Synthesis of cyclic carbonates catalysed by aluminium heteroscorpionate complexes
Supporting Information

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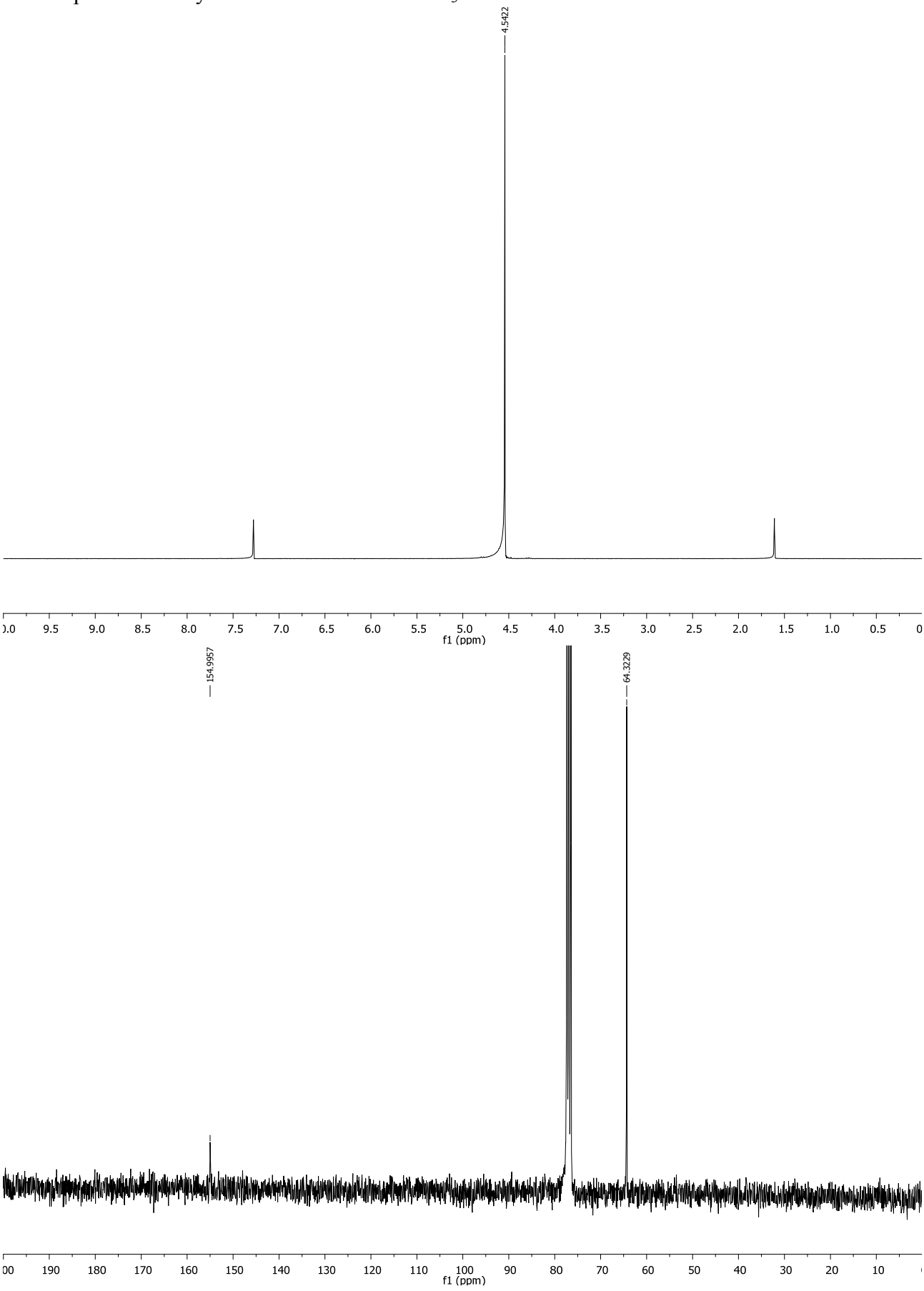
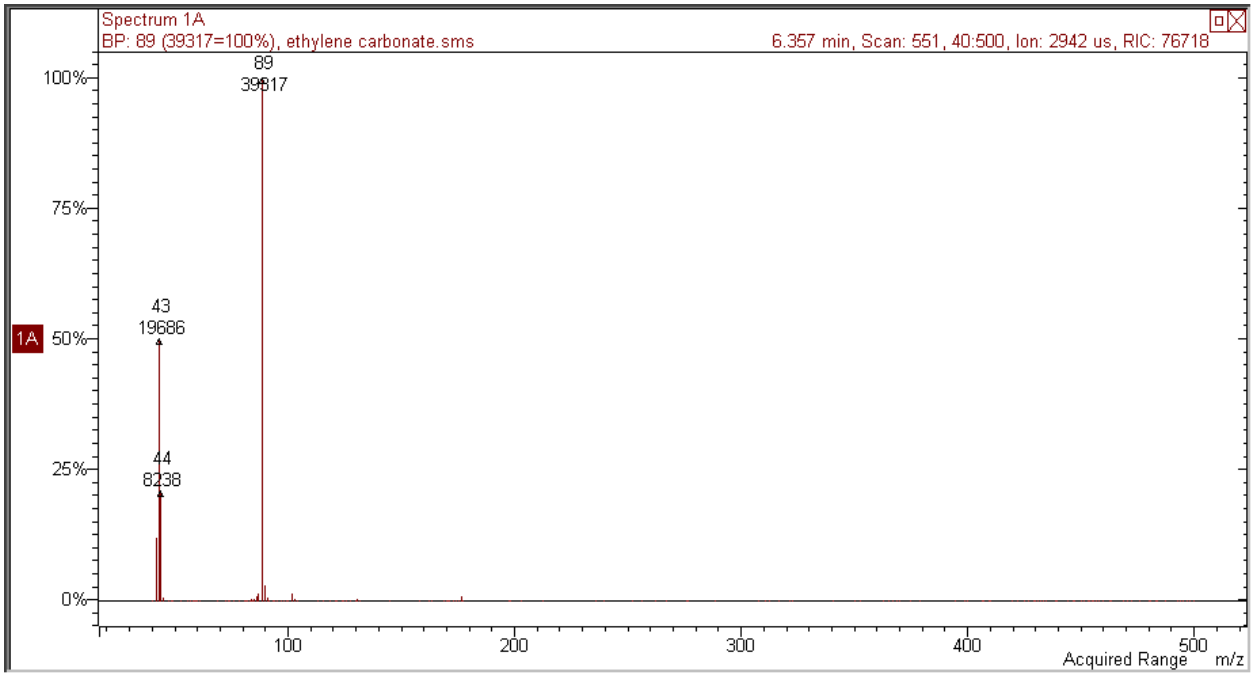
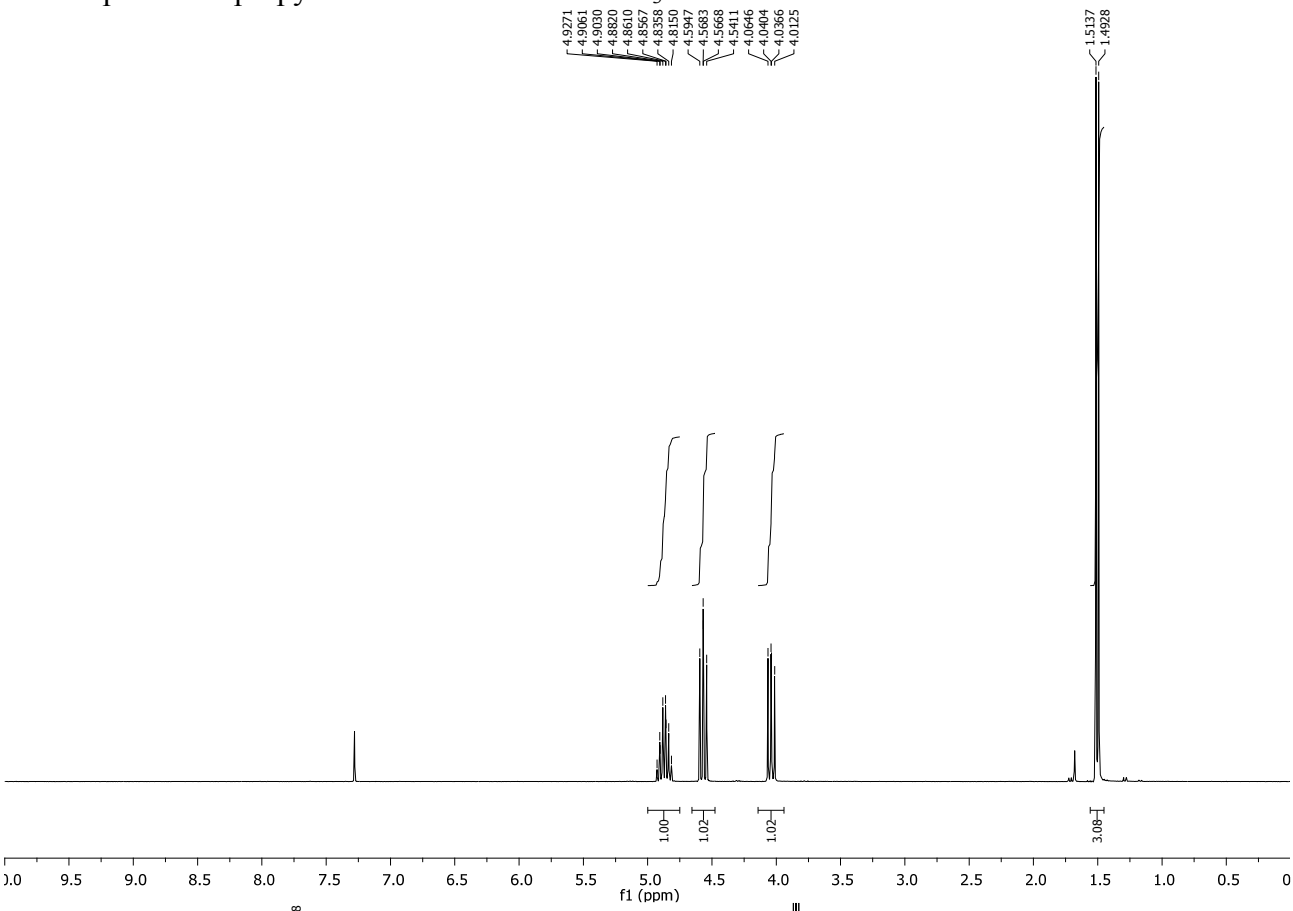
NMR Spectra for ethylene carbonate **2a** in $CDCl_3$

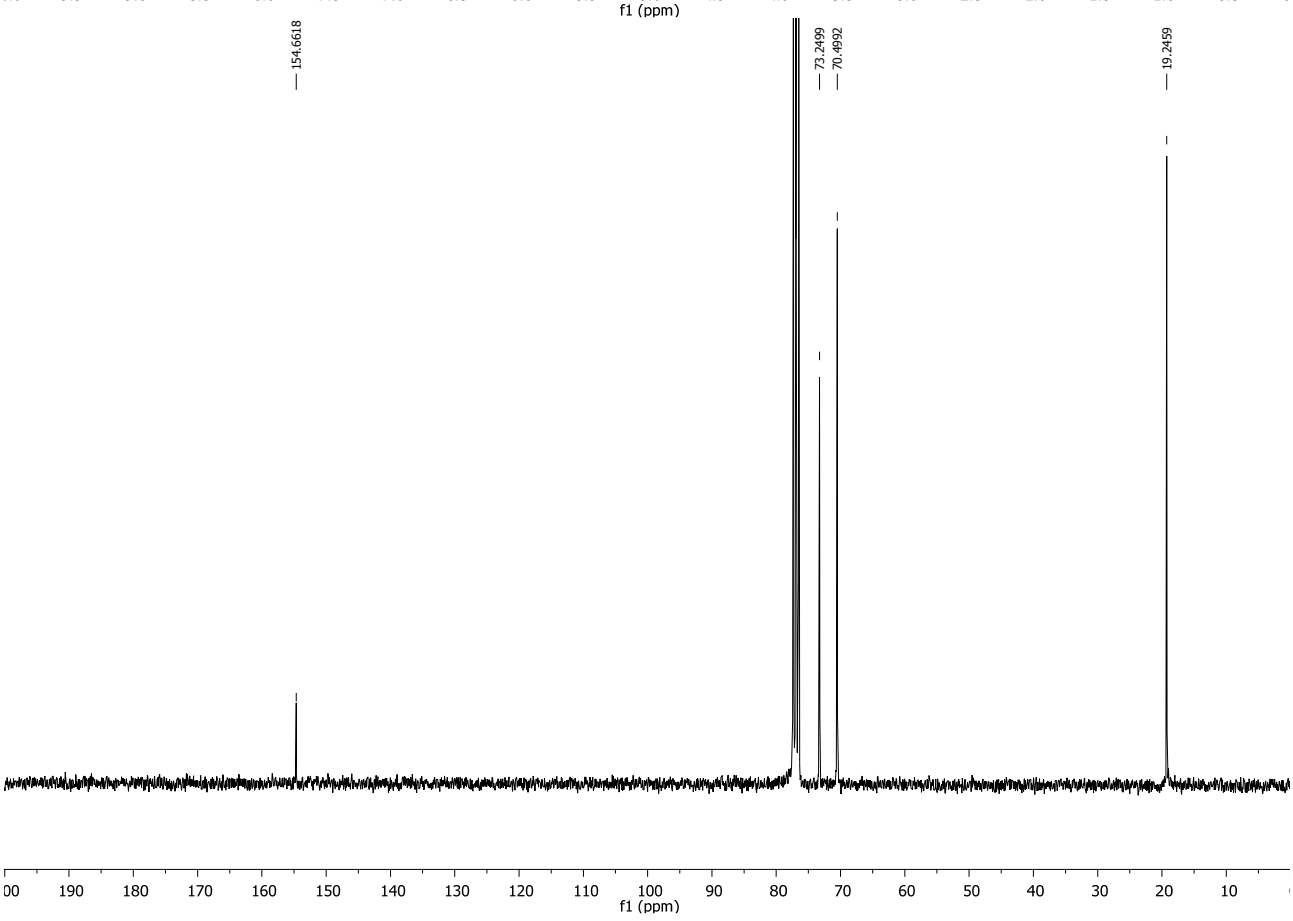


Chemical ionization mass spectrum for ethylene carbonate **2a**

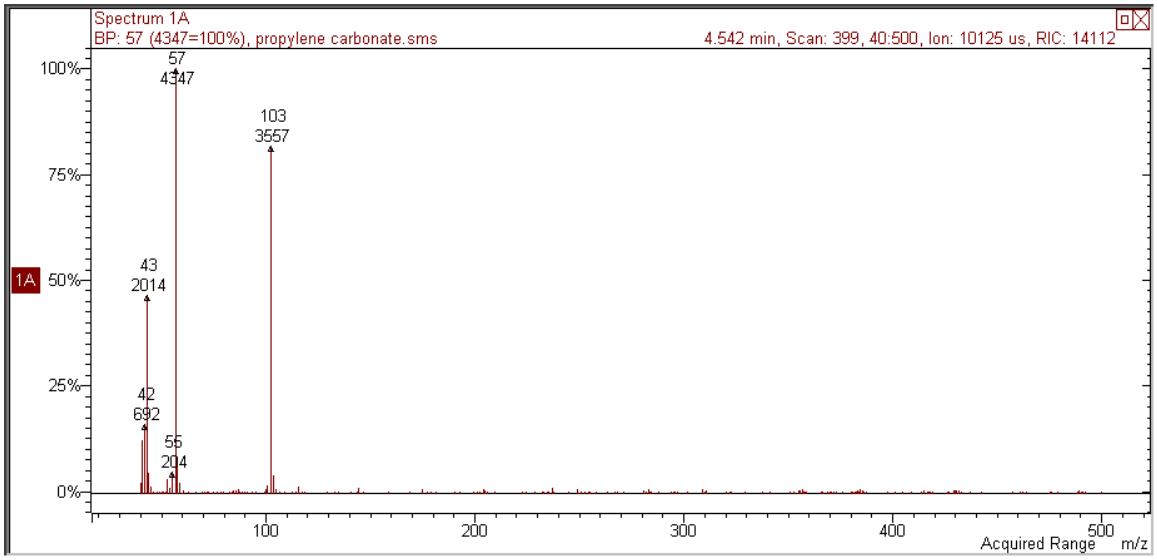


NMR Spectra for propylene carbonate **2b** in $CDCl_3$

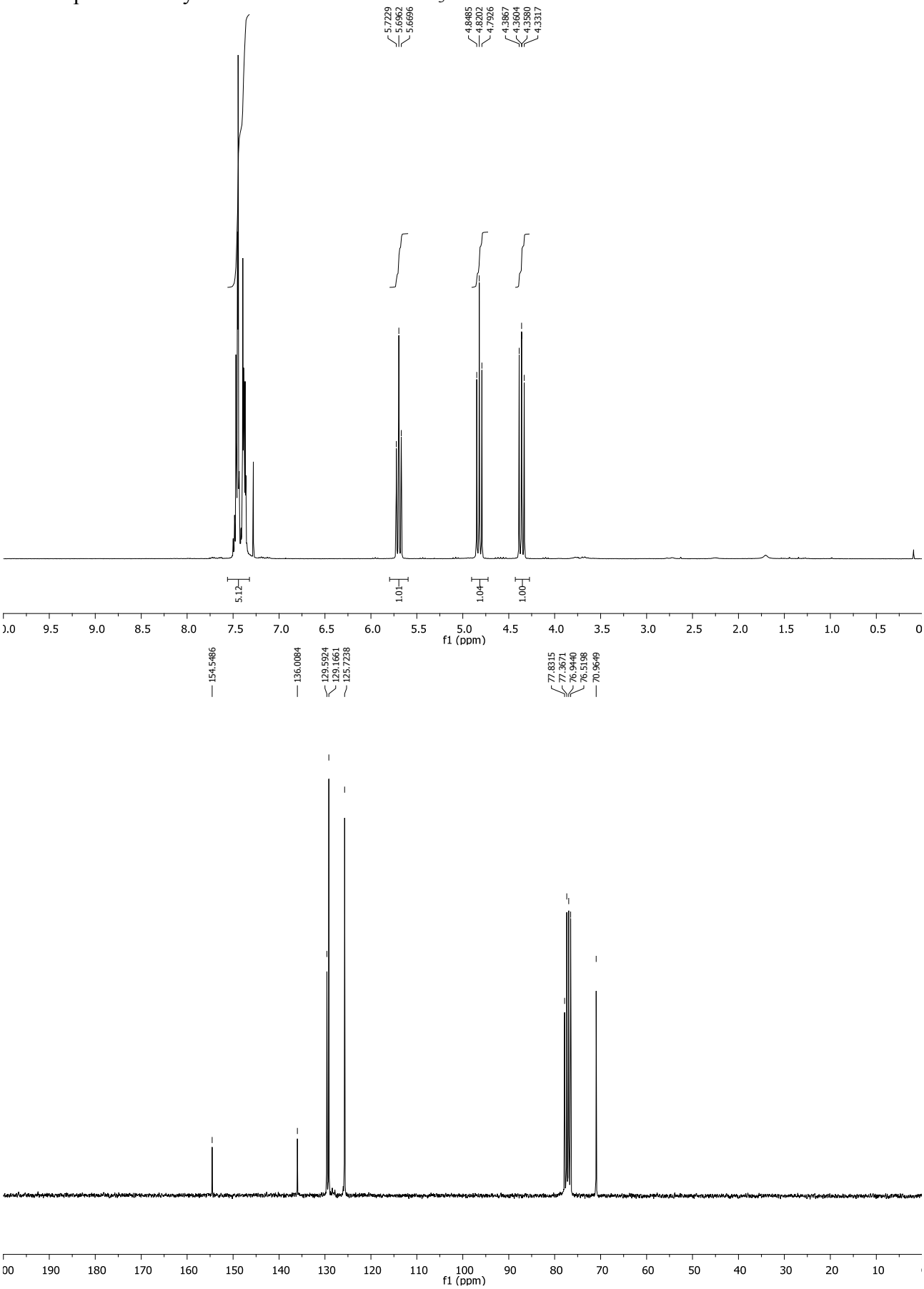




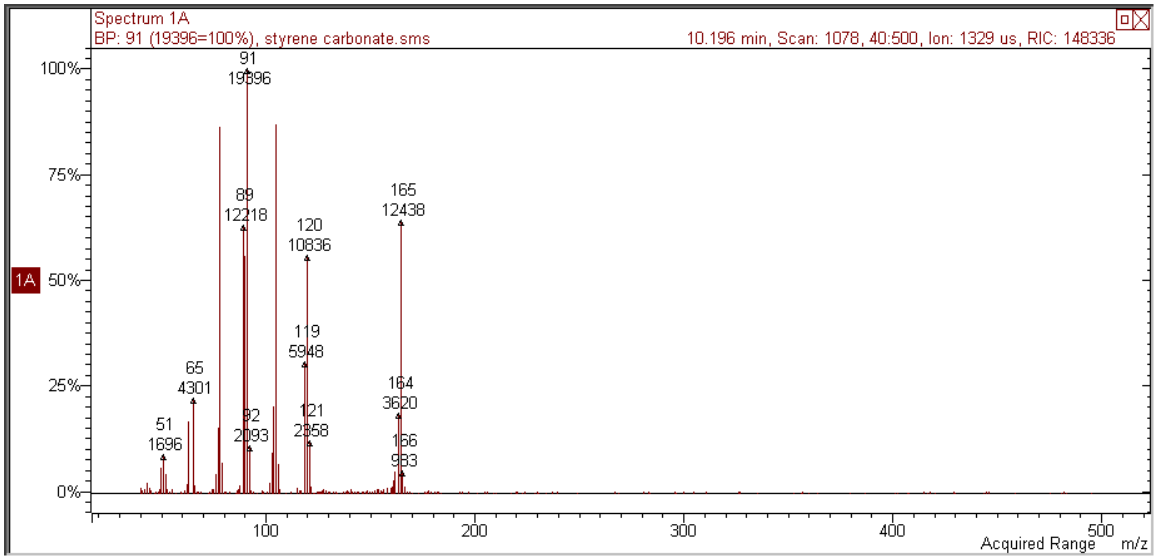
Chemical ionization mass spectrum for propylene carbonate **2b**



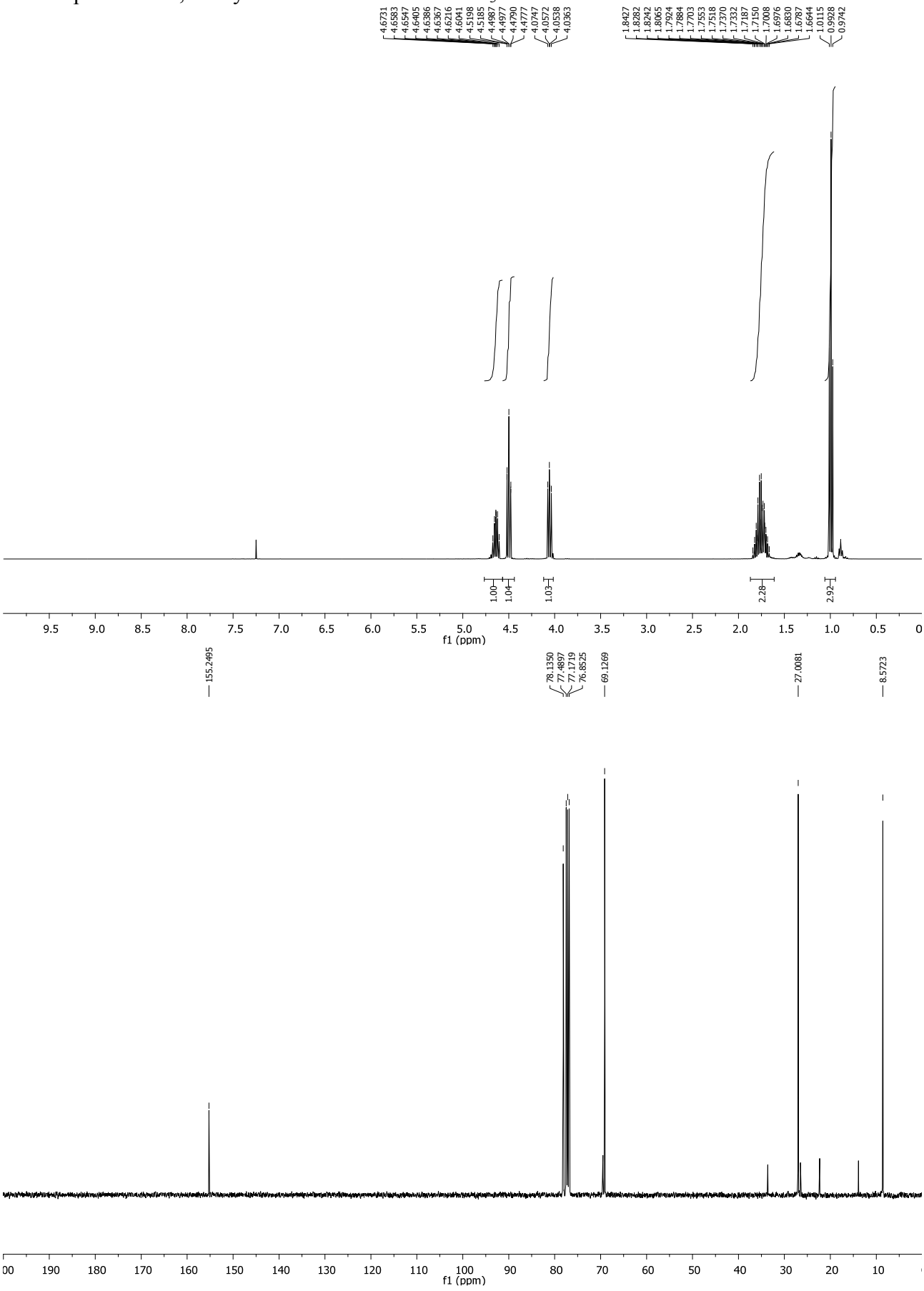
NMR Spectra for styrene carbonate **2c** in $CDCl_3$



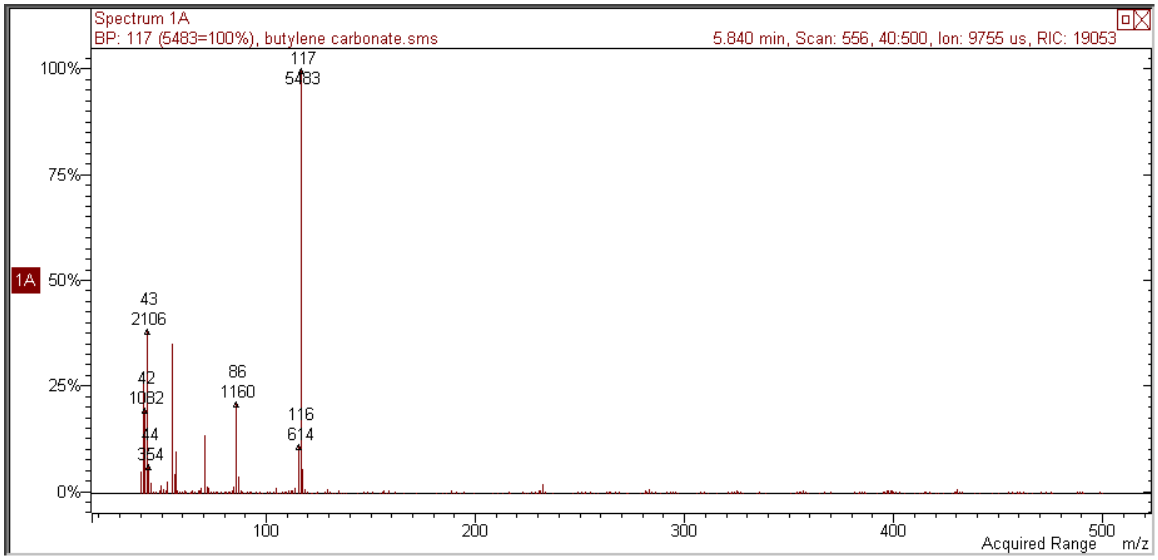
Chemical ionization mass spectrum for styrene carbonate **2c**



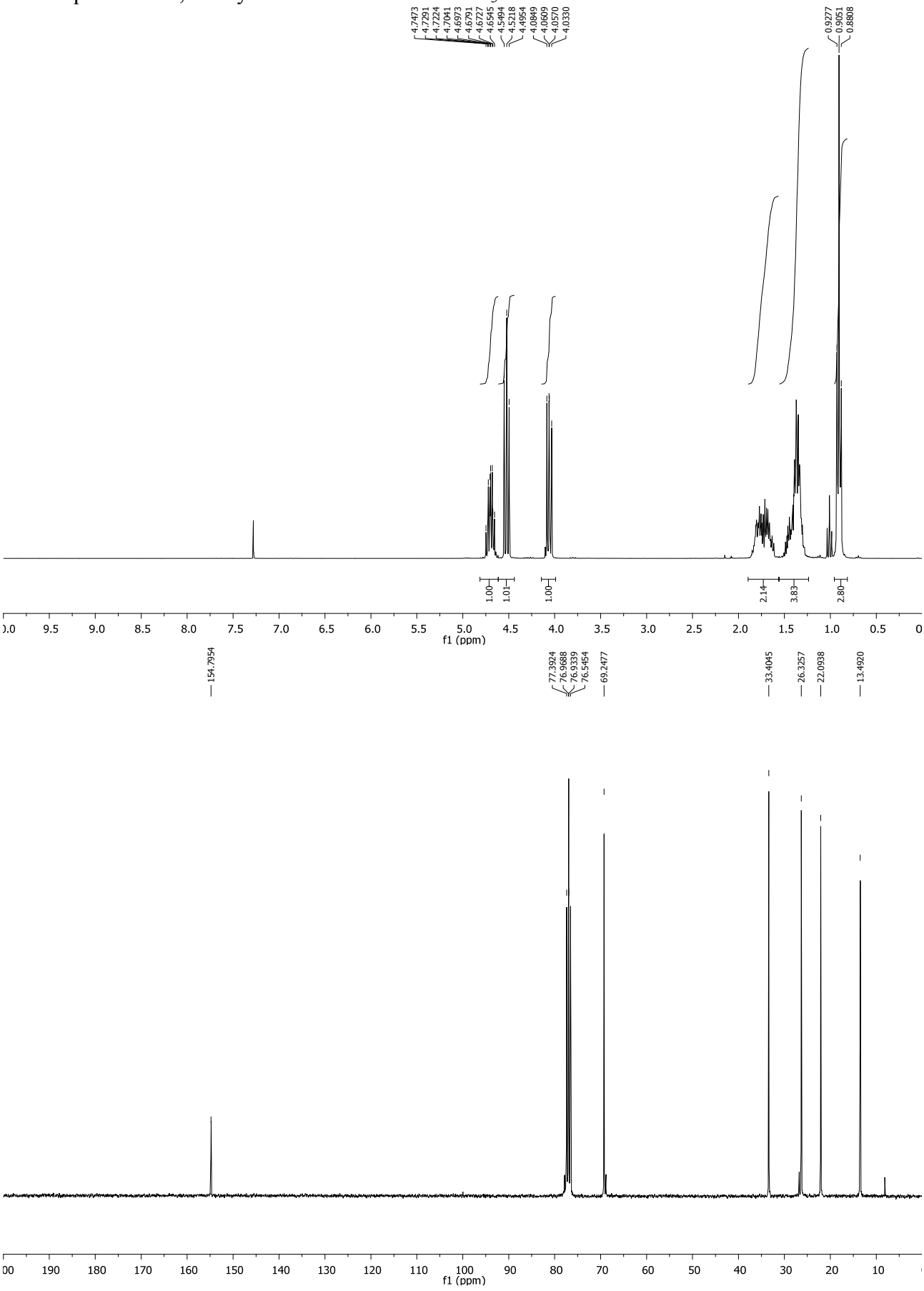
NMR Spectra for 1,2-butylene carbonate **2d** in $CDCl_3$



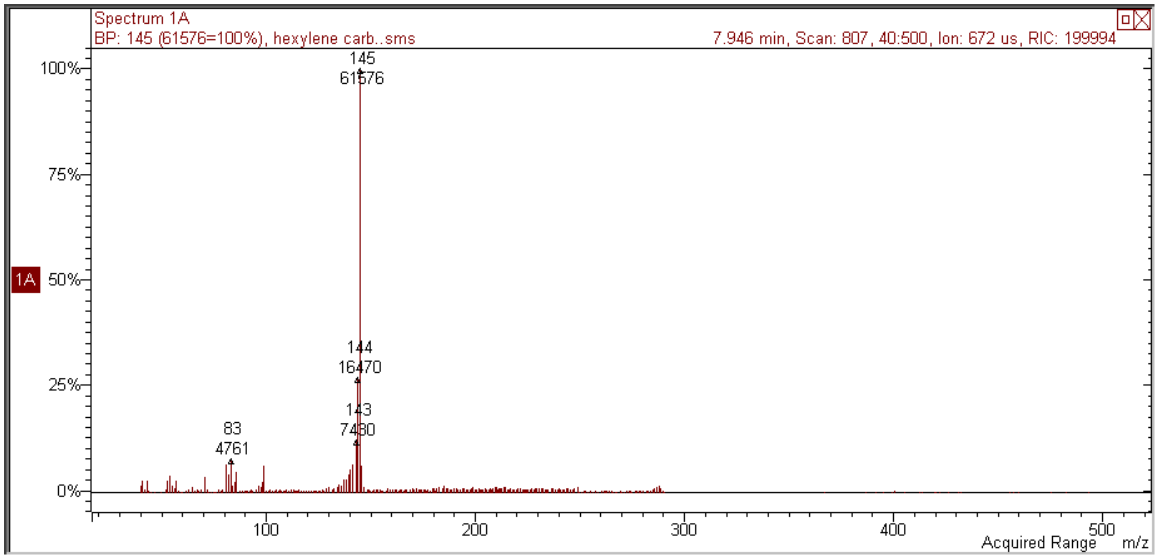
Chemical ionization mass spectrum for butylene carbonate **2d**



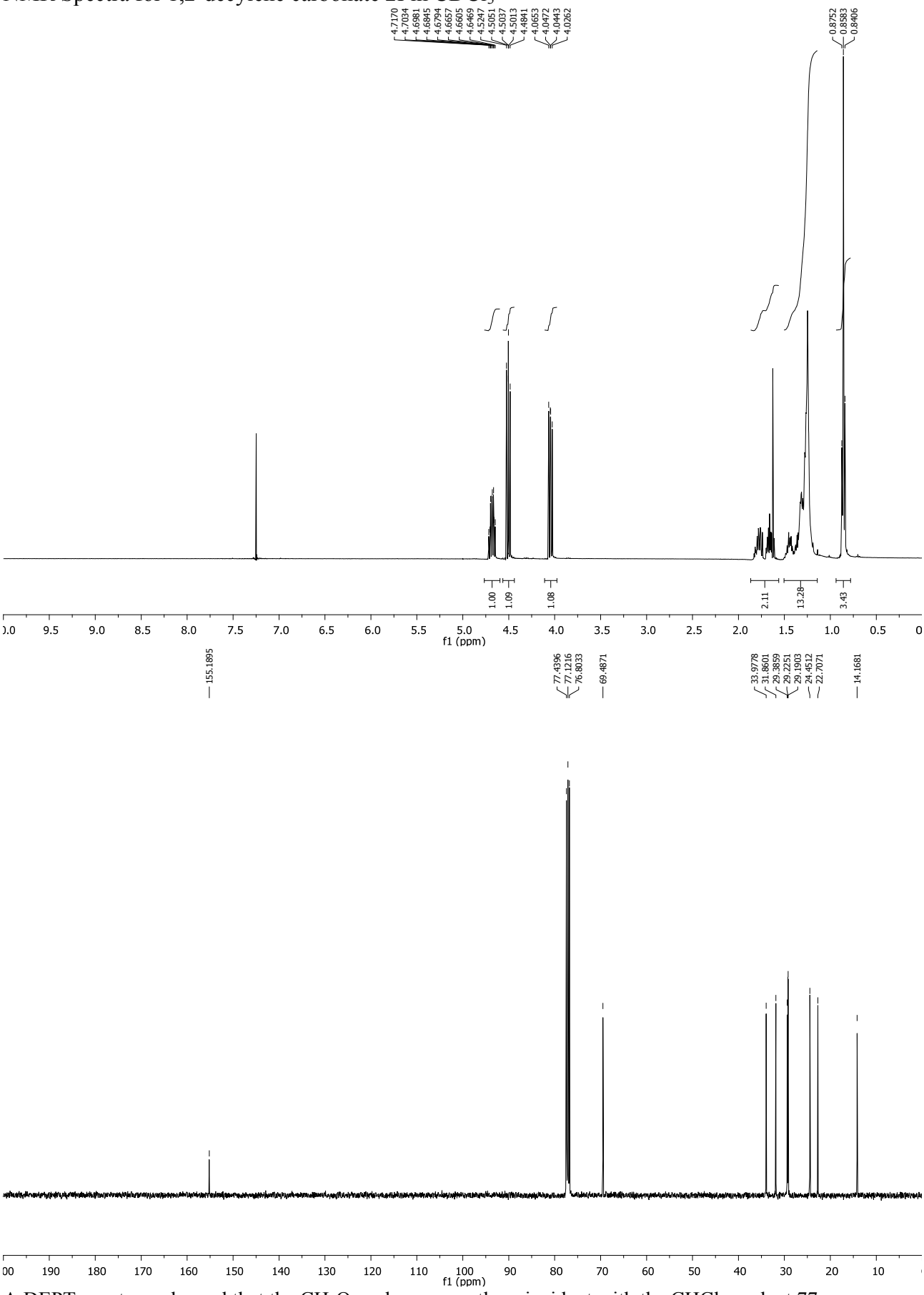
NMR Spectra for 1,2-hexylene carbonate **2e** in $CDCl_3$



Chemical ionization mass spectrum for hexylene carbonate **2e**

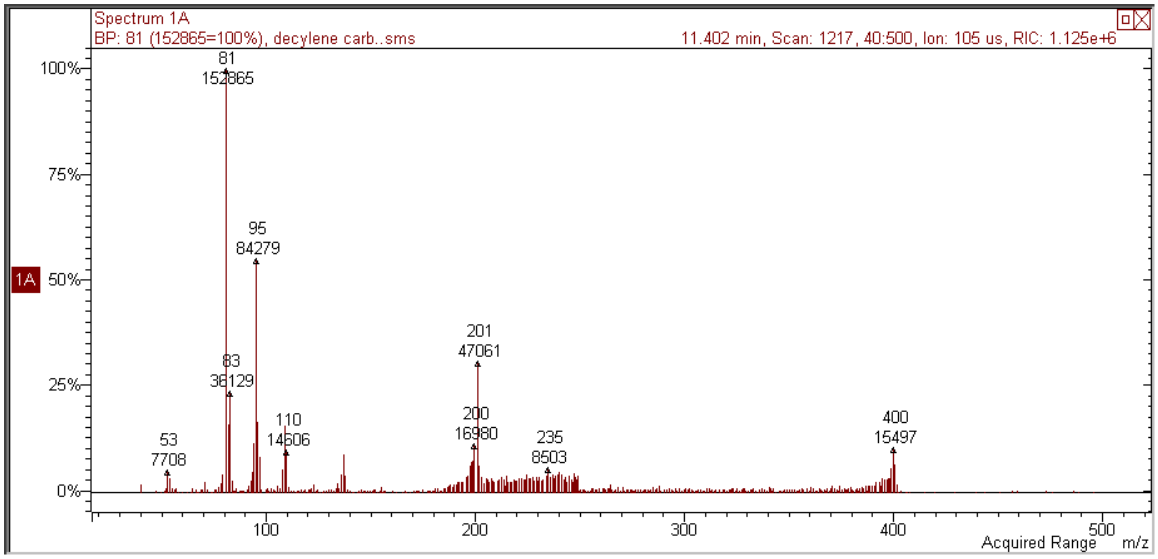


NMR Spectra for 1,2-decylene carbonate **2f** in $CDCl_3$

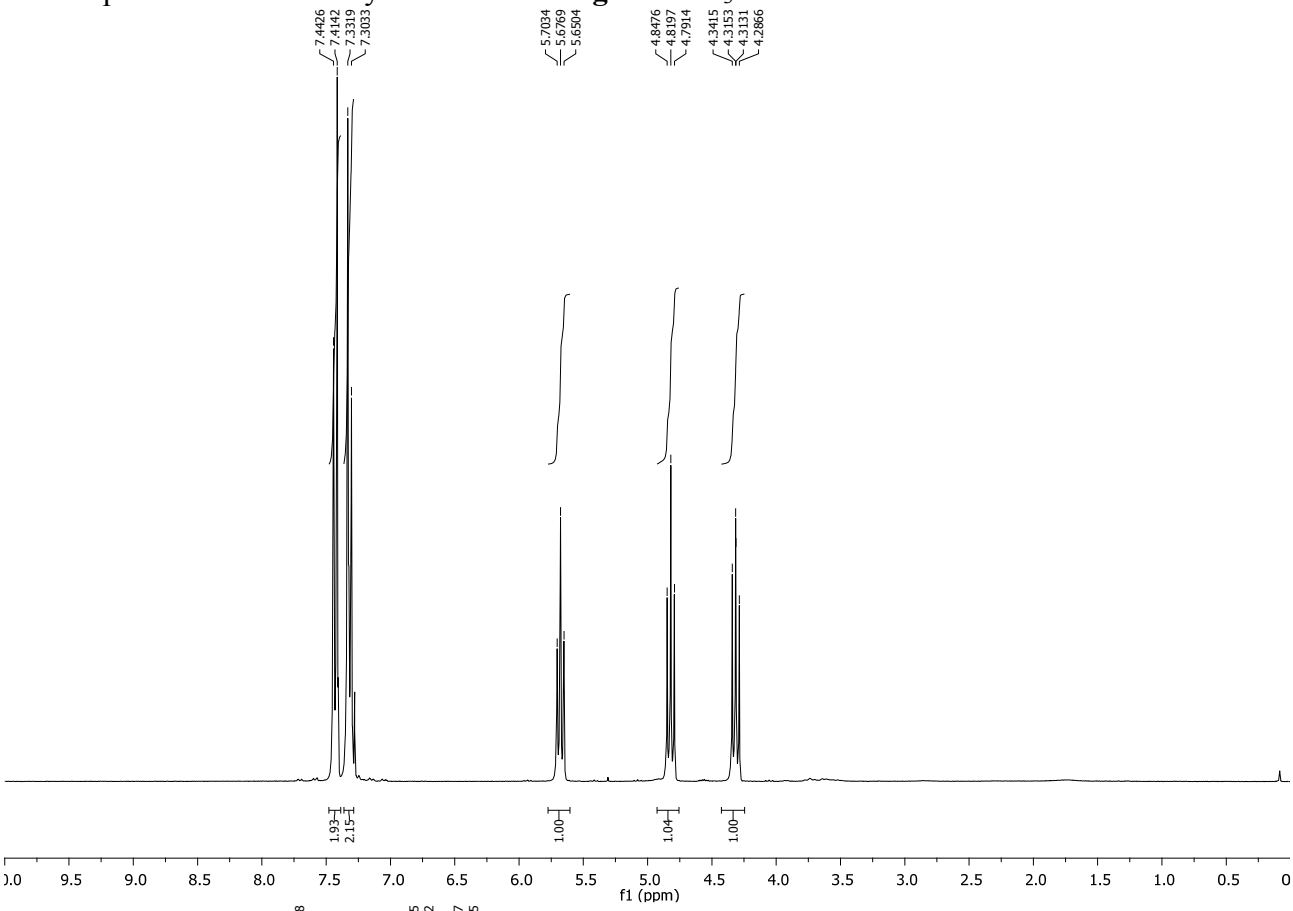


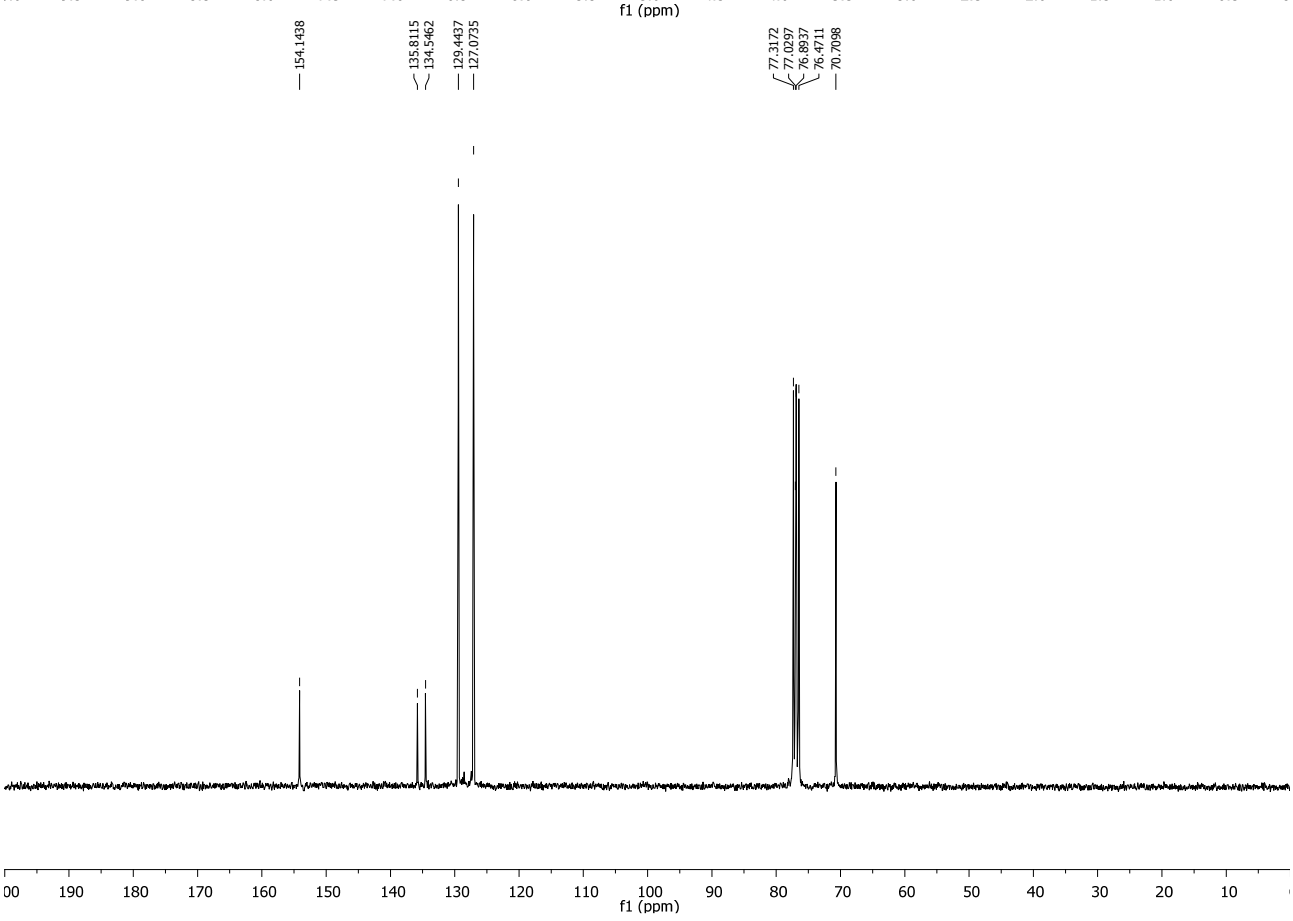
A DEPT spectrum showed that the CH_2O peak was exactly coincident with the $CHCl_3$ peak at 77 ppm

Chemical ionization mass spectrum for decylene carbonate **2f**

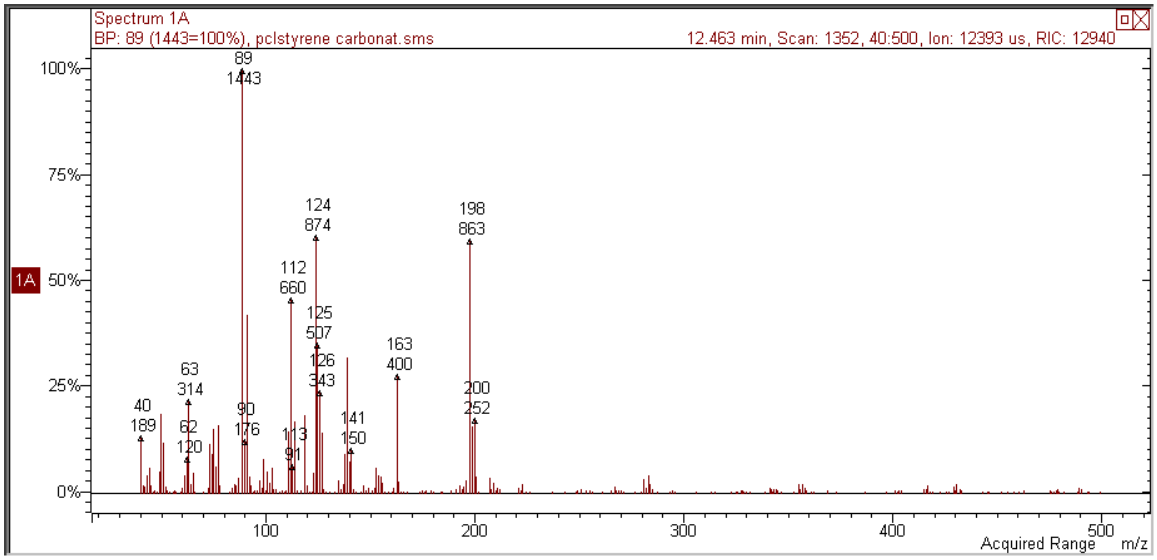


NMR Spectra for 4-chlorostyrene carbonate **2g** in $CDCl_3$

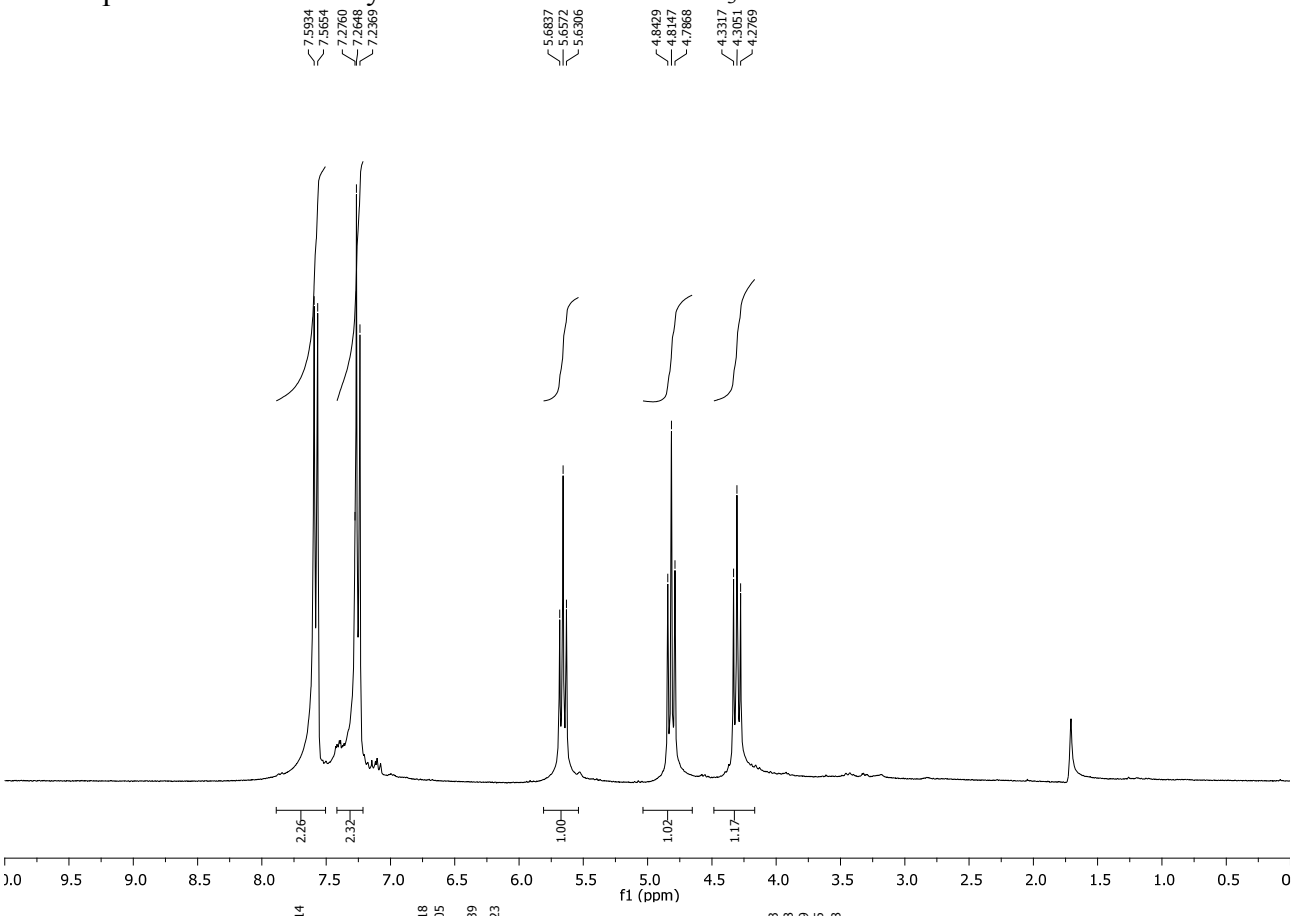


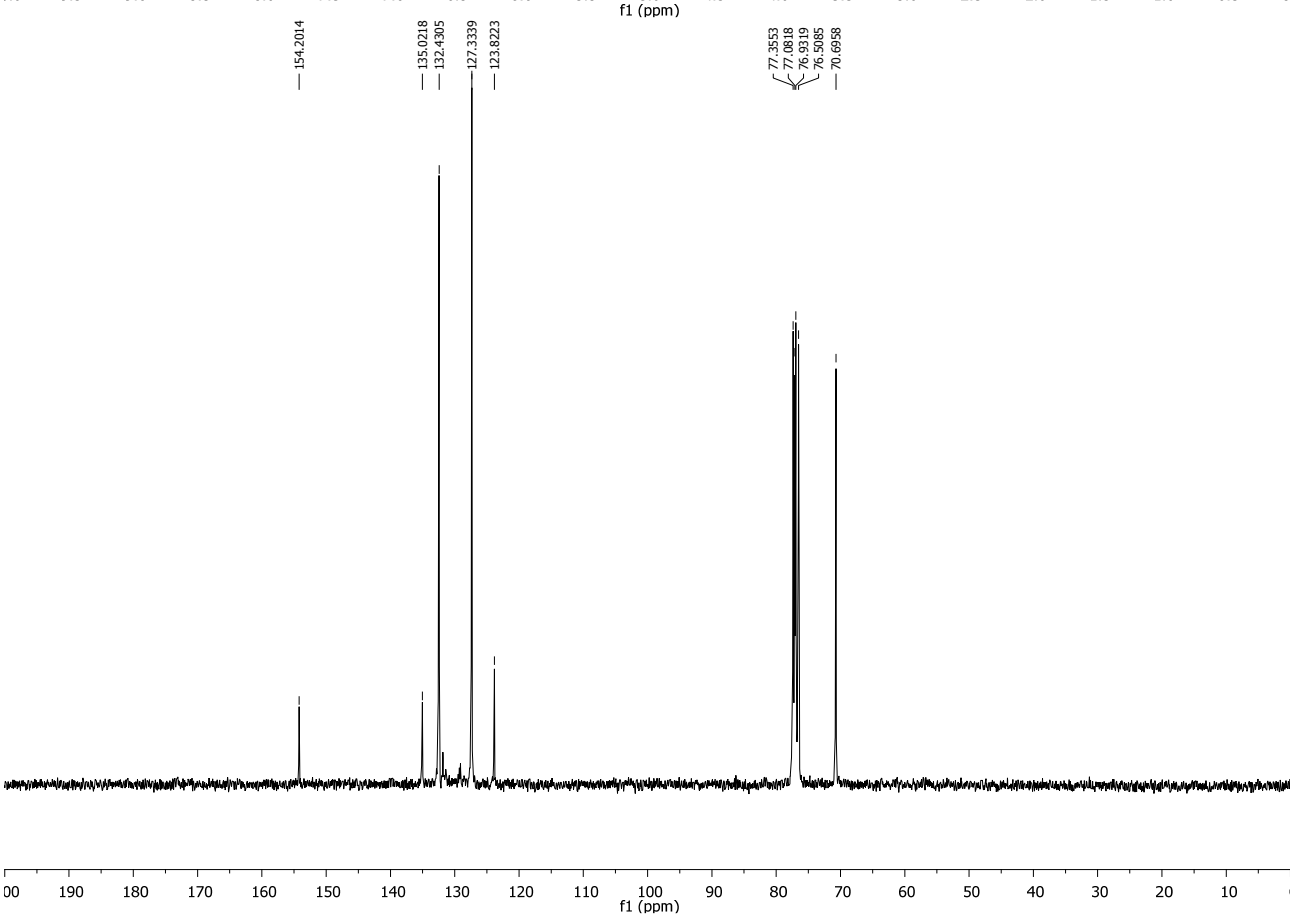


Electron ionization mass spectrum for 4-chlorostyrene carbonate **2g**

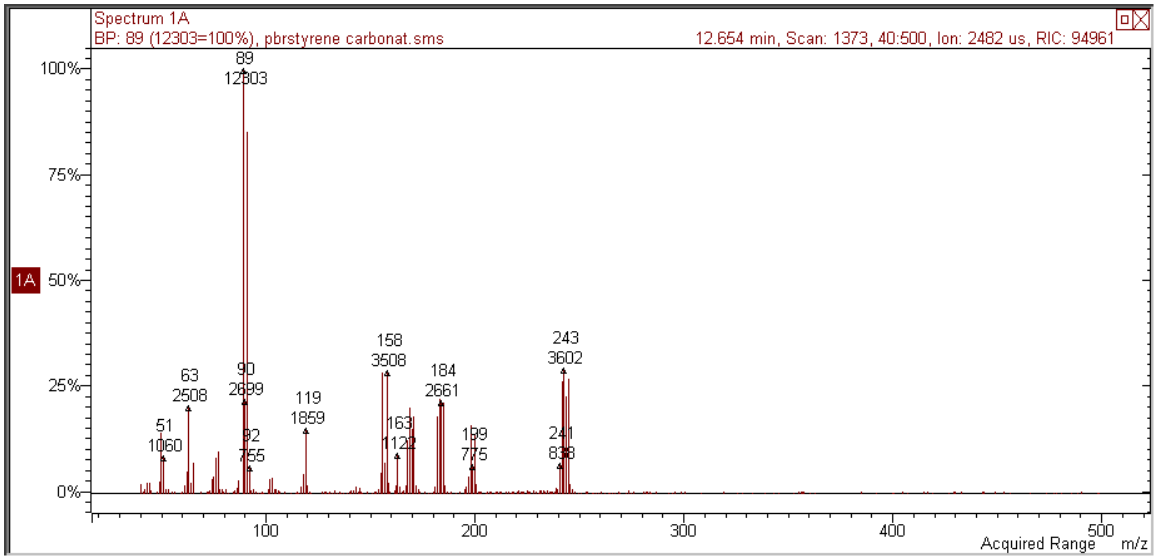


NMR Spectra for 4-bromostyrene carbonate **2h** in $CDCl_3$

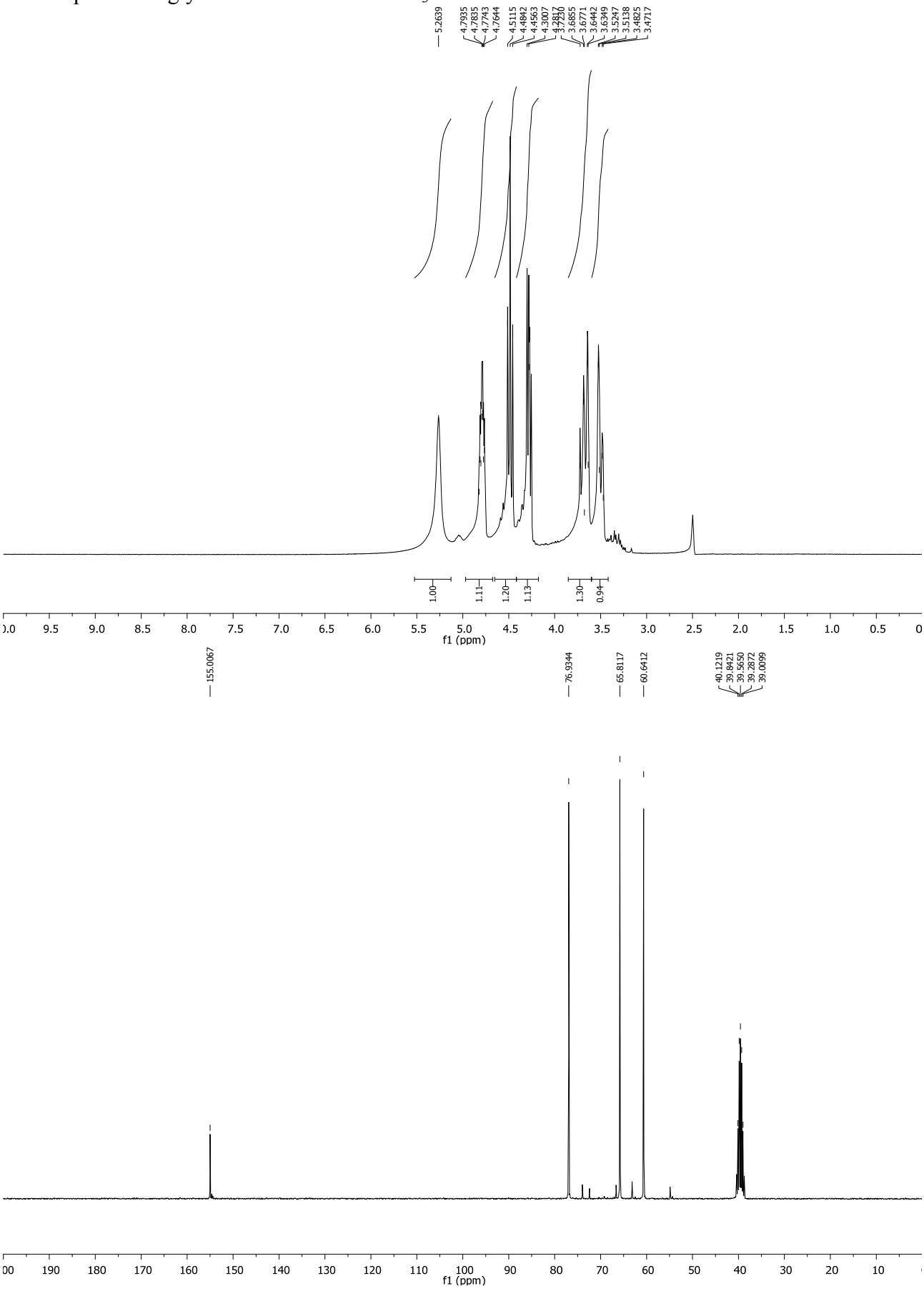




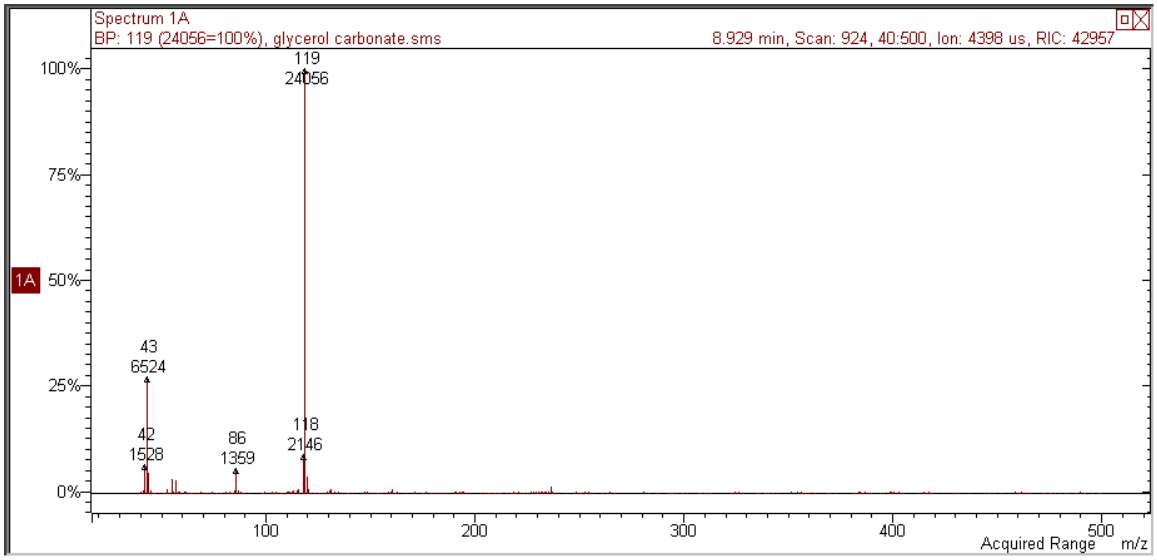
Chemical ionization mass spectrum for 4-bromostyrene carbonate **2h**



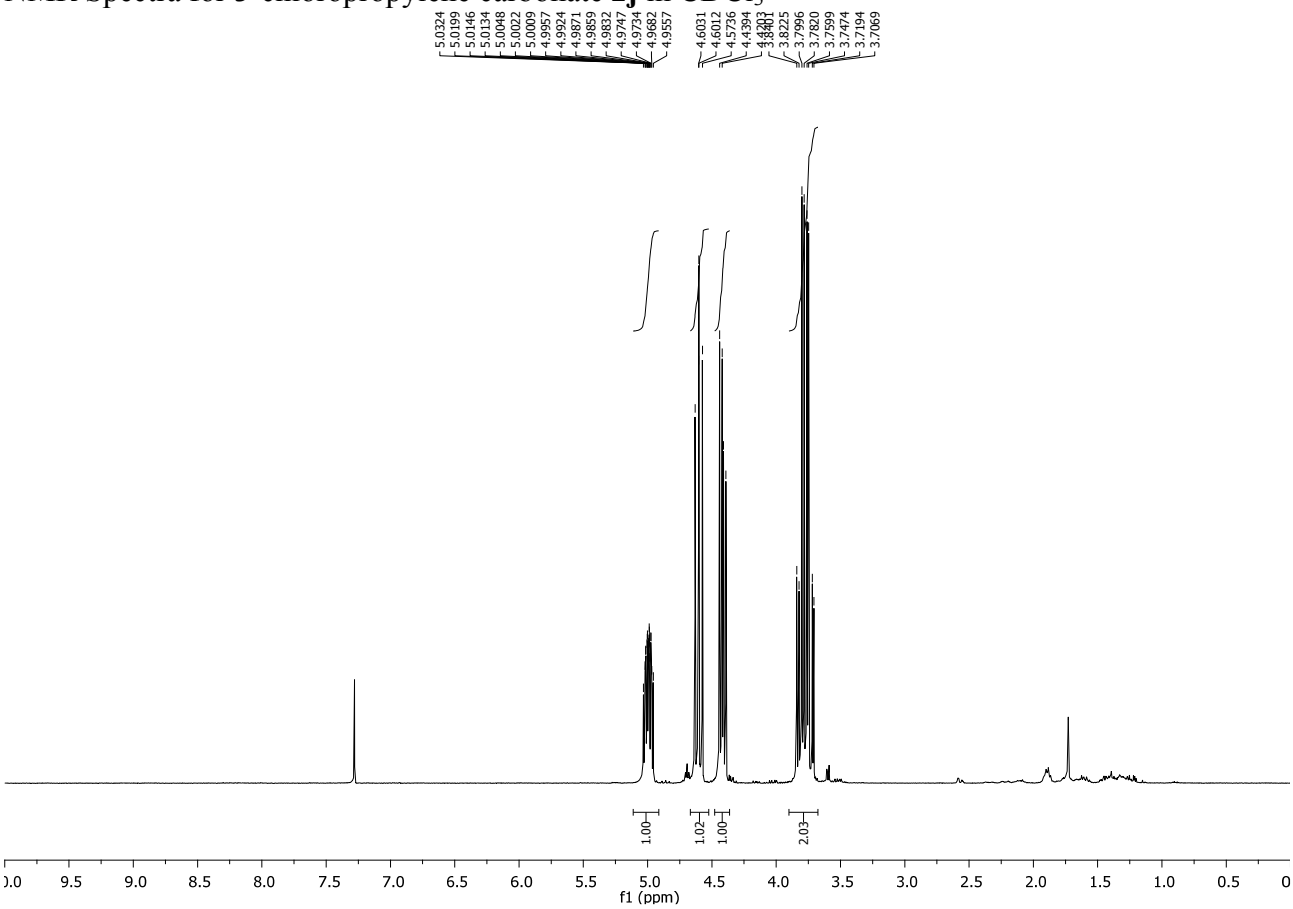
NMR Spectra for glycerol carbonate **2i** in CD_3OD

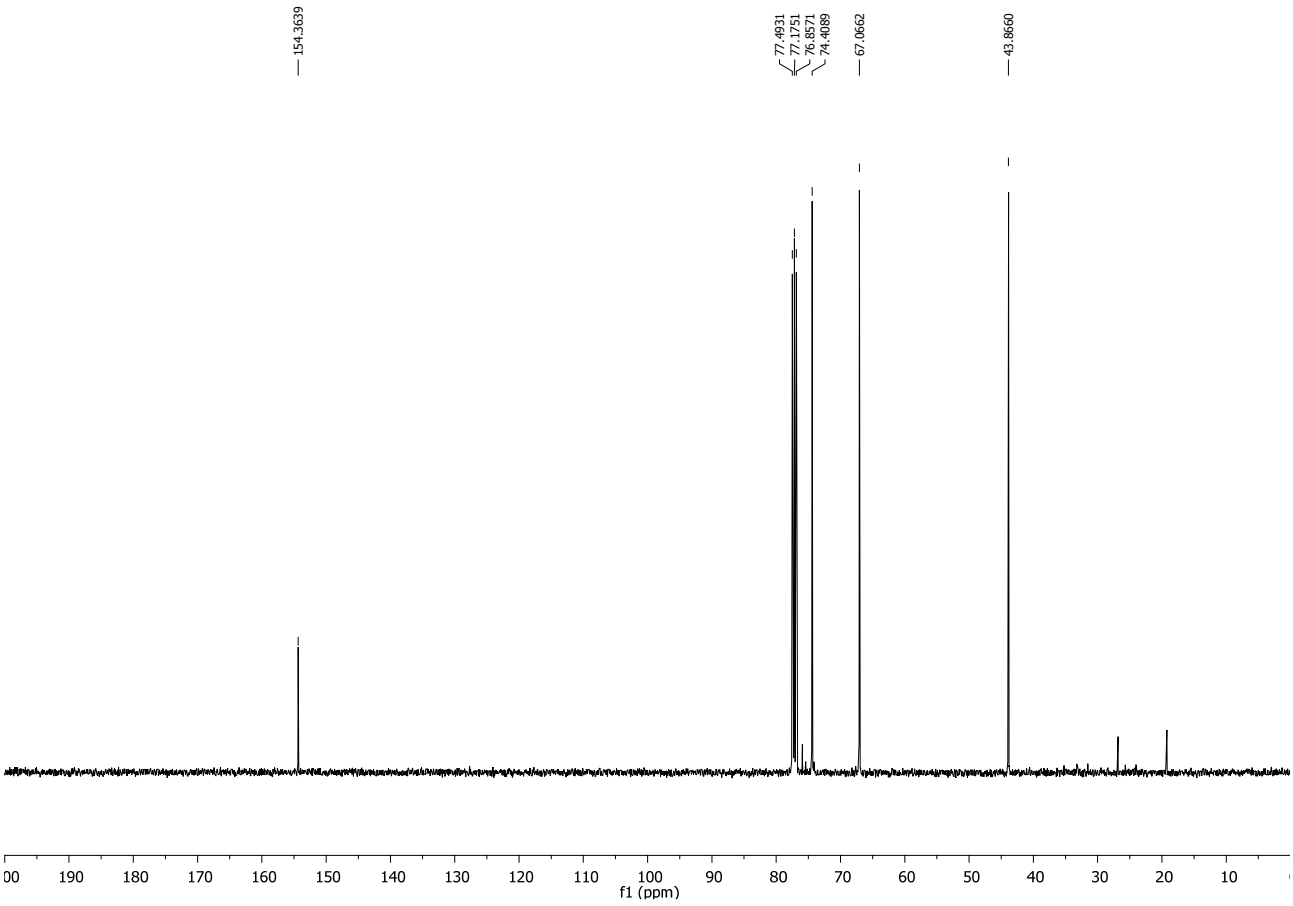


Chemical ionization mass spectrum for glycerol carbonate **2i**

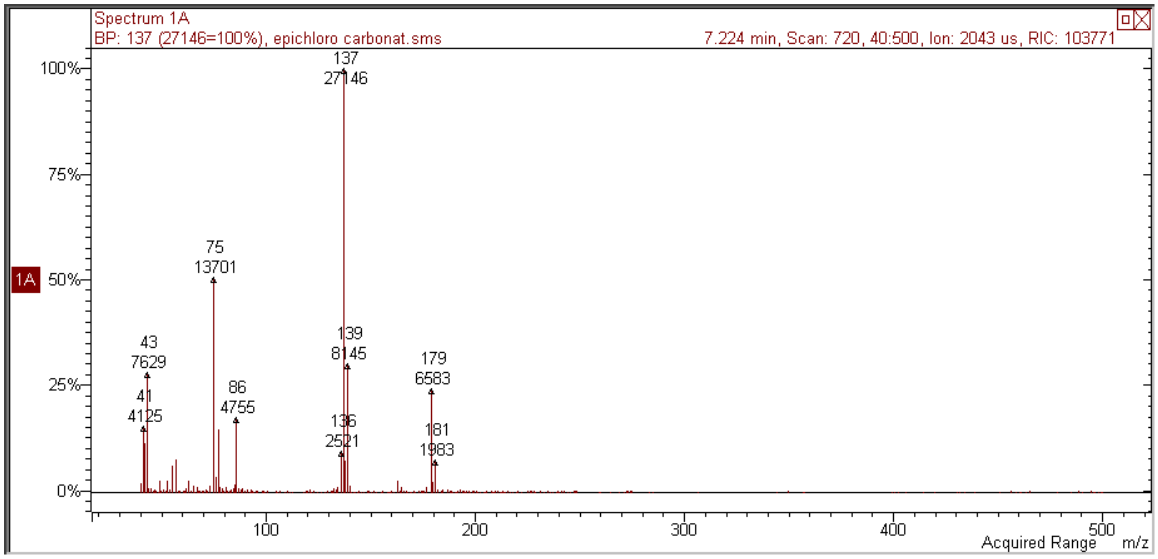


NMR Spectra for 3-chloropropylene carbonate **2j** in $CDCl_3$

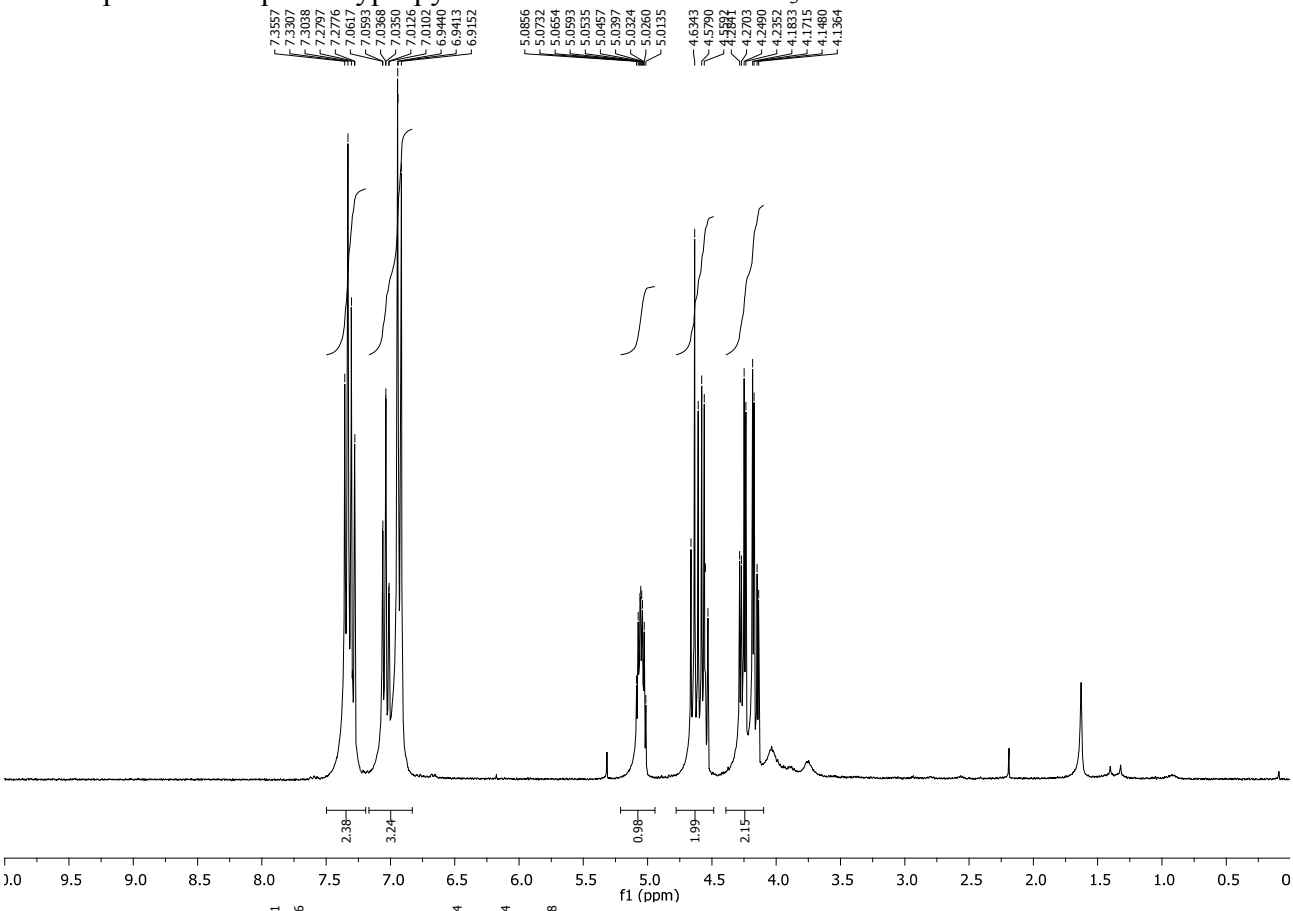


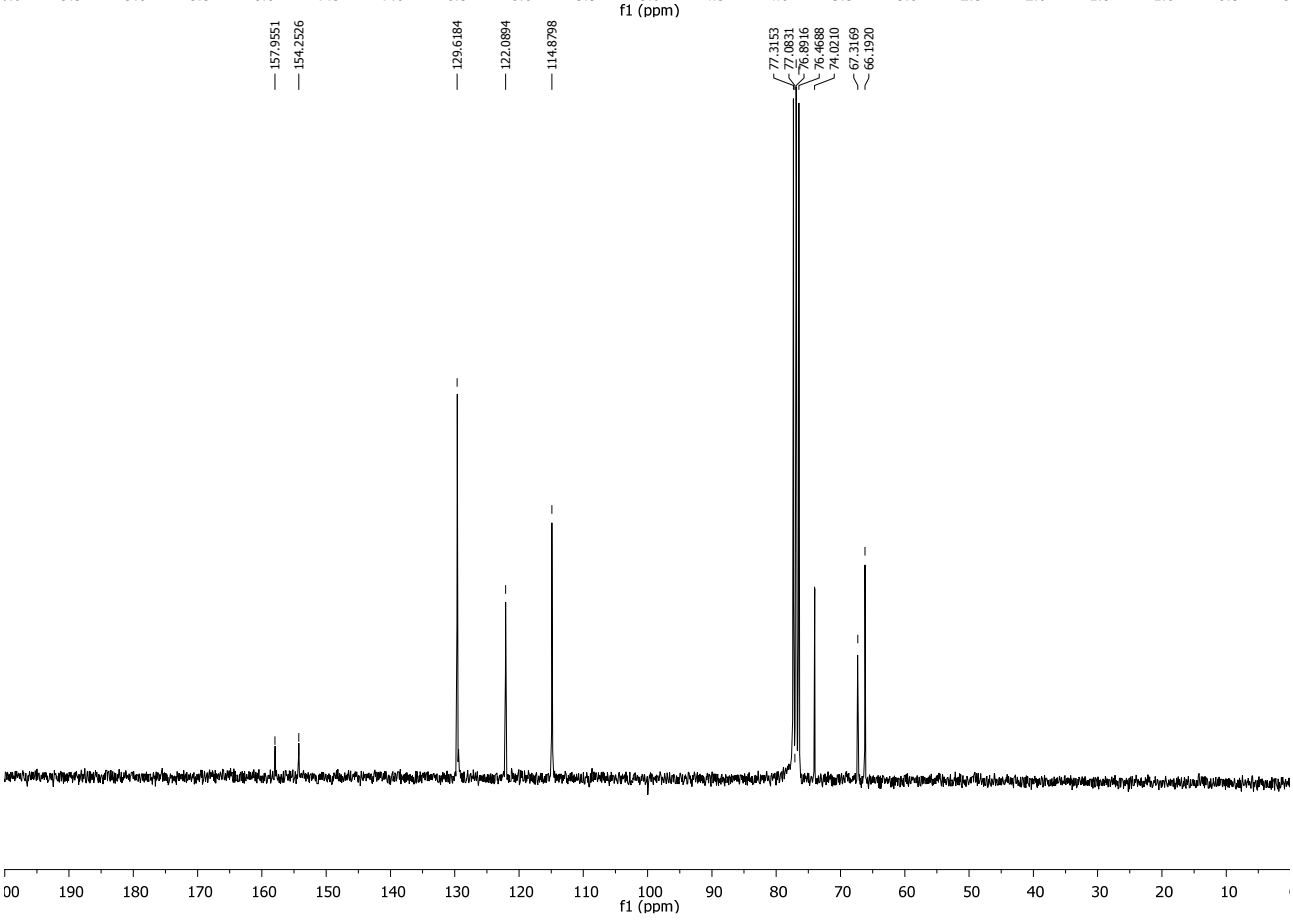


Chemical ionization mass spectrum for 3-chloropropylene carbonate **2j**

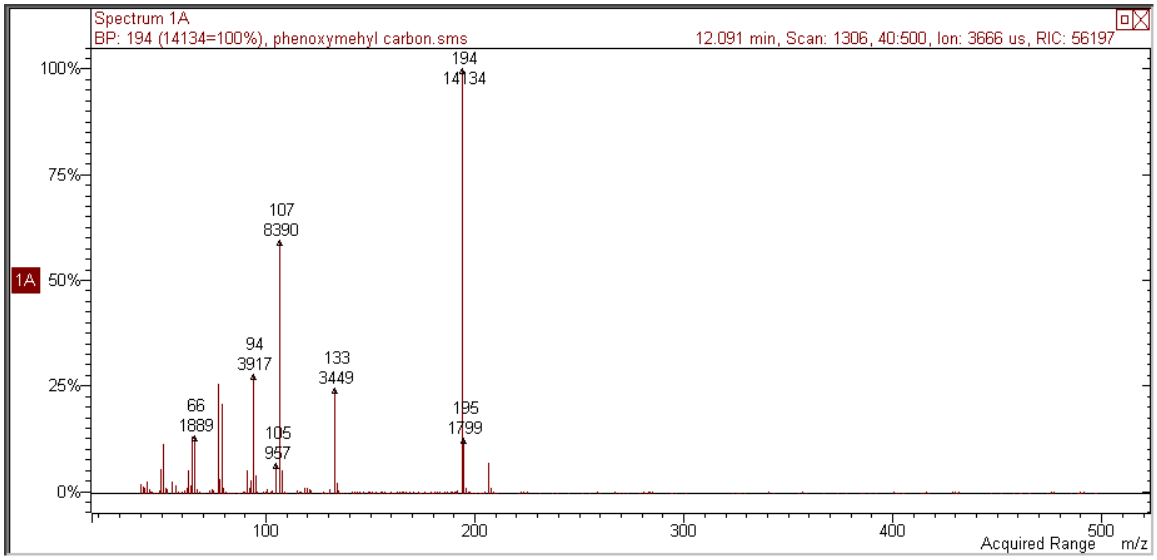


NMR Spectra for 3-phenoxypropylene carbonate **2k** in $CDCl_3$

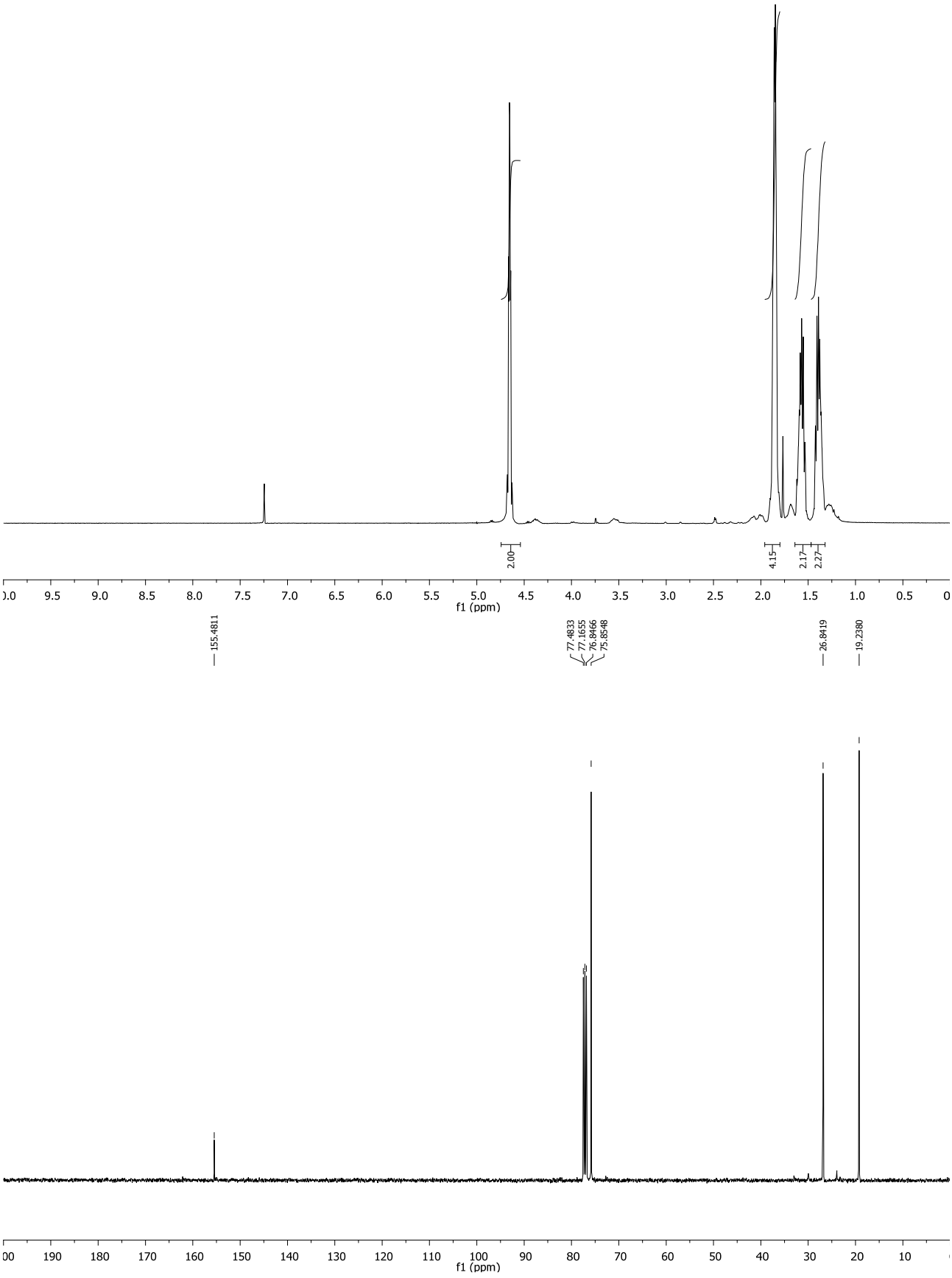




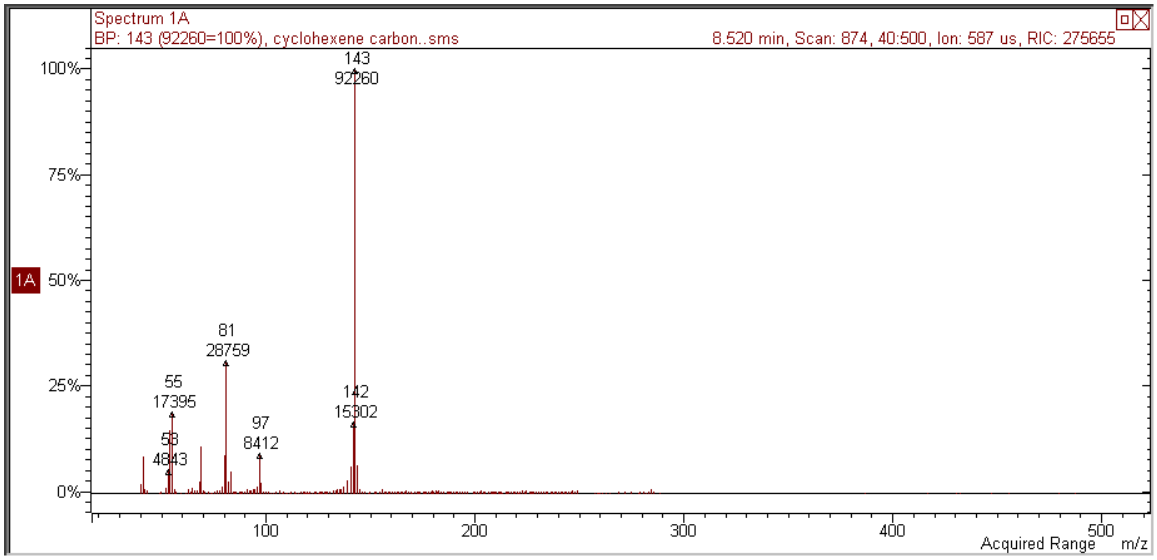
Electron ionization mass spectrum for 3-phenoxypropylene carbonate **2k**



NMR Spectra for cyclohexene carbonate **29** in $CDCl_3$

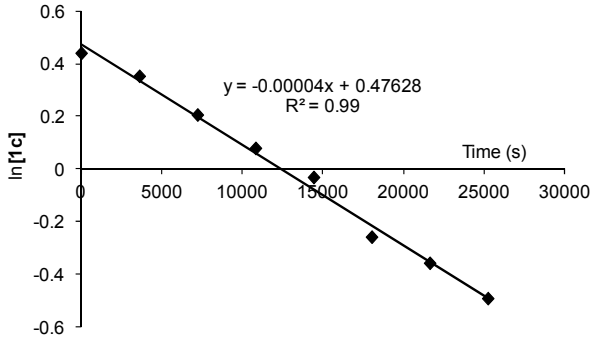


Chemical ionization mass spectrum for cyclohexene carbonate **29**

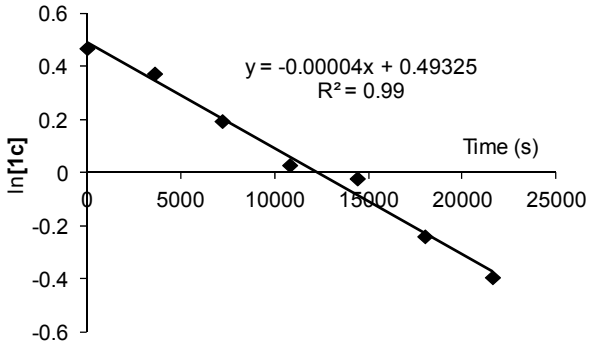


Kinetic plots to determine the order with respect to complex **27**

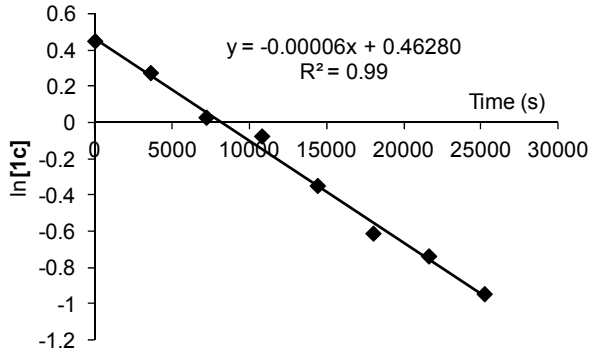
3 mol% catalyst (42 mM): run 1



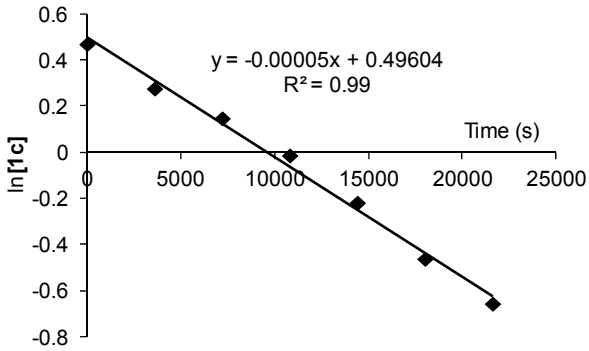
3 mol% catalyst (42 mM): run 2



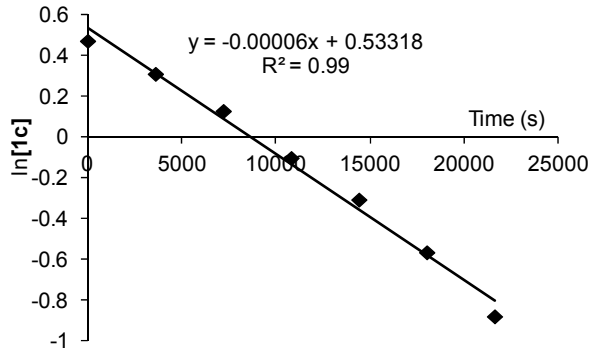
4 mol% catalyst (56 mM): run 1



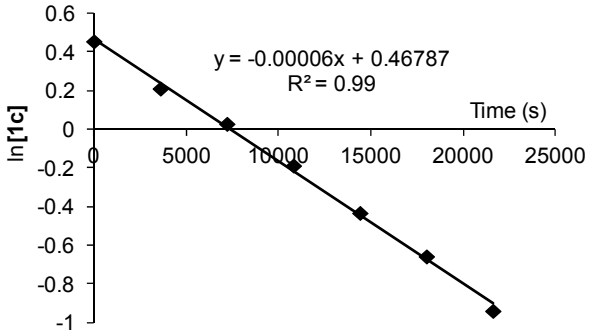
4 mol% catalyst (56 mM): run 2



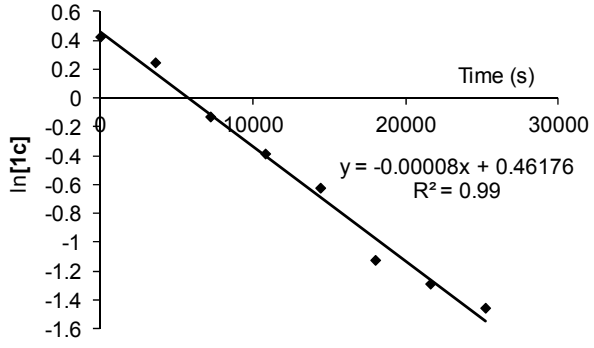
5 mol% catalyst (70 mM): run 1



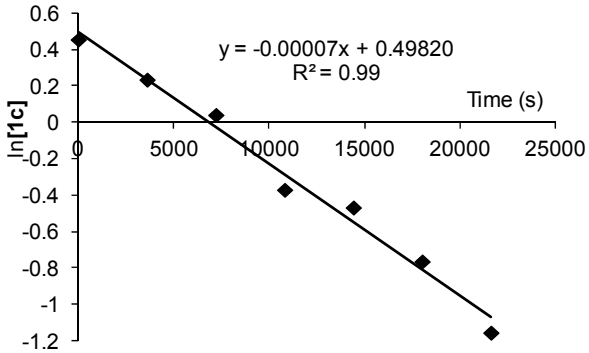
5 mol% catalyst (70 mM): run 2



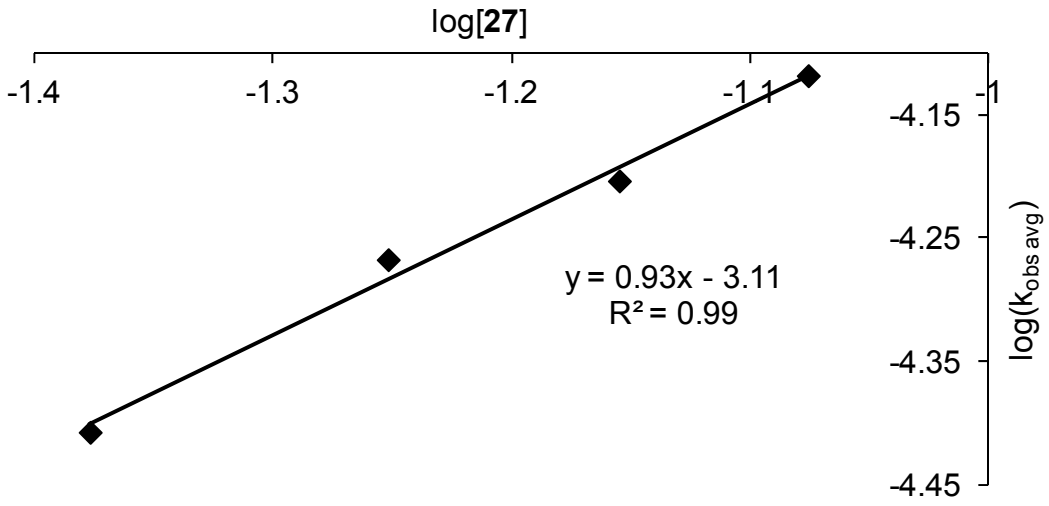
6 mol% catalyst (84 mM): run 1



6 mol% catalyst (84 mM): run 2

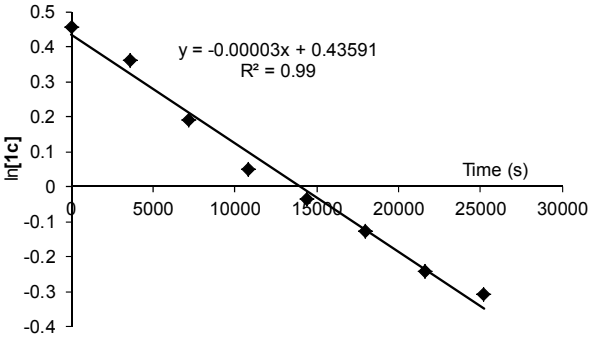


Plot of $\log(k_{obs\ avg})$ against log[**27**]

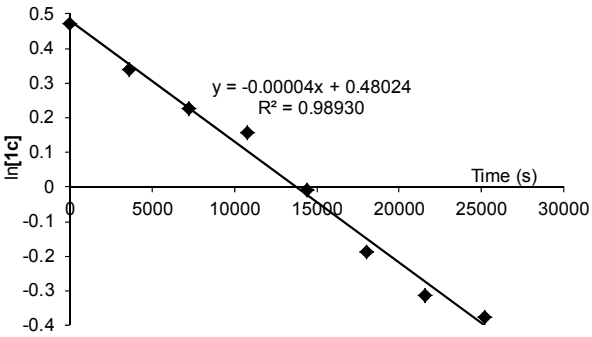


Kinetic plots to determine the order with respect to Bu_4NBr

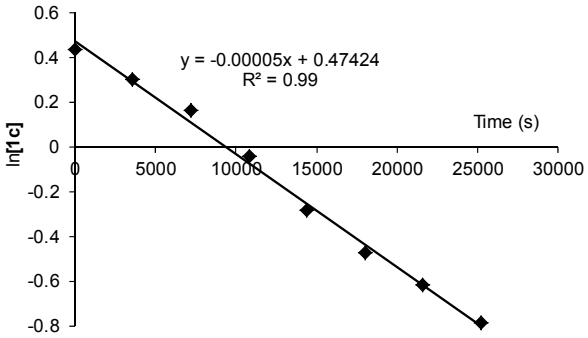
3 mol% Bu_4NBr (42 mM): run 1



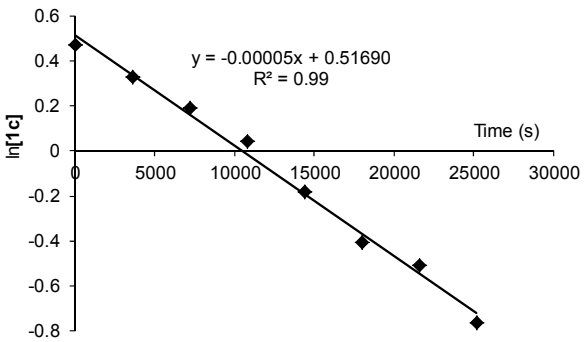
3 mol% Bu_4NBr (42 mM): run 2



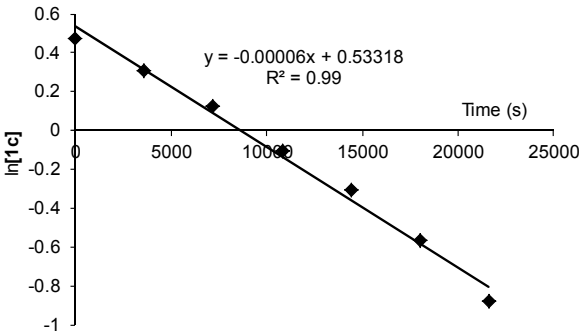
4 mol% Bu_4NBr (42 mM): run 1



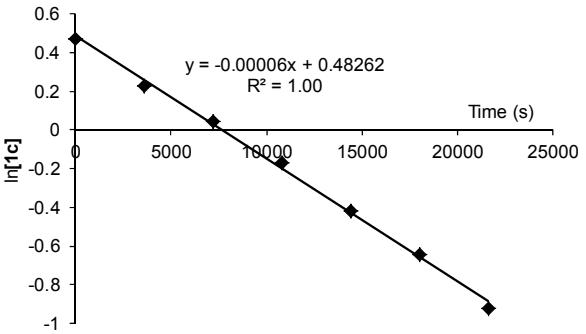
4 mol% Bu_4NBr (42 mM): run 2



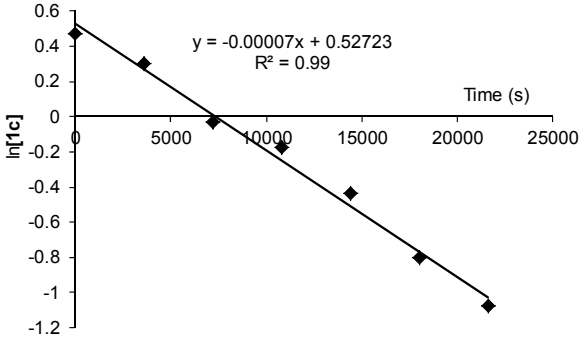
5 mol% Bu_4NBr (42 mM): run 1



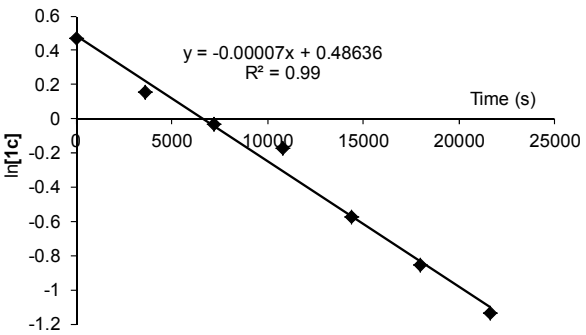
5 mol% Bu_4NBr (42 mM): run 2



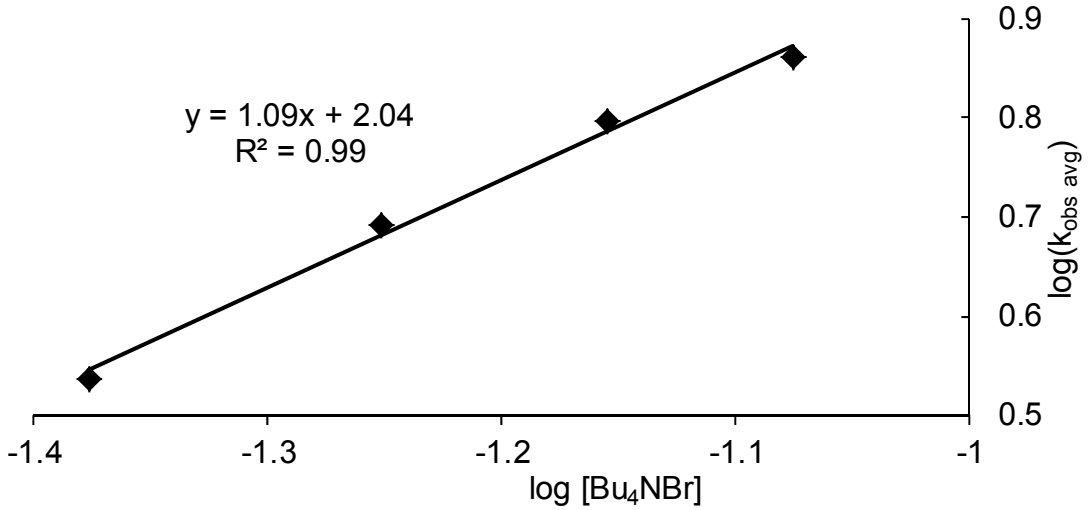
6 mol% Bu_4NBr (42 mM): run 1



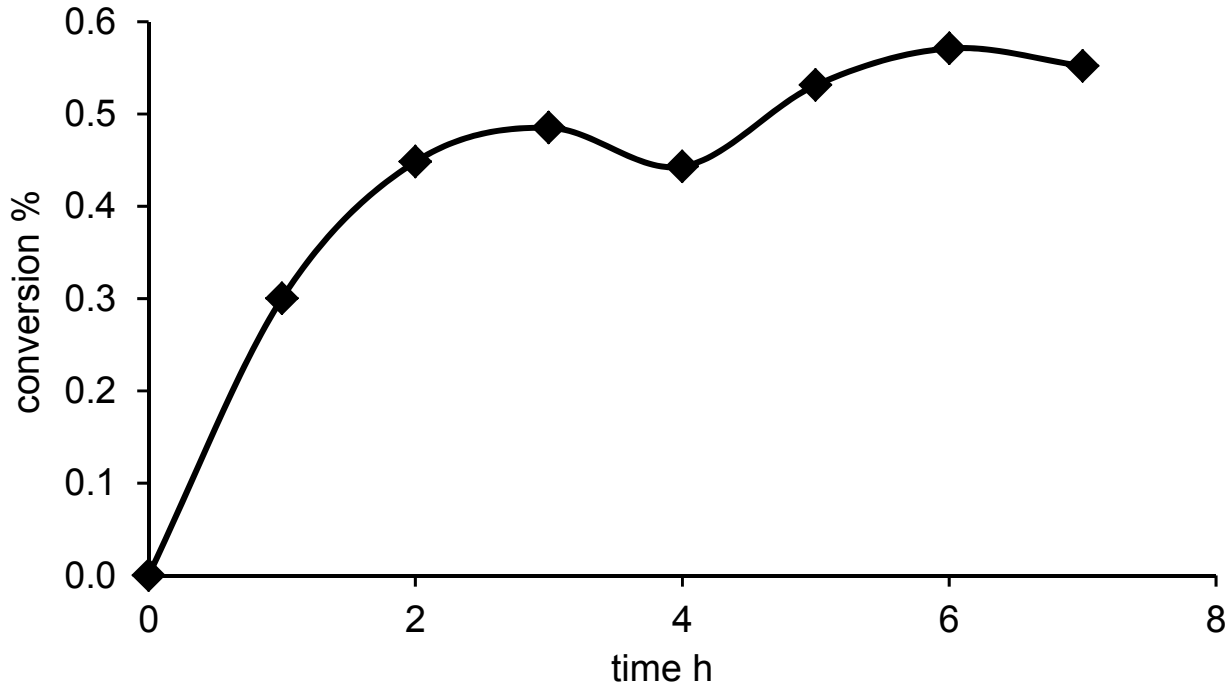
6 mol% Bu_4NBr (42 mM): run 2



Plot of $\log(k_{obs\ avg})$ against $\log[Bu_4NBr]$



Plot showing that complex **27** (5 mol%) alone is not an active catalyst at 60 ^{o}C in propylene carbonate



Plot showing that Bu_4NBr (5 mol%) alone is not an active catalyst at 60 ^{o}C in propylene carbonate