Supporting Information

Identification of *N*-benzothiazolyl-2-benzenesulfonamides as novel ABCA1 expression upregulators

Hongtao Liu,‡[ab] Xinhai Jiang,‡[c] Xinfeng Gao,‡[b] Wenhua Tian,[b] Chen Xu,[b] Ruizhi Wang,[b] Yanni Xu,*[c] Liping Wei,[d] Feng Cao[e] and Wenyan Li*[b]

[a.] *Department of Pharmacy, Hebei General Hospital, Shijiazhuang 05005, China.*

[b.] *Hebei Key Laboratory of Organic Functional Molecules, College of Chemistry and Materials Science, Hebei Normal University, Shijiazhuang, 050024, China. E-Mails: wyli8512@mail.hebtu.edu.cn*

[c.] *NHC Key Laboratory of Biotechnology of Antibiotics, Institute of Medicinal Biotechnology, Chinese Academy of Medical Sciences & Peking Union Medical College (CAMS&PUMC), Beijing 100050, China. E-Mails: xuyanniwendeng@hotmail.com*

[d.] *Department of Cardiology, Tianjin Union Medical Center, Nankai University Affiliated Hospital, 190 Jieyuan Road, Hongqiao, Tianjin 300121, P.R.China.*

[e.] *Department of Cardiology & National Clinical Research Center of Geriatrics Disease, Chinese PLA General Hospital, Beijing 100853, China.*

‡ *These authors contributed equally.*

Content

1. Western blot analysis of ApoA-I

In order to exclude the effect of ApoA-I on cholesterol efflux, we did western blot assay to examine whether our compound **6i** affect ApoA-I protein expression in RAW264.7 cells. As Fig. S1, compound **6i** at the indicated concentration (0 (control), 2.5, 5, 10 μM) didn't affect ApoA-I protein expression. Therefore, the promoting cholesterol efflux effect of compound **6i** should be induced by increasing ABCA1 expression.

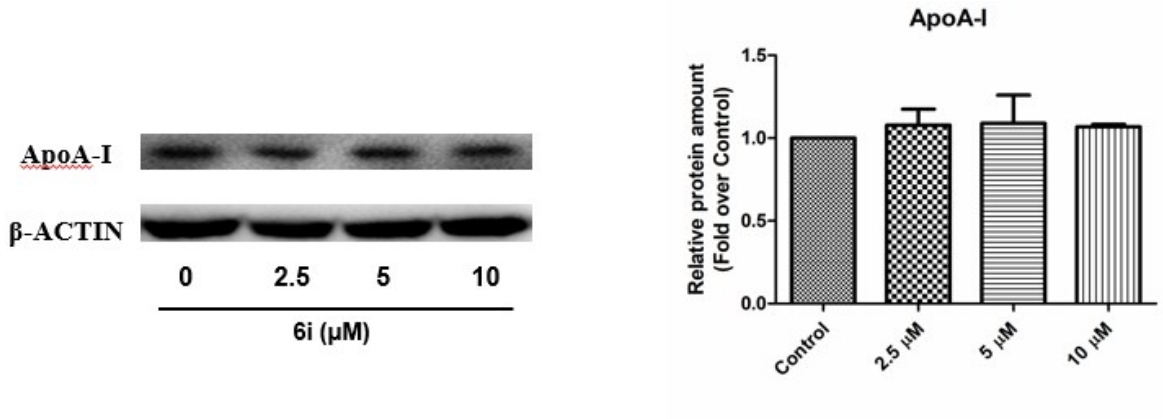


Fig. S1 Western blot analysis of apoA-I

2. Cell validity test

$HepG_2$ cells (ATCC, Rockville, MD) were grown in 96-well plate and treated with compounds (100, 50, 25, 12.5, 6.25, 3.125, 1.56 μM) for 72 h. Then the cell counting kit 8 (solarbio life sciences, Beijing, China) was used to investigate the influence of compounds on cell validity following the instruction. The results (Fig. S2) showed that all the tested compounds showed low cytotoxicity (CC_{50} > 100 μM).

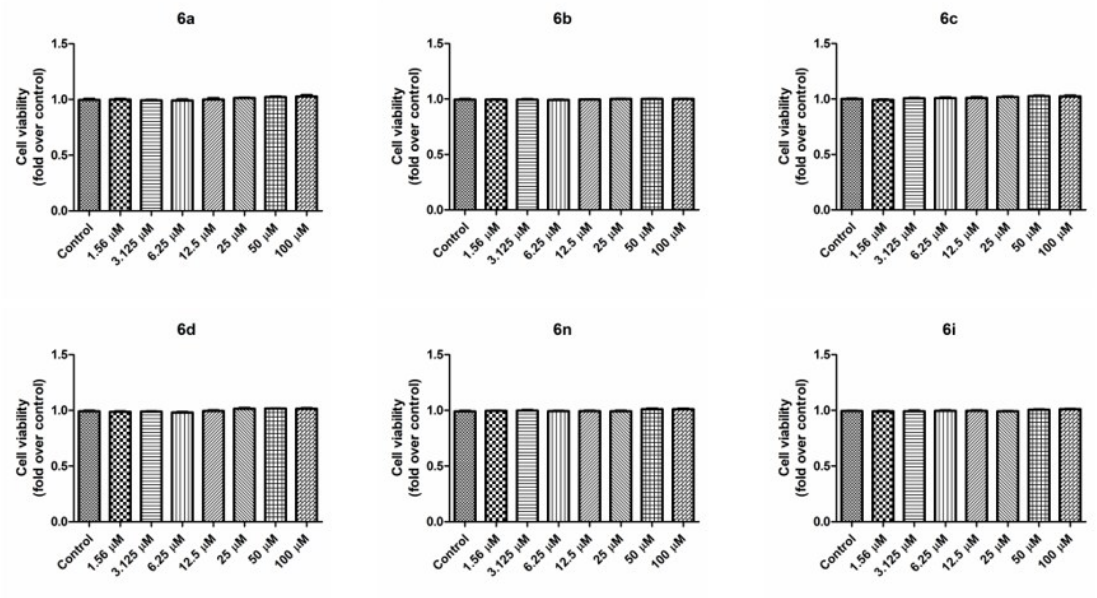
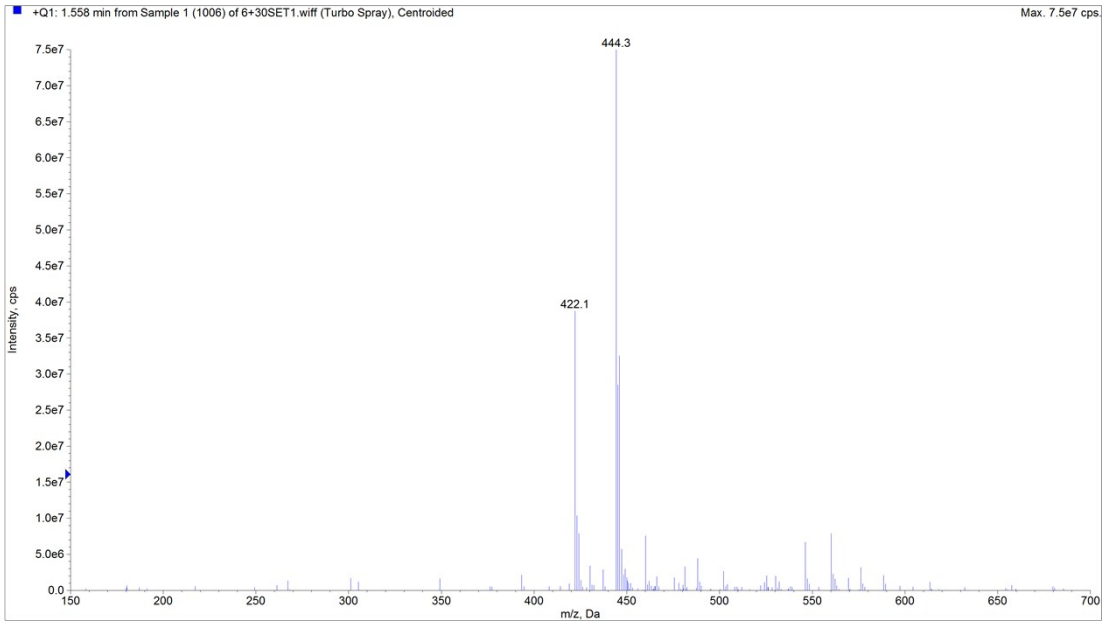
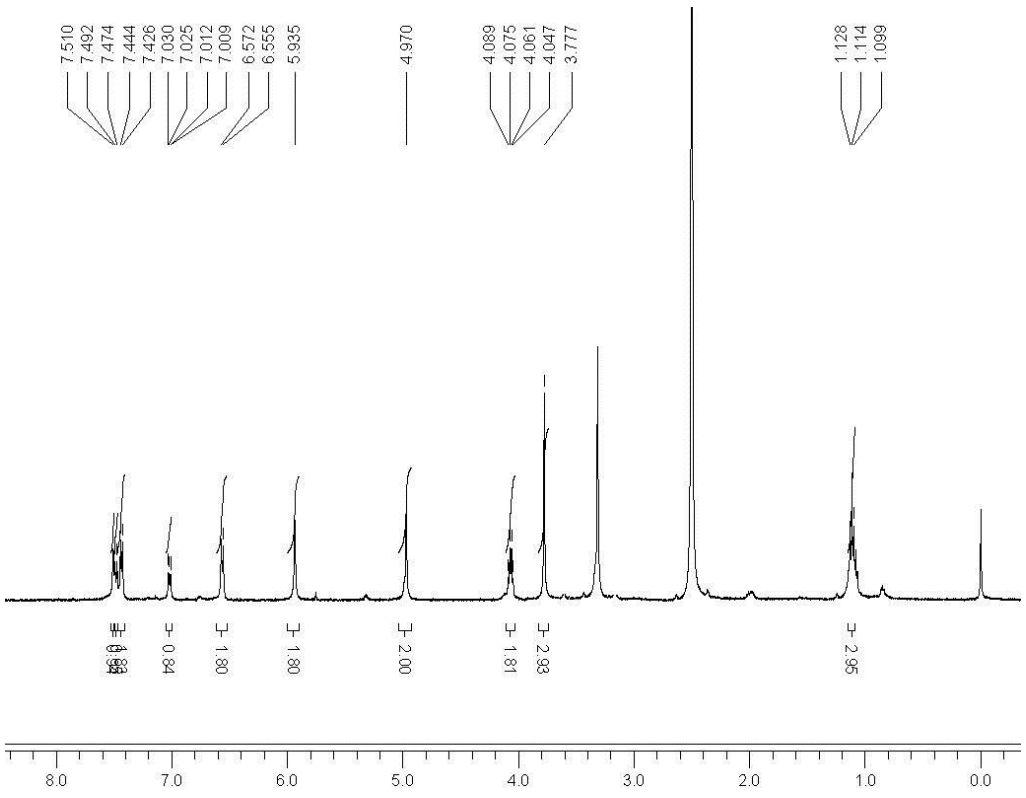


Fig. S2 Cell validity test

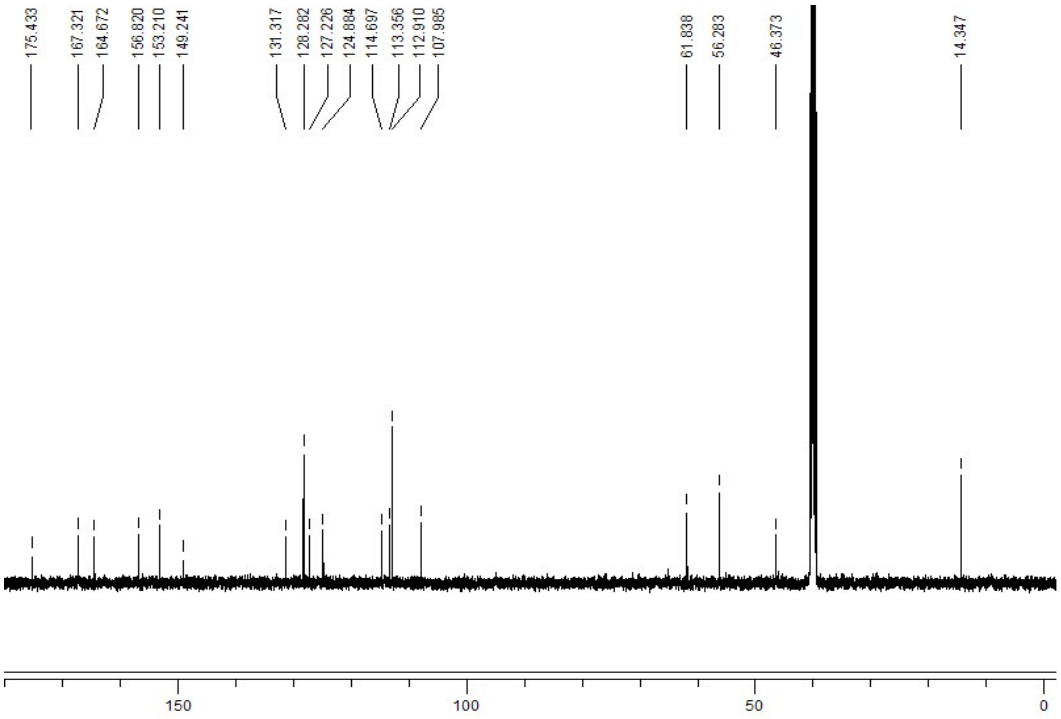
3. ESI-MS, ^{1}H NMR, ^{13}C NMR for compounds 6a-6n



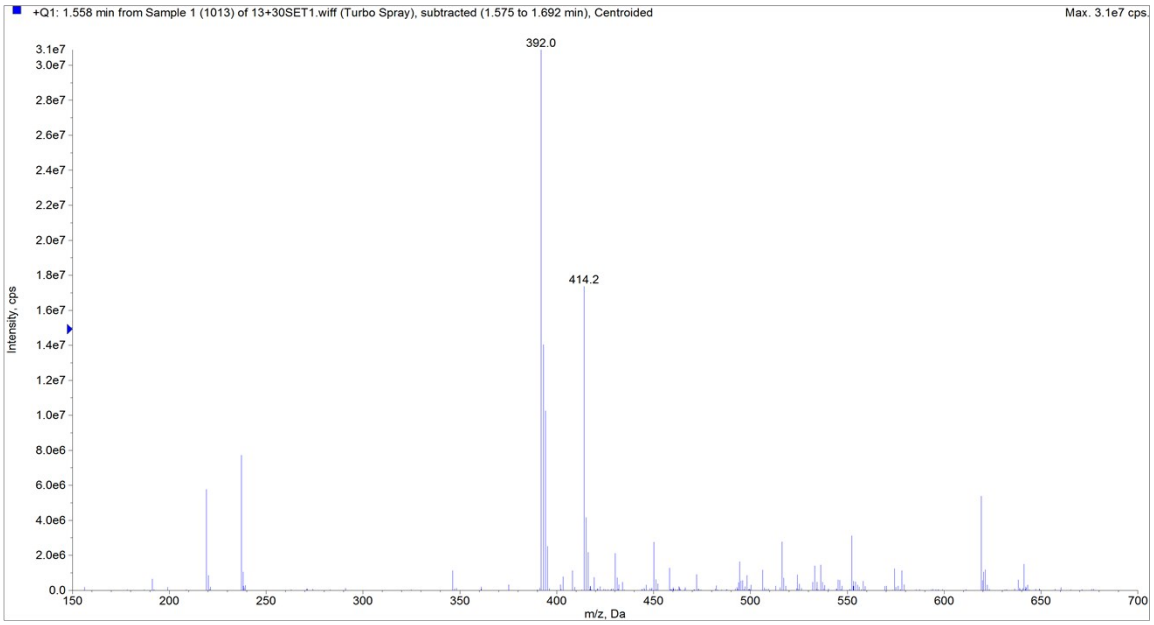
ESI-MS of compound **6a**



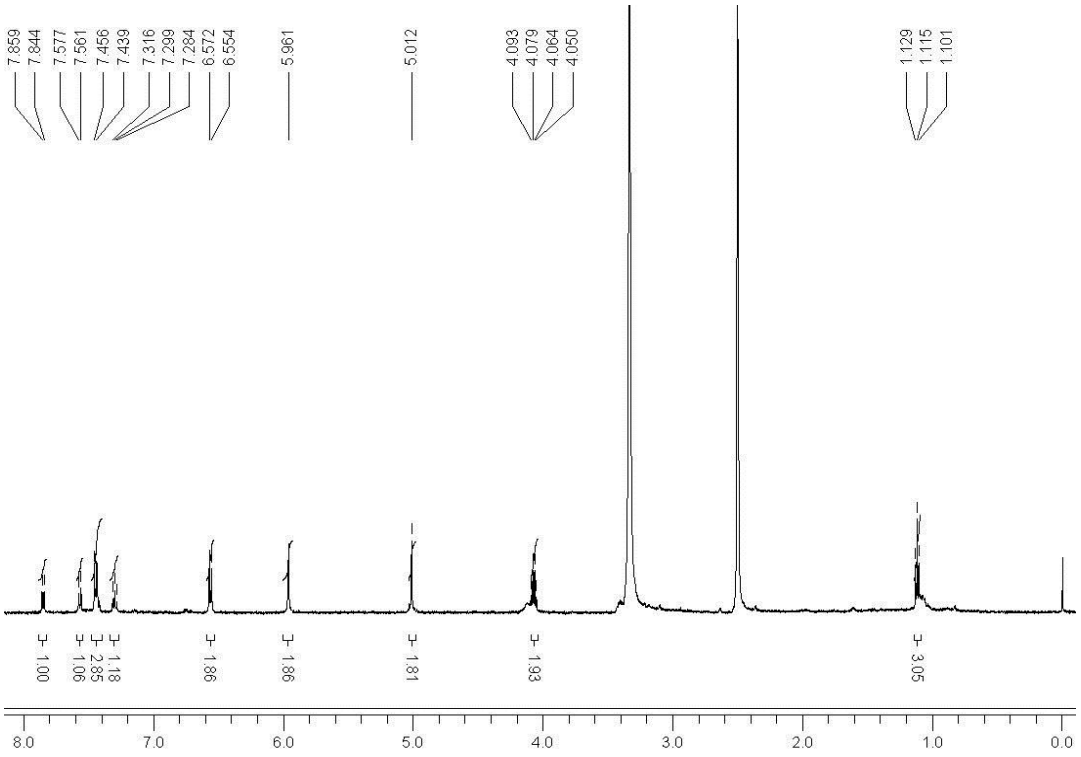
^{1}H-NMR spectra of compound **6a**



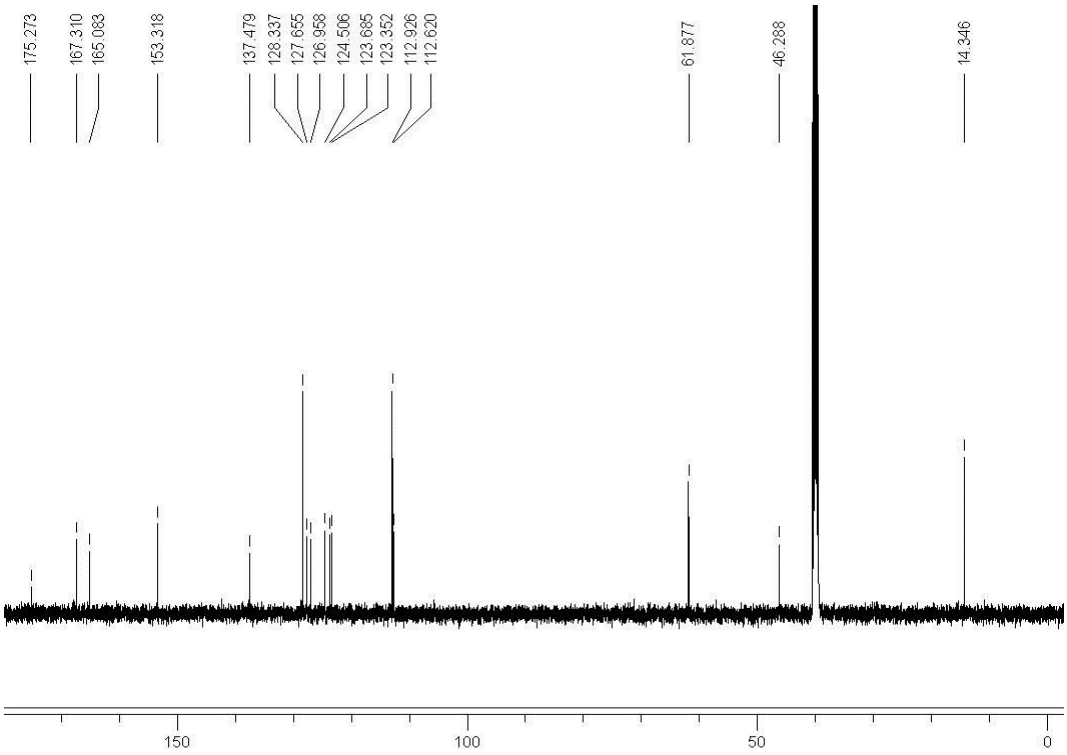
^{13}C-NMR spectra of compound **6a**



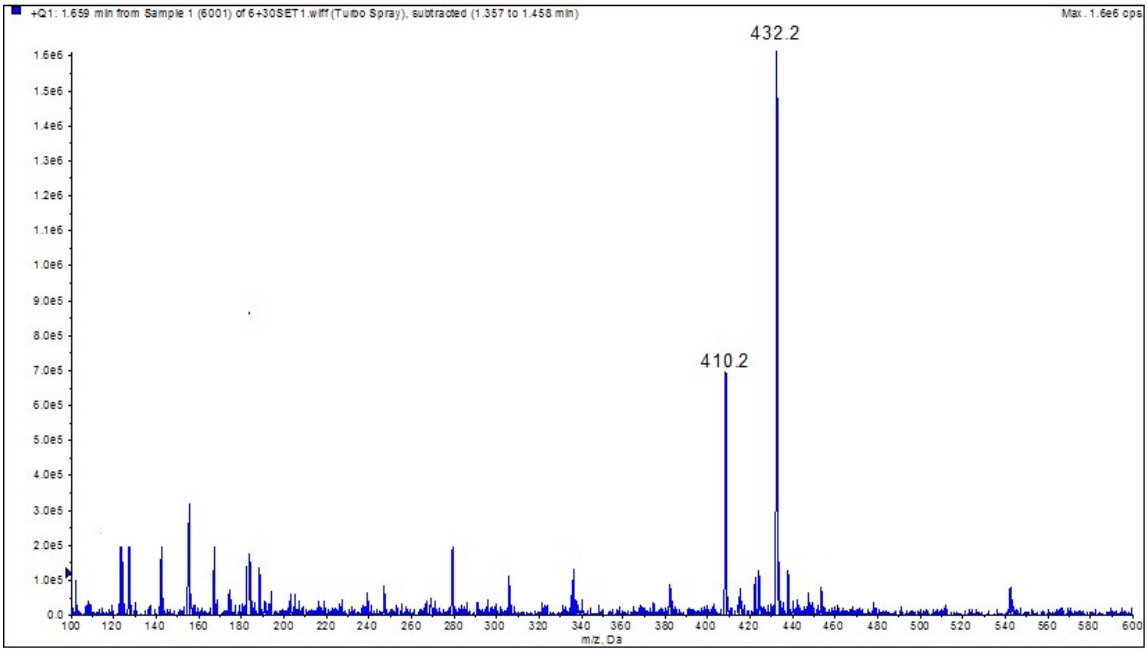
ESI-MS of compound **6b**



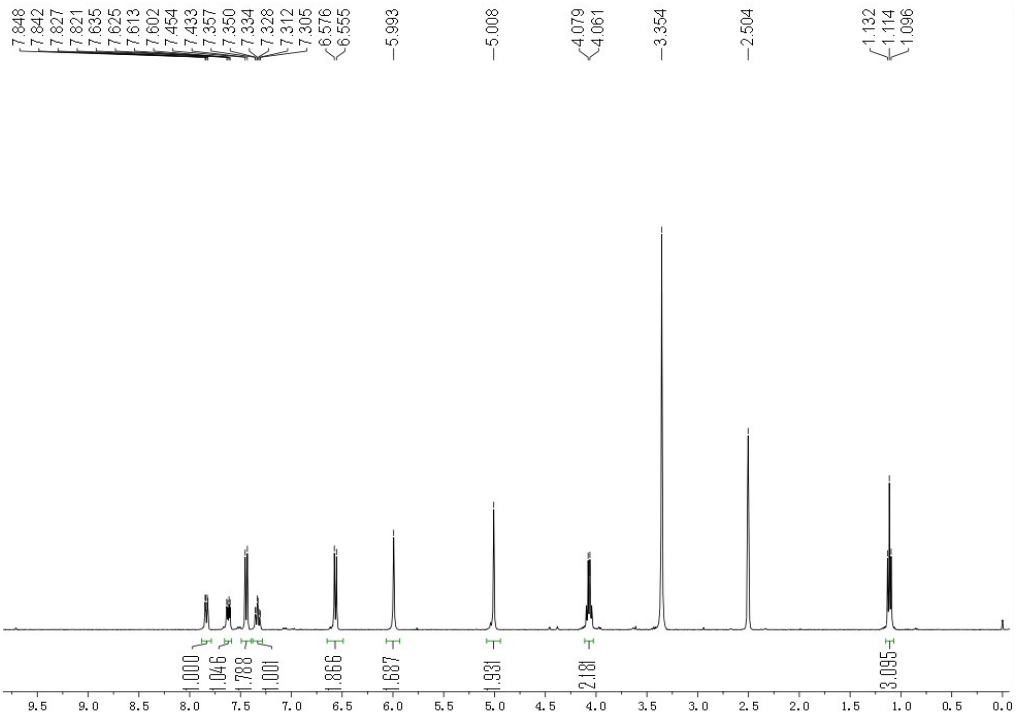
^{1}H-NMR spectra of compound **6b**



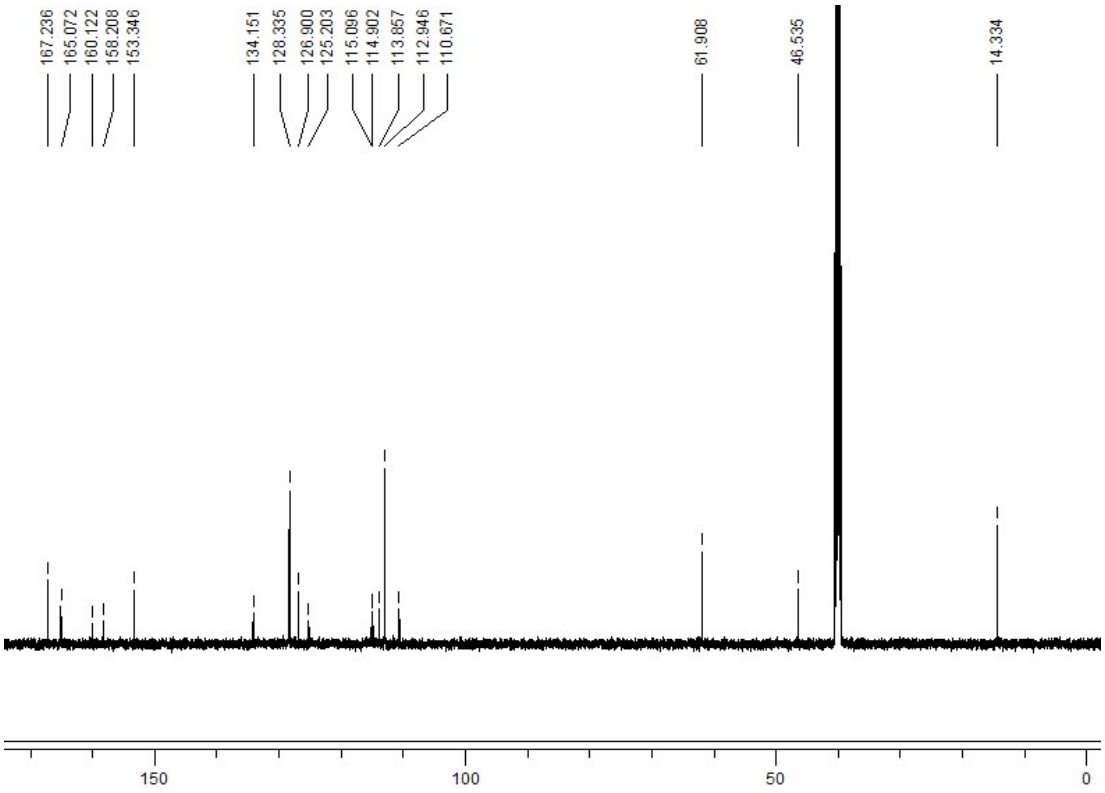
^{13}C-NMR spectra of compound **6b**



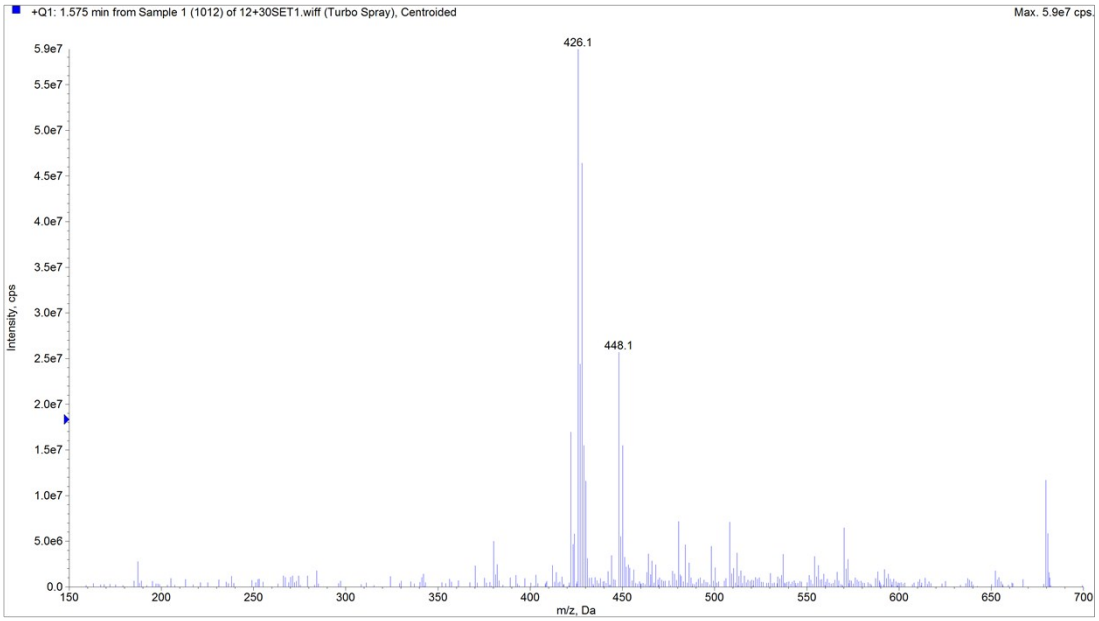
ESI-MS of compound **6c**



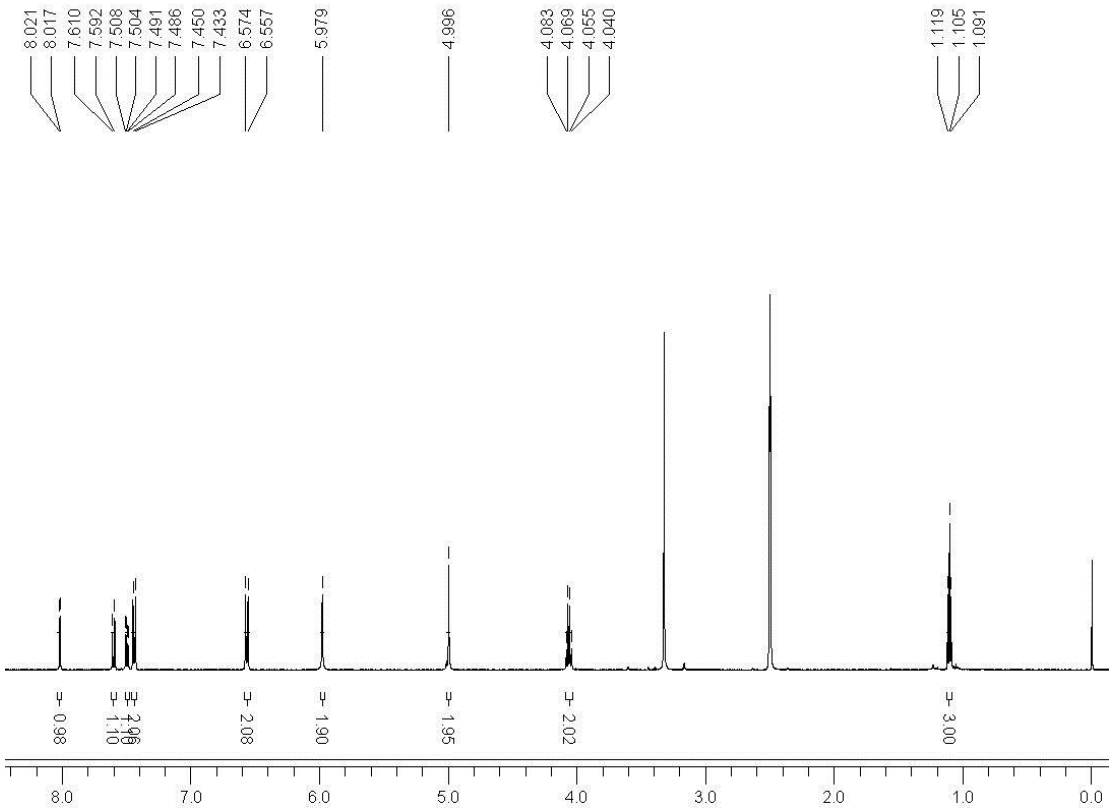
^{1}H-NMR spectra of compound **6c**



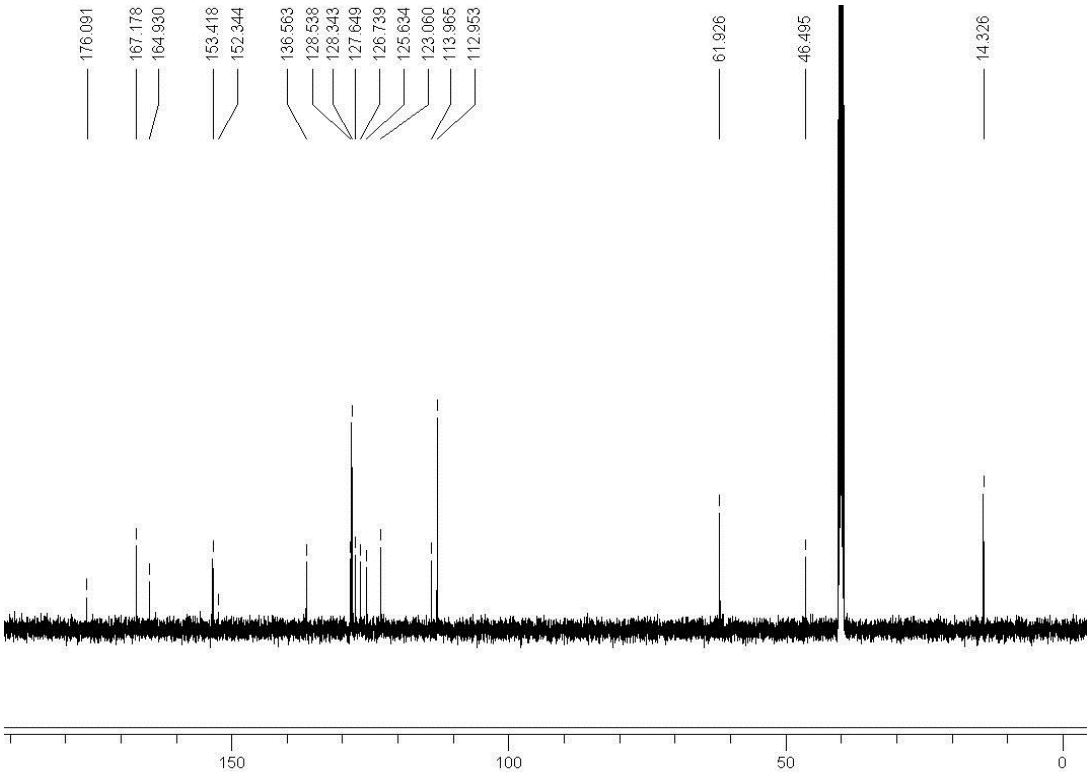
^{13}C-NMR spectra of compound **6c**



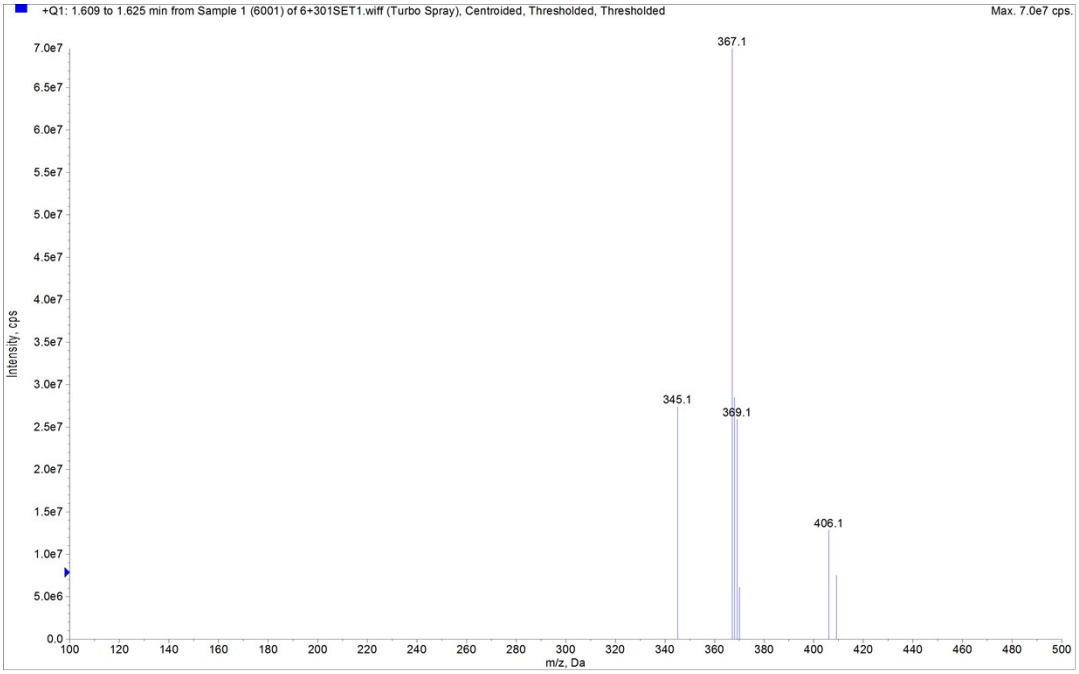
ESI-MS of compound **6d**



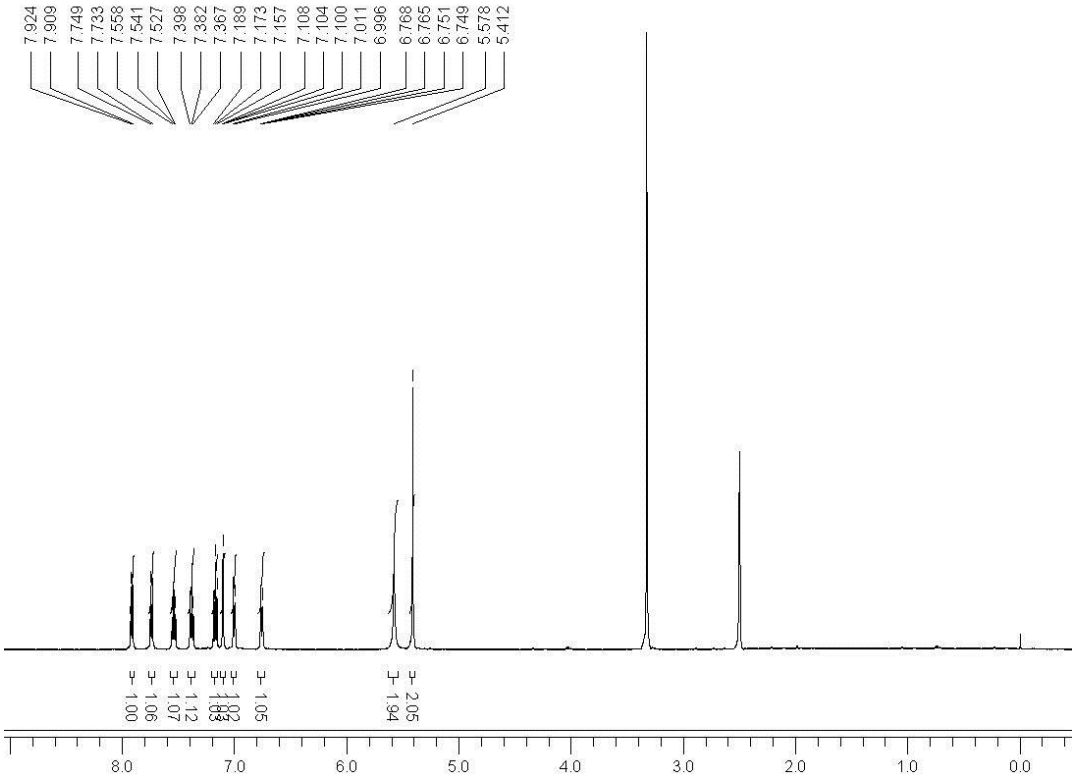
^{1}H-NMR spectra of compound **6d**



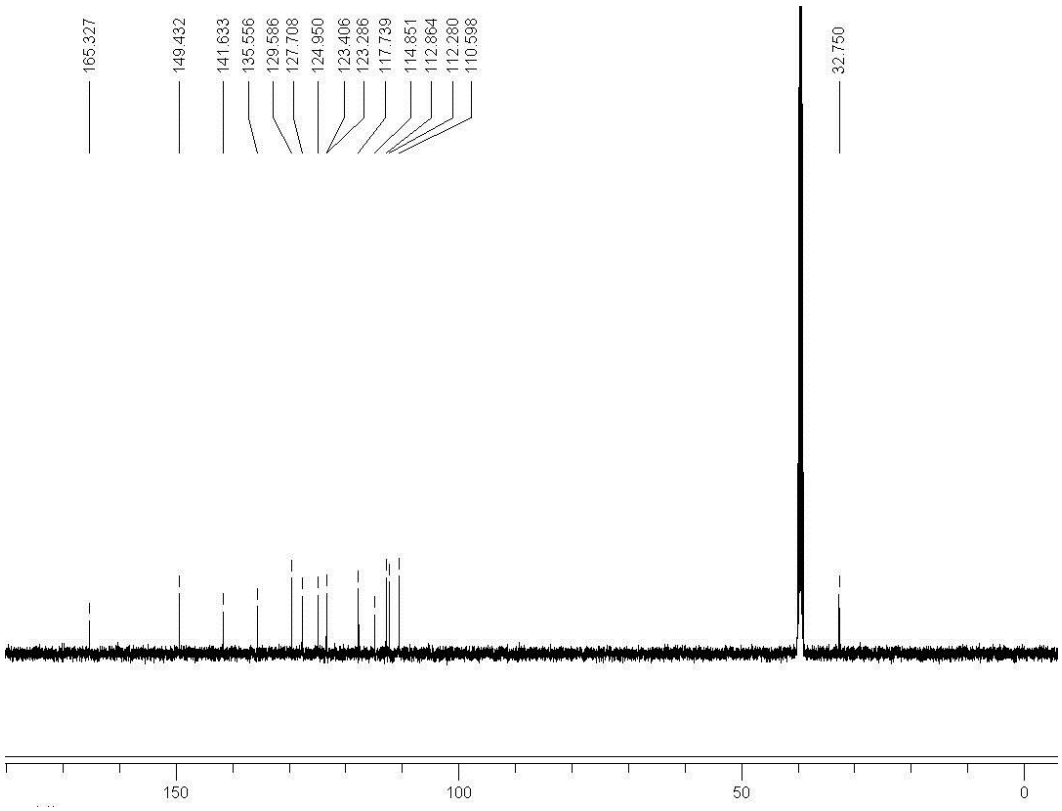
^{13}C-NMR spectra of compound **6d**



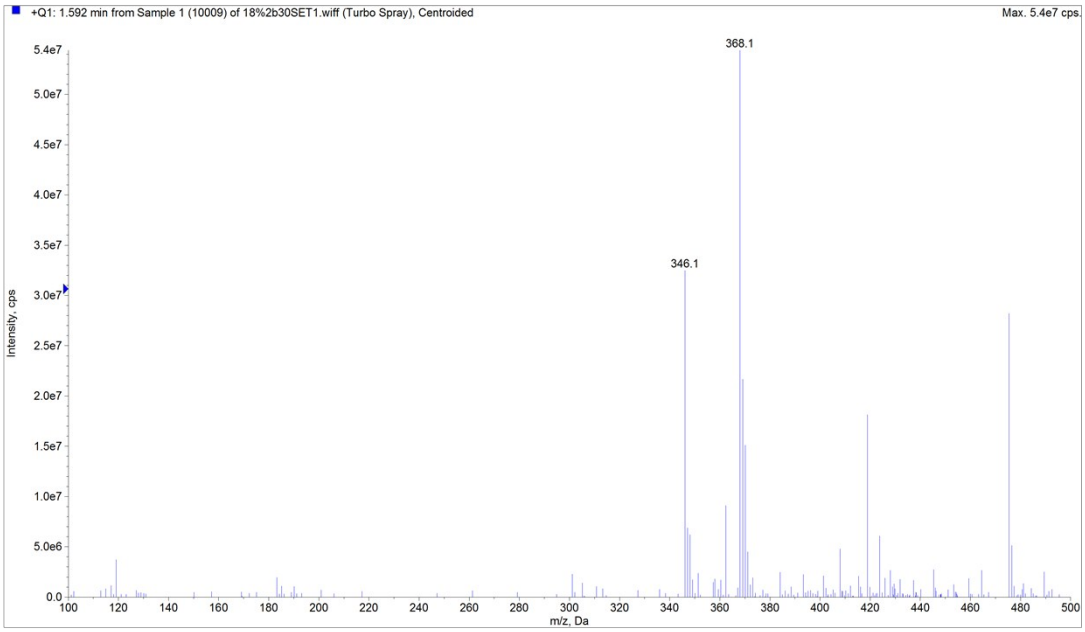
ESI-MS of compound **6e**



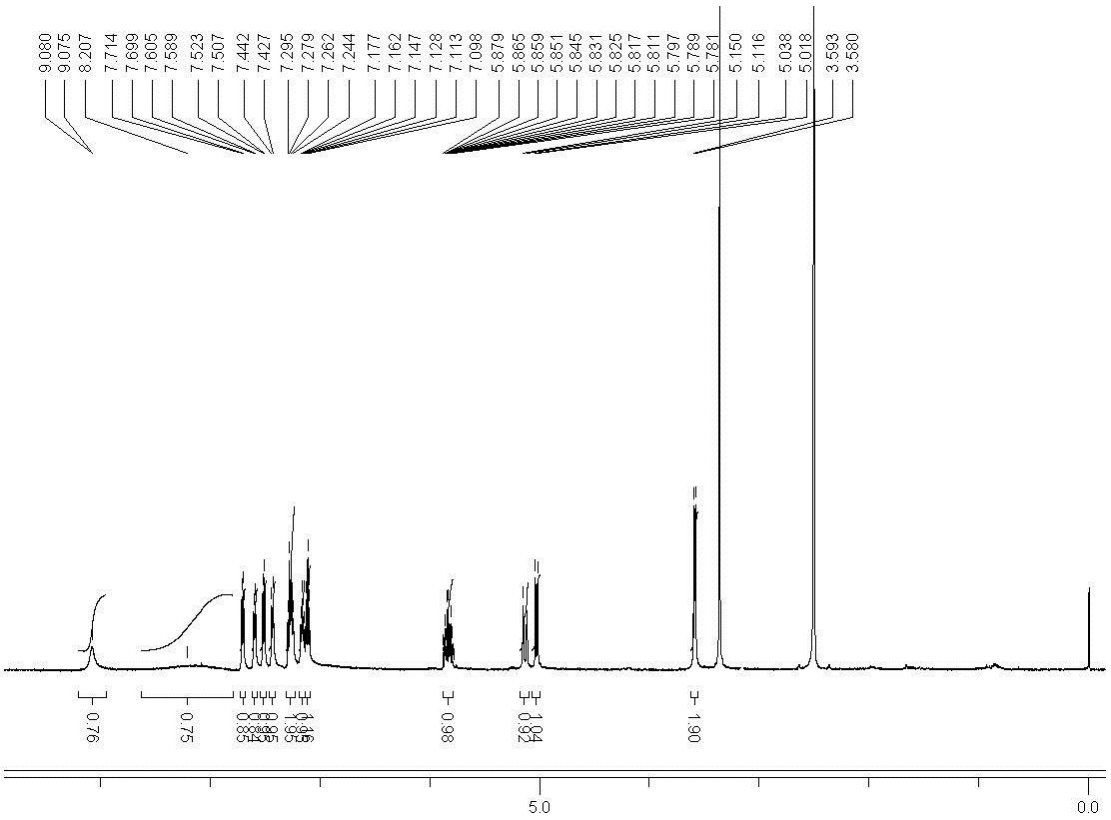
^{1}H-NMR spectra of compound **6e**



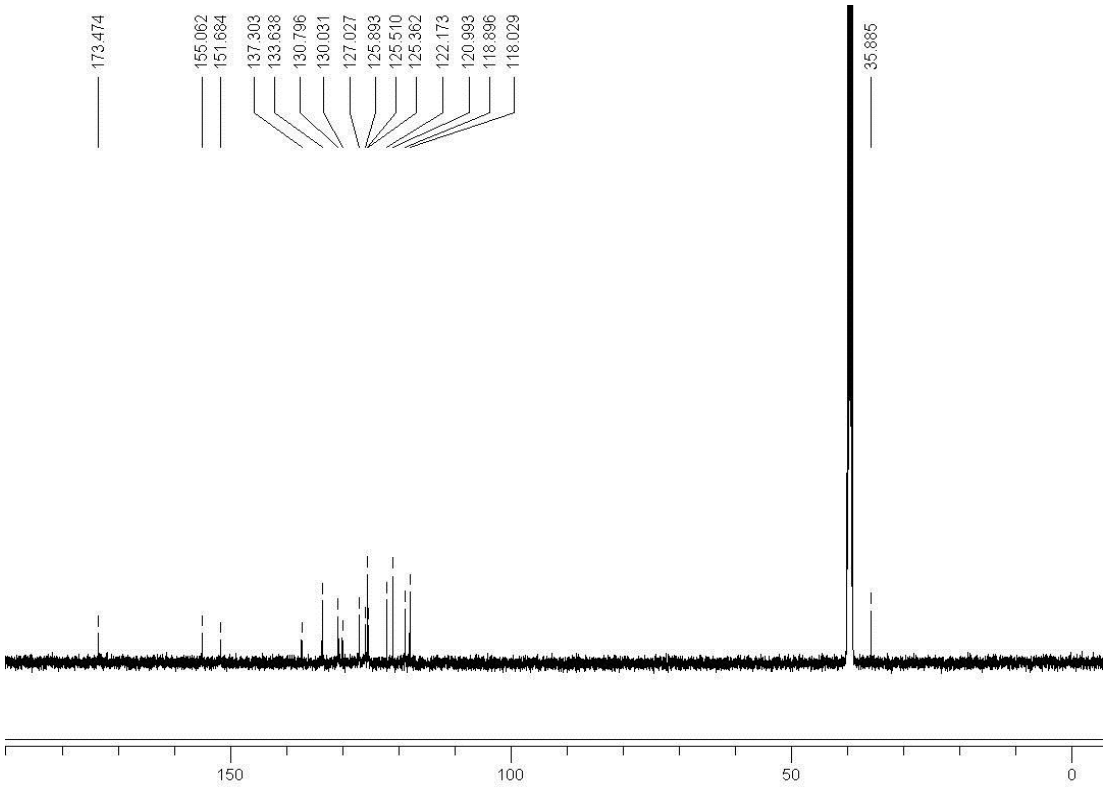
^{13}C-NMR spectra of compound **6e**



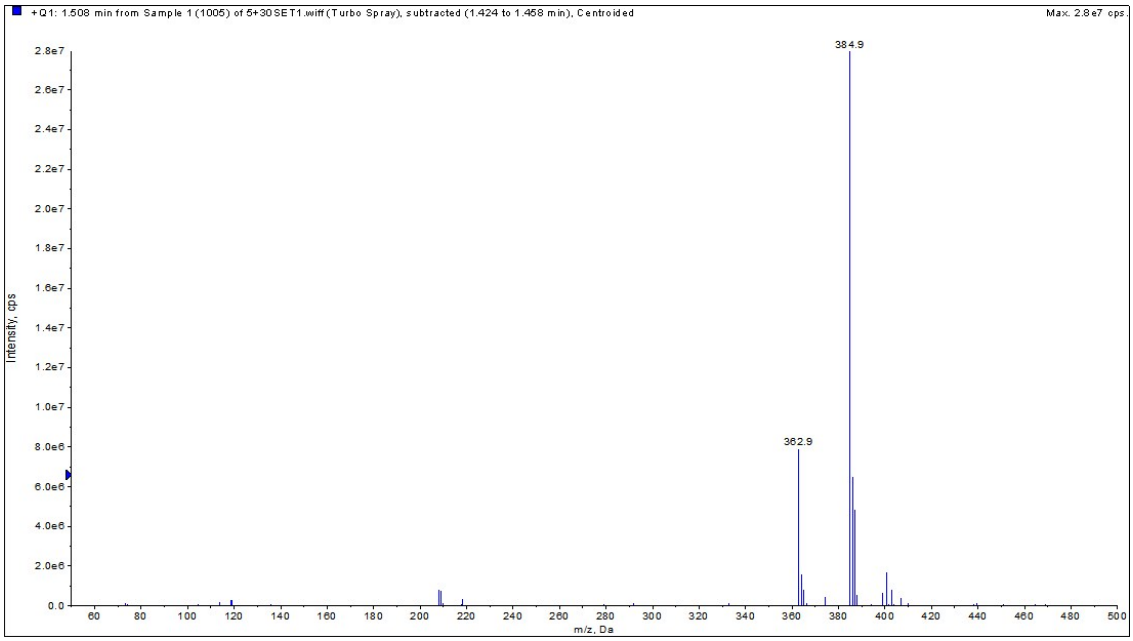
ESI-MS of compound **6f**



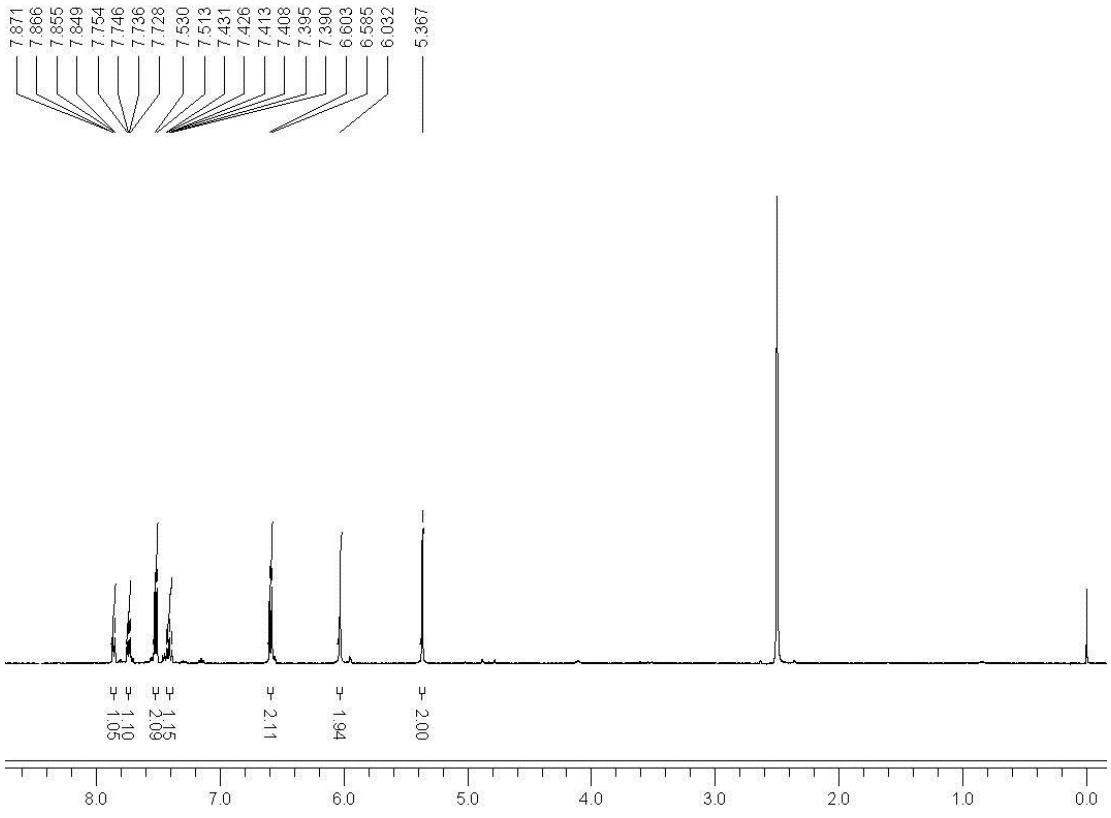
^{1}H-NMR spectra of compound **6f**



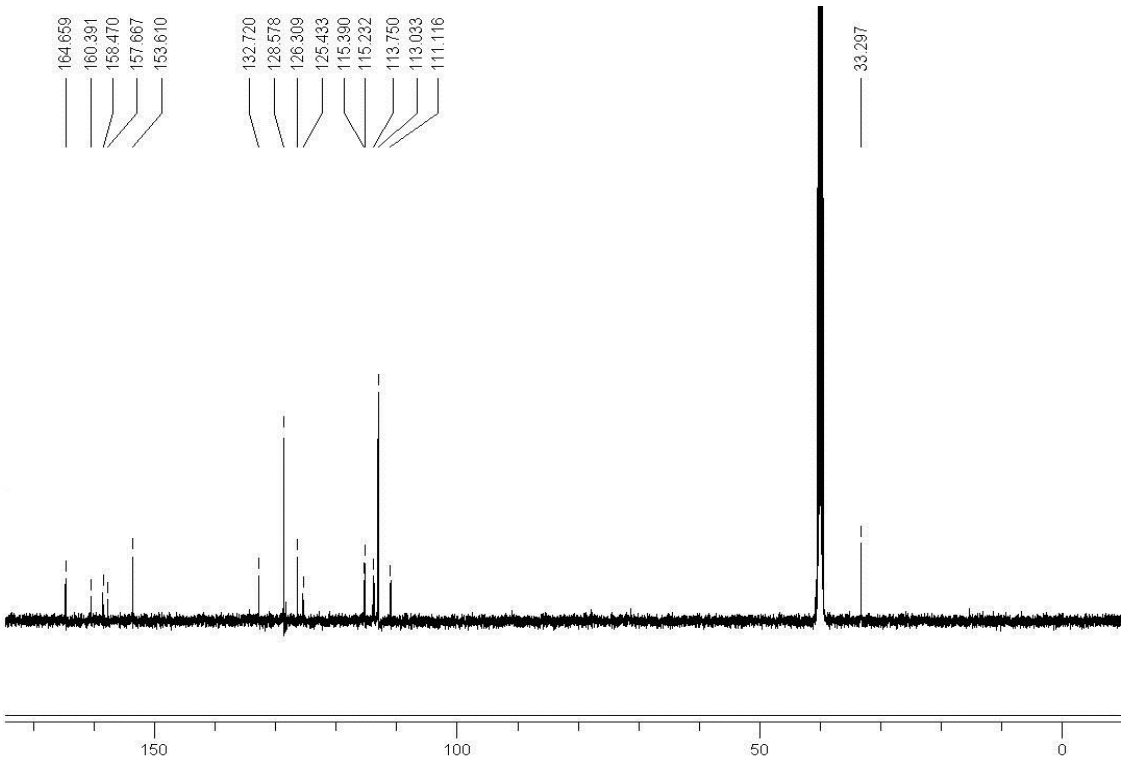
^{13}C-NMR spectra of compound **6f**



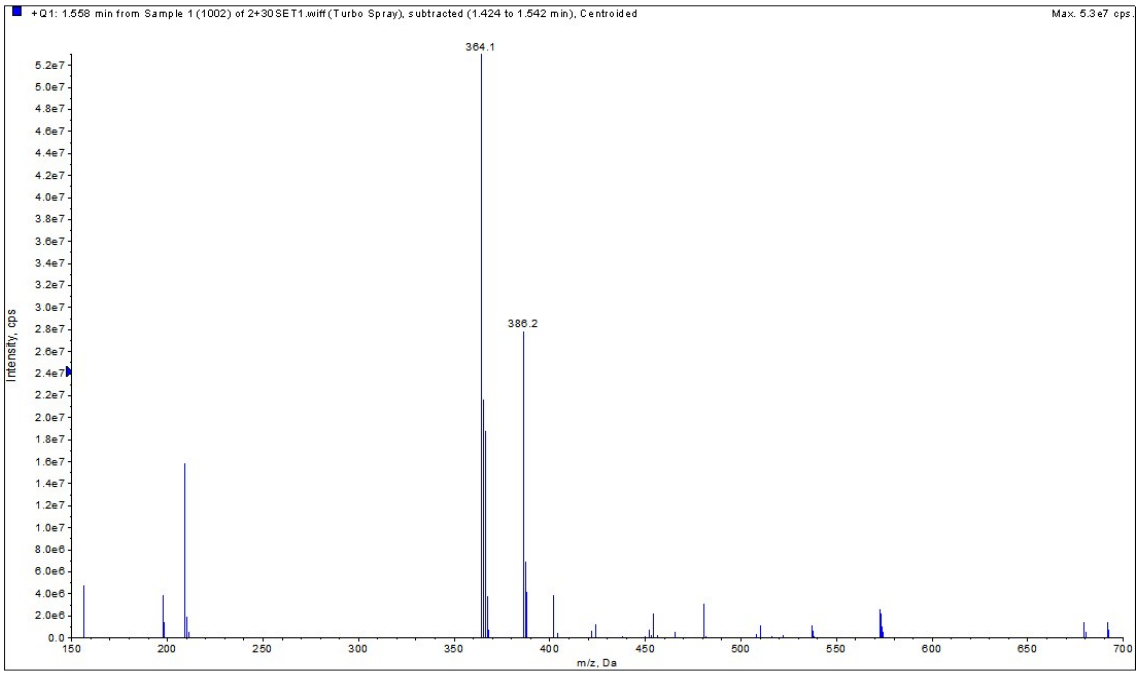
ESI-MS of compound **6g**



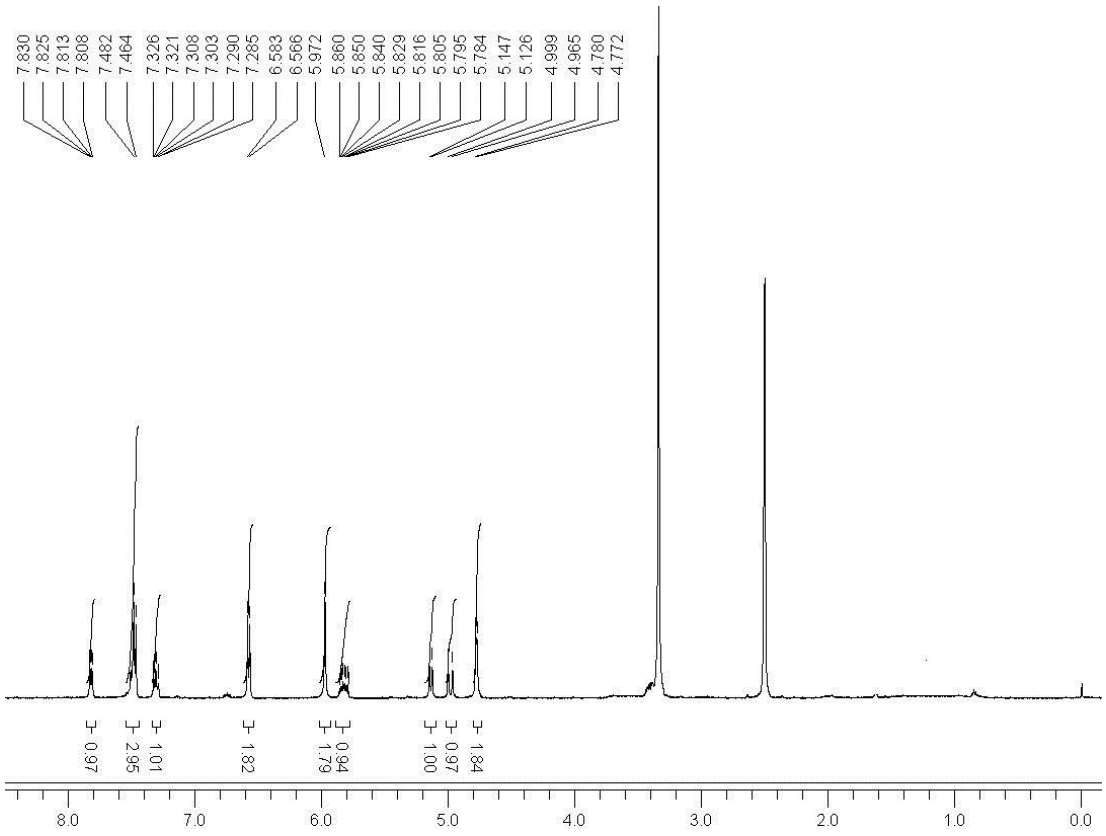
^{1}H-NMR spectra of compound **6g**



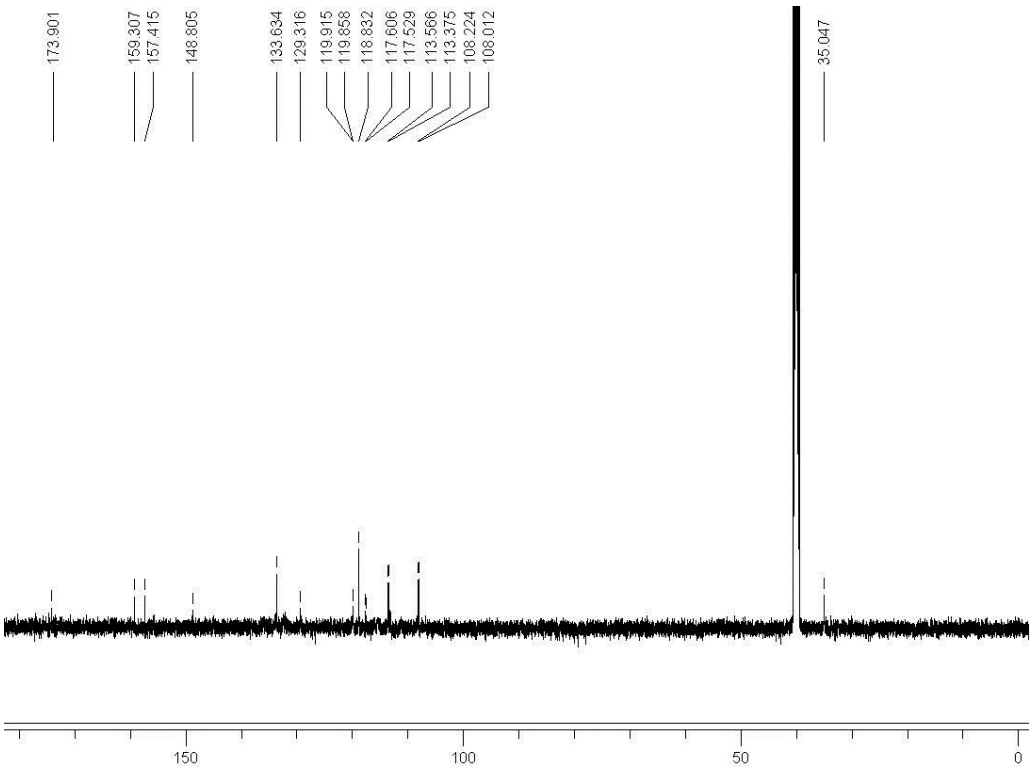
^{13}C-NMR spectra of compound **6g**



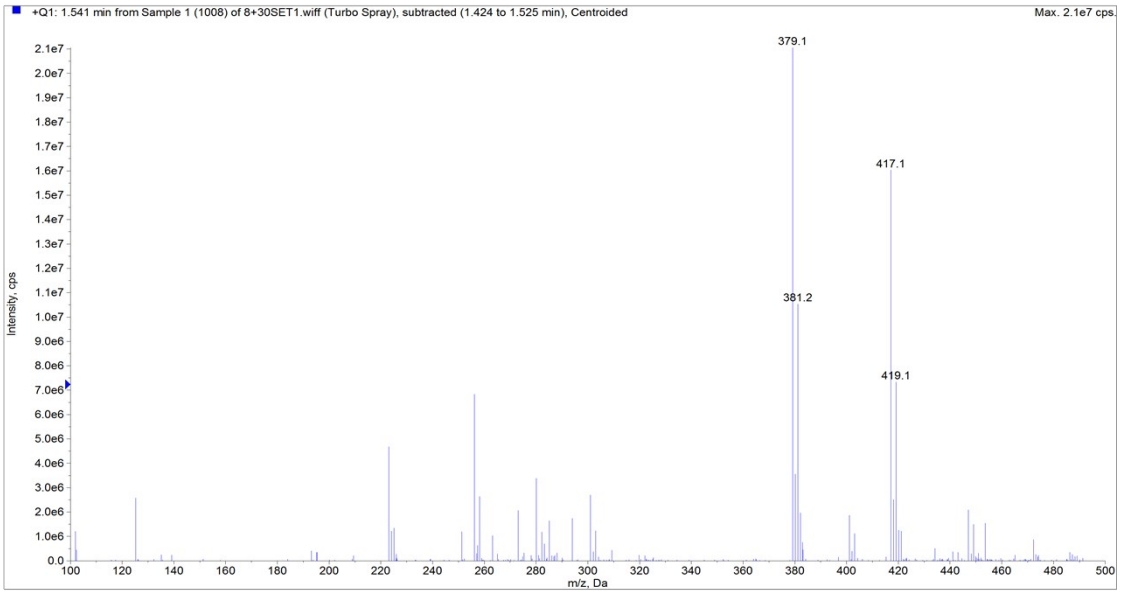
ESI-MS of compound **6h**



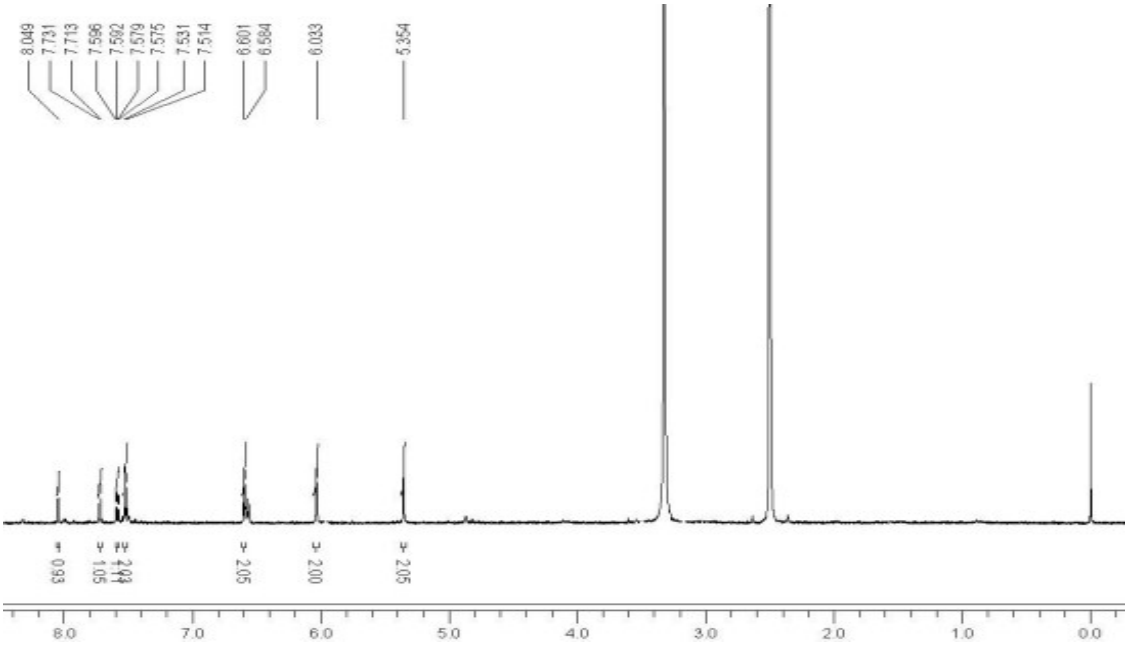
^{1}H-NMR spectra of compound **6h**



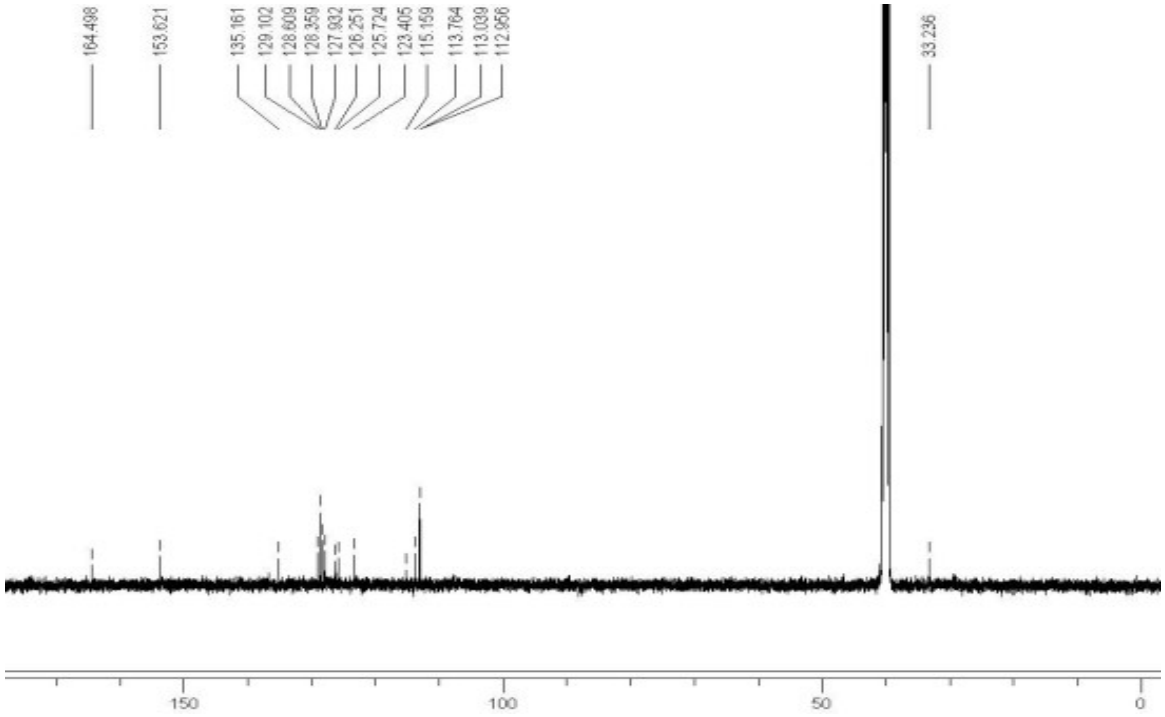
^{13}C-NMR spectra of compound **6h**



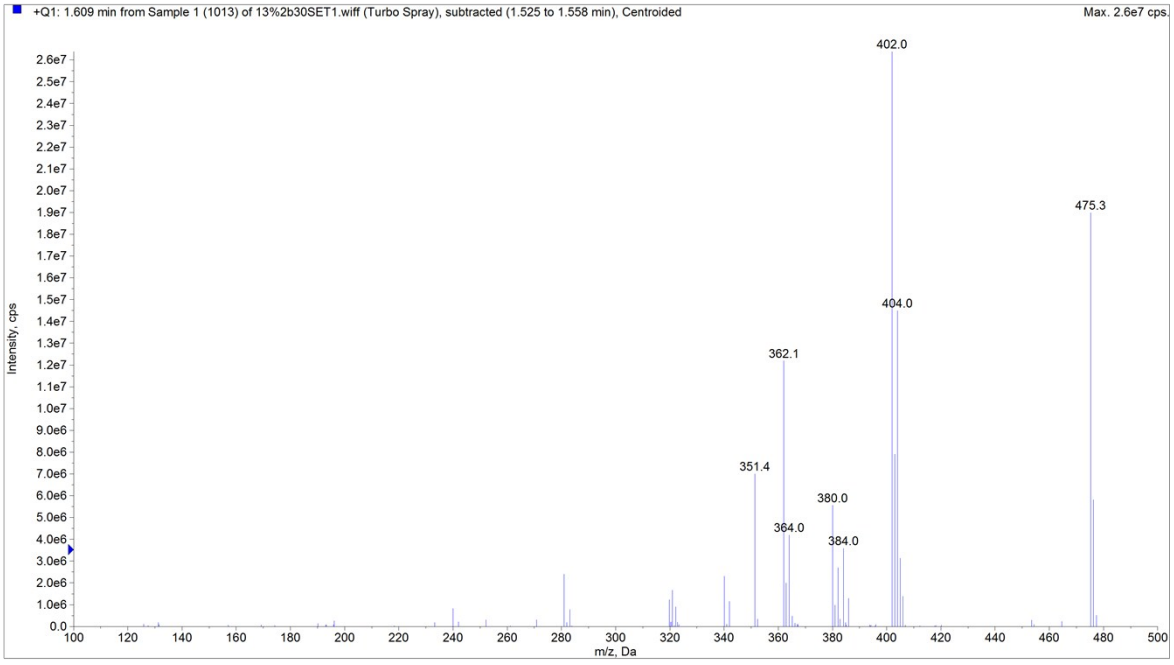
ESI-MS of compound **6i**



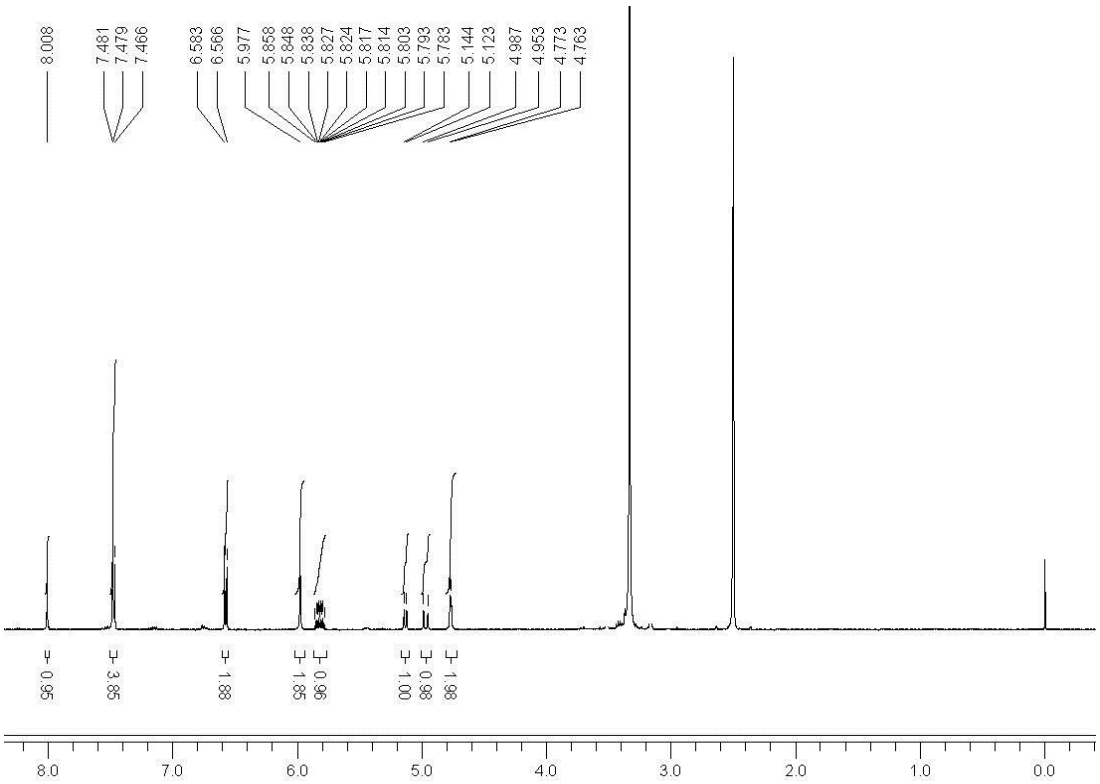
^{1}H-NMR spectra of compound **6i**



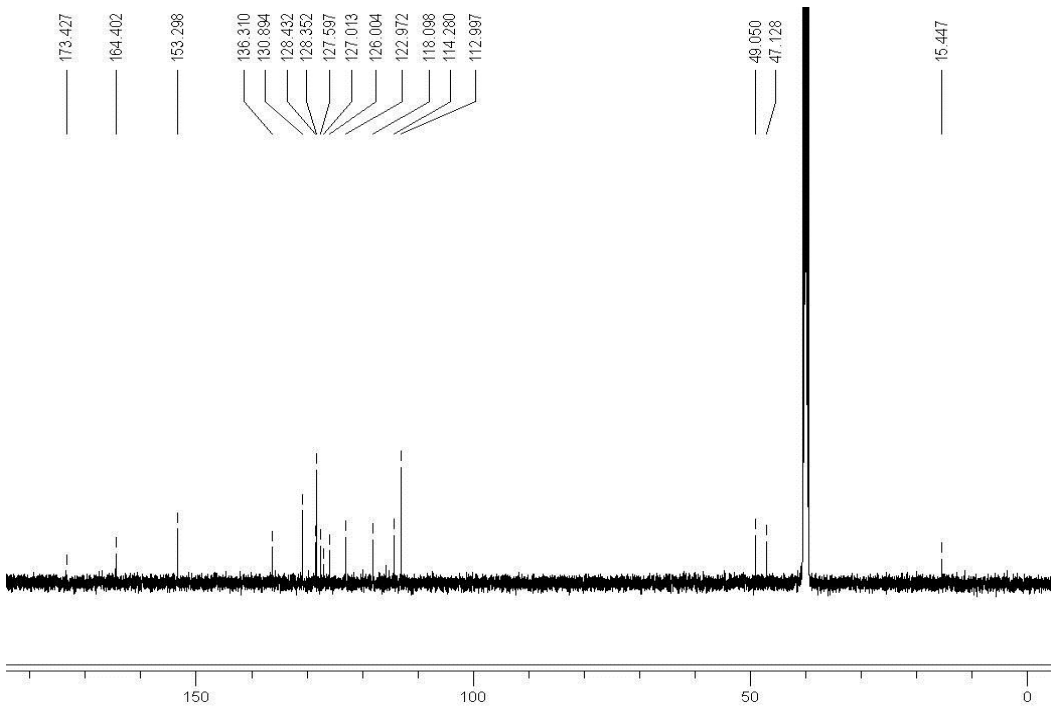
^{13}C-NMR spectra of compound **6i**



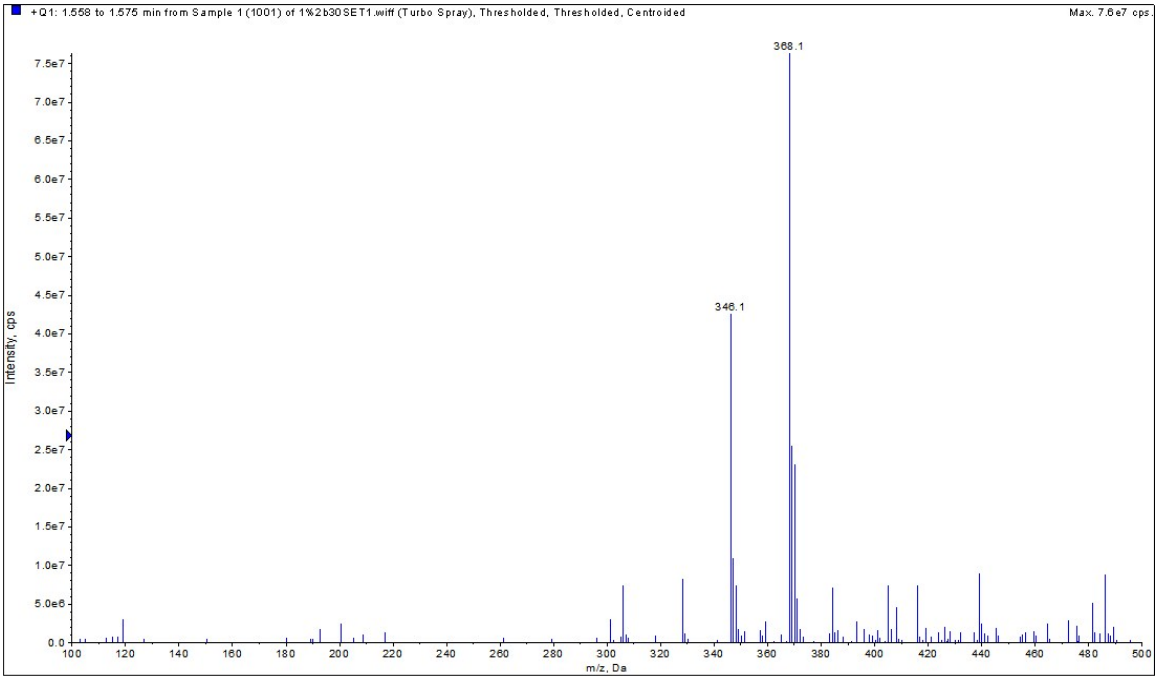
ESI-MS of compound **6j**



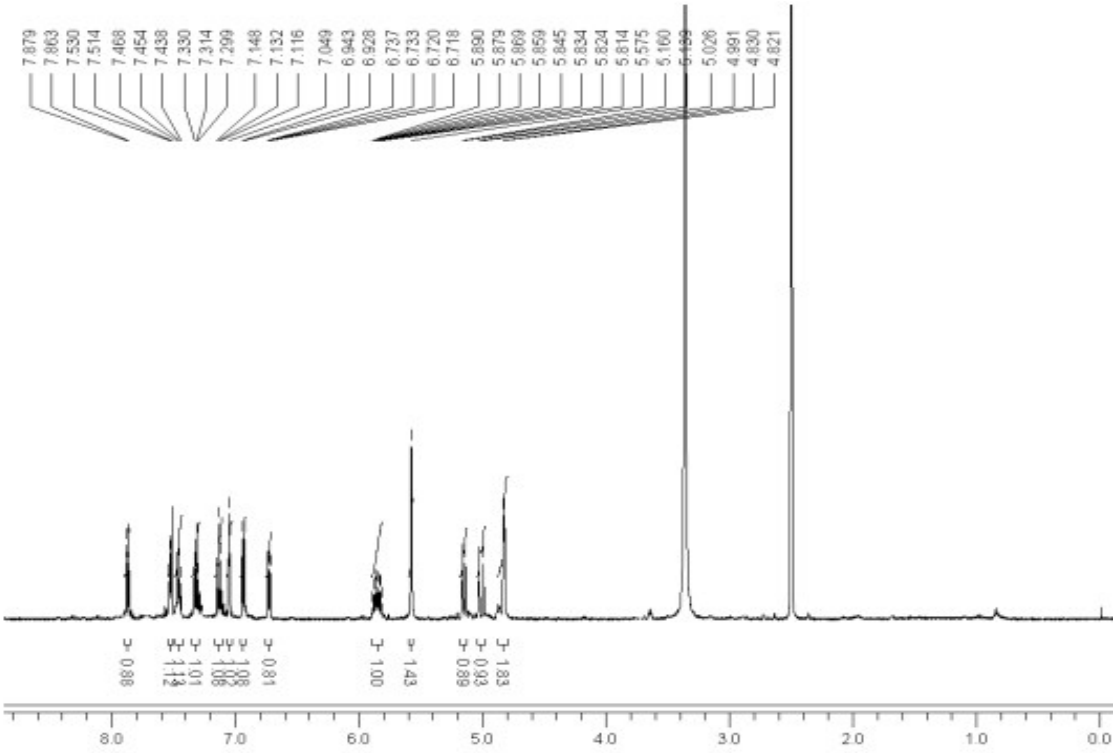
^{1}H-NMR spectra of compound **6j**



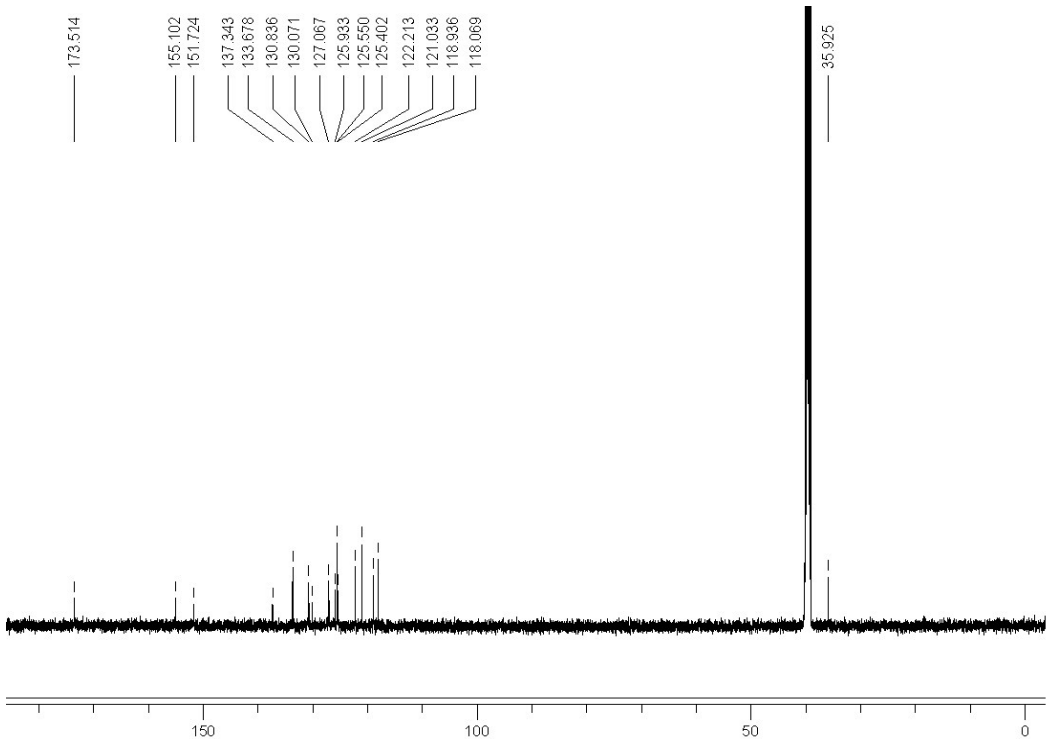
^{13}C-NMR spectra of compound **6j**



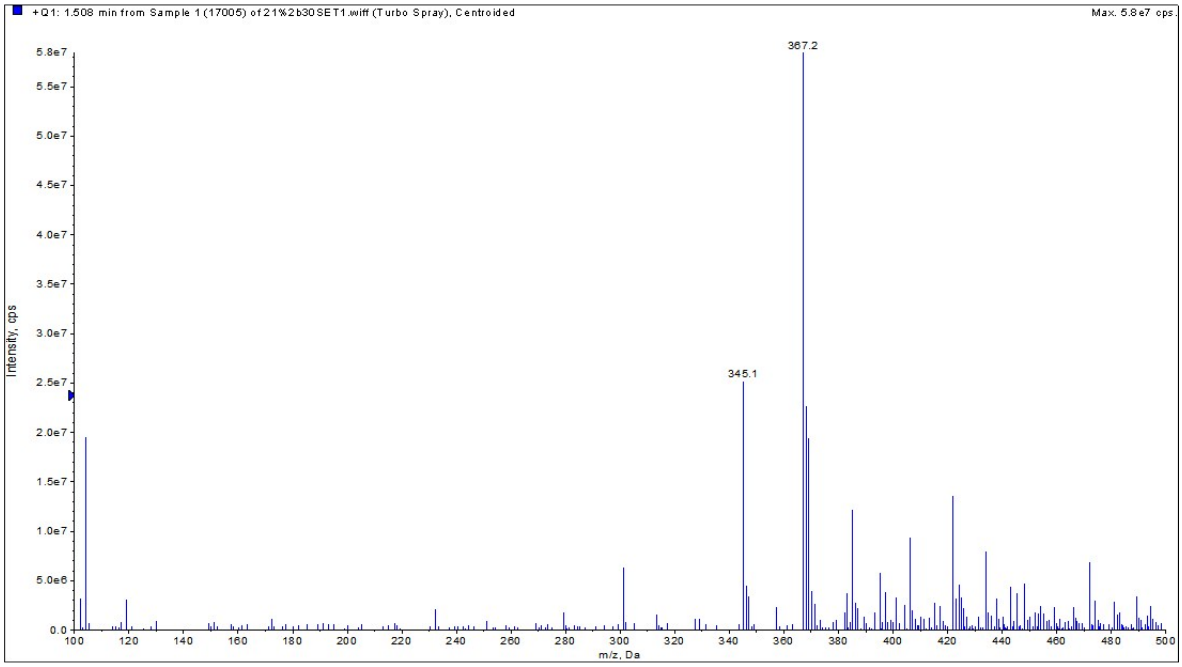
ESI-MS of compound **6k**



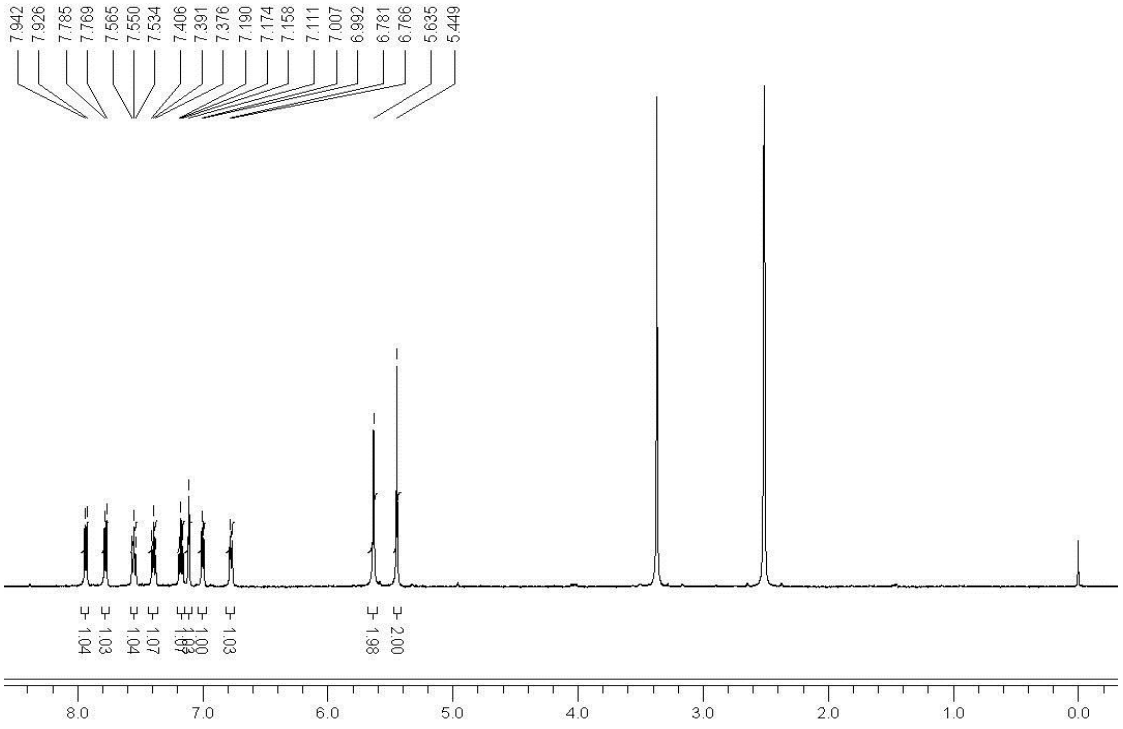
^{1}H-NMR spectra of compound **6k**



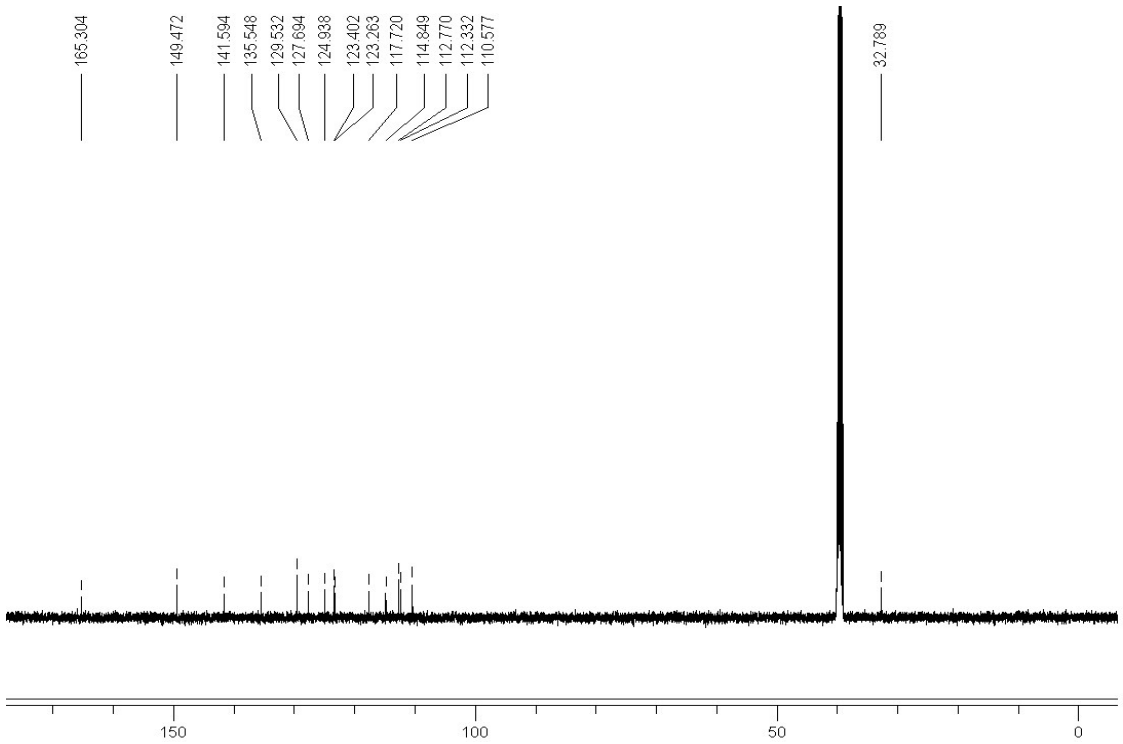
^{13}C-NMR spectra of compound **6k**



ESI-MS of compound **6l**

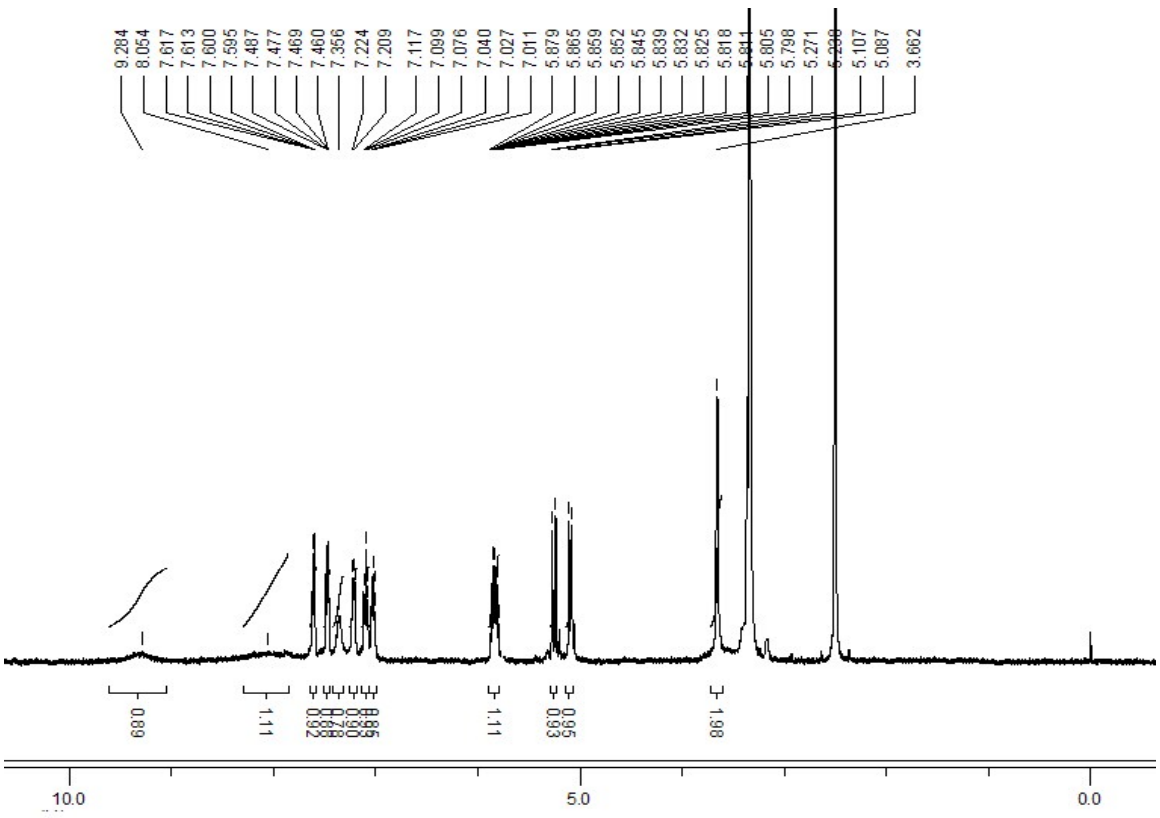


^{1}H-NMR spectra of compound **6l**

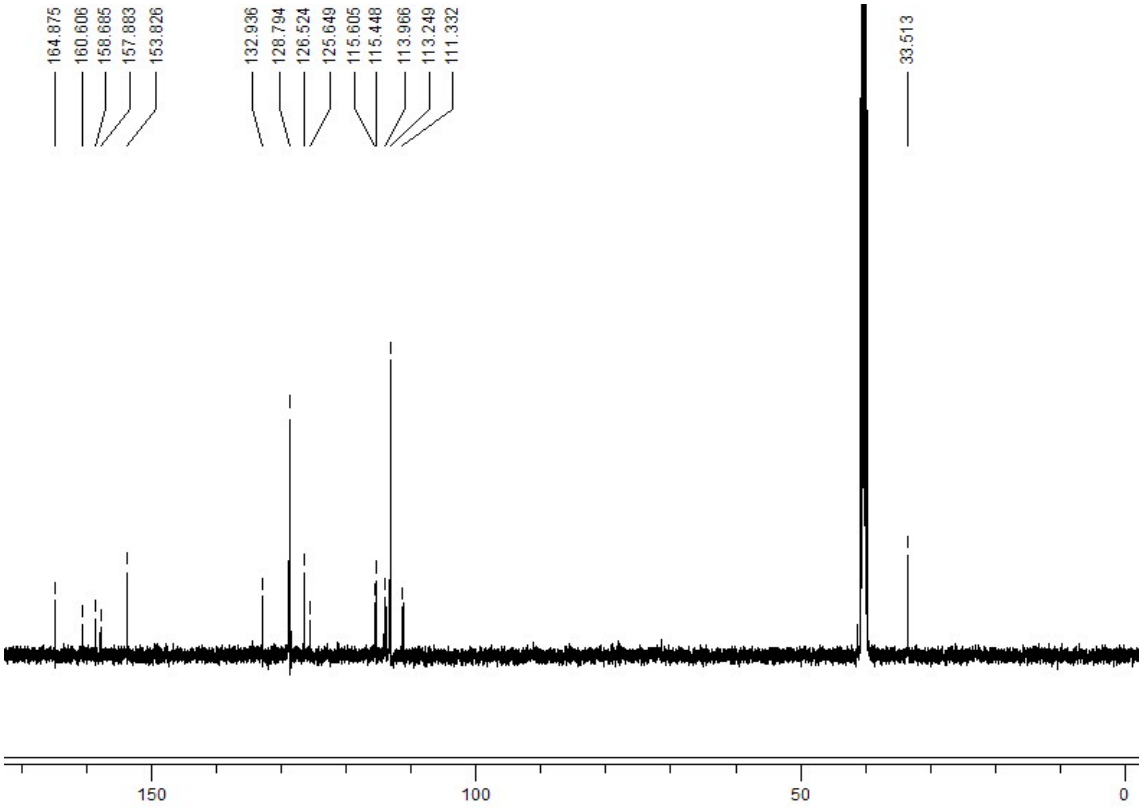


^{13}C-NMR spectra of compound **6l**

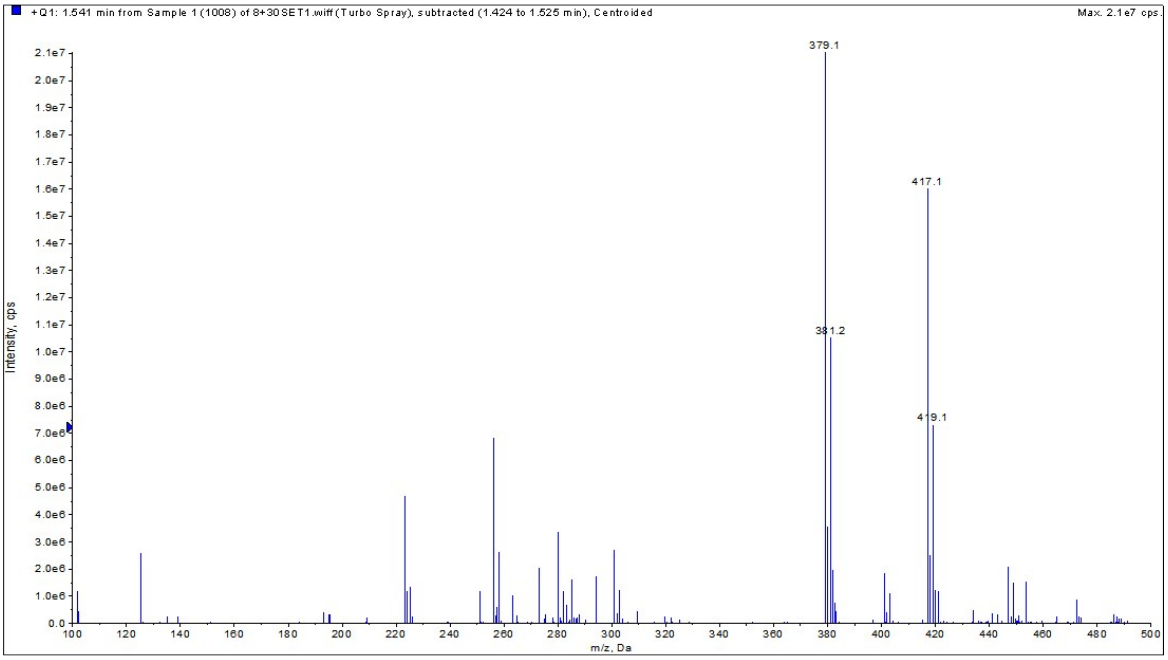
ESI-MS of compound **6m**



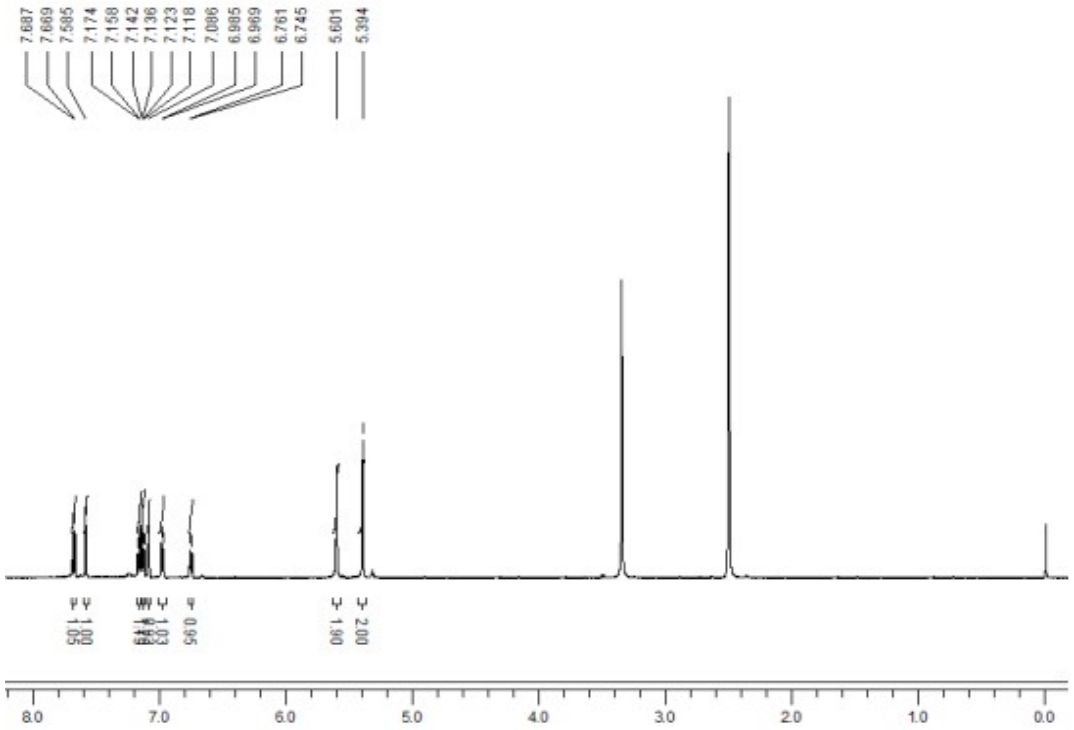
[1]H-NMR spectra of compound **6m**



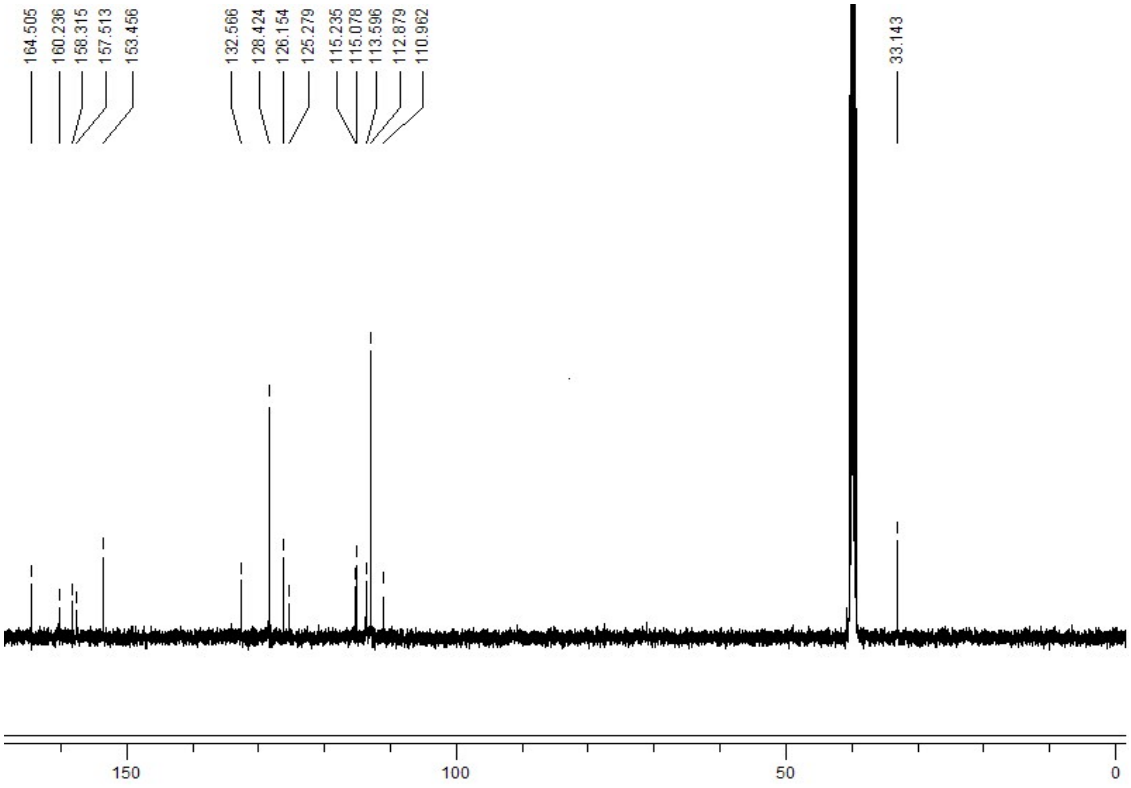
[13]C-NMR spectra of compound **6m**



ESI-MS of compound **6n**



^{1}H-NMR spectra of compound **6n**



^{13}C-NMR spectra of compound **6n**