

Supporting Information for

***Antioxidant Activity of Peptide-based Angiotensin Converting Enzyme  
Inhibitors***

by

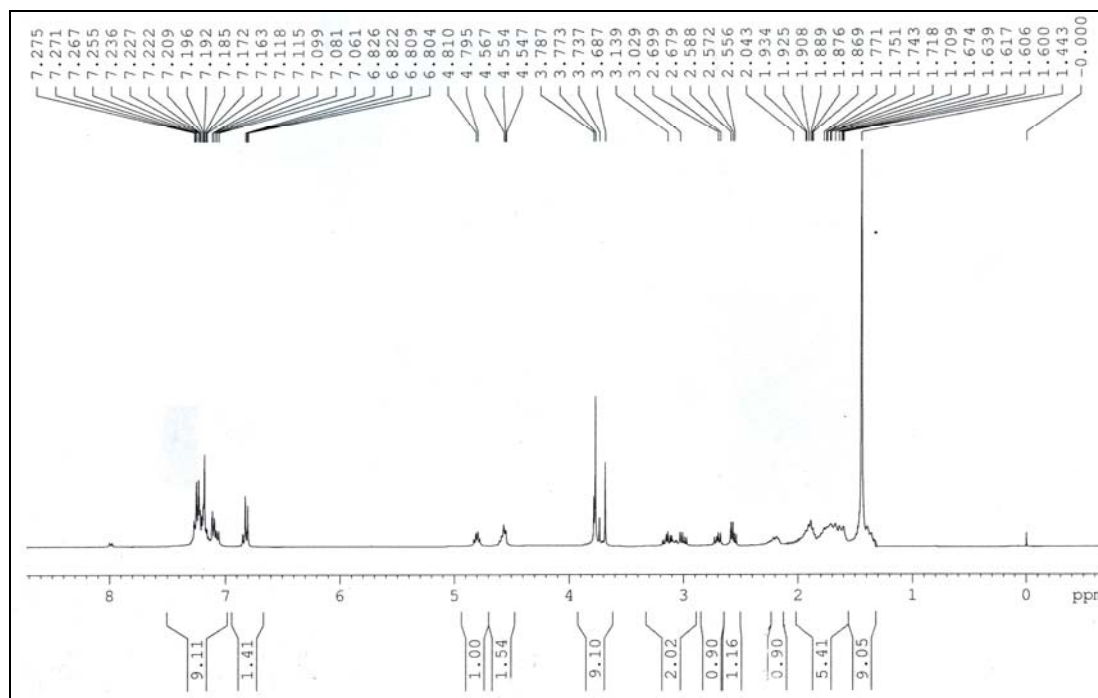
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Department of Inorganic and Physical Chemistry

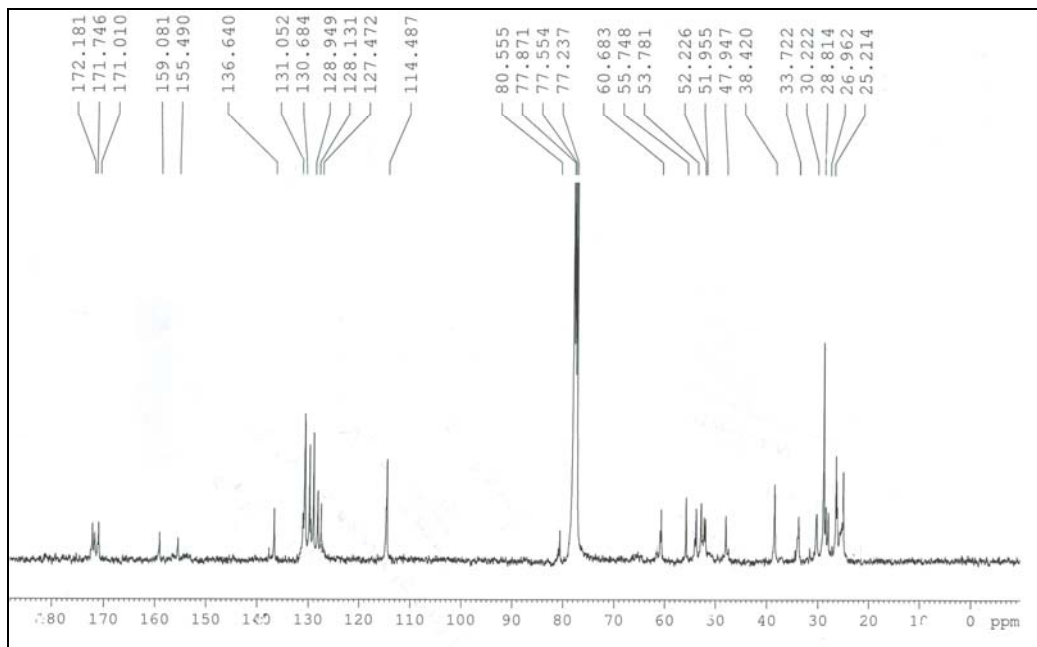
Indian Institute of Science, Bangalore 560012, India

Email: mugesh@ipc.iisc.ernet.in

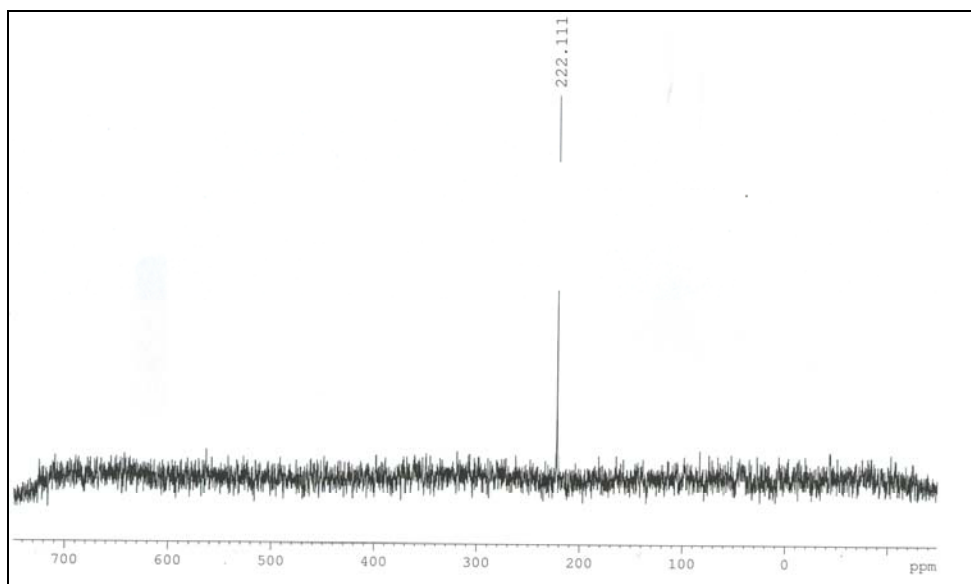
**Figure S1.**  $^1\text{H}$  NMR Spectrum of compound **22** in  $\text{CDCl}_3$ .



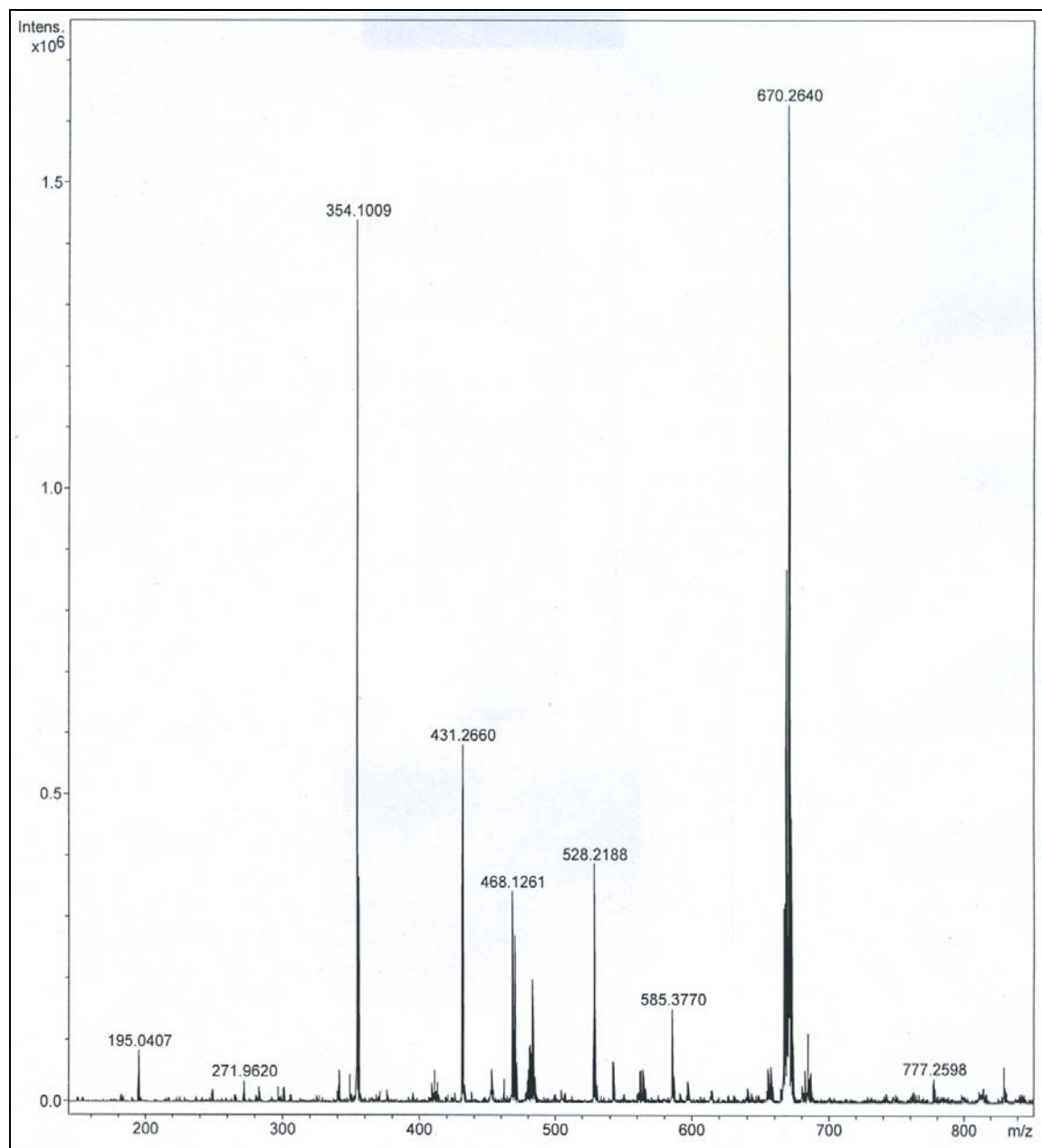
**Figure S2.**  $^{13}\text{C}$  NMR Spectrum of compound **22** in  $\text{CDCl}_3$ .



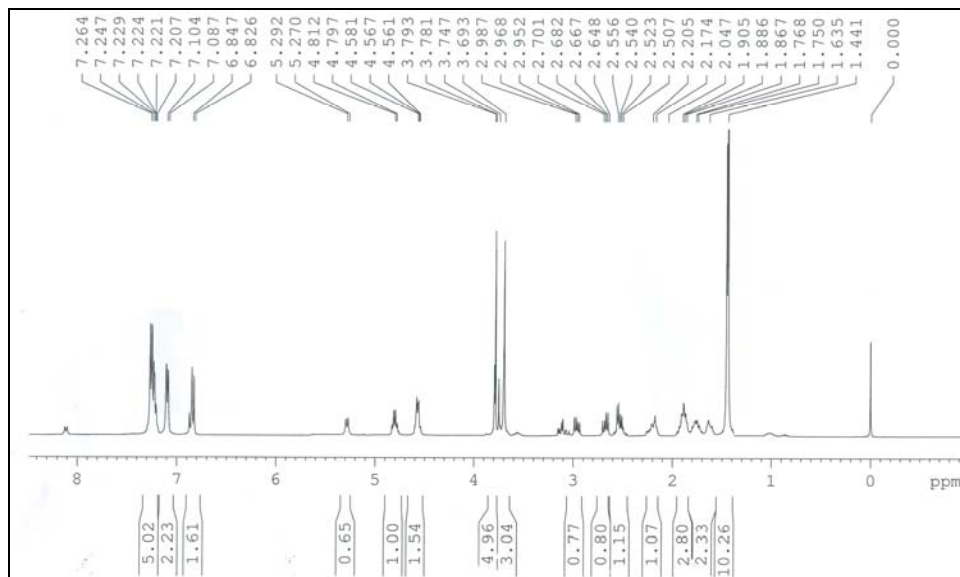
**Figure S3.**  $^{77}\text{Se}$  NMR Spectrum of compound **22** in  $\text{CDCl}_3$ .



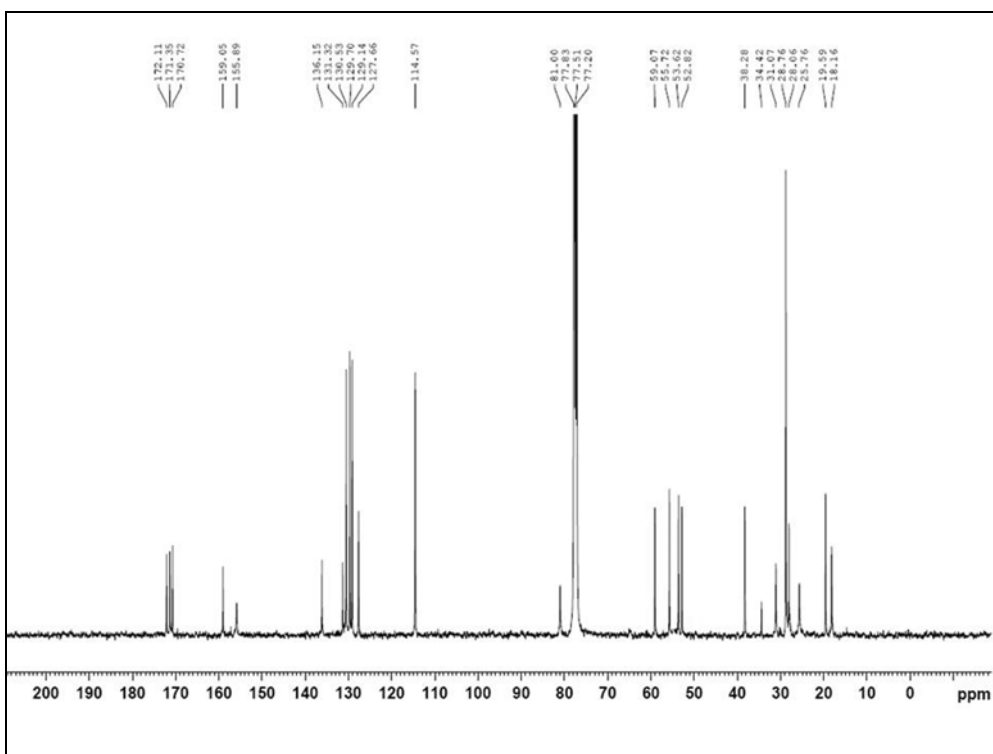
**Figure S4.** ESI-MS spectrum of compound **22**. Calculated mass: 670.2007, found: 670.2640.



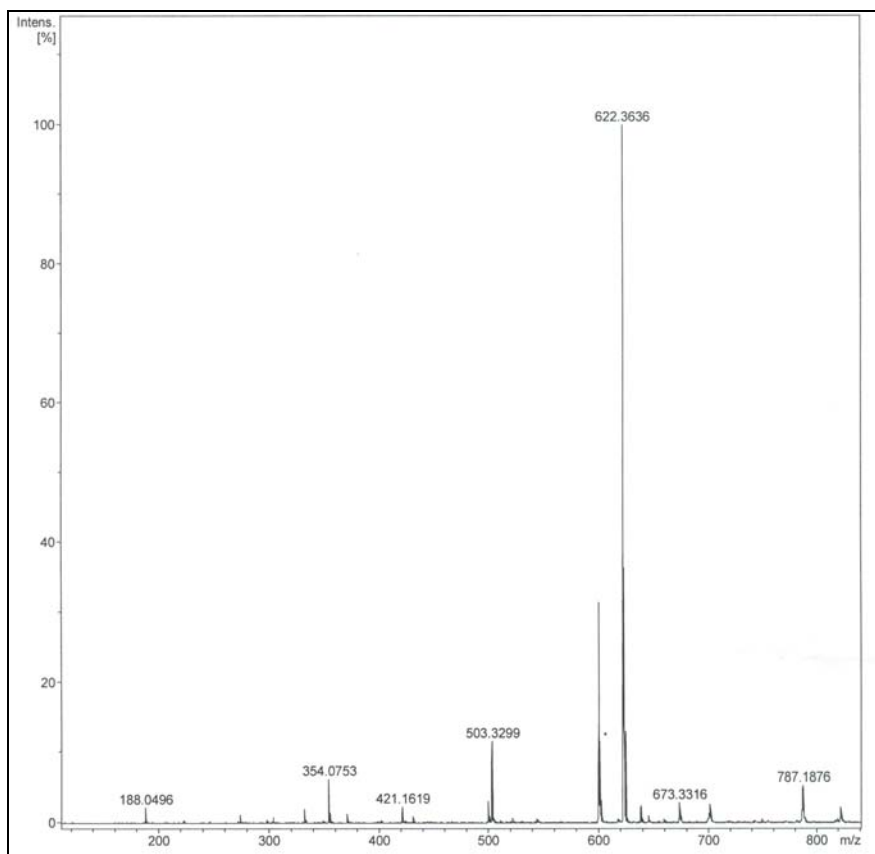
**Figure S5.**  $^1\text{H}$  NMR Spectrum of compound **23** in  $\text{CDCl}_3$ .



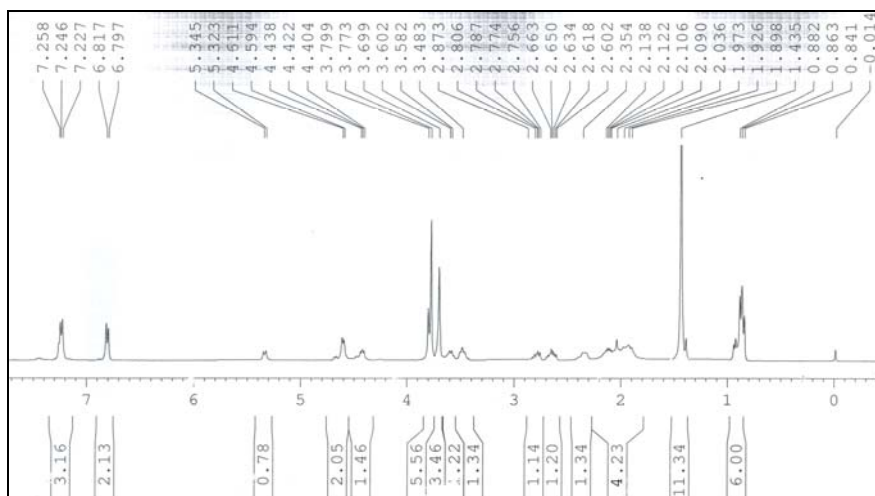
**Figure S6.**  $^{13}\text{C}$  NMR Spectrum of compound **23** in  $\text{CDCl}_3$ .



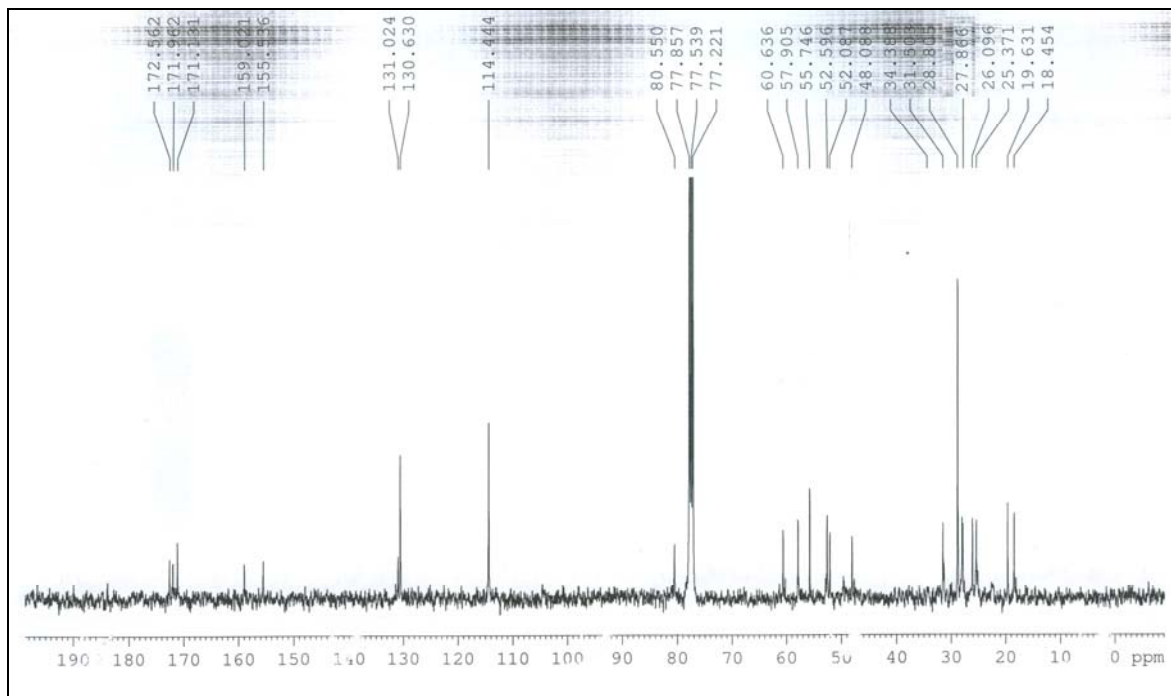
**Figure S7.** ESI-MS spectrum of compound **23**. Calculated mass: 622.2563, found: 622.3636.



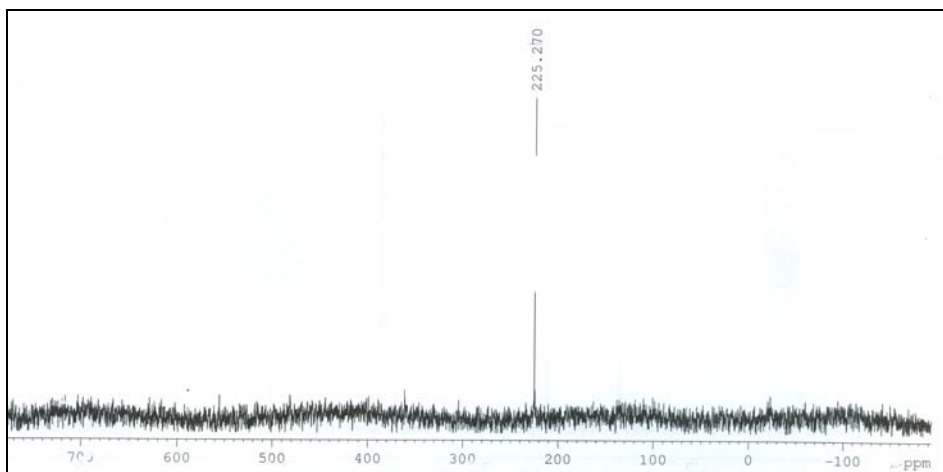
**Figure S8.**  $^1\text{H}$  NMR Spectrum of compound **24** in  $\text{CDCl}_3$ .



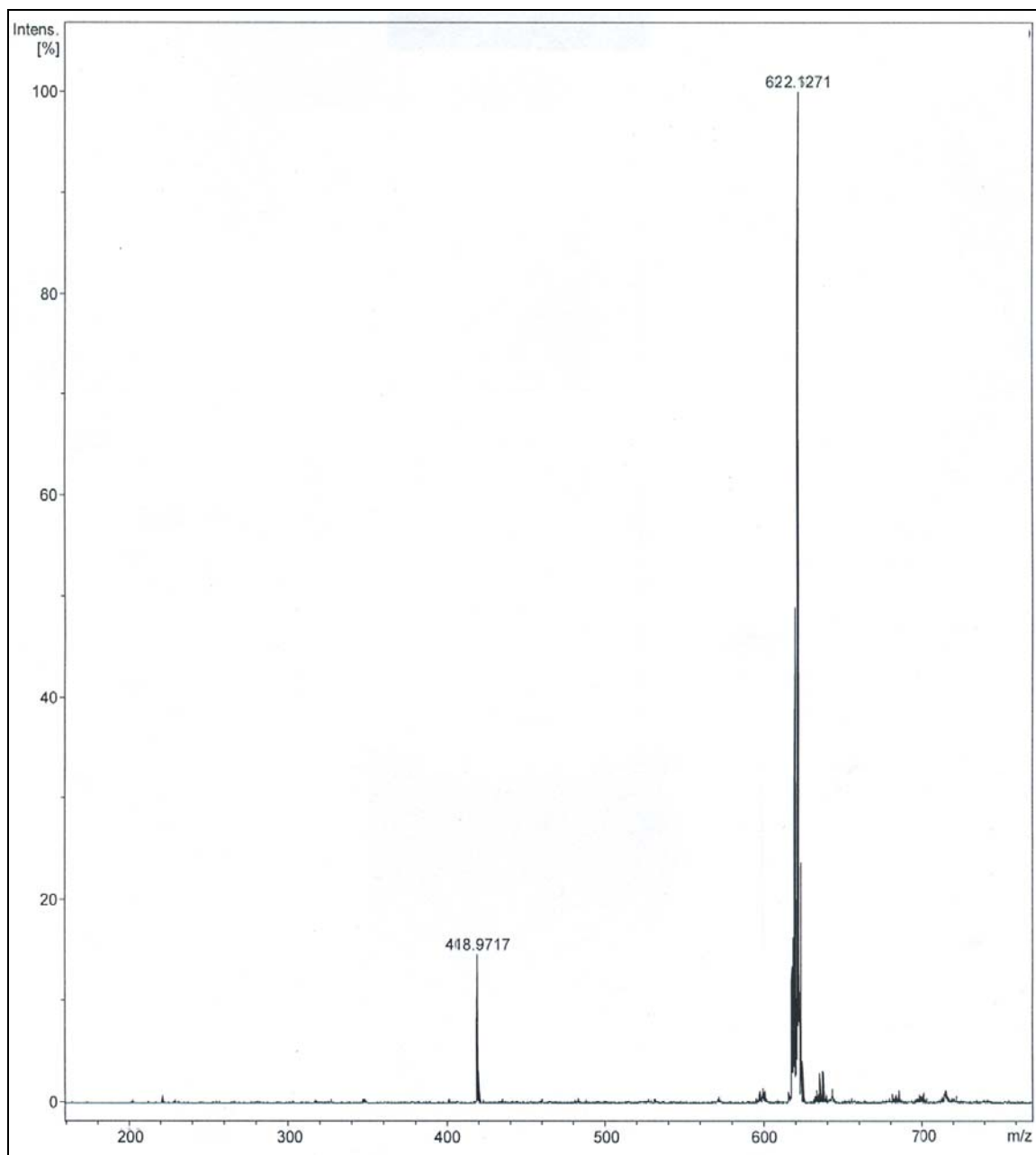
**Figure S9.**  $^{13}\text{C}$  NMR Spectrum of compound **24** in  $\text{CDCl}_3$ .



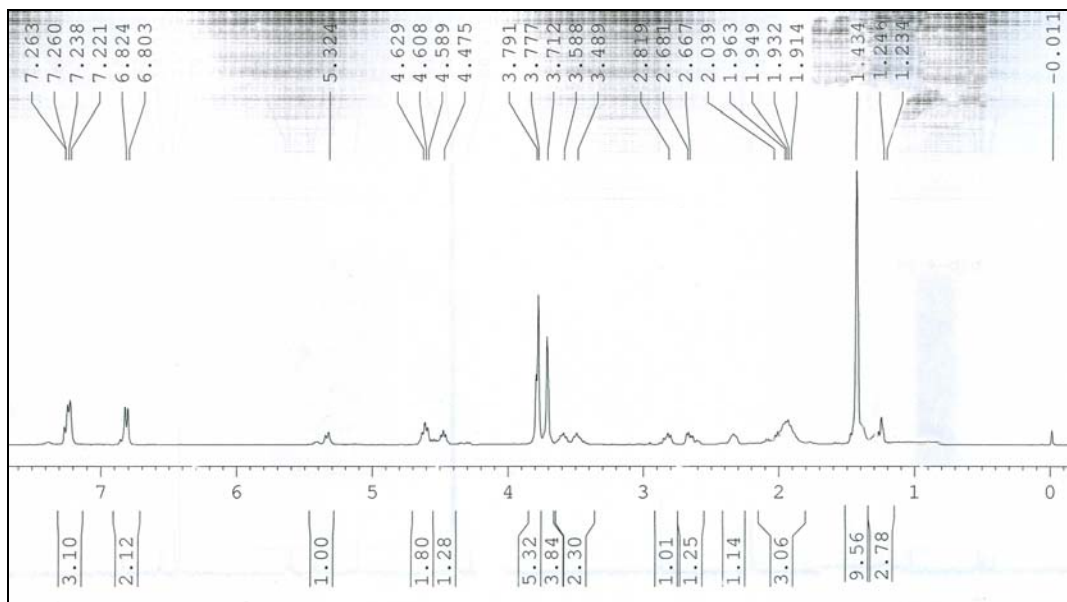
**Figure S10.**  $^{77}\text{Se}$  NMR Spectrum of compound **24** in  $\text{CDCl}_3$ .



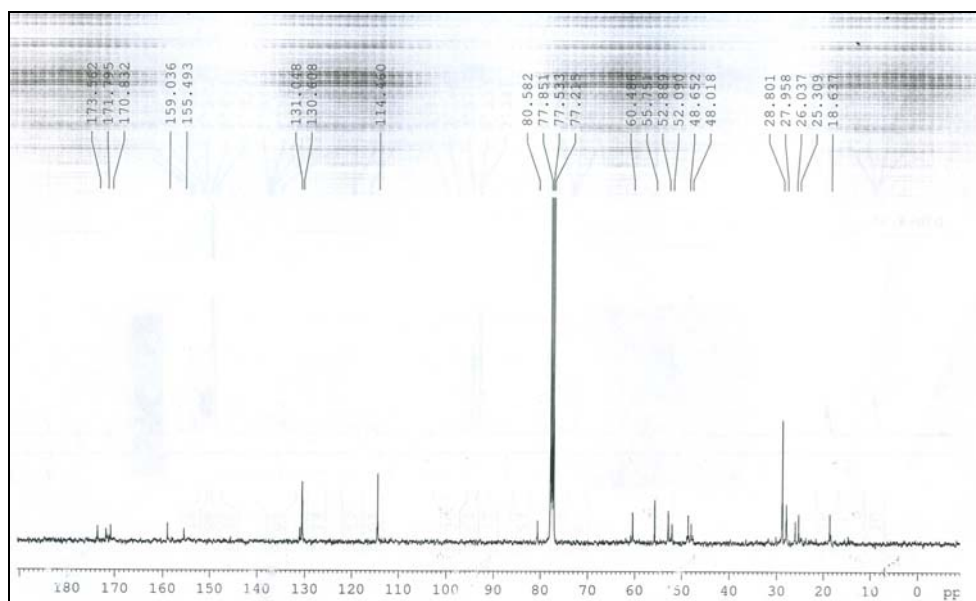
**Figure S11.** ESI-MS spectrum of compound **24**. Calculated mass: 622.2007, found: 622.1271.



**Figure S12.**  $^1\text{H}$  NMR Spectrum of compound **25** in  $\text{CDCl}_3$ .

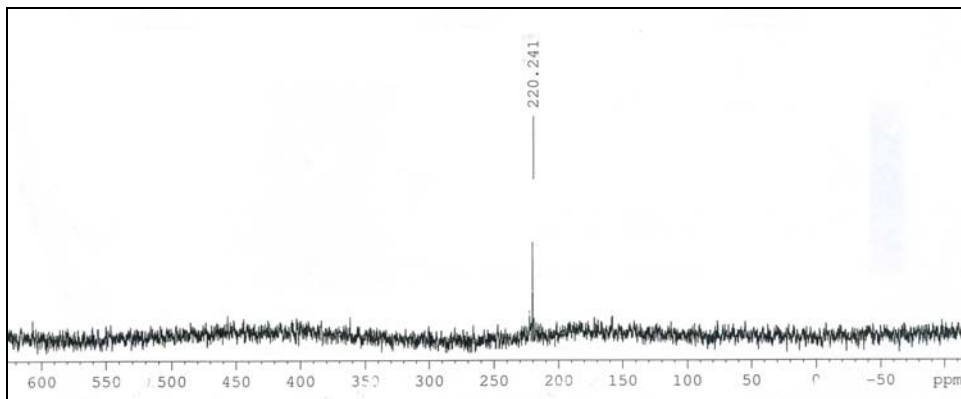


**Figure S13.**  $^{13}\text{C}$  NMR Spectrum of compound **25** in  $\text{CDCl}_3$ .

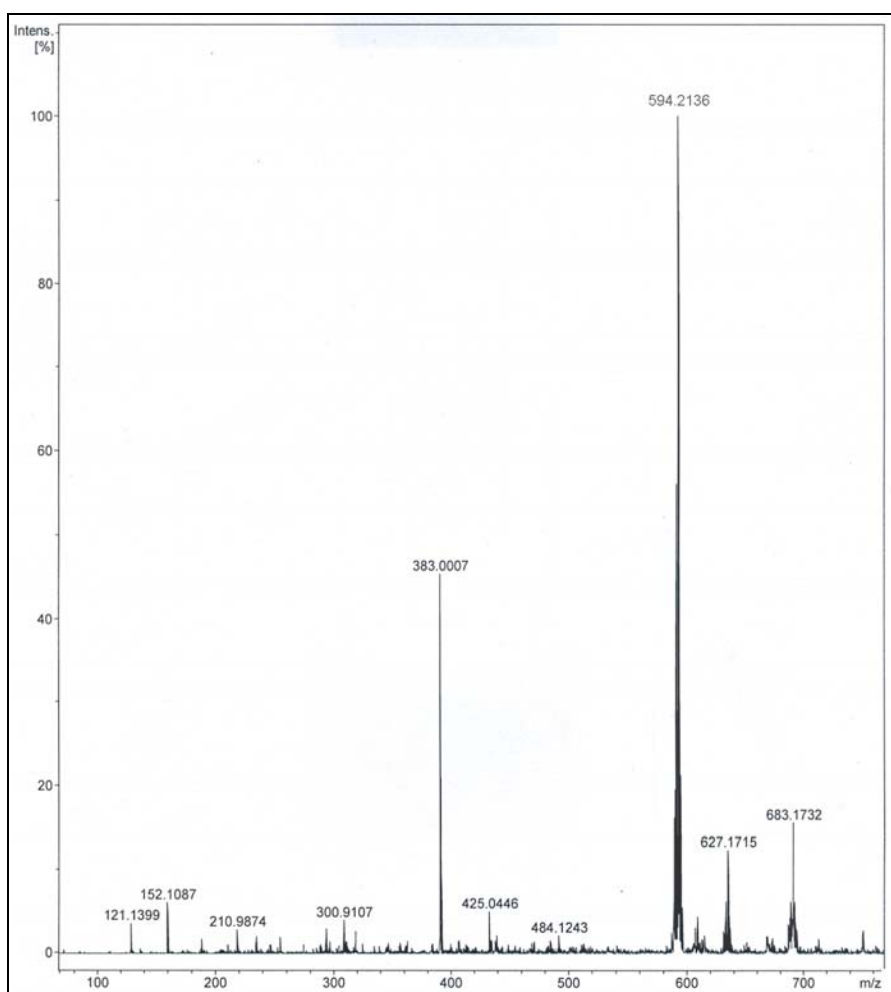




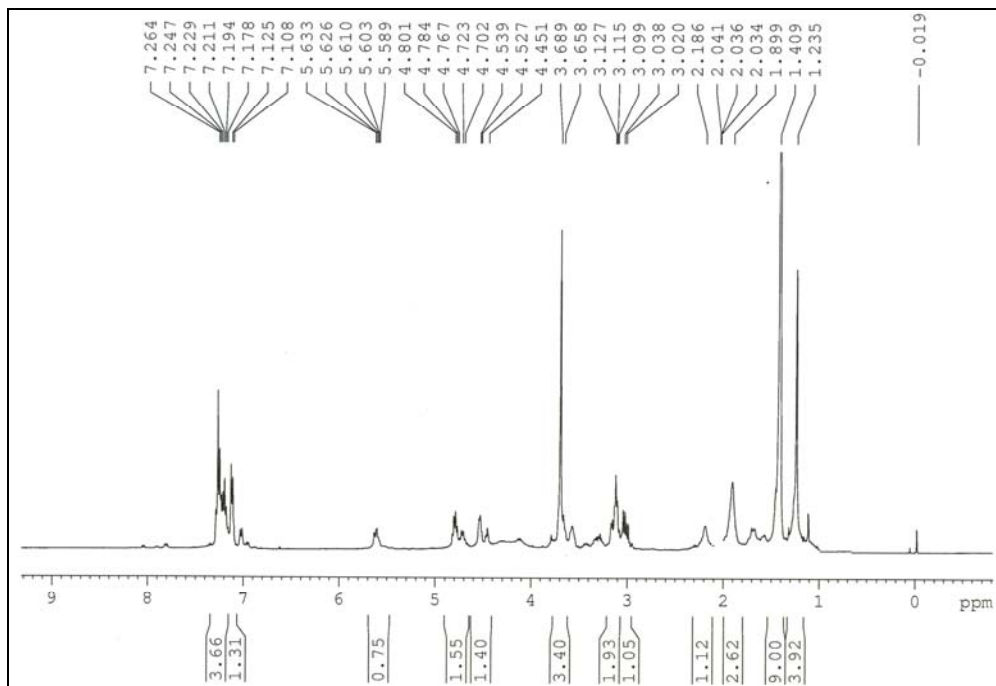
**Figure S14.**  $^{77}\text{Se}$  NMR Spectrum of compound **25** in  $\text{CDCl}_3$ .



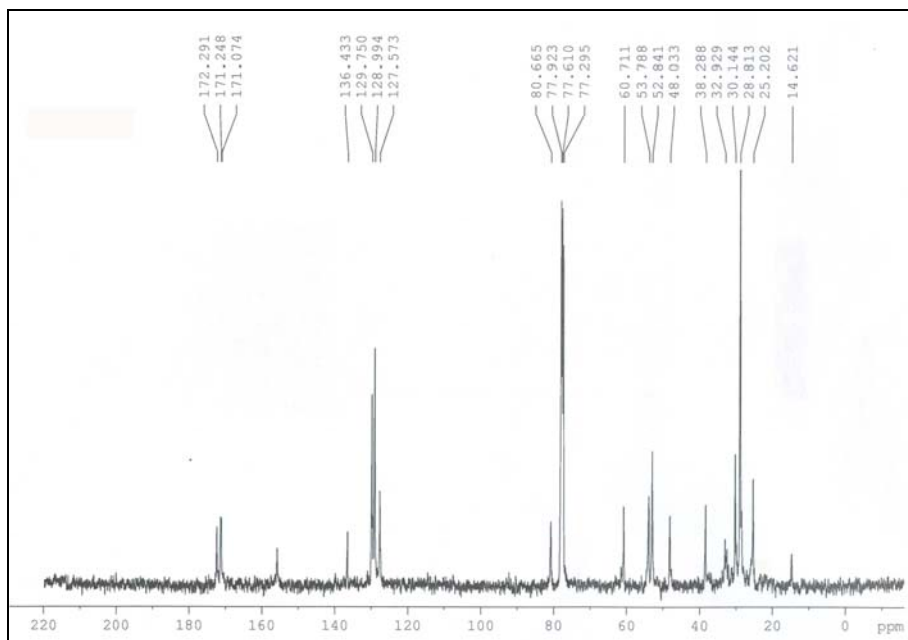
**Figure S15.** ESI-MS spectrum of Compound **25**. Calculated mass: 594.1694, found: 594.2136.



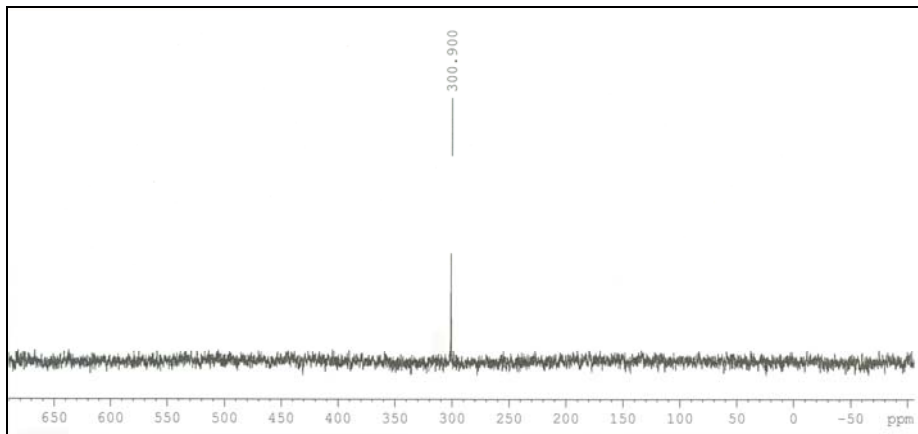
**Figure S16.**  $^1\text{H}$  NMR Spectrum of compound **26** in  $\text{CDCl}_3$ .



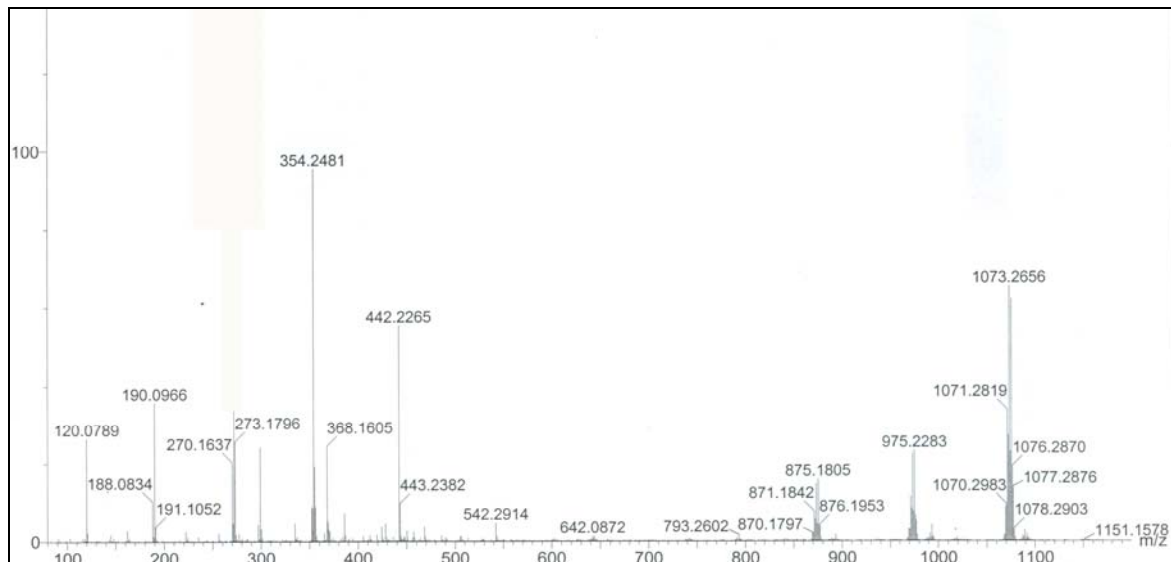
**Figure S17.**  $^{13}\text{C}$  NMR Spectrum of compound **26** in  $\text{CDCl}_3$ .



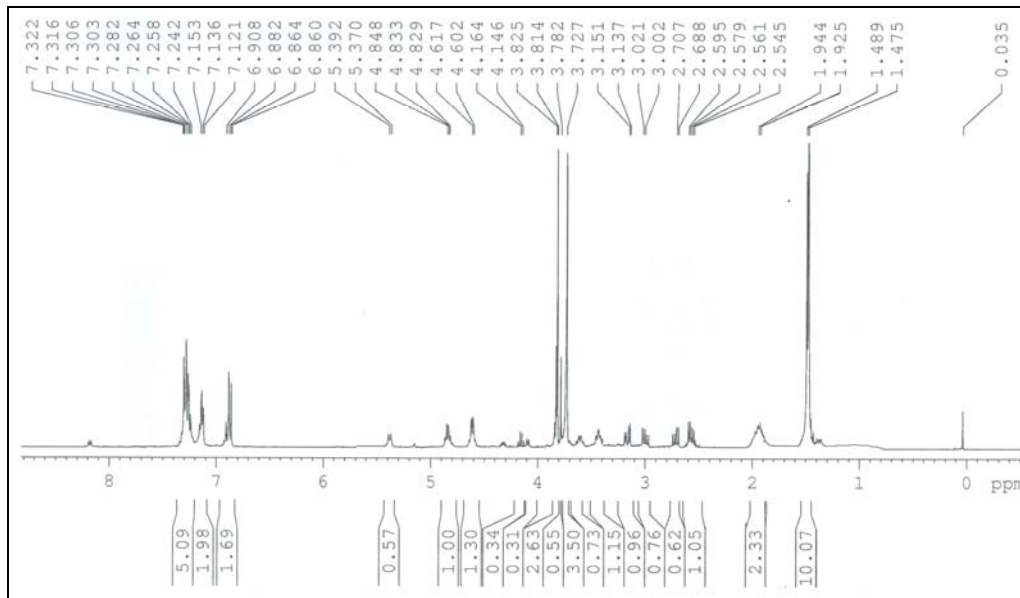
**Figure S18.**  $^{77}\text{Se}$  NMR Spectrum of compound **26** in  $\text{CDCl}_3$ .



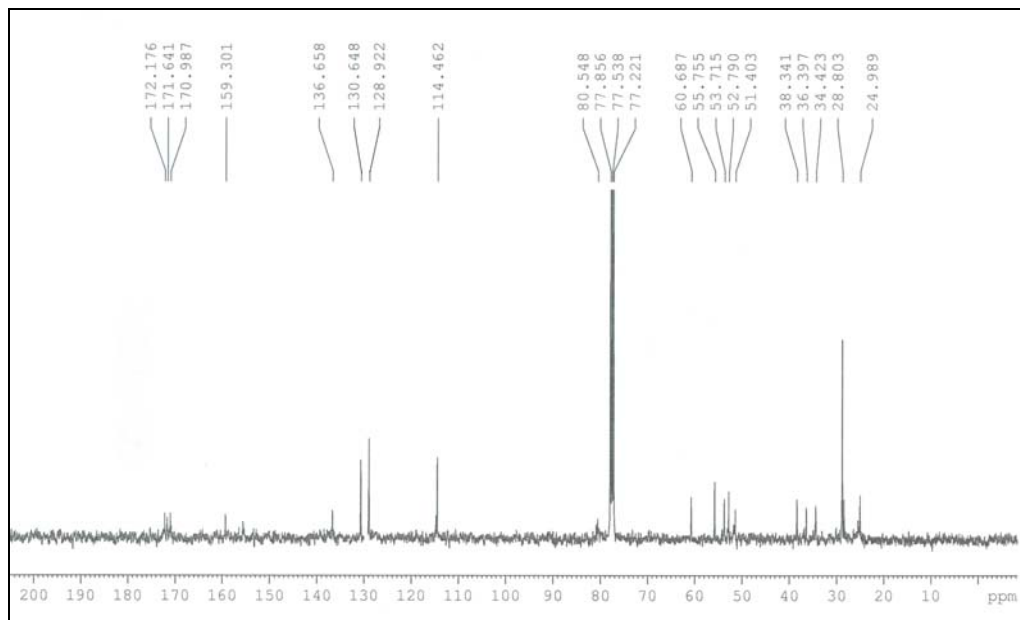
**Figure S19.** ESI-MS spectrum of compound **26**. Calculated mass: 1073.2818, found: 1073.2656.



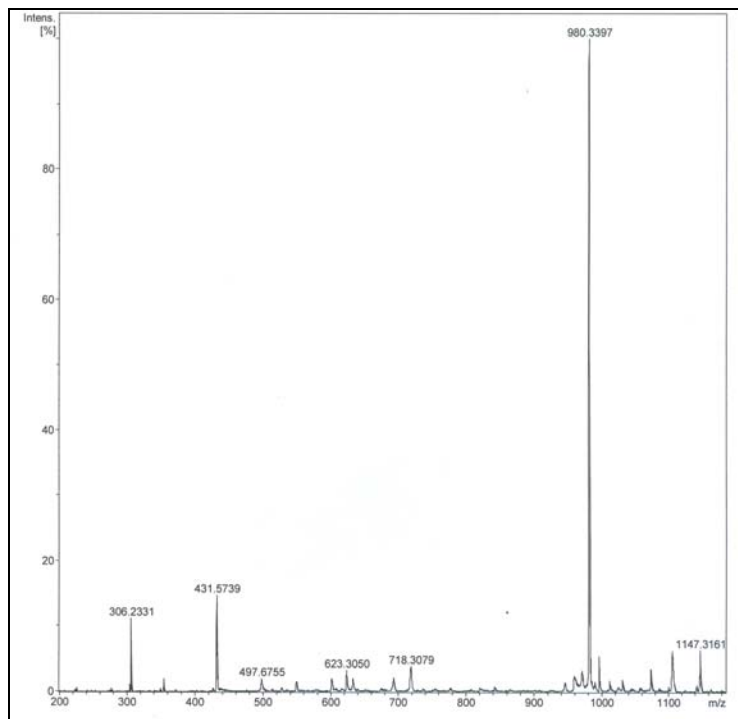
**Figure S20.**  $^1\text{H}$  NMR Spectrum of compound **27** in  $\text{CDCl}_3$ .



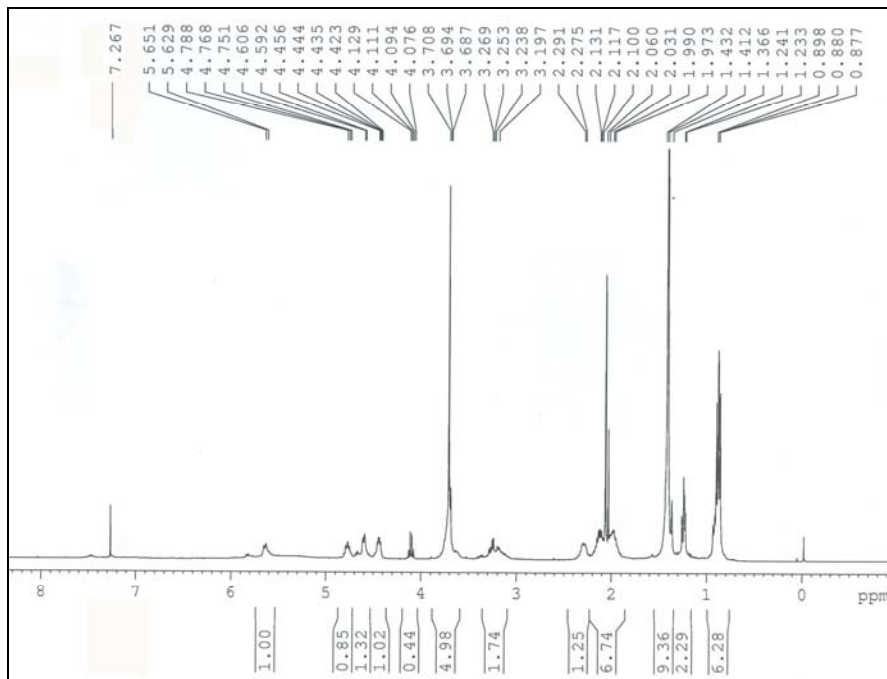
**Figure S21.**  $^{13}\text{C}$  NMR Spectrum of compound **27** in  $\text{CDCl}_3$ .



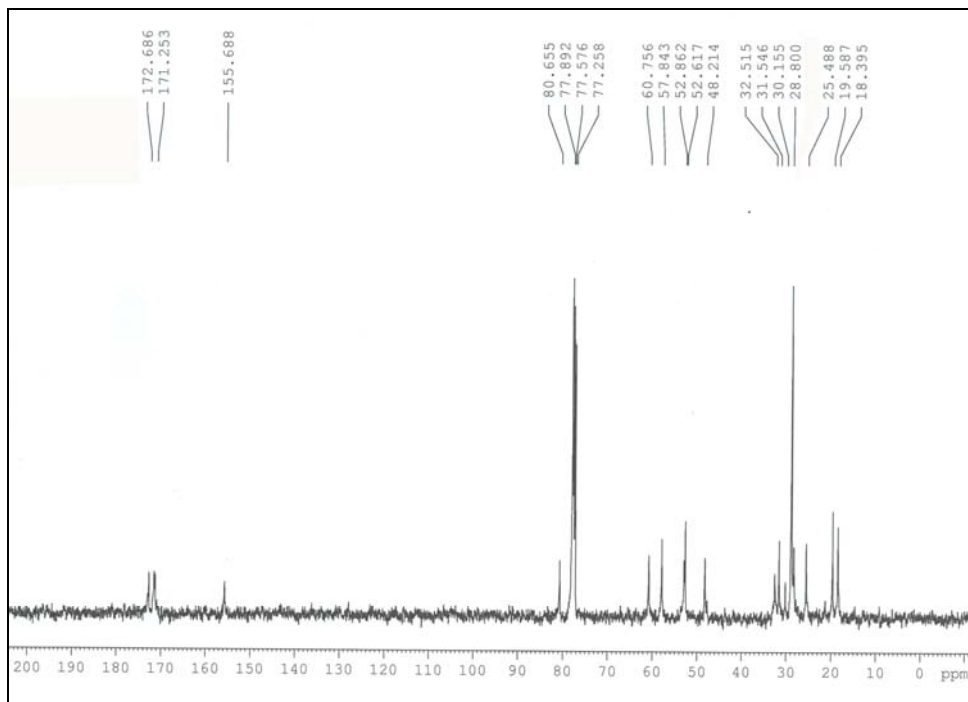
**Figure S22.** ESI-MS spectrum of compound **27**. Calculated mass: 979.3921, found 980.3397.



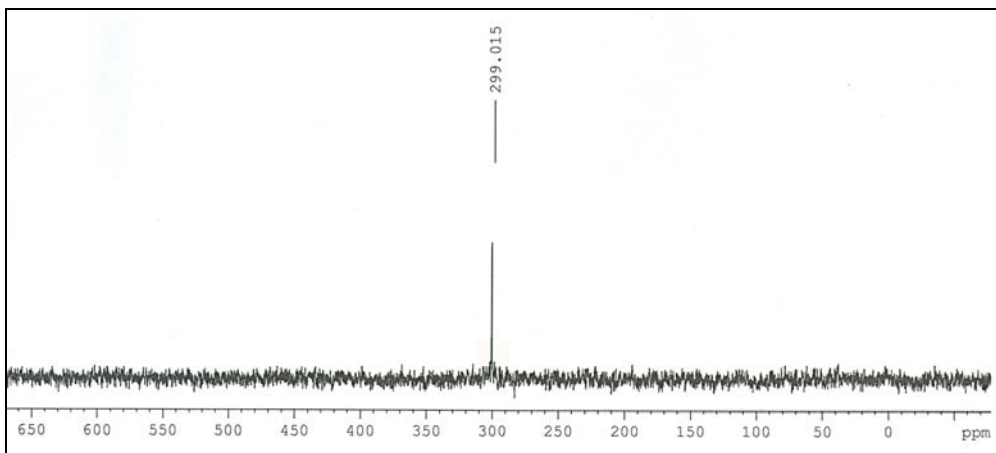
**Figure S23.**  $^1\text{H}$  NMR Spectrum of compound **28** in  $\text{CDCl}_3$ .



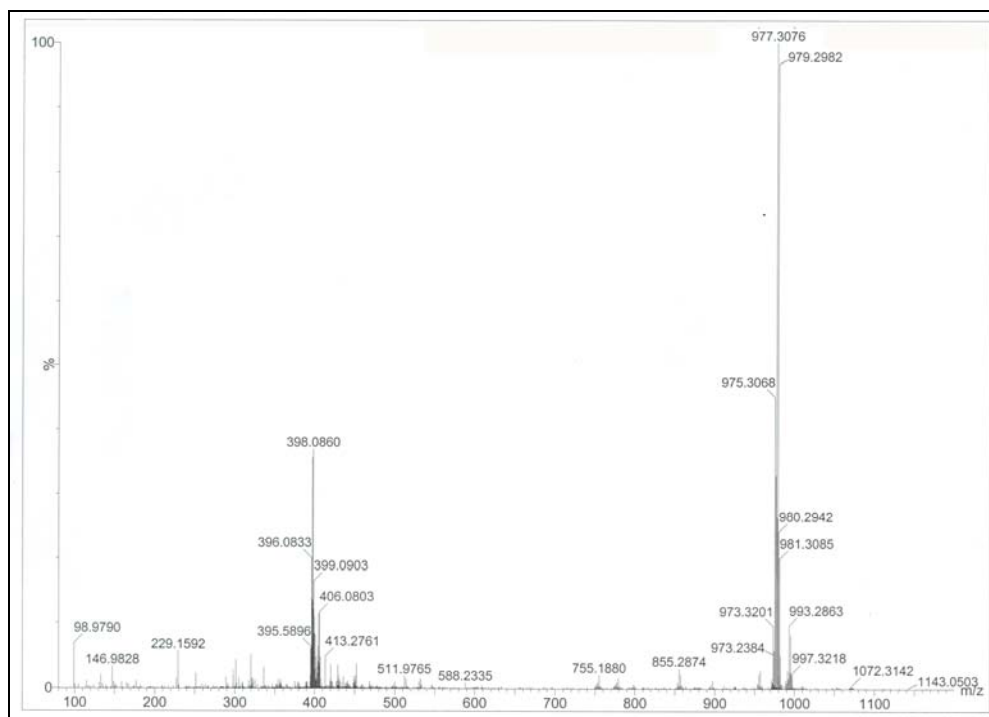
**Figure S24.**  $^{13}\text{C}$  NMR Spectrum of compound **28** in  $\text{CDCl}_3$ .



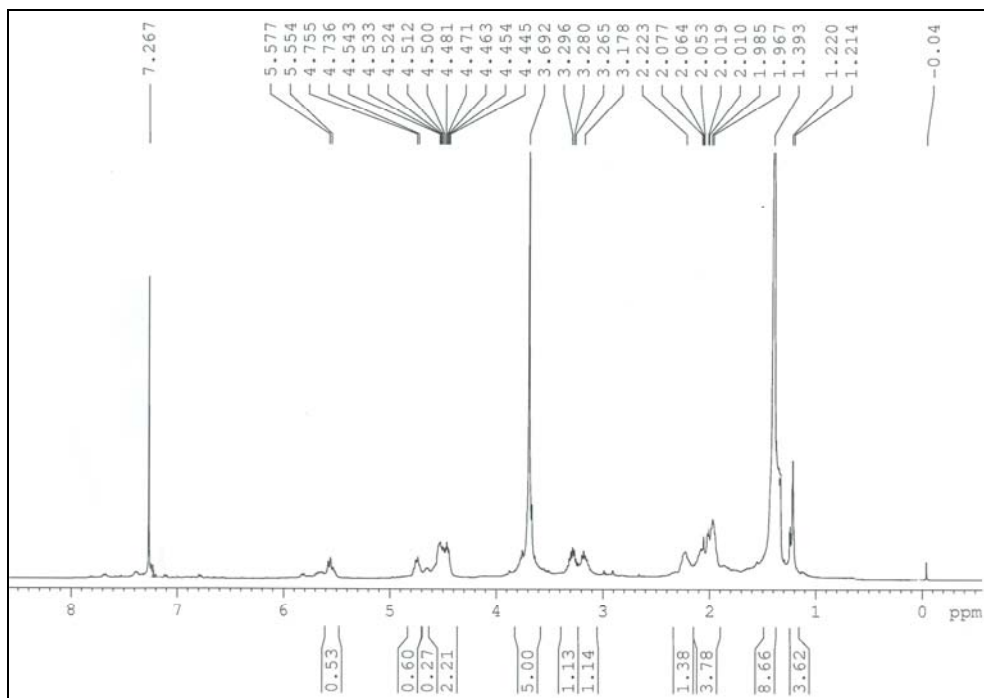
**Figure S25.**  $^{77}\text{Se}$  NMR Spectrum of compound **28** in  $\text{CDCl}_3$ .



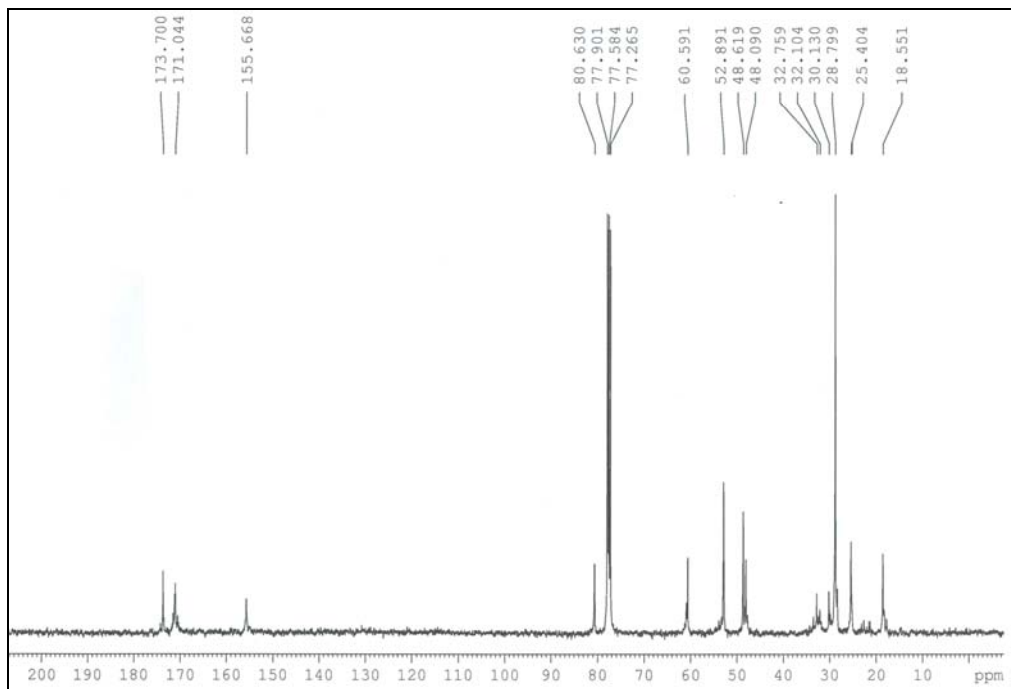
**Figure S26.** ESI-MS spectrum of compound **28**. Calculated mass: 979.2810, found 979.2982.



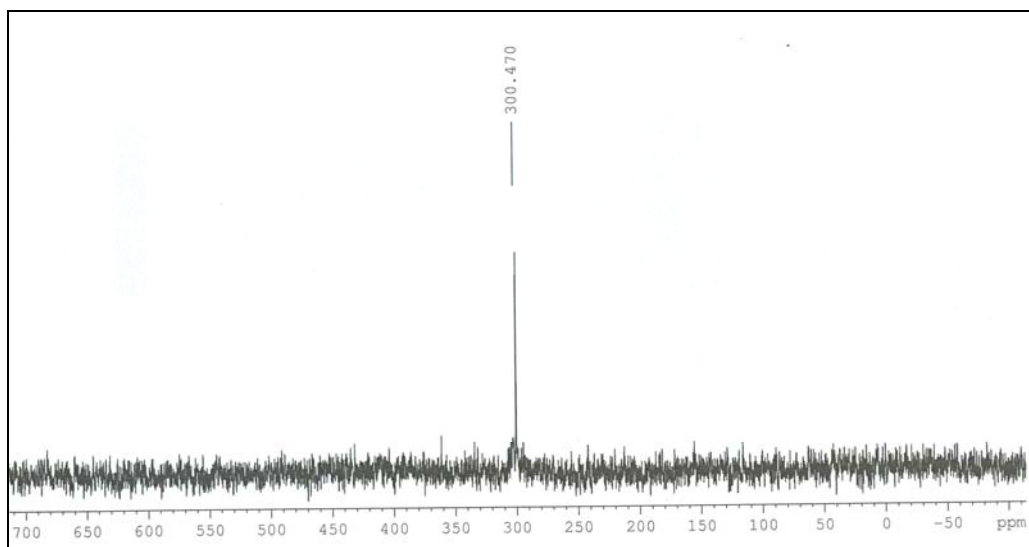
**Figure S27.**  $^1\text{H}$  NMR Spectrum of compound **29** in  $\text{CDCl}_3$ .



**Figure S28.**  $^{13}\text{C}$  NMR Spectrum of compound **29** in  $\text{CDCl}_3$ .

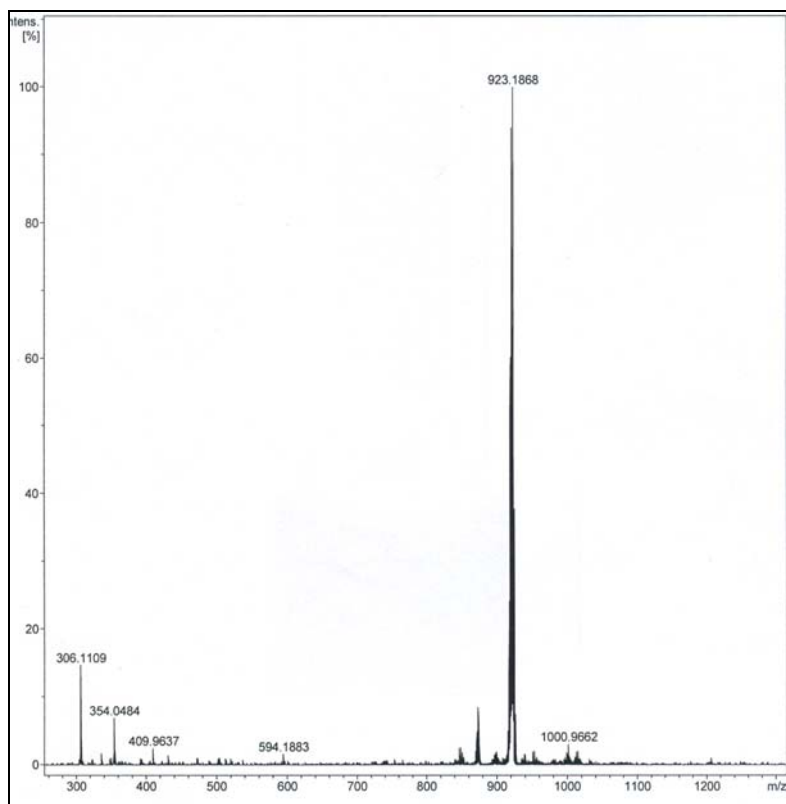


**Figure S29.**  $^{77}\text{Se}$  NMR Spectrum of compound **29** in  $\text{CDCl}_3$ .

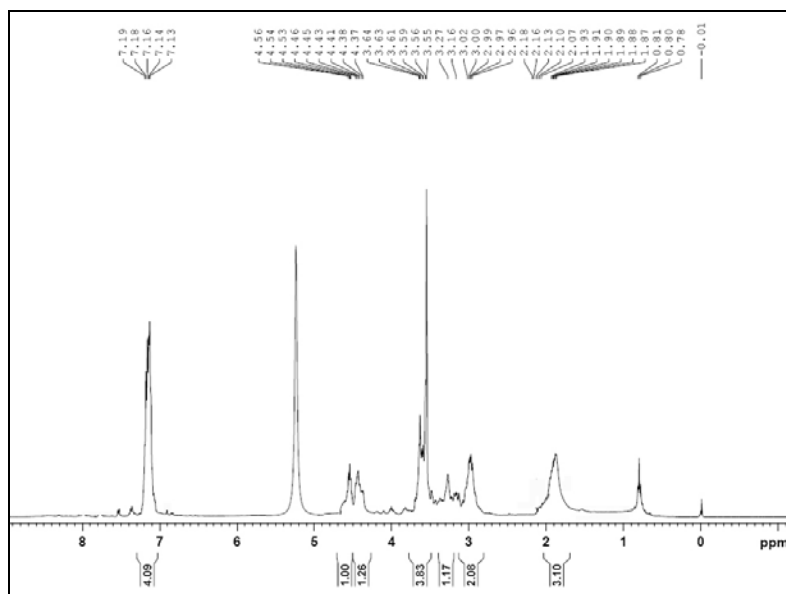




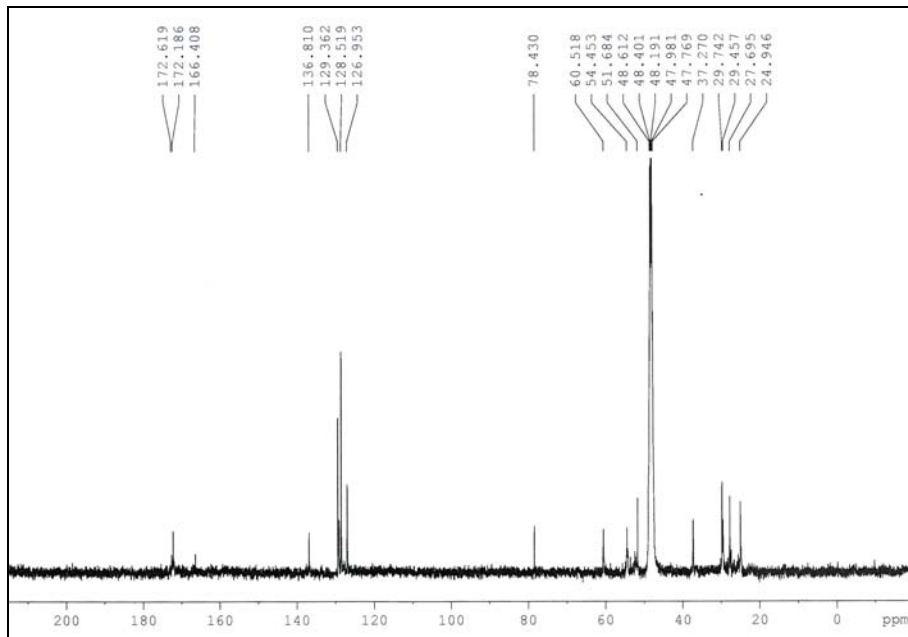
**Figure S30.** ESI-MS spectrum of compound **29**. Calculated mass: 923.2184, found 923.1868.



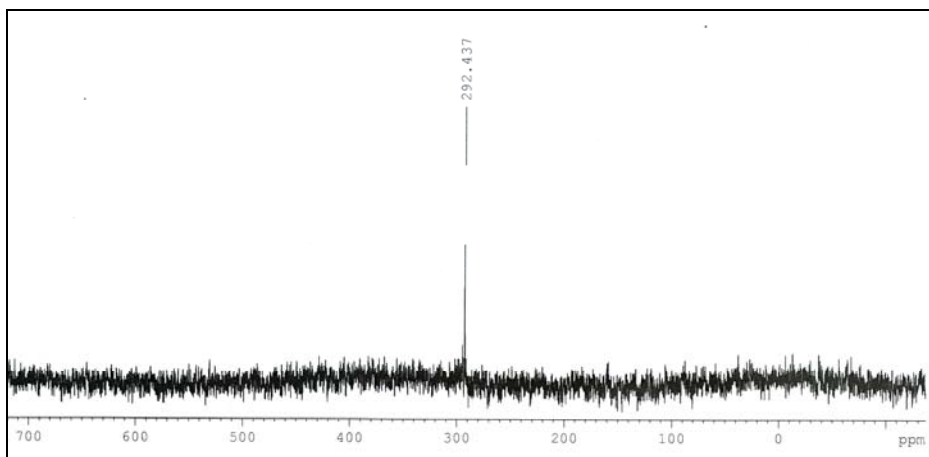
**Figure S31.**  $^1\text{H}$  NMR Spectrum of compound **30** in  $\text{MeOH-d}_4$ .



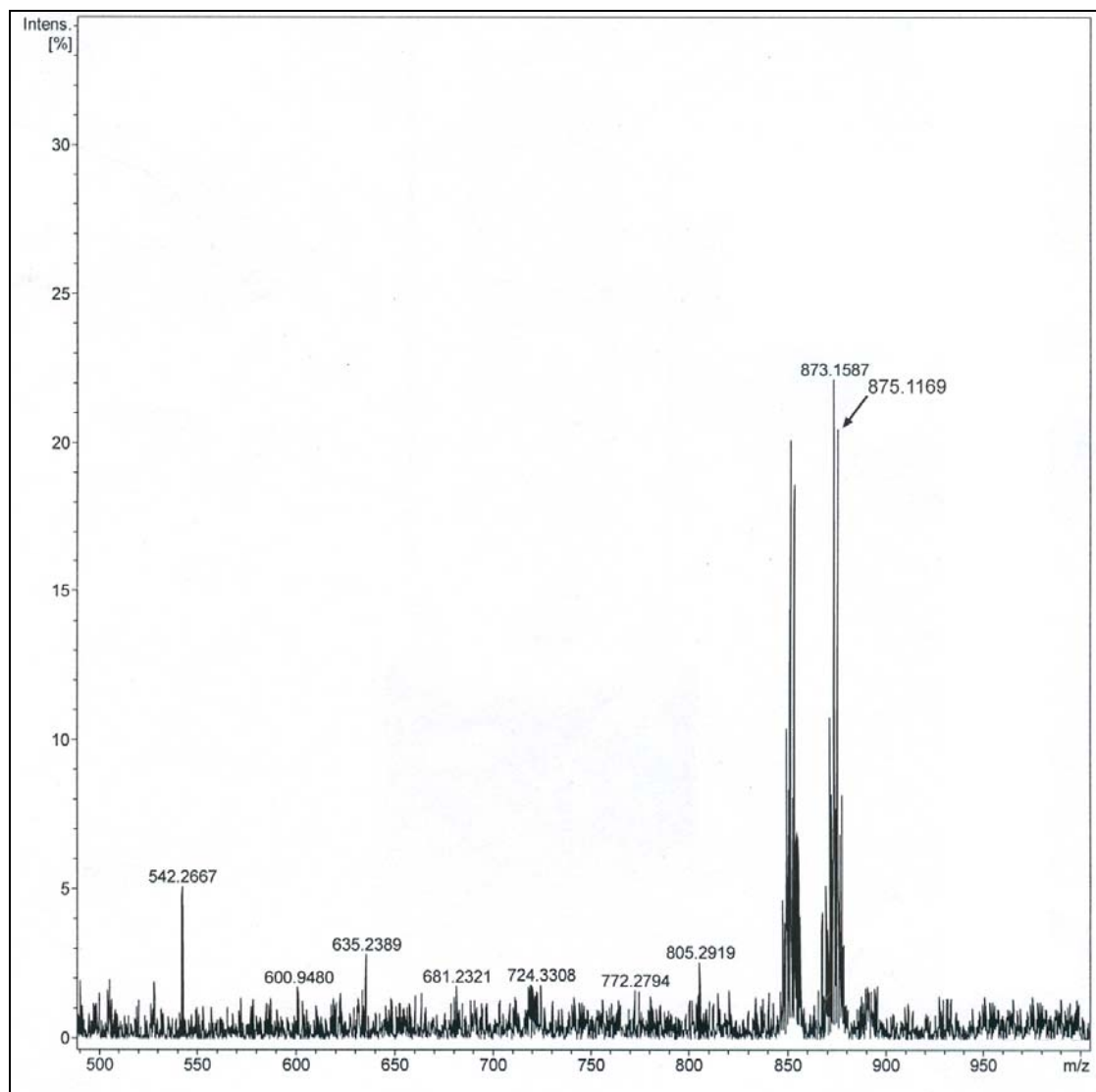
**Figure S32.**  $^{13}\text{C}$  NMR Spectrum of compound **30** in  $\text{MeOH-d}_4$



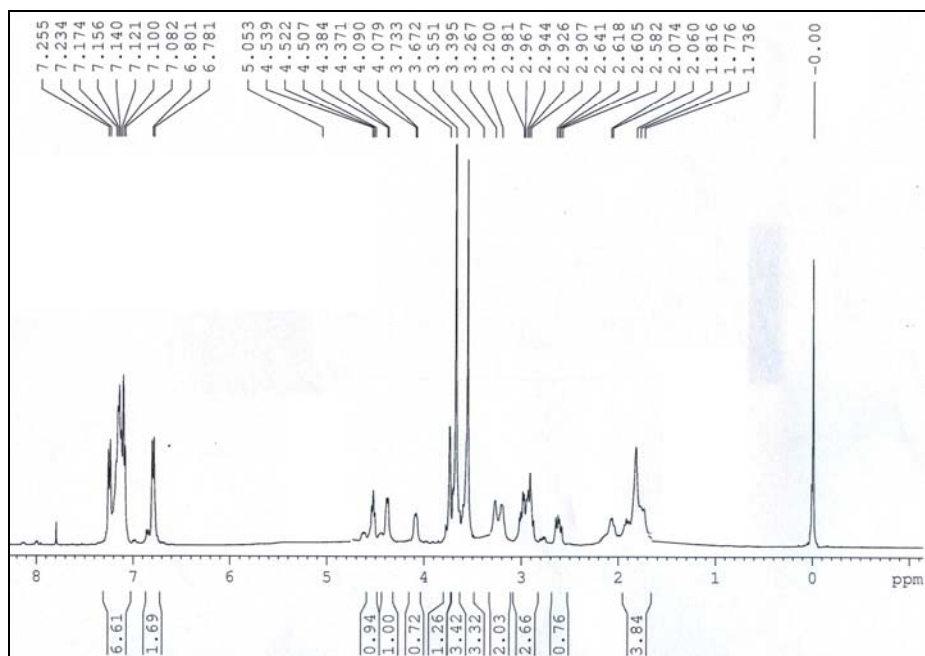
**Figure S33.**  $^{77}\text{Se}$  NMR Spectrum of compound **30** in  $\text{MeOH-d}_4$ .



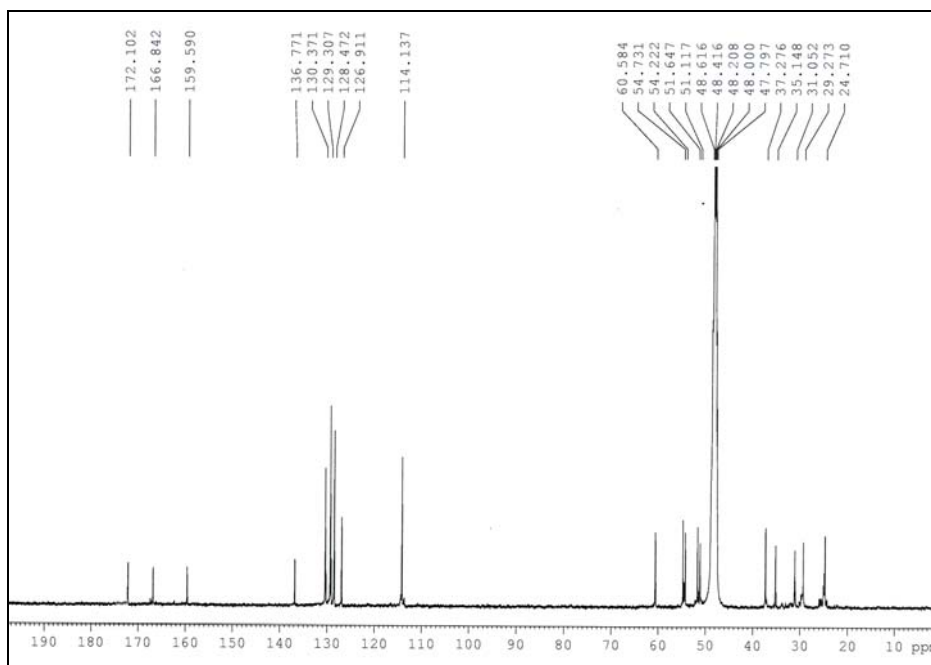
**Figure S34.** ESI-MS spectrum of compound **30**. Calculated mass: 875.1762, found 875.1169.



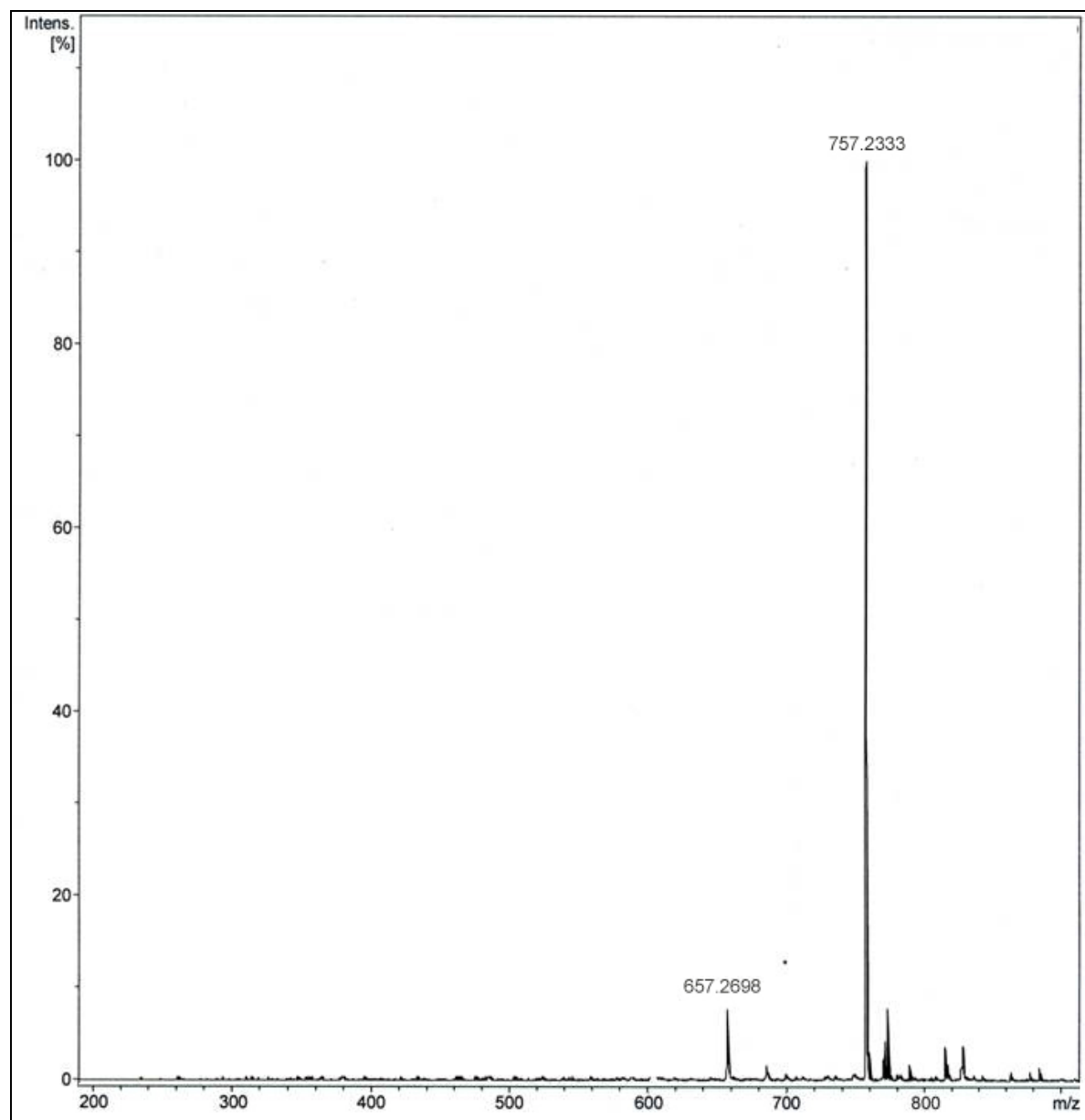
**Figure S35.**  $^1\text{H}$  NMR Spectrum of compound **31** in  $\text{MeOH-d}_4$ .



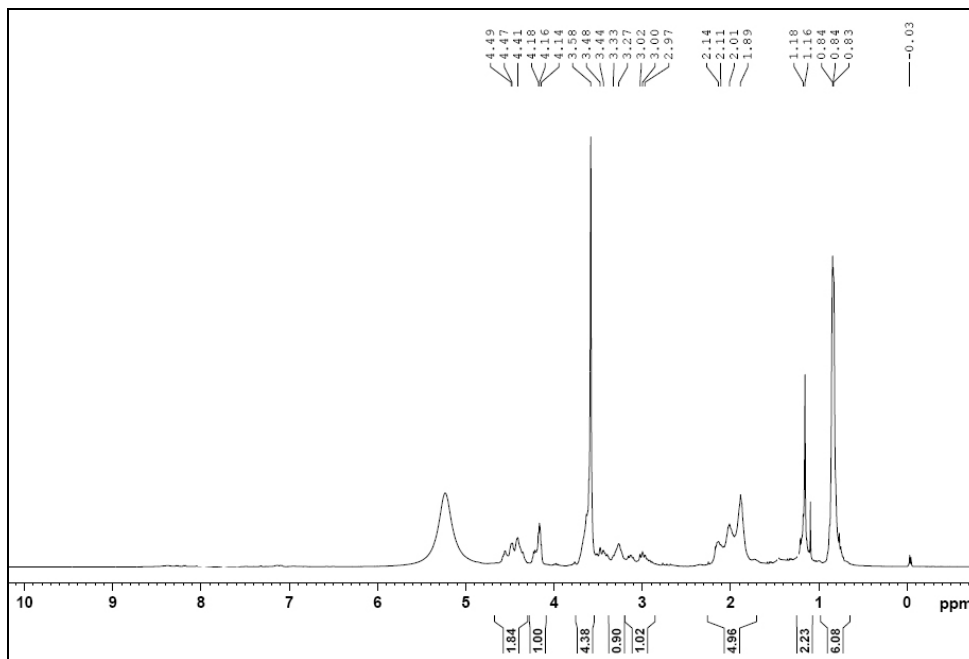
**Figure S36.**  $^{13}\text{C}$  NMR Spectrum of compound **31** in  $\text{MeOH-d}_4$ .



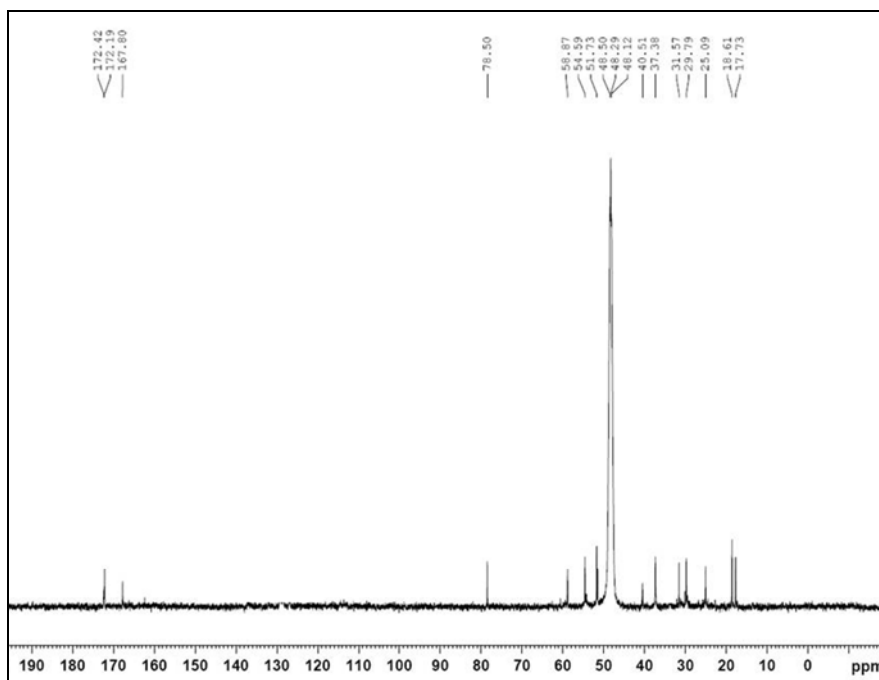
**Figure S37.** ESI-MS spectrum of compound **31**. Calculated mass: 757.3053, found 757.2333.



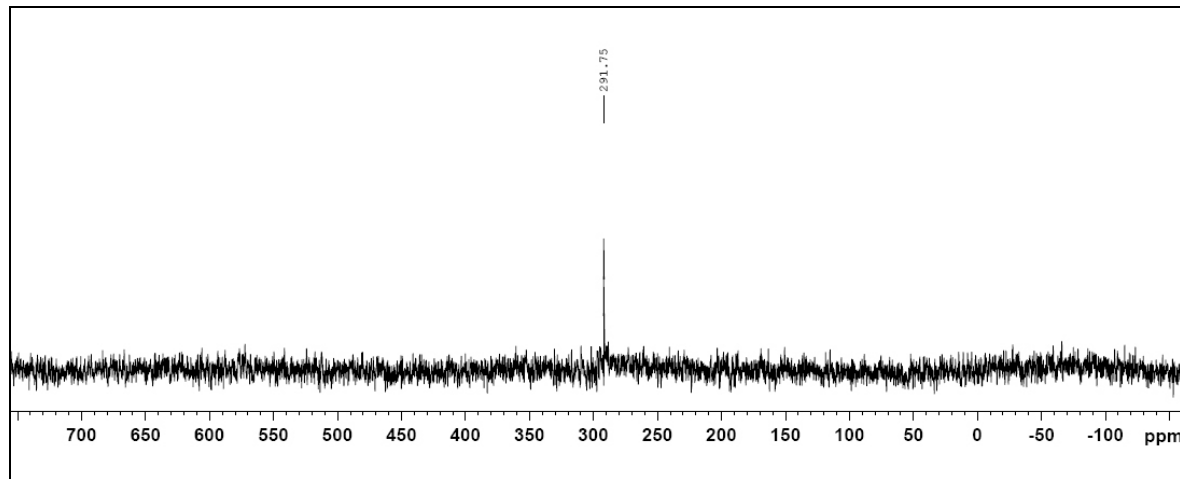
**Figure S38.**  $^1\text{H}$  NMR Spectrum of compound **32** in  $\text{MeOH-d}_4$ .



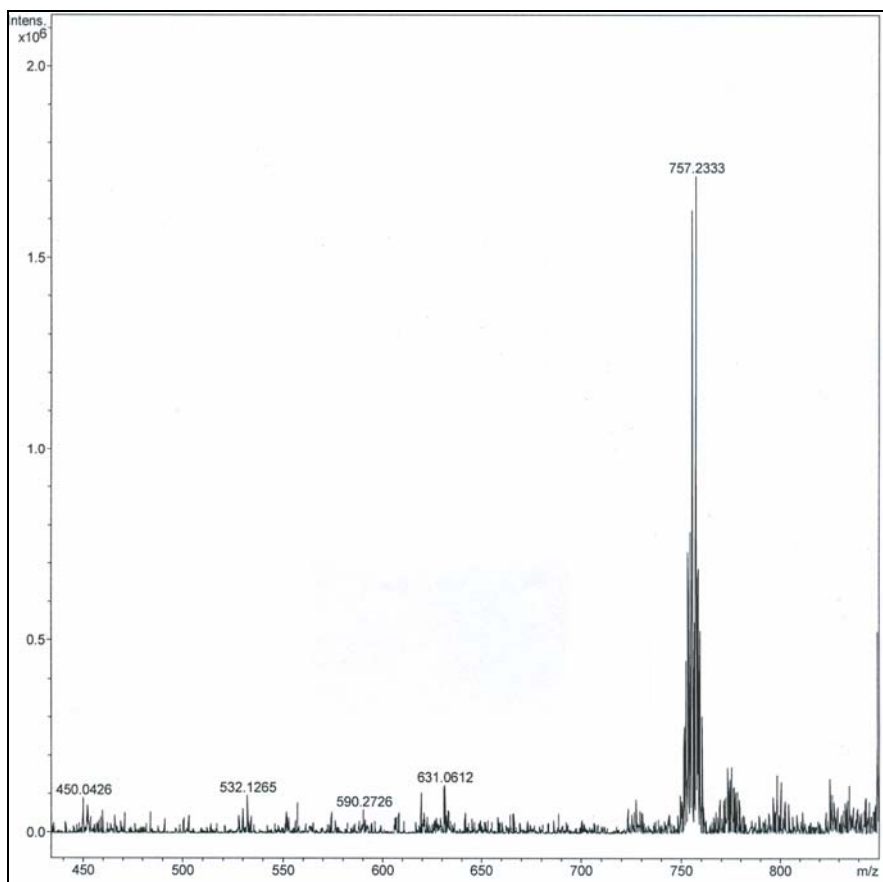
**Figure S39.**  $^{13}\text{C}$  NMR Spectrum of compound **32** in  $\text{MeOH-d}_4$ .



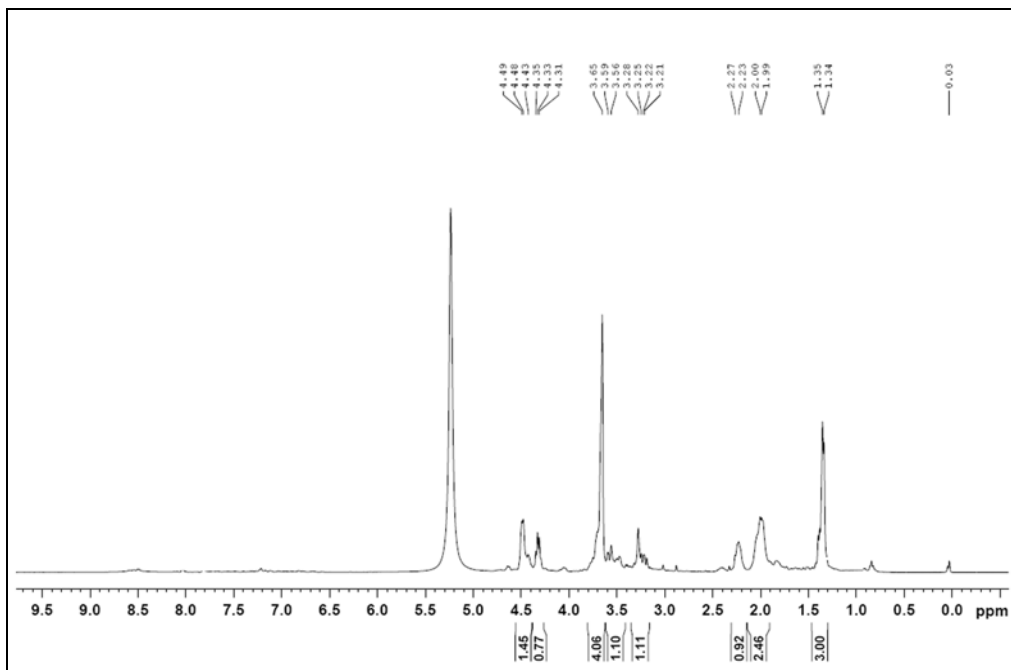
**Figure S40.**  $^{77}\text{Se}$  NMR Spectrum of compound **32** in  $\text{MeOH-d}_4$ .



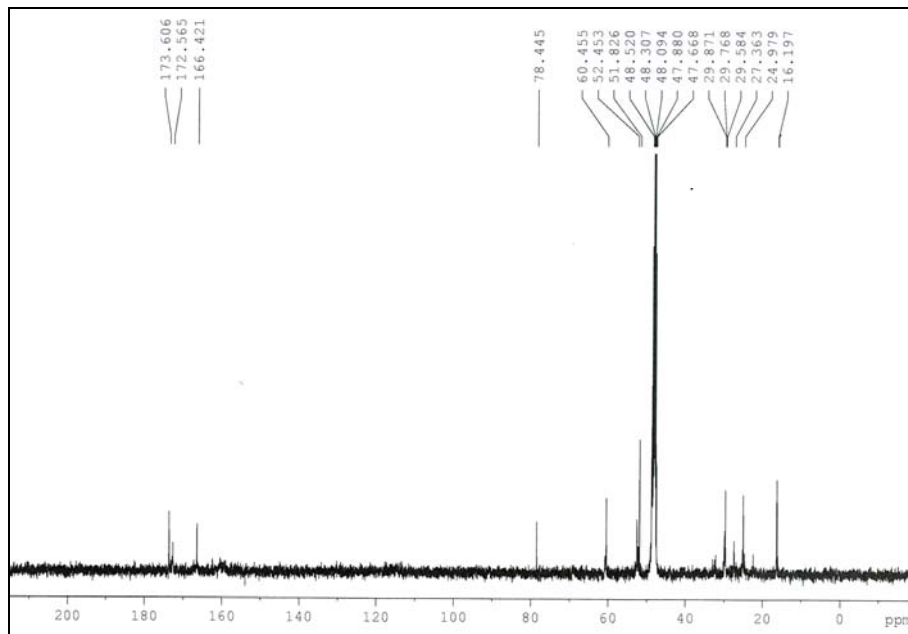
**Figure S41.** ESI-MS spectrum of compound **32**. Calculated mass: 757.1942, found 757.2333.



**Figure S42.**  $^1\text{H}$  NMR Spectrum of compound **33** in  $\text{MeOH-d}_4$ .

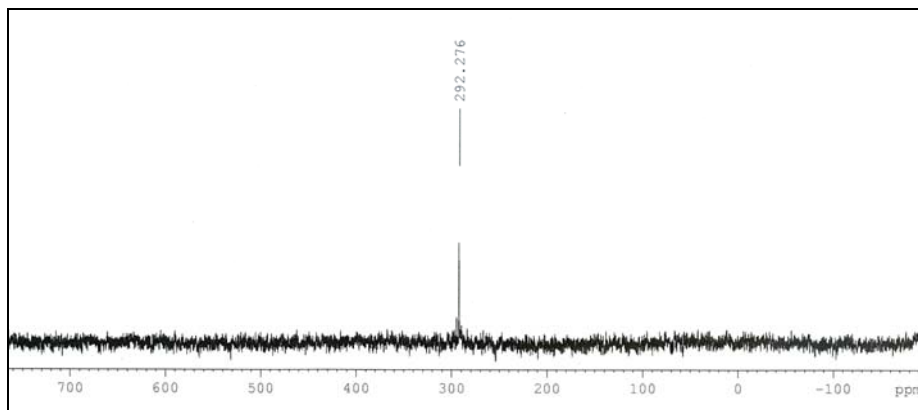


**Figure S43.**  $^{13}\text{C}$  NMR Spectrum of compound **33** in  $\text{MeOH-d}_4$ .

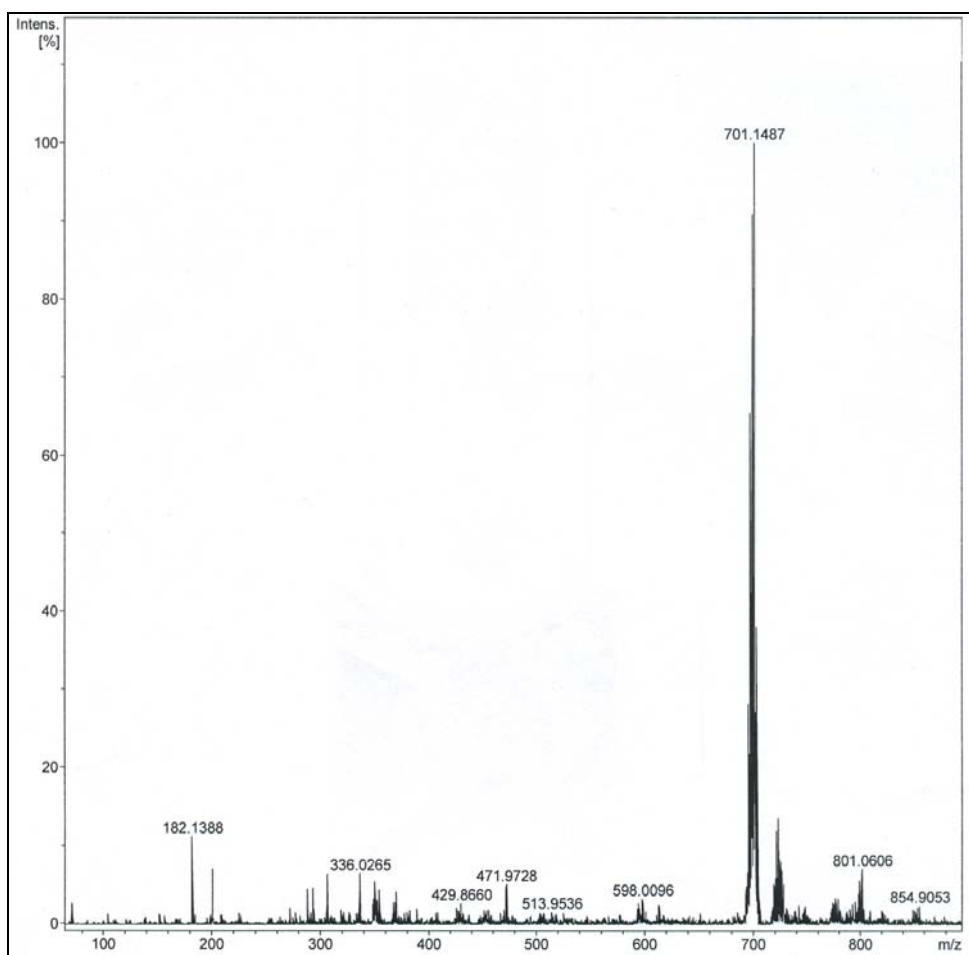




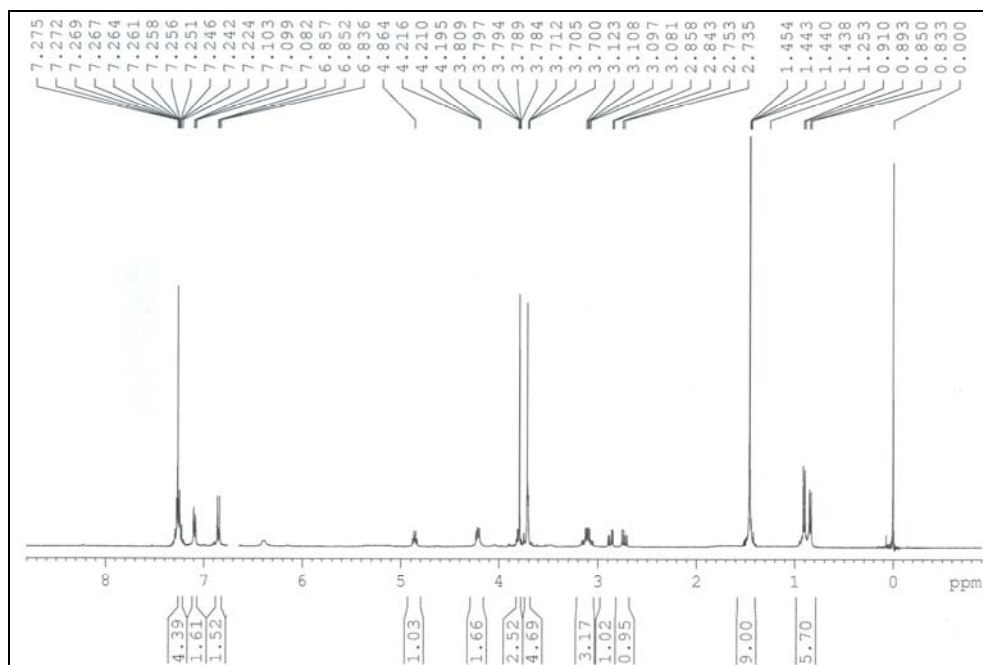
**Figure S44.**  $^{77}\text{Se}$  NMR Spectrum of compound **33** in  $\text{MeOH-d}_4$ .



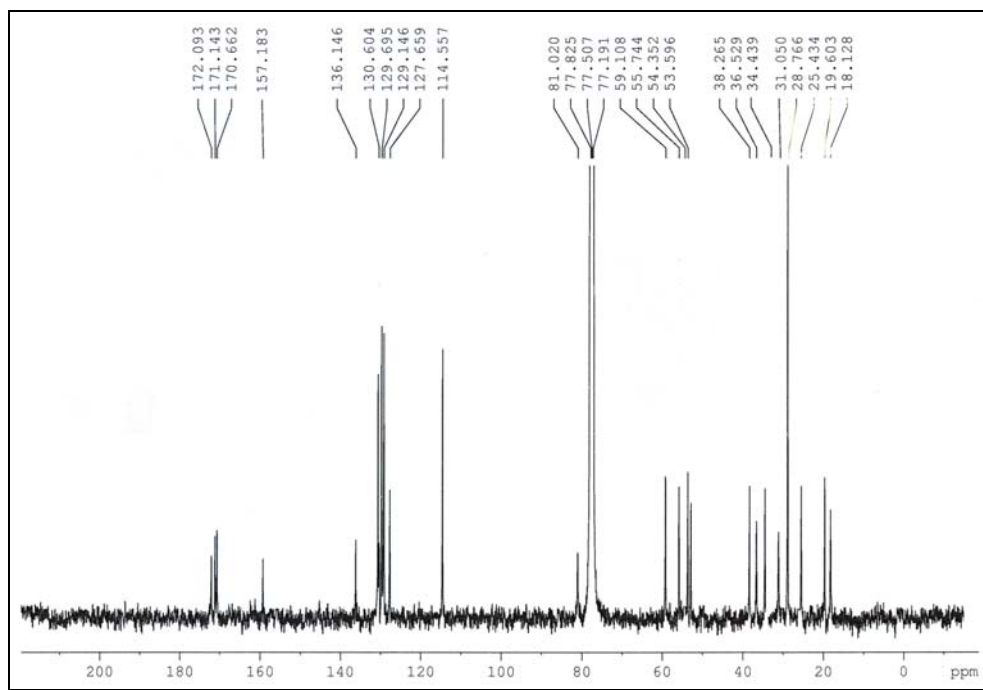
**Figure S45.** ESI-MS spectrum of compound **33**. Calculated mass: 701.1316, found 701.1487.



**Figure S46.**  $^1\text{H}$  NMR Spectrum of compound **36** in  $\text{CDCl}_3$ .



**Figure S47.**  $^{13}\text{C}$  NMR Spectrum of compound **36** in  $\text{CDCl}_3$ .



**Figure S48.** ESI-MS spectrum of compound **36**. Calculated mass: 624.2719 , found 624.4609.

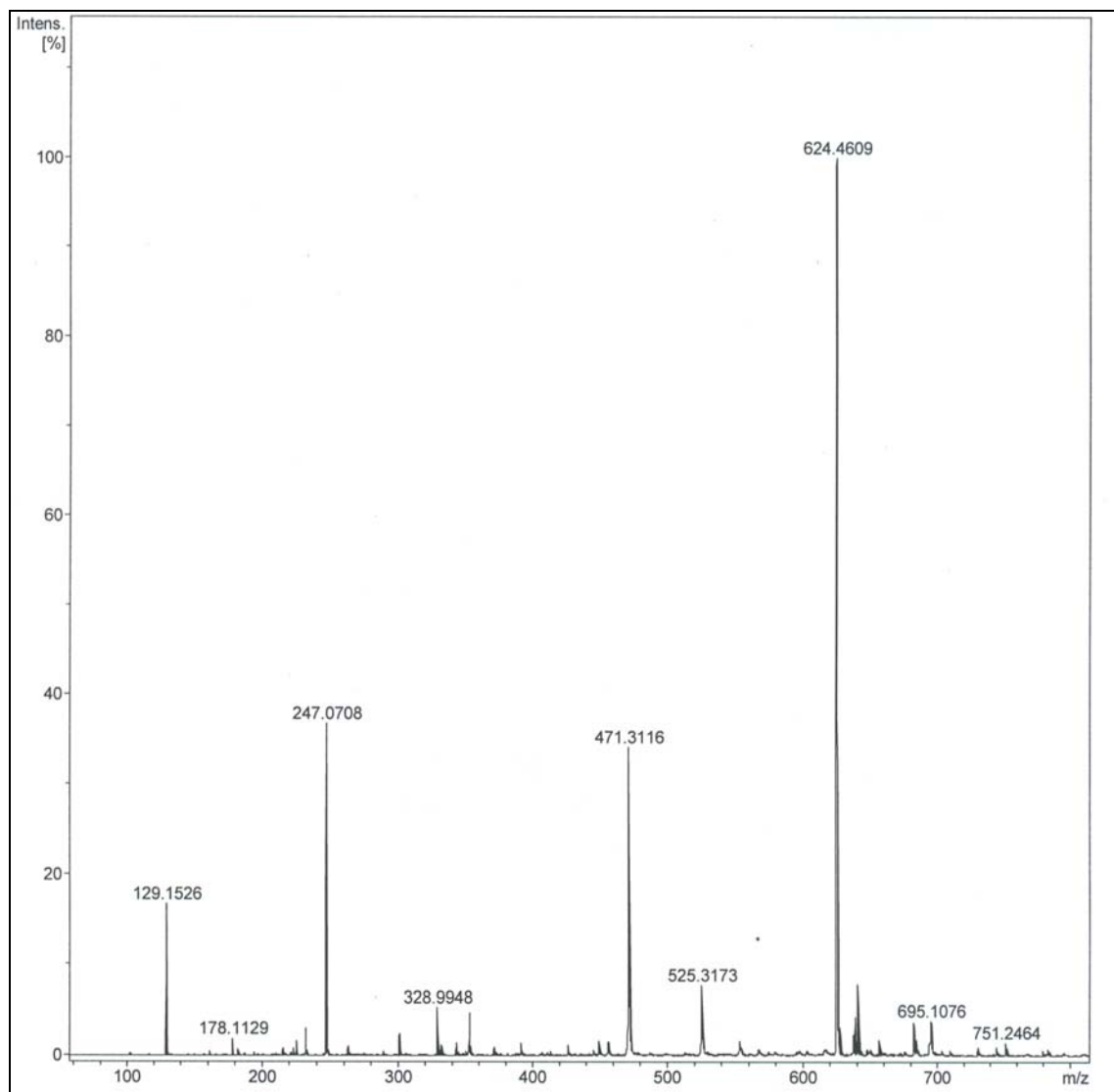


Figure S49.  $^1\text{H}$  NMR Spectrum of compound **37** in  $\text{CDCl}_3$ .

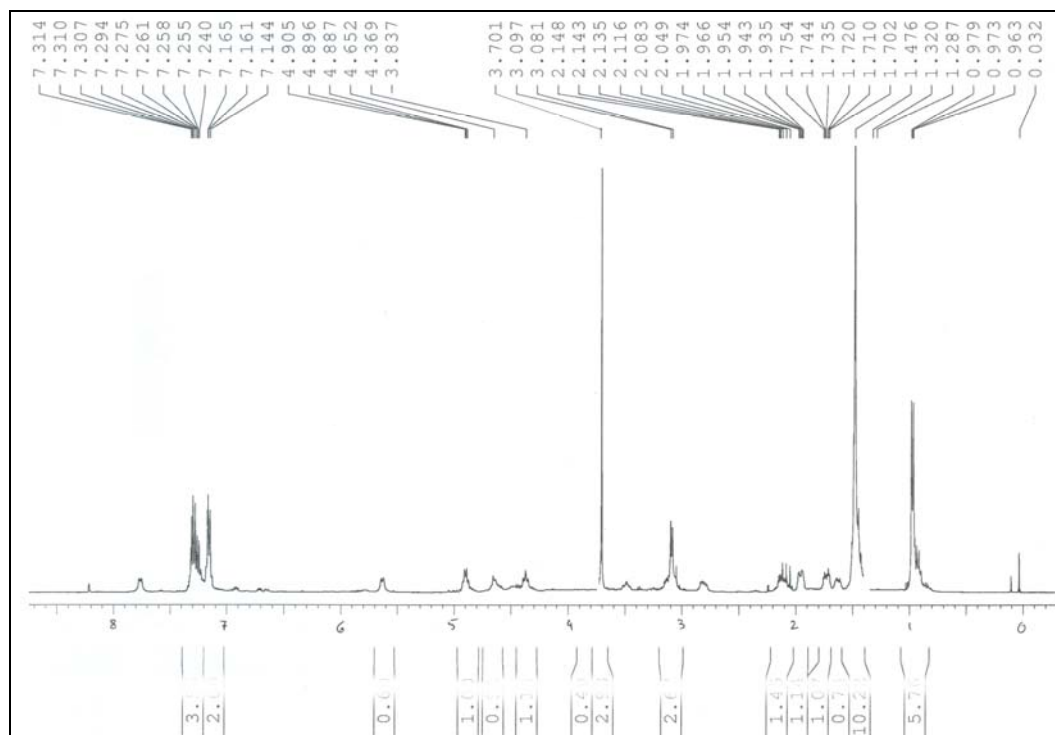
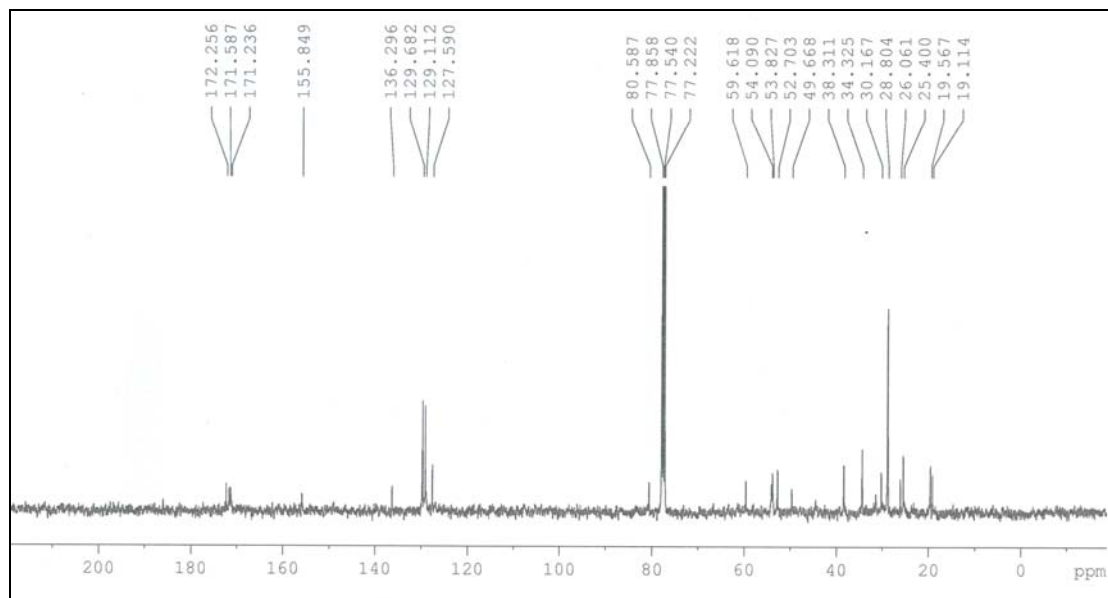
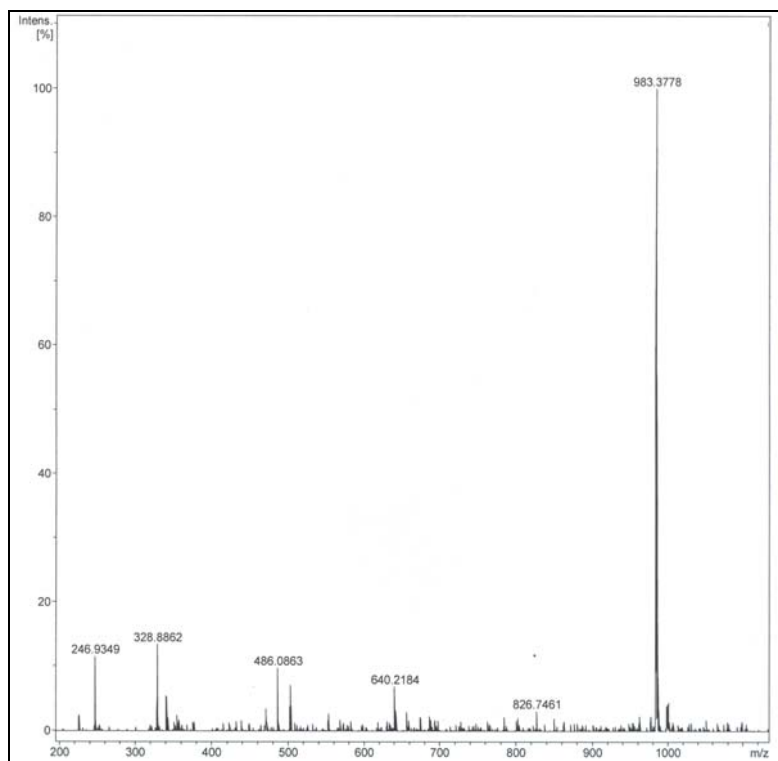


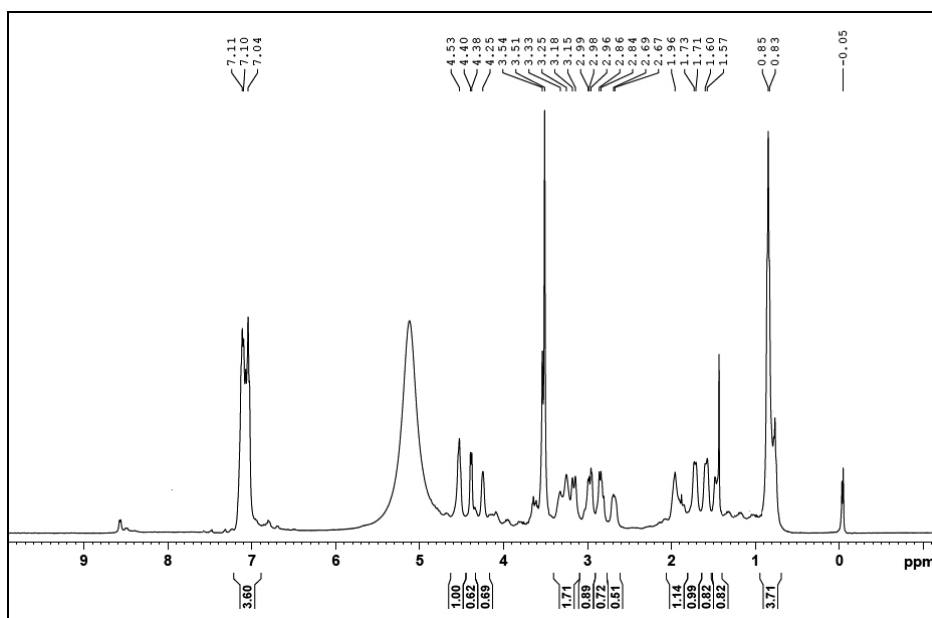
Figure S50.  $^{13}\text{C}$  NMR Spectrum of compound **37** in  $\text{CDCl}_3$ .



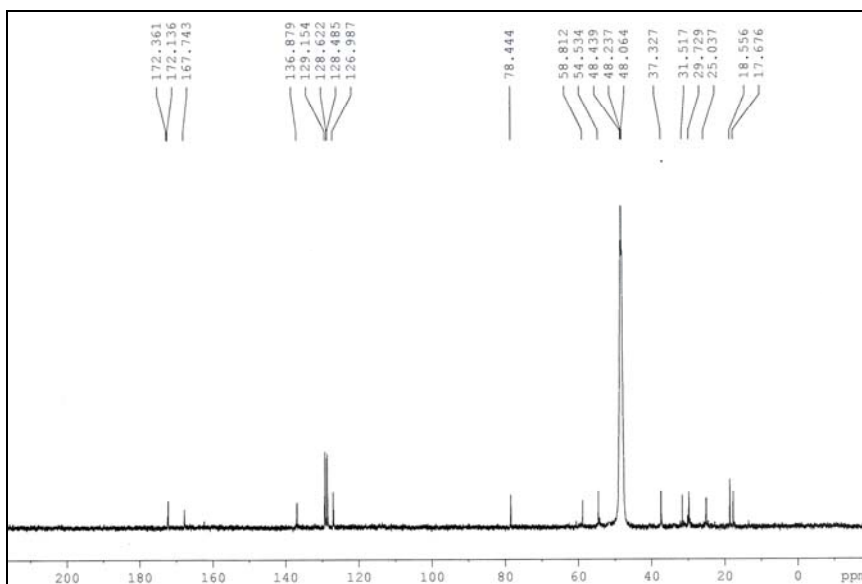
**Figure S51.** ESI-MS spectrum of compound **37**. Calculated mass: 983.4234, found 983.3778.



**Figure S52.**  $^1\text{H}$  NMR Spectrum of compound **38** in  $\text{MeOH-d}_4$ .



**Figure S53.**  $^{13}\text{C}$  NMR Spectrum of compound **38** in  $\text{MeOH-d}_4$ .



**Figure S54.** ESI-MS spectrum of compound **38**. Calculated mass: 783.3186, found 783.3188.

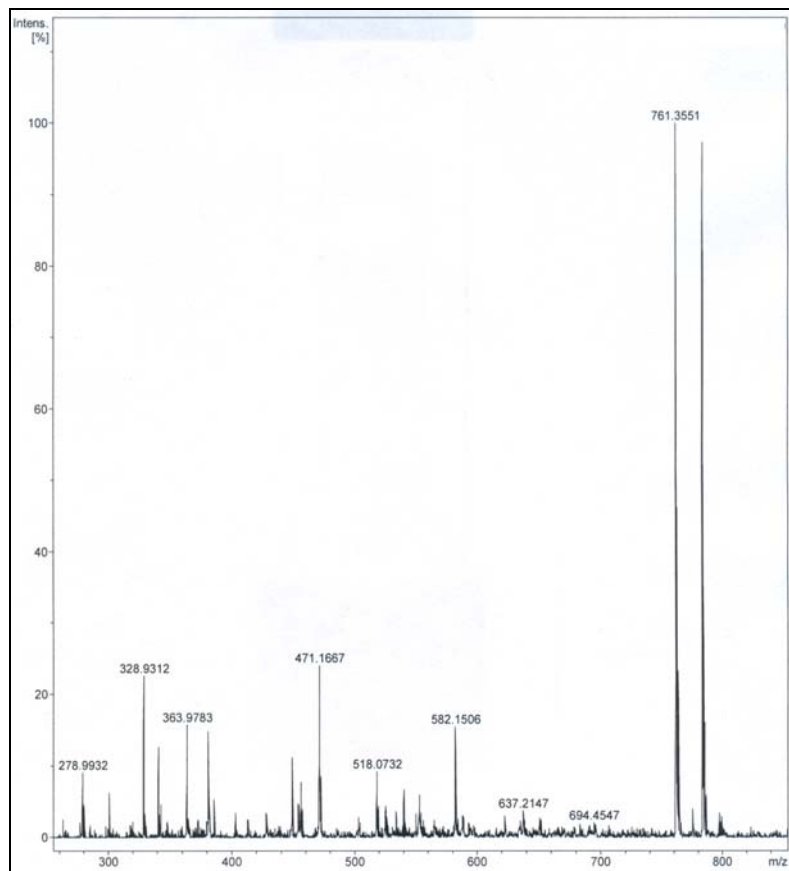


Figure S55.  $^1\text{H}$  NMR Spectrum of compound **39** in  $\text{CDCl}_3$ .

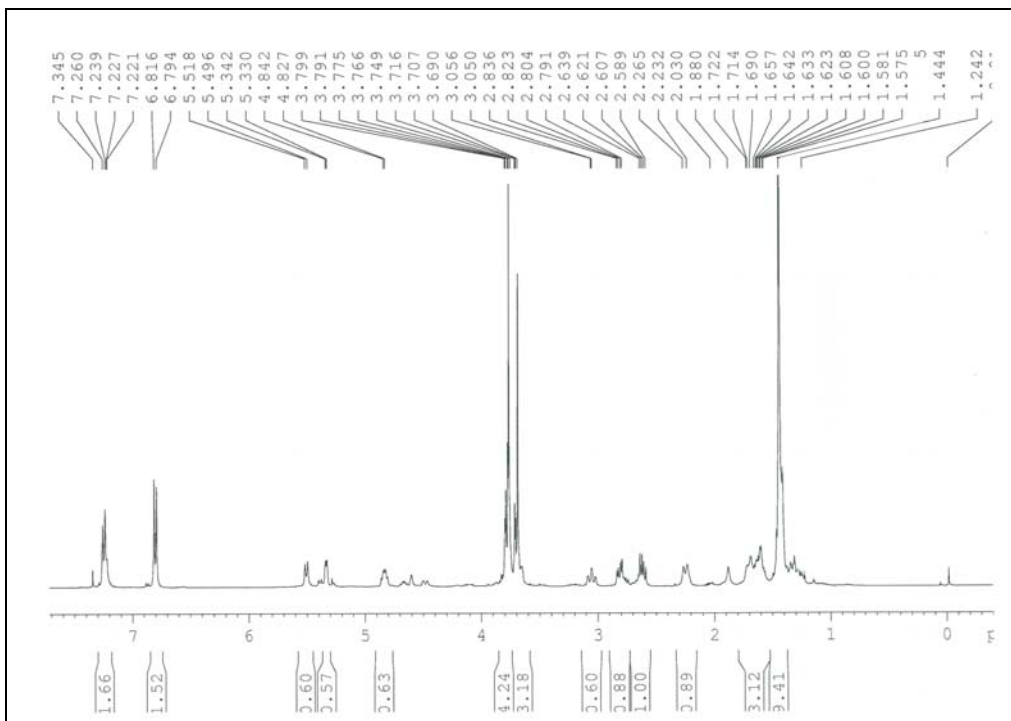
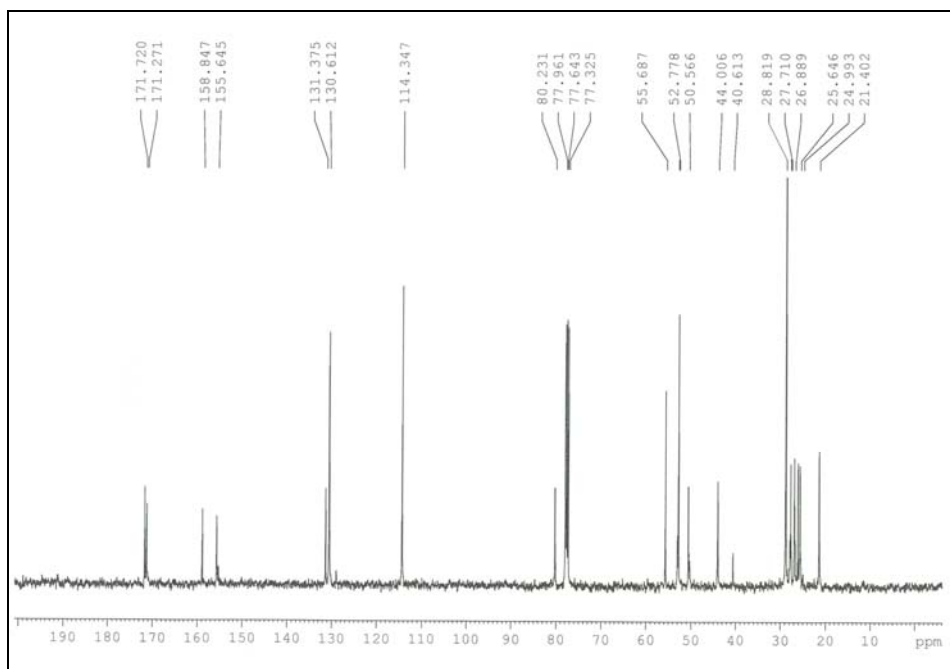
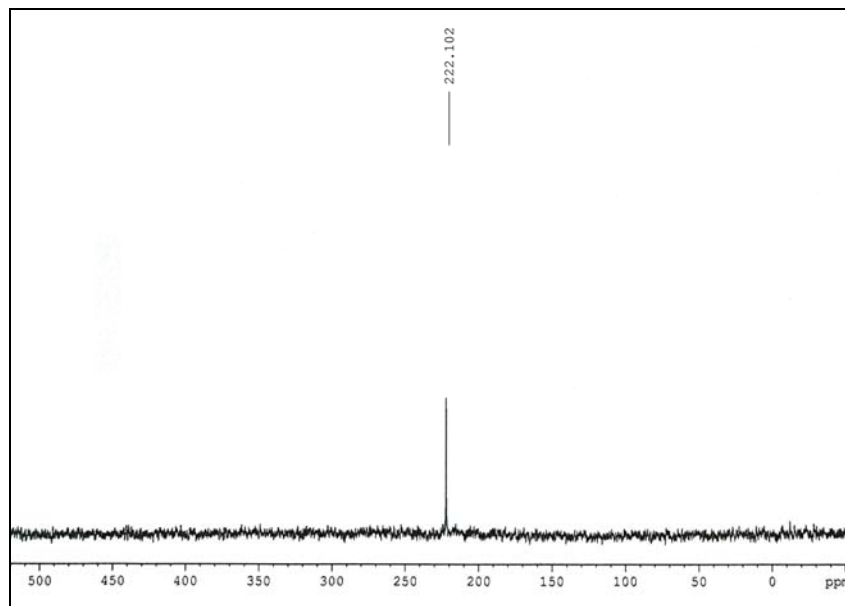


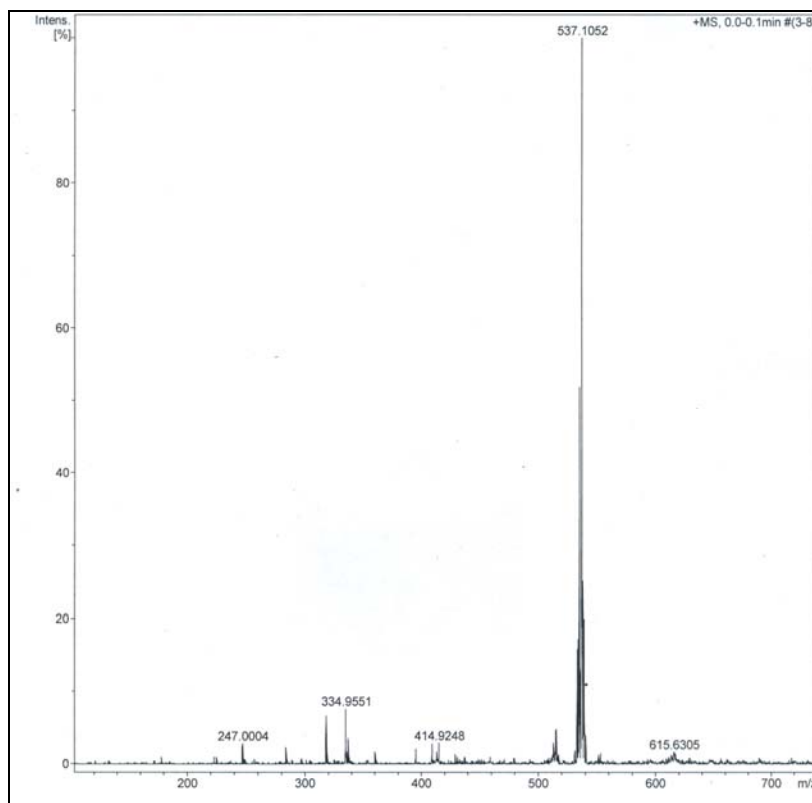
Figure S56.  $^{13}\text{C}$  NMR Spectrum of compound **39** in  $\text{CDCl}_3$ .



**Figure S57.**  $^{77}\text{Se}$  NMR Spectrum of compound **39** in  $\text{CDCl}_3$ .

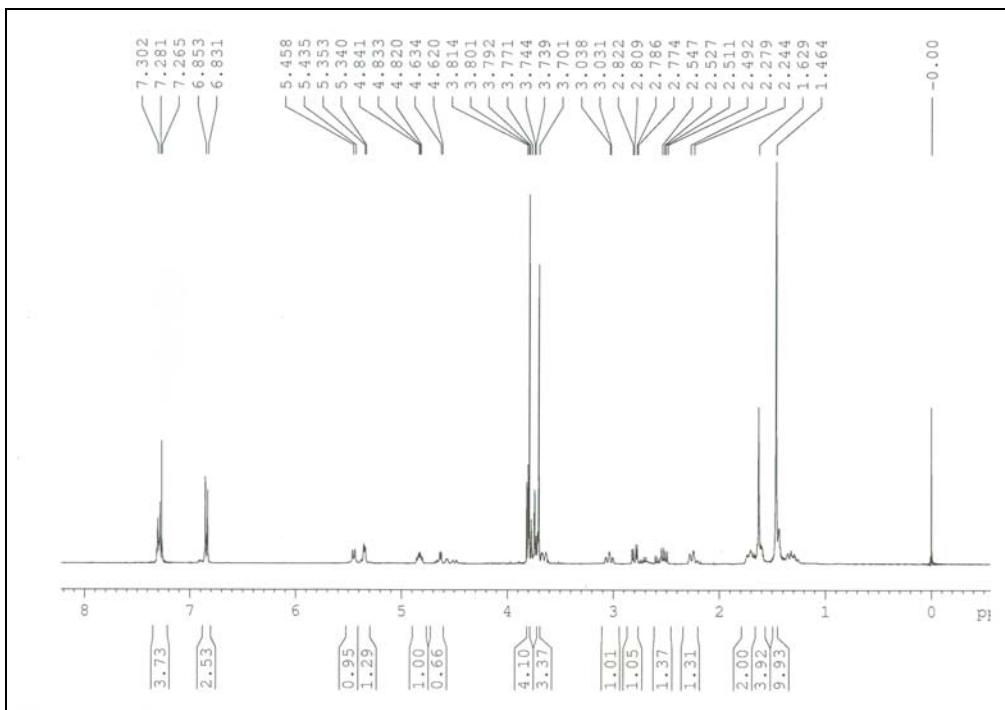


**Figure S58.** ESI-MS spectrum of compound **39**. Calculated mass: 537.1480, found 537.1052.

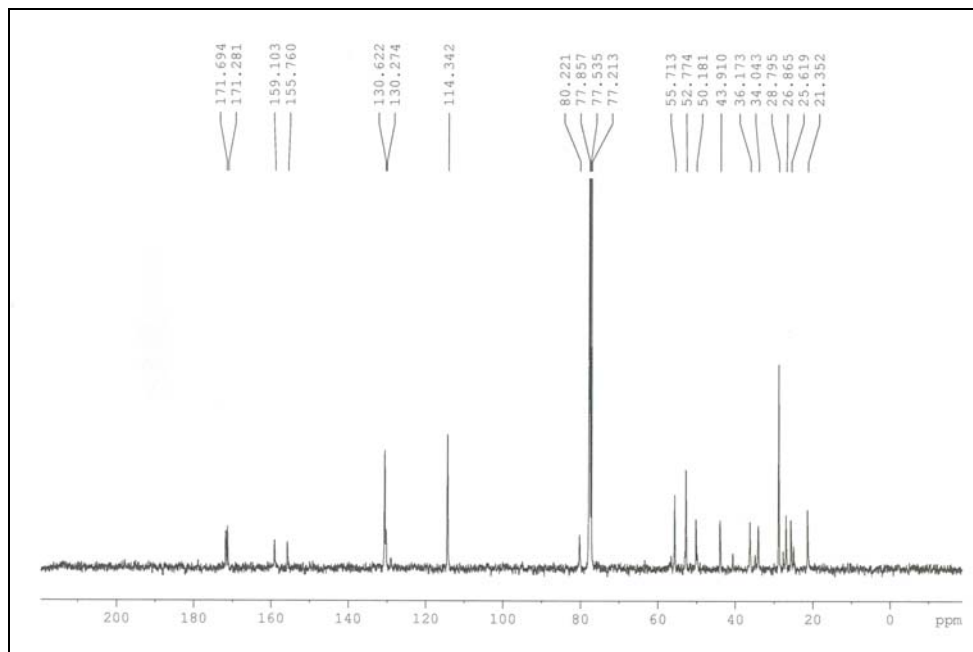




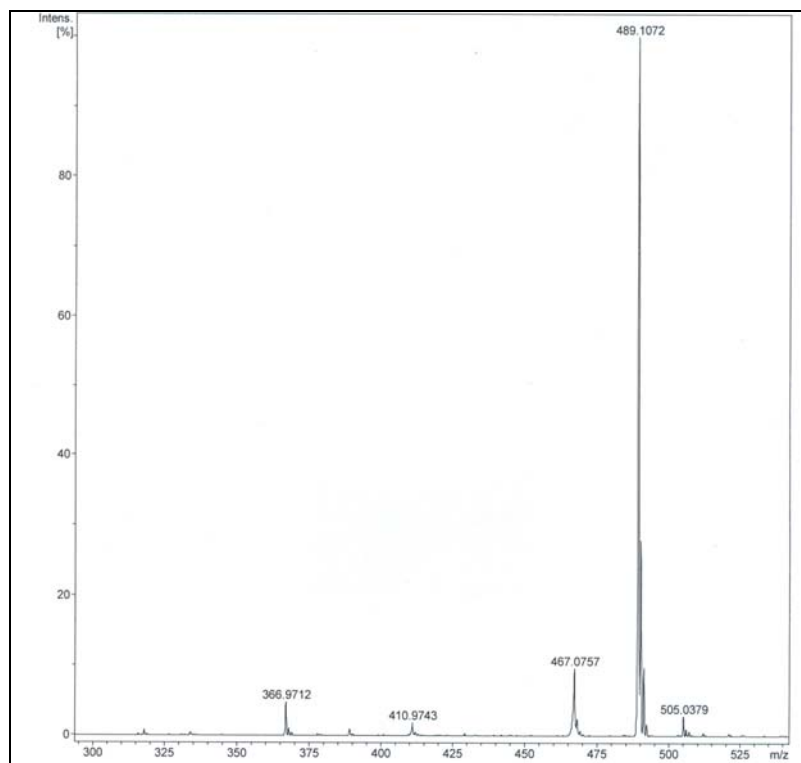
**Figure S59.**  $^1\text{H}$  NMR Spectrum of compound **40** in  $\text{CDCl}_3$ .



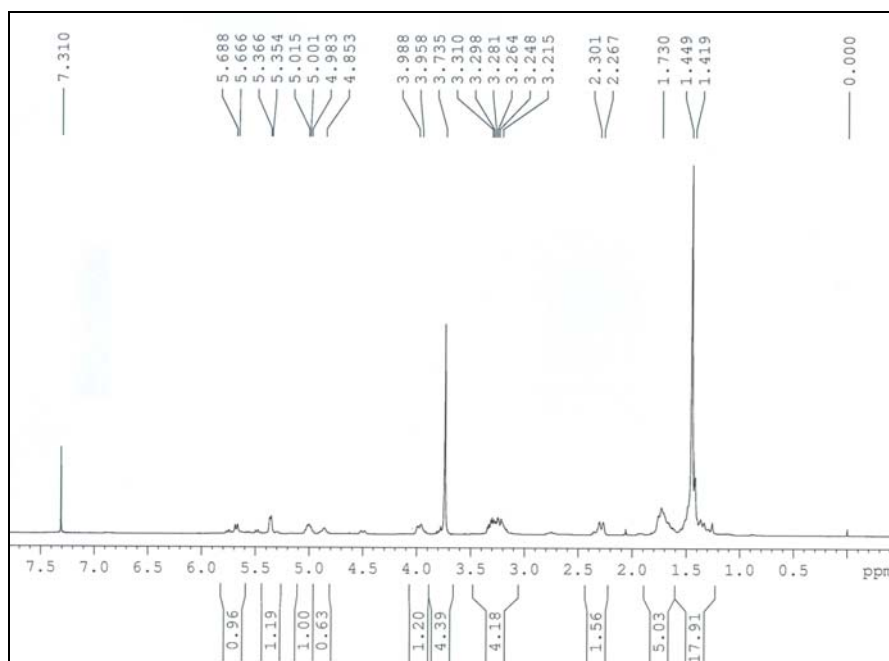
**Figure S60.**  $^{13}\text{C}$  NMR Spectrum of compound **40** in  $\text{CDCl}_3$ .



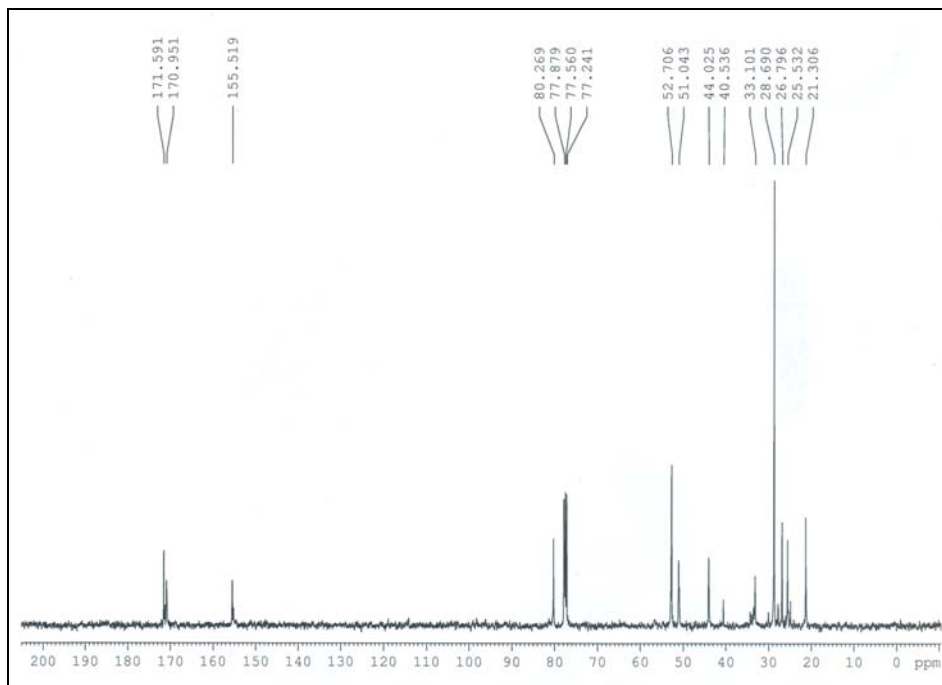
**Figure S61.** ESI-MS spectrum of compound **40**. Calculated mass: 489.2035, found 489.1072.



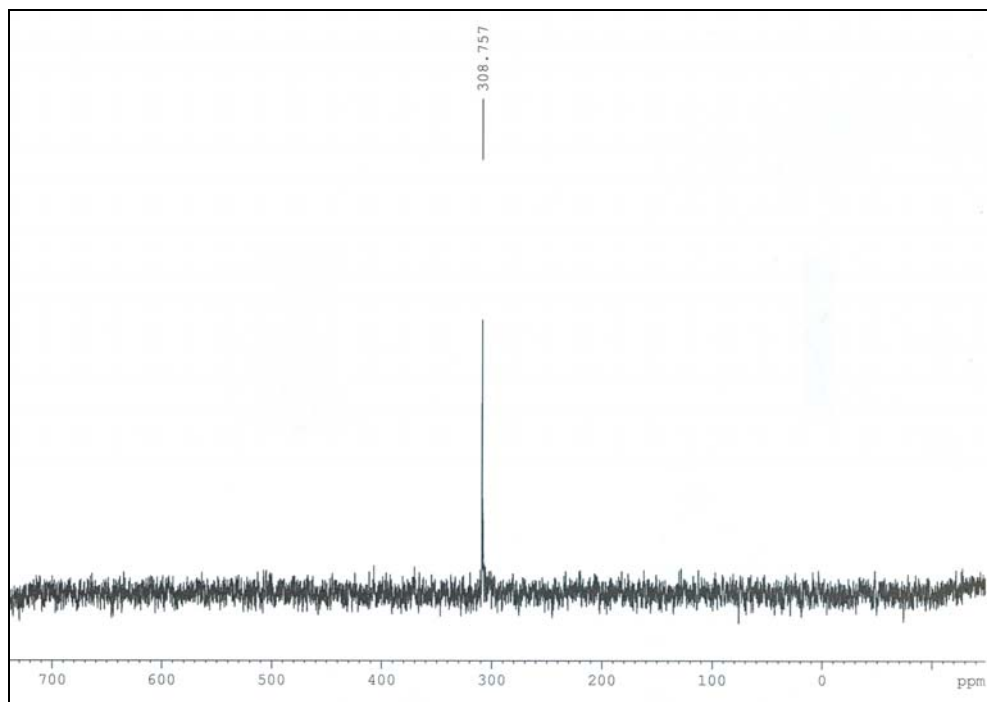
**Figure S62.**  $^1\text{H}$  NMR Spectrum of compound **41** in  $\text{CDCl}_3$ .



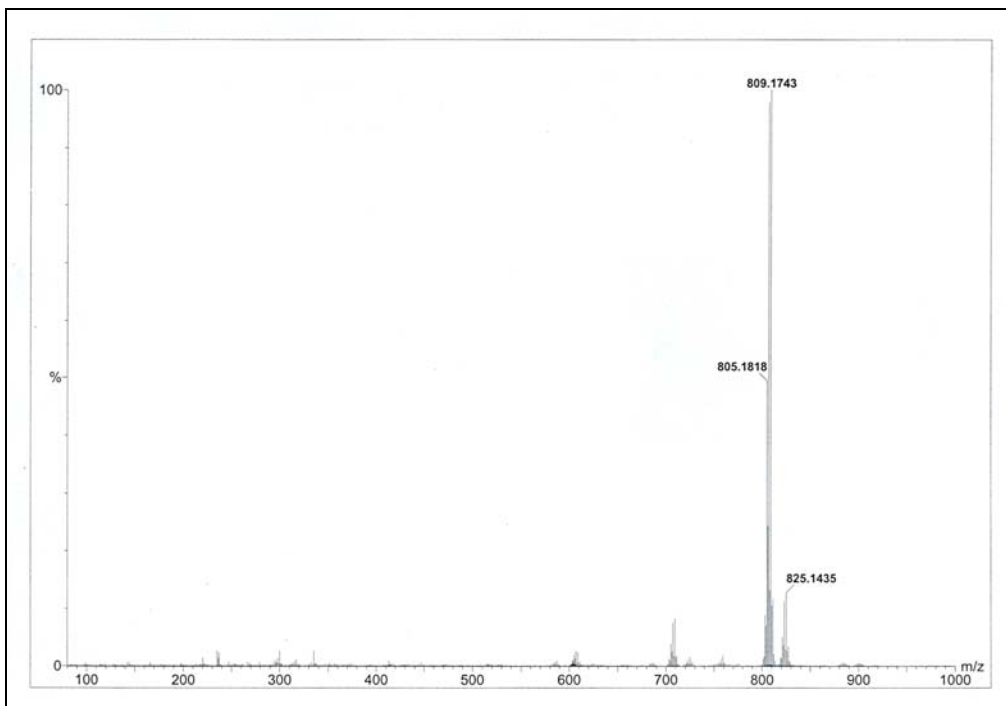
**Figure S63.**  $^{13}\text{C}$  NMR Spectrum of compound **41** in  $\text{CDCl}_3$ .



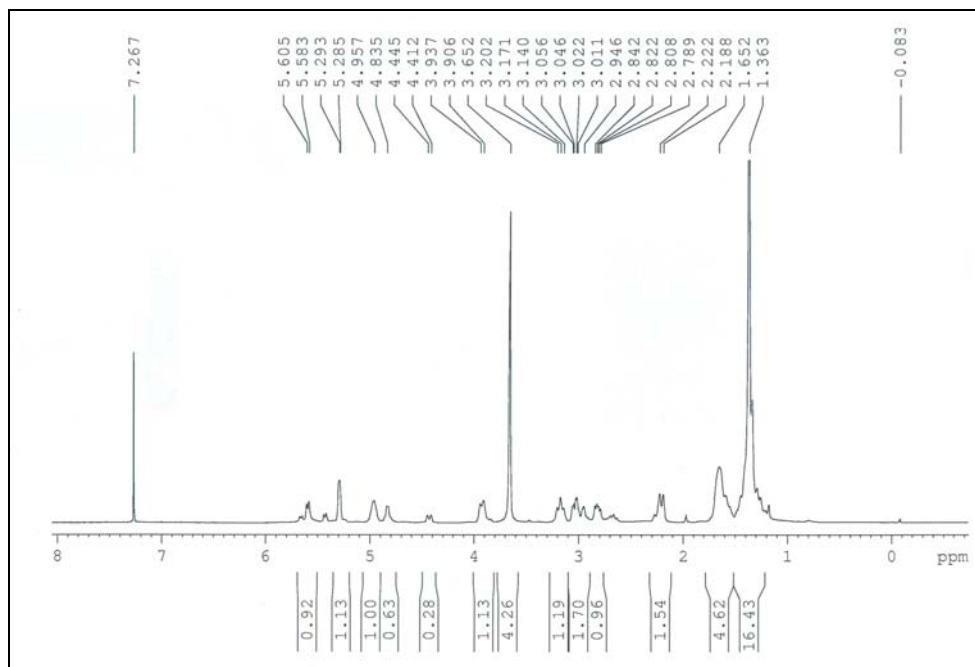
**Figure S64.**  $^{77}\text{Se}$  NMR Spectrum of compound **41** in  $\text{CDCl}_3$ .



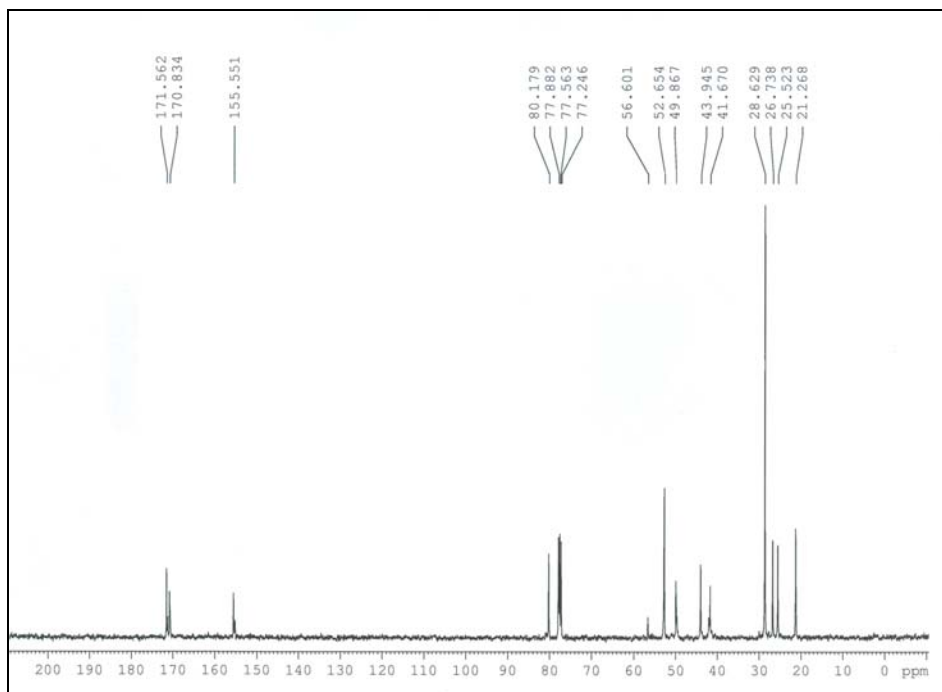
**Figure S65.** ESI-MS spectrum of compound **41**. Calculated mass: 809.1755, found 809.1743.



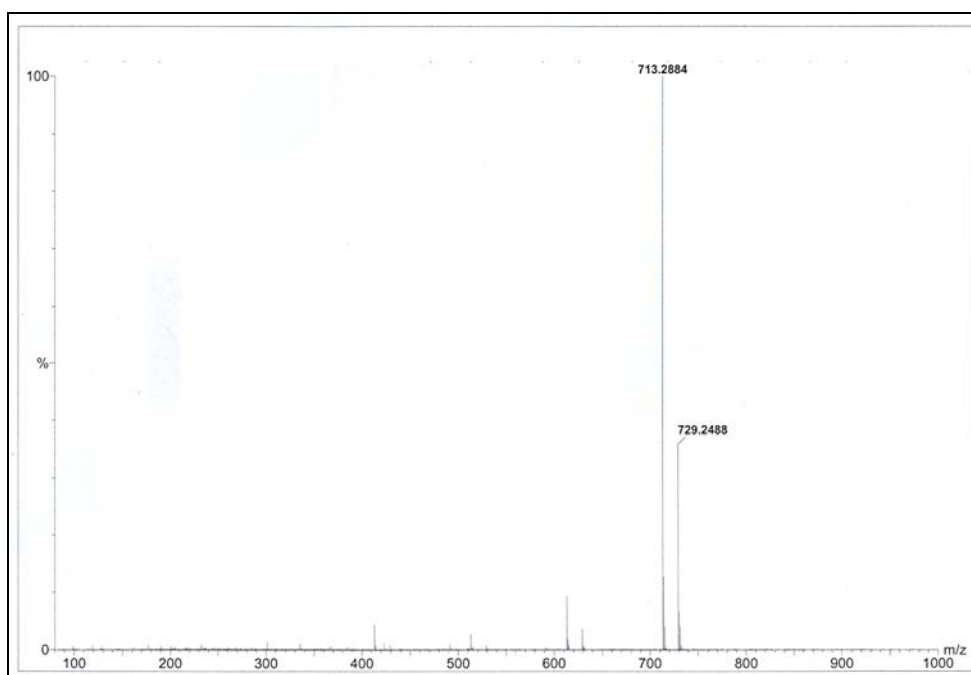
**Figure S66.**  $^1\text{H}$  NMR Spectrum of compound **42** in  $\text{CDCl}_3$ .



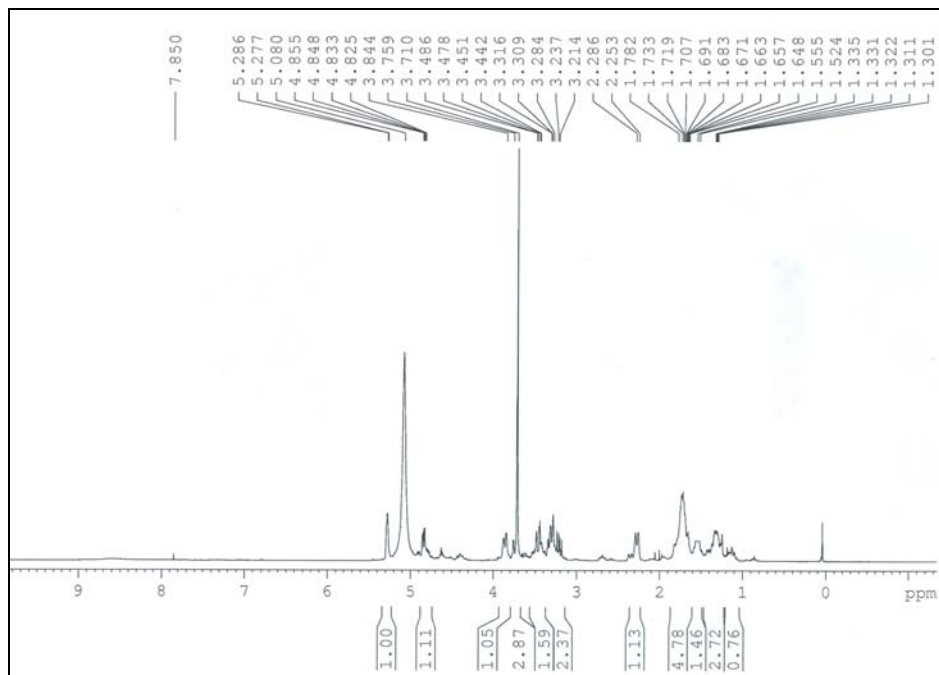
**Figure S67.**  $^{13}\text{C}$  NMR Spectrum of compound **42** in  $\text{CDCl}_3$ .



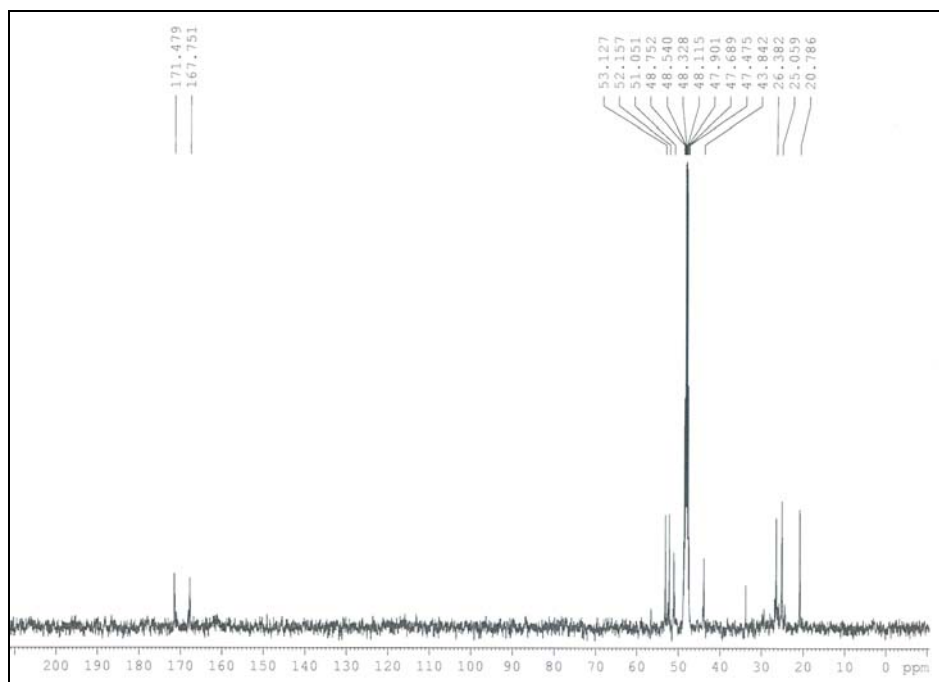
**Figure S68.** ESI-MS spectrum of compound **42**. Calculated mass: 713.2866, found 713.2884.



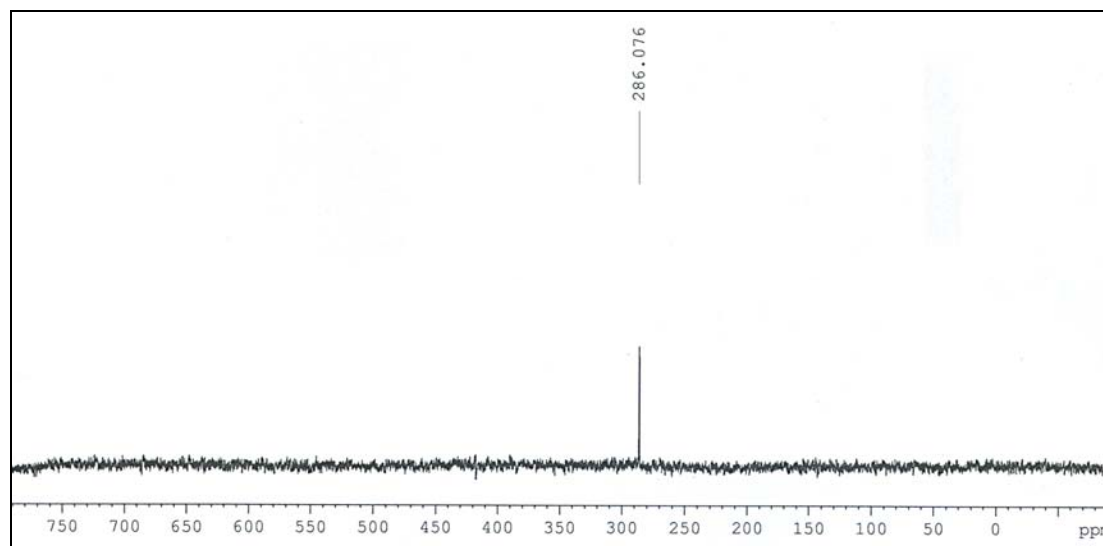
**Figure S69.**  $^1\text{H}$  NMR Spectrum of compound **43** in  $\text{CDCl}_3$ .



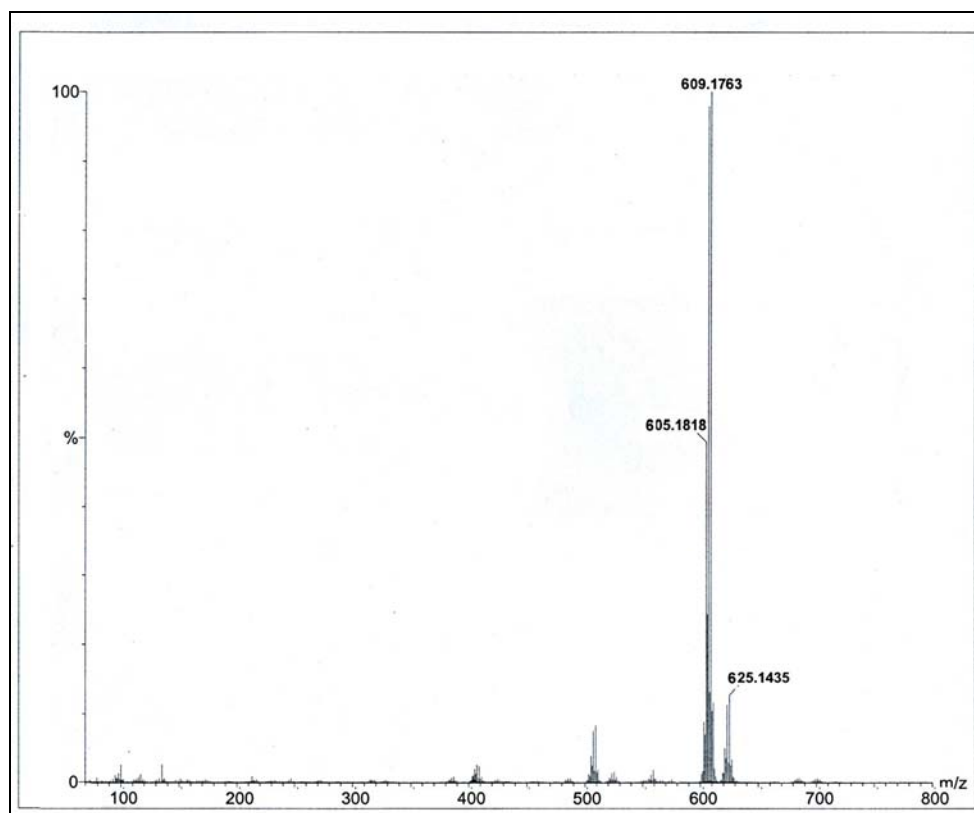
**Figure S70.**  $^{13}\text{C}$  NMR Spectrum of compound **43** in  $\text{CDCl}_3$ .



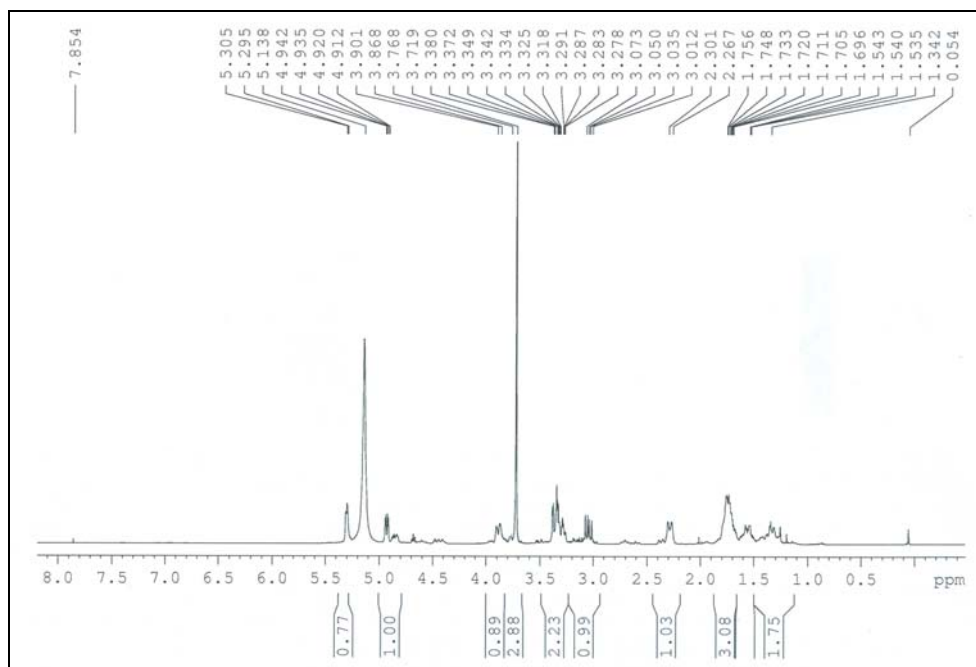
**Figure S71.**  $^{77}\text{Se}$  NMR Spectrum of compound **43** in  $\text{CDCl}_3$ .



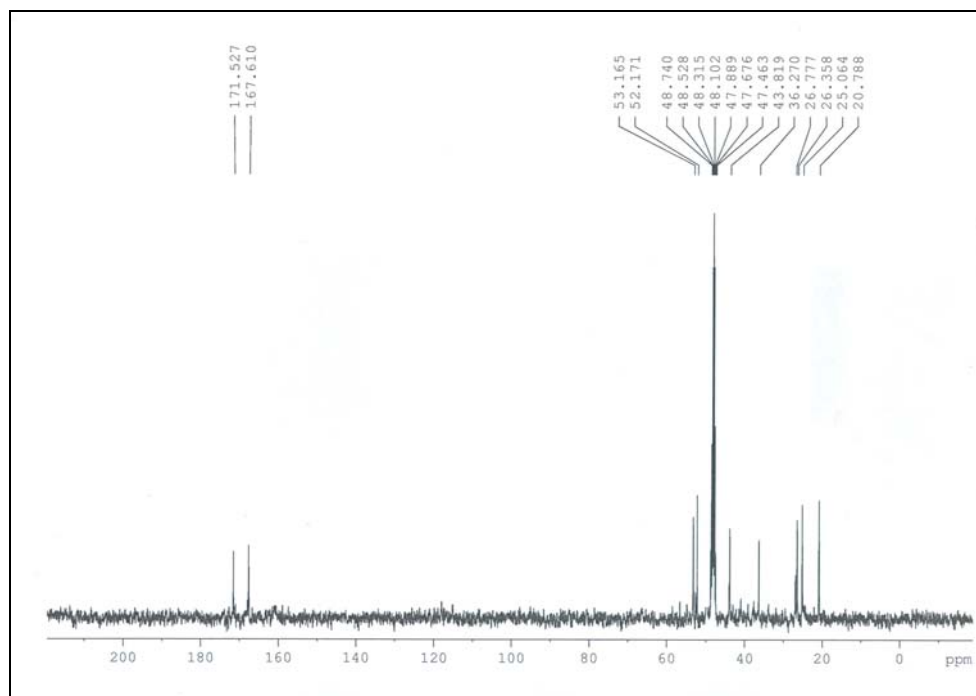
**Figure S72.** ESI-MS spectrum of compound **43**. Calculated mass: 609.0706, found 609.1763.



**Figure S73.**  $^1\text{H}$  NMR Spectrum of compound **44** in  $\text{CDCl}_3$ .

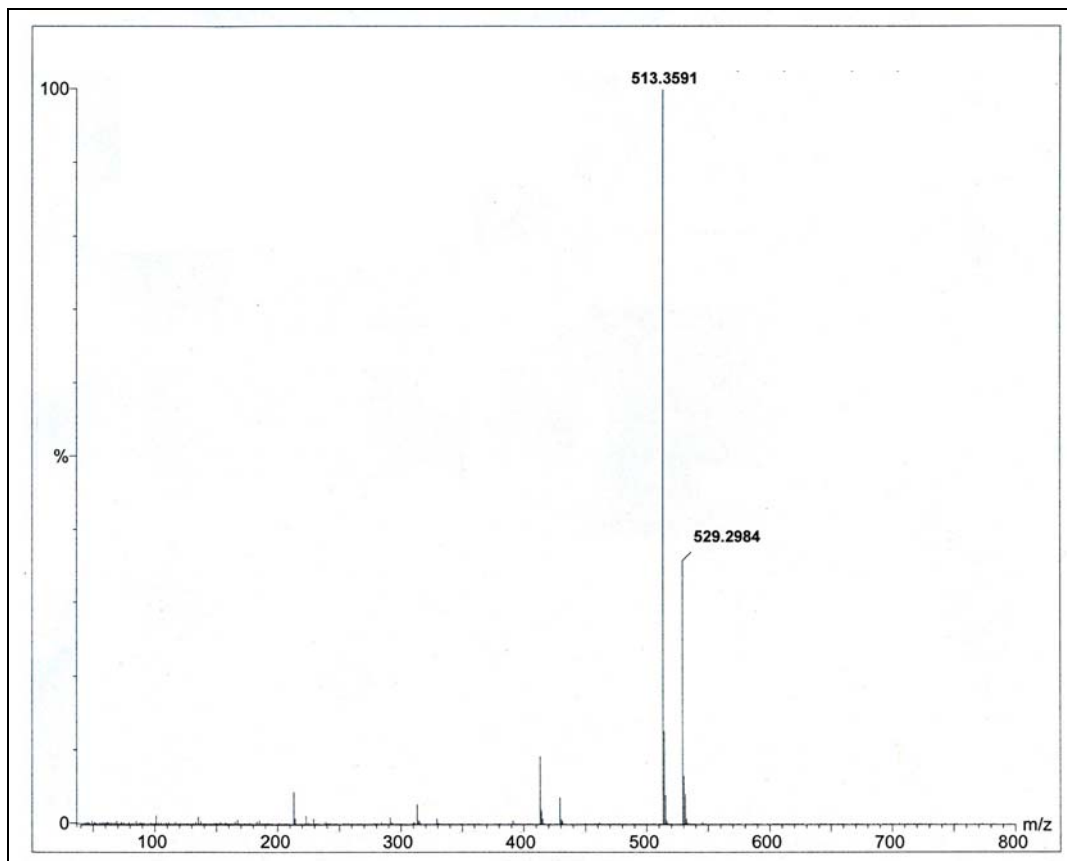


**Figure S74.**  $^{13}\text{C}$  NMR Spectrum of compound **44** in  $\text{CDCl}_3$ .

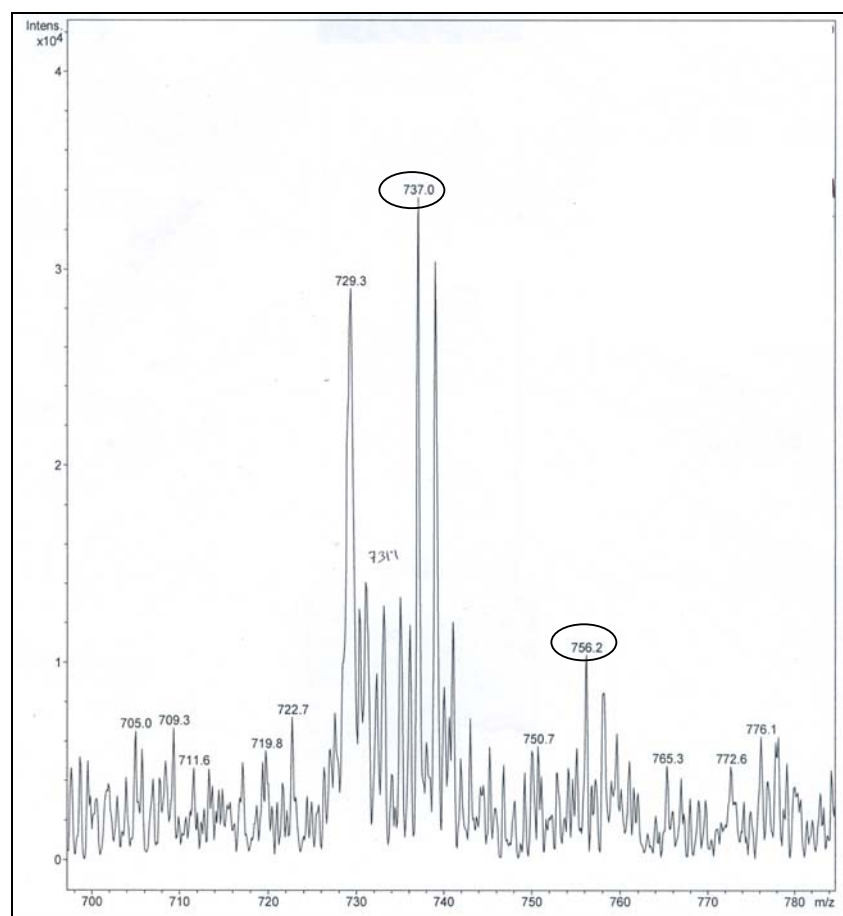




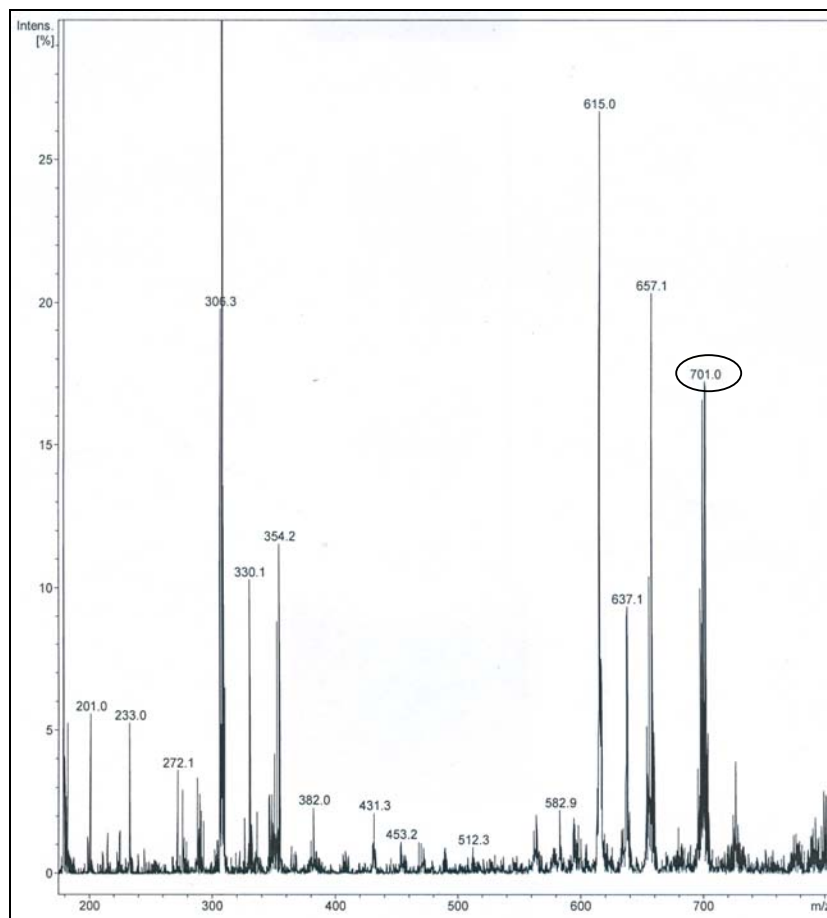
**Figure S75.** ESI-MS spectrum of compound **44**. Calculated mass: 513.1817, found 513.3591.



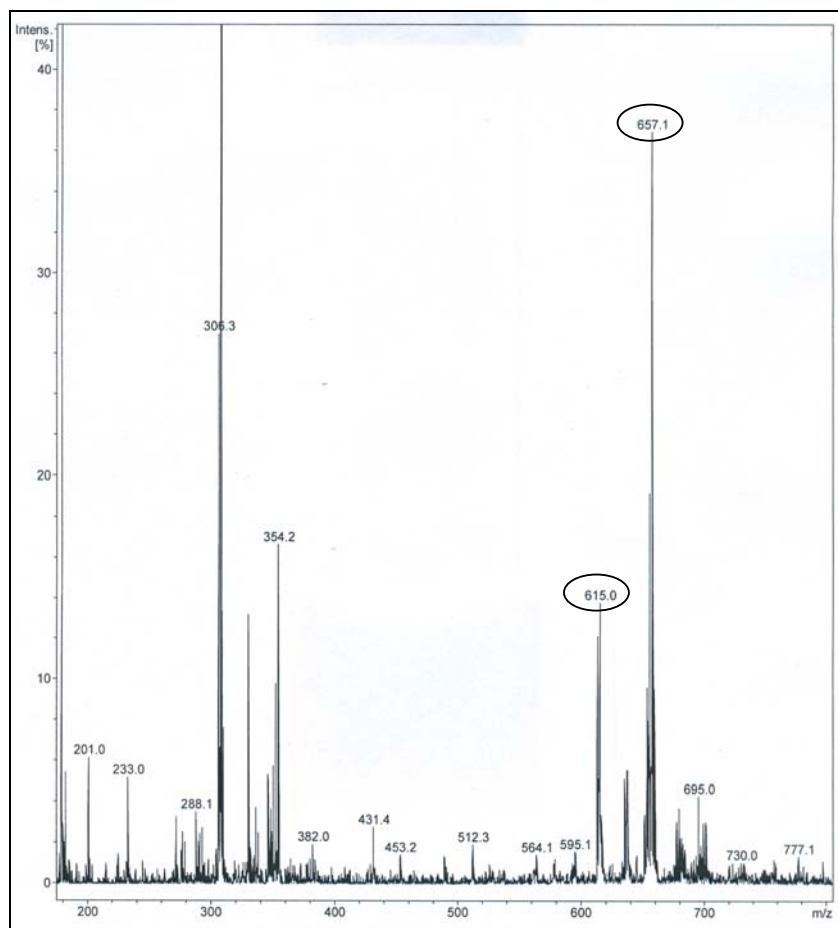
**Figure S76.** Mass spectrum of compound **33** after treating with PN.



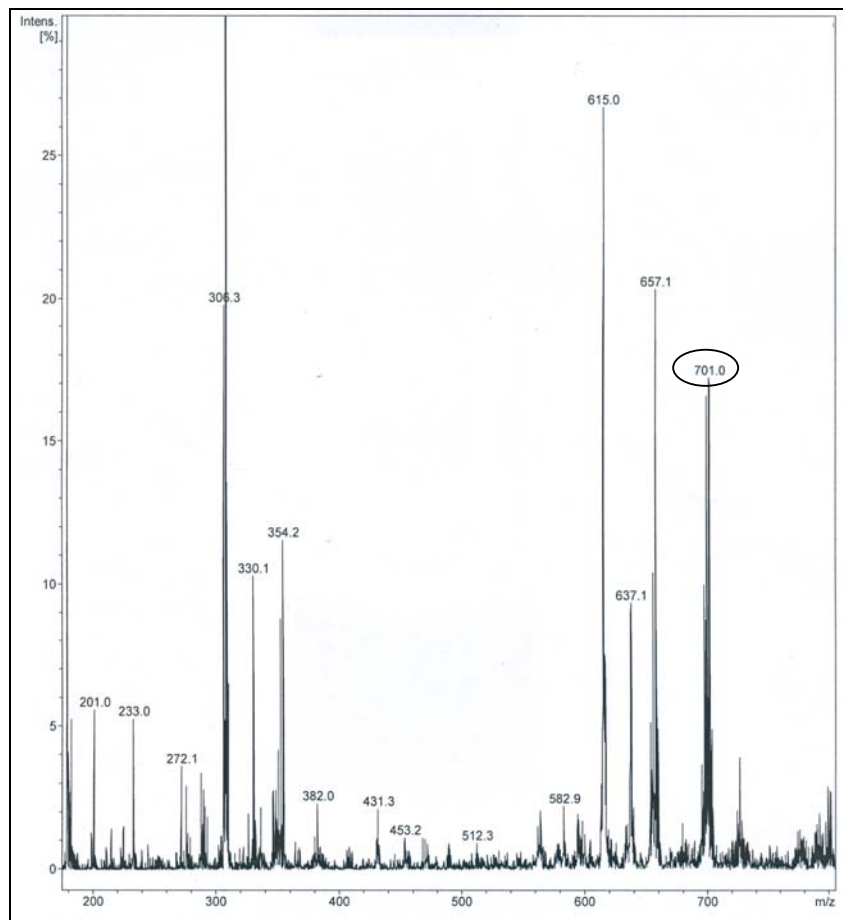
**Figure S77.** Mass spectrum of compound **33** after treating with PN and GSH.



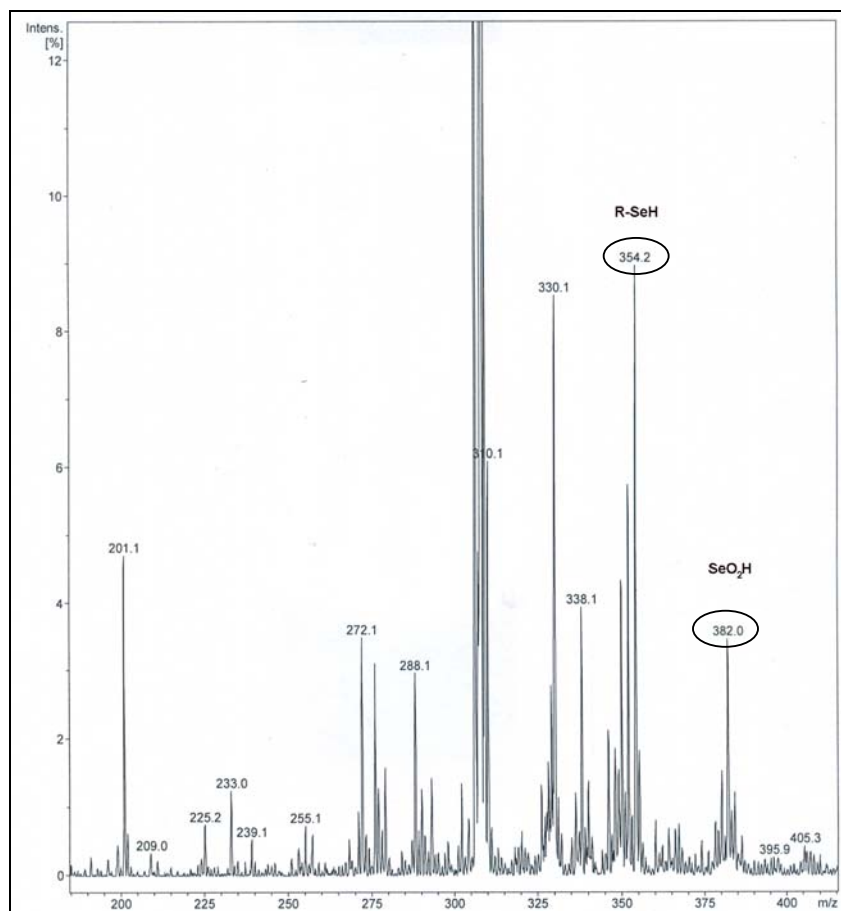
**Figure S78.** Mass spectrum of compound **33** after treating with H<sub>2</sub>O<sub>2</sub> and GSH.



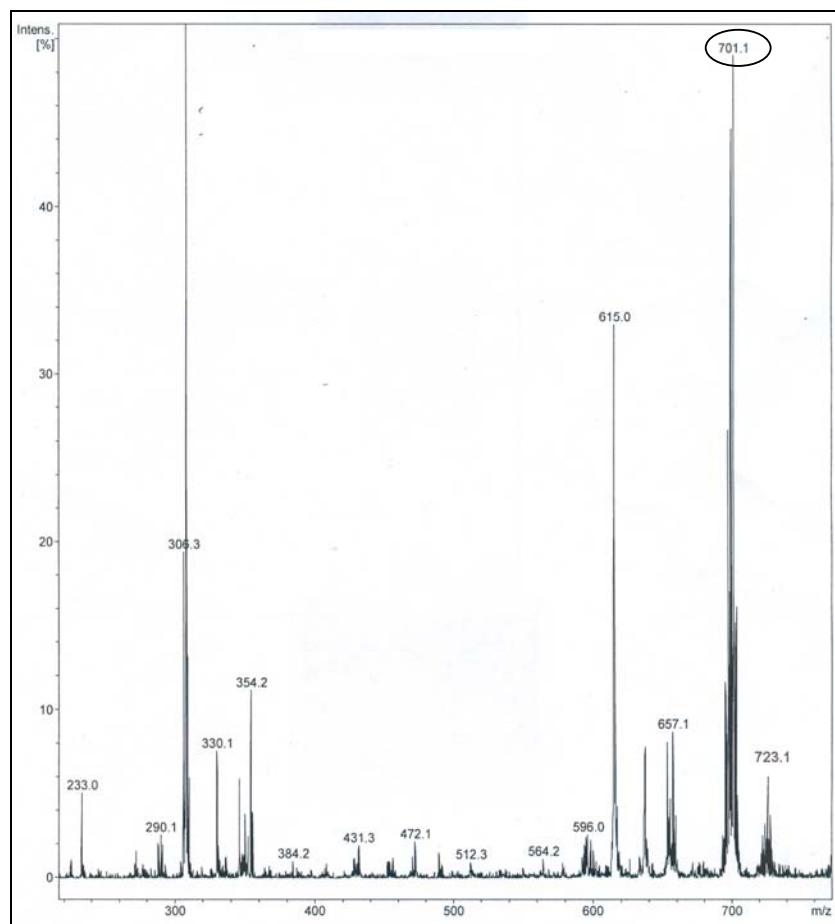
**Figure S79.** Mass spectrum of compound **33** after treating with H<sub>2</sub>O<sub>2</sub> and GSH (after 24 h).



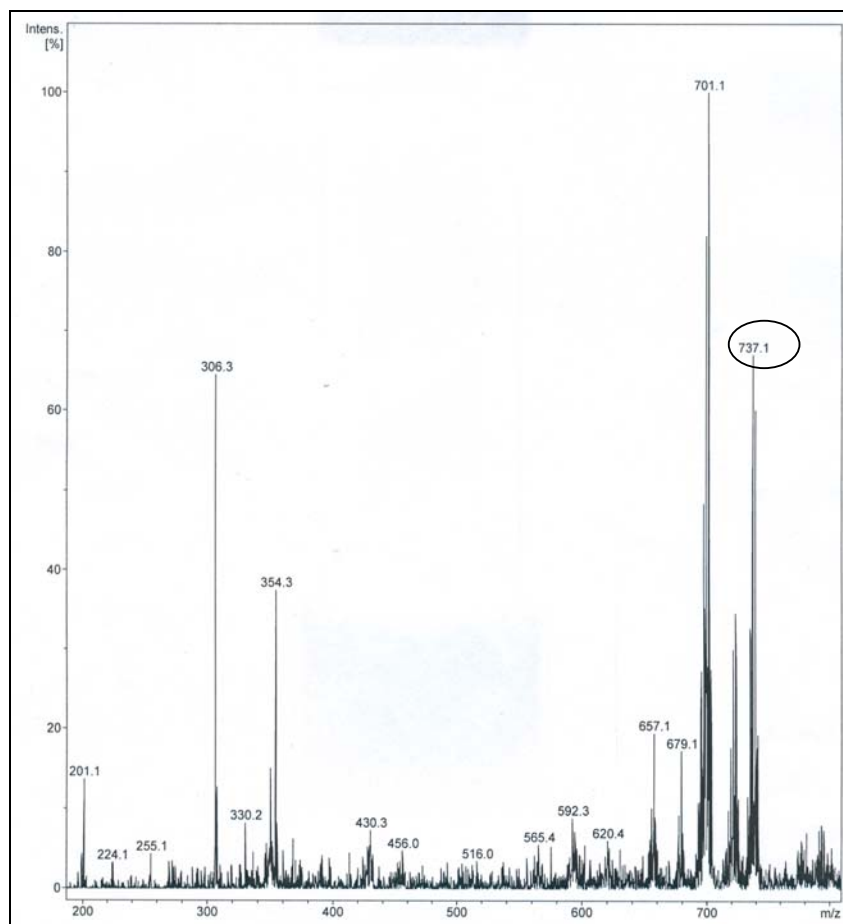
**Figure S80.** Mass spectrum of compound **33** after treating with H<sub>2</sub>O<sub>2</sub> and GSH.



**Figure S81.** Mass spectrum of compound **33** after treating with GSH.

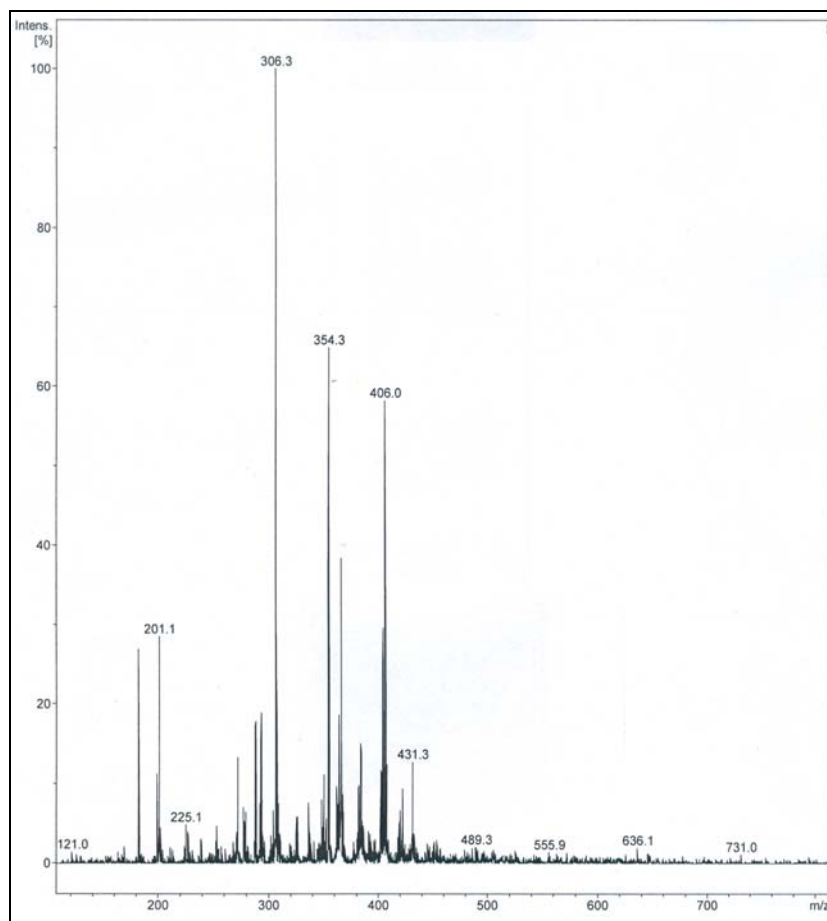


**Figure S82.** Mass spectrum of compound **33** after treating with H<sub>2</sub>O<sub>2</sub>.





**Figure S83.** Mass spectrum of compound **33** after treating with H<sub>2</sub>O<sub>2</sub> (after 24 h).



**Figure S84.** Mass spectrum of compound **33** after treating with H<sub>2</sub>O<sub>2</sub>, GSH and bromopropionic acid.

