

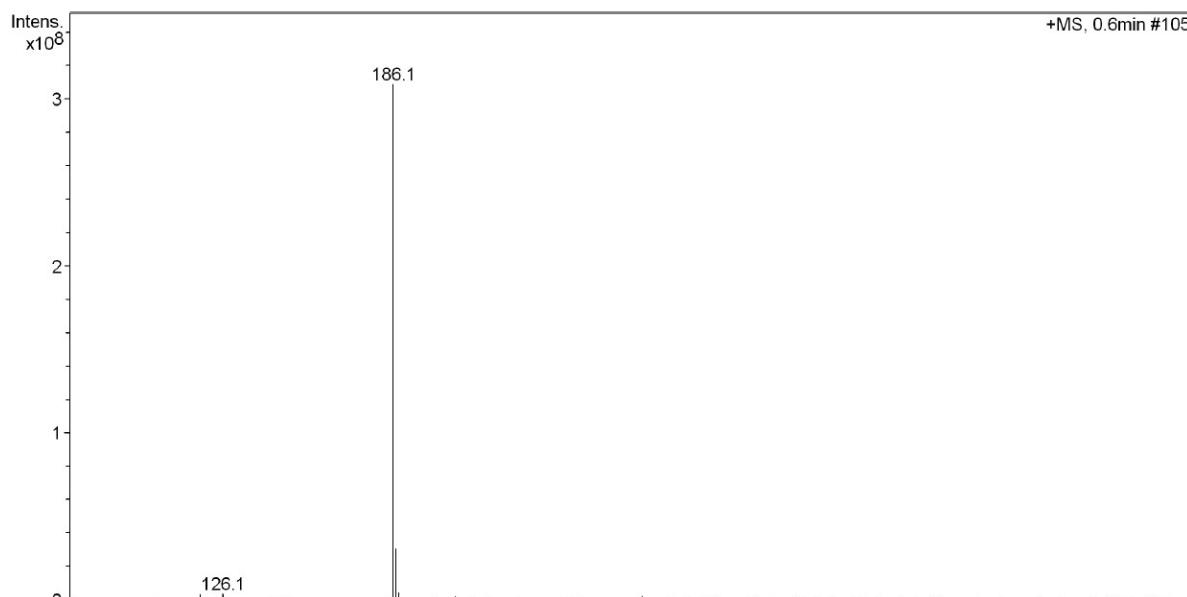
### Supporting information

Design, synthesis and biological evaluation of novel pteridinone derivatives possessing a sulfonyl moiety as potent dual inhibitors of PLK1 and BRD4

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Zhiwei Li, Mingze Qin, Yajing Liu, Ping Gong, Yanfang Zhao, Yunlei Hou\*

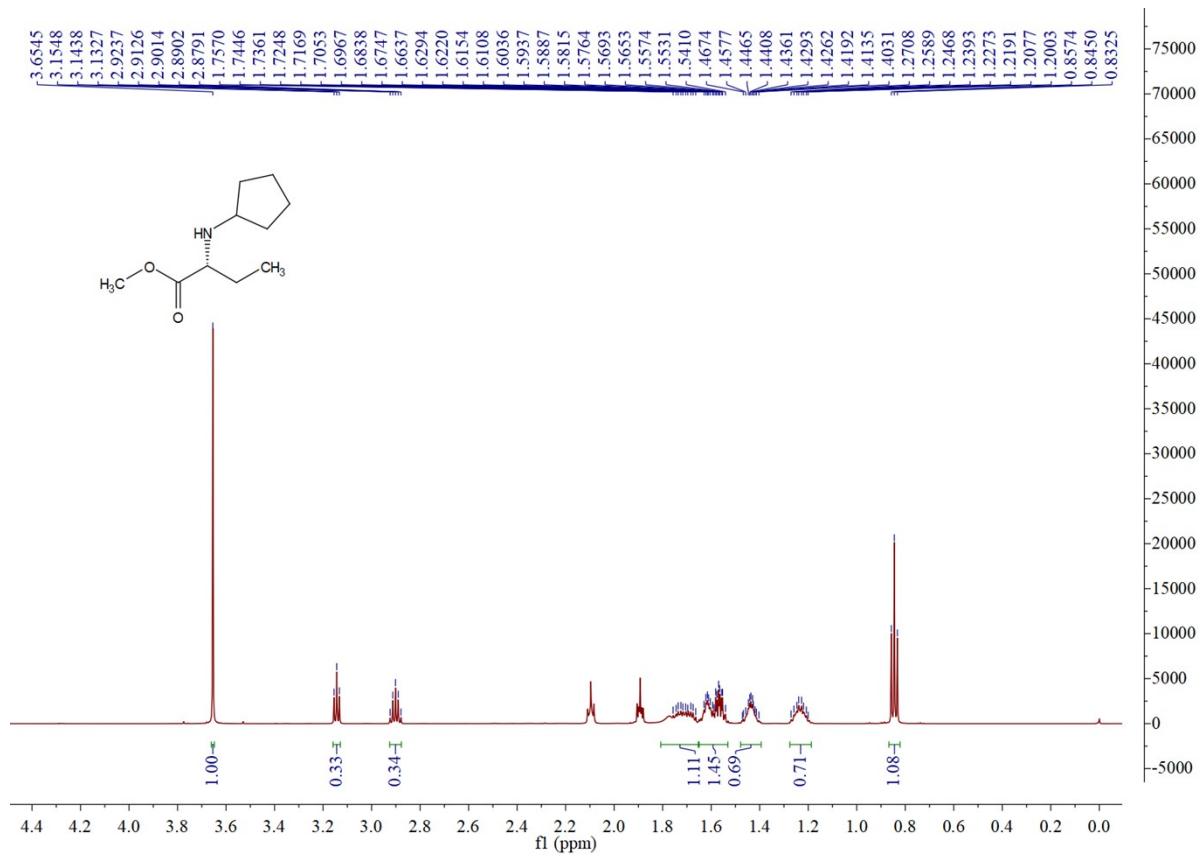
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Mass, <sup>1</sup>H NMR and <sup>13</sup>C NMR spectrum of compounds

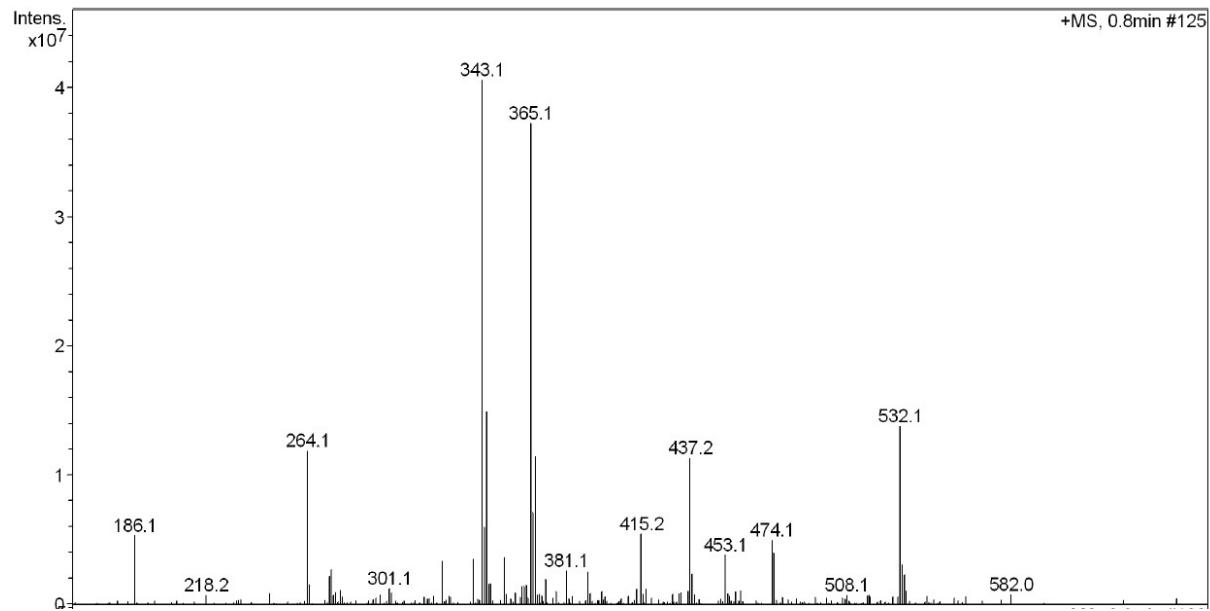


**Fig. 1 Mass spectrum of compound 2**

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**Fig. 2** <sup>1</sup>H NMR spectrum of compound 3



**Fig. 3** Mass spectrum of compound 4

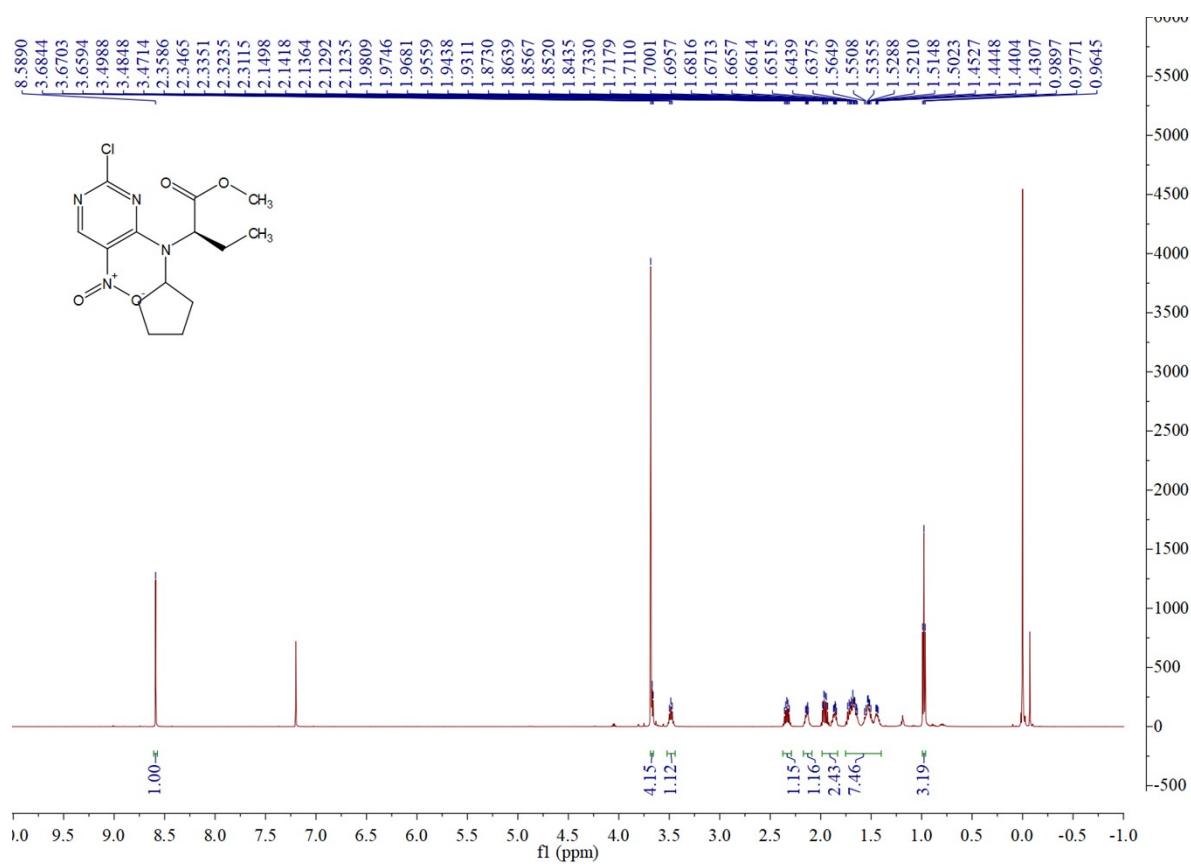


Fig. 4 <sup>1</sup>H NMR spectrum of compound 4

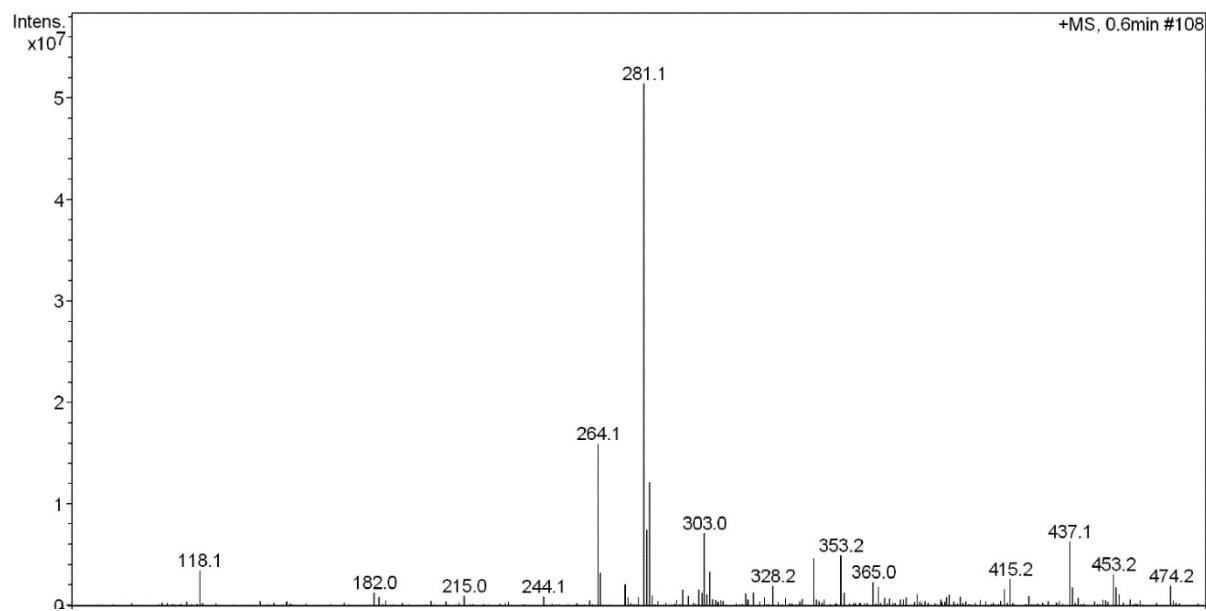
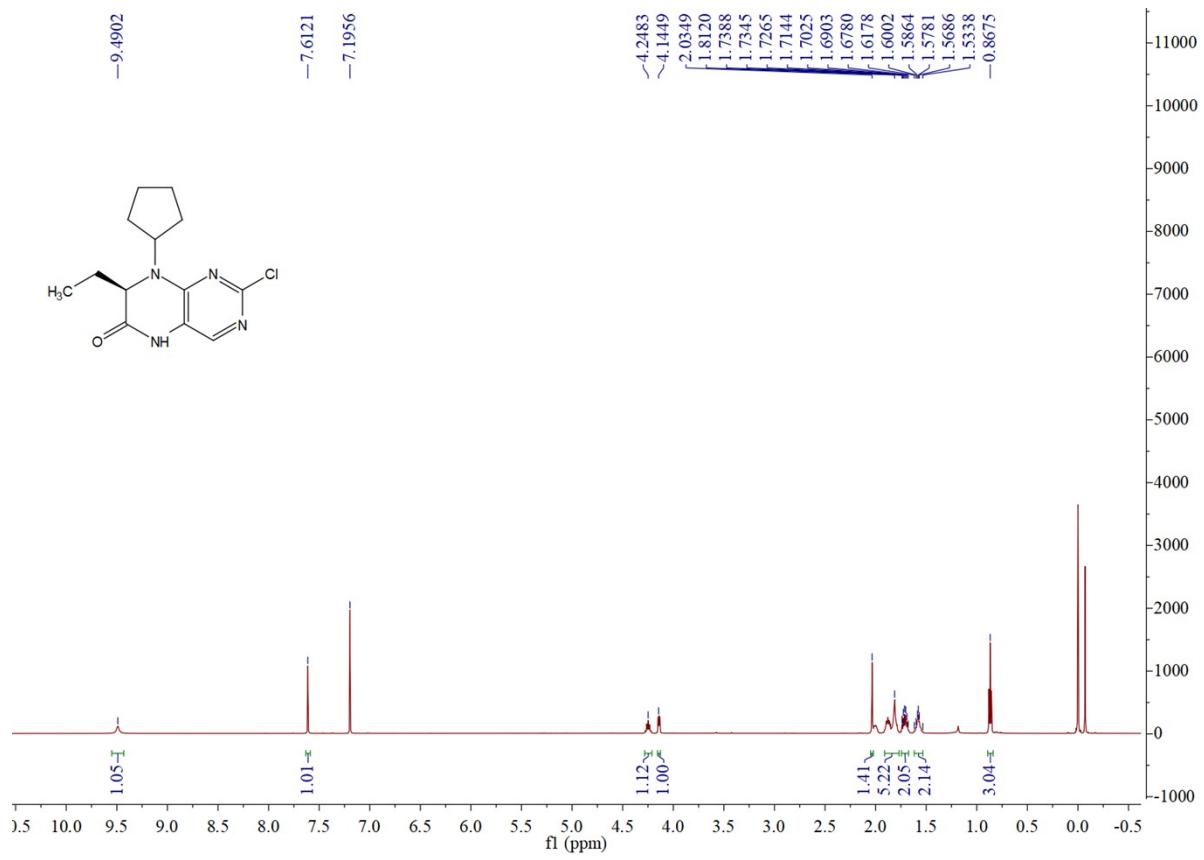
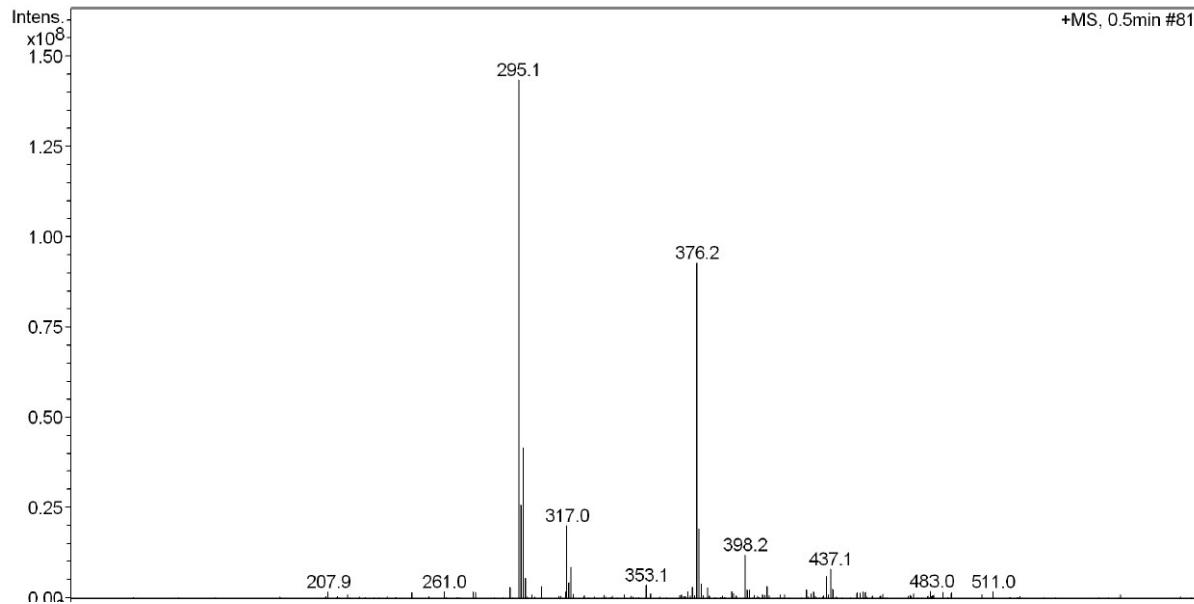


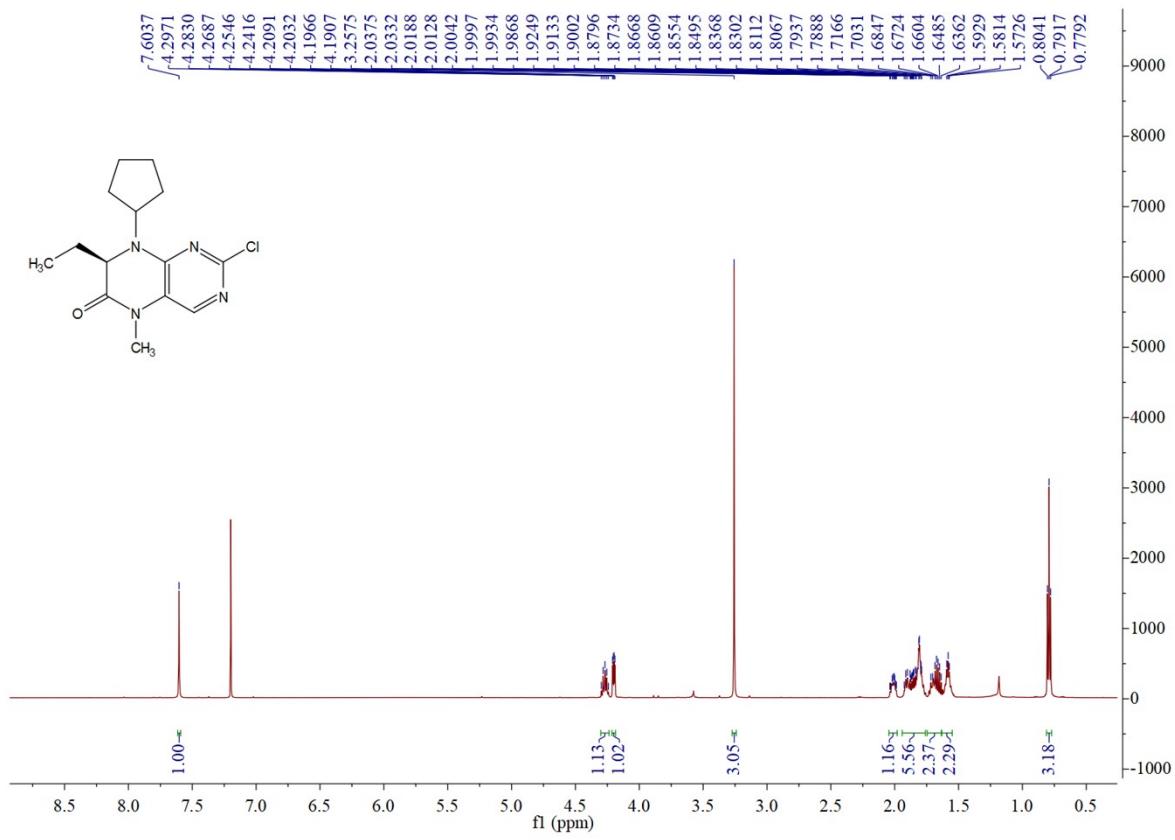
Fig. 5 Mass spectrum of compound 5



**Fig. 6**  $^1\text{H}$  NMR spectrum of compound 5



**Fig. 7** Mass spectrum of compound 6



**Fig. 8**  $^1\text{H}$  NMR spectrum of compound 6

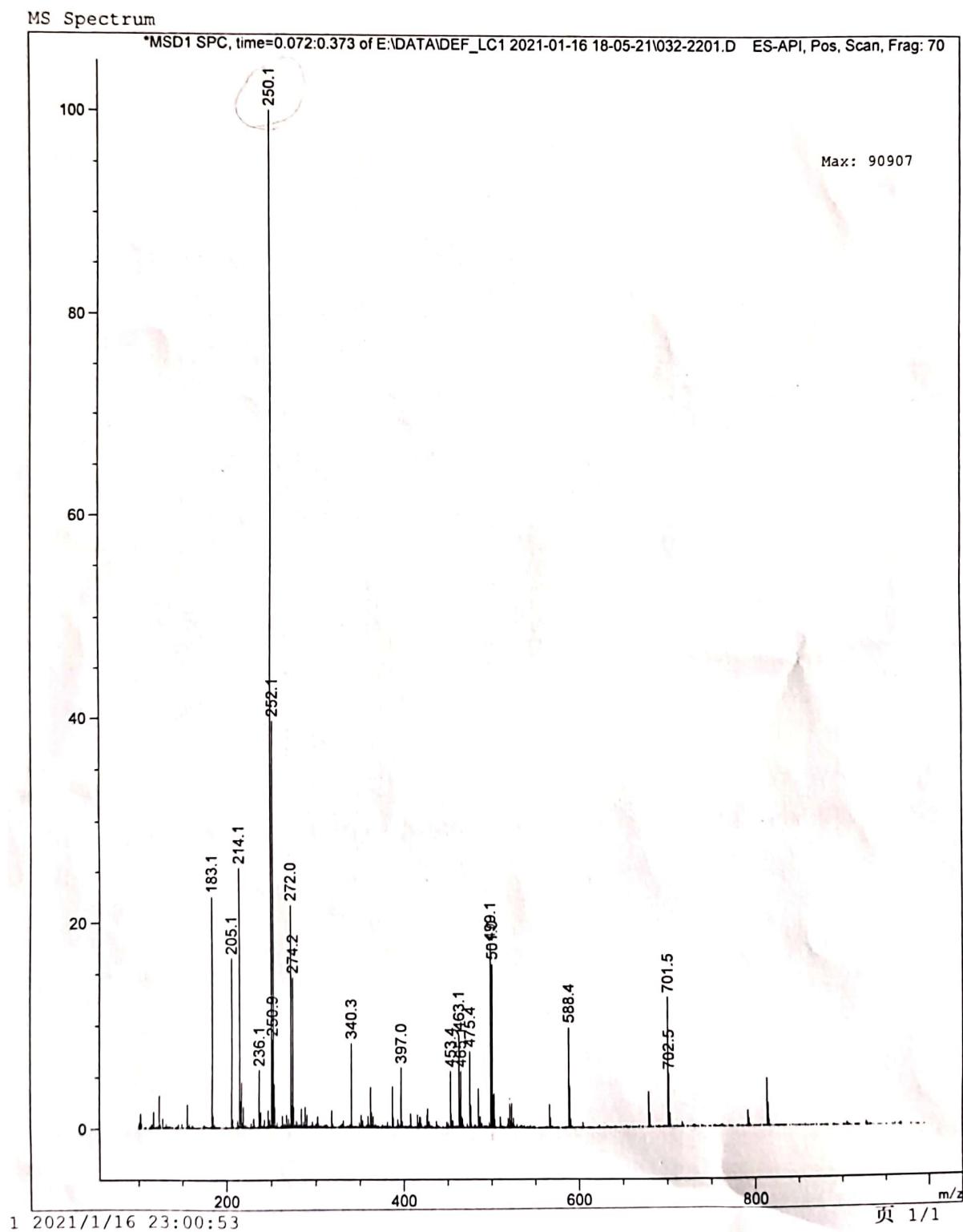
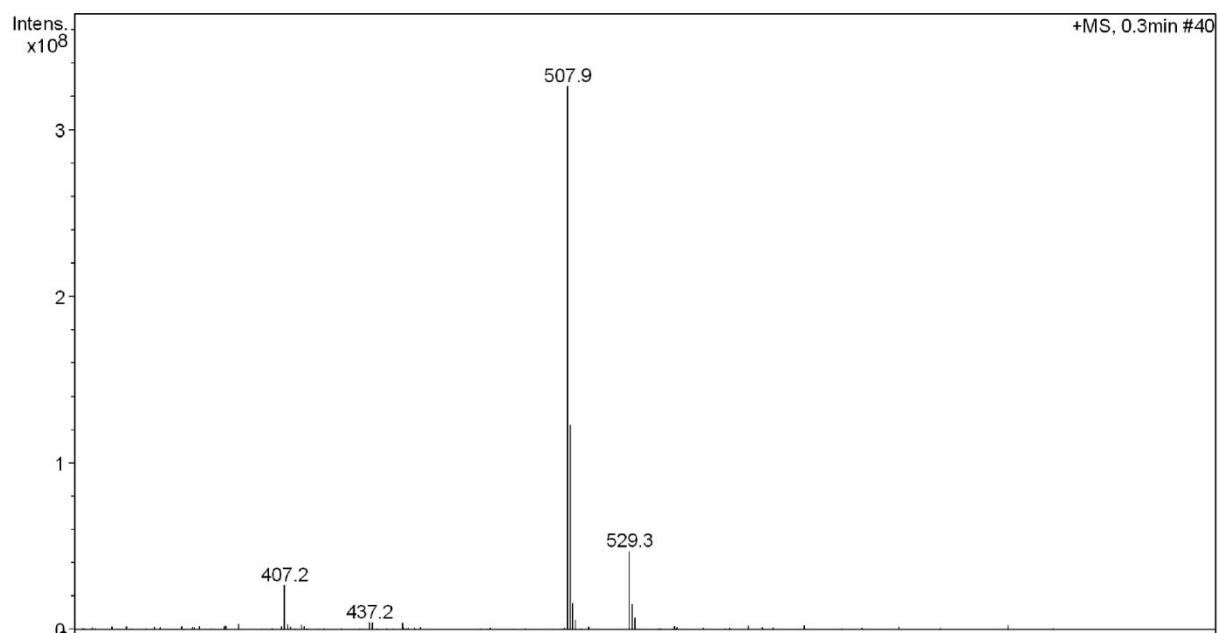


Fig. 9 Mass spectrum of compound 11



**Fig. 10** Mass spectrum of compound 12

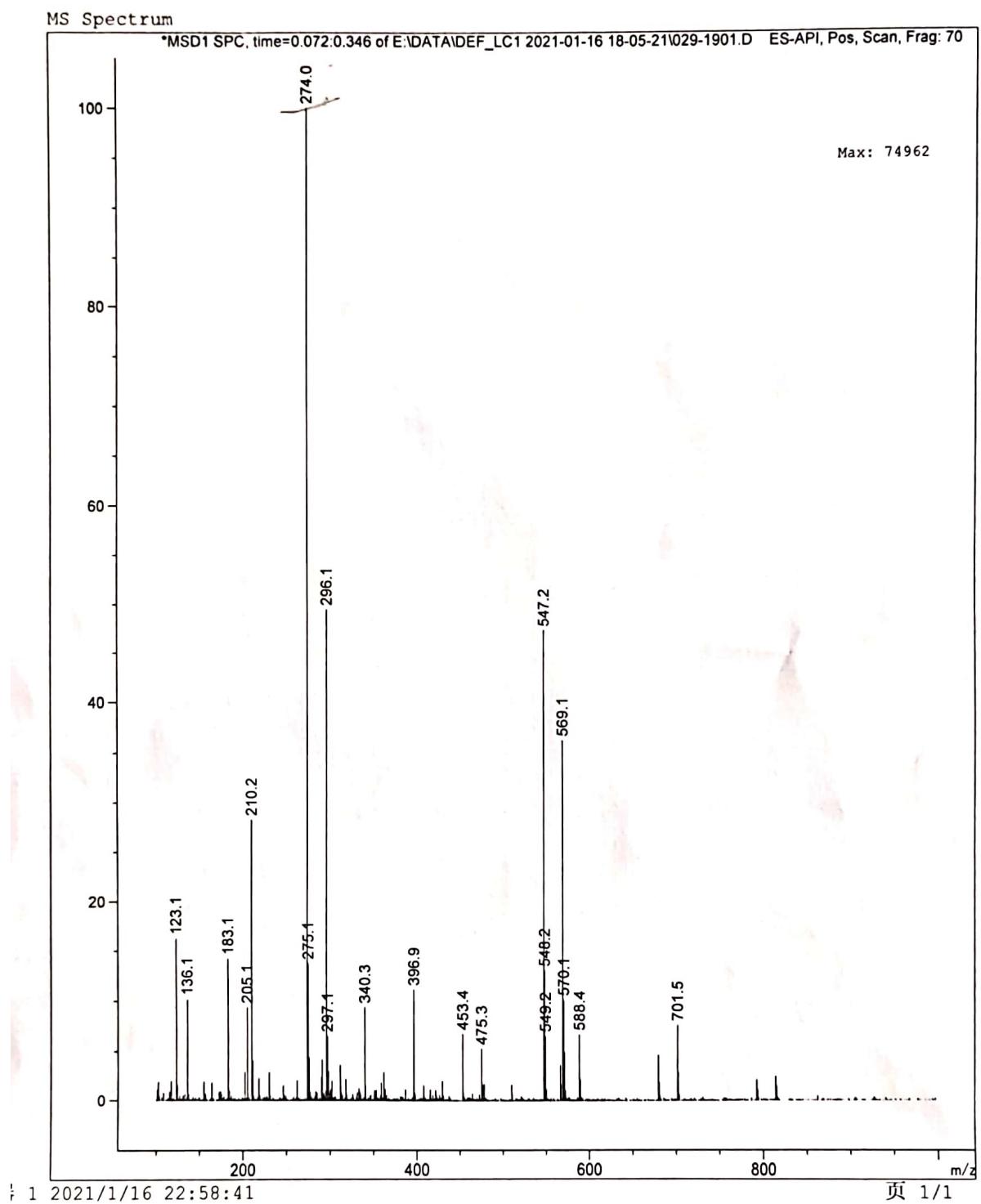


Fig. 11 Mass spectrum of compound 15

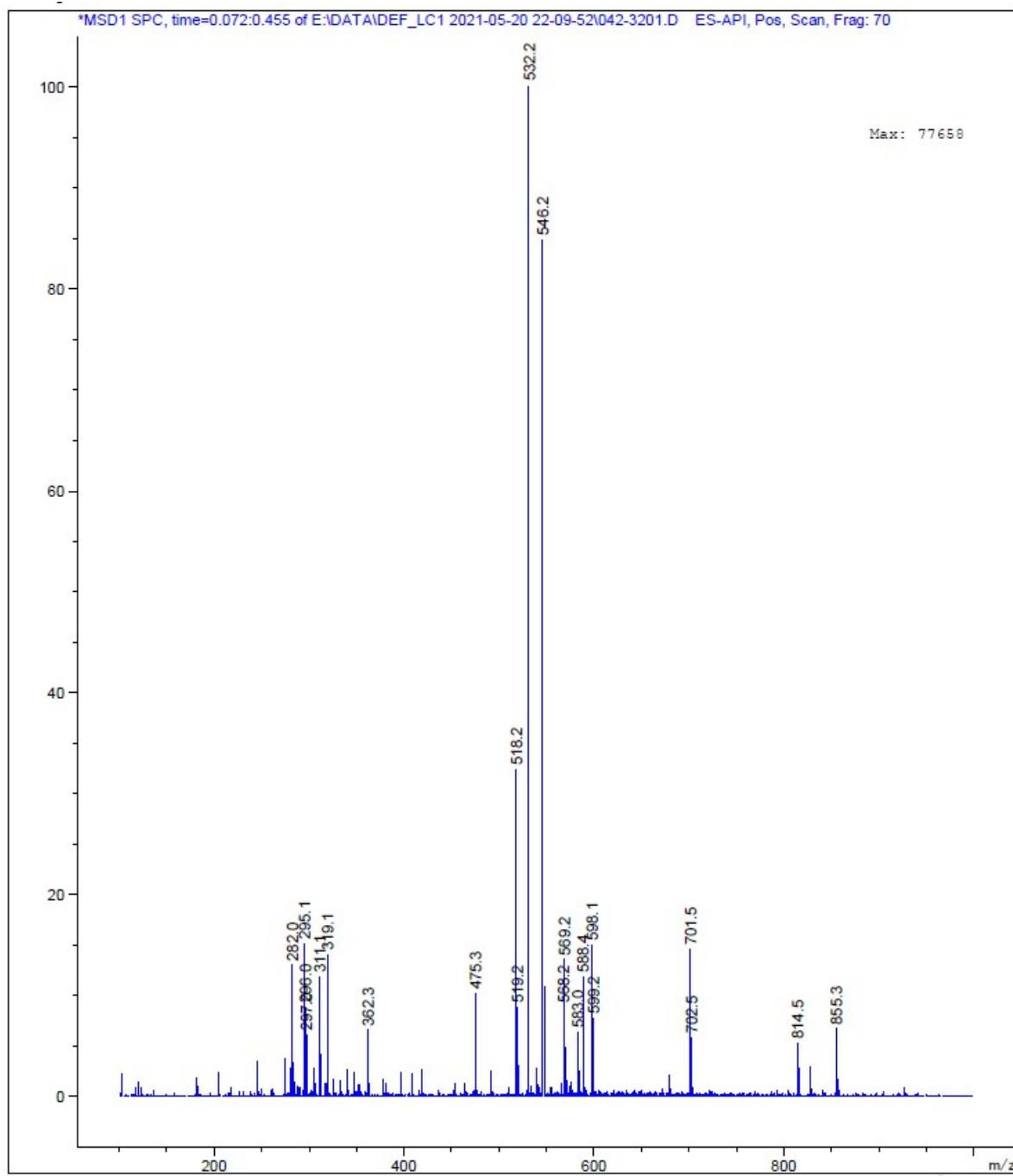
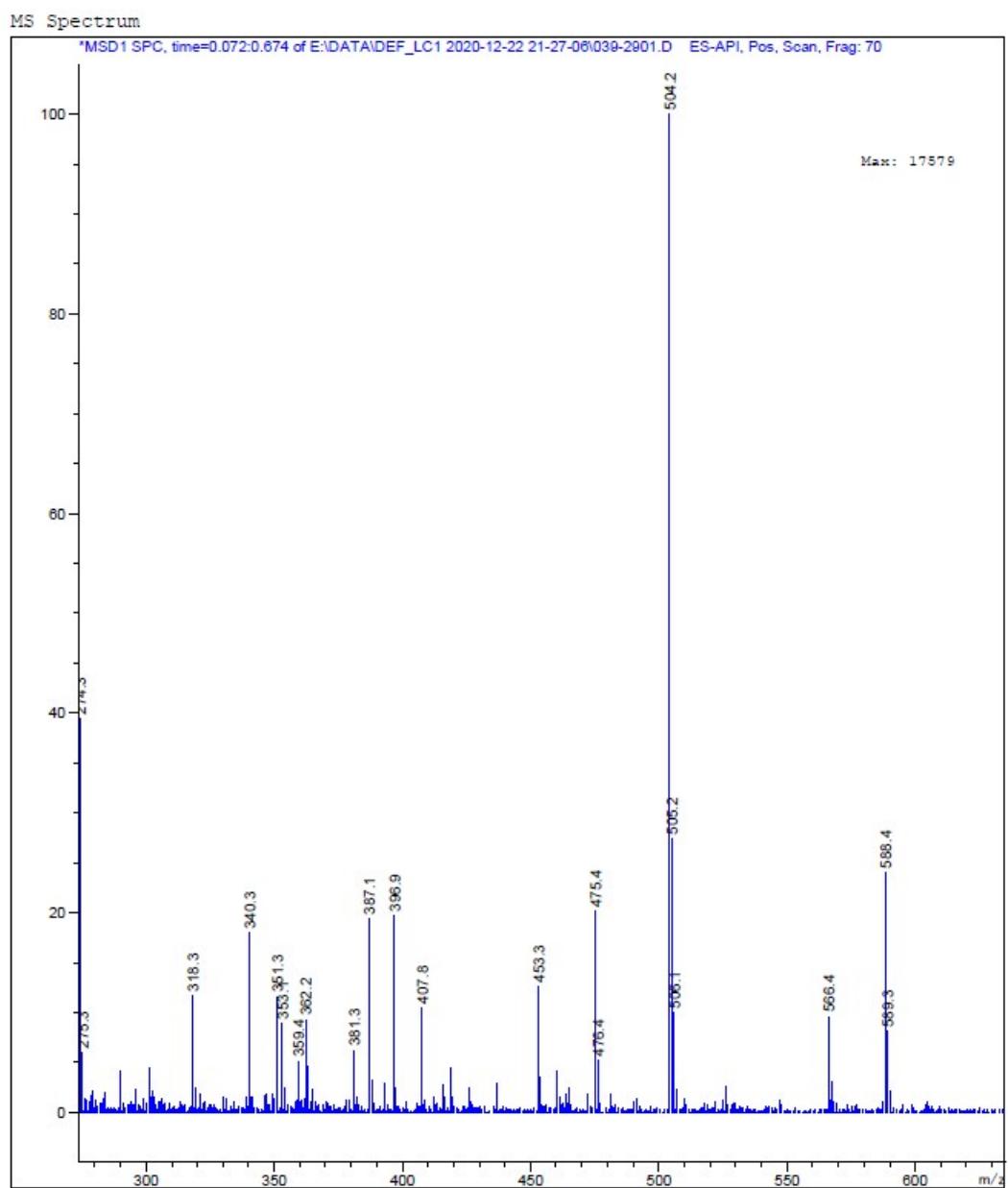
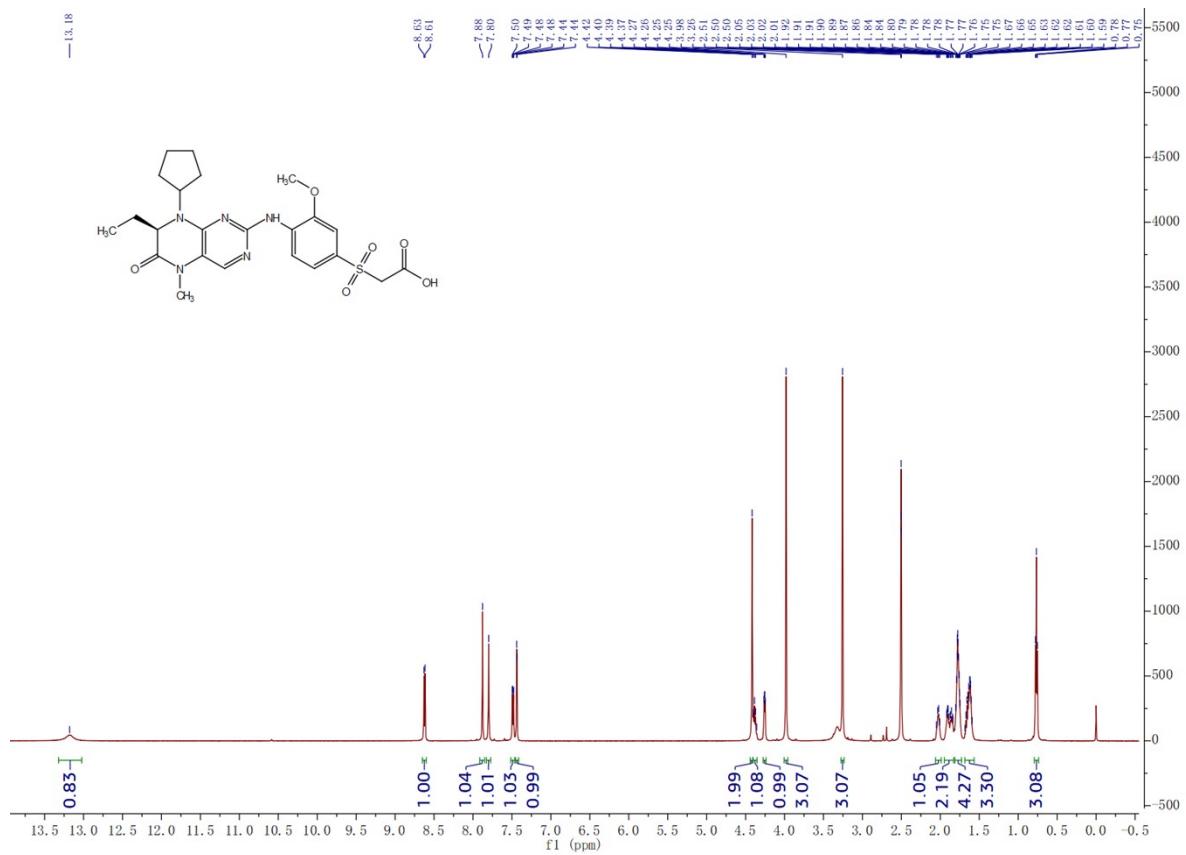


Fig. 12 Mass spectrum of compound 16



**Fig. 13** Mass spectrum of compound 17



**Fig. 14**  $^1\text{H}$  NMR spectrum of compound 17

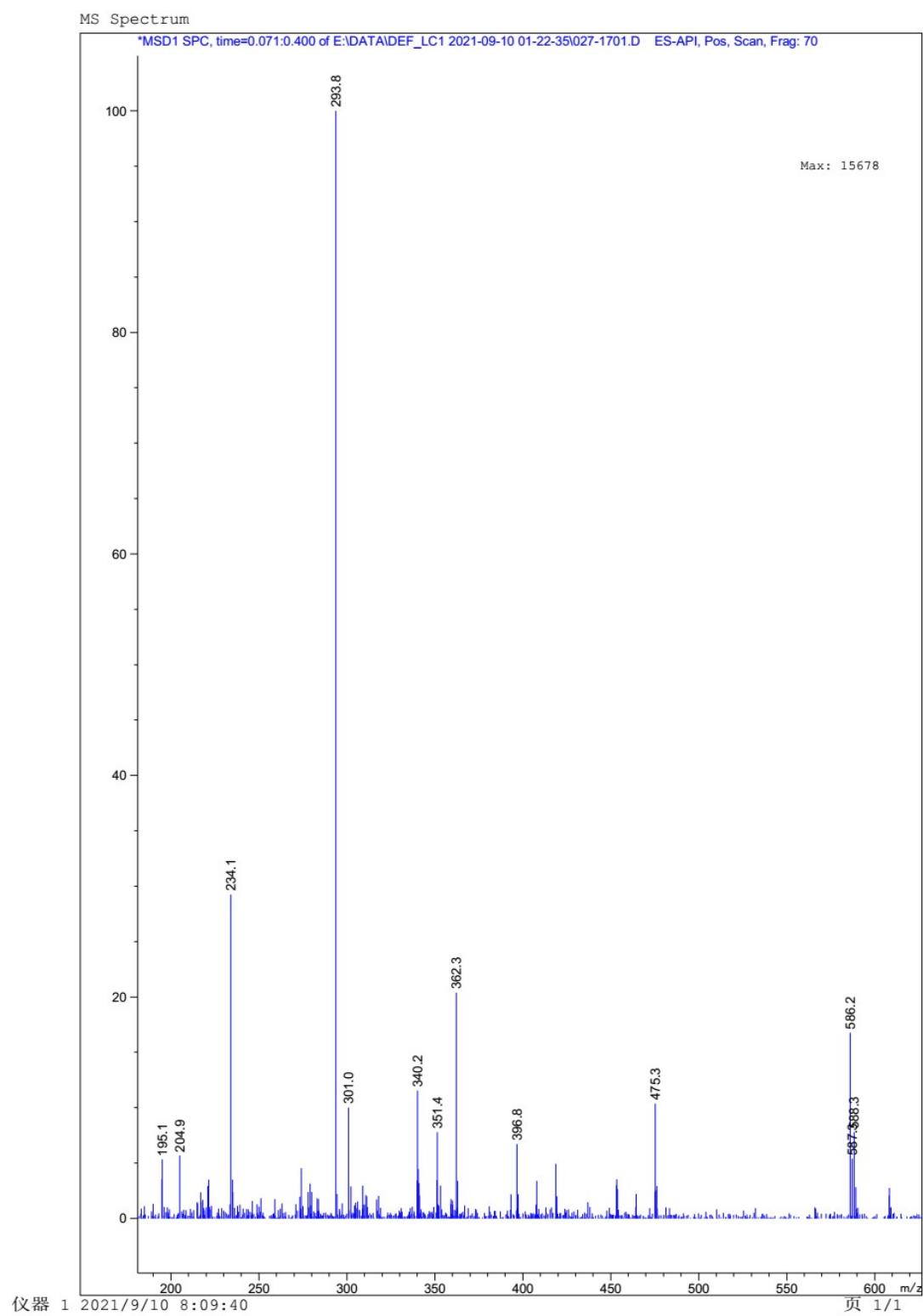
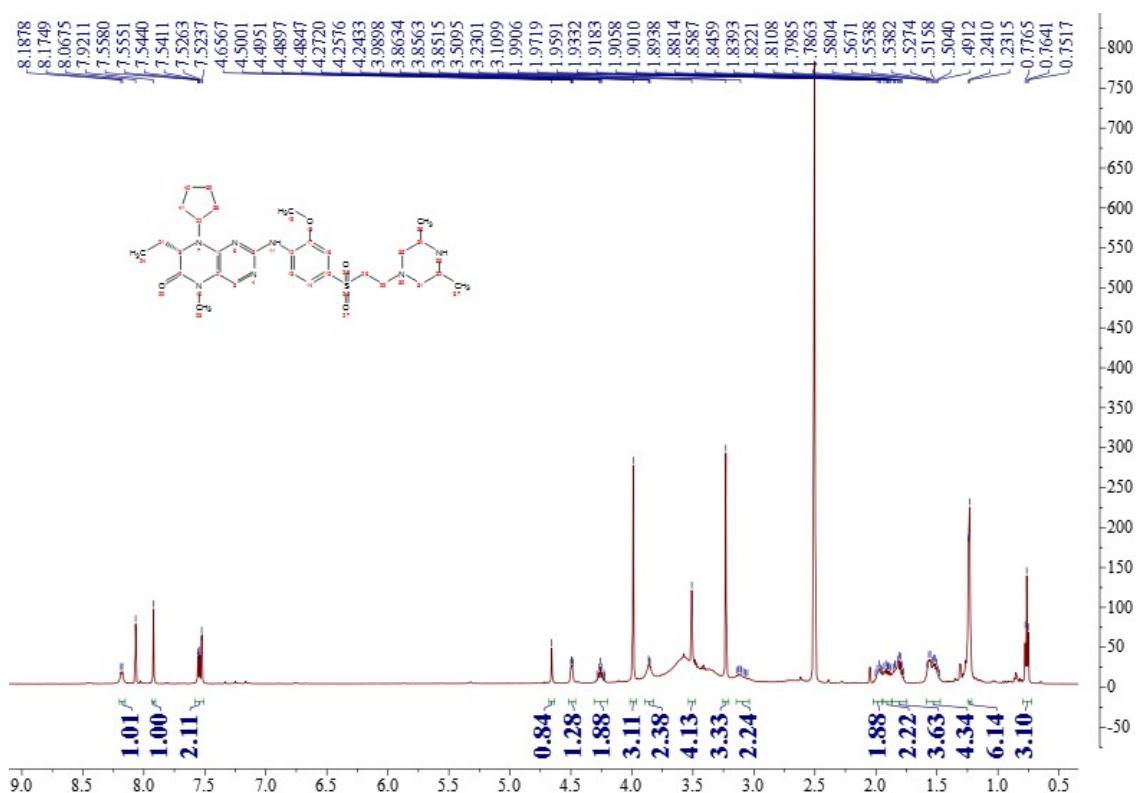
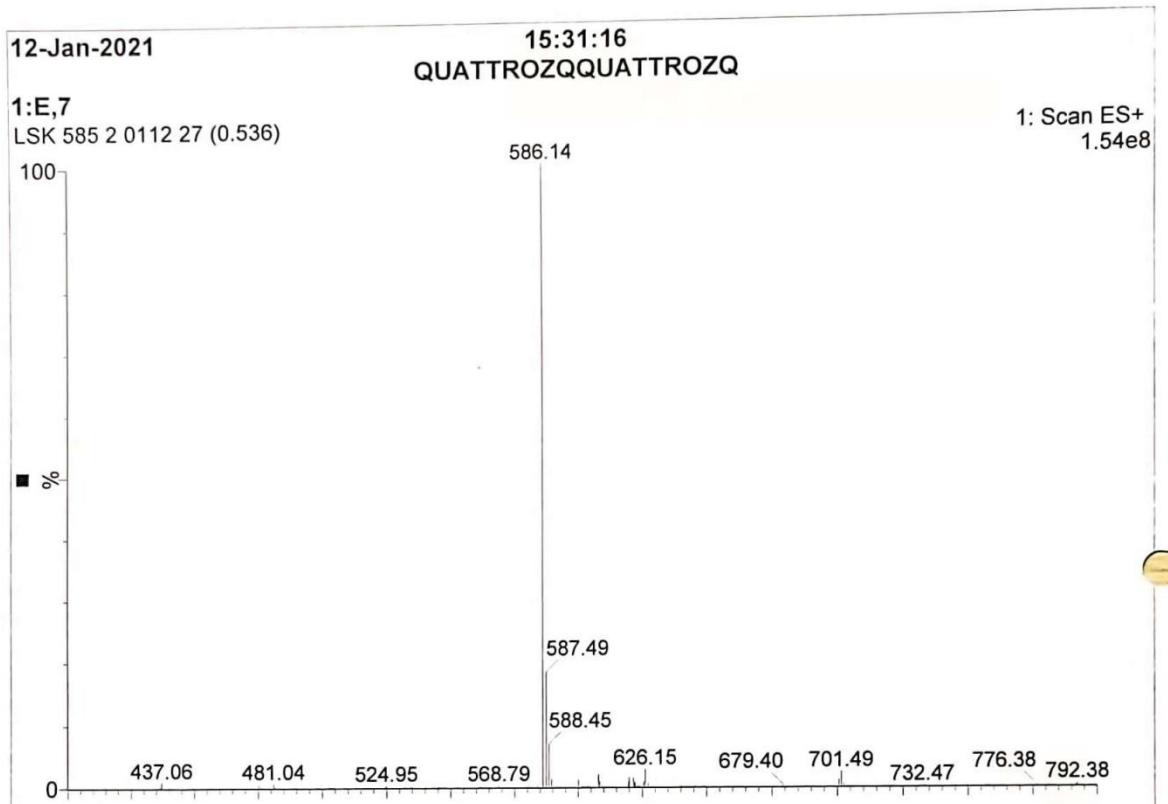


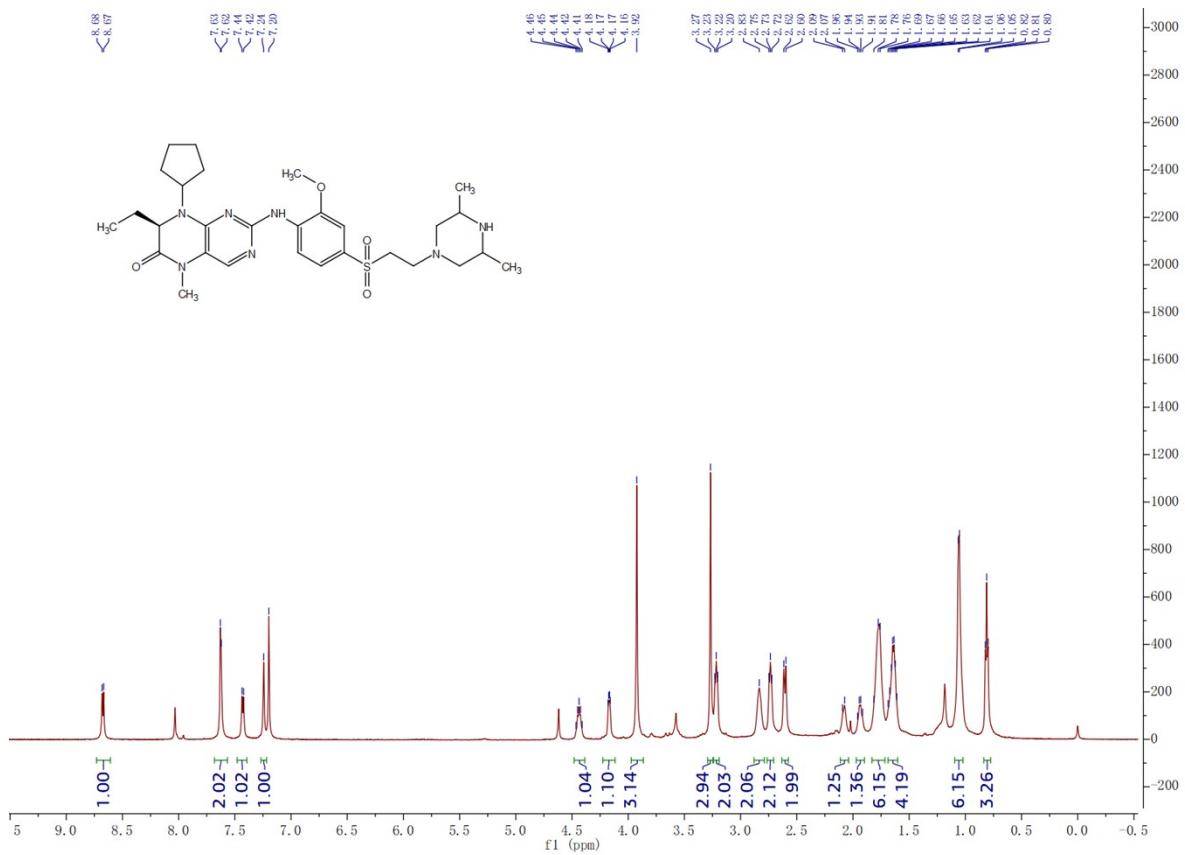
Fig. 15 Mass spectrum of compound A1



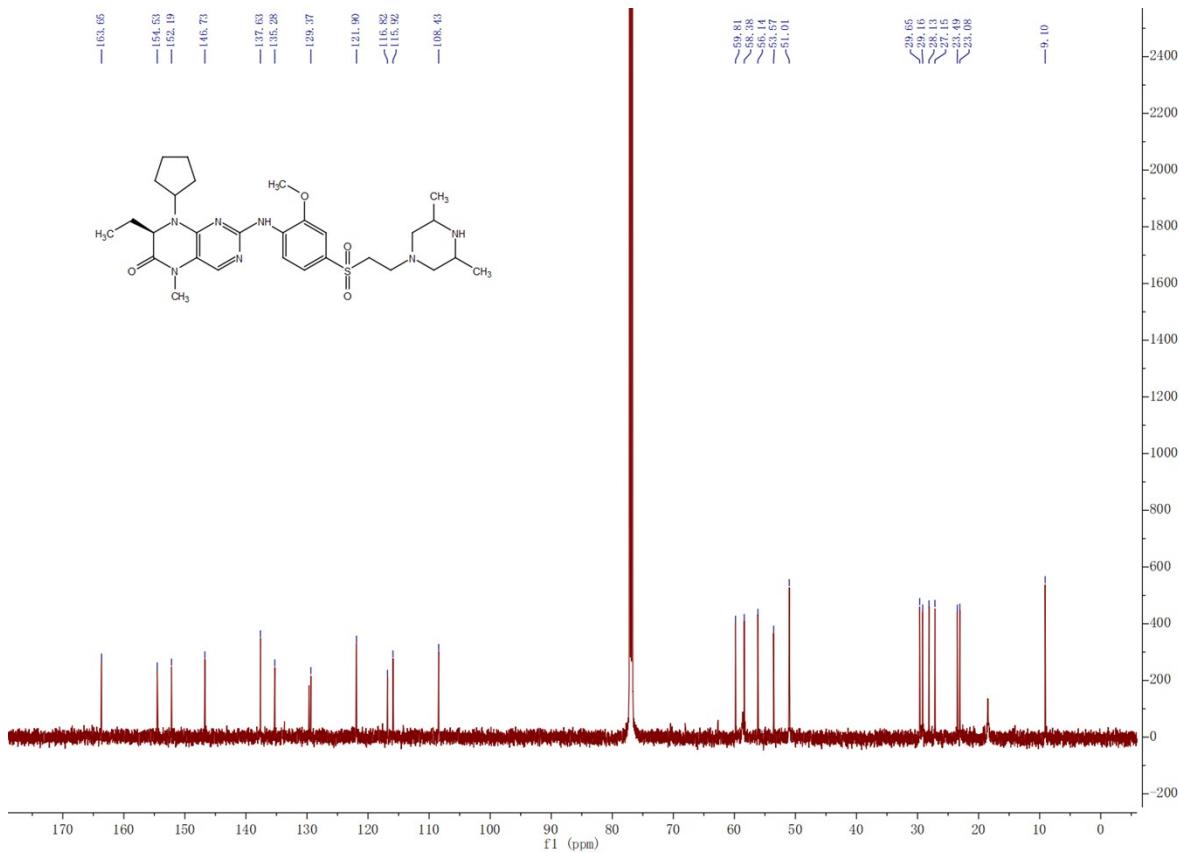
**Fig. 16** <sup>1</sup>H NMR spectrum of compound A1



**Fig. 17** Mass spectrum of compound A2



**Fig. 18**  $^1\text{H}$  NMR spectrum of compound A2



**Fig. 19**  $^{13}\text{C}$  NMR spectrum of compound A2

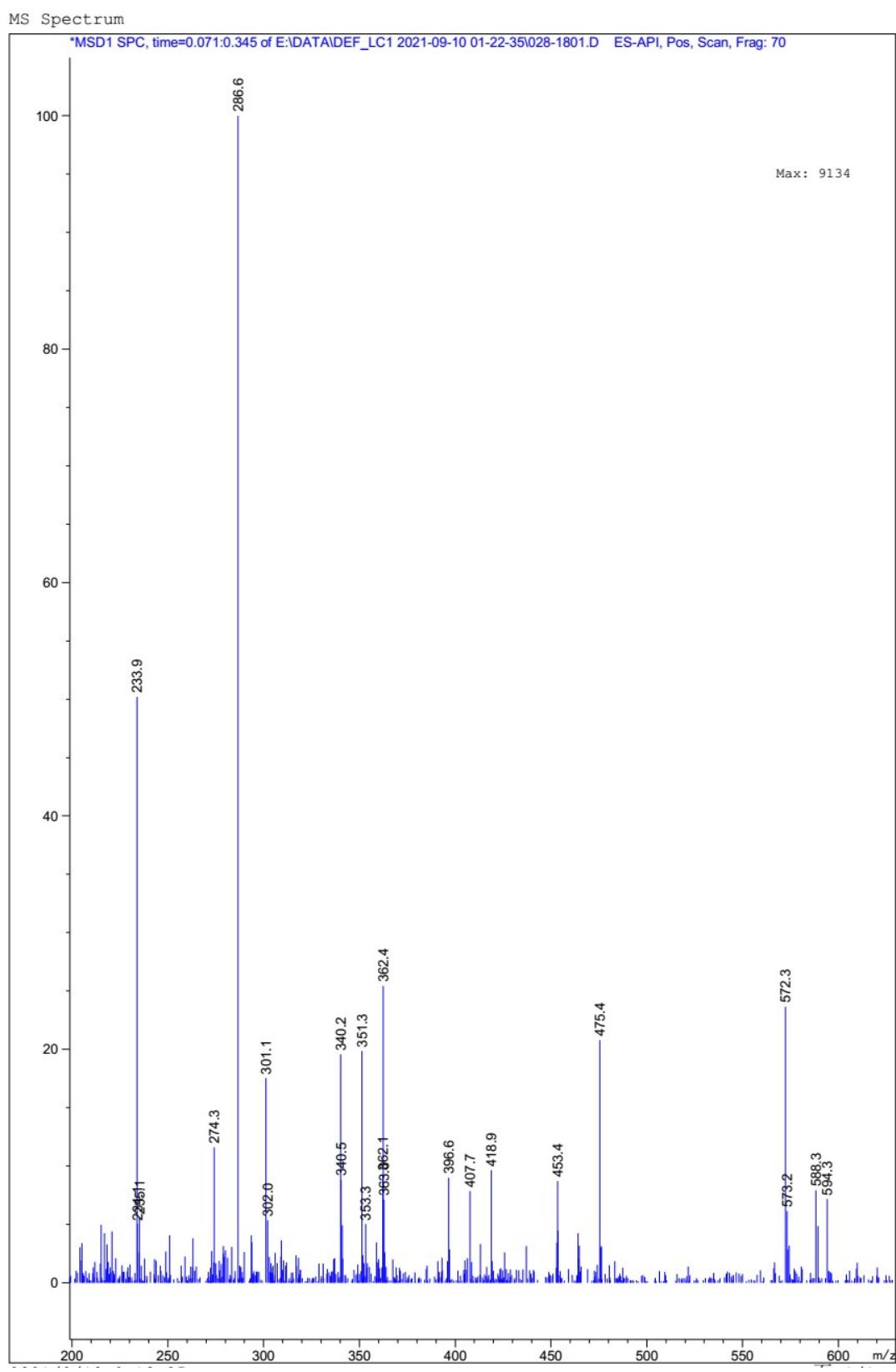
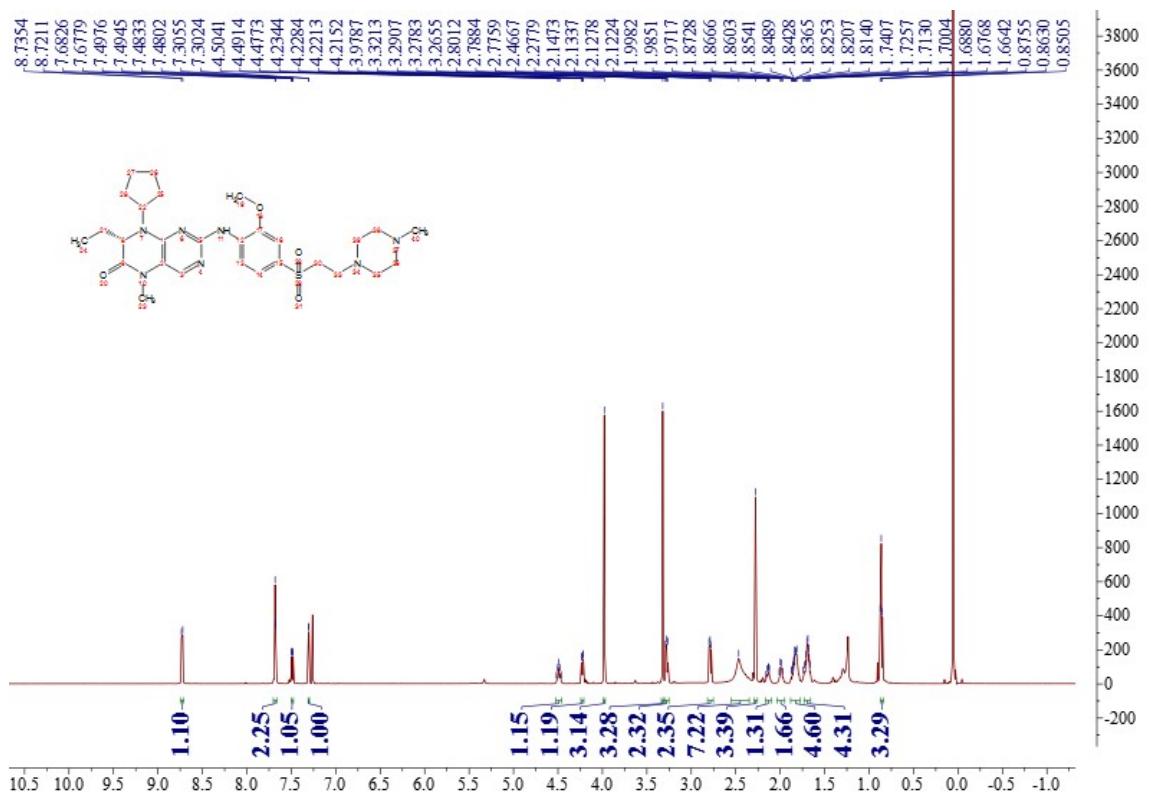
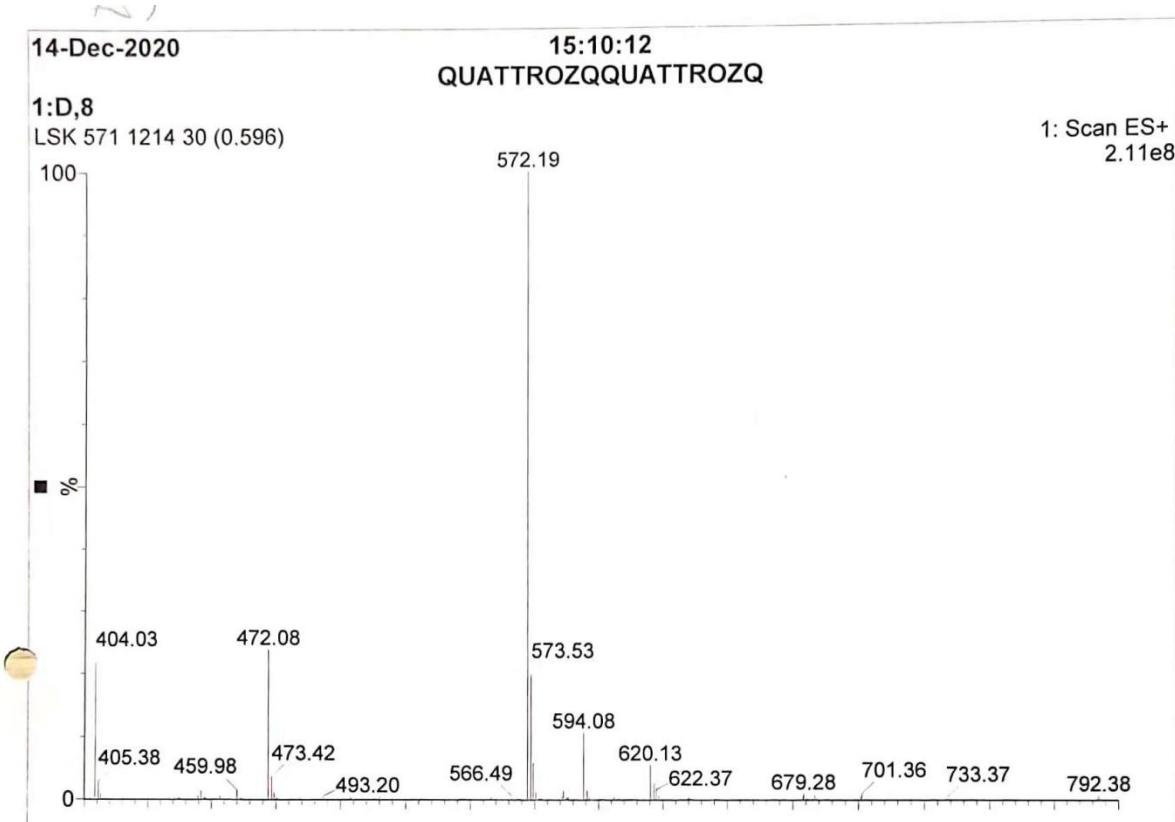


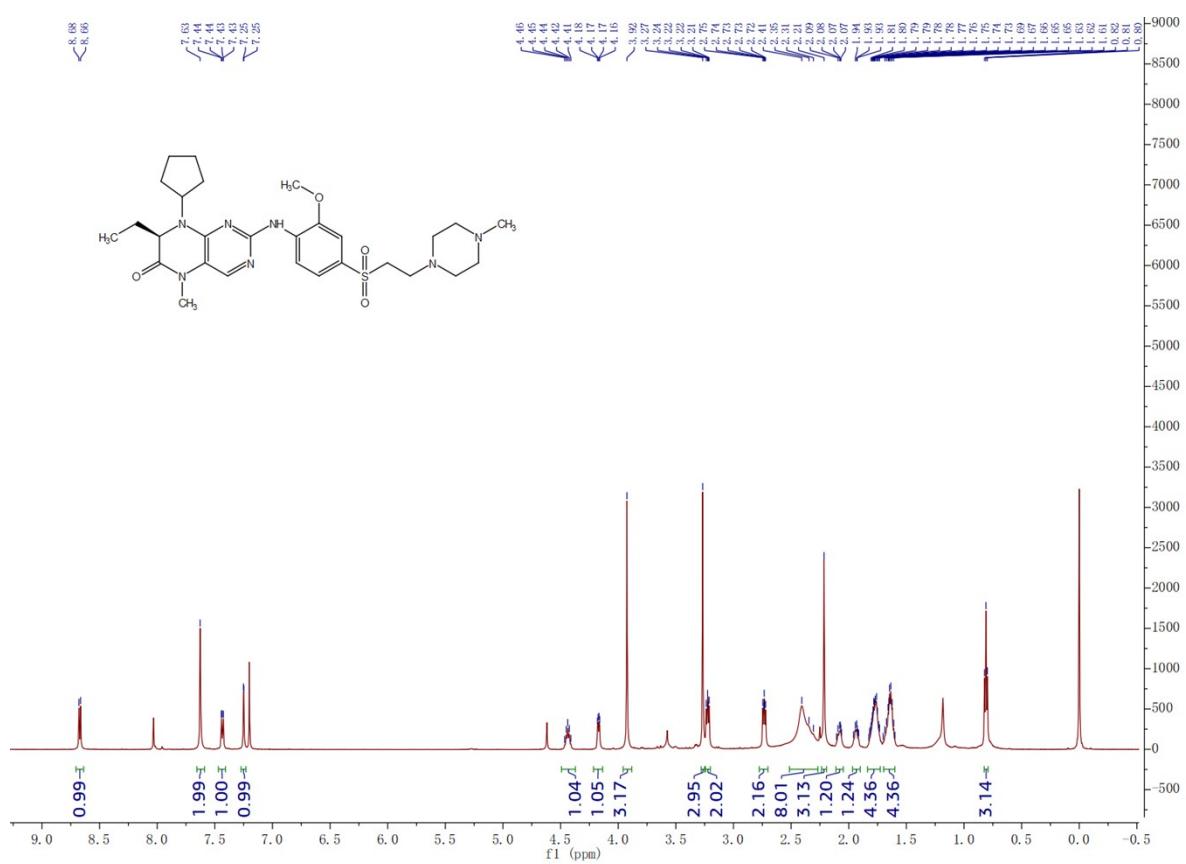
Fig. 20 Mass spectrum of compound A3



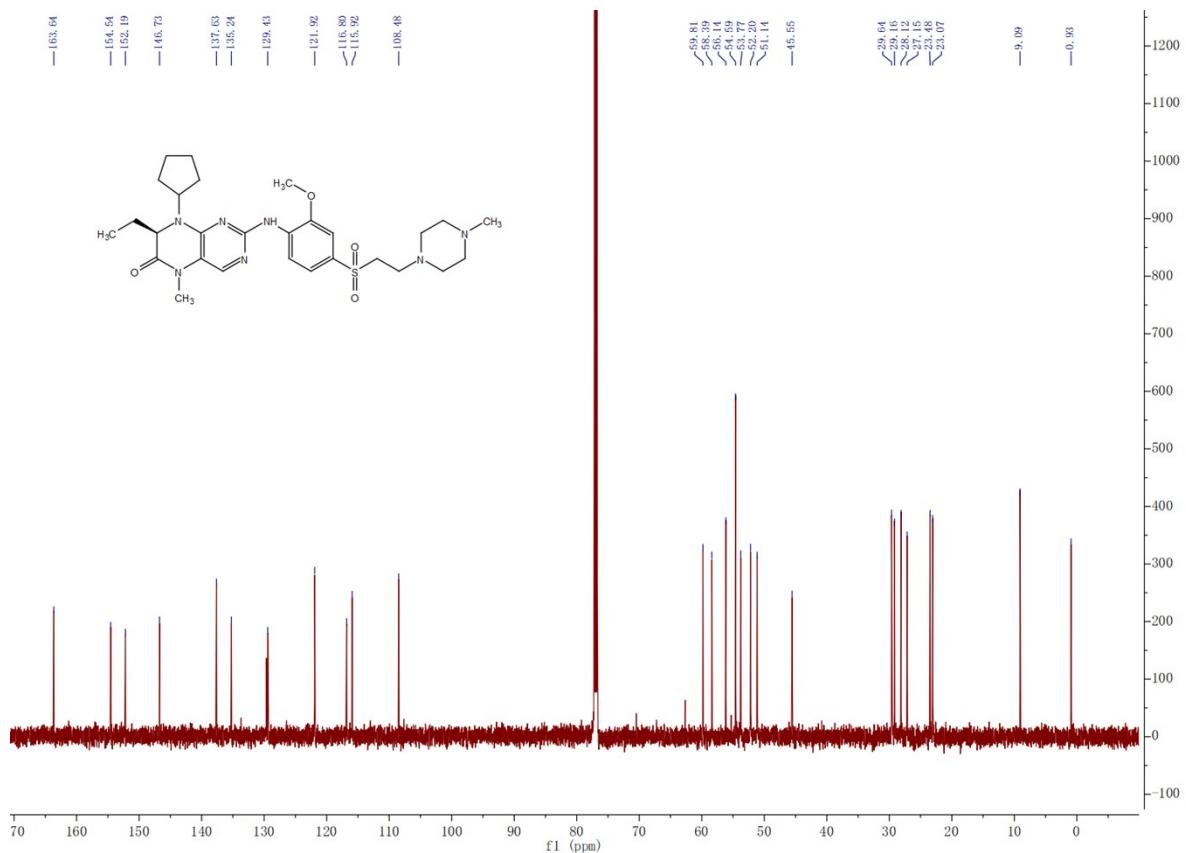
**Fig. 21 <sup>1</sup>H NMR spectrum of compound A3**



**Fig. 22 Mass spectrum of compound A4**



**Fig. 23 <sup>1</sup>H NMR spectrum of compound A4**



**Fig. 24 <sup>13</sup>C NMR spectrum of compound A4**

## MS Spectrum

\*MSD1 SPC, time=0.071:0.373 of E:\DATA\DEF\_LC1 2021-09-10 01-22-35\029-1901.D ES-API, Pos, Scan, Frag: 70

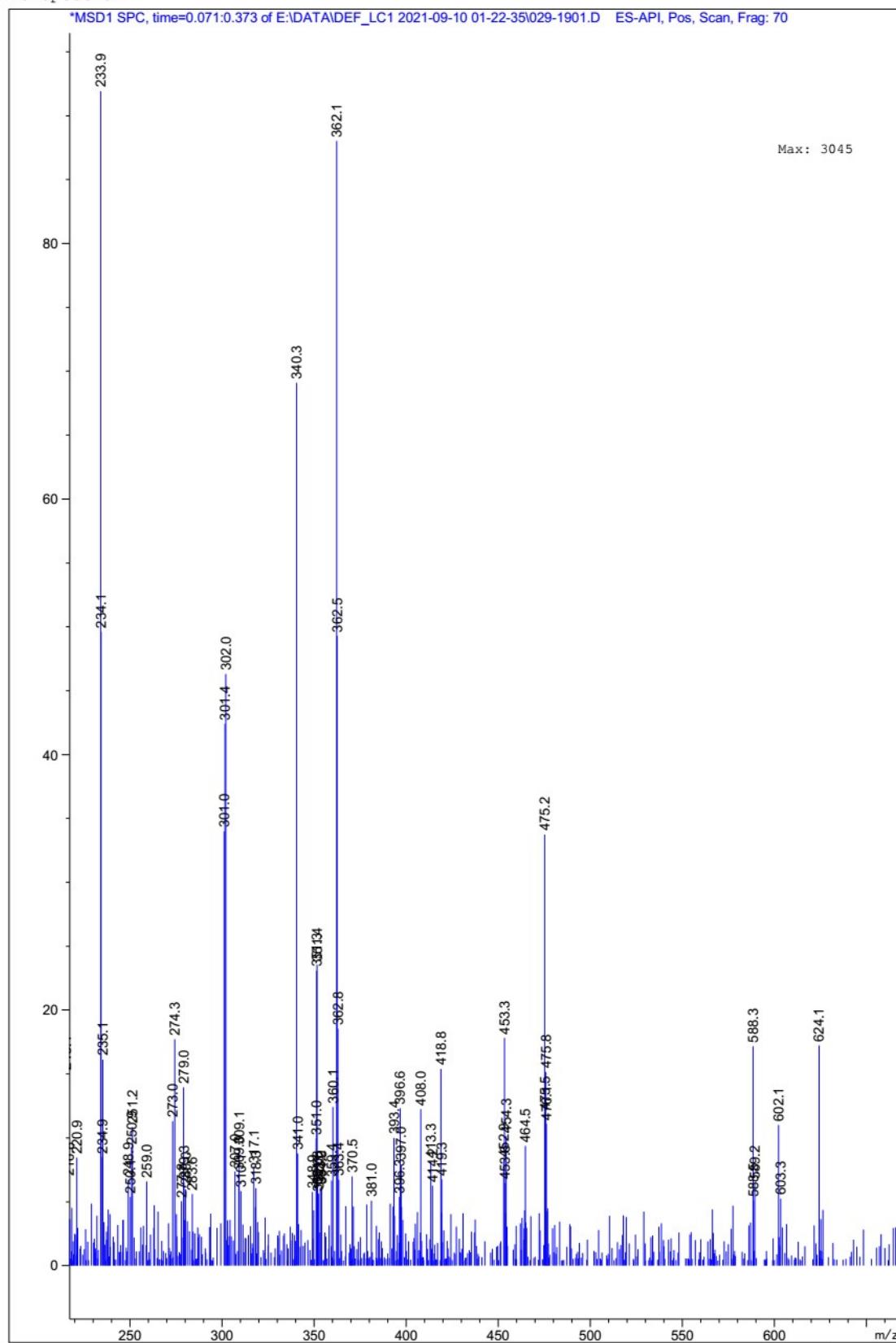
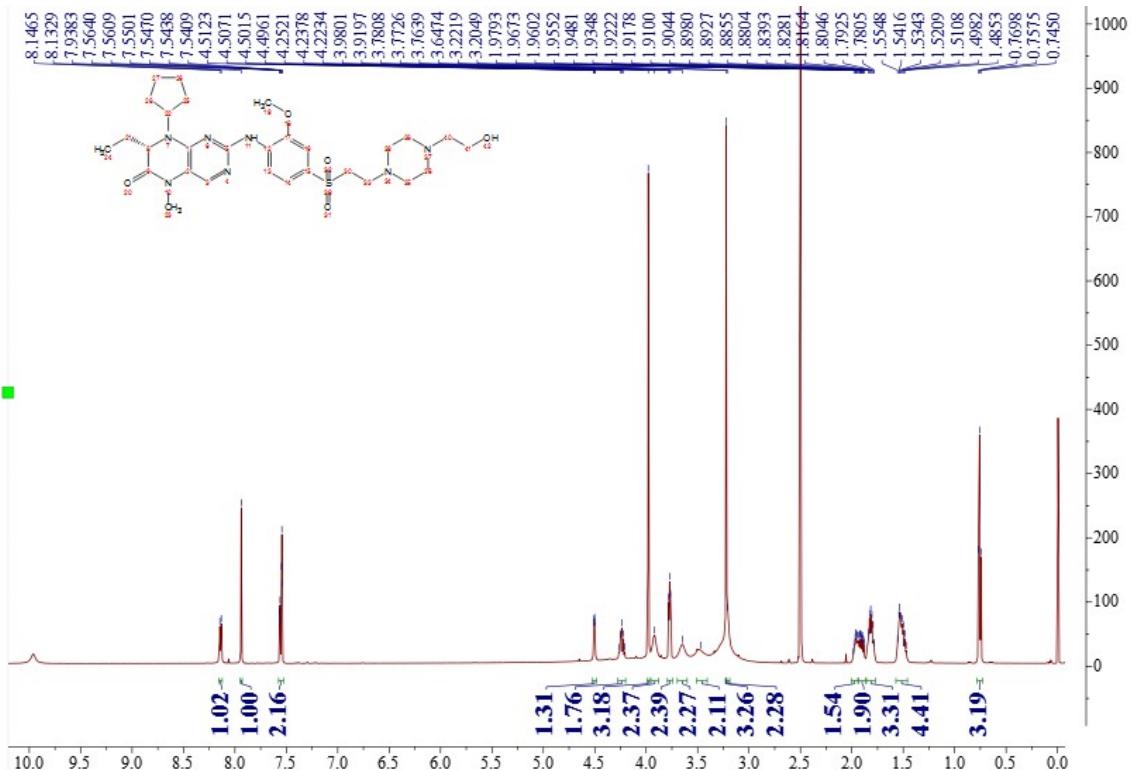
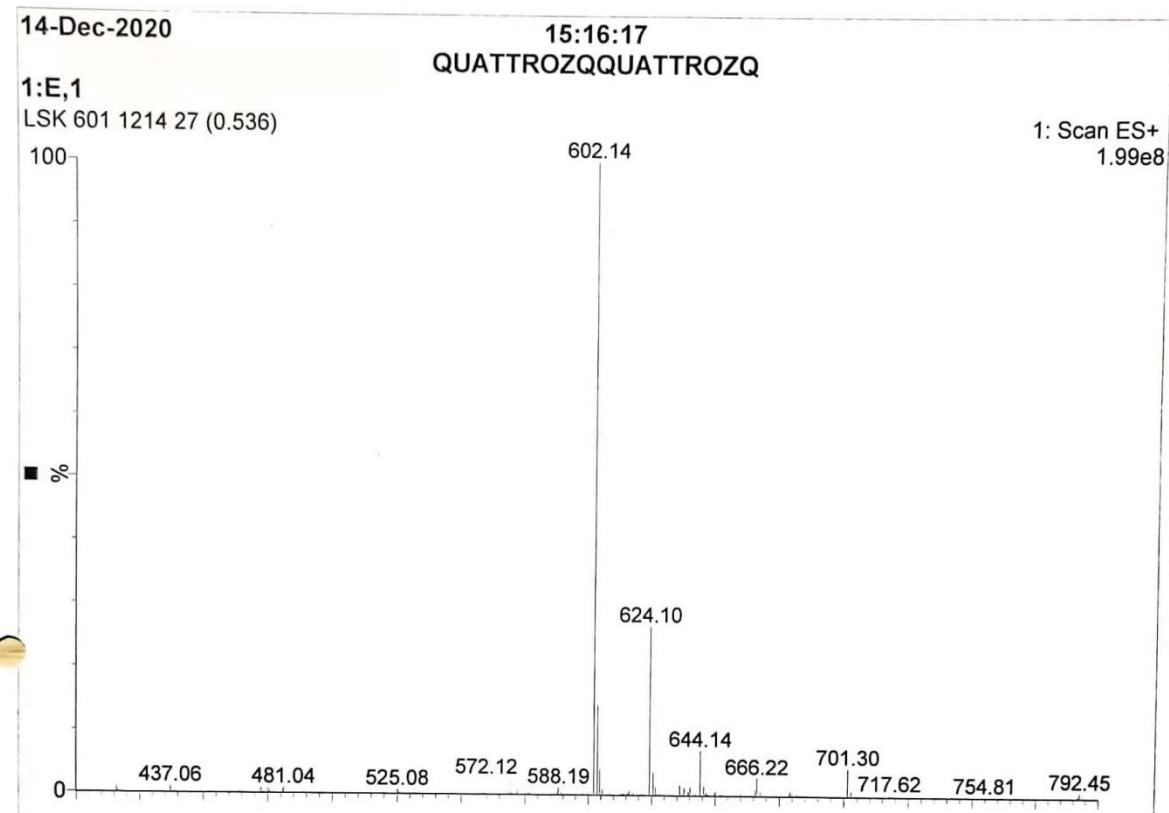


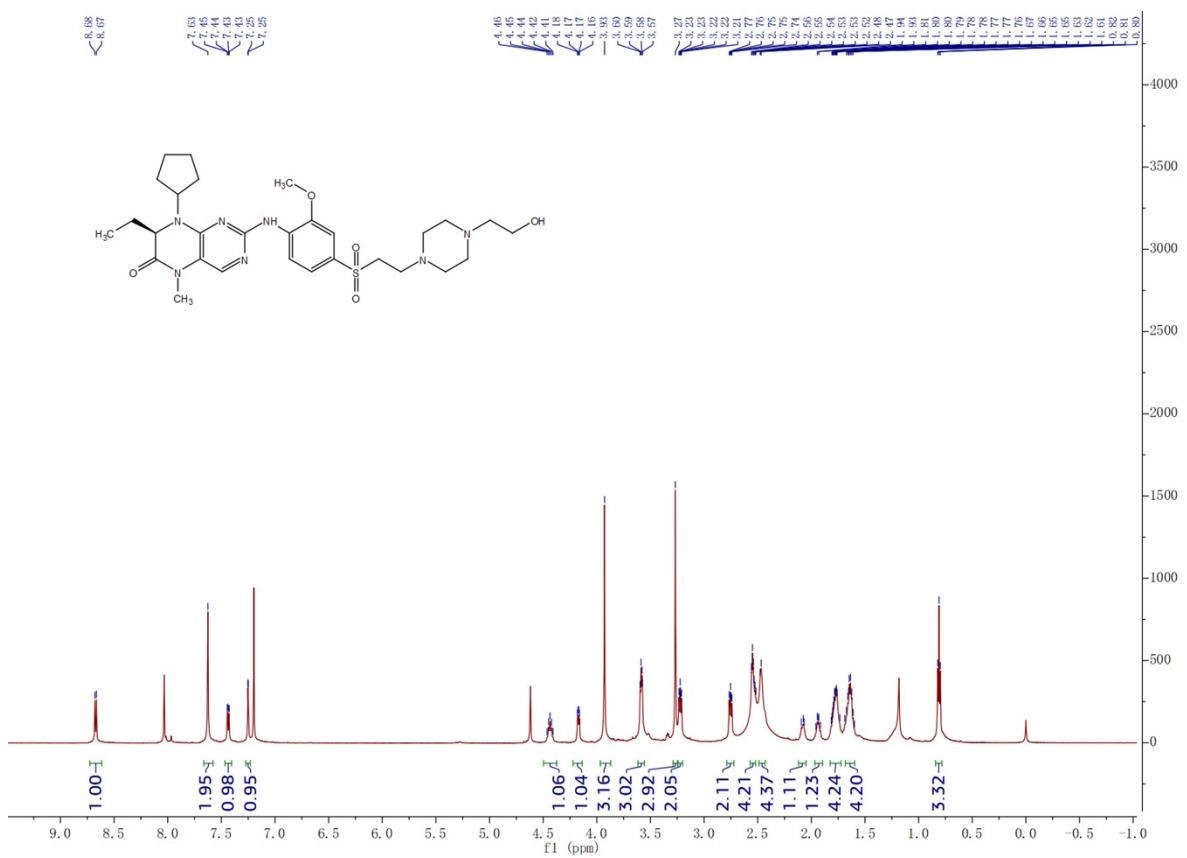
Fig. 25 Mass spectrum of compound A5



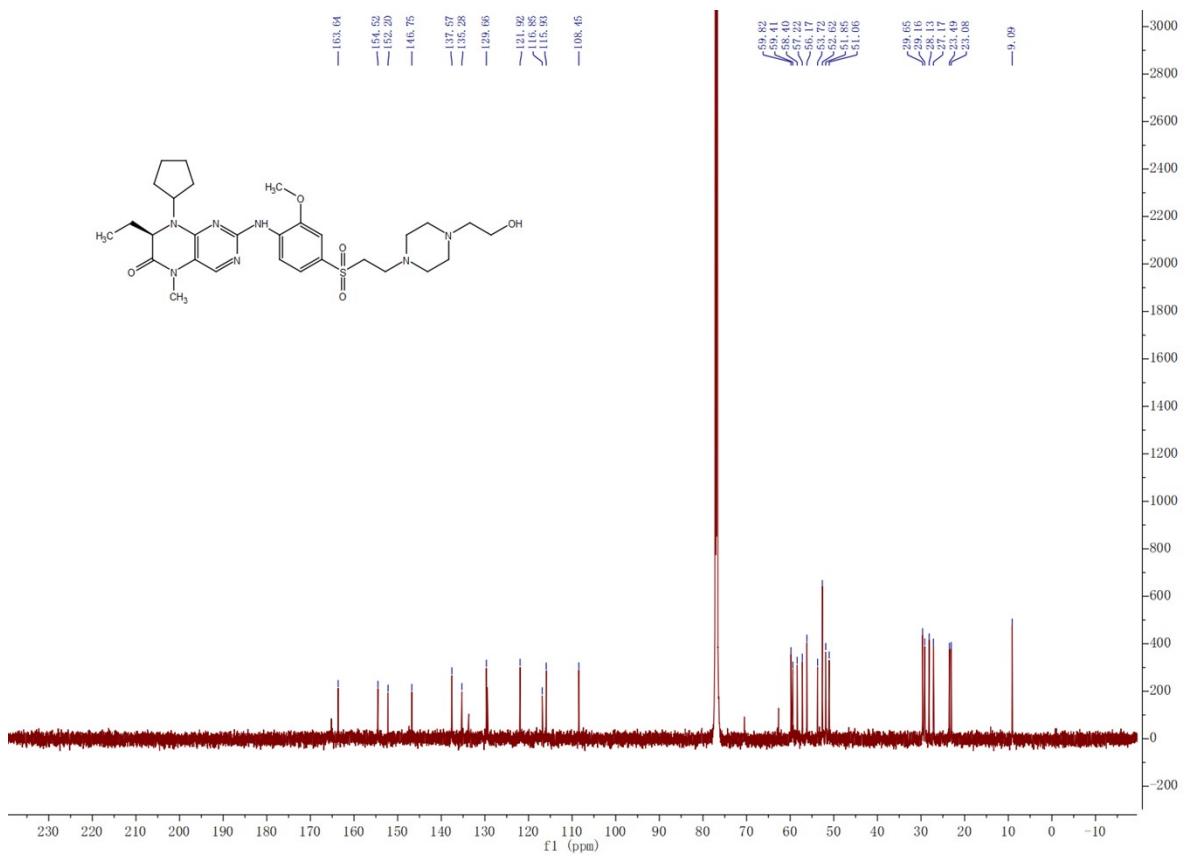
**Fig. 26**  $^1\text{H}$  NMR spectrum of compound A5



**Fig. 27 Mass spectrum of compound A6**



**Fig. 28**  $^1\text{H}$  NMR spectrum of compound A6



**Fig. 29**  $^{13}\text{C}$  NMR spectrum of compound A6

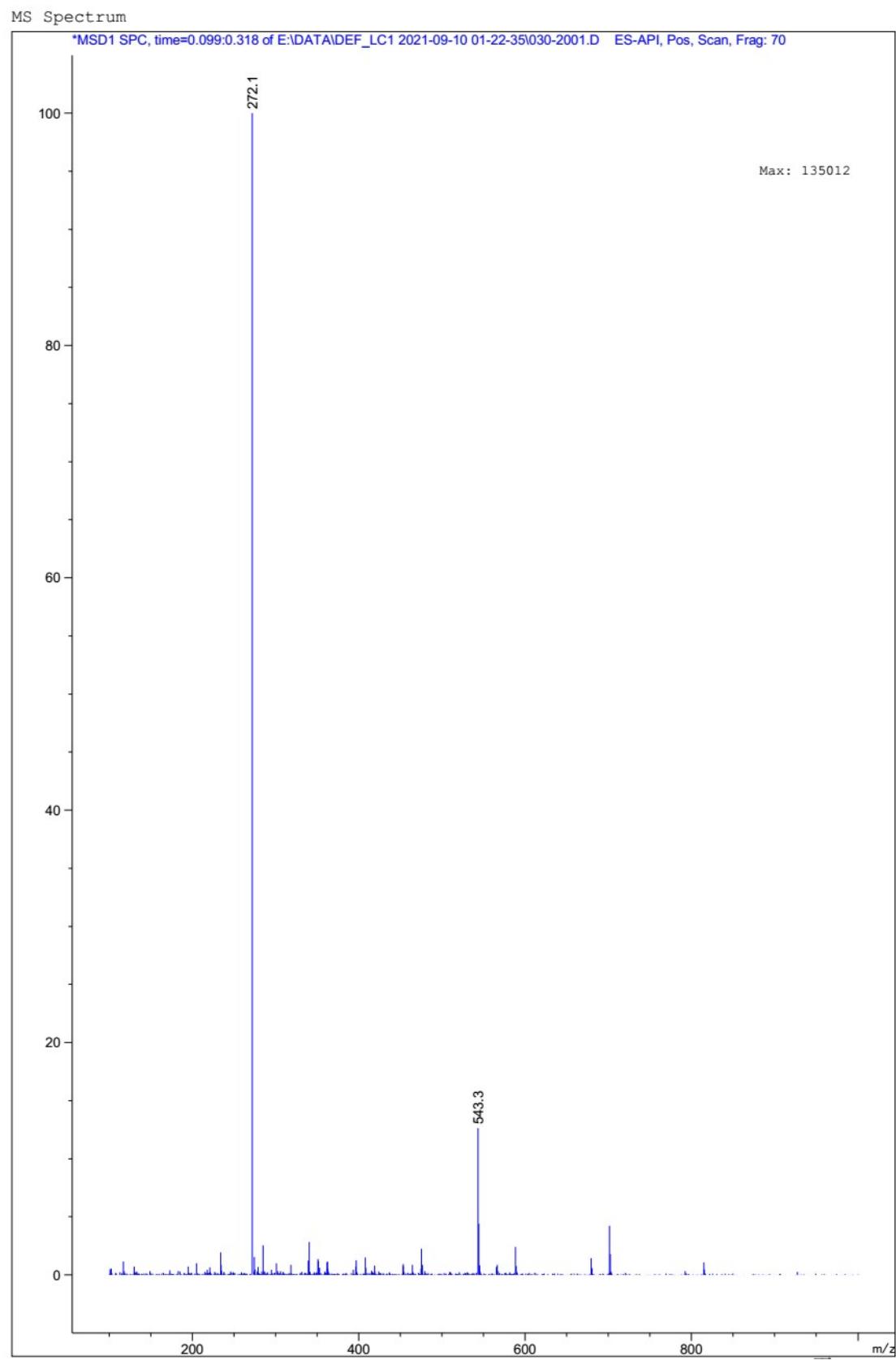
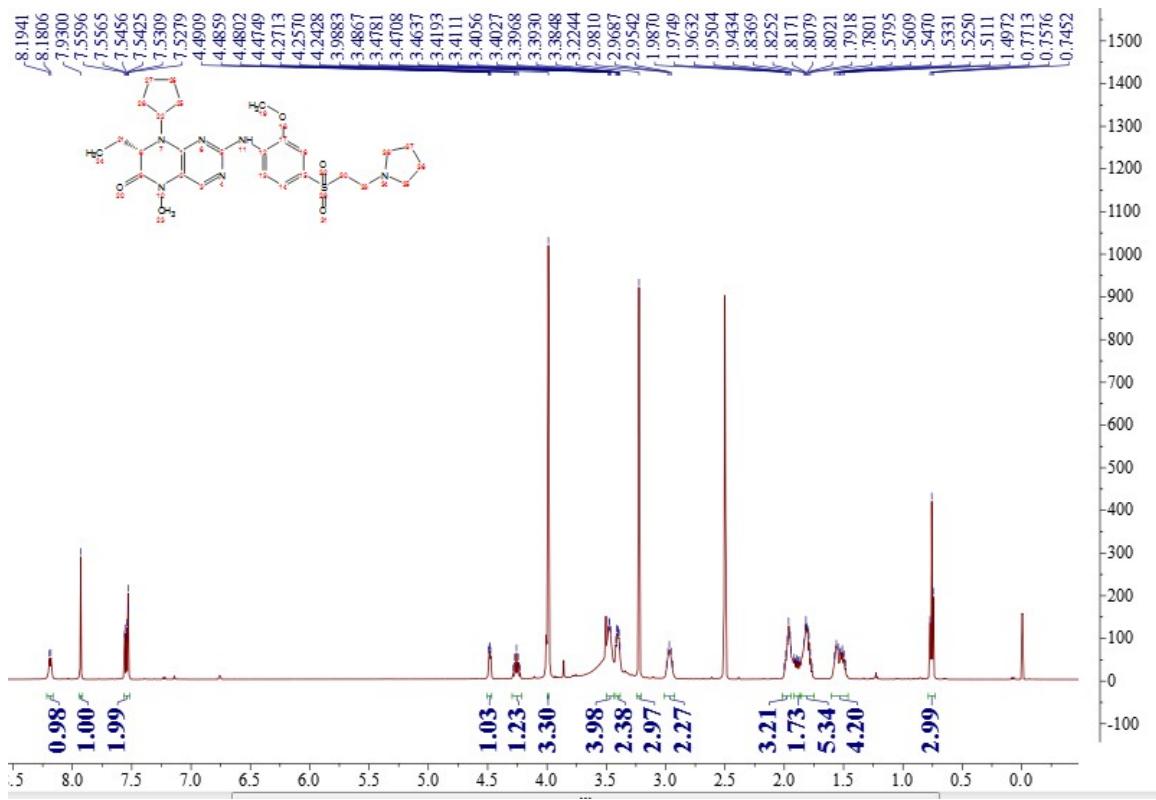
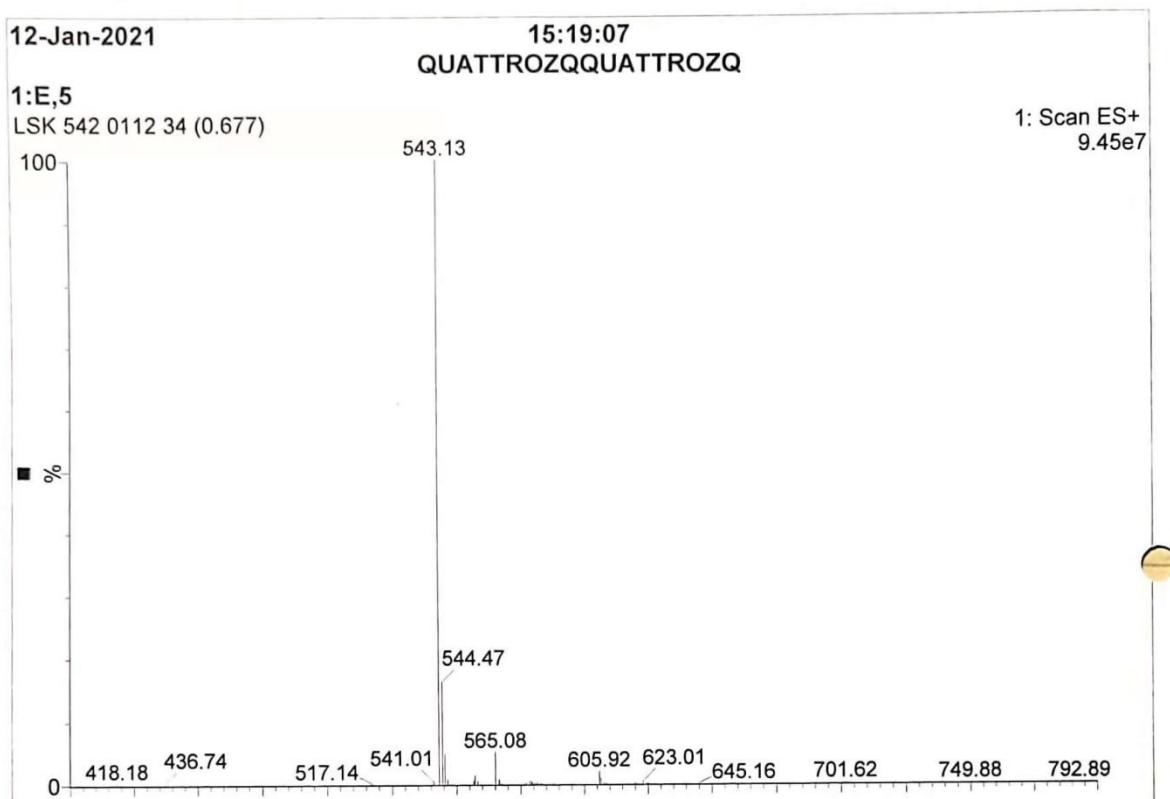


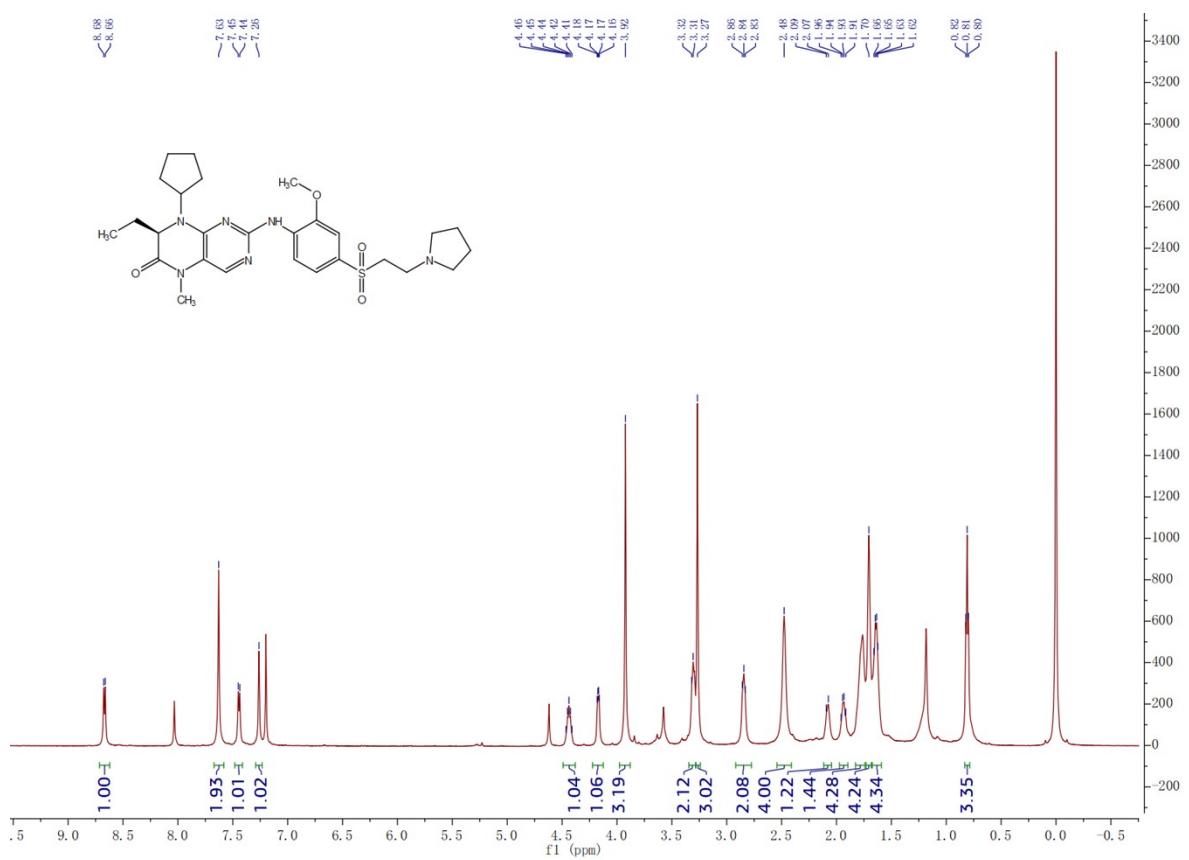
Fig. 30 Mass spectrum of compound A7



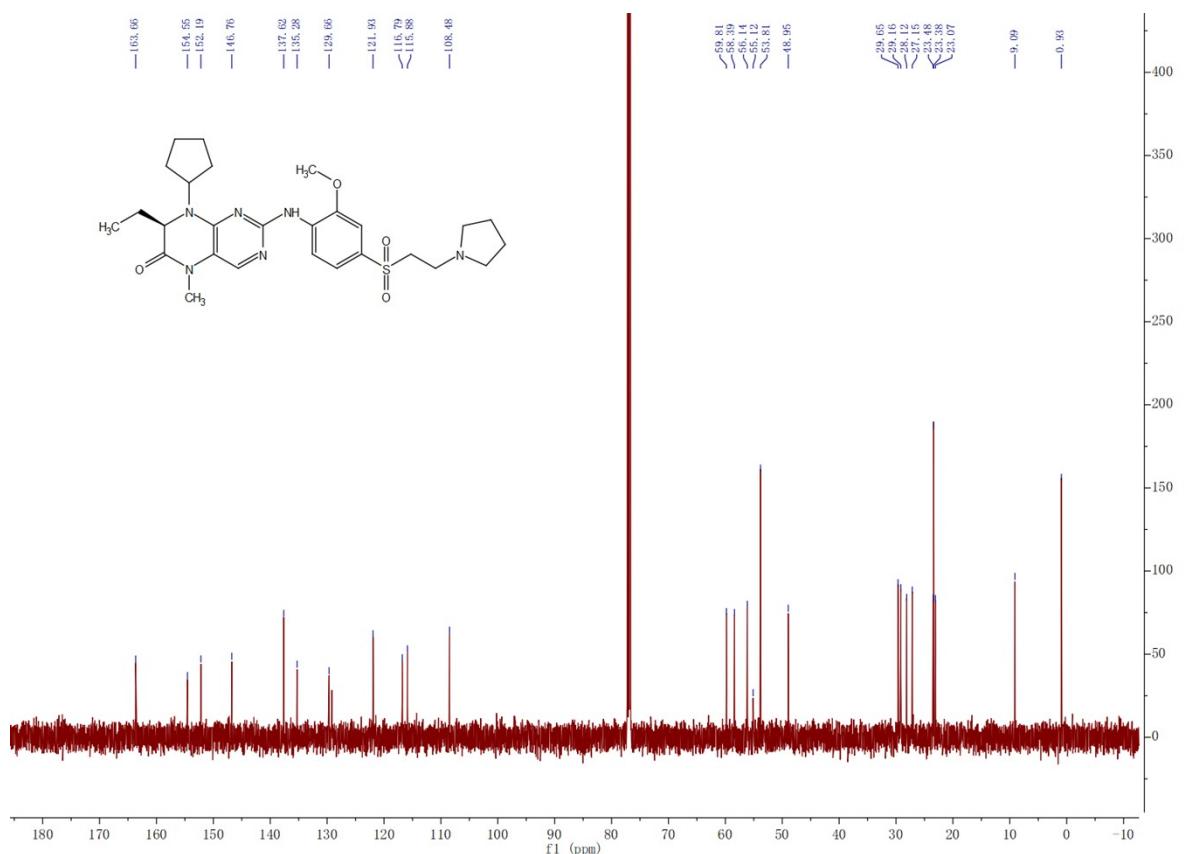
**Fig. 31**  $^1\text{H}$  NMR spectrum of compound A7



**Fig. 32 Mass spectrum of compound A8**



**Fig. 33**  $^1\text{H}$  NMR spectrum of compound A8



**Fig. 34**  $^{13}\text{C}$  NMR spectrum of compound A8

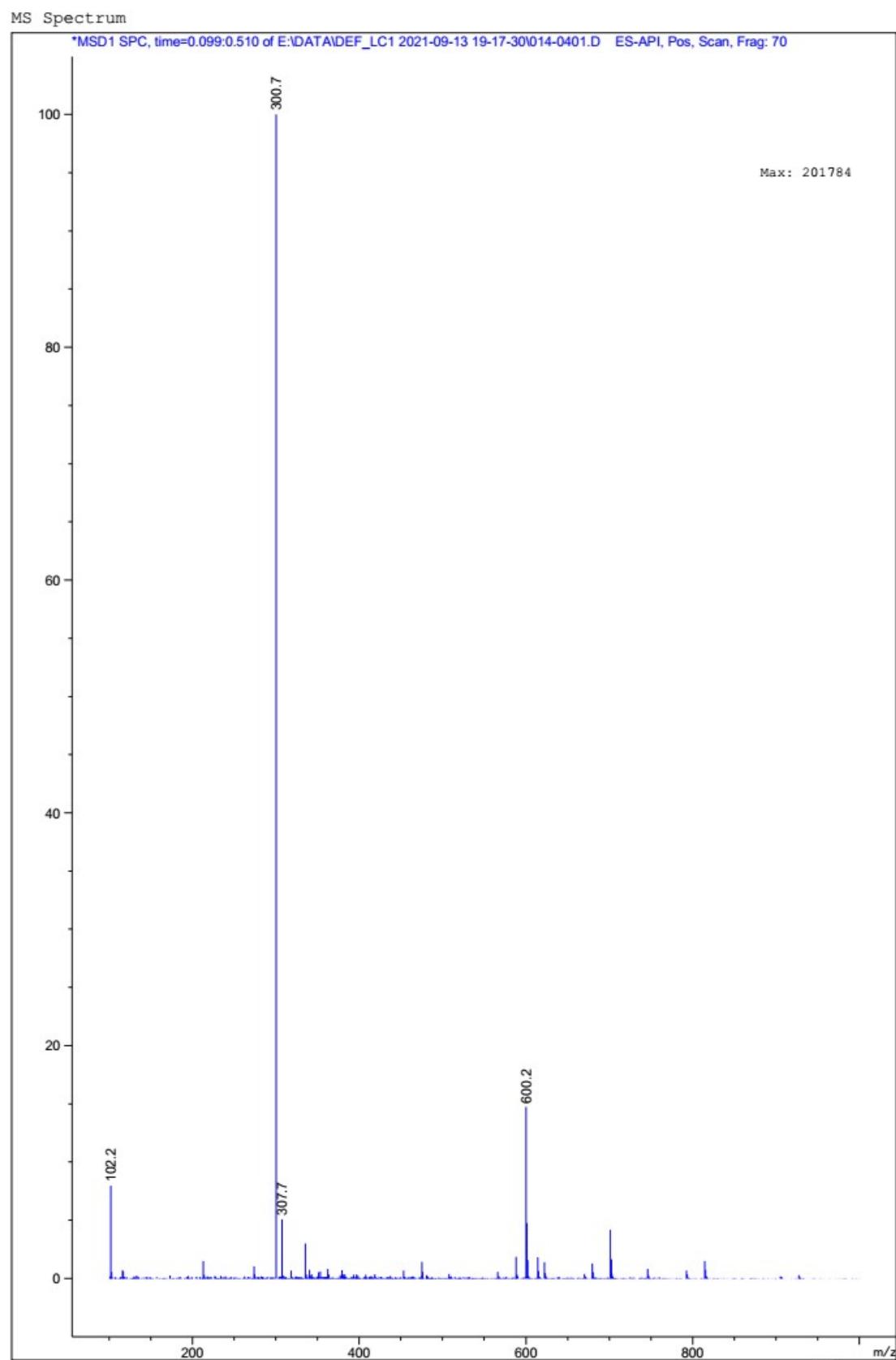
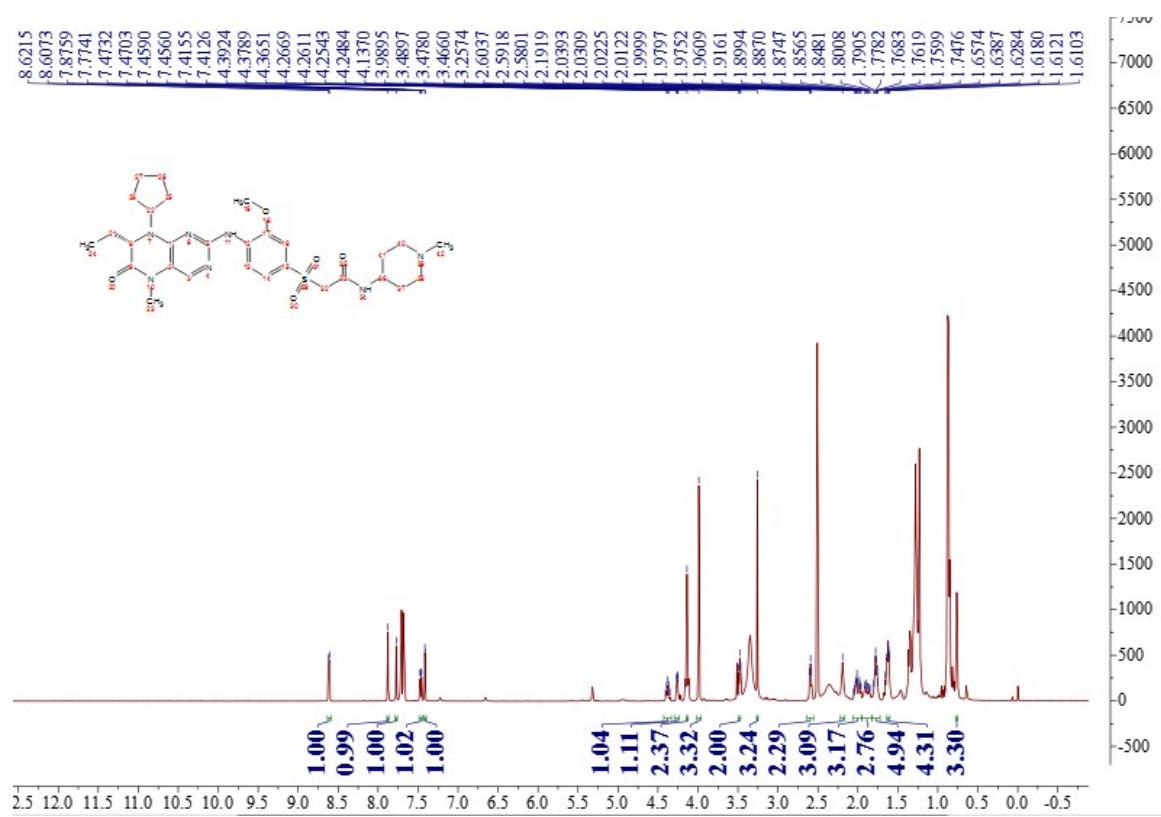
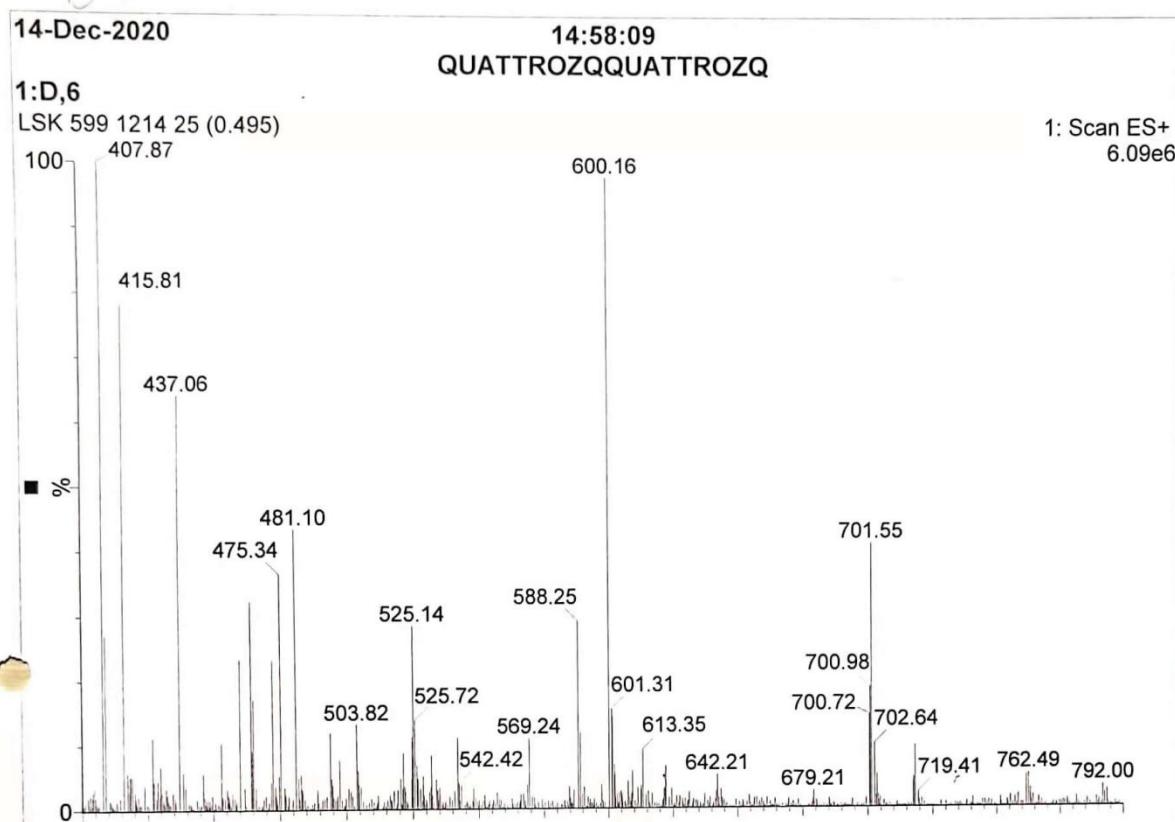


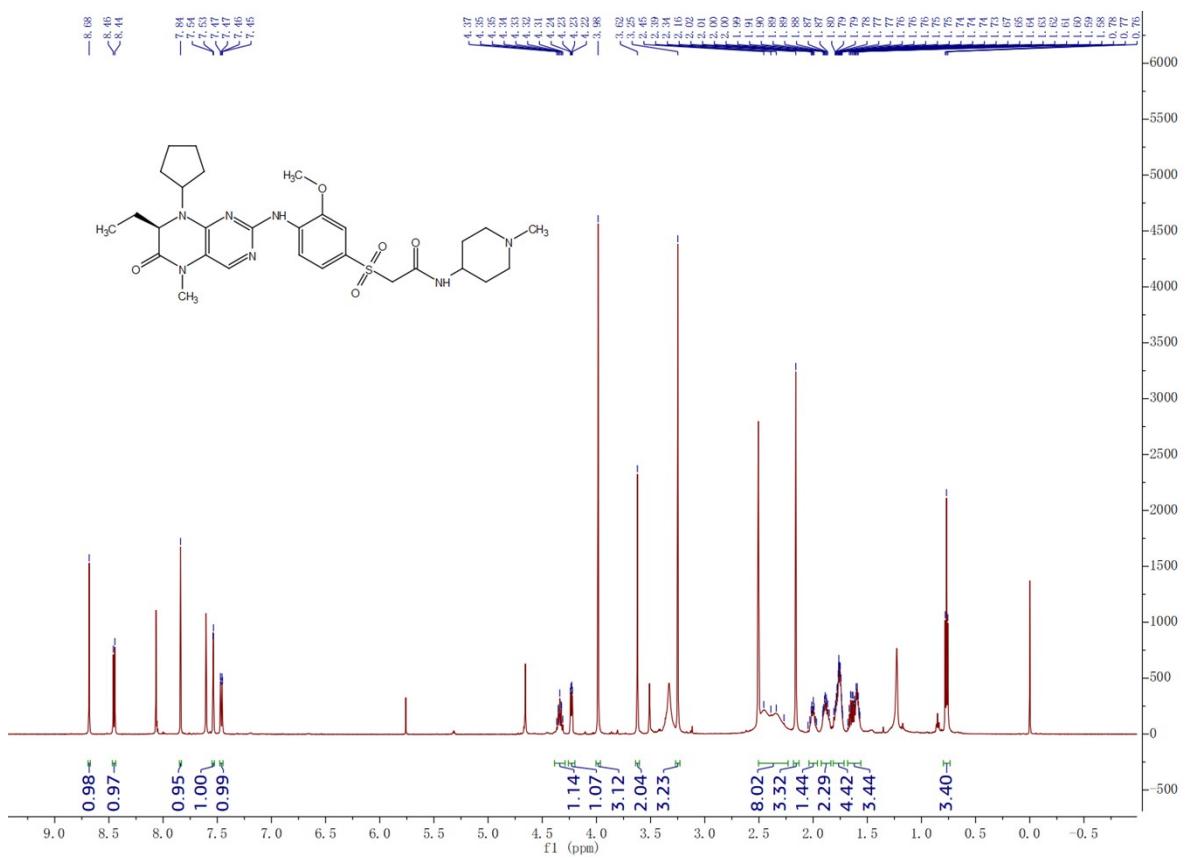
Fig. 35 Mass spectrum of compound B1



**Fig. 36** <sup>1</sup>H NMR spectrum of compound B1



**Fig. 37** Mass spectrum of compound B2



**Fig. 38**  $^1\text{H}$  NMR spectrum of compound B2

## MS Spectrum

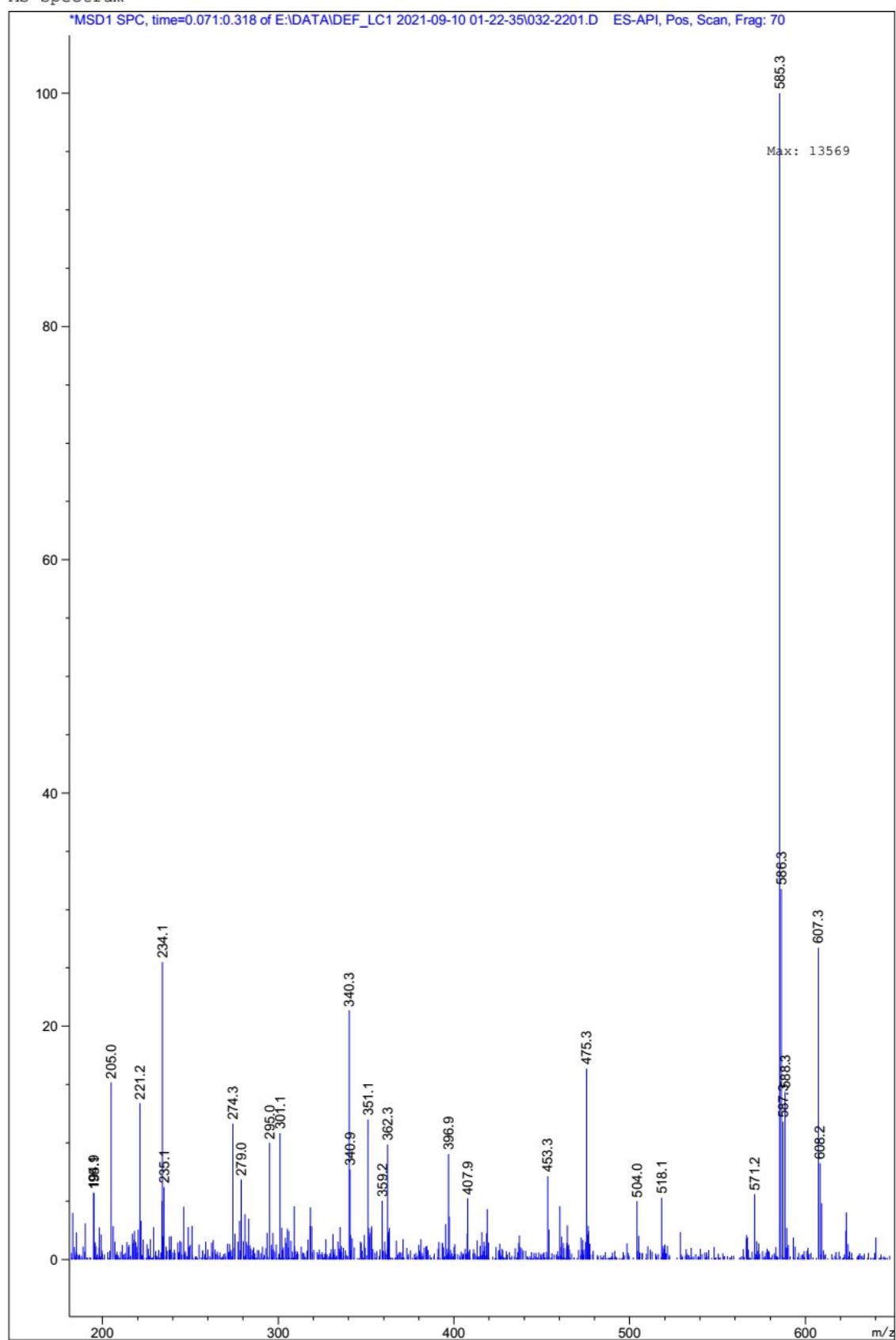
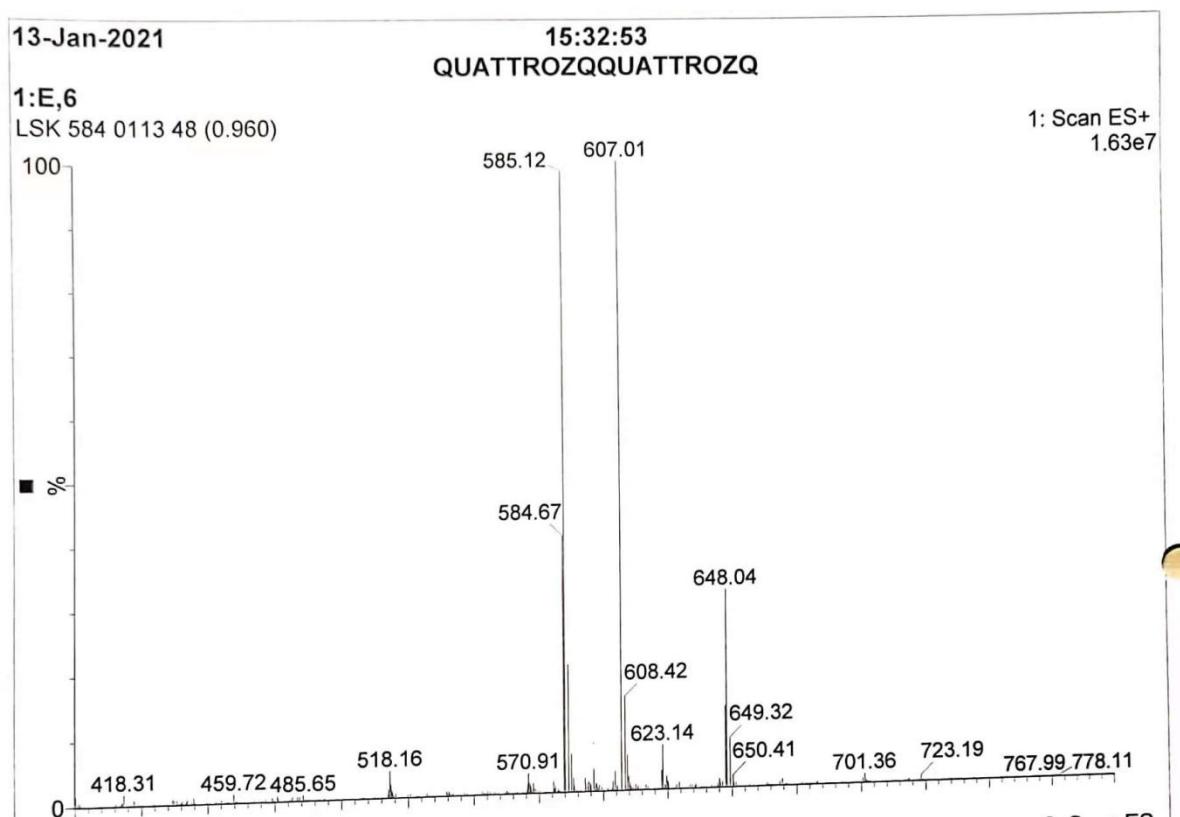
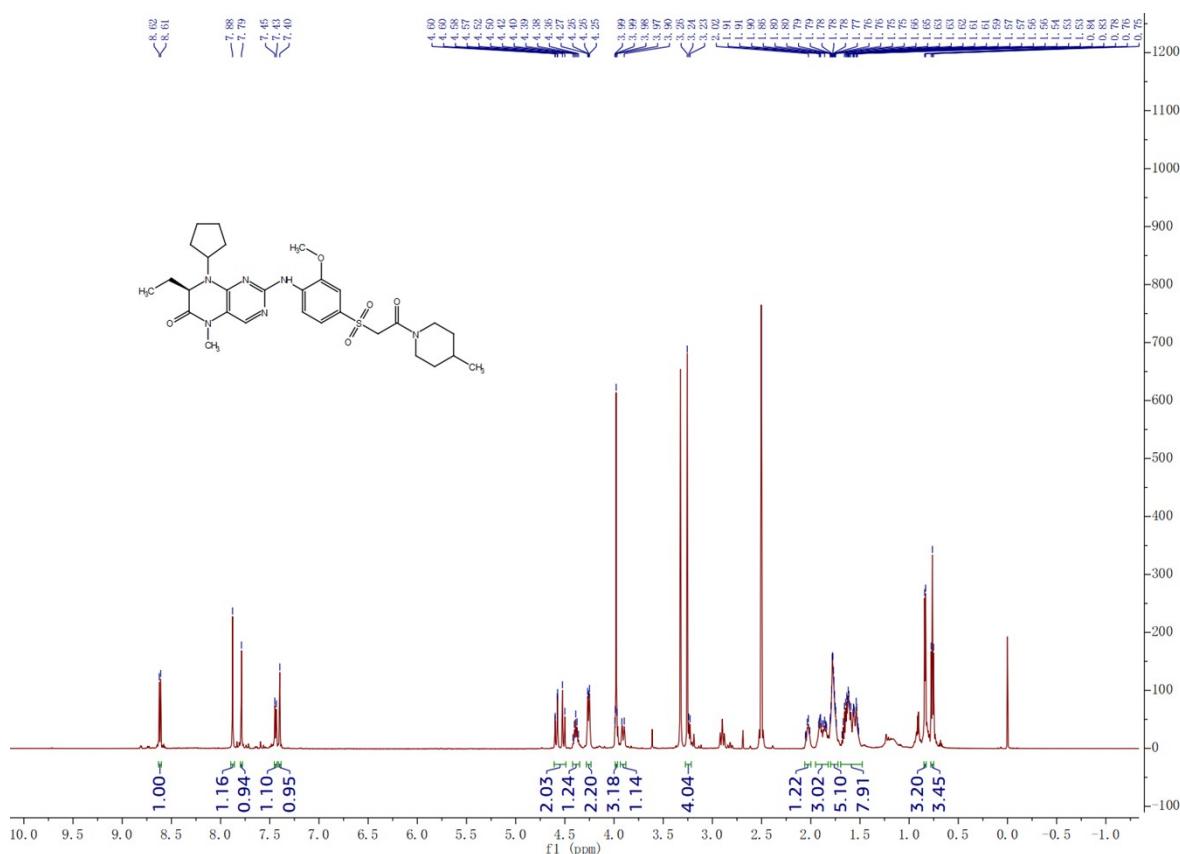


Fig. 39 Mass spectrum of compound B3



**Fig. 40** Mass spectrum of compound B4



**Fig. 41**  $^1\text{H}$  NMR spectrum of compound B4

## MS Spectrum

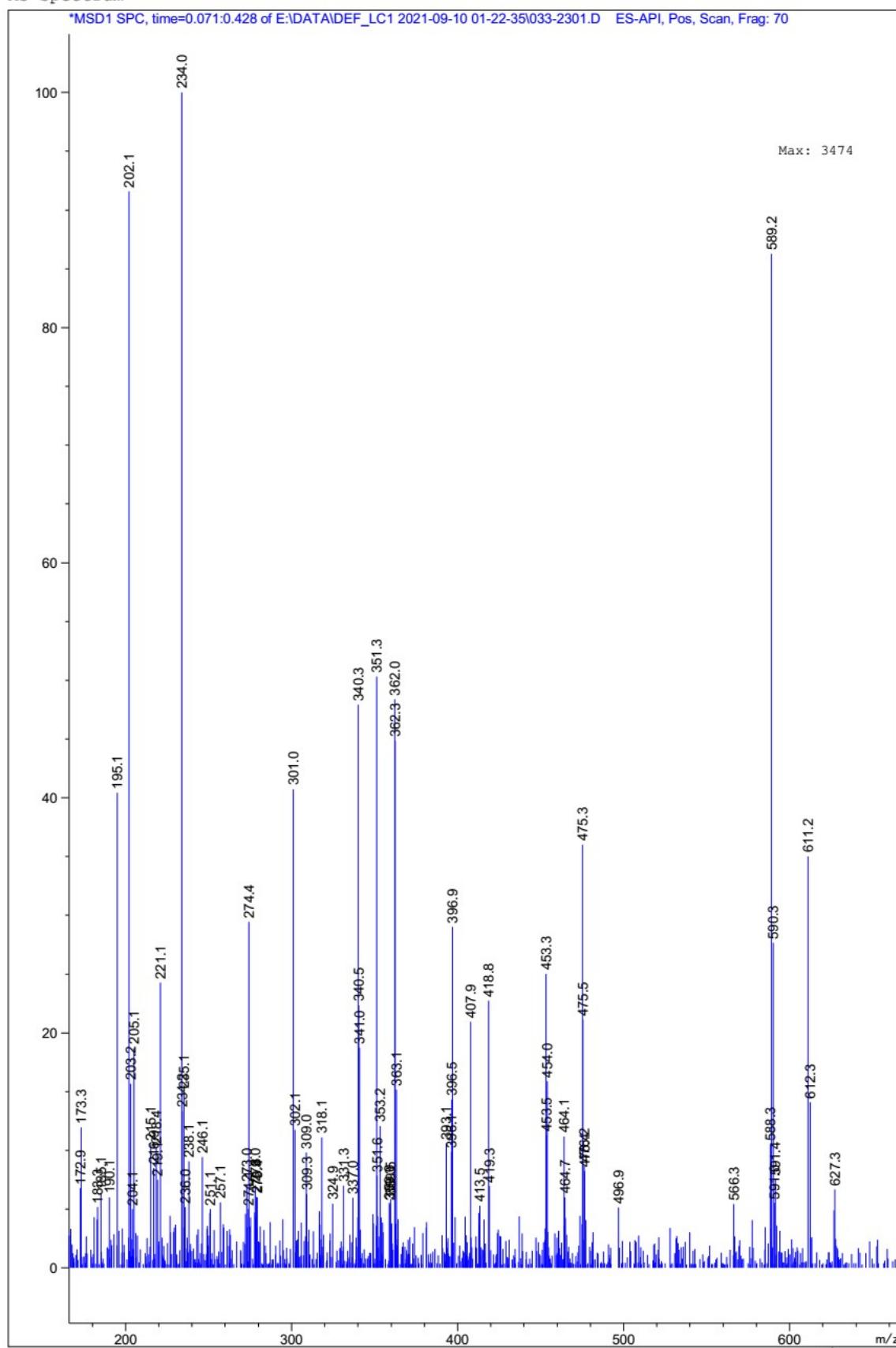
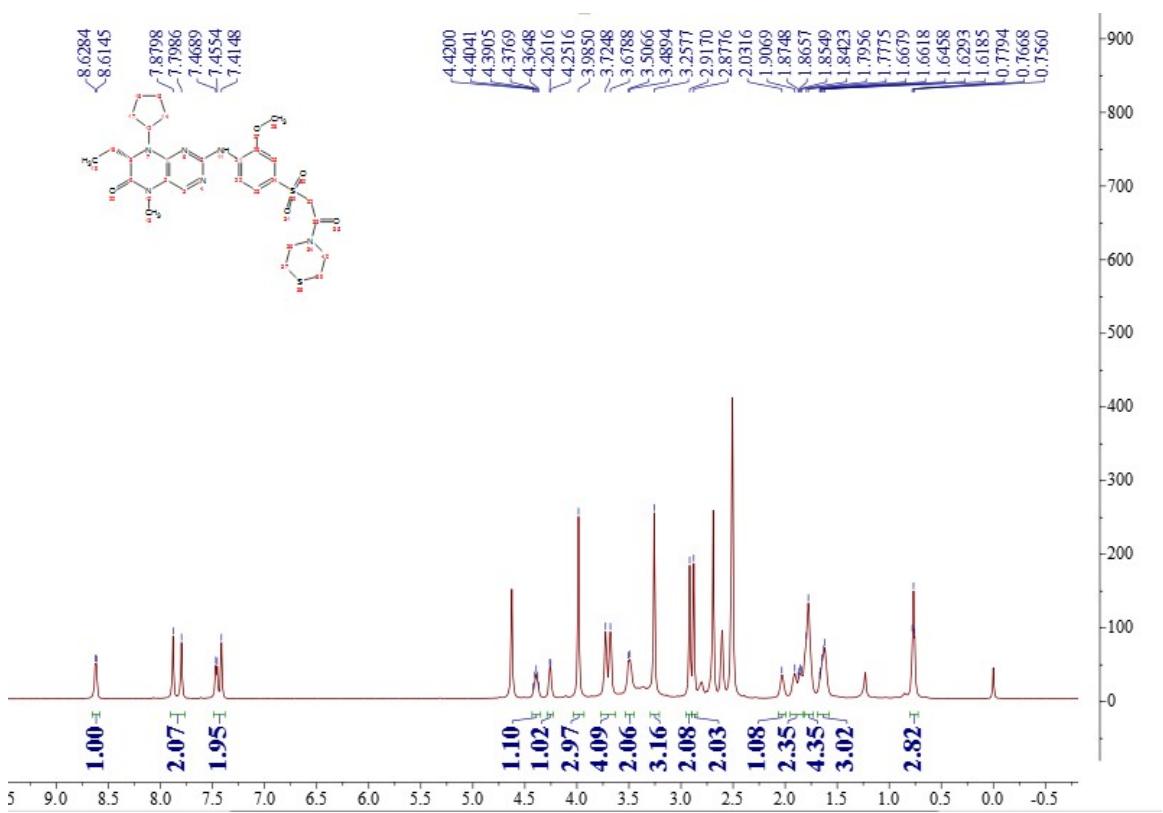
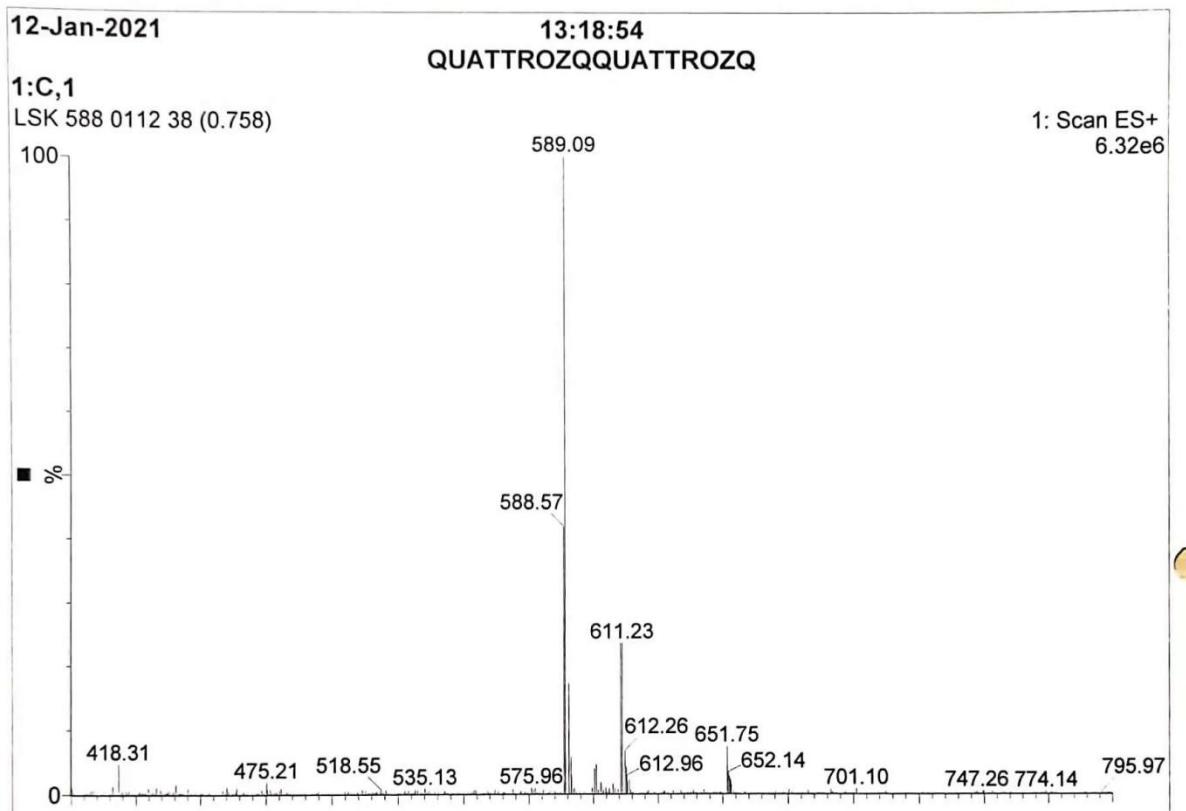


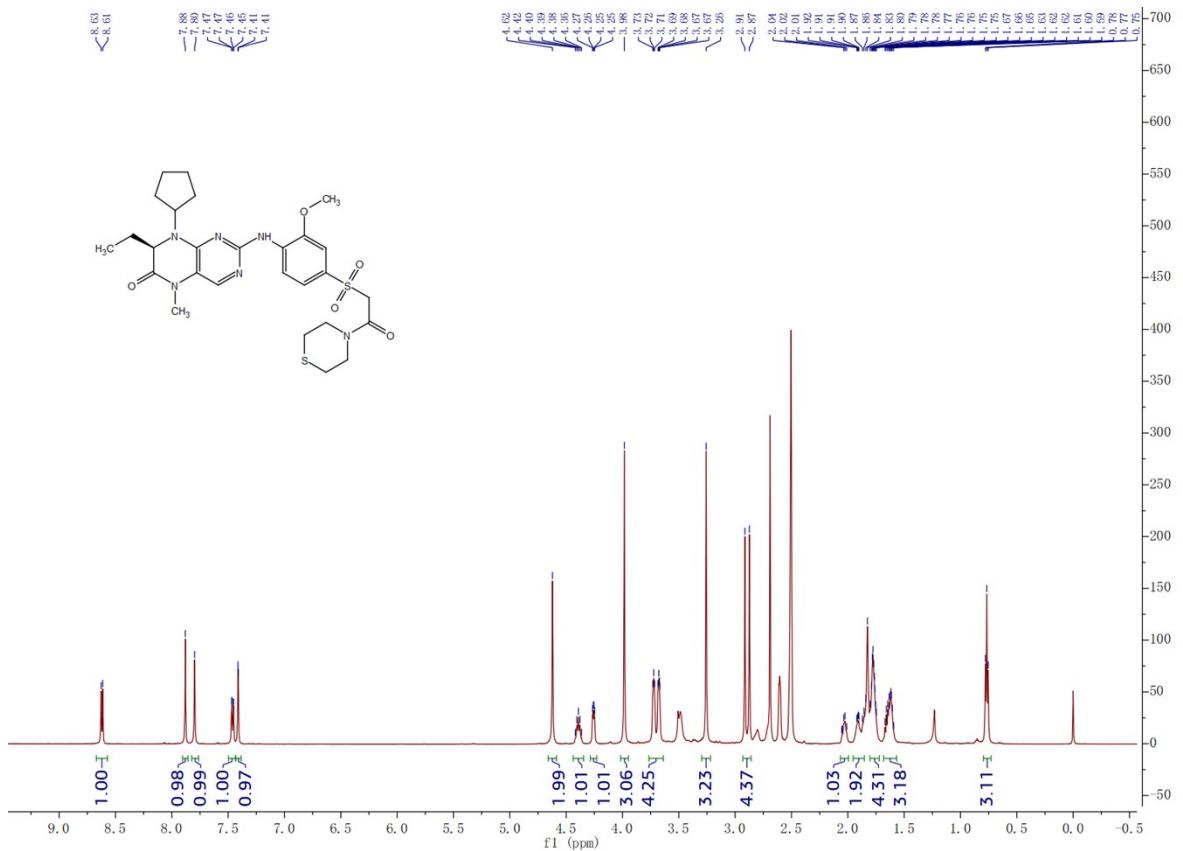
Fig. 42 Mass spectrum of compound B5



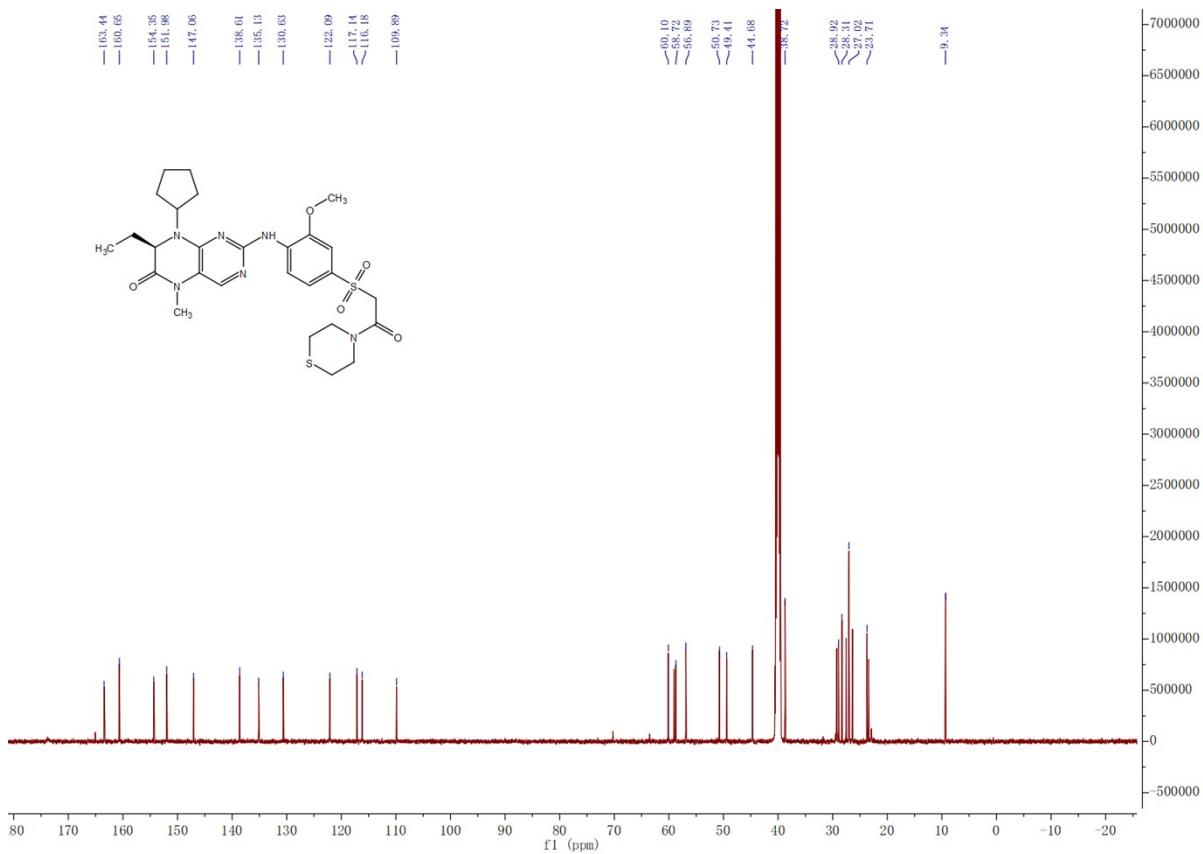
**Fig. 43**  $^1\text{H}$  NMR spectrum of compound B5



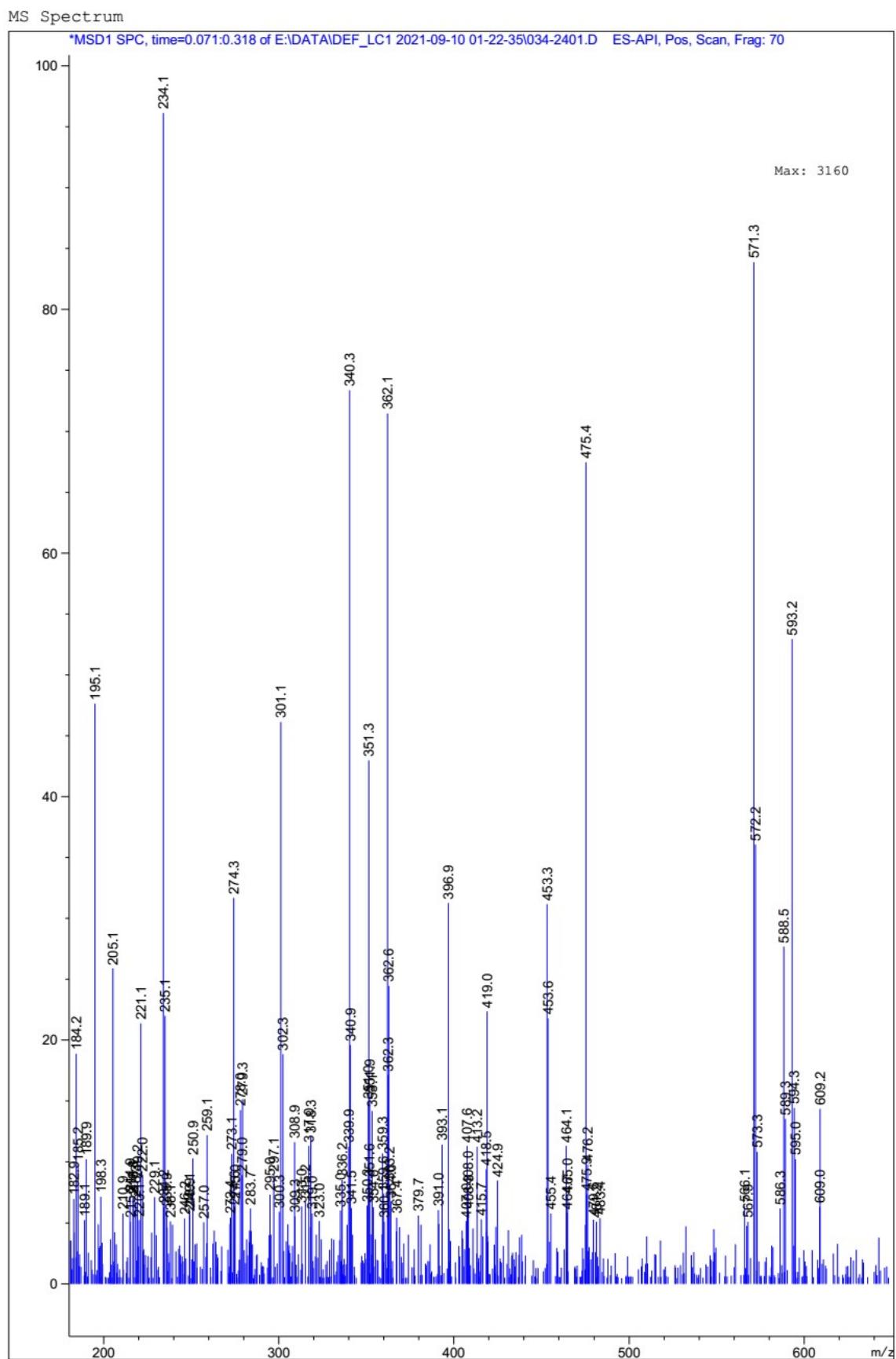
**Fig. 44** Mass spectrum of compound B6



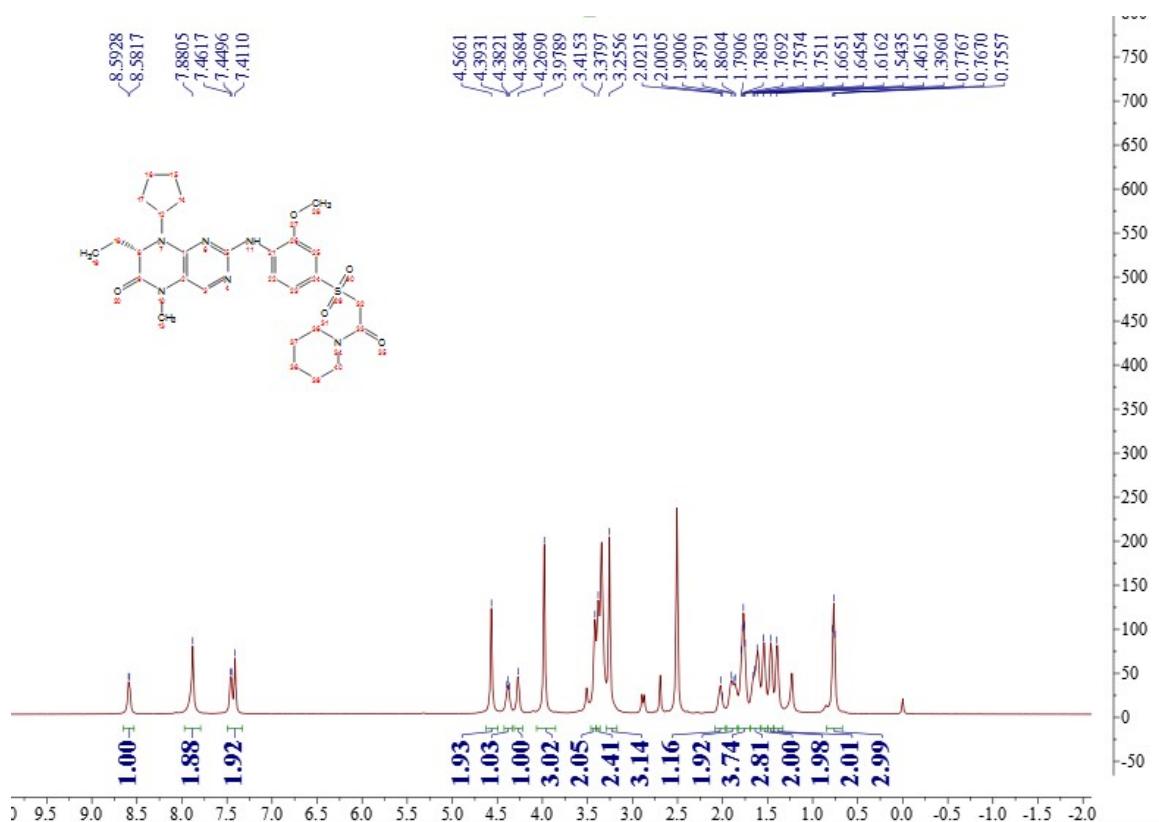
**Fig. 45**  $^1\text{H}$  NMR spectrum of compound B6



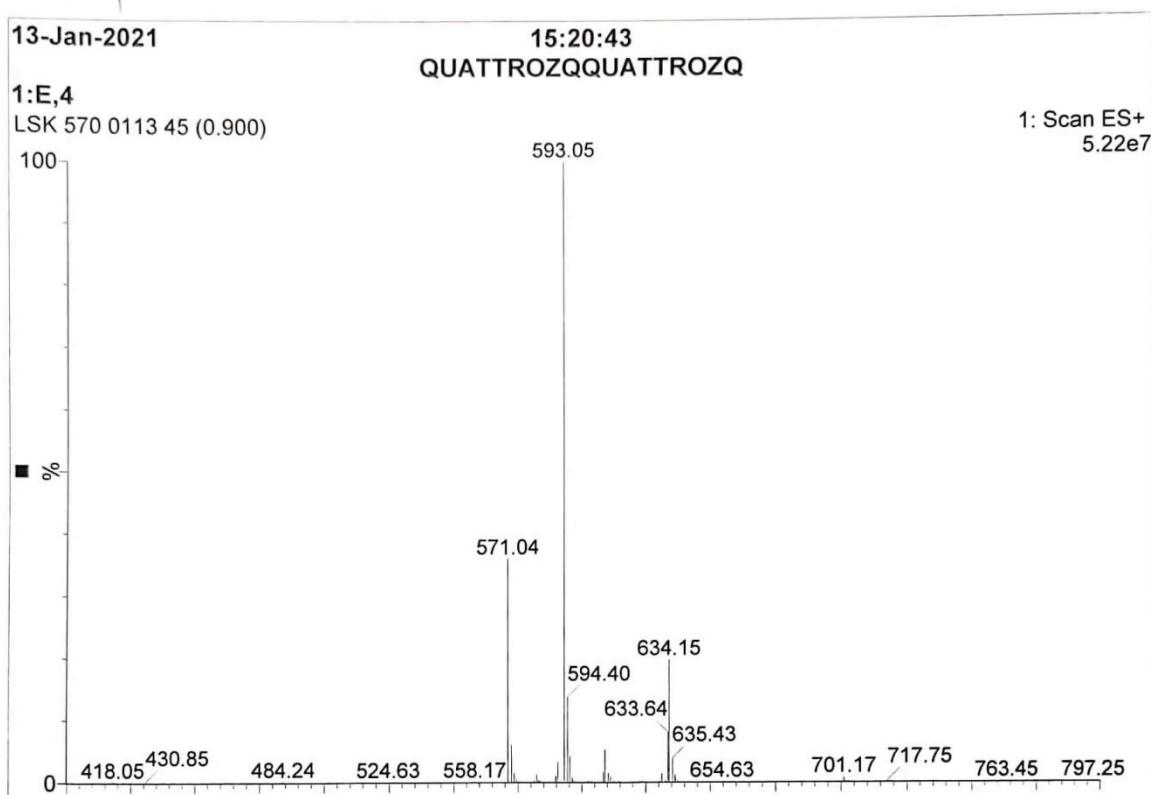
**Fig. 46**  $^{13}\text{C}$  NMR spectrum of compound B6



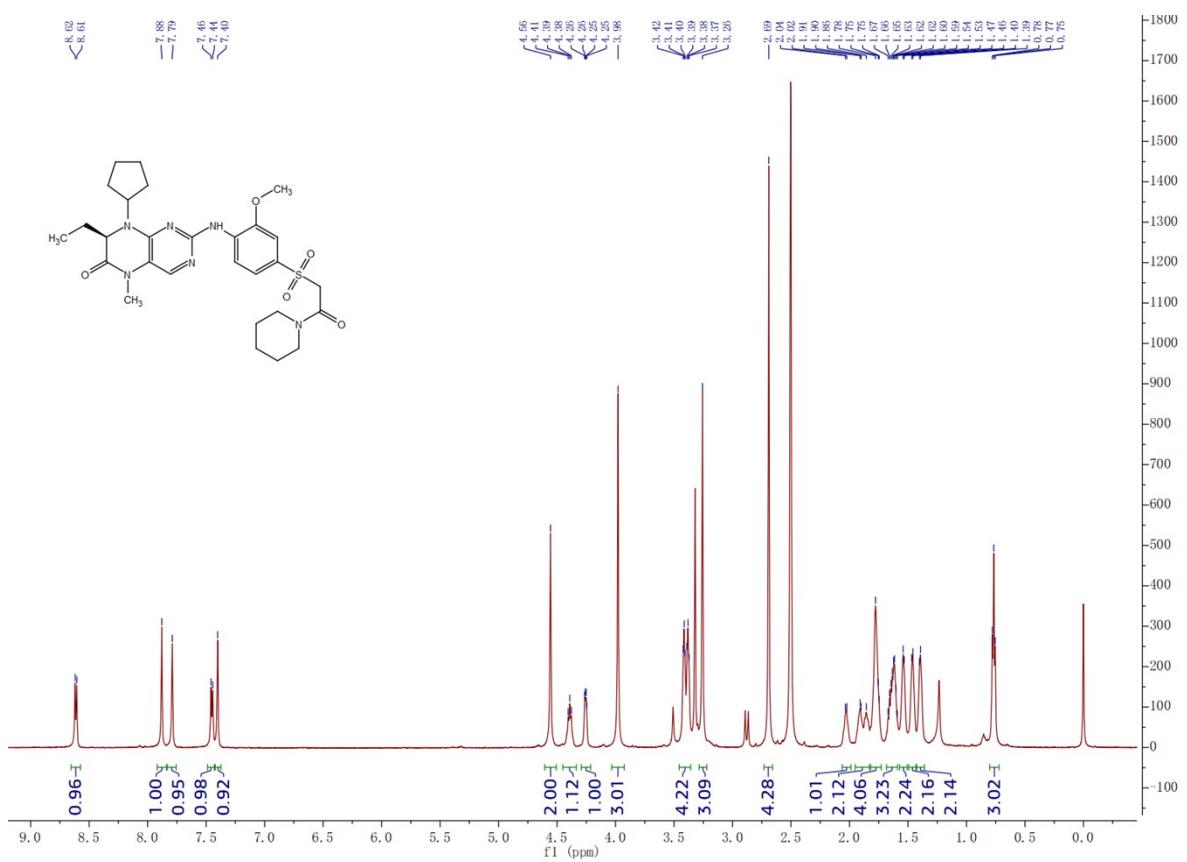
**Fig. 47 Mass spectrum of compound B7**



**Fig. 48** <sup>1</sup>H NMR spectrum of compound B7



**Fig. 49** Mass spectrum of compound B8



**Fig. 50**  $^1\text{H}$  NMR spectrum of compound B8

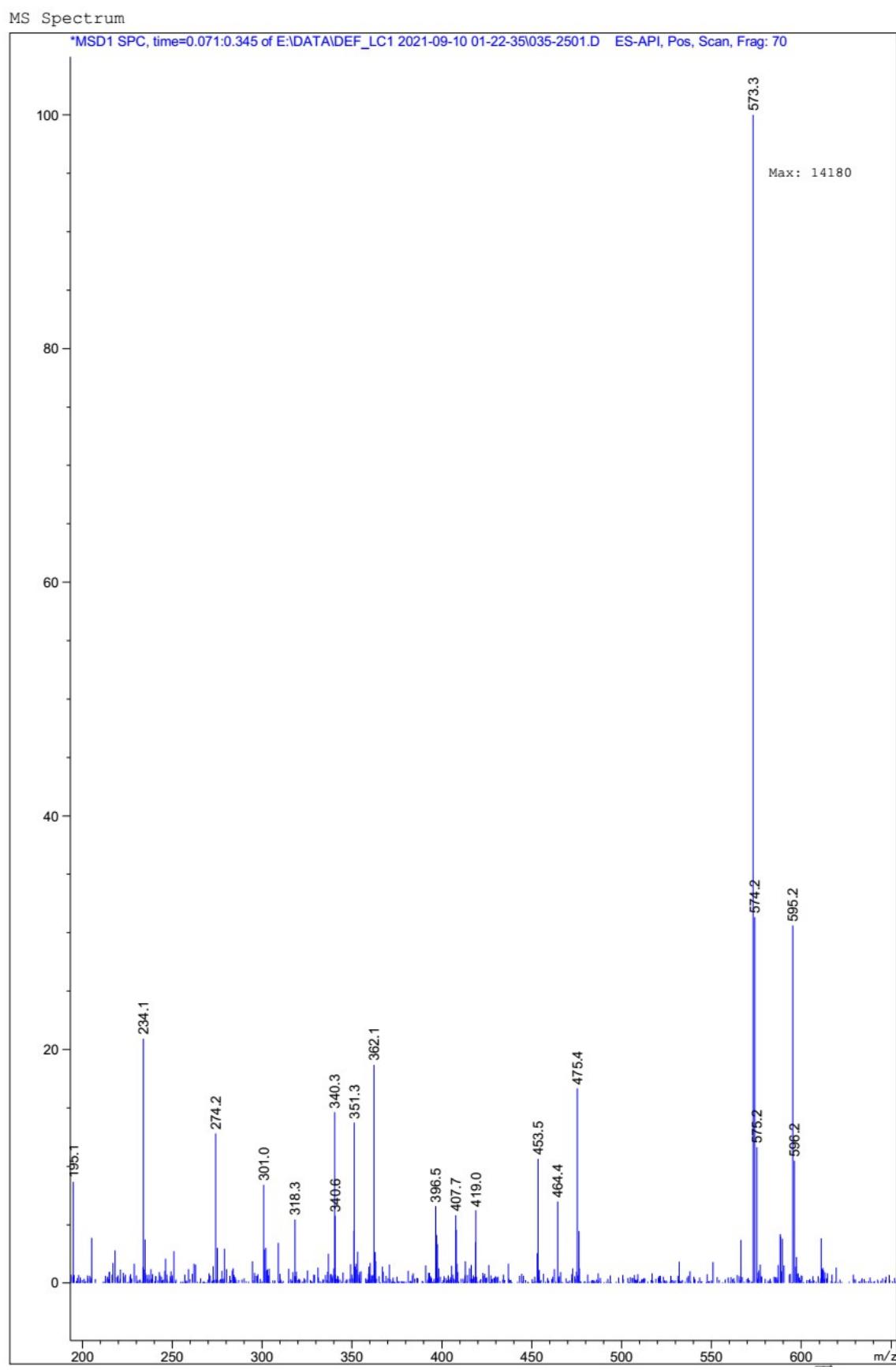
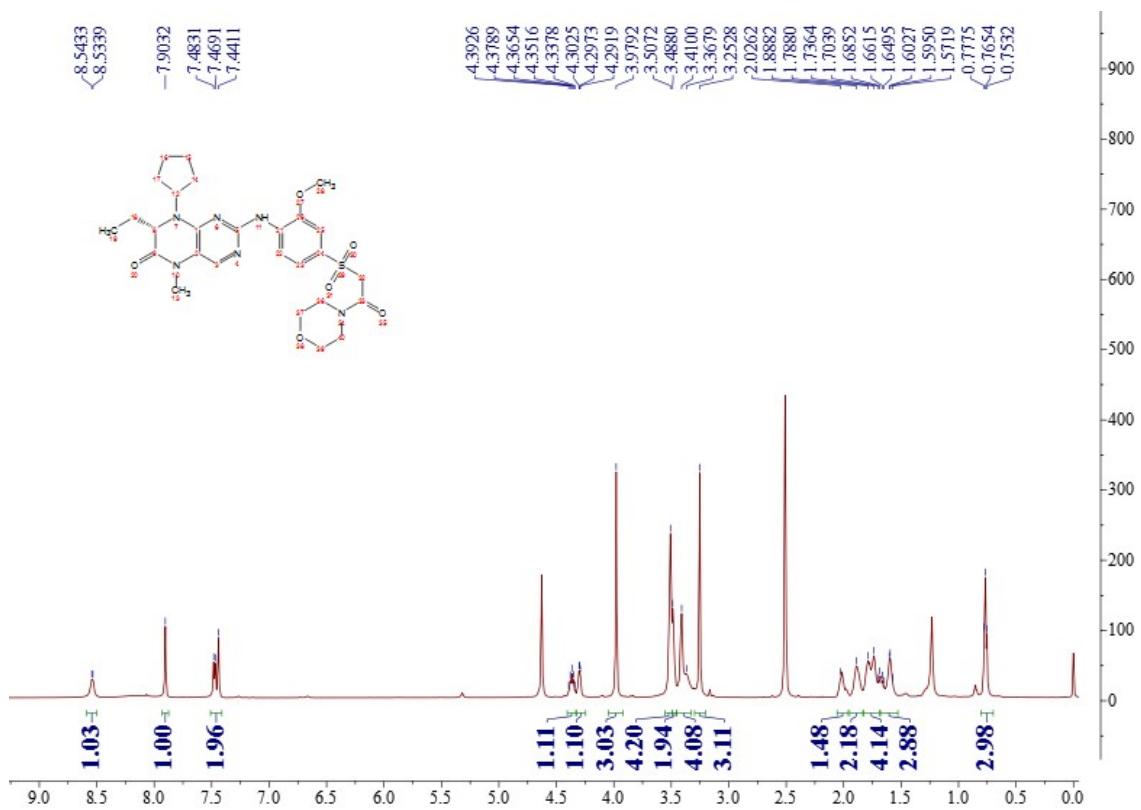
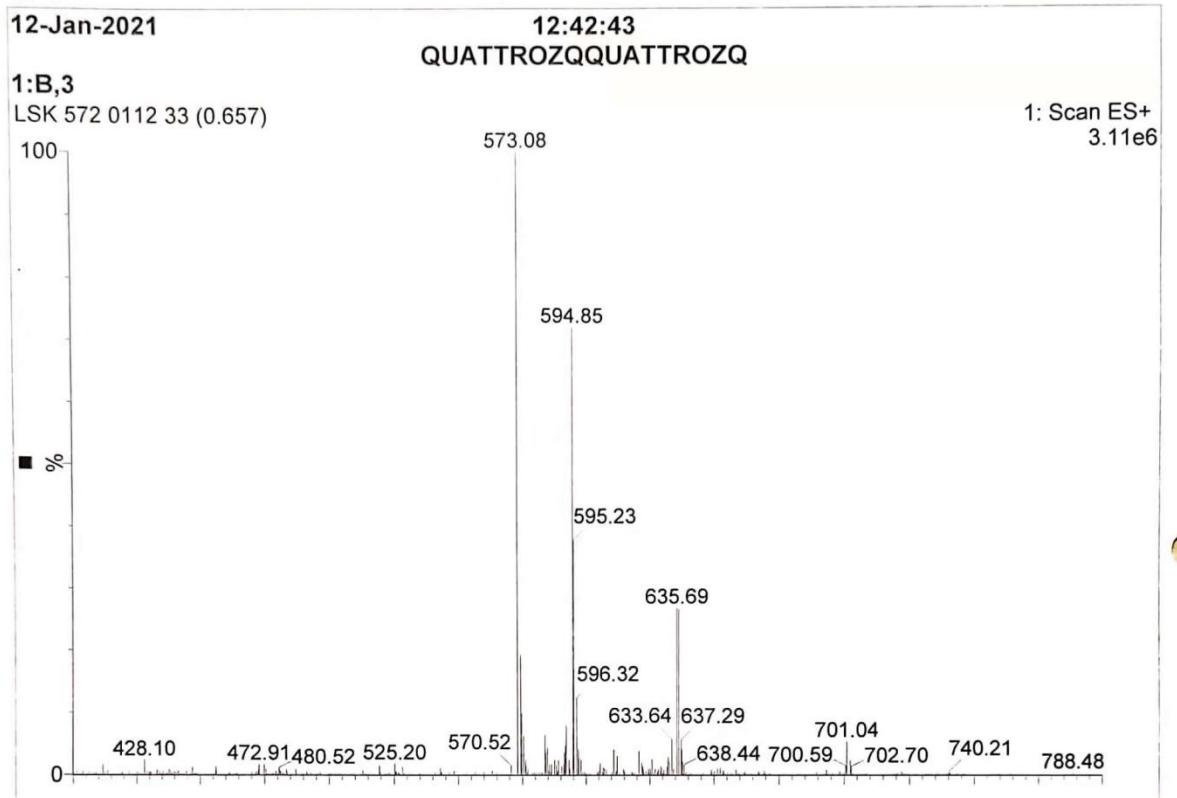


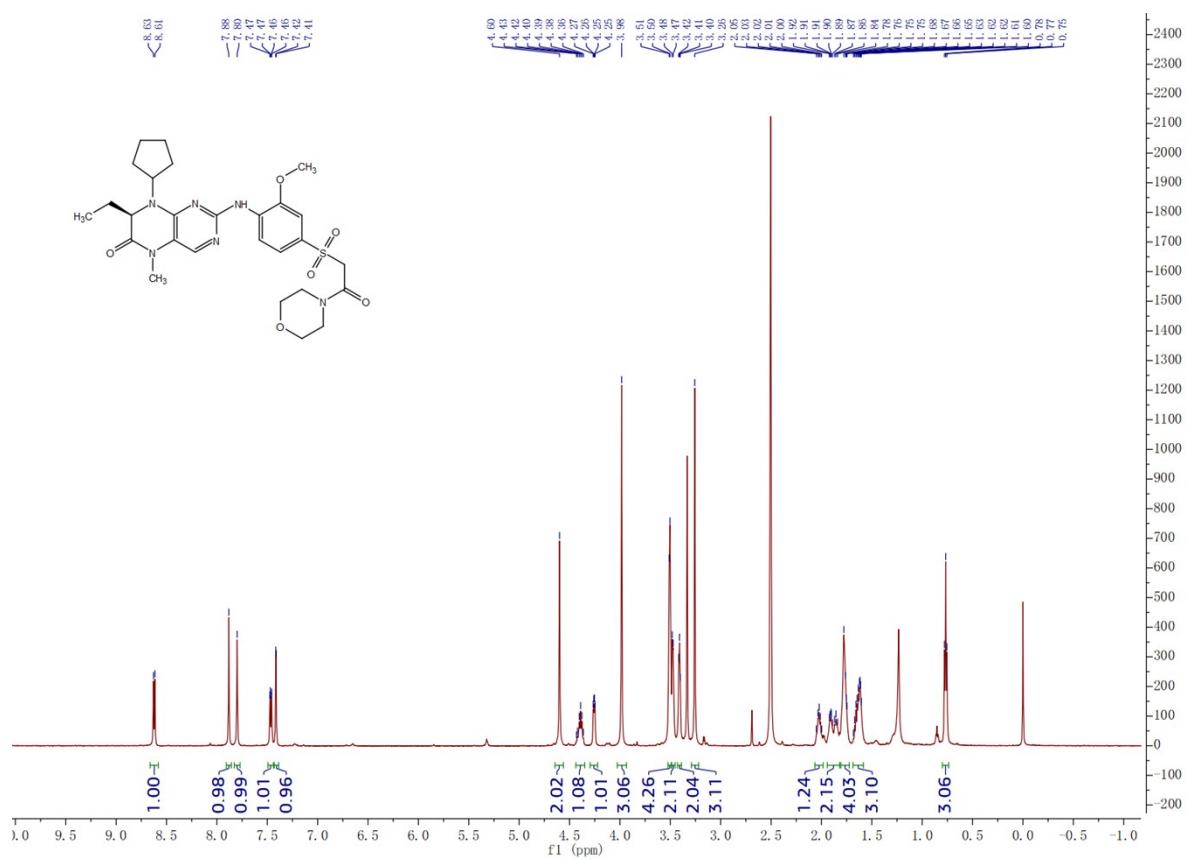
Fig.51 Mass spectrum of compound B9



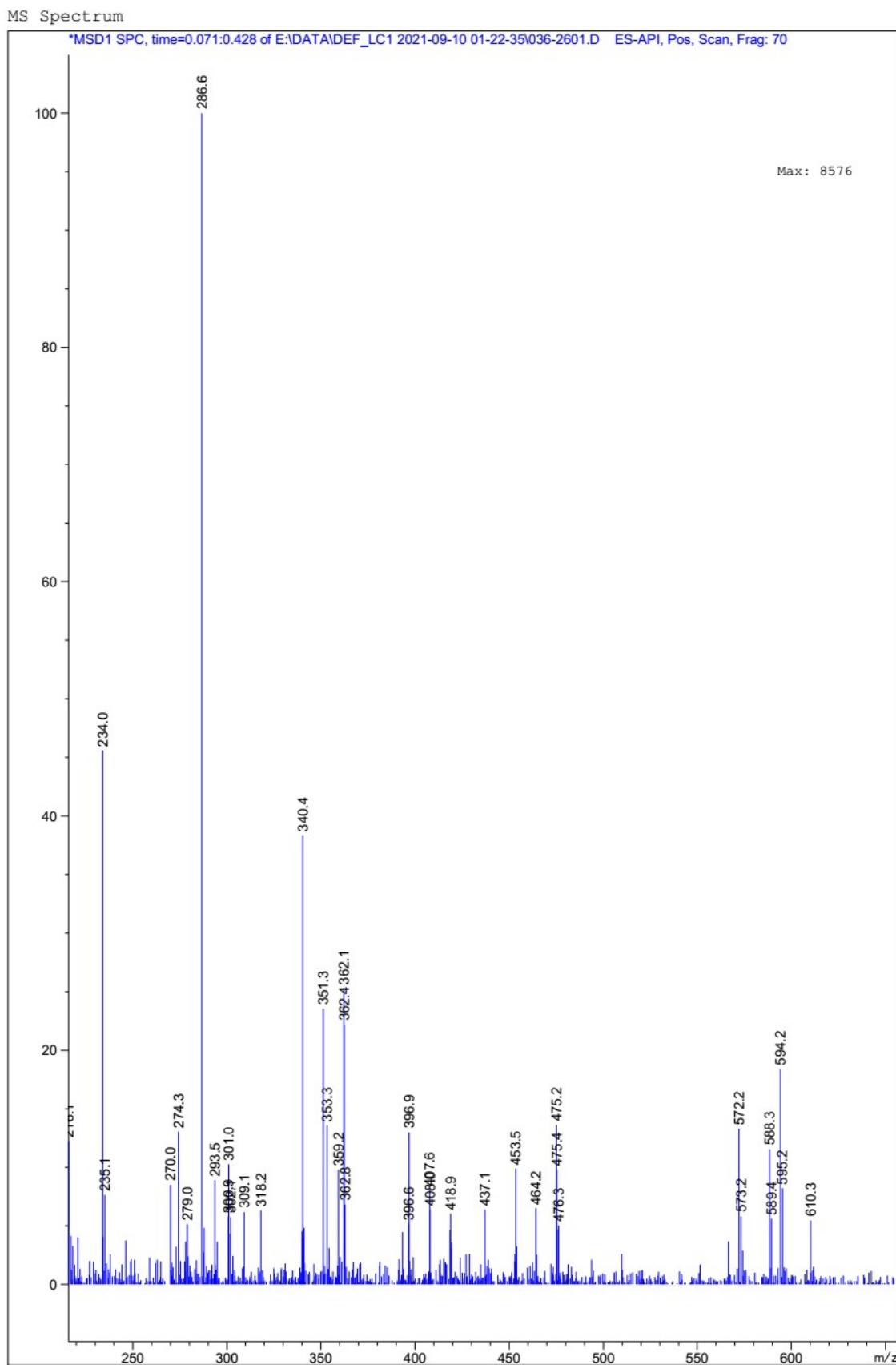
**Fig. 52 <sup>1</sup>H NMR spectrum of compound B9**



**Fig. 53 Mass spectrum of compound B10**



**Fig. 54**  $^1\text{H}$  NMR spectrum of compound B10



**Fig. 55 Mass spectrum of compound B11**

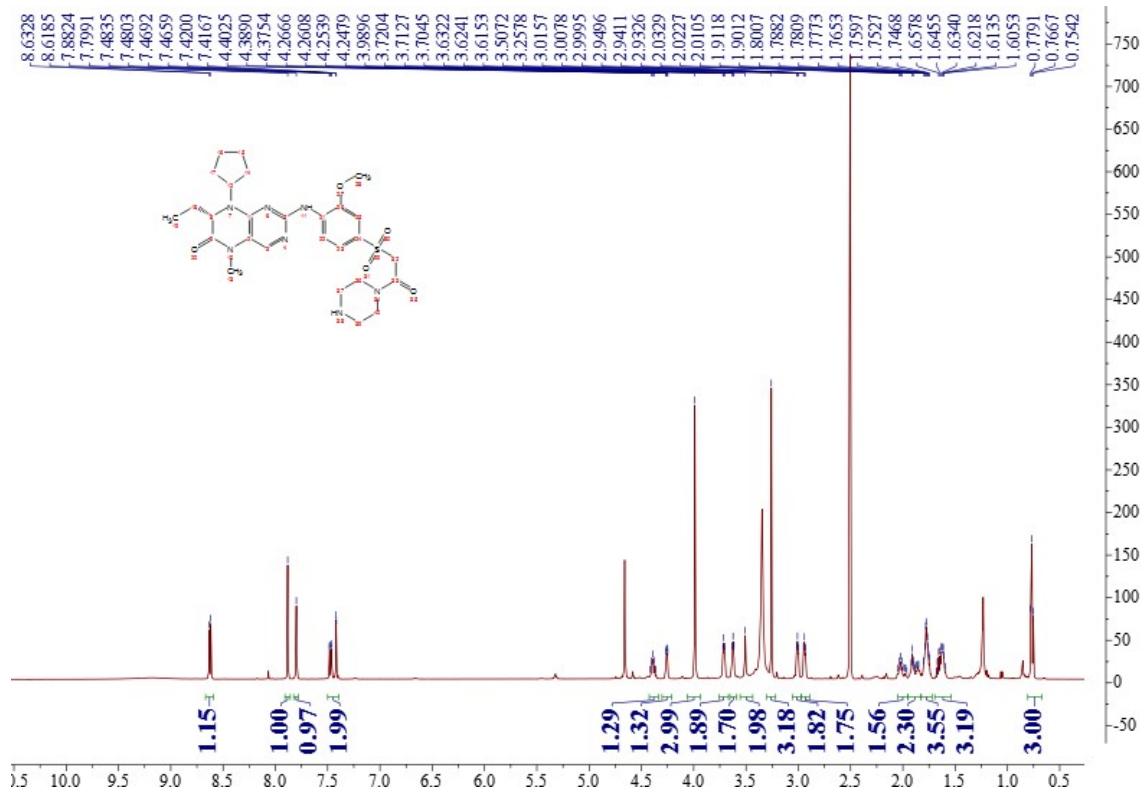


Fig. 56 <sup>1</sup>H NMR spectrum of compound B11

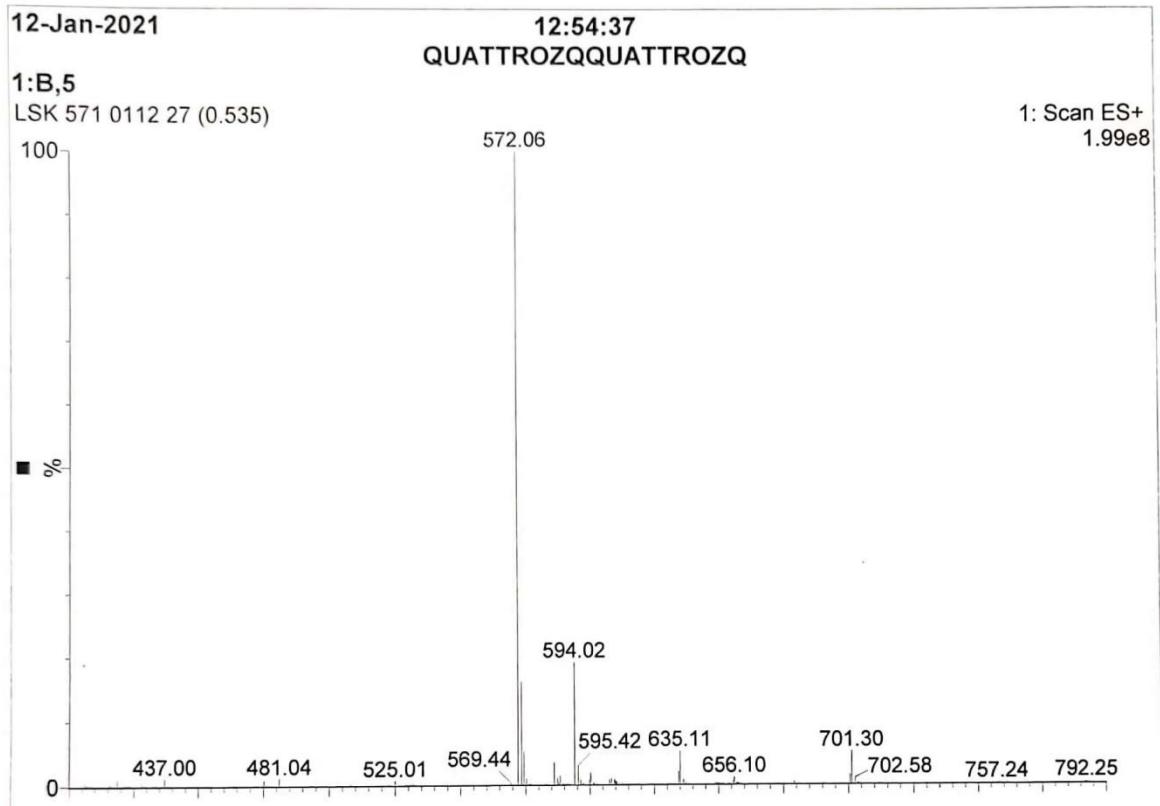
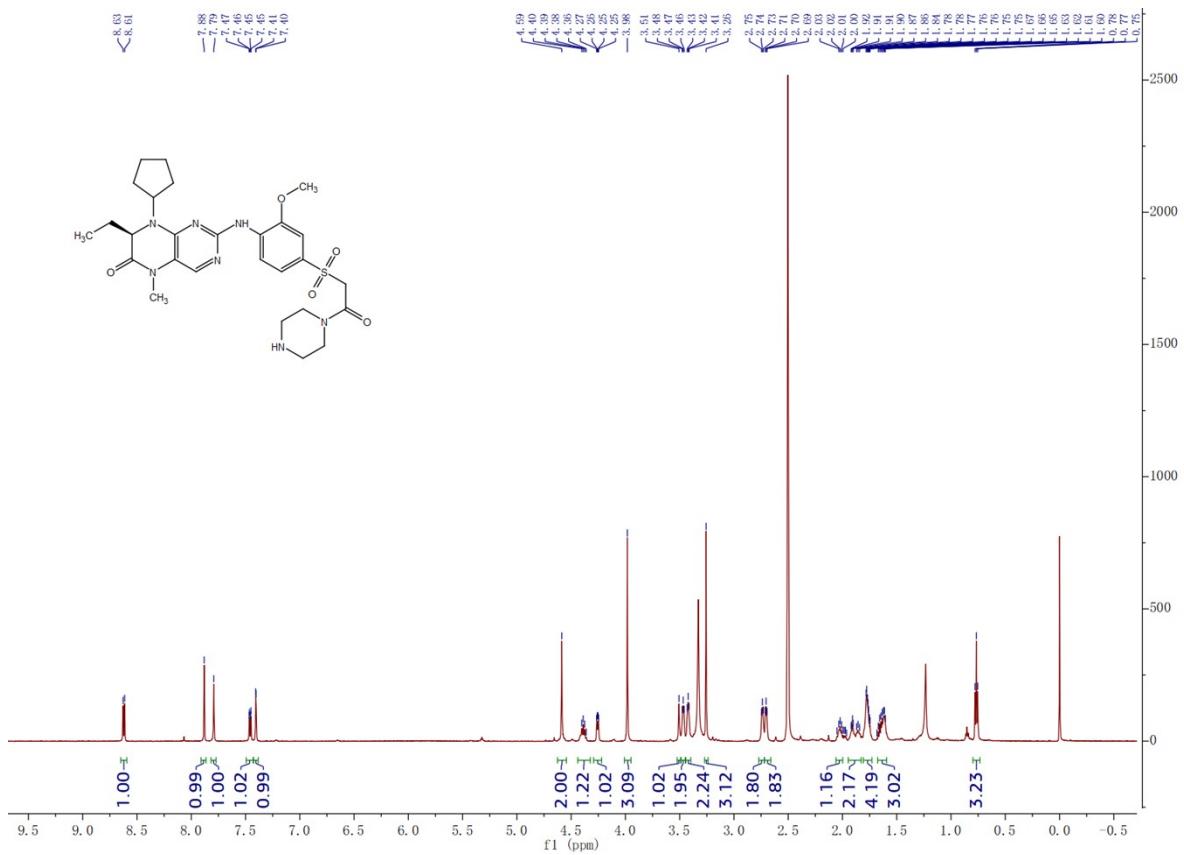
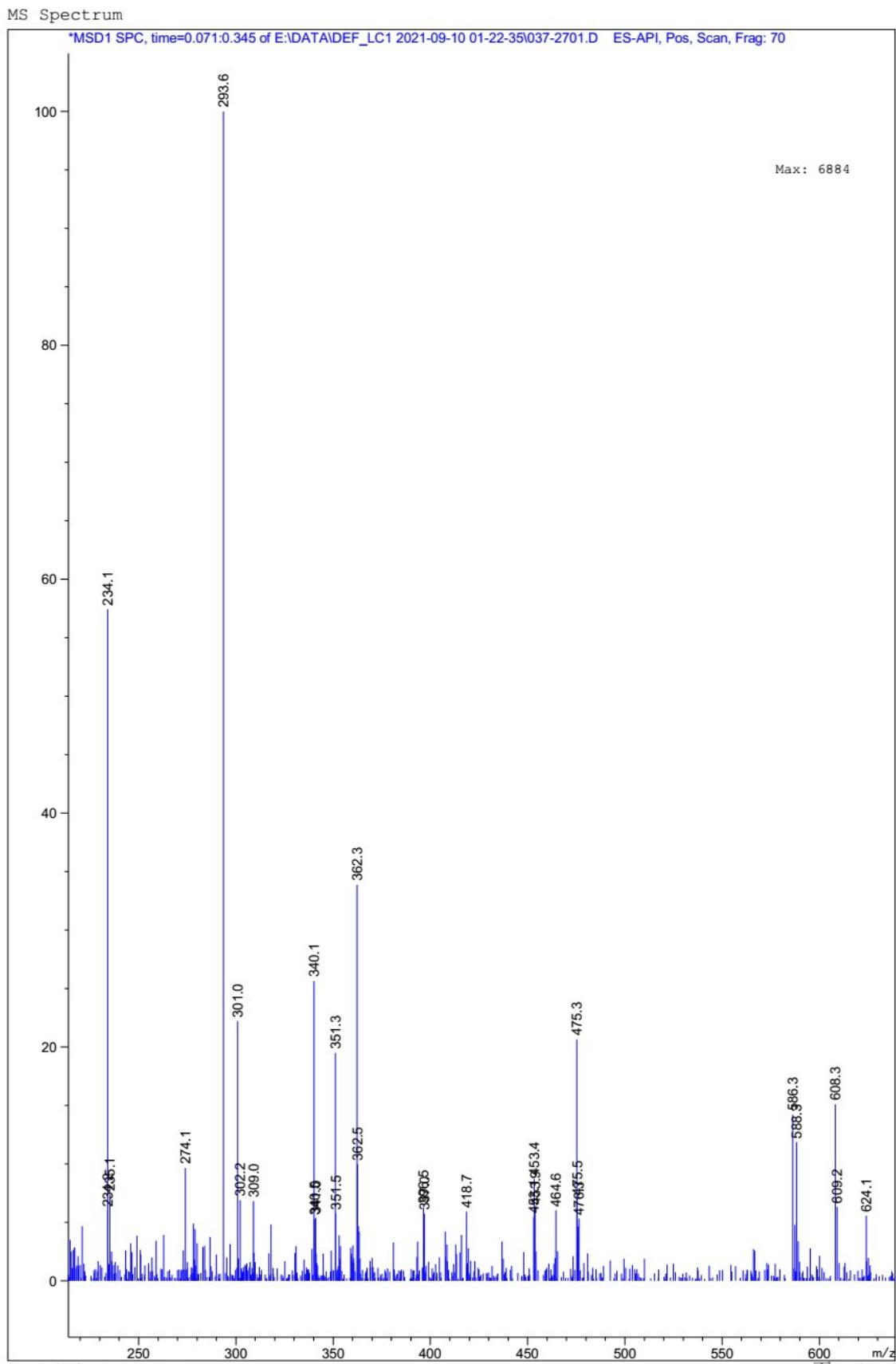
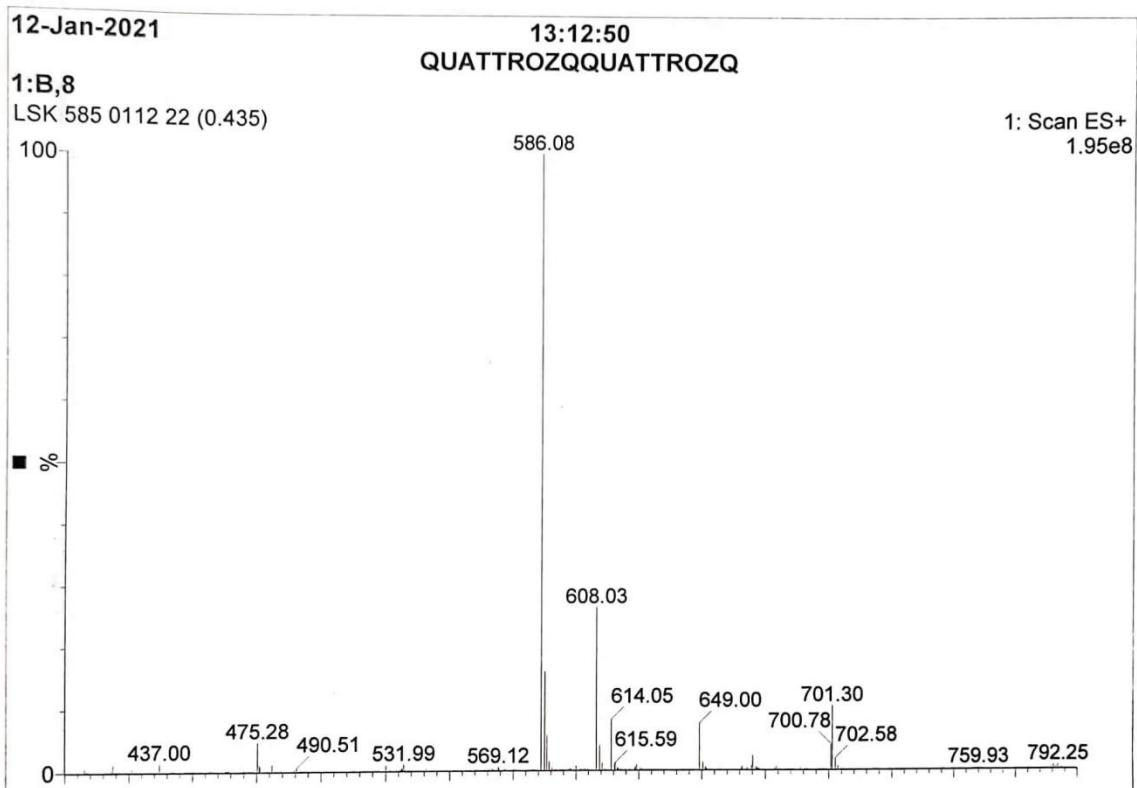


Fig. 57 Mass spectrum of compound B12

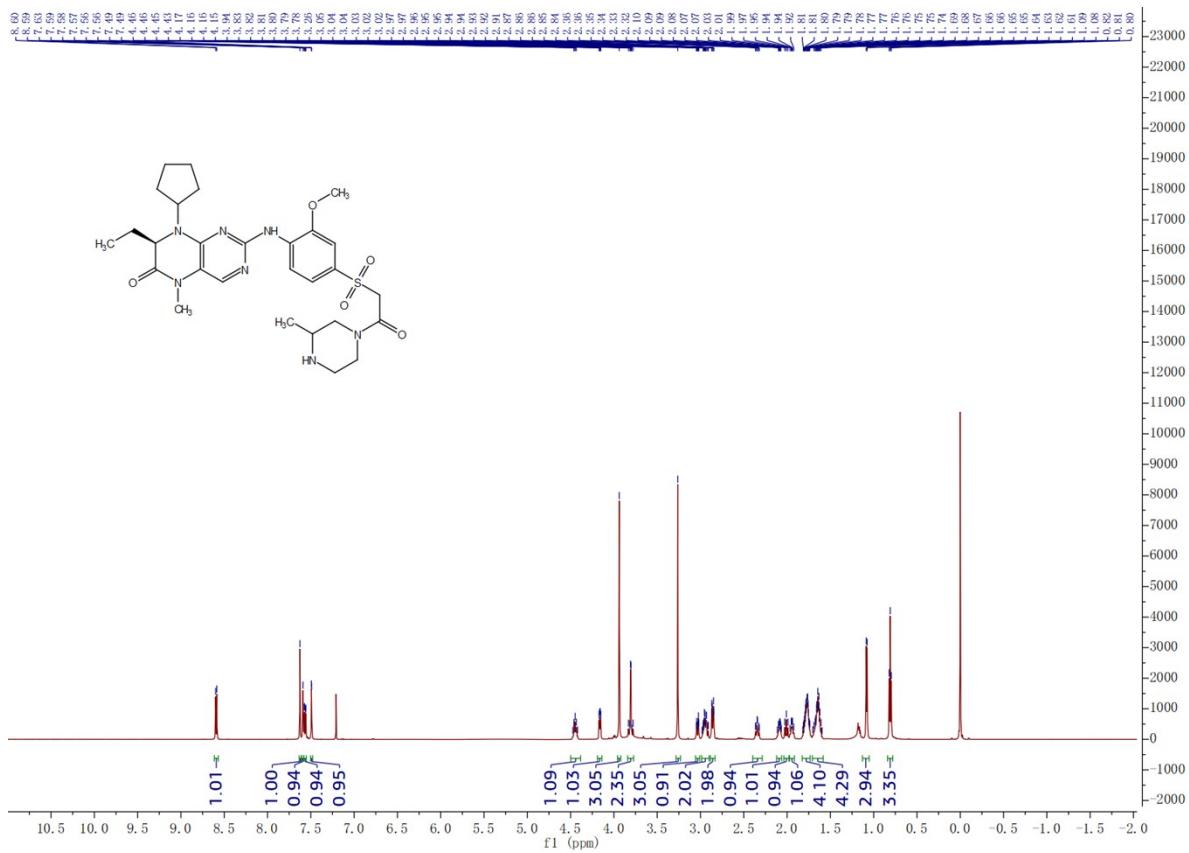




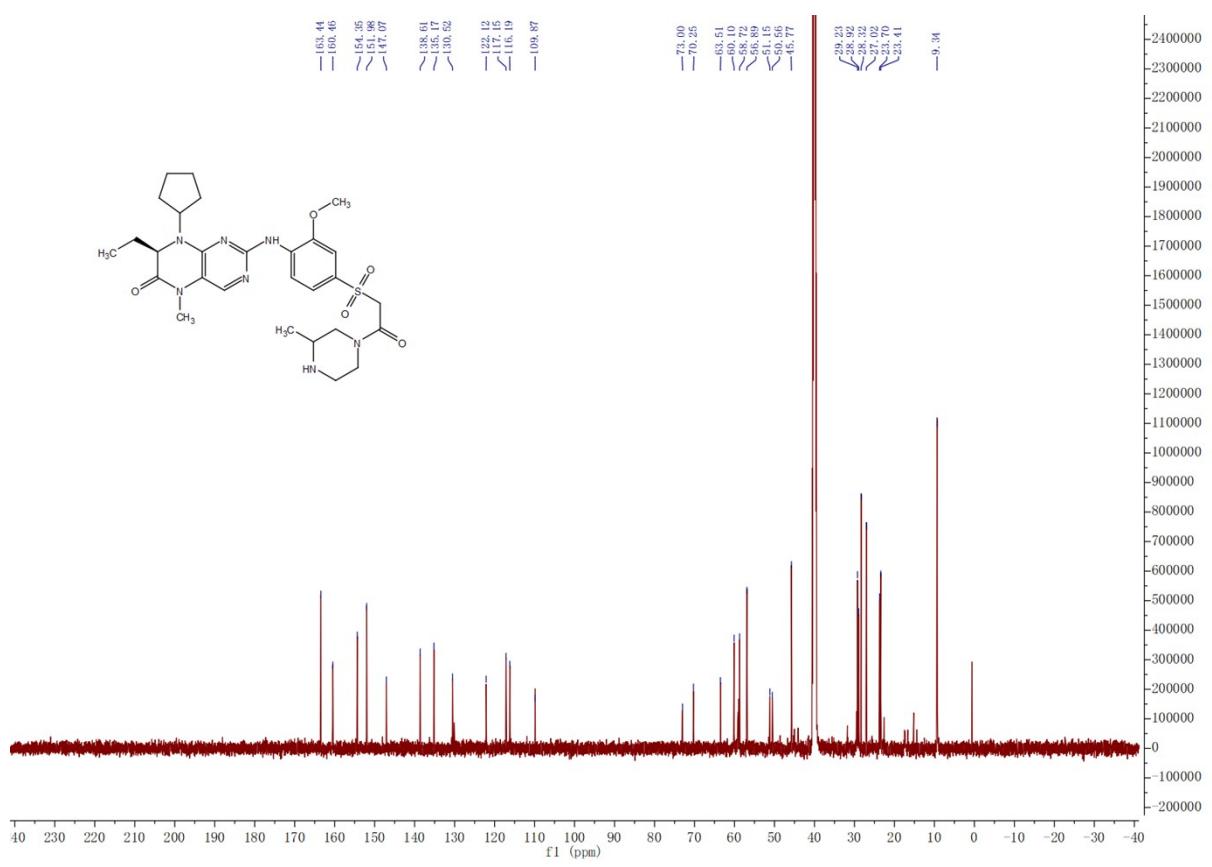
**Fig. 59** Mass spectrum of compound B13



**Fig. 60** Mass spectrum of compound B14



**Fig. 61**  $^1\text{H}$  NMR spectrum of compound B14



**Fig. 62  $^{13}\text{C}$  NMR spectrum of compound B14**