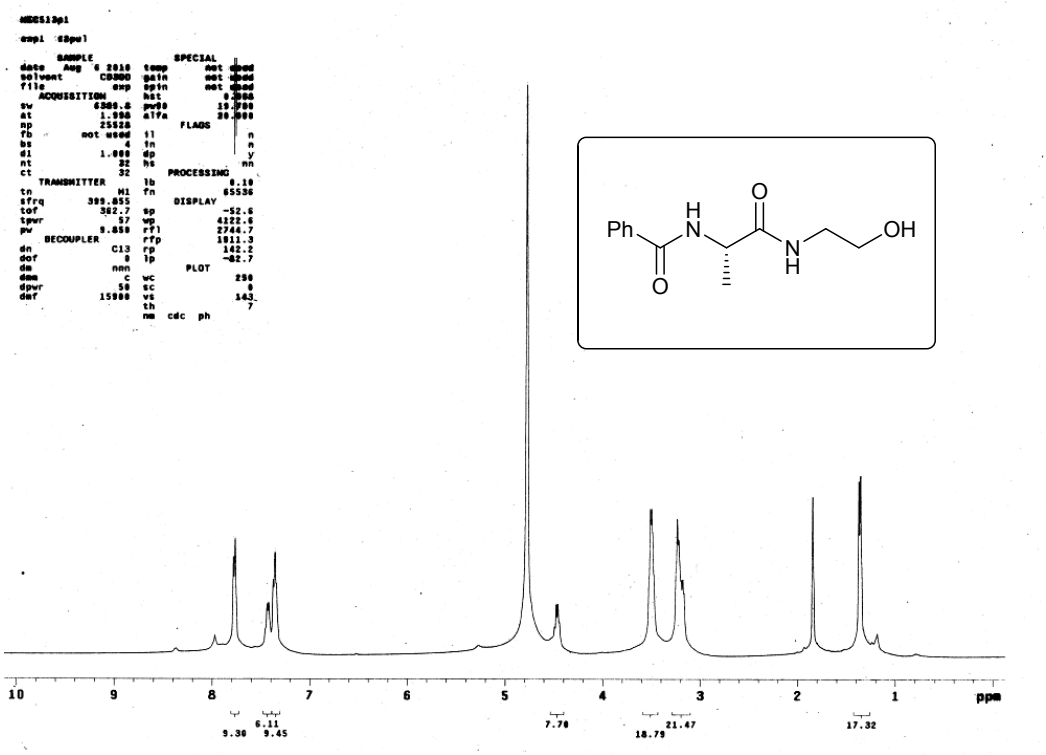


Figure S19. ^{1}H NMR spectra of the product of entry 7 in table 2

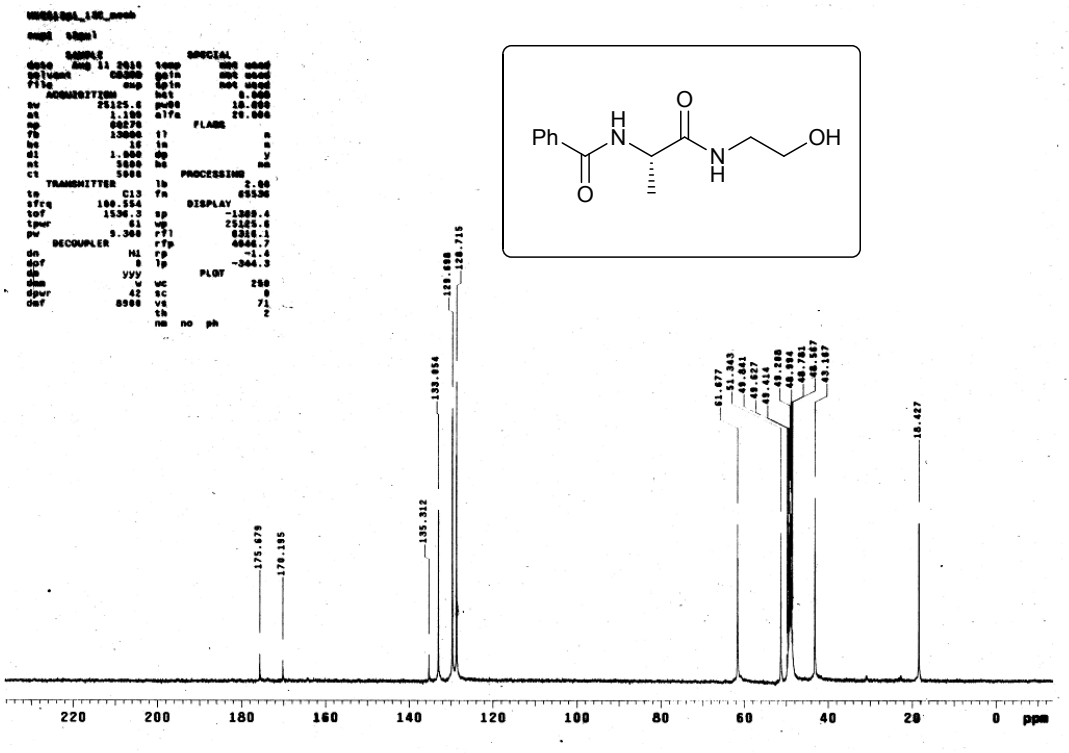


Figure S20. ^{1}H NMR spectra of the product of entry 7 in table 2

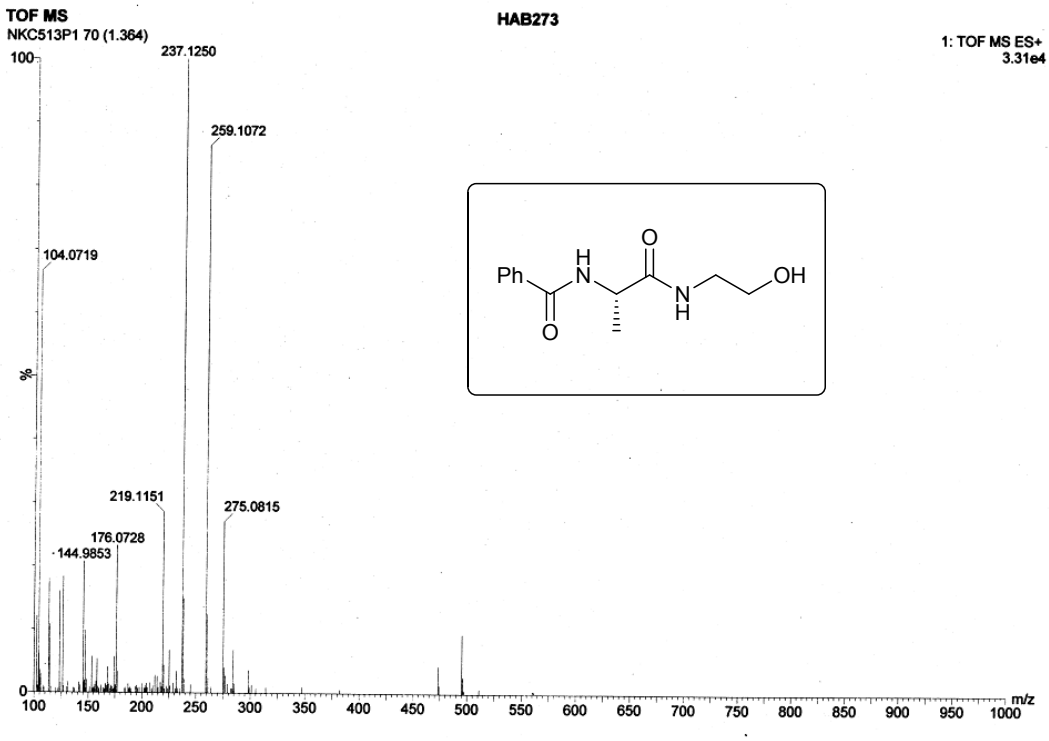


Figure S21. HRMS spectra of the product of entry 7 in table 2

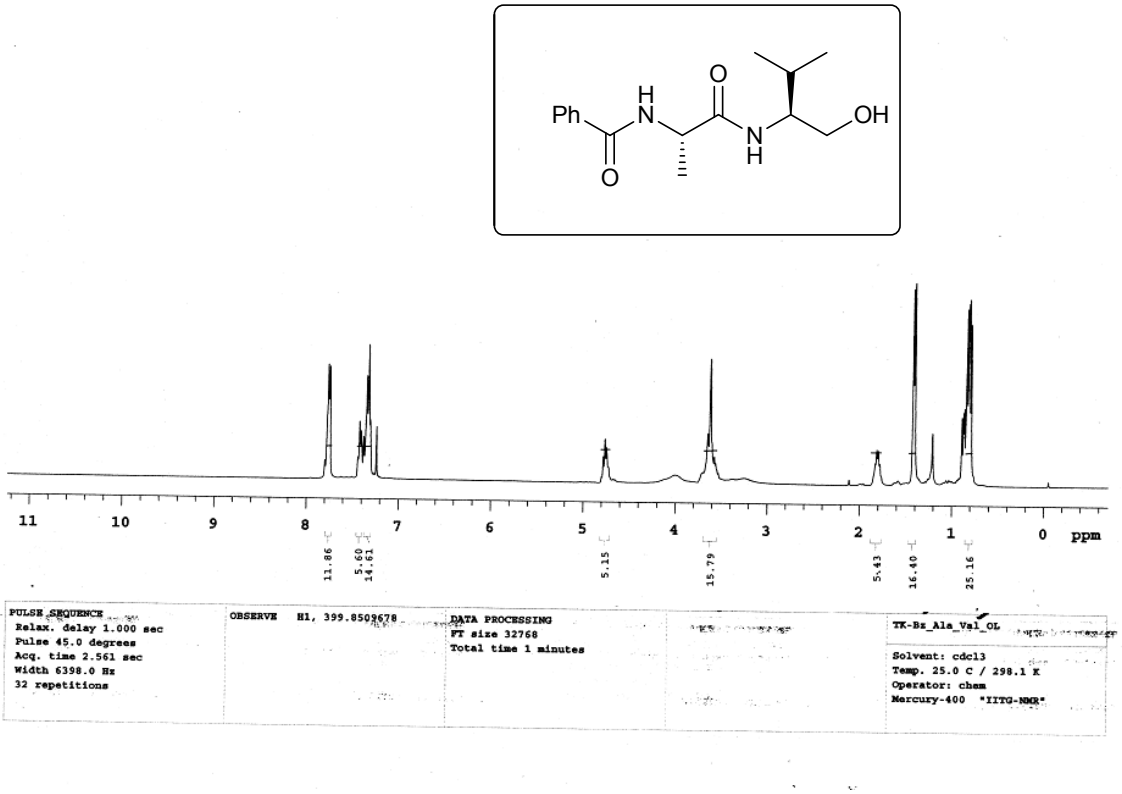


Figure S22. ^{1}H NMR spectra of the product of entry 8 in table 2

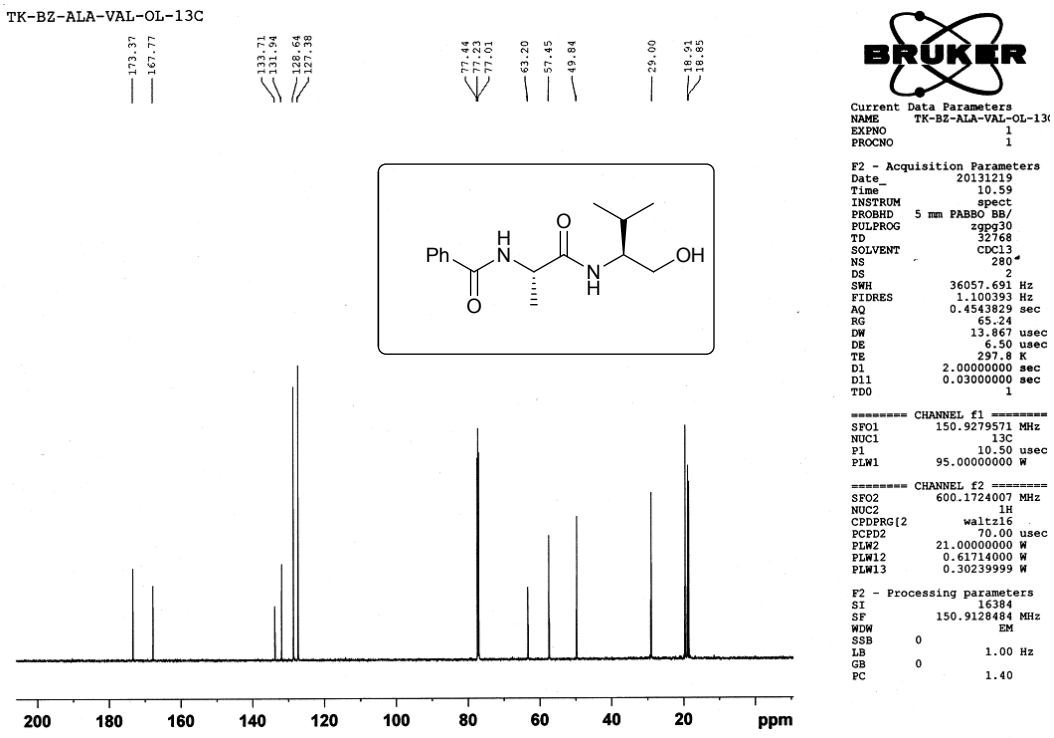


Figure S23. ^{13}C NMR spectra of the product of entry 8 in table 2

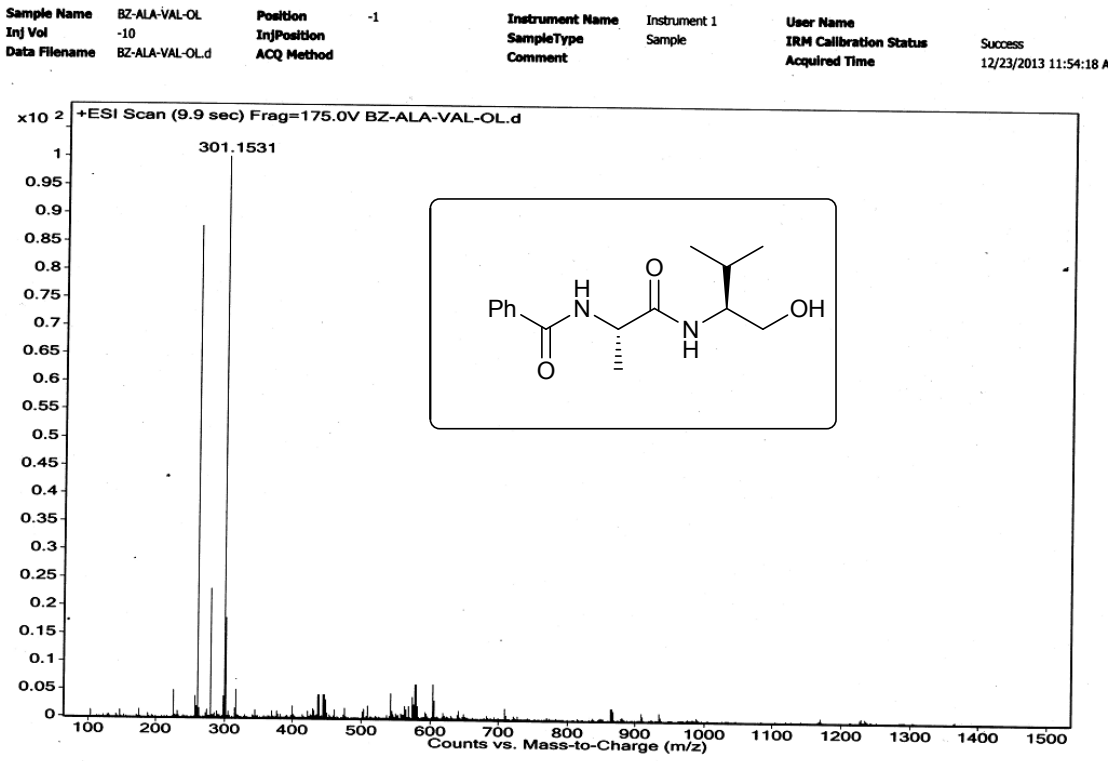


Figure S24. HRMS spectra of the product of entry 8 in table 2

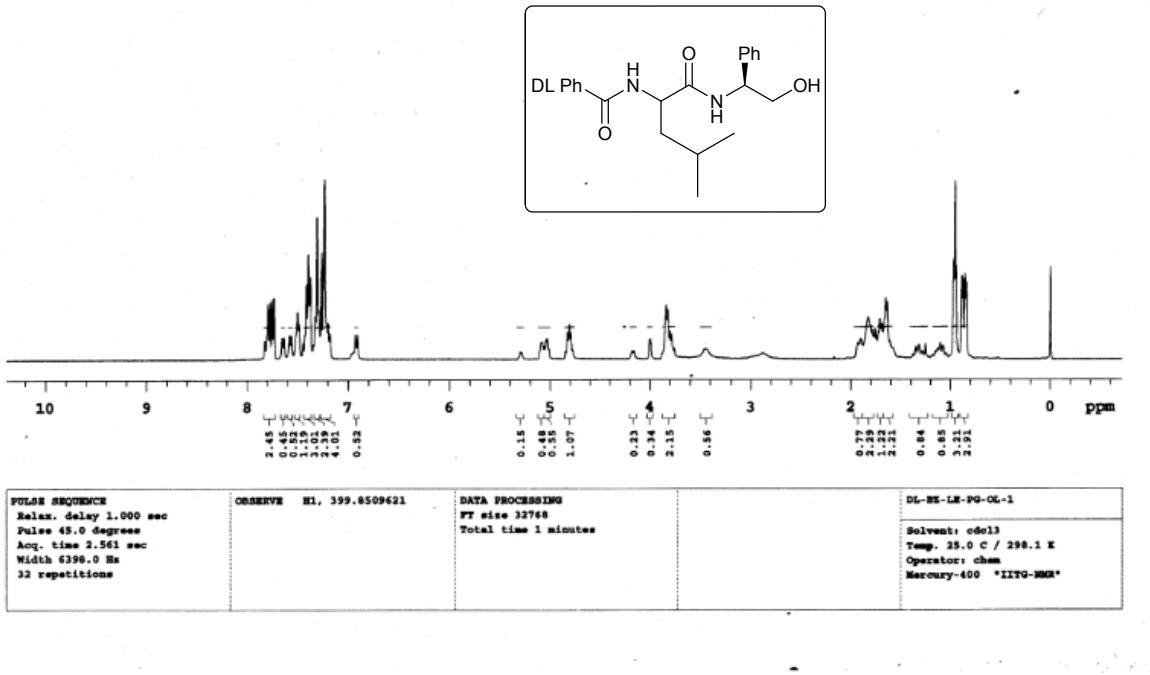


Figure S25. [1]H NMR spectra of the product of entry 9 in table 2

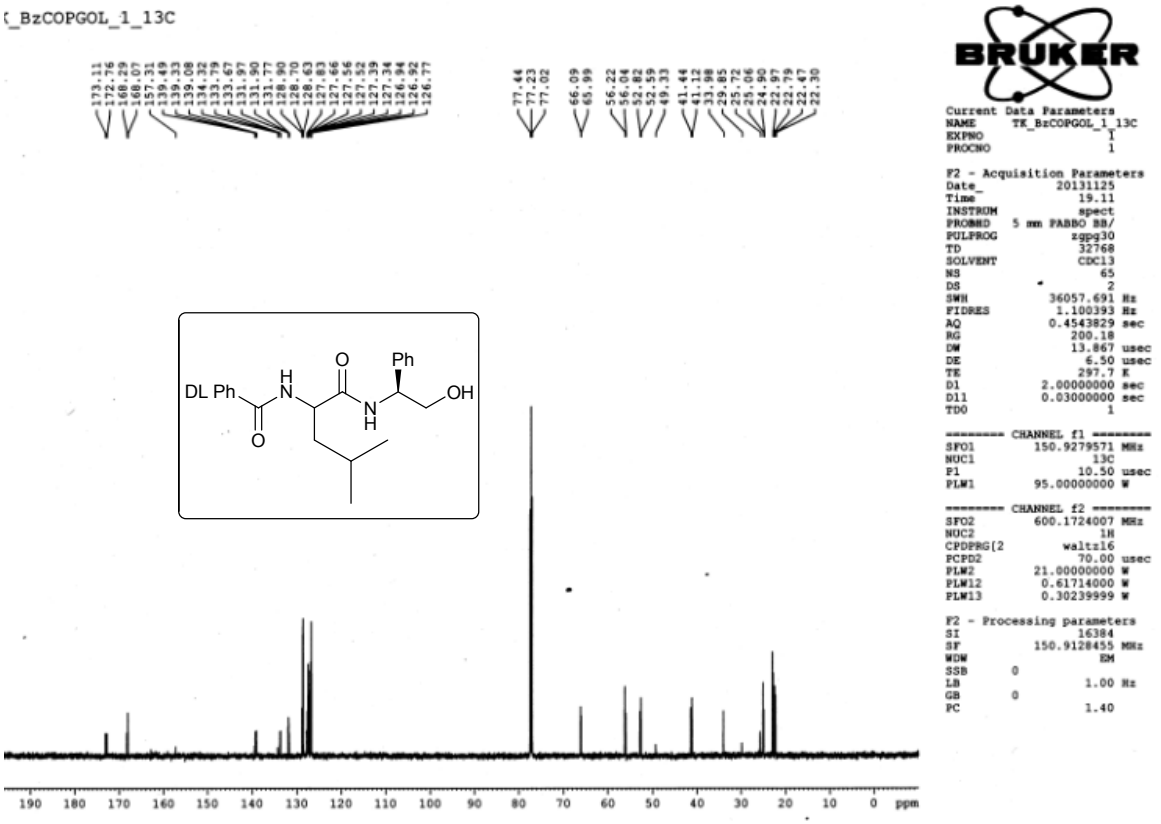


Figure S26. [13]C NMR spectra of the product of entry 9 in table 2

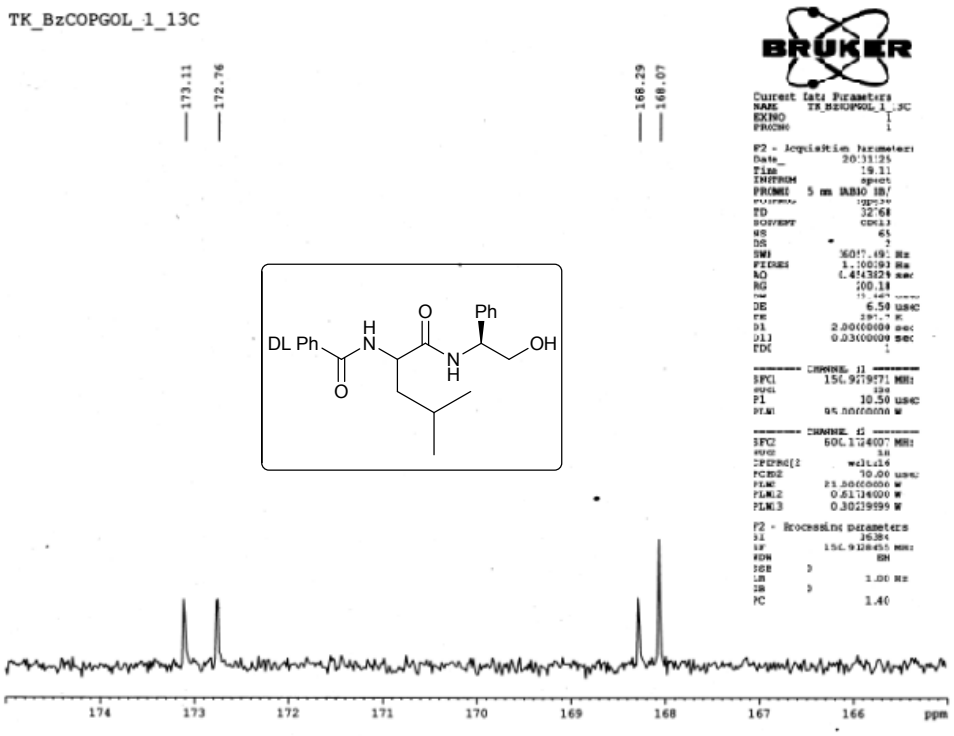


Figure S27. ^{13}C NMR expanded spectra of the product of entry 9 in table 2

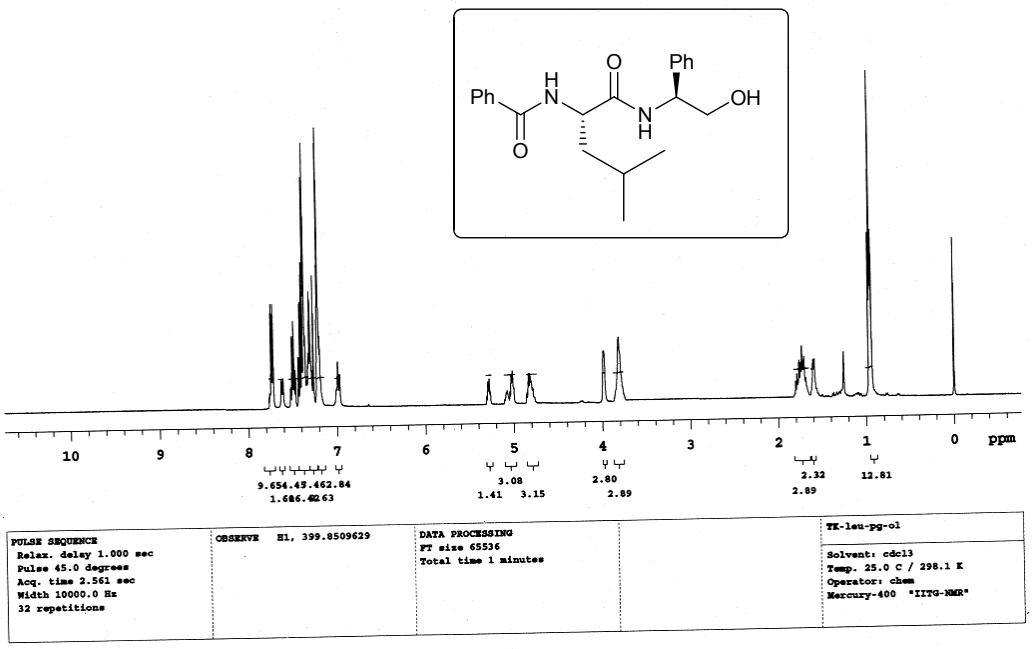


Figure S28. ^{1}H NMR spectra of the product of entry 10 in table 2

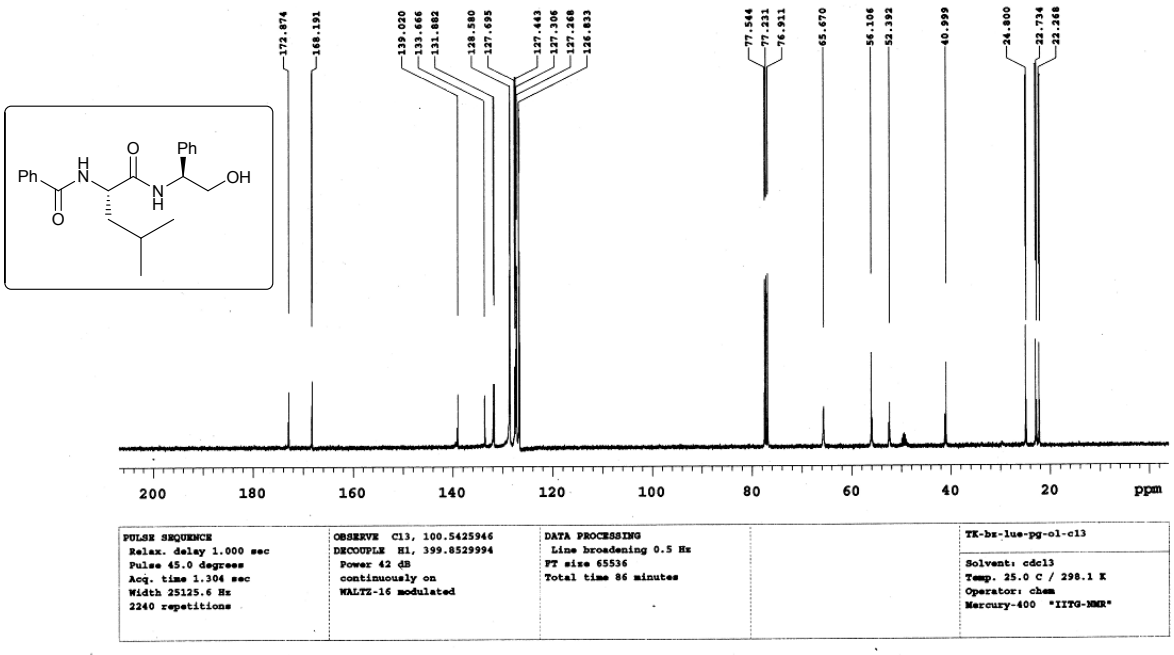


Figure S29. ^{13}C NMR spectra of the product of entry 10 in table 2

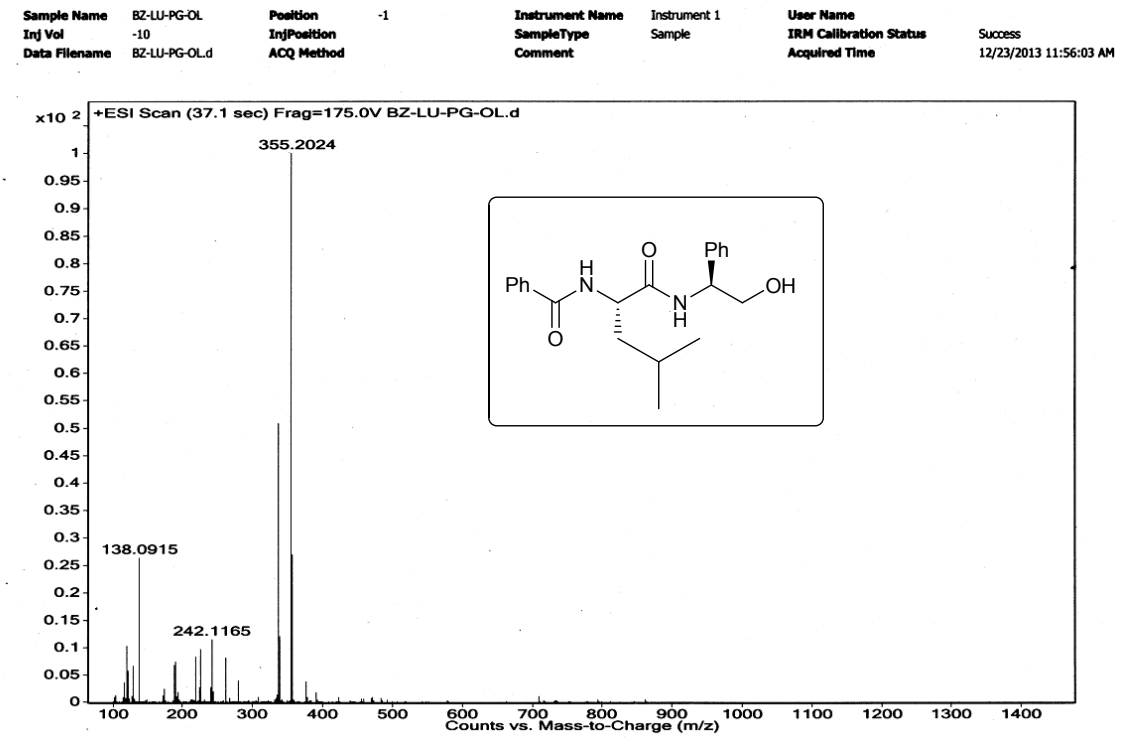


Figure S30. HRMS spectra of the product of entry 10 in table 2

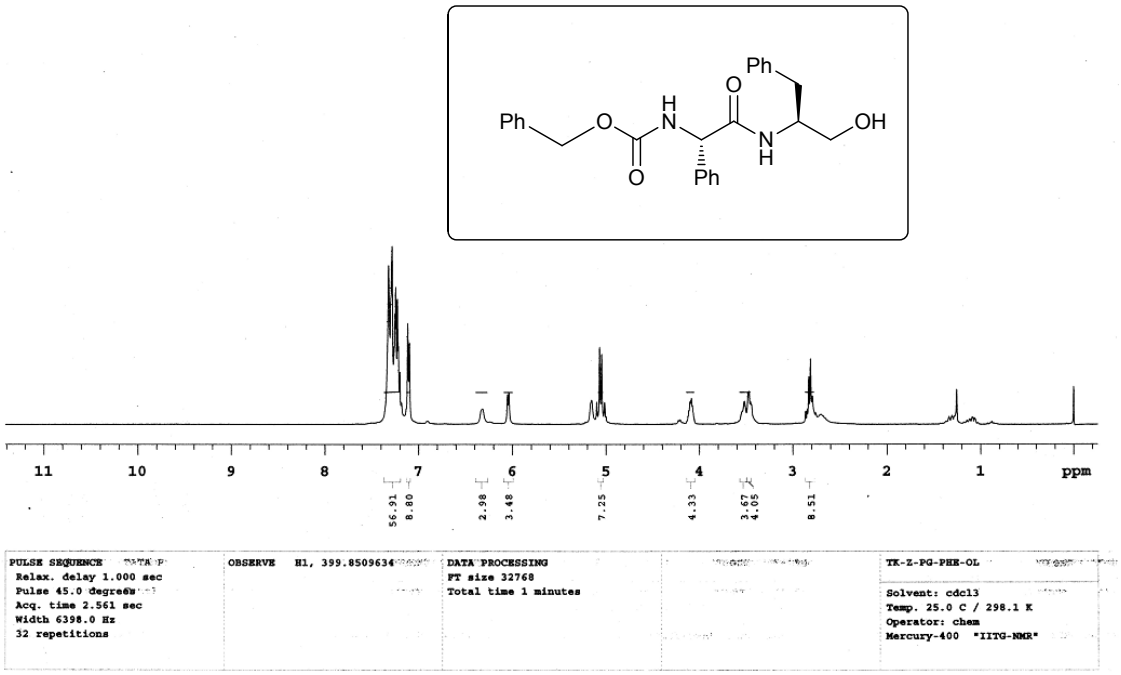


Figure S31. ^{1}H NMR spectra of the product of entry 11 in table 2

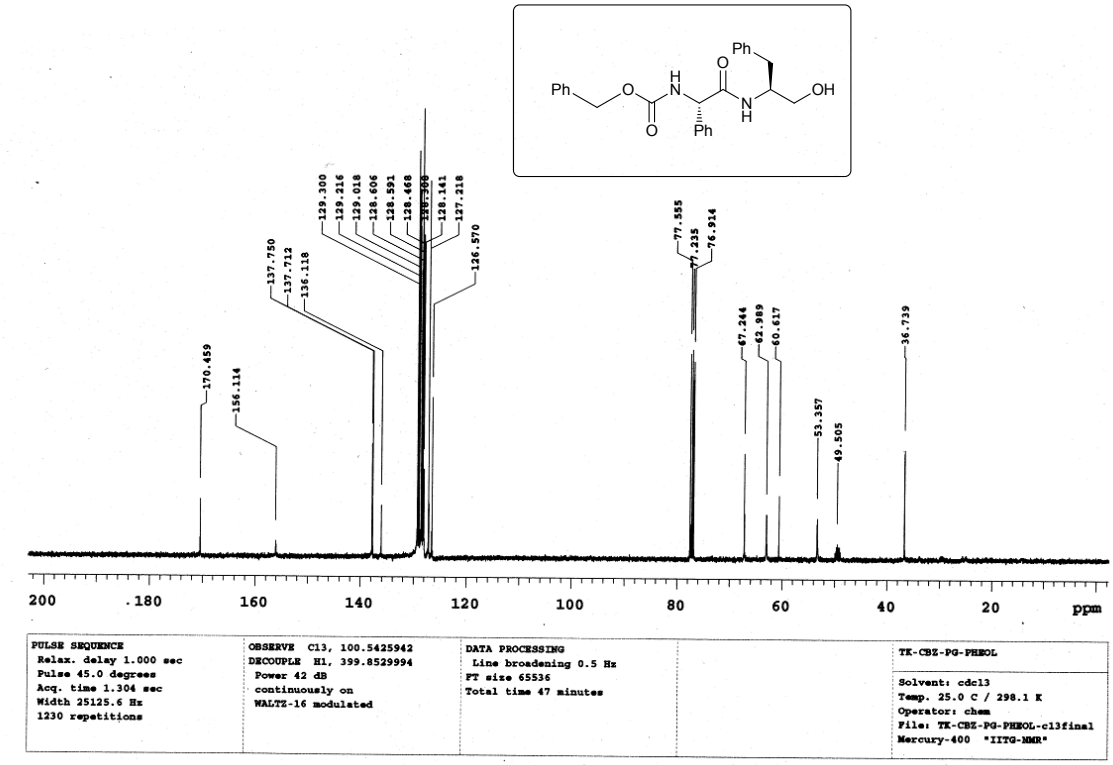


Figure S32. ^{13}C NMR spectra of the product of entry 11 in table 2

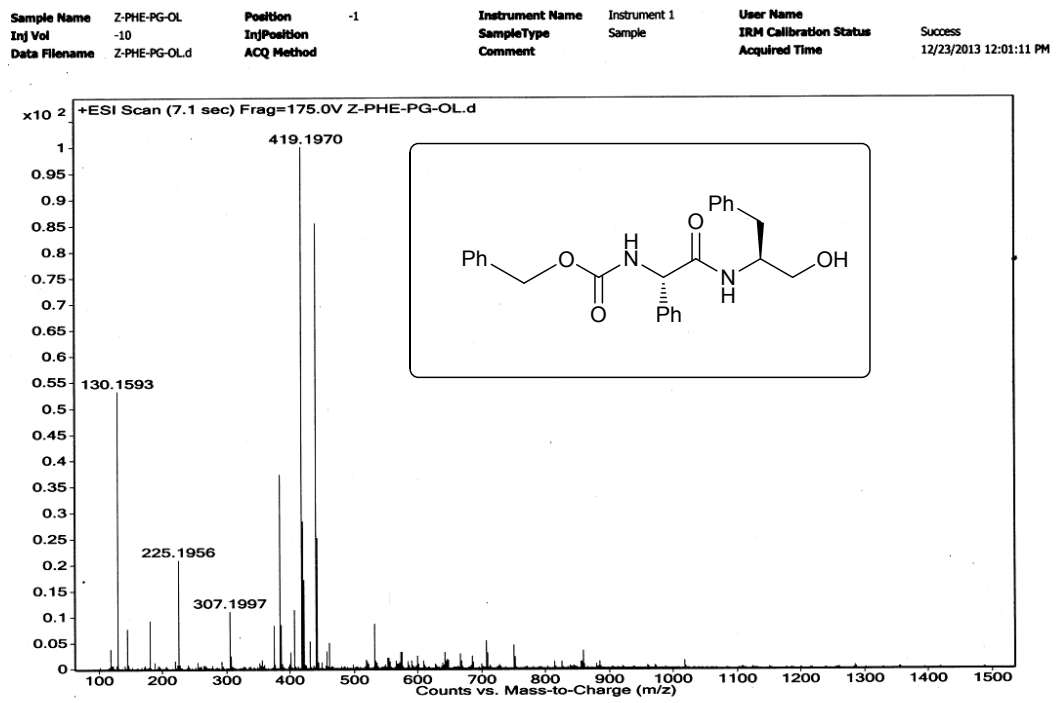


Figure S33. HRMS spectra of the product of entry 11 in table 2

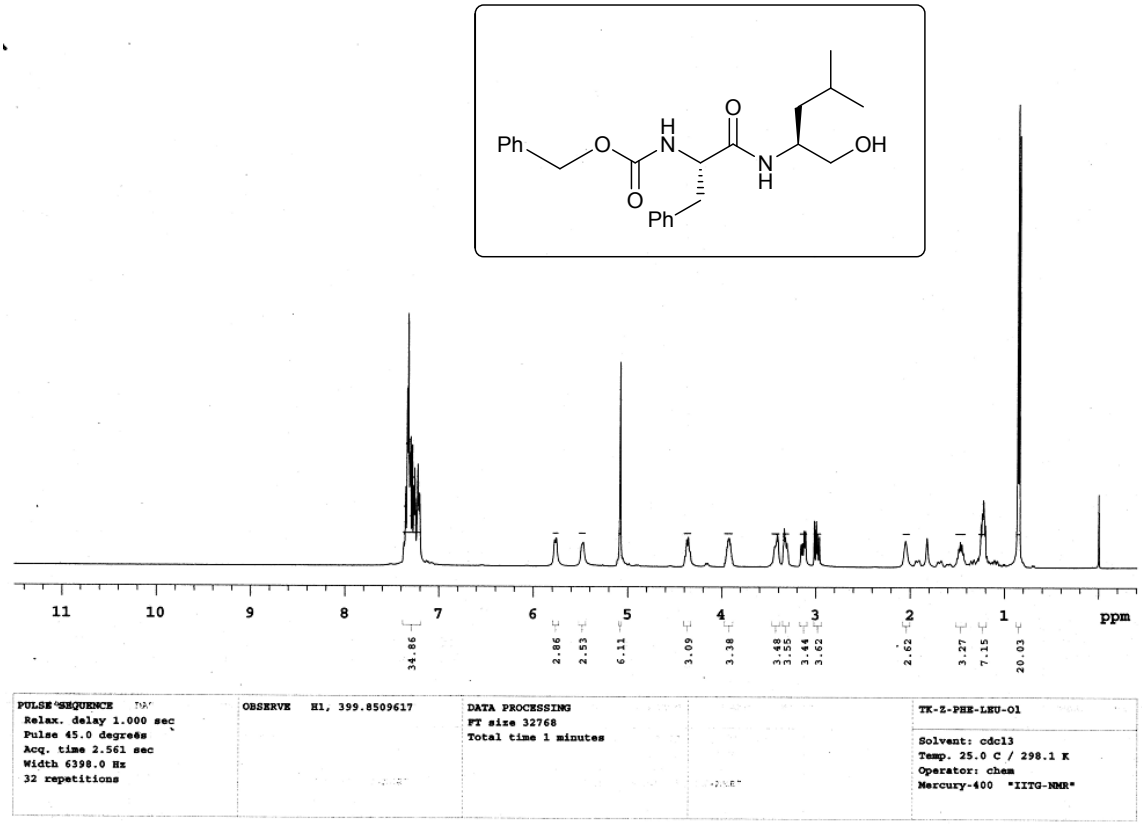


Figure S34. ^{1}H NMR spectra of the product of entry 12 in table 2

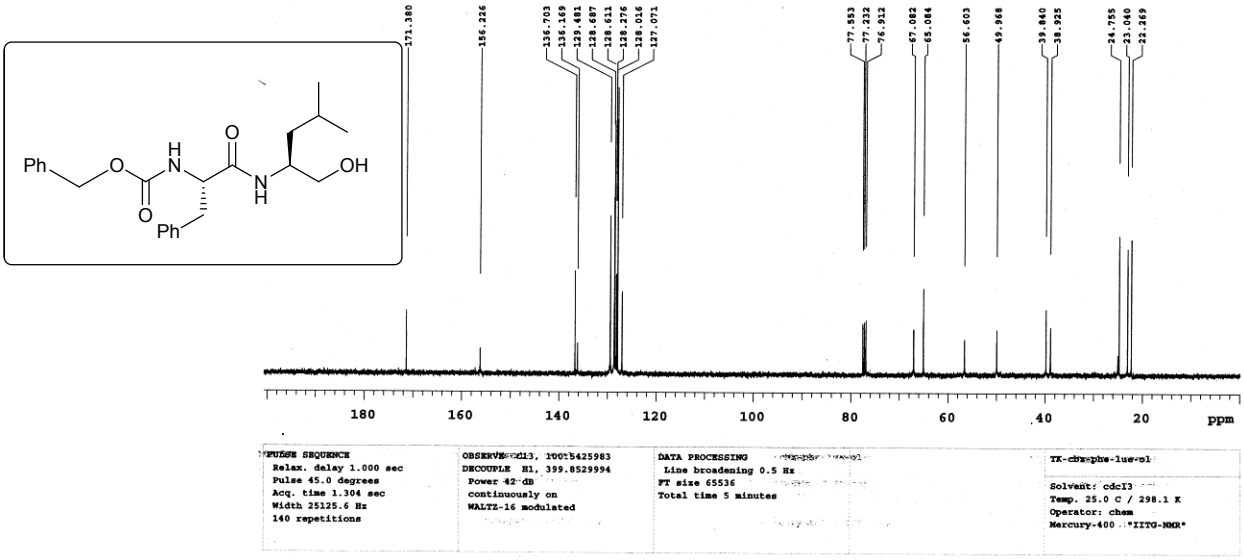
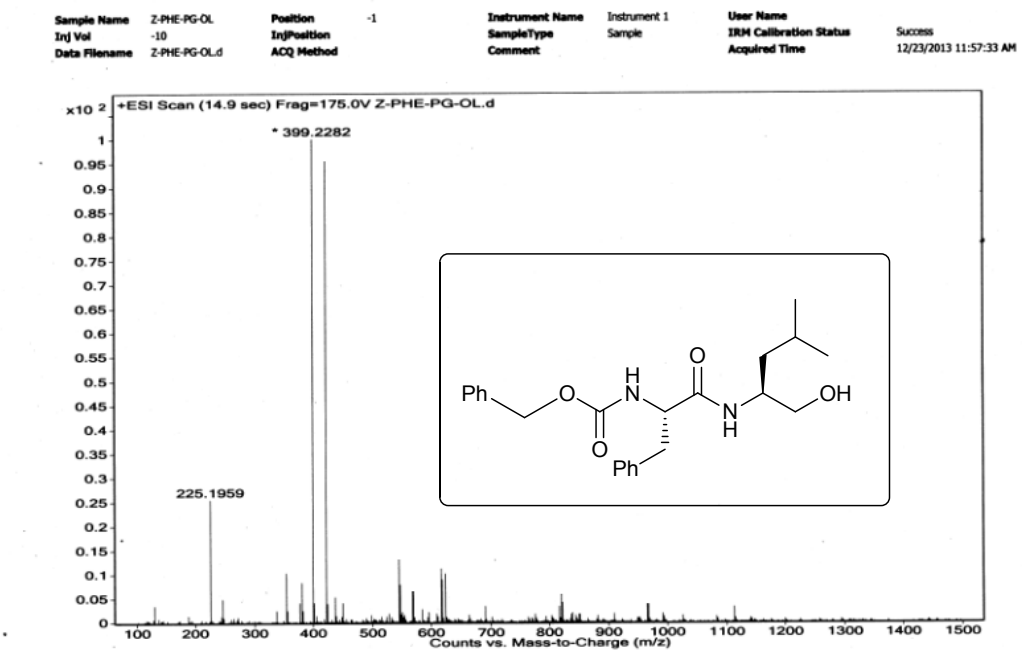


Figure S35. ^{13}C NMR spectra of the product of entry 12 in table 2



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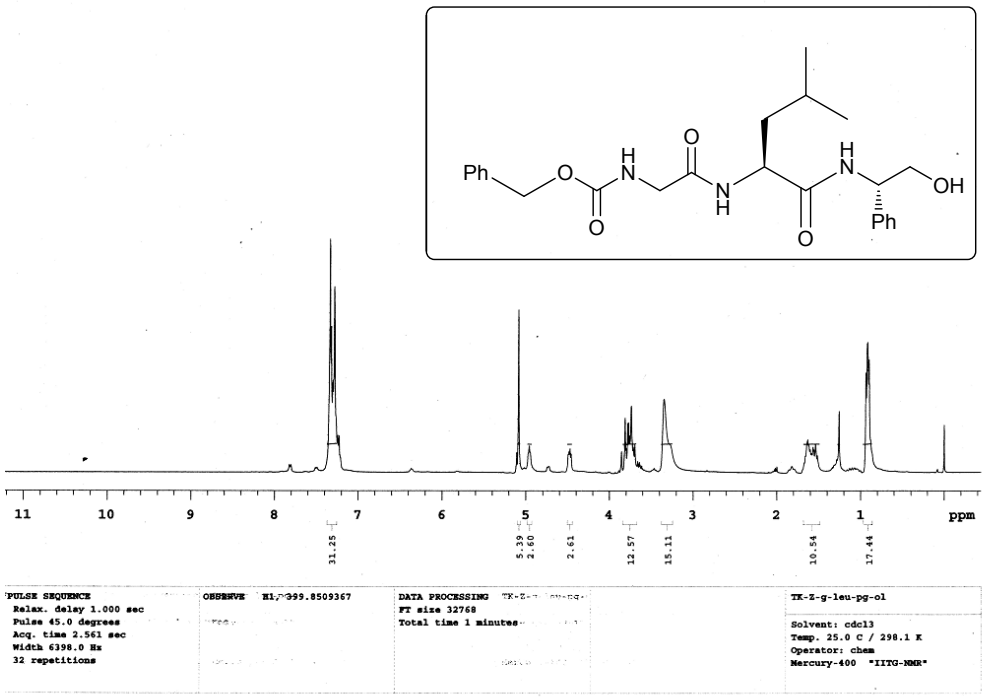


Figure S37. [1]H NMR spectra of the product of entry 13 in table 2

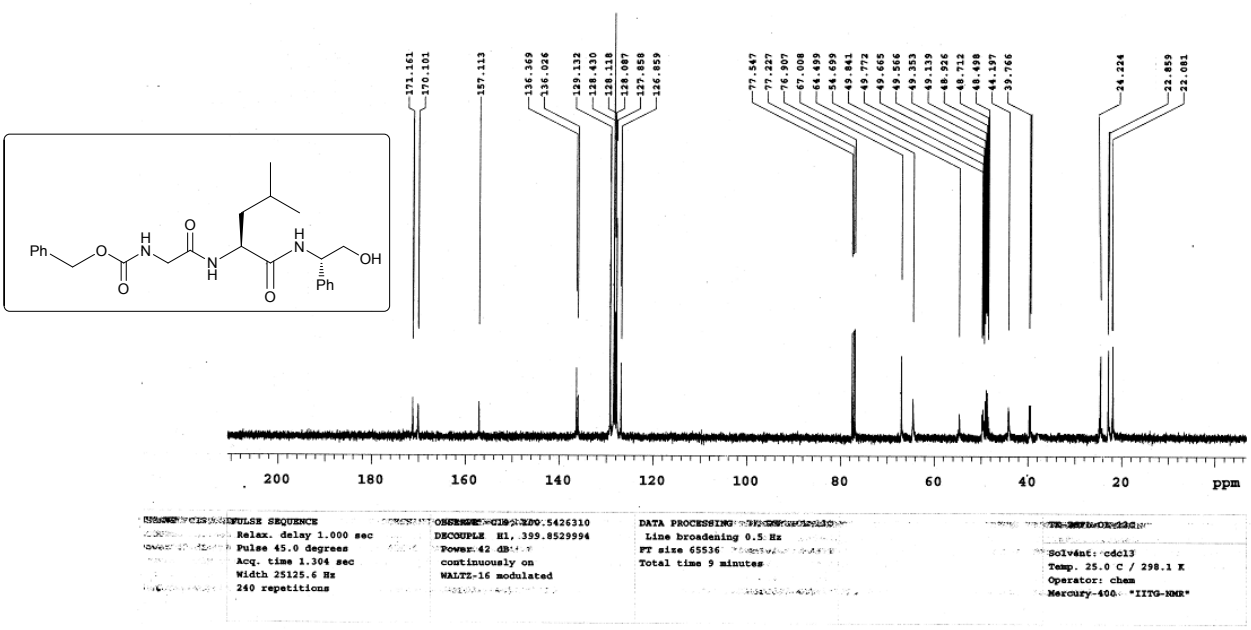


Figure S38. [13]C NMR spectra of the product of entry 13 in table 2

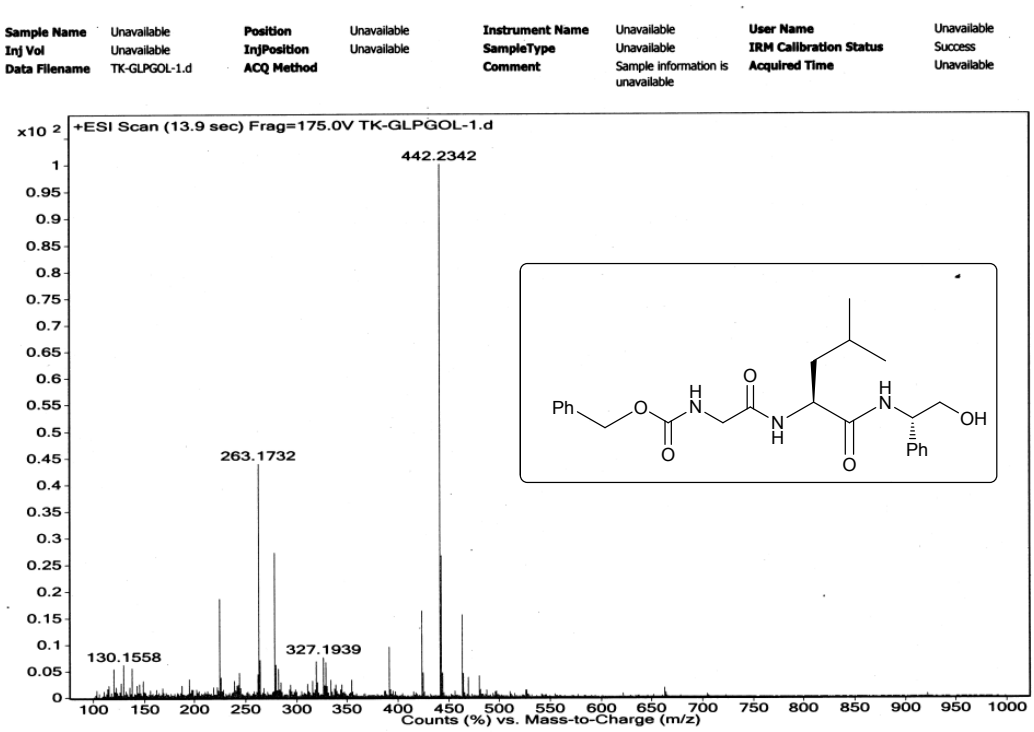


Figure S39. HRMS spectra of the product of entry 13 in table 2

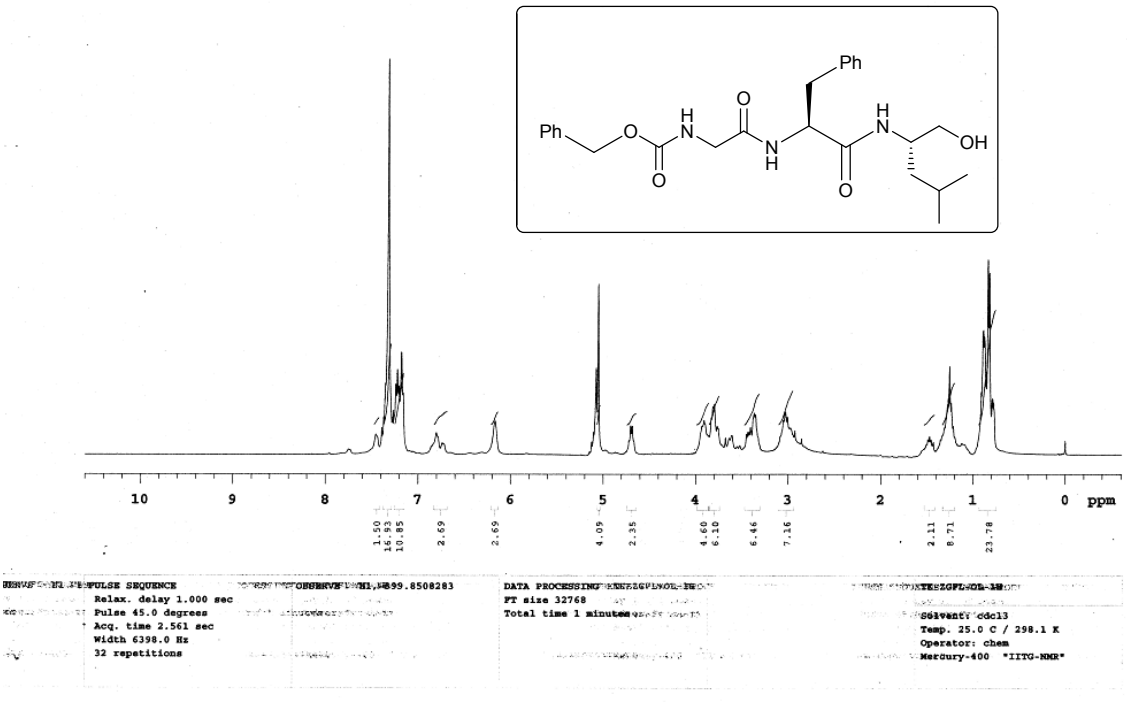


Figure S40. ^{1}H NMR spectra of the product of entry 14 in table 2

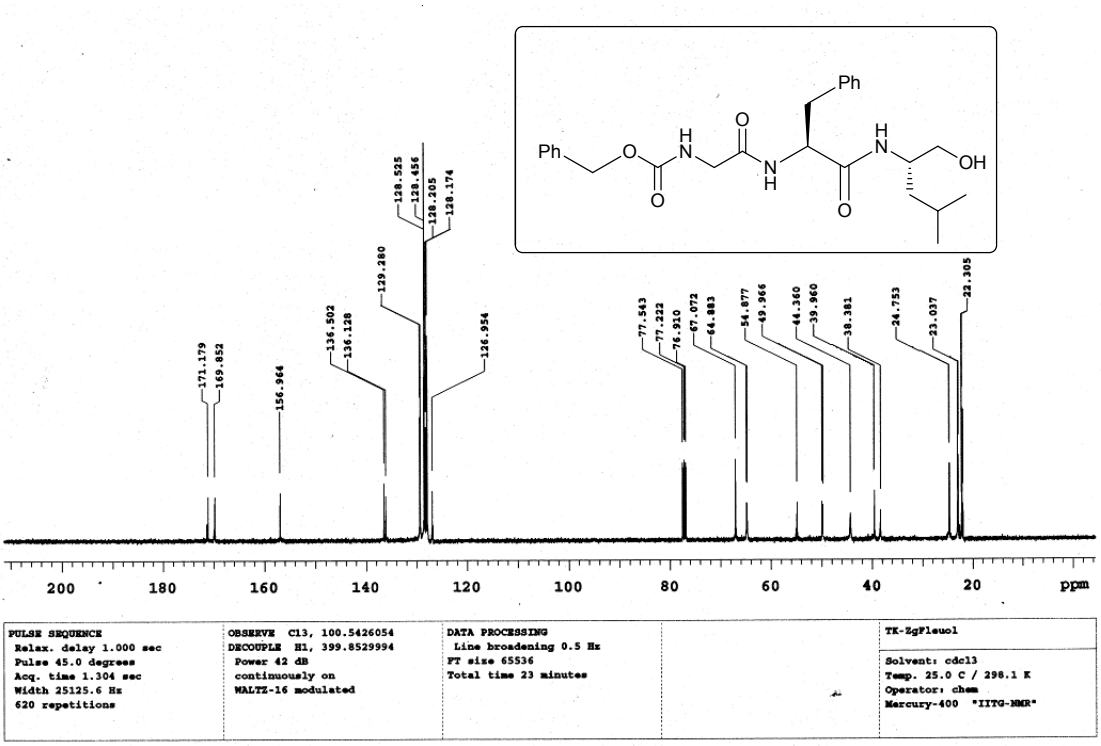


Figure S41. ^{13}C NMR spectra of the product of entry 14 in table 2

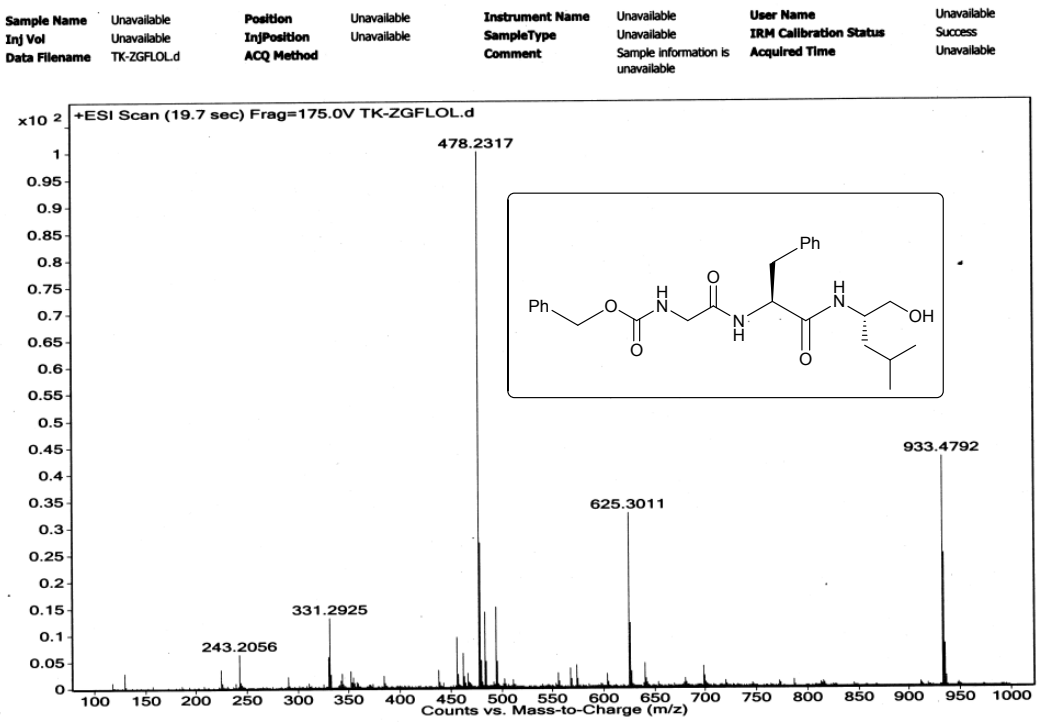


Figure S42. HRMS spectra of the product of entry 14 in table 2

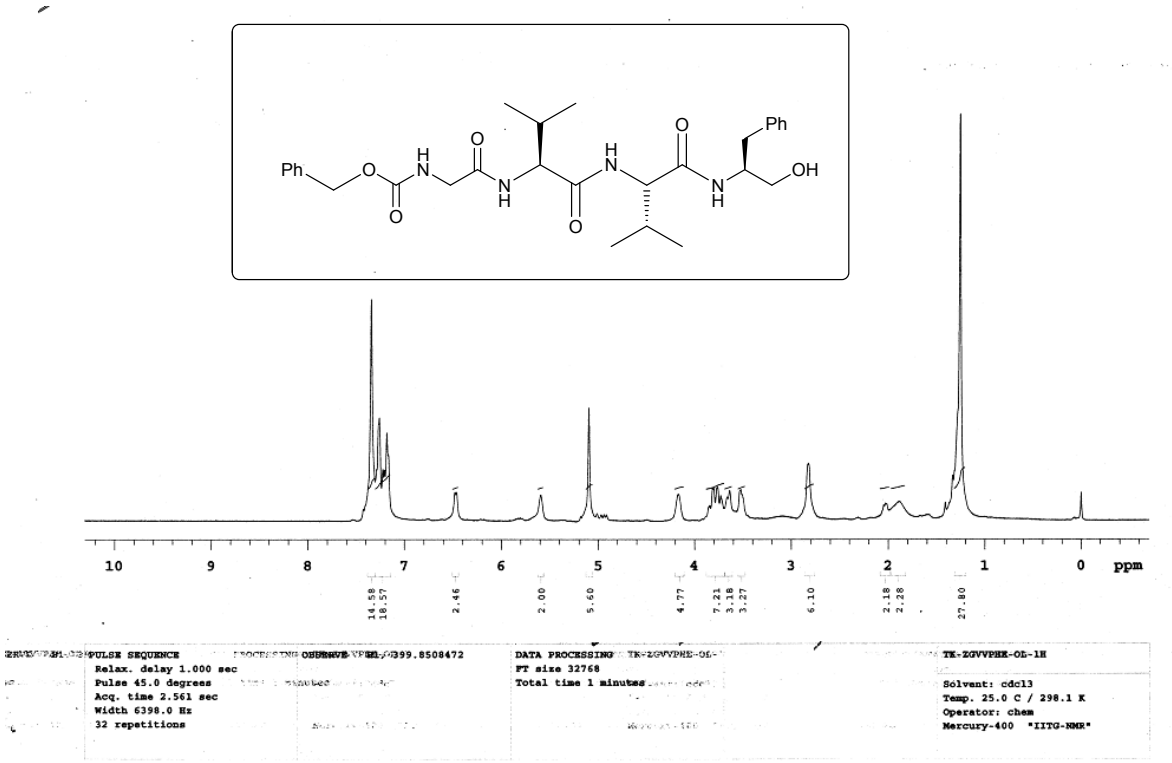


Figure S43. ^{1}H NMR spectra of the product of entry 15 in table 2

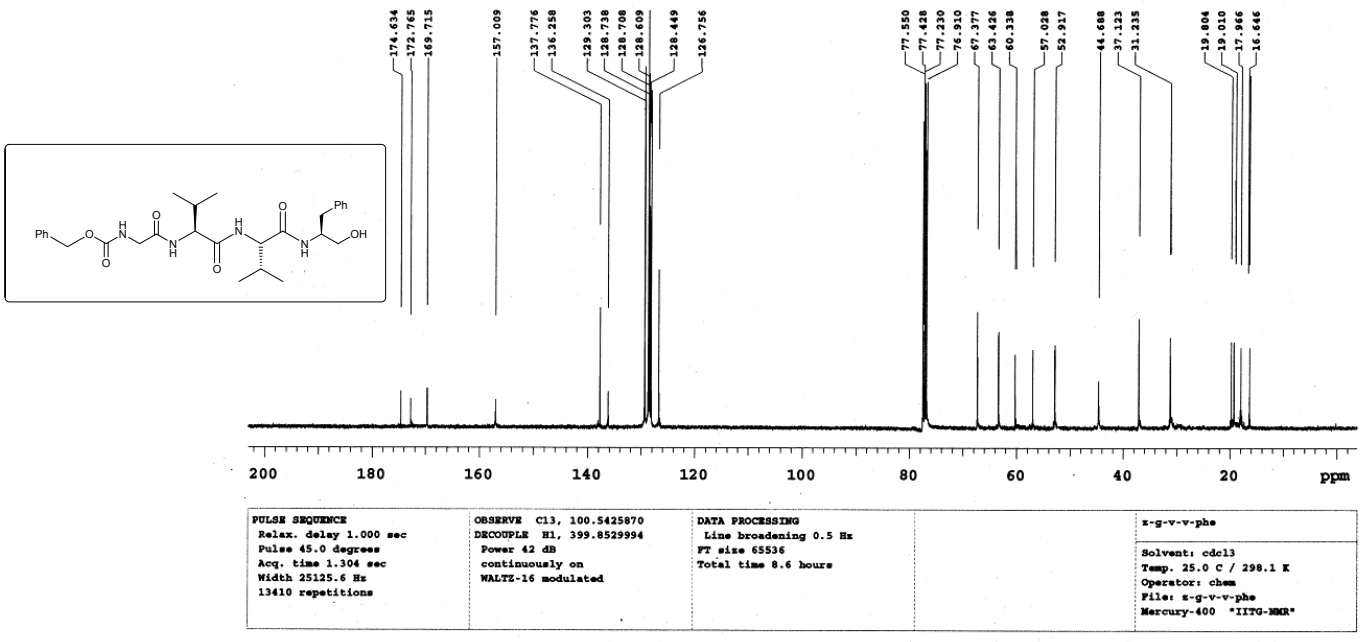


Figure S44. ^{13}C NMR spectra of the product of entry 15 in table 2

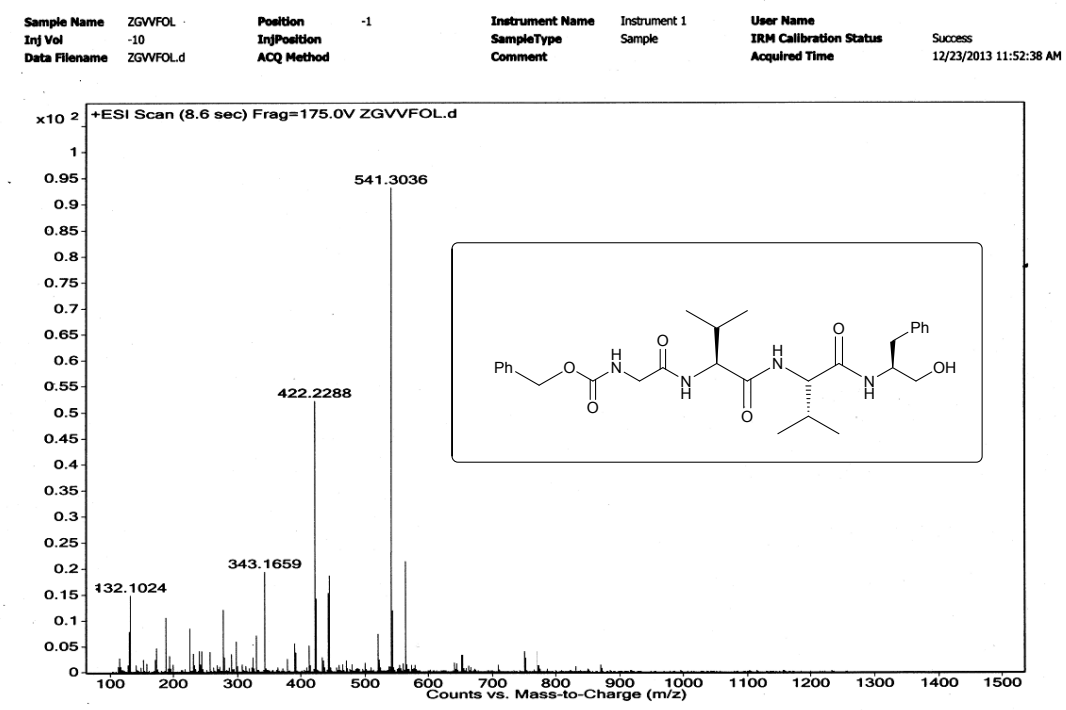


Figure S45. HRMS spectra of the product of entry 15 in table 2

2 HPLC data for racemization studies:

HPLC profiles of Peptide alcohols, reverse phase, run time 20 min (linear gradient of 0 to 100% CH_3CN in H_2O with 0.1% formic acid)

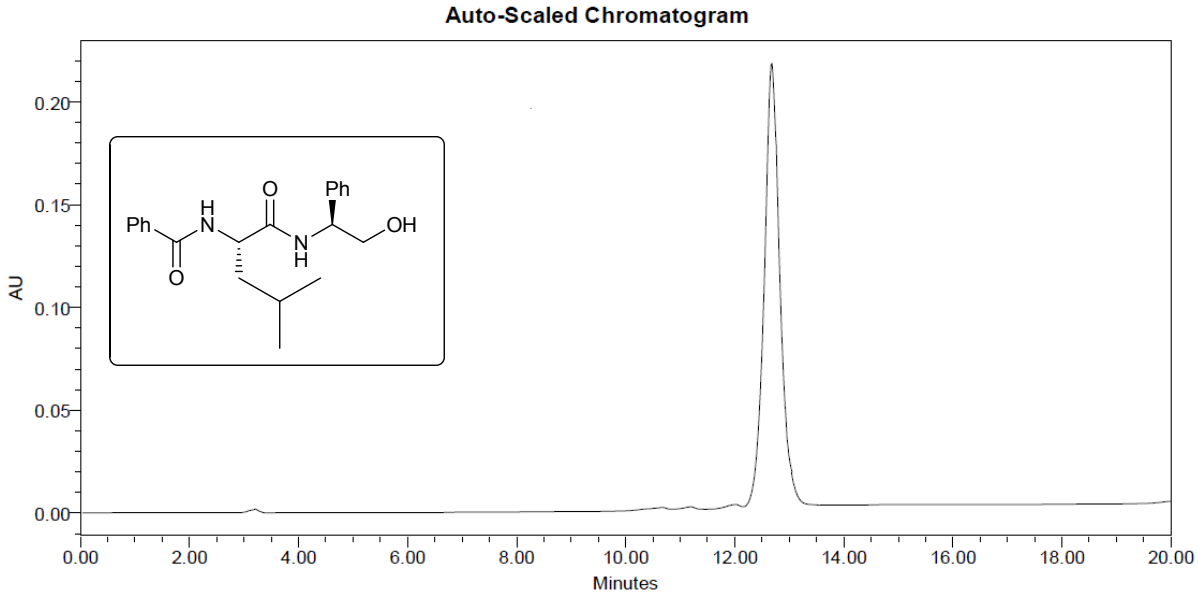
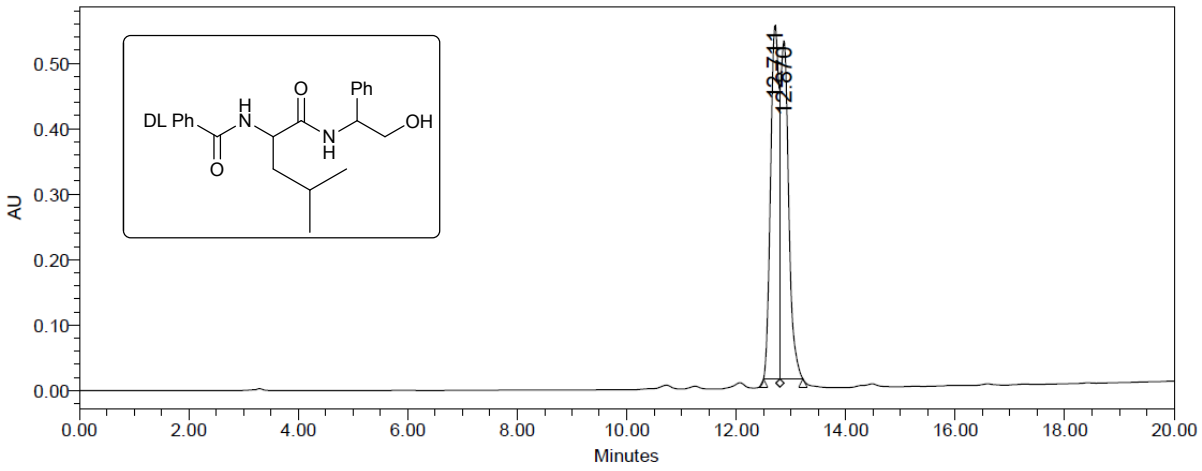


Figure S46 HPLC profile diagram of the product of entry 9 in table 2



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1	12.711	5711231	51.75	541199
2	12.870	5323968	48.25	516790

Figure S47 HPLC profile diagram of the product of entry 10 in table 2

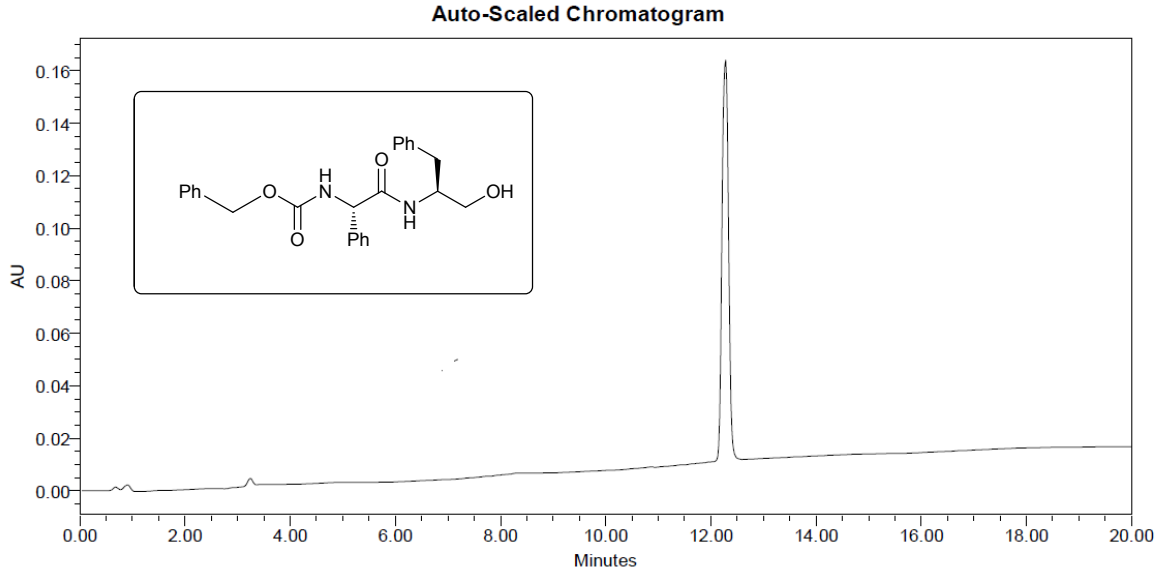


Figure S48 HPLC profile diagram of the product of entry 11 in table 2

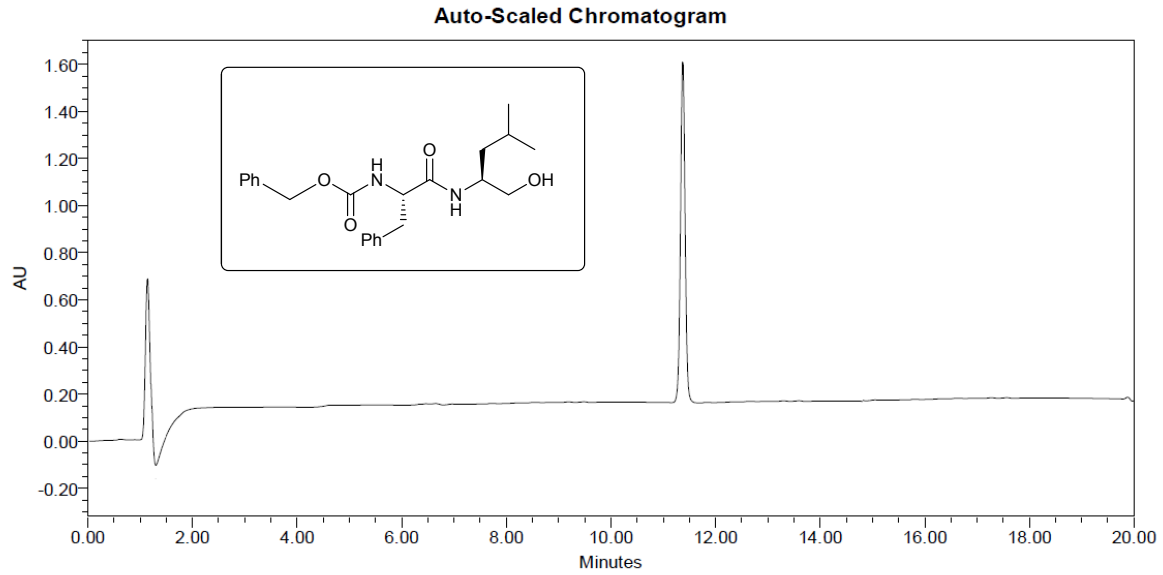
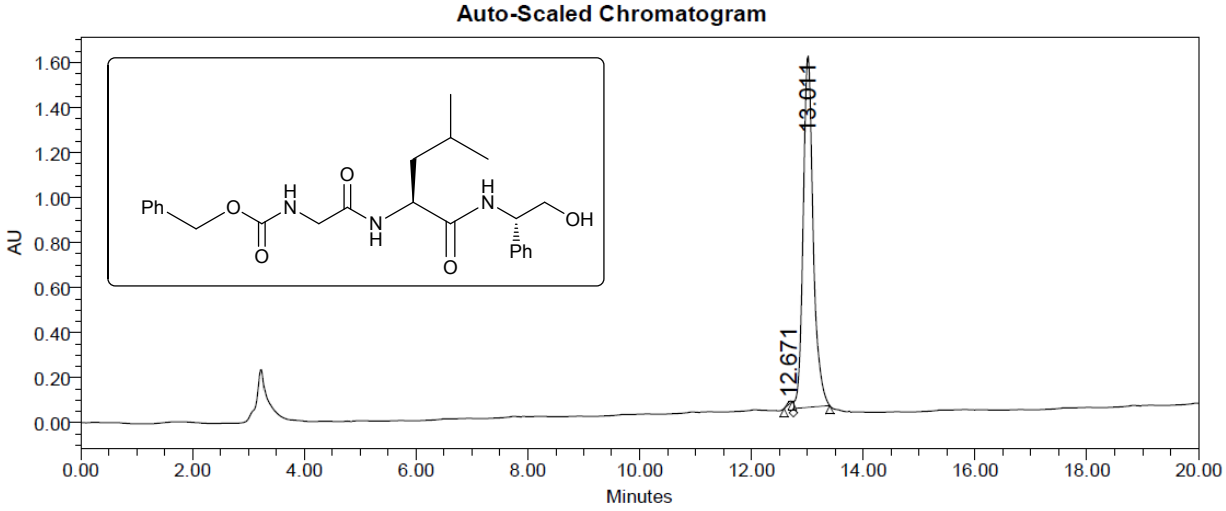


Figure S49 HPLC profile diagram of the product of entry 12 in table 2



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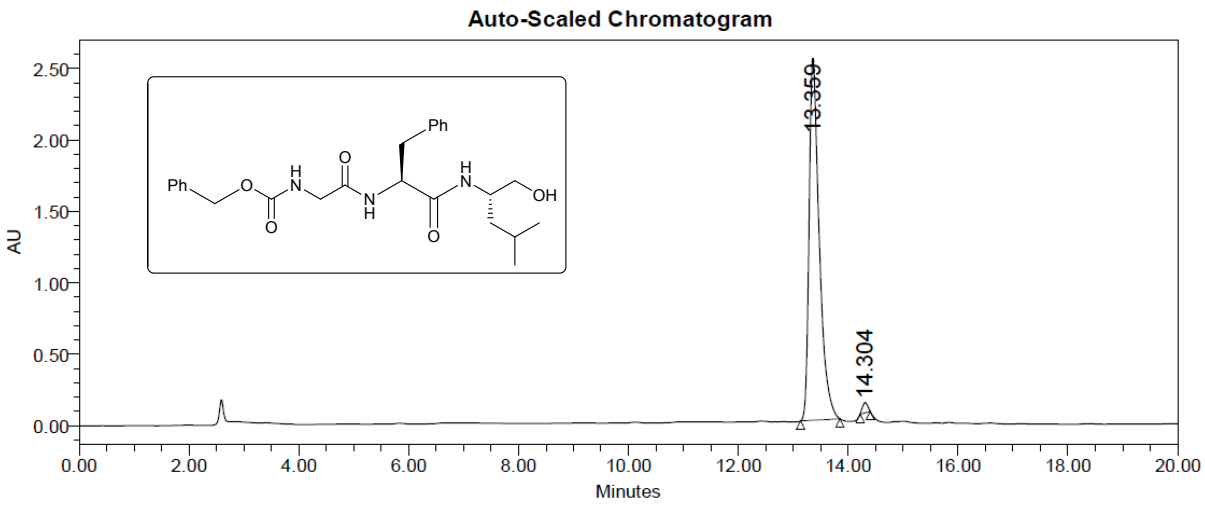
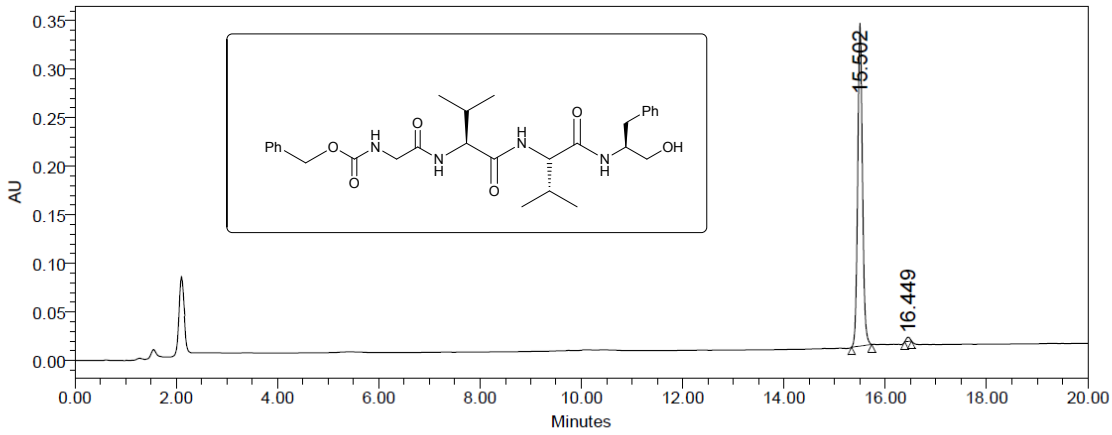
2	13.011	19481136	99.71	1563010

Figure S50 HPLC profile diagram of the product of entry 13 in table 2



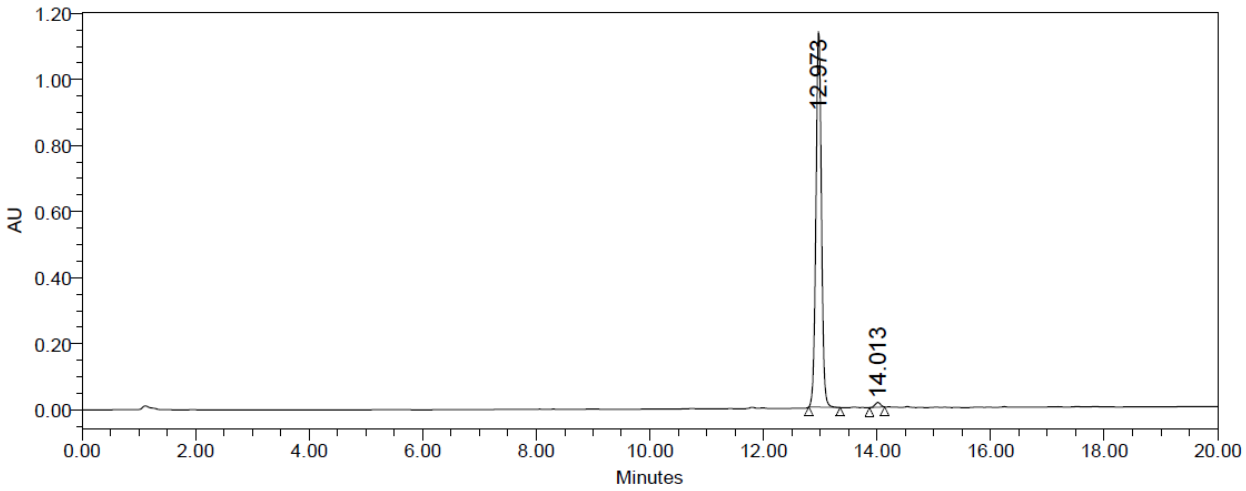
	RT	Area	% Area	Height
1	13.359	32560748	99.60	2549534
2	14.304	463261	0.40	70573

Figure S51 HPLC profile diagram of the product of entry 14 in table 2



	RT	Area	% Area	Height
1	15.502	2169156	99.04	330702
2	16.449	21026	0.96	4354

Figure S52 HPLC profile diagram of the product of entry 15 in table 2



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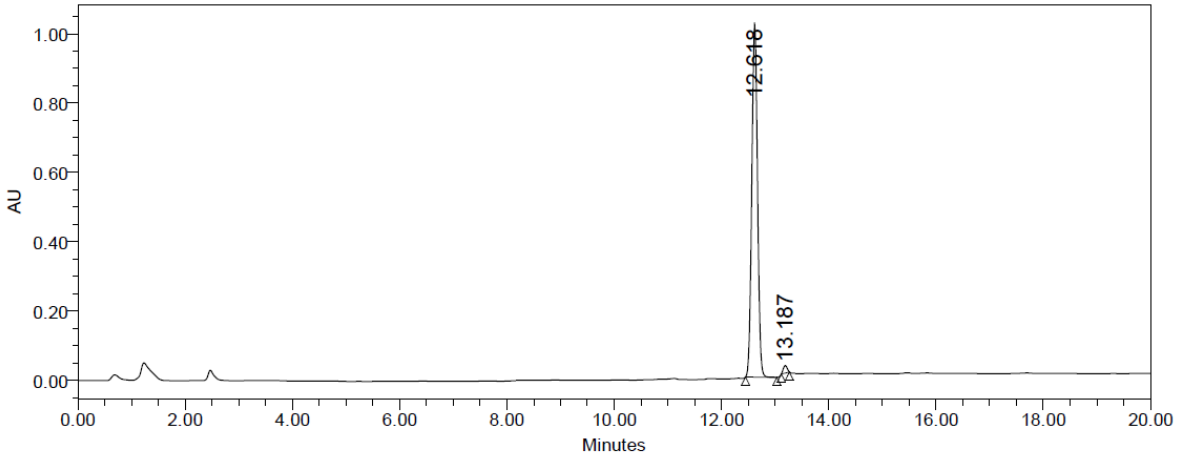
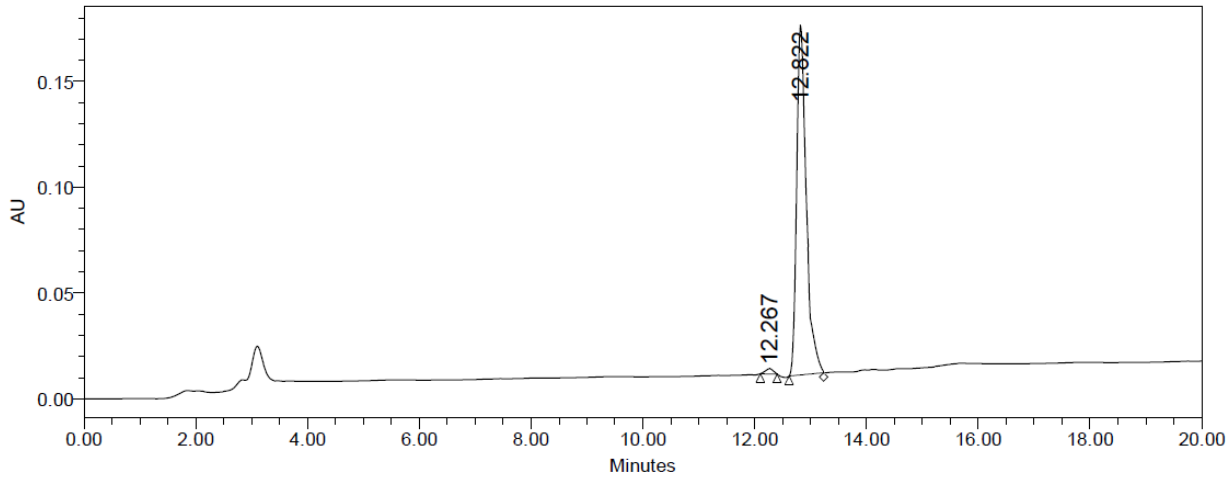
1	12.973	7644662	98.74	1140857
2	14.013	97751	1.26	14754

Figure S53 HPLC profile diagram of peptide alcohol **A** (Figure 1)



	RT	Area	% Area	Height
1	12.618	7524790	98.57	1018656
2	13.187	109328	1.43	21627

Figure S54 HPLC profile diagram of peptide alcohol **B** (Figure 1)



	RT	Area	% Area	Height
1	12.267	24372	1.09	2478
2	12.822	2221749	98.91	165780

Figure S55 HPLC profile diagram of peptide alcohol **C** (Figure 1)

3 Mass spectr of A, B and C

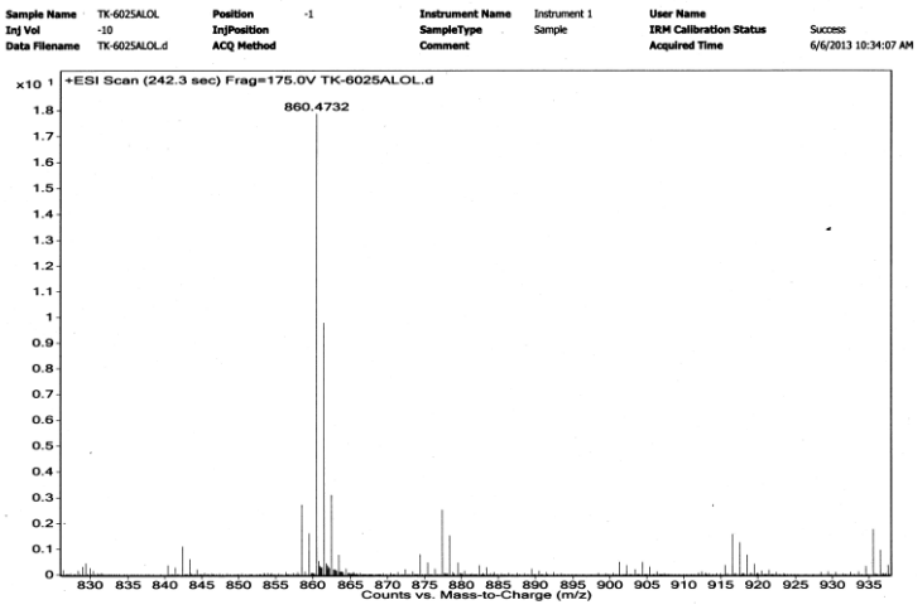


Figure S56 Mass spectra of peptide alcohol **A** (Figure 1)

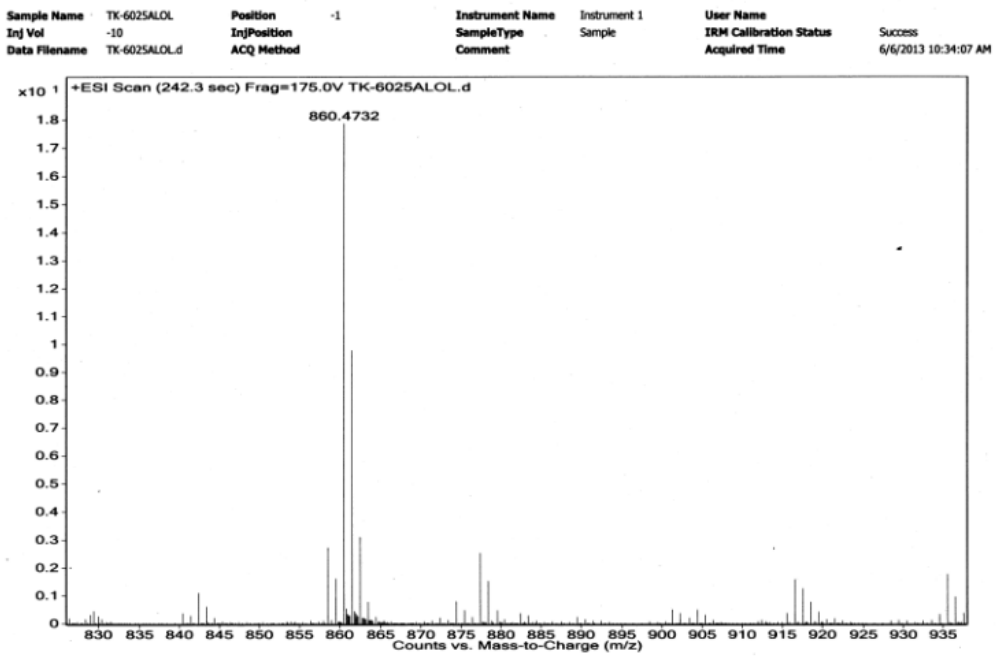


Figure S57 ESI-MS spectrum of the peptide alcohol **B** (Figure 1)

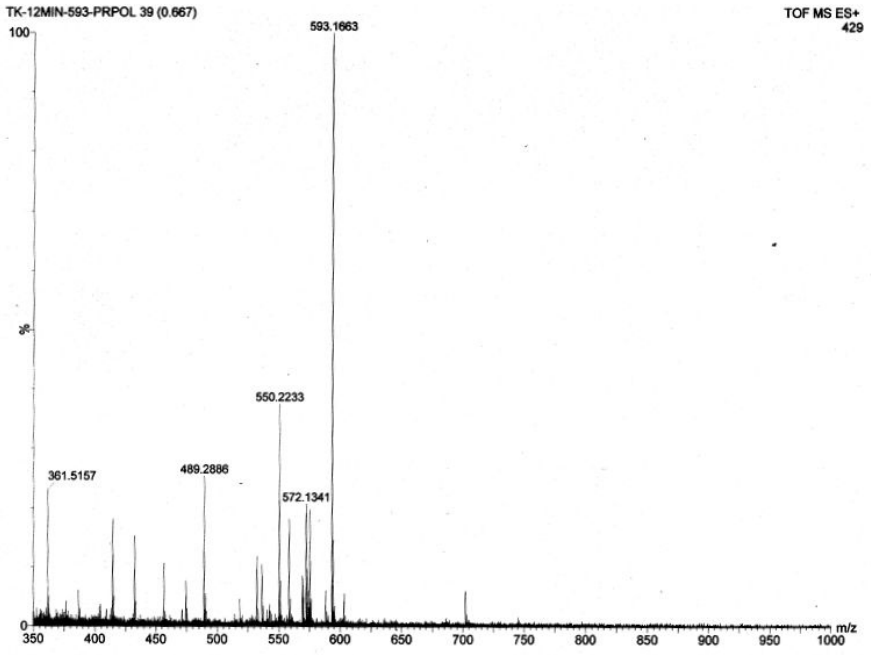


Figure S58 ESI-MS spectrum of peptide alcohol **C** (Figure 1)

4 Spectra for chemoselectivity studies:

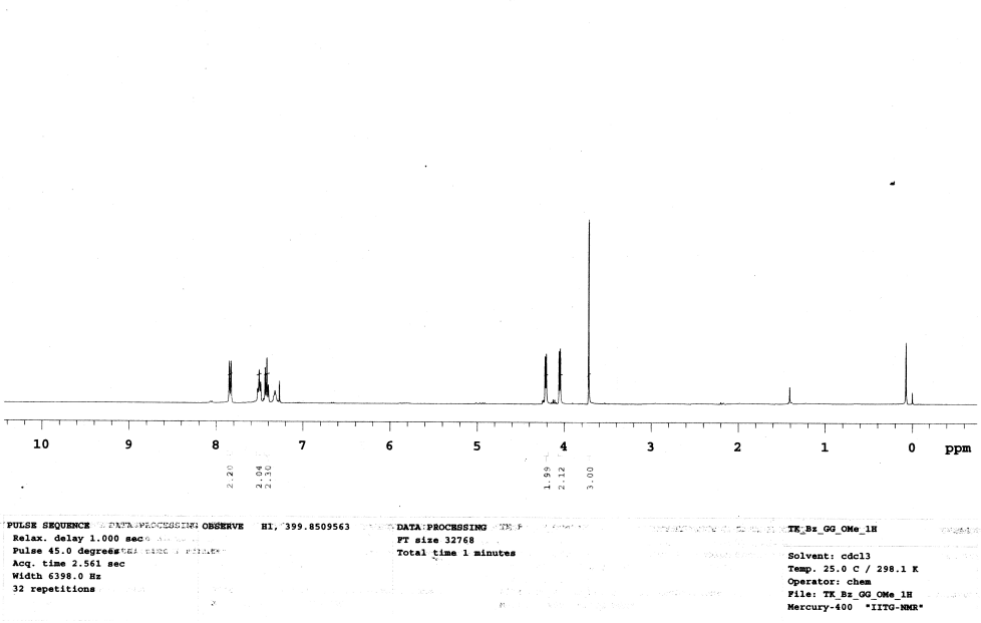


Figure S59. [1]H NMR spectra of compound Bz-Gly-Gly-OMe

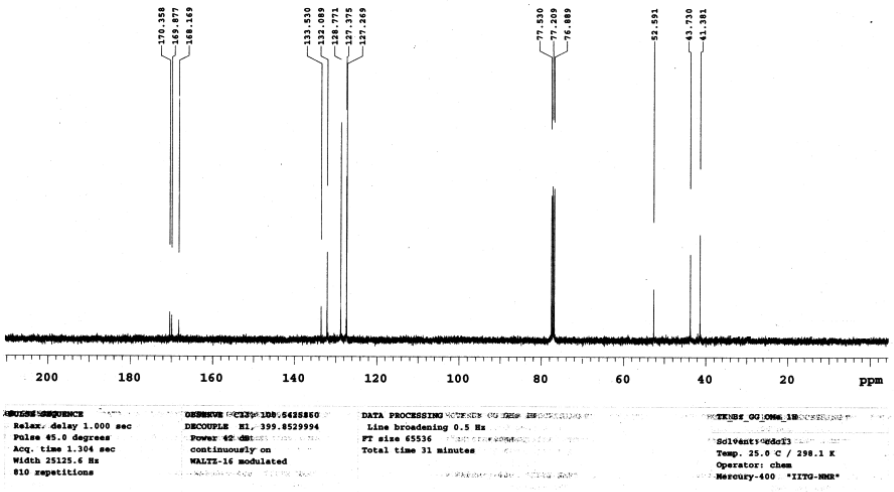


Figure S60. [13]C NMR spectra of compound Bz-Gly-Gly-OMe

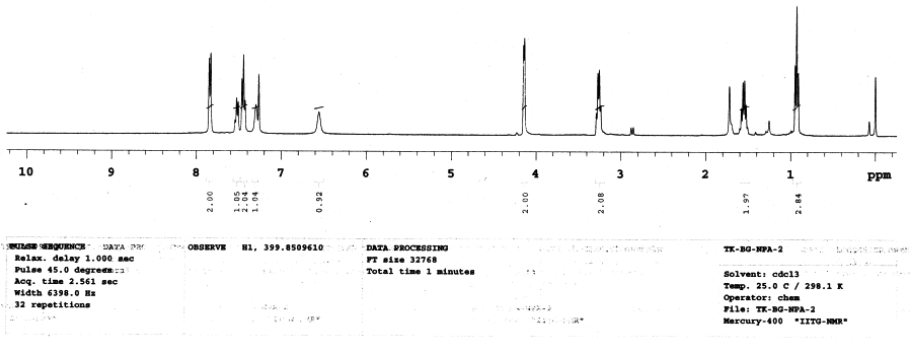


Figure S61. ^{1}H NMR spectra of compound N-(2-(diisopropylamino)-2-oxoethyl)benzamide

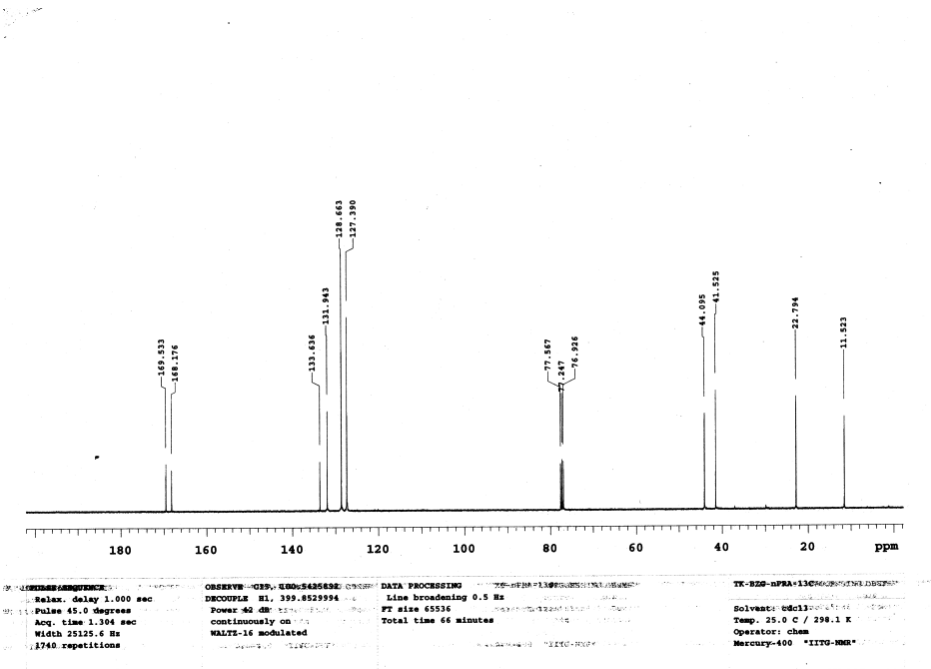


Figure S562. ^{13}C NMR spectra of N-(2-(diisopropylamino)-2-oxoethyl)benzamide

5 Spectra for mechanism:

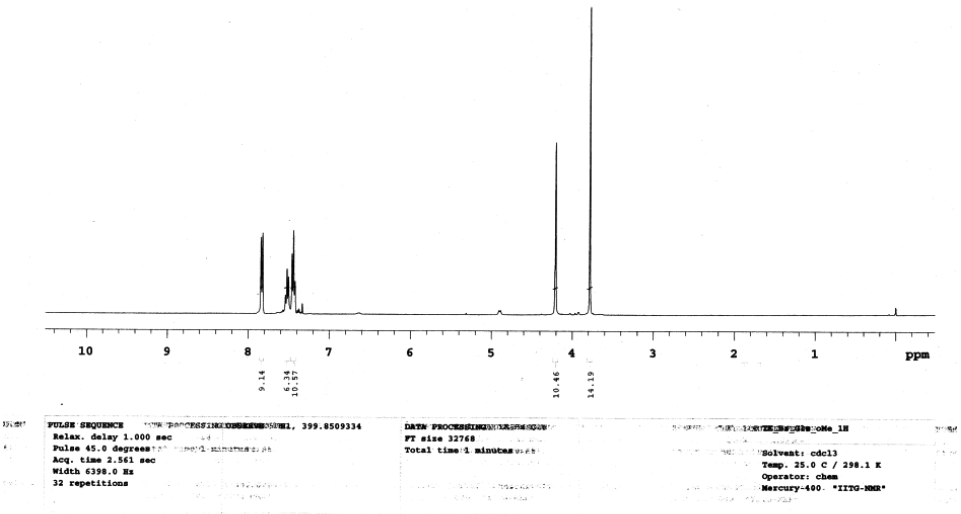


Figure S63. ^{1}H NMR spectra of compound Bz-Gly-OMe

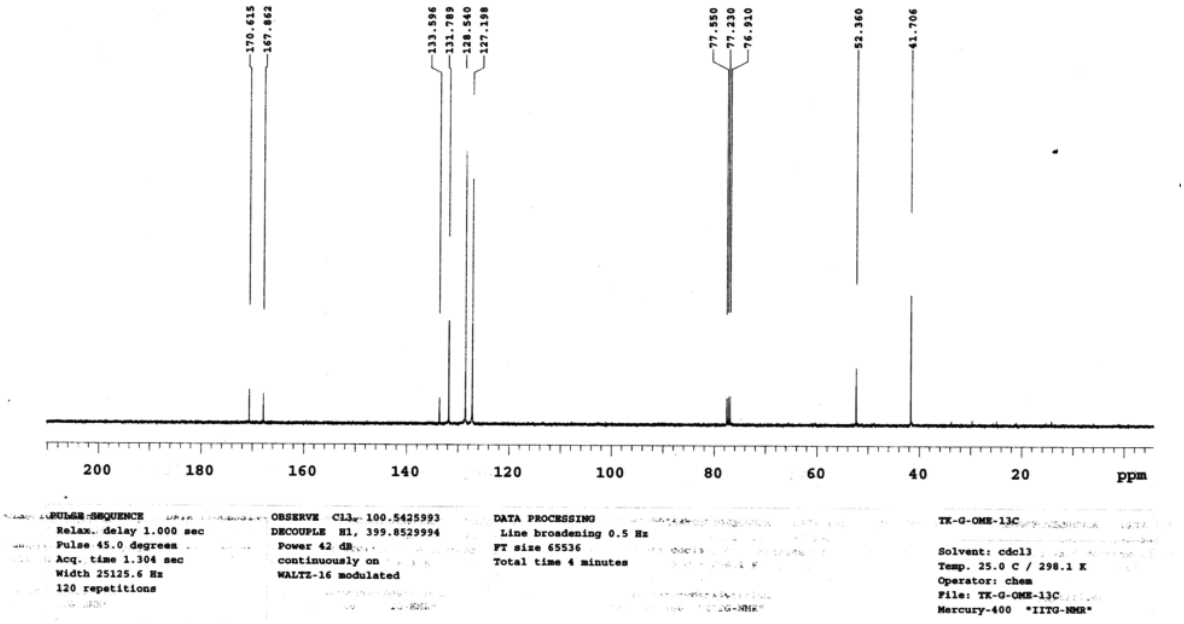


Figure S64. ^{13}C NMR spectra of Bz-Gly-OMe

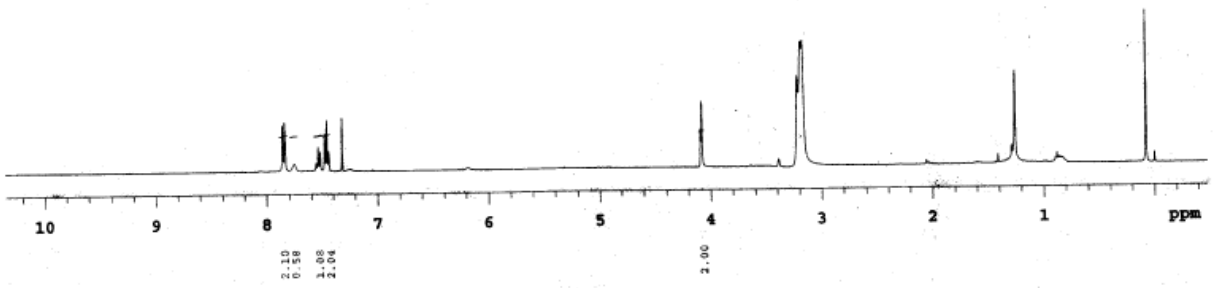


Figure S625. ^{1}H NMR spectra of compound Bz-Gly-NH2 (Benzoylglycinamide)

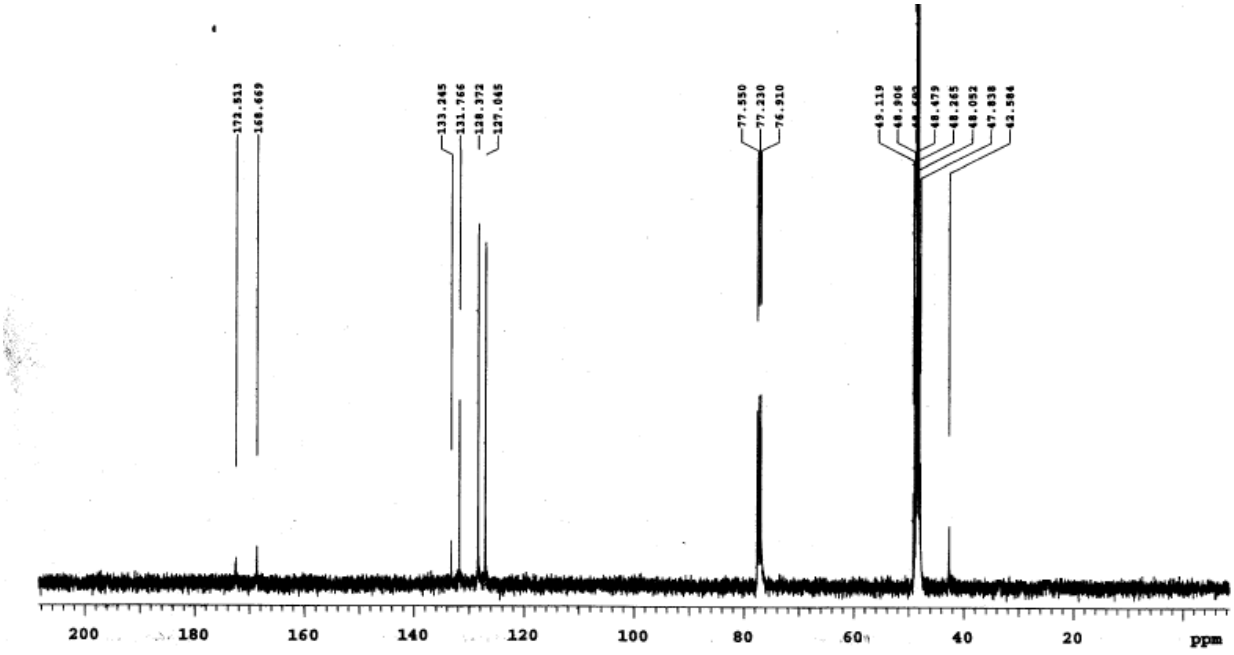


Figure S66. ^{13}C NMR spectra of Bz-Gly-NH_2 (Benzoylglycinamide)