

Synthesis of isoxazol-5-one derivatives catalyzed by amine-functionalized cellulose

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Supplementary Materials (Figures S1-S36)

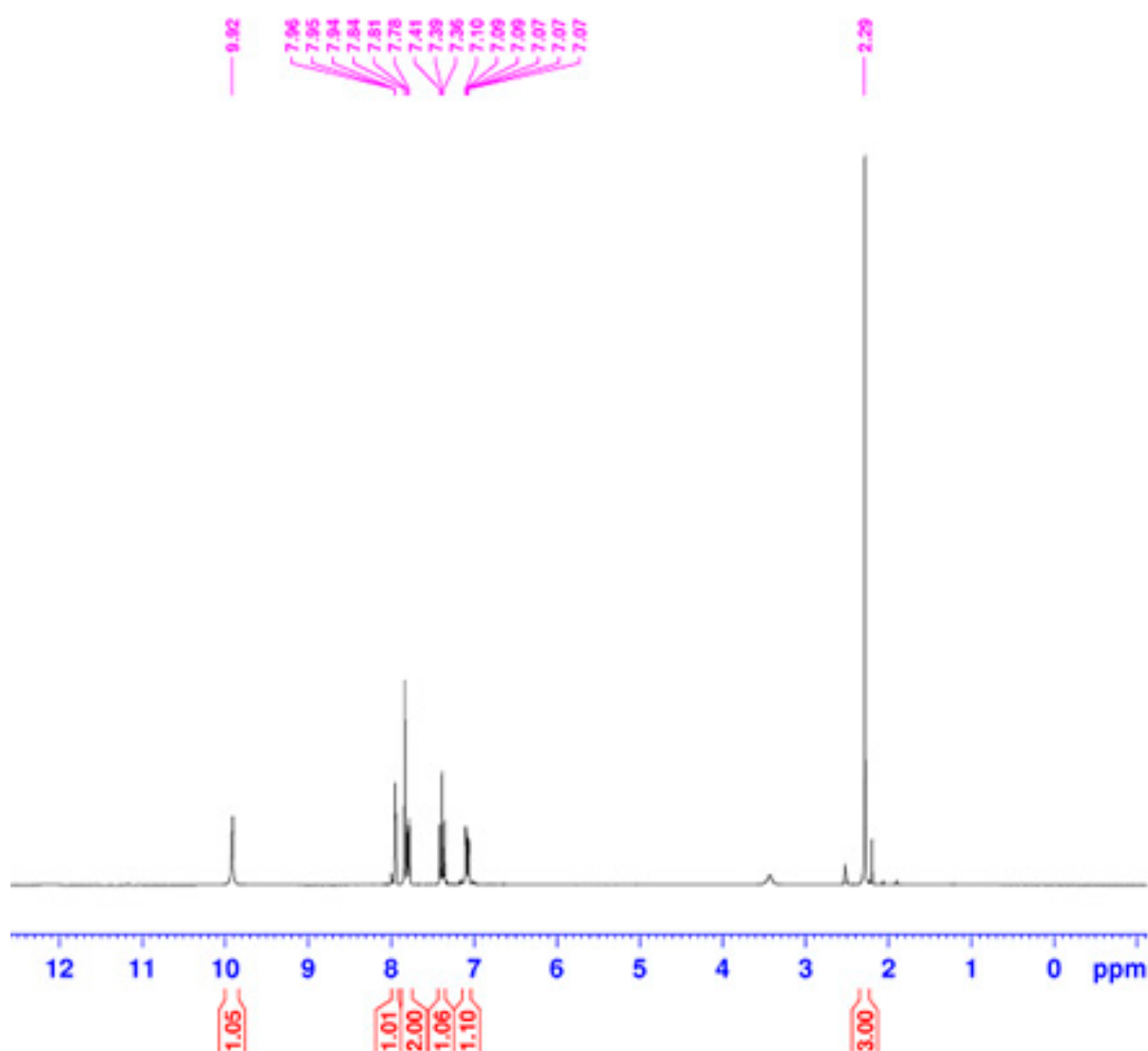


Figure S1. ¹H NMR (300 MHz, DMSO-*d*₆) spectrum of 4-(3-hydroxybenzylidene)-3-methylisoxazol-5(4*H*)-one (**4e**)

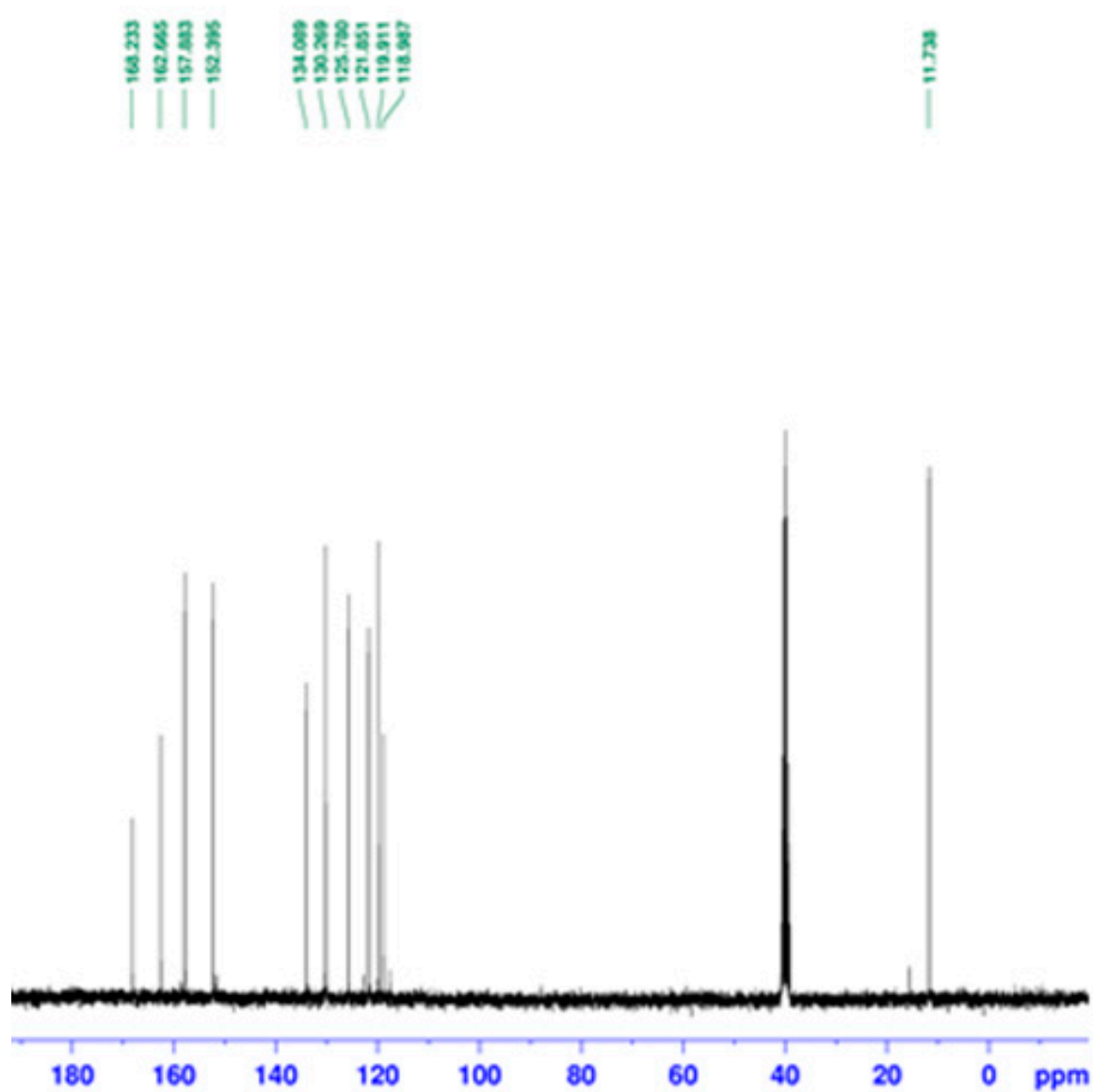


Figure S2. ^{13}C NMR (75 MHz, $\text{DMSO}-d_6$) spectrum of 4-(3-hydroxybenzylidene)-3-methylisoxazol-5(4H)-one (**4e**)

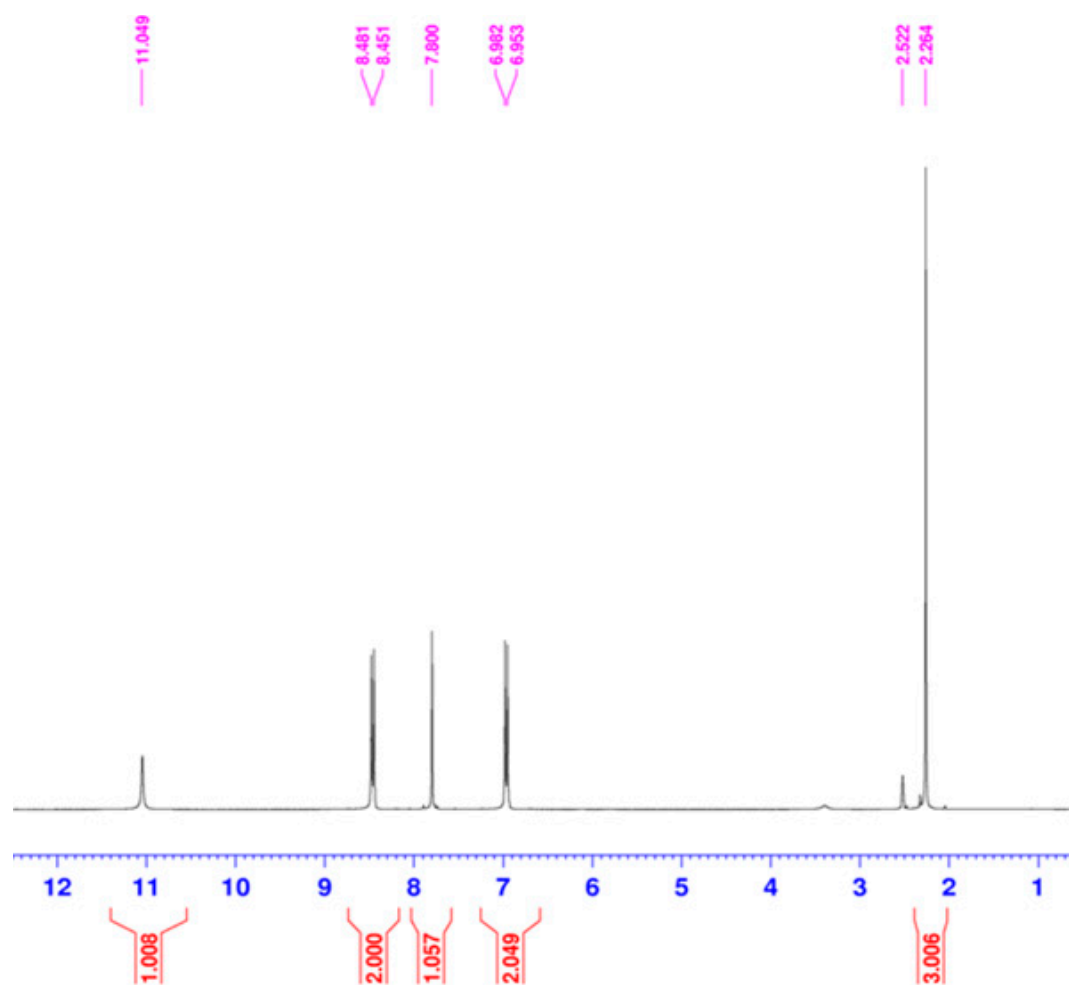


Figure S3. ^1H NMR (300 MHz, $\text{DMSO}-d_6$) spectrum of 4-(4-hydroxybenzylidene)-3-methylisoxazol-5(4H)-one (**4f**)

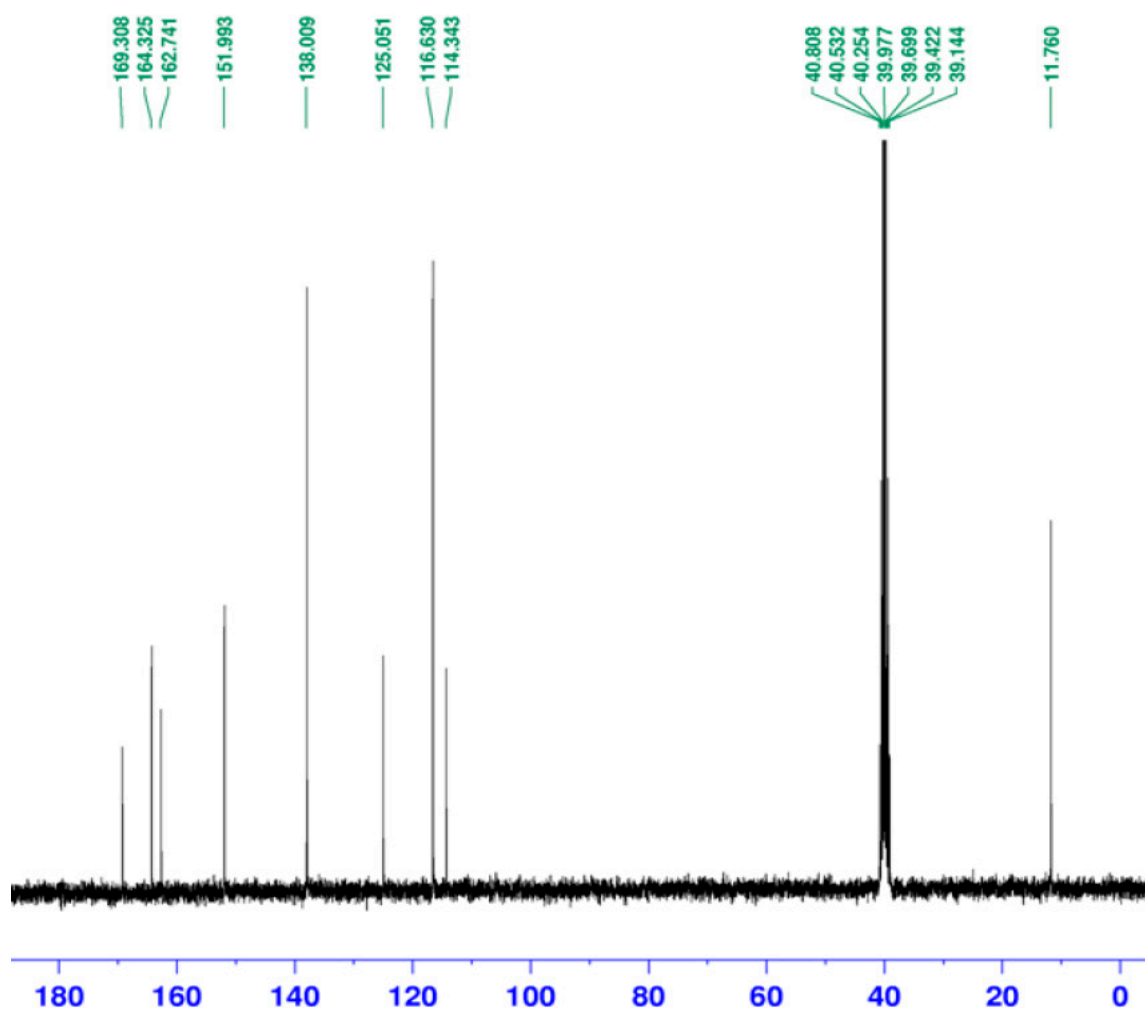


Figure S4. ^{13}C NMR (75 MHz, $\text{DMSO}-d_6$) spectrum of 4-(4-hydroxybenzylidene)-3-methylisoxazol-5(4H)-one (**4f**)

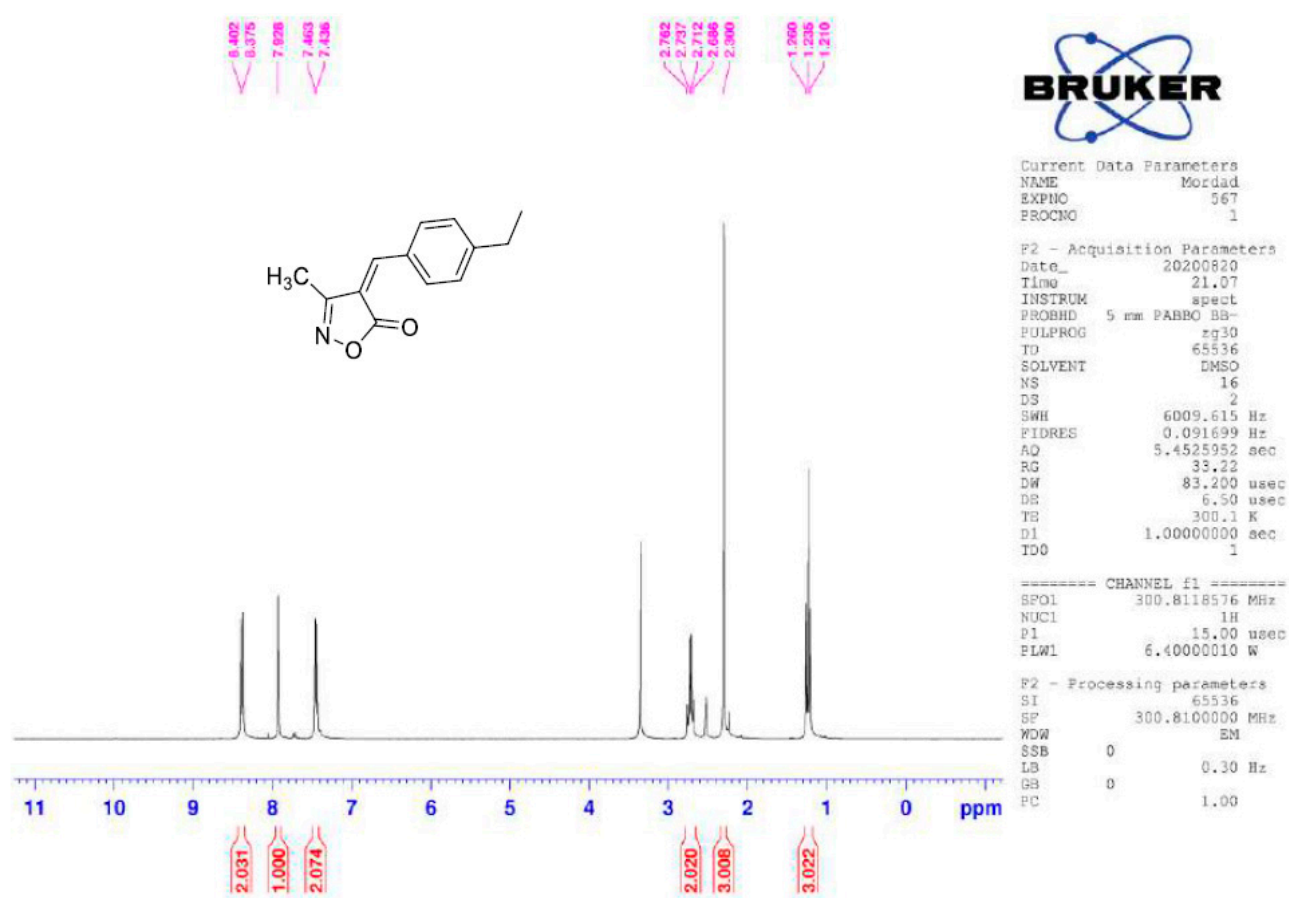


Figure S5. ¹H NMR (300 MHz, DMSO-*d*₆) spectrum of 4-(4-ethylbenzylidene)-3-methylisoxazol-5(4H)-one (4h)

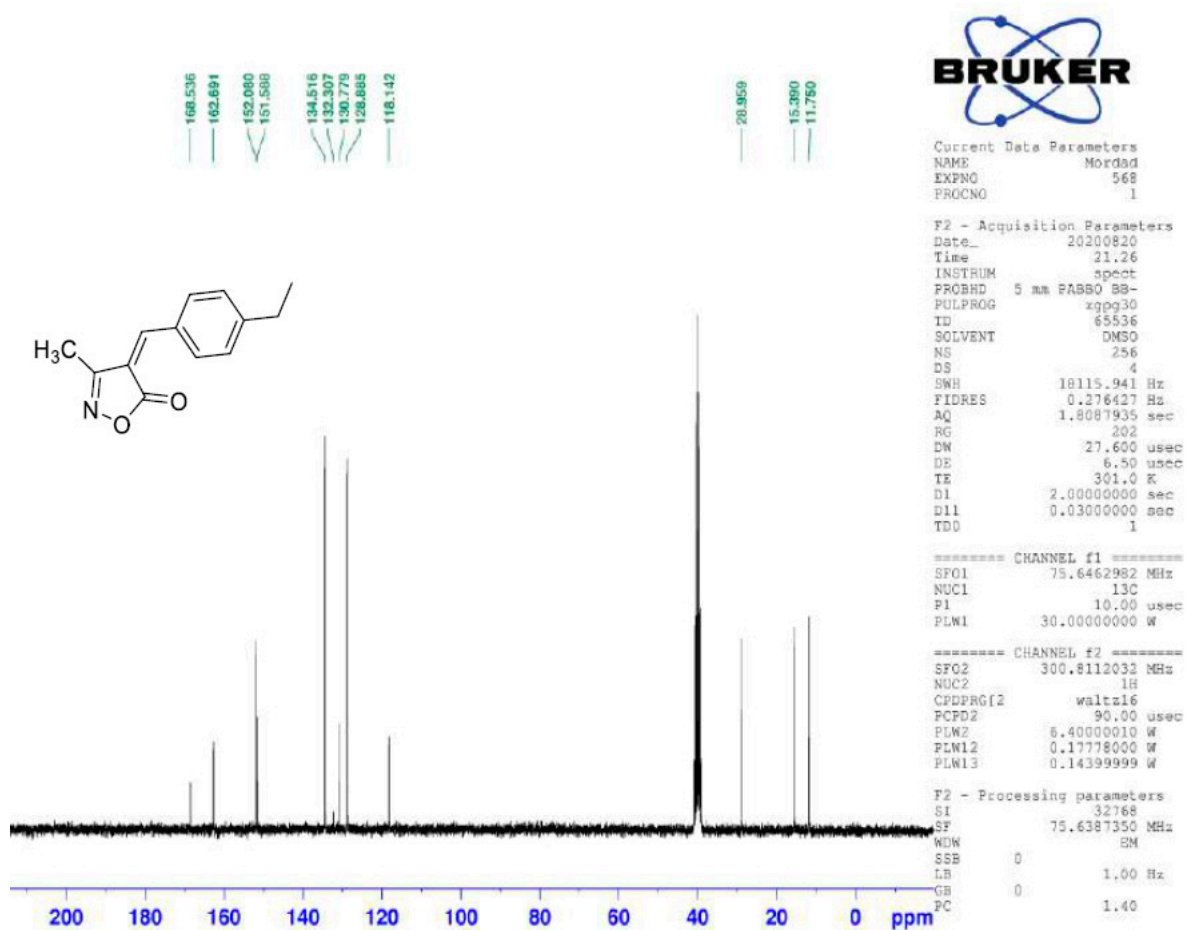


Figure S6. ¹³C NMR (300 MHz, DMSO-*d*₆) spectrum of 4-(4-ethylbenzylidene)-3-methylisoxazol-5(4*H*)-one (**4h**)

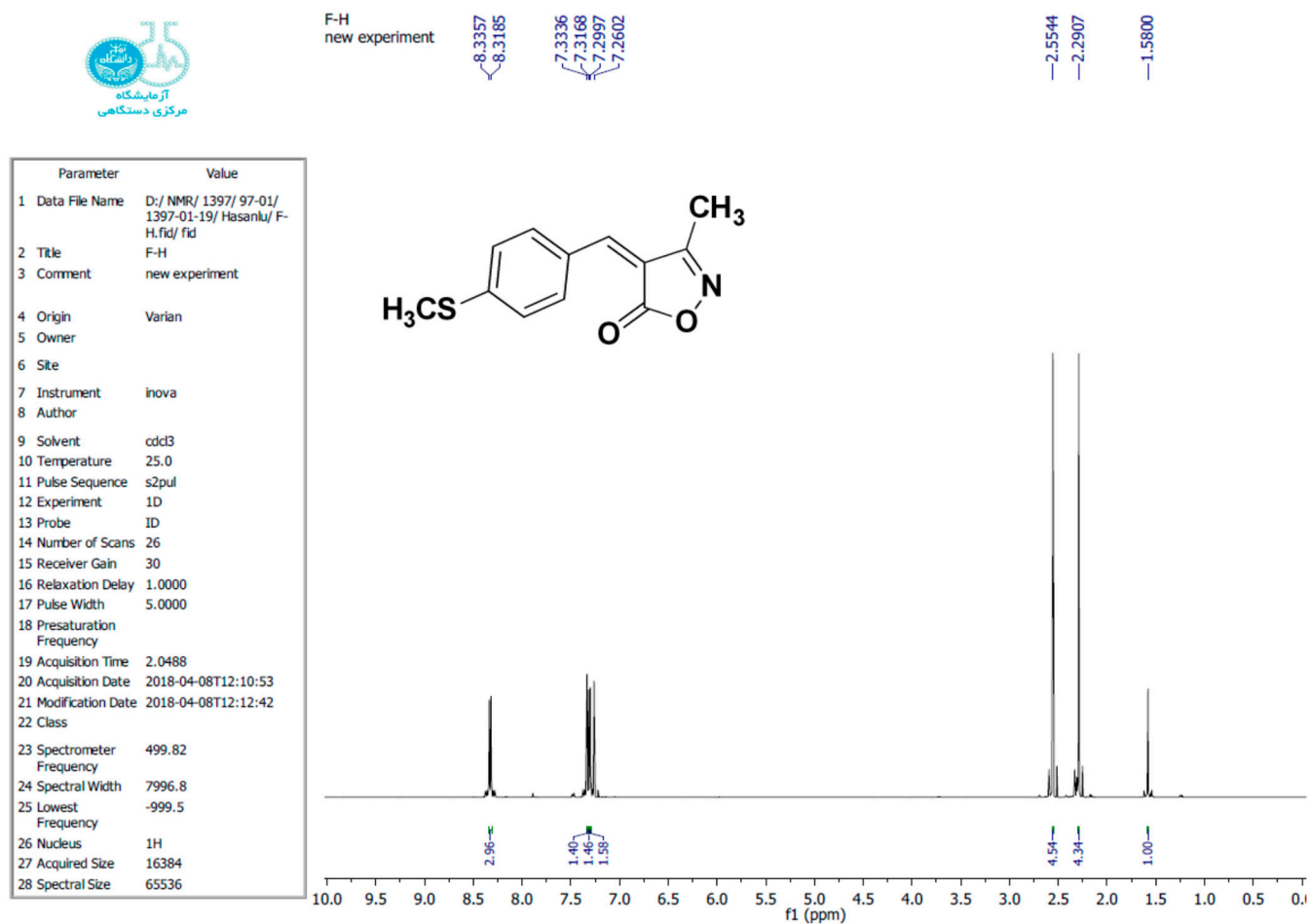


Figure S7. ¹H NMR (500 MHz, CDCl₃) spectrum of 3-methyl-4-(4-(methylthio)benzylidene)isoxazol-5(4*H*)-one (**4i**)

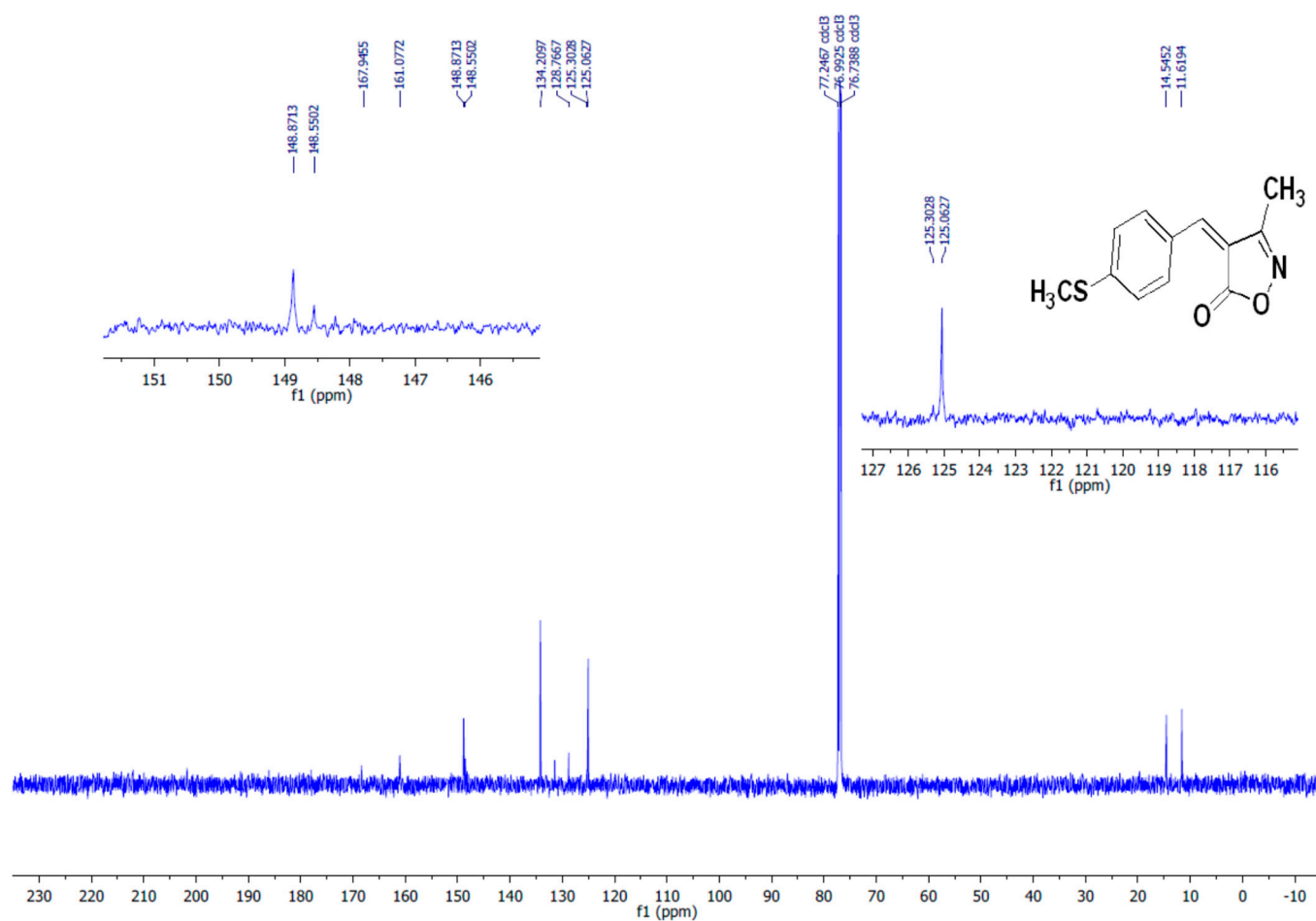


Figure S8. ¹³C NMR (CDCl₃, 125 MHz) spectrum of 3-methyl-4-(4-(methylthio)benzylidene)isoxazol-5(4*H*)-one (**4i**)

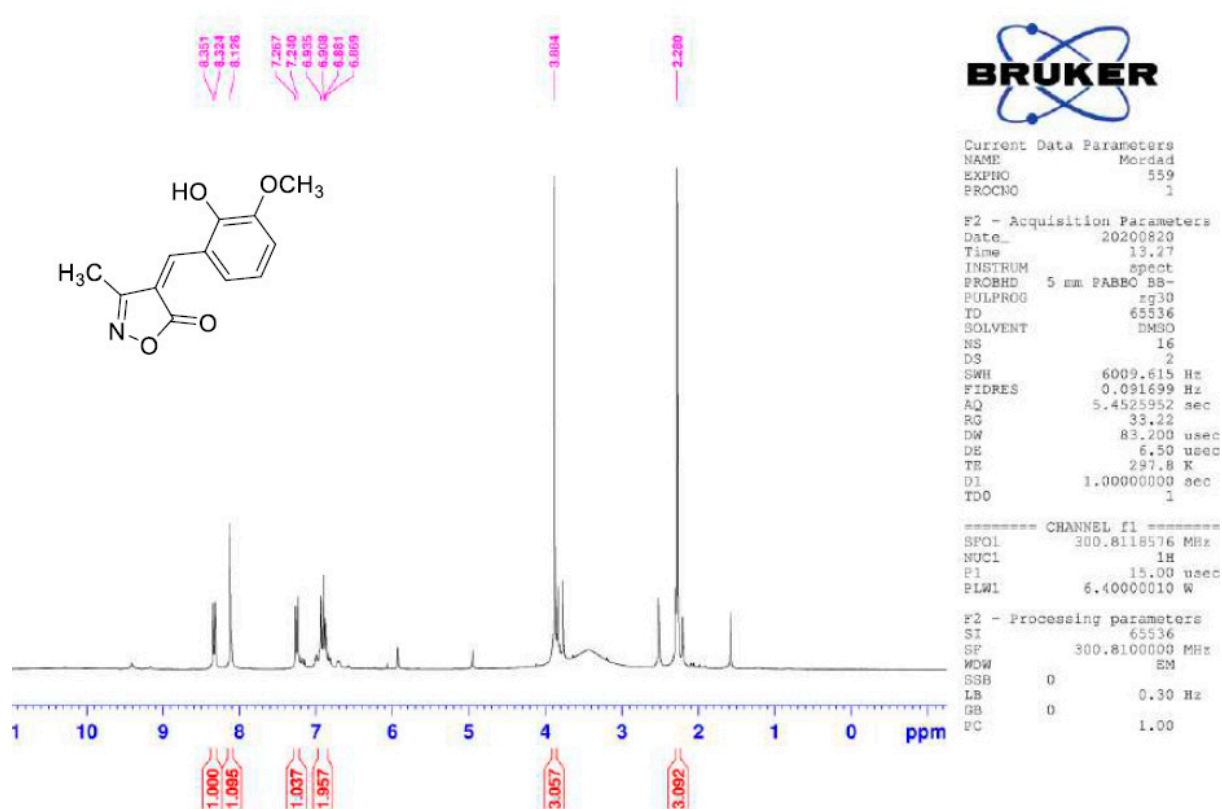


Figure S9. ¹H NMR (300 MHz, CDCl₃) spectrum of 4-(2-Hydroxy-3-methoxybenzylidene)-3-methylisoxazol-5(4H)-one (4j)

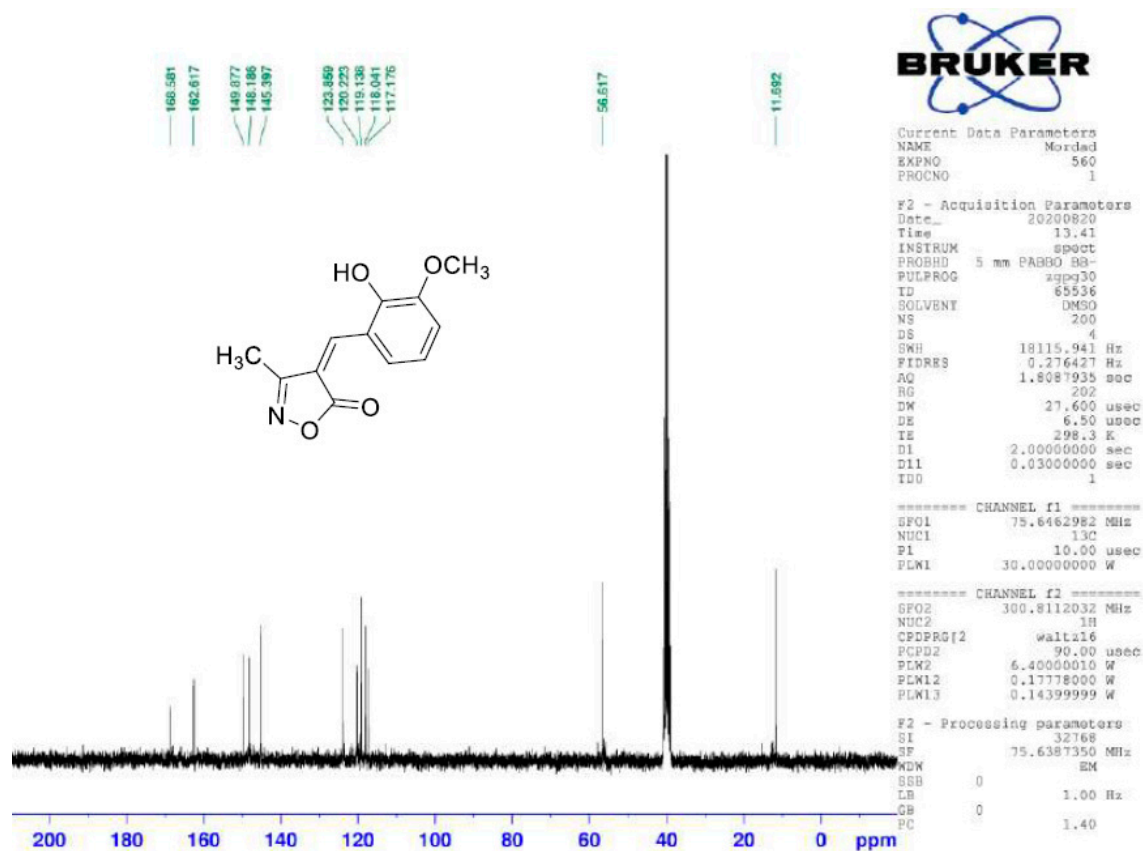


Figure S10. ¹³C NMR (75 MHz, DMSO-d₆) spectrum of 4-(2-Hydroxy-3-methoxybenzylidene)-3-methylisoxazol-5(4H)-one (4j)

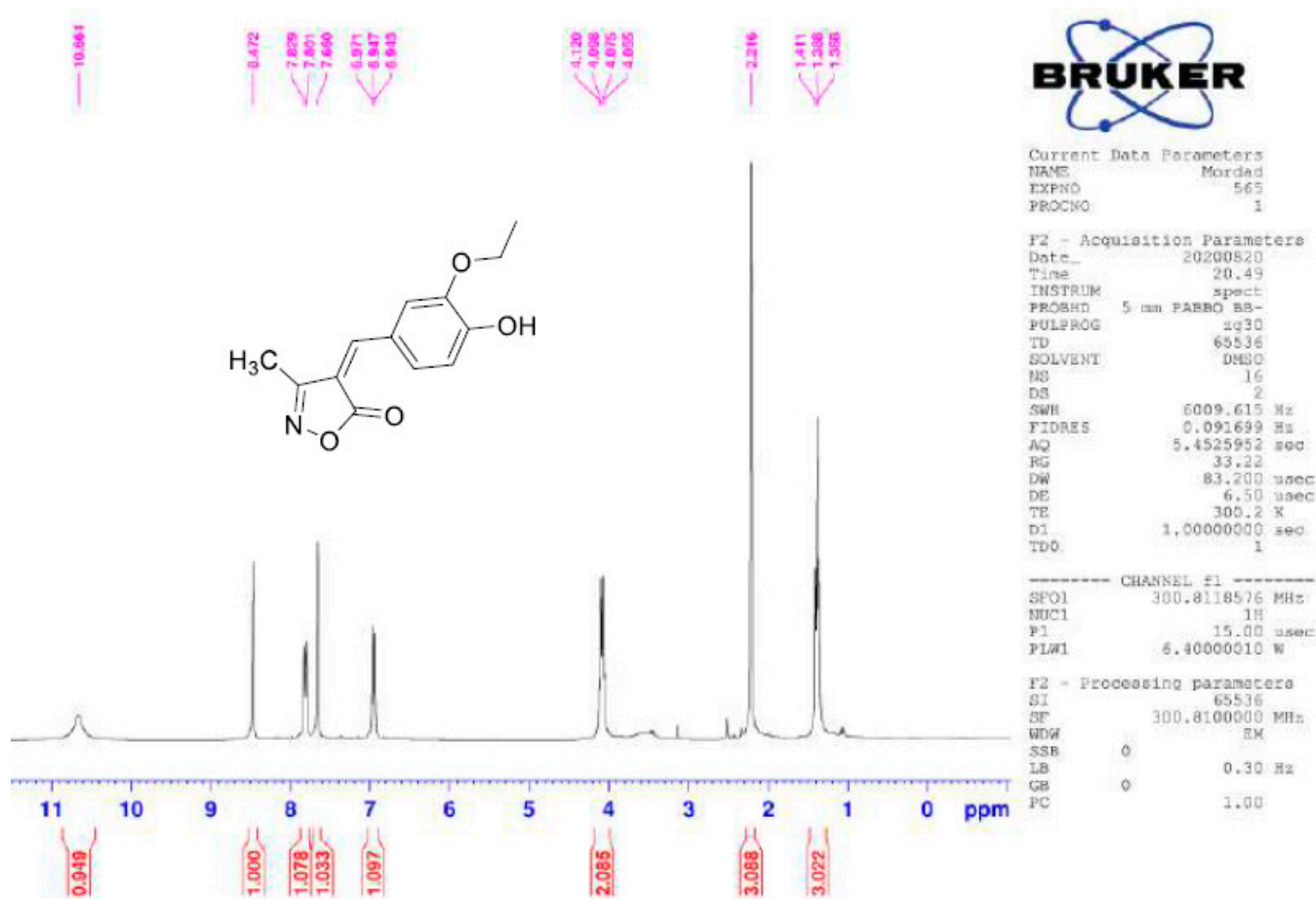


Figure S11. ^1H NMR (300 MHz, $\text{DMSO}-d_6$) spectrum of 4-(3-ethoxy-4-hydroxybenzylidene)-3-methylisoxazol-5(4H)-one (4k)

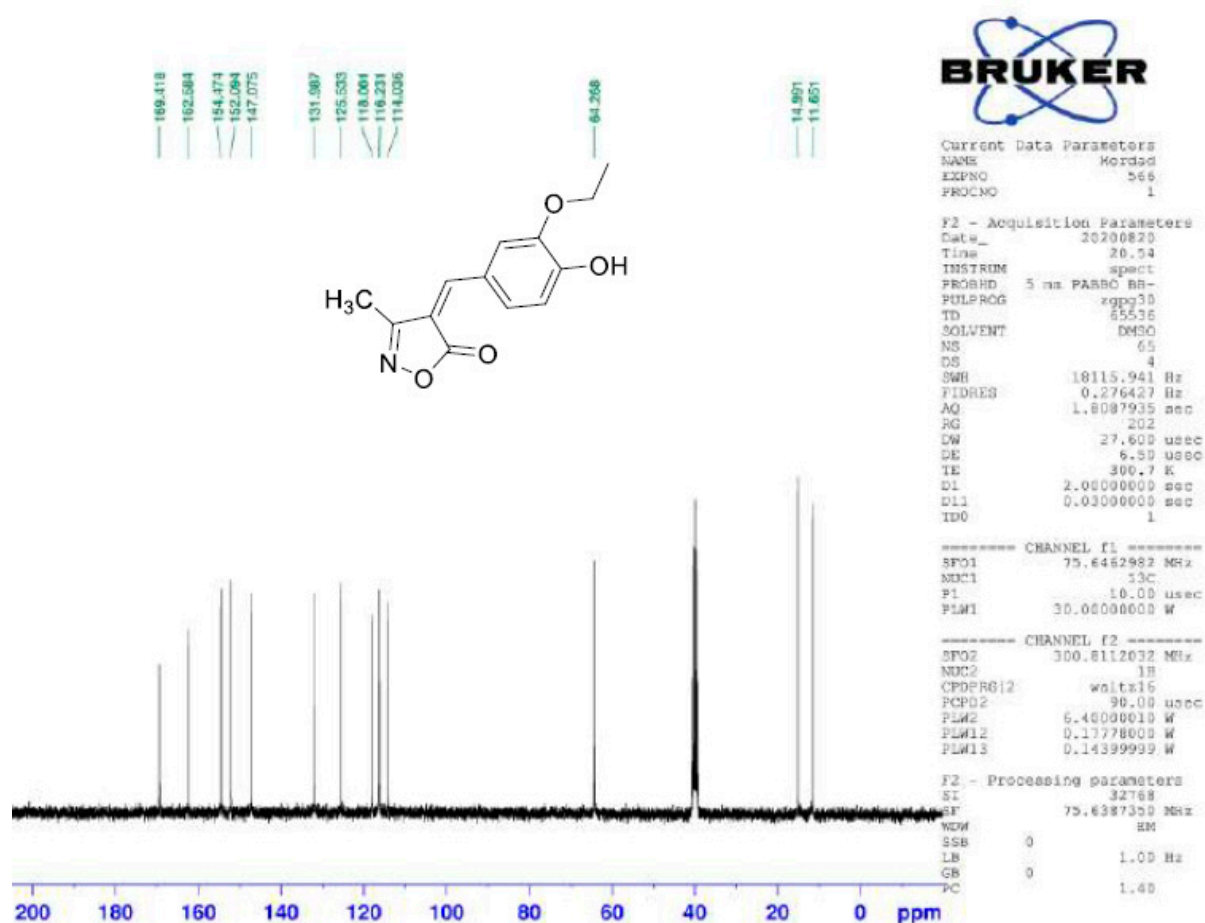


Figure S12. ¹³C NMR (75 MHz, DMSO-*d*₆) spectrum of 4-(3-ethoxy-4-hydroxybenzylidene)-3-methylisoxazol-5(4*H*)-one (4k)

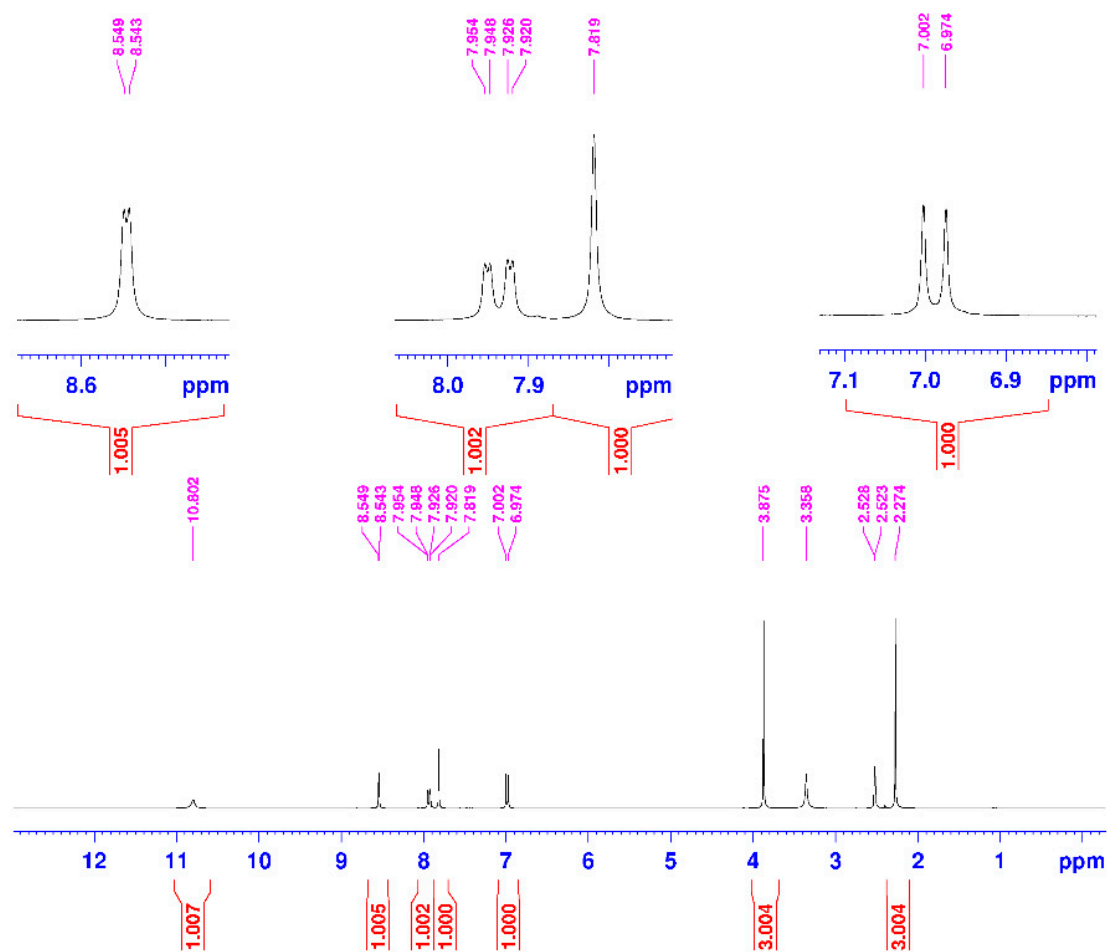


Figure S13. ¹H NMR (500 MHz, DMSO-*d*₆) spectrum of 4-(4-hydroxy-3-methoxybenzylidene)-3-methylisoxazol-5(4*H*)-one (4l)

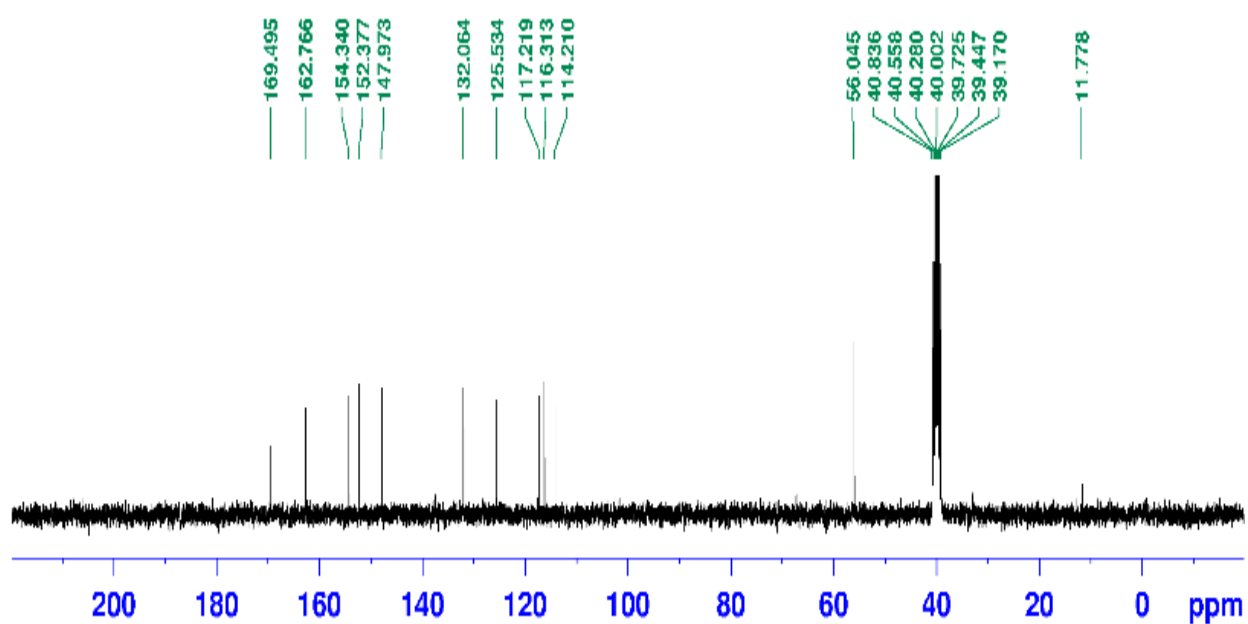


Figure S14. ¹³C NMR (125 MHz, DMSO-*d*₆) spectrum of 4-(4-hydroxy-3-methoxybenzylidene)-3-methylisoxazol-5(4*H*)-one (4l)

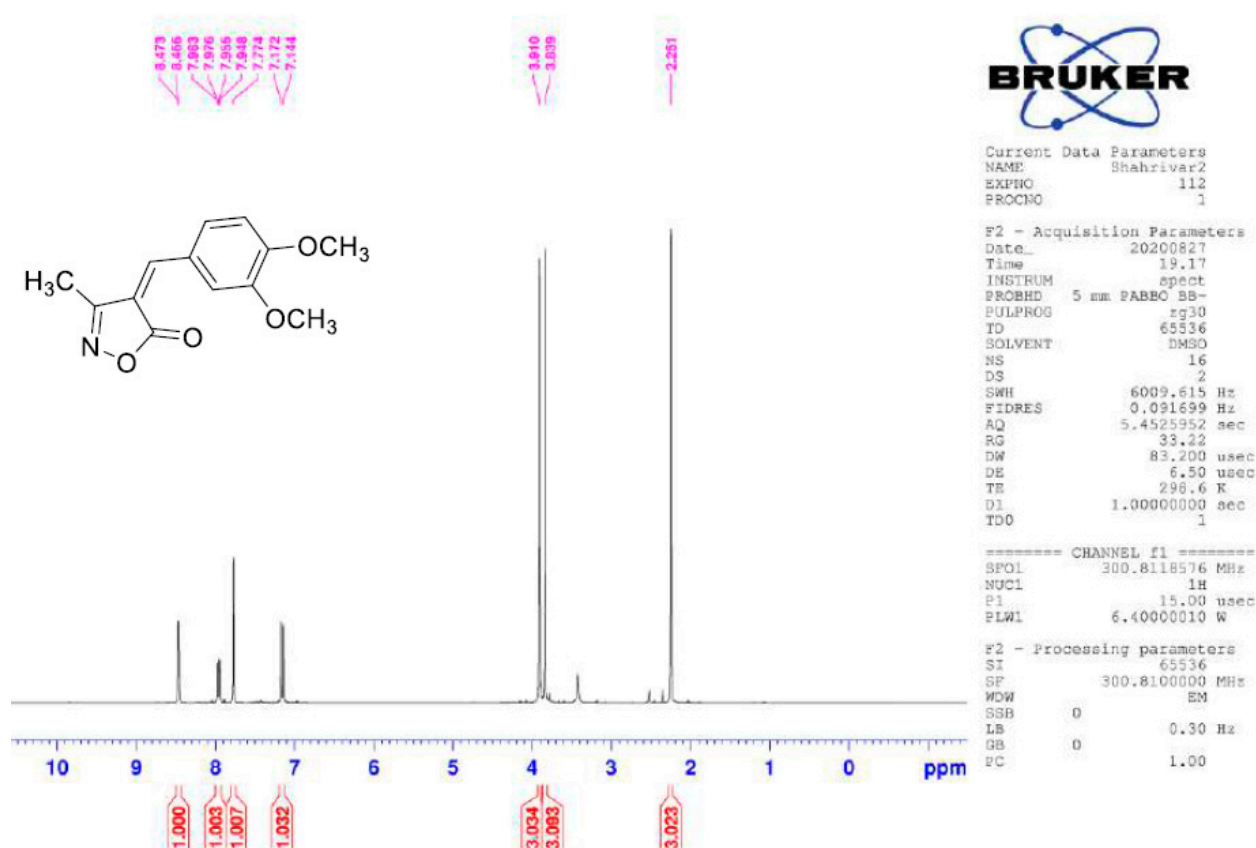


Figure S15. ¹H NMR (300 MHz, DMSO-*d*₆) spectrum of 4-(3,4-Dimethoxybenzylidene)-3-methylisoxazol-5(4*H*)-one (**4m**)

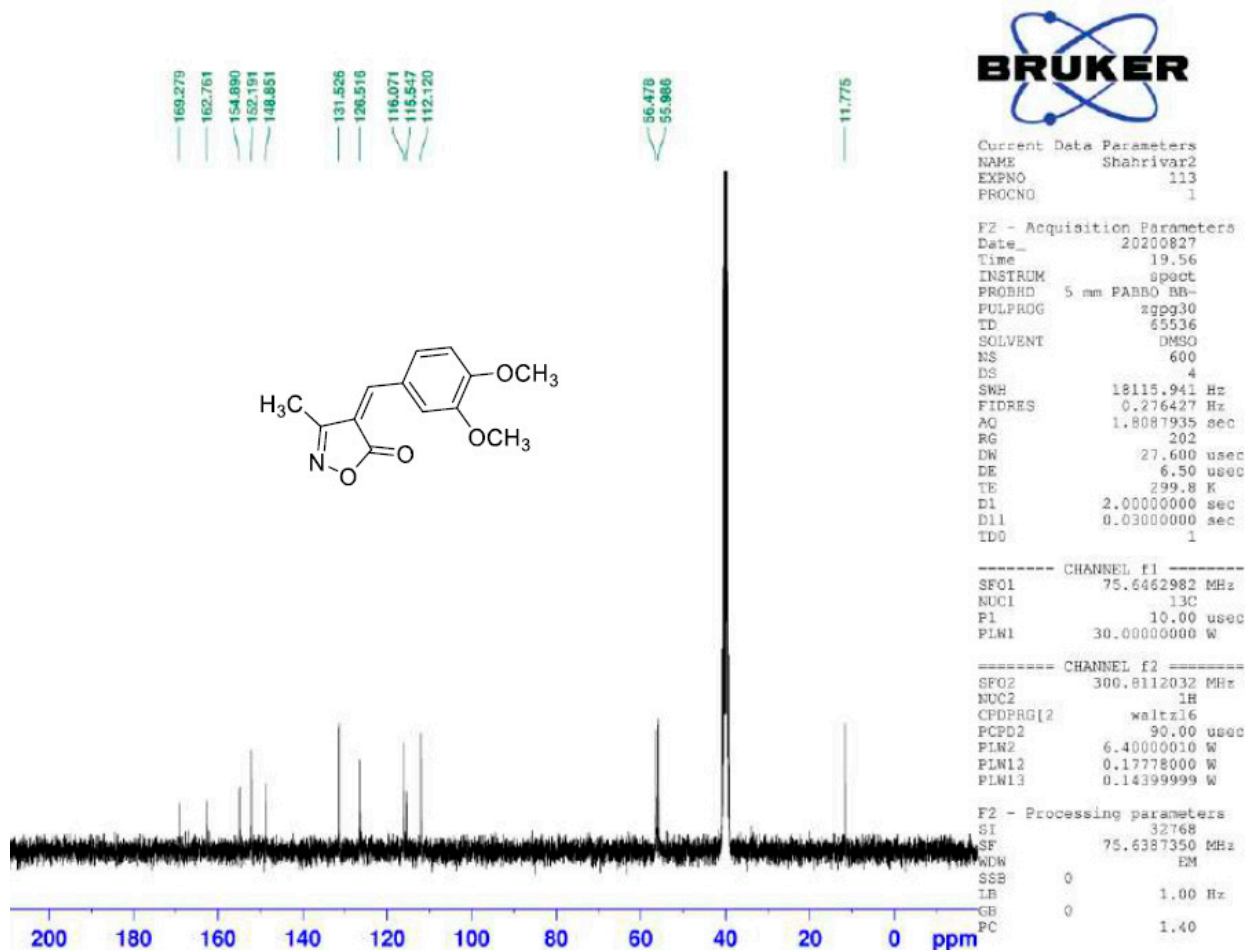
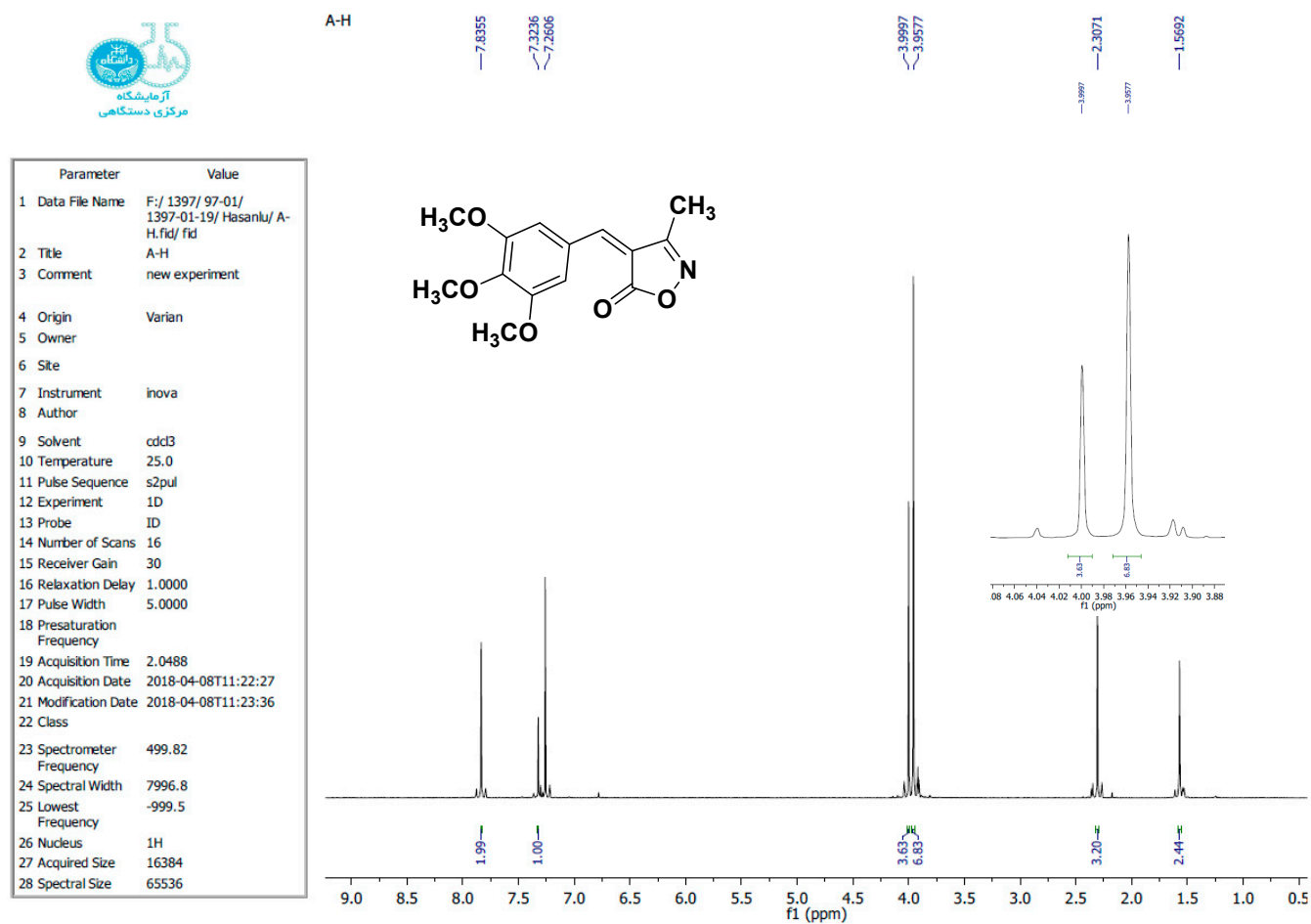


Figure S16. ^{13}C NMR (75 MHz, $\text{DMSO}-d_6$) spectrum of 4-(3,4-Dimethoxybenzylidene)-3-methylisoxazol-5(4*H*)-one (**4m**)**Figure S17.** ^1H NMR (500 MHz, CDCl_3) spectrum of 3-methyl-4-(3,4,5-trimethoxybenzylidene)isoxazol-5(4*H*)-one (**4n**)

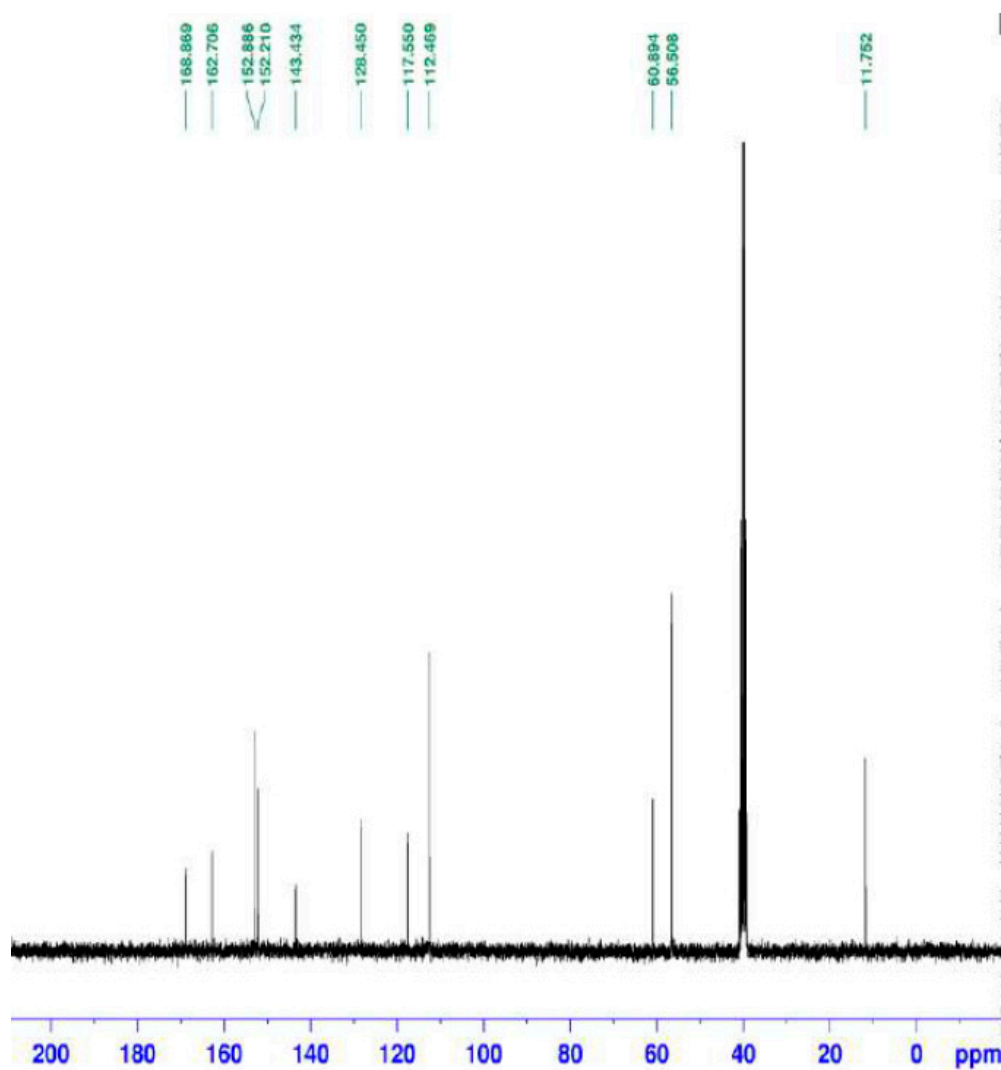


Figure S18. ^{13}C NMR (125 MHz, $\text{DMSO}-d_6$) spectrum of 3-methyl-4-(3,4,5-trimethoxybenzylidene)isoxazol-5-(4H)-one (4n)

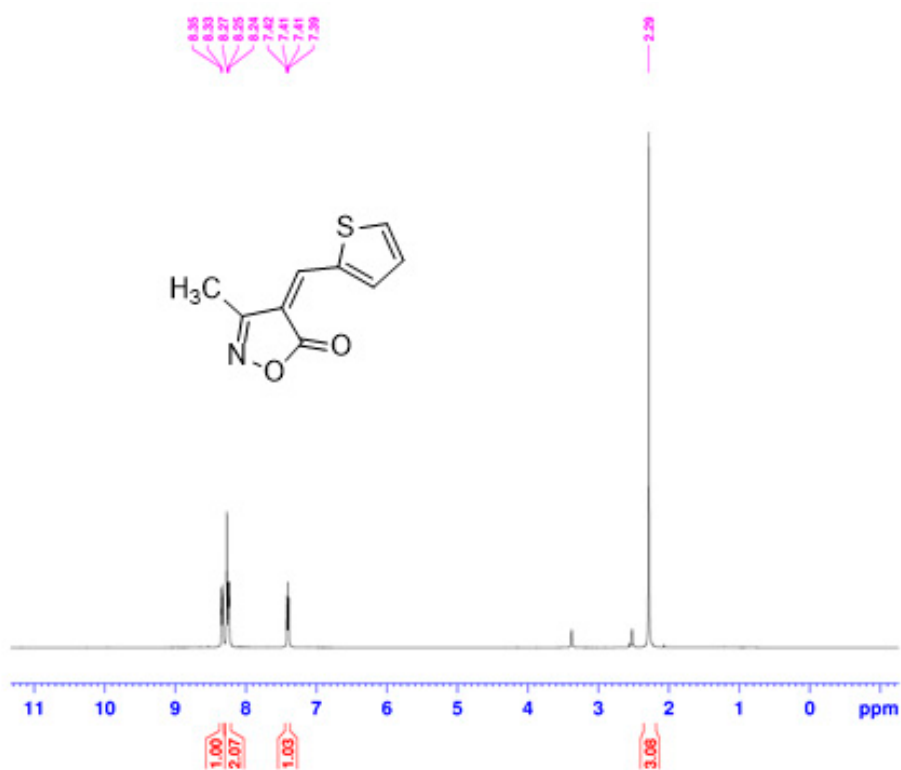


Figure S19. ^1H NMR (300 MHz, CDCl_3) spectrum of 3-methyl-4-(thiophen-2-ylmethylene)isoxazol-5(4H)-one (4o)

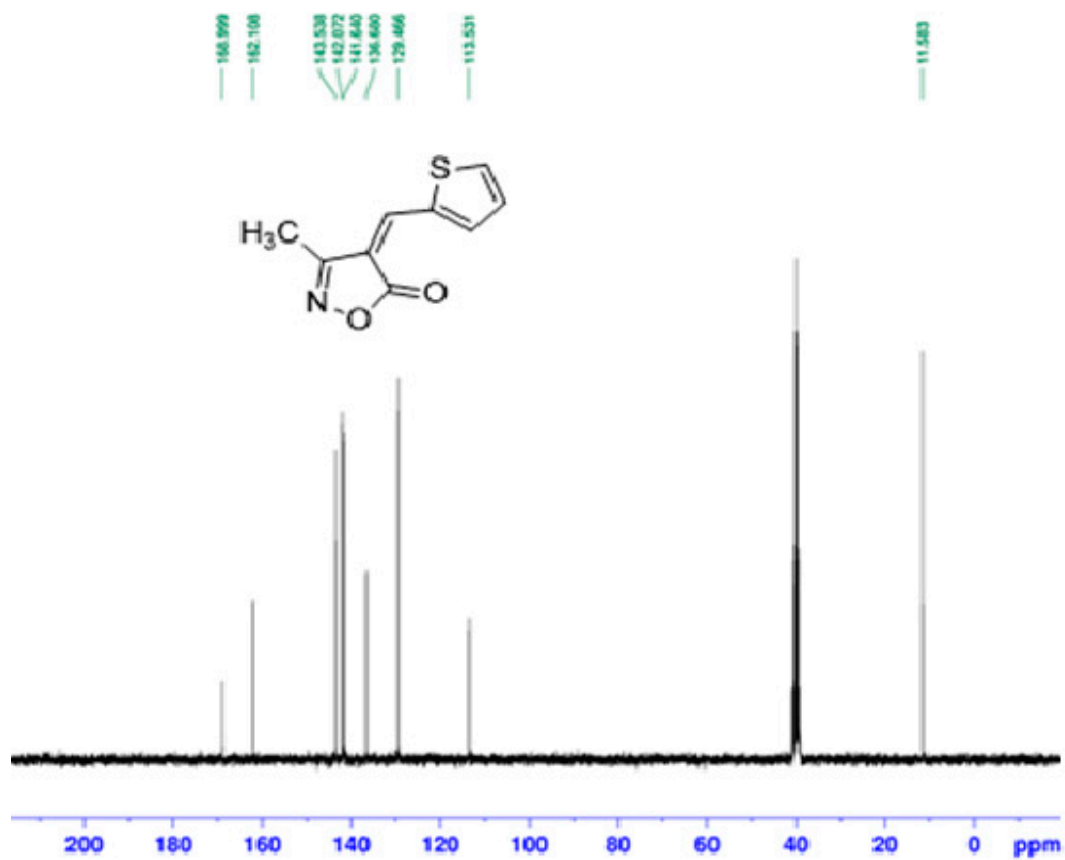


Figure S20. ^{13}C NMR (75 MHz, CDCl_3) spectrum of 3-methyl-4-(thiophen-2-ylmethylene)isoxazol-5(4H)-one (4o)

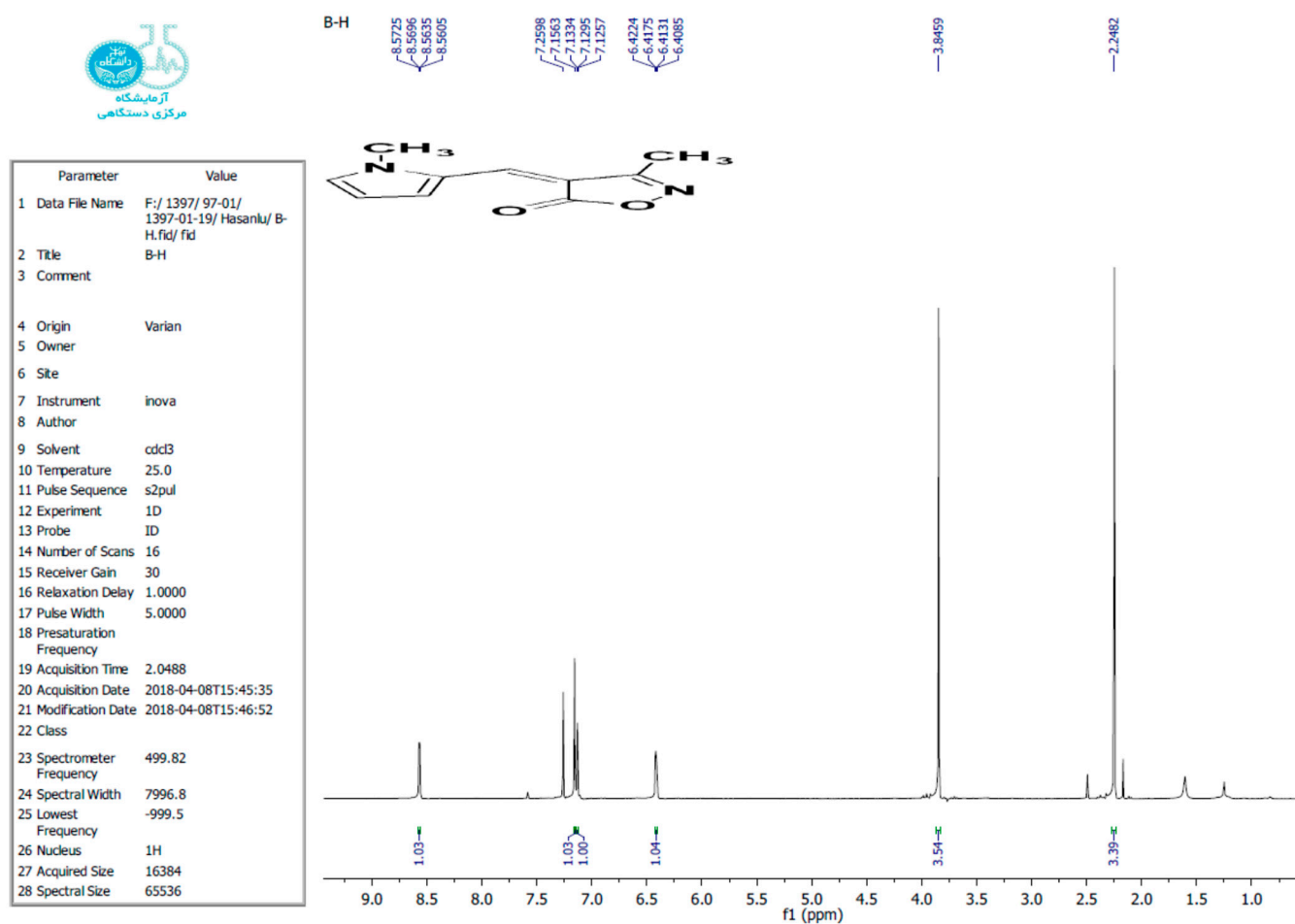


Figure S21. ^1H NMR (500 MHz, CDCl_3) spectrum of 3-methyl-4-((1-methyl-1H-pyrrol-2-yl)methylene)isoxazol-5(4H)-one (**4p**)

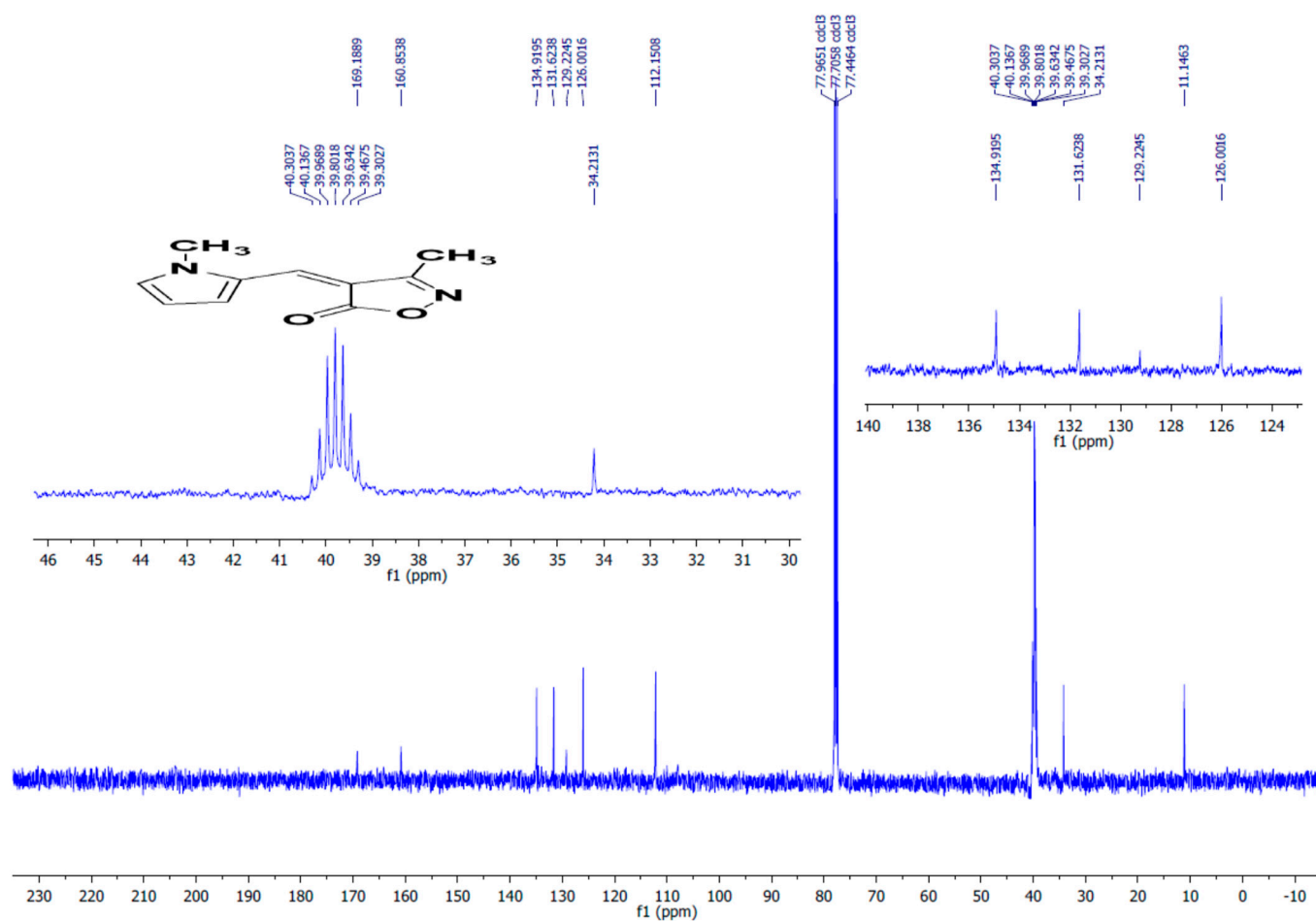


Figure S22. ¹³C NMR (125 MHz, CDCl₃ + DMSO-*d*₆) spectrum of 3-methyl-4-((1-methyl-1H-pyrrol-2-yl)methylene)isoxazol-5(4H)-one (4p)

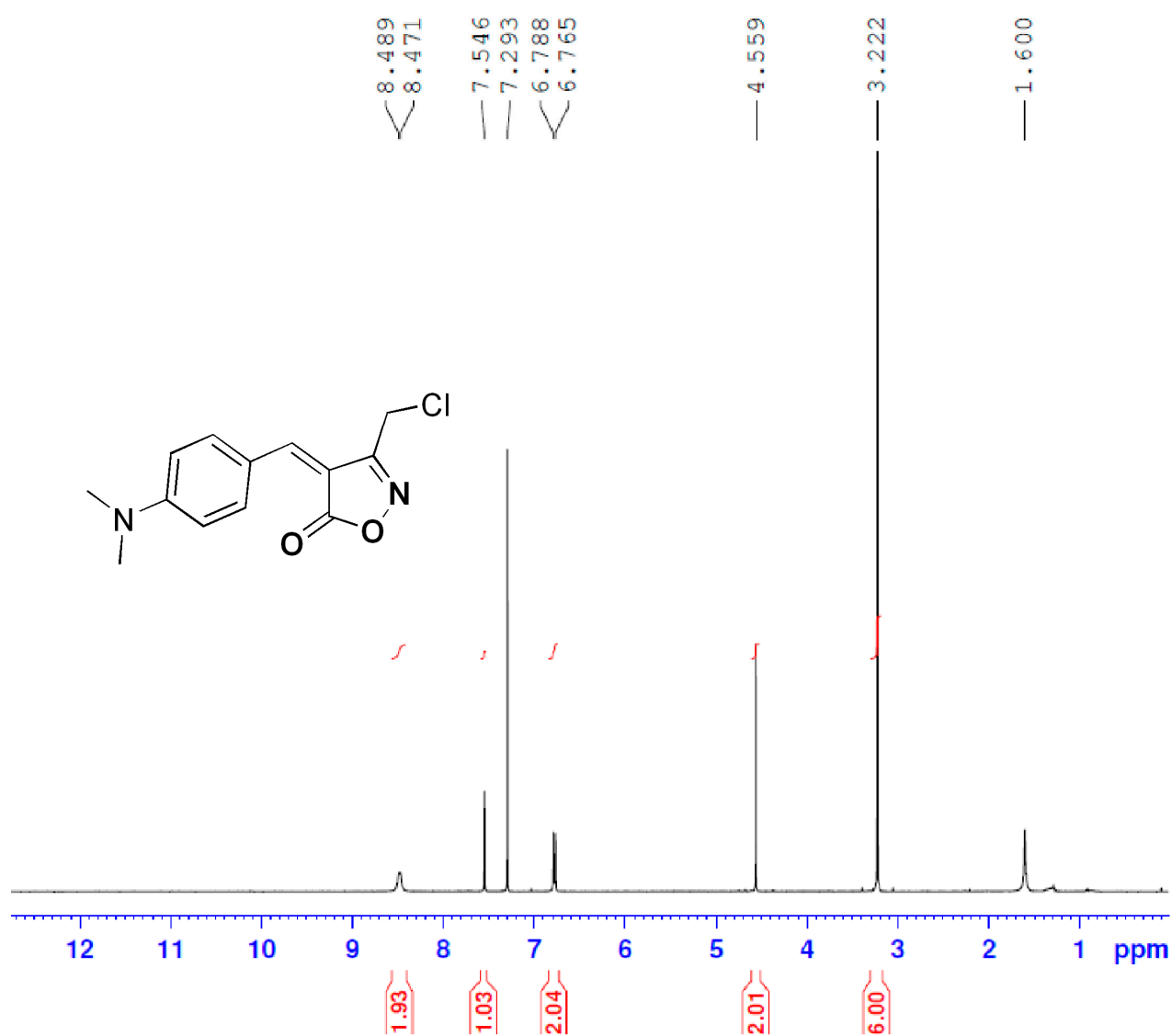


Figure S23. ¹H NMR (400 MHz, CDCl₃) spectrum of 3-(chloromethyl)-4-(4-(dimethylamino)benzylidene)isoxazol-5(4H)-one (4v)

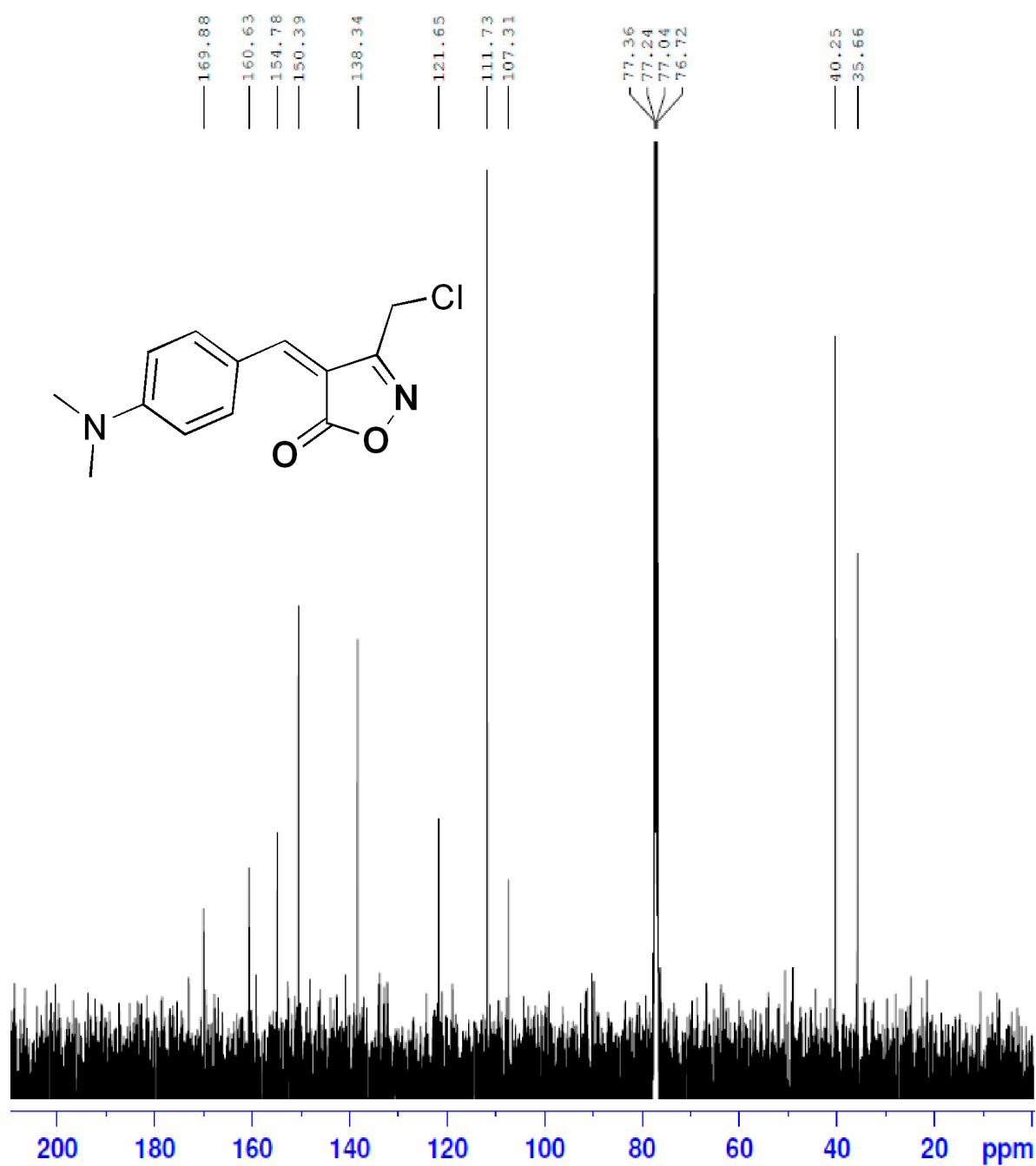


Figure S24. ¹³C NMR (100 MHz, CDCl₃): spectrum of 3-(chloromethyl)-4-(4-(dimethylamino)benzylidene)isoxazol-5(4H)-one (4v)

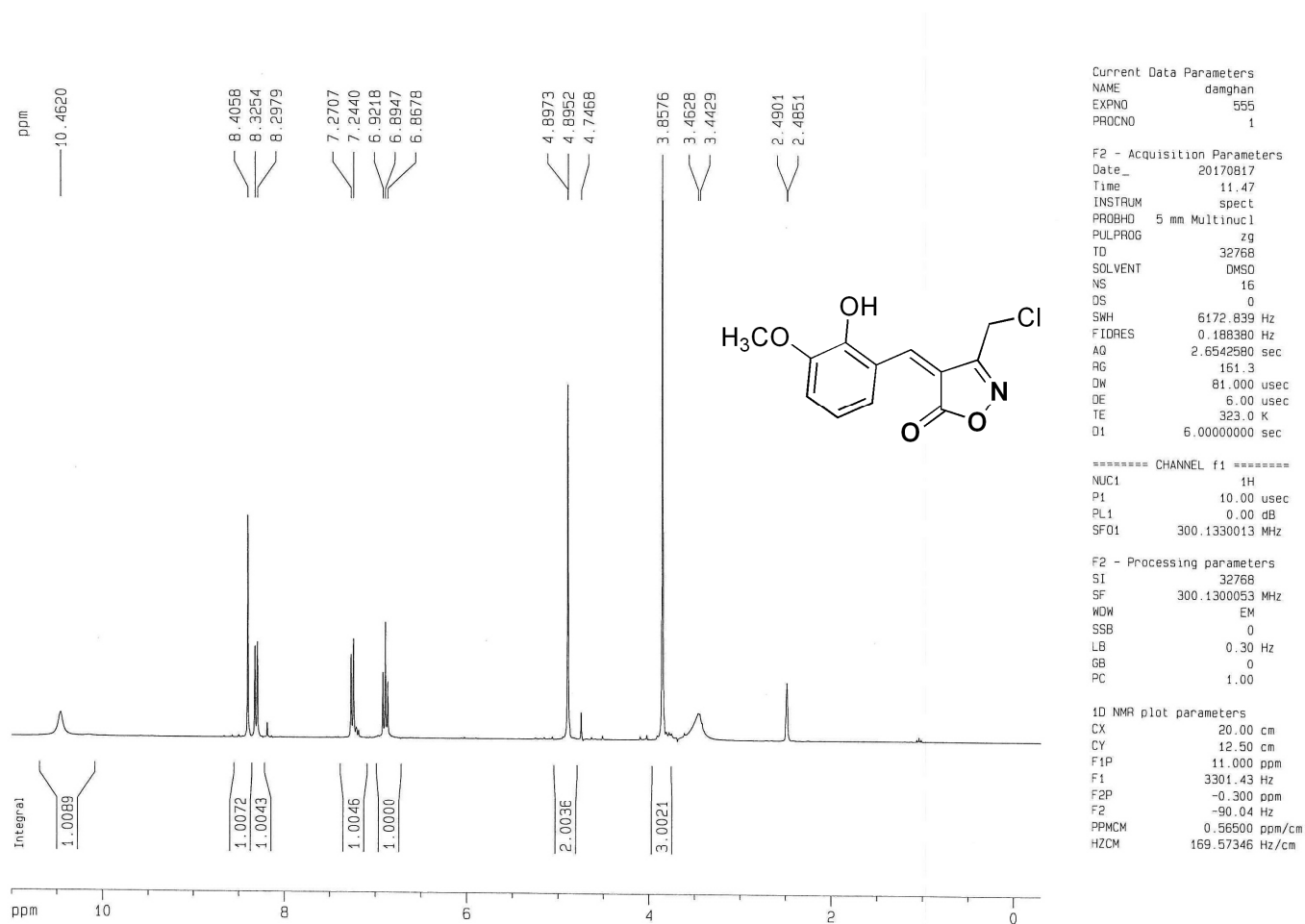


Figure S25. ^1H NMR (300 MHz, $\text{DMSO}-d_6$) spectrum of 3-(chloromethyl)-4-(2-hydroxy-3-methoxybenzylidene)isoxazol-5(4H)-one (**4w**)

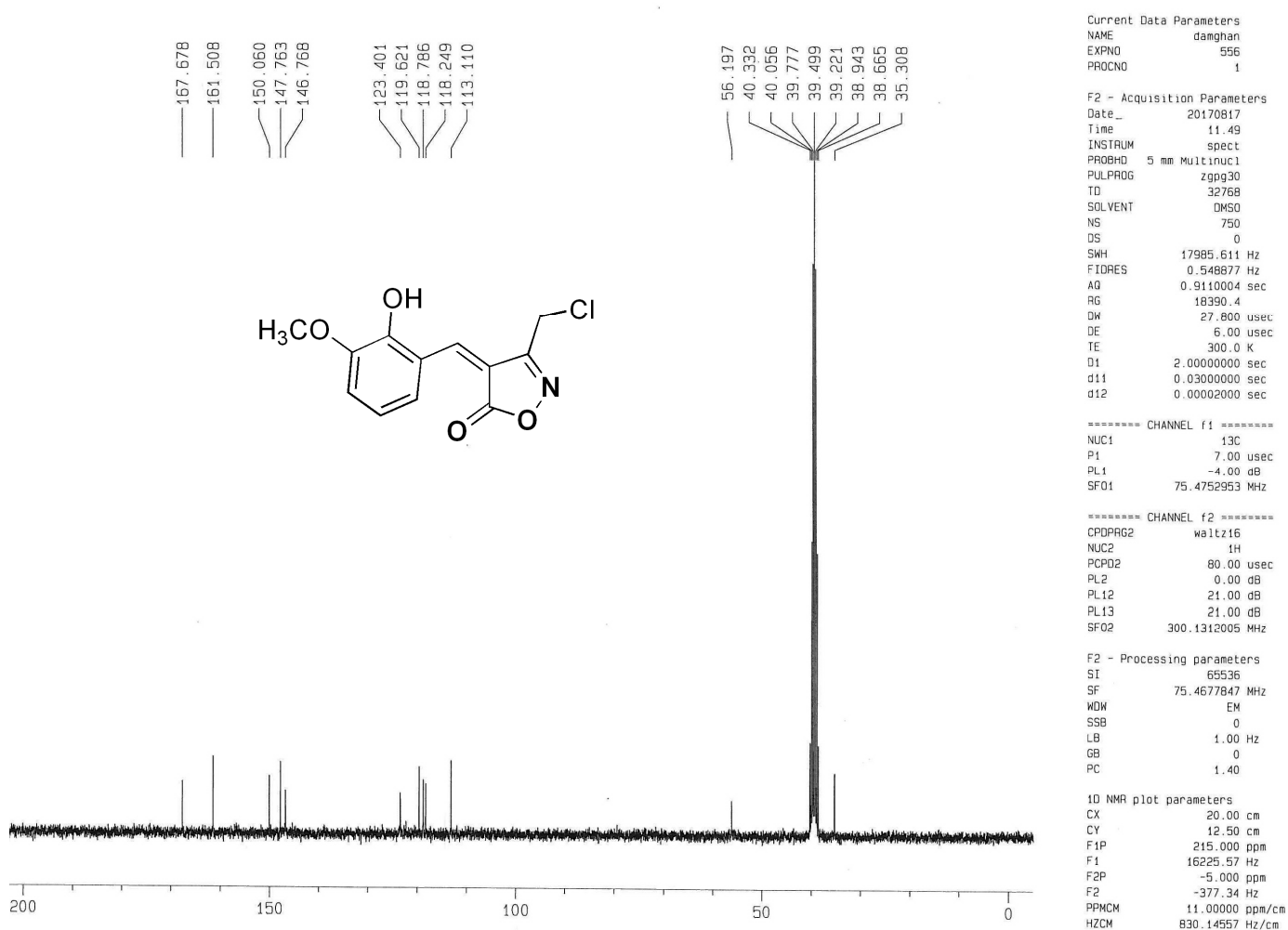


Figure S26. ^{13}C NMR (75 MHz, $\text{DMSO}-d_6$) spectrum of 3-(chloromethyl)-4-(2-hydroxy-3-methoxybenzylidene)isoxazol-5(4H)-one (4w)

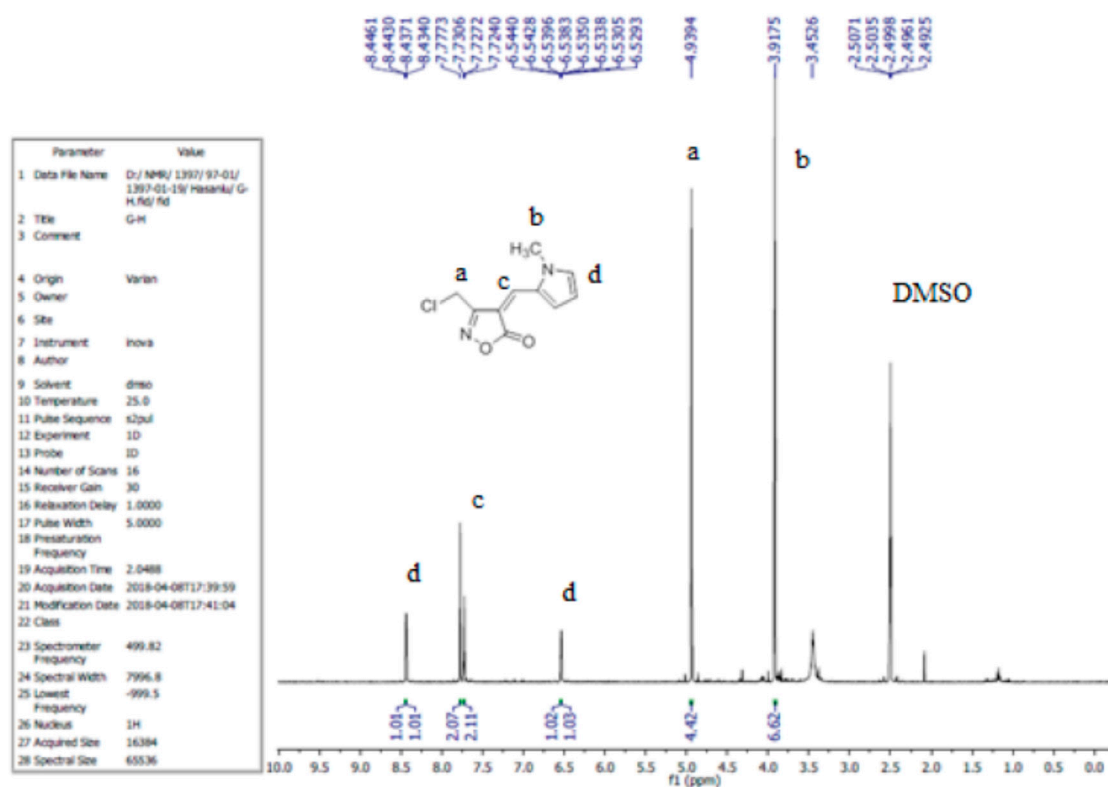
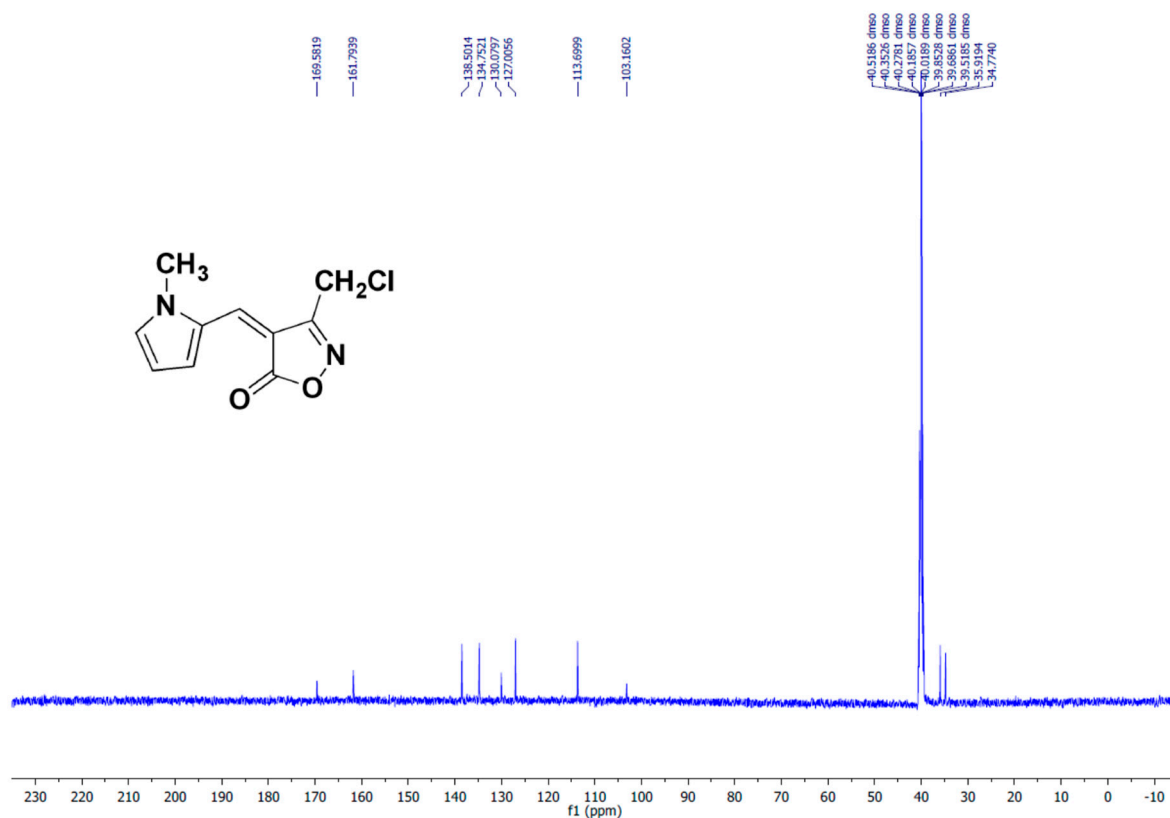


Figure S27. ^1H NMR (500 MHz, $\text{DMSO}-d_6$) spectrum of 3-(chloromethyl)-4-((1-methyl-1H-pyrrol-2-yl)methylene)isoxazol-5(4H)-one (**4aa**)



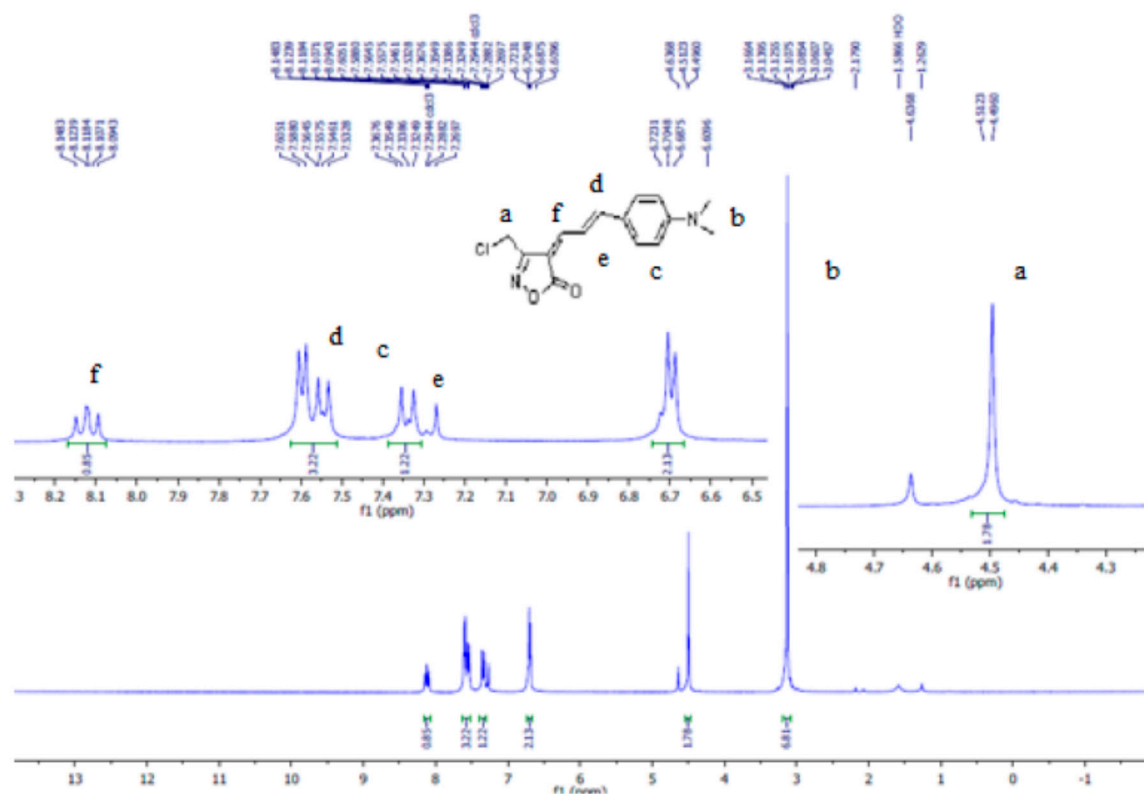


Figure S29. ^1H NMR (500MHz, CDCl_3) spectrum of 3-(chloromethyl)-4-(3-(4(dimethylamino)phenyl)allylidene)isoxazol-5(4H)-one (**4ab**)

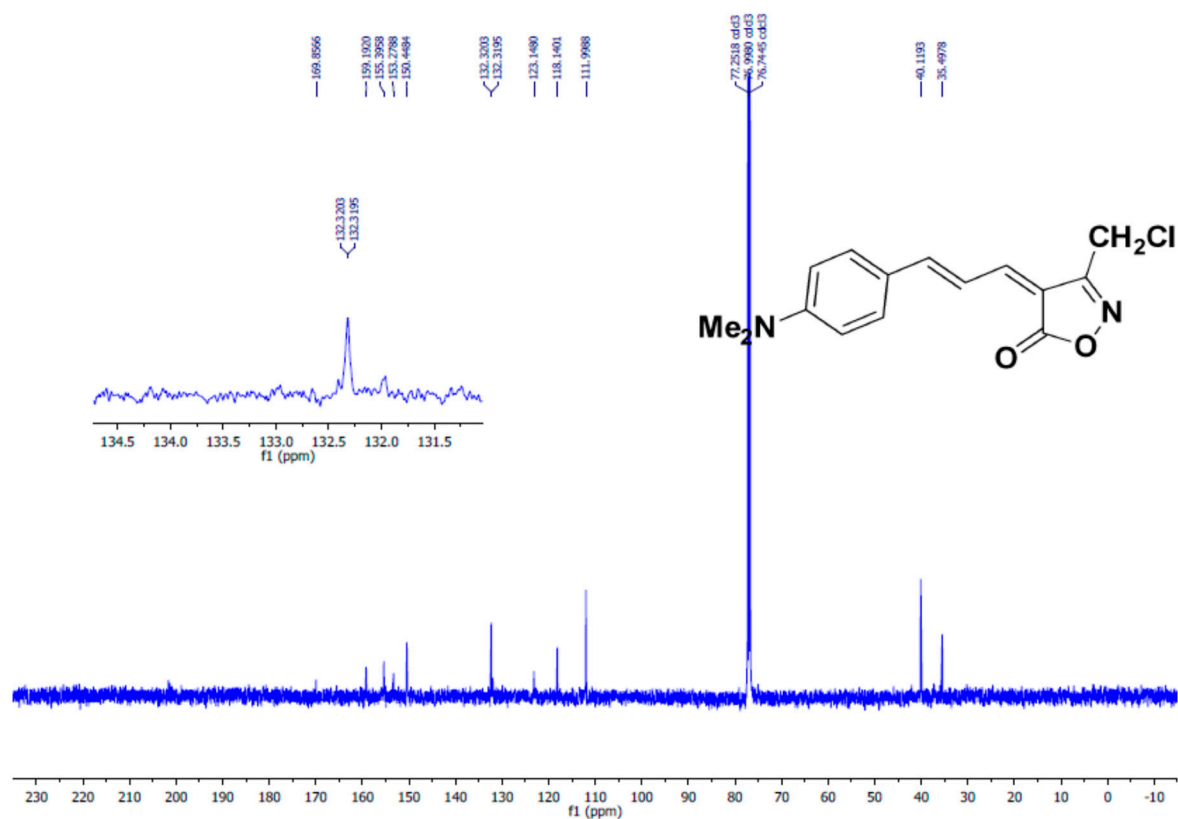


Figure S30. ^{13}C NMR (125 MHz, CDCl_3) spectrum of 3-(chloromethyl)-4-(3-(4(dimethylamino)phenyl)allylidene)isoxazol-5(4H)-one (**4ab**)

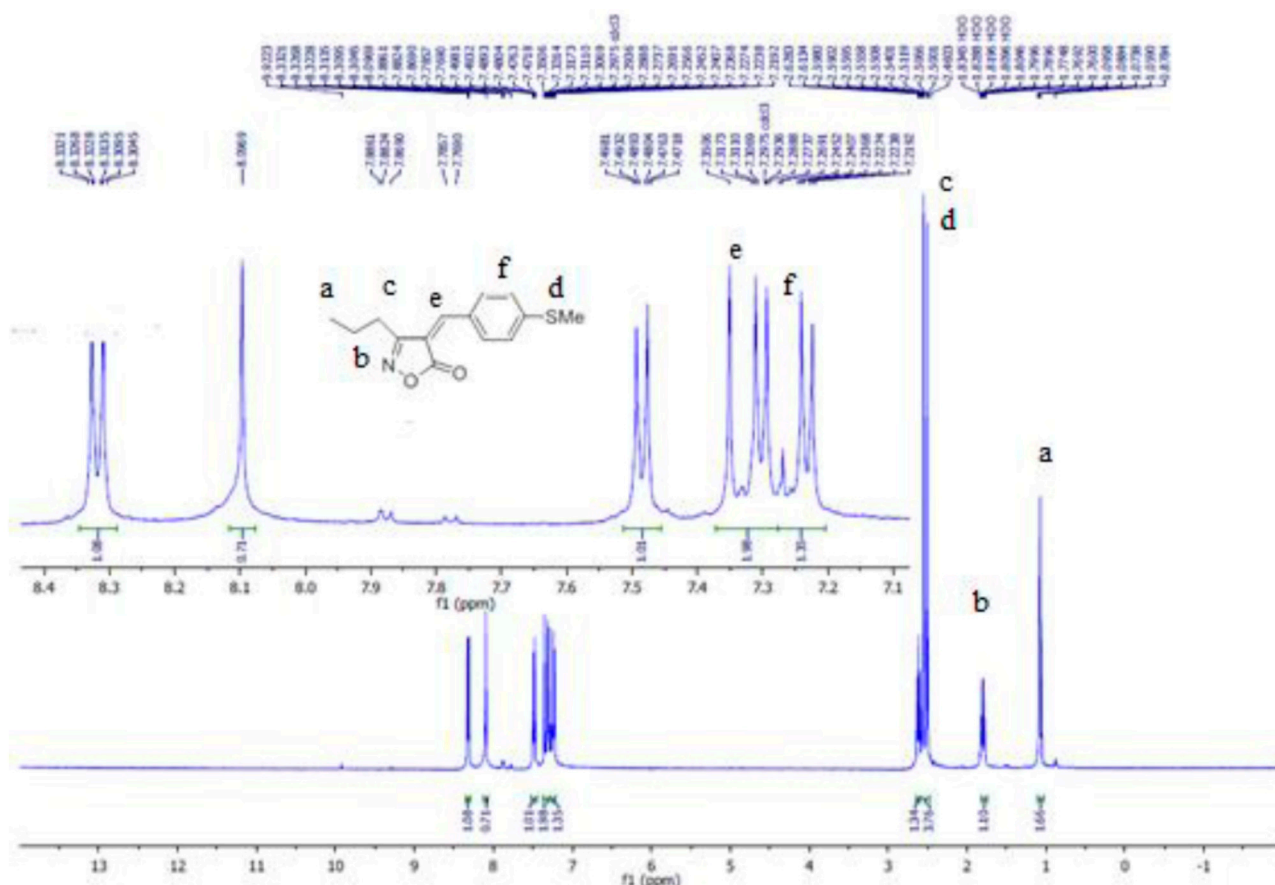


Figure S31. ^1H NMR (500 MHz, CDCl_3) spectrum of 4-(4-(methylthio)benzylidene)-3-propylisoxazol-5(4H)-one (**4ac**)

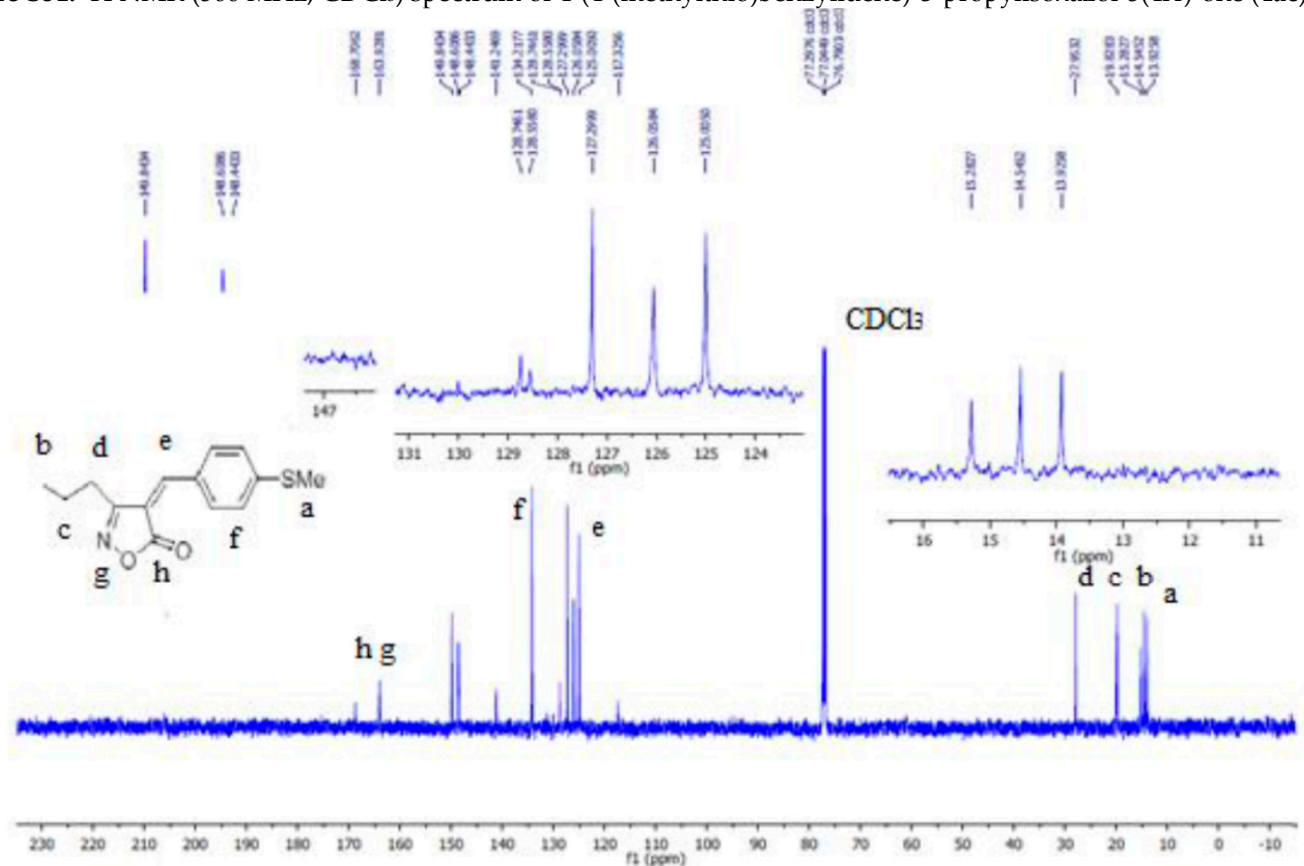


Figure S32. ^{13}C NMR (125 MHz, CDCl_3) spectrum of 4-(4-(methylthio)benzylidene)-3-propylisoxazol-5(4H)-one (**4ac**)

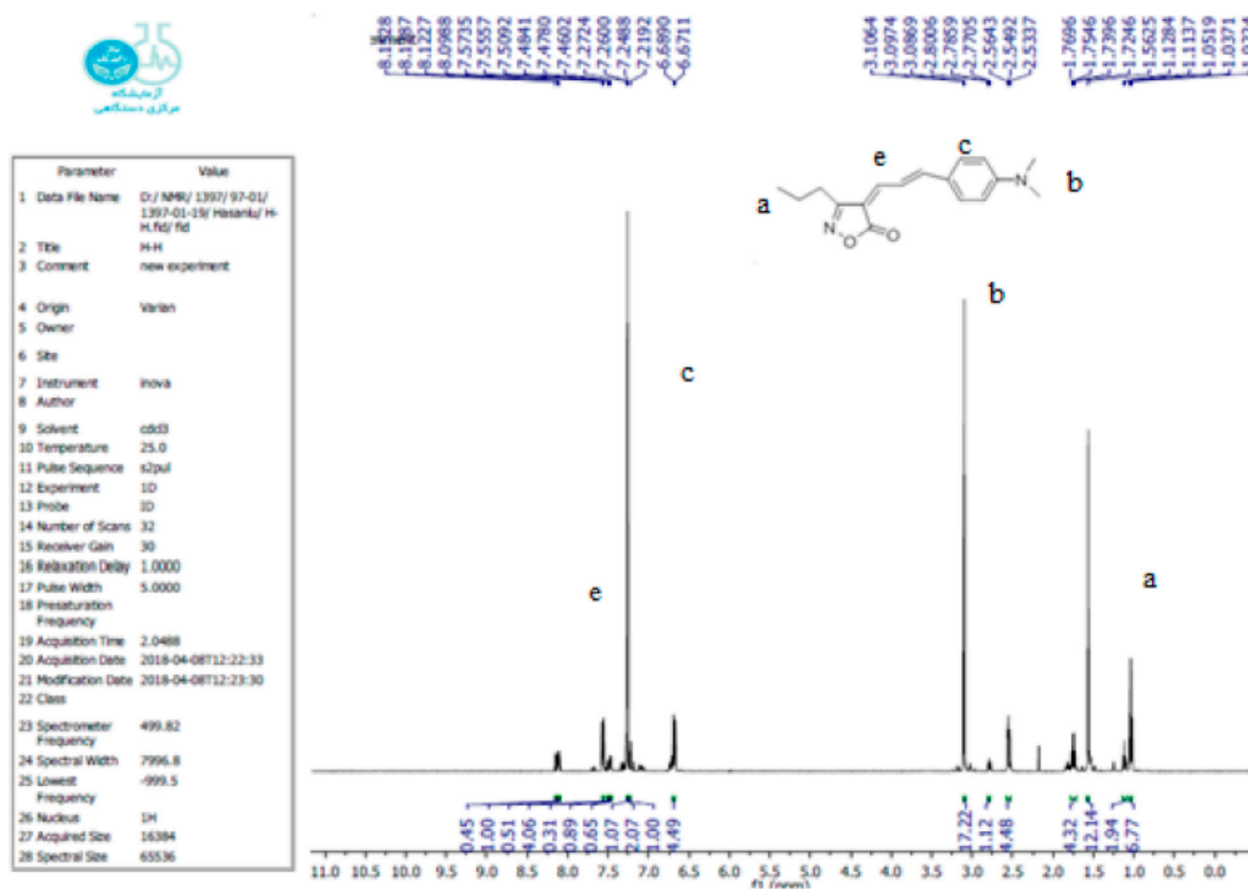


Figure S33. ^1H NMR(500 MHz, CDCl_3) spectrum of (4-(dimethylamino)phenyl)allylidene-3-propylisoxazol-5(4*H*)-one (4ad)

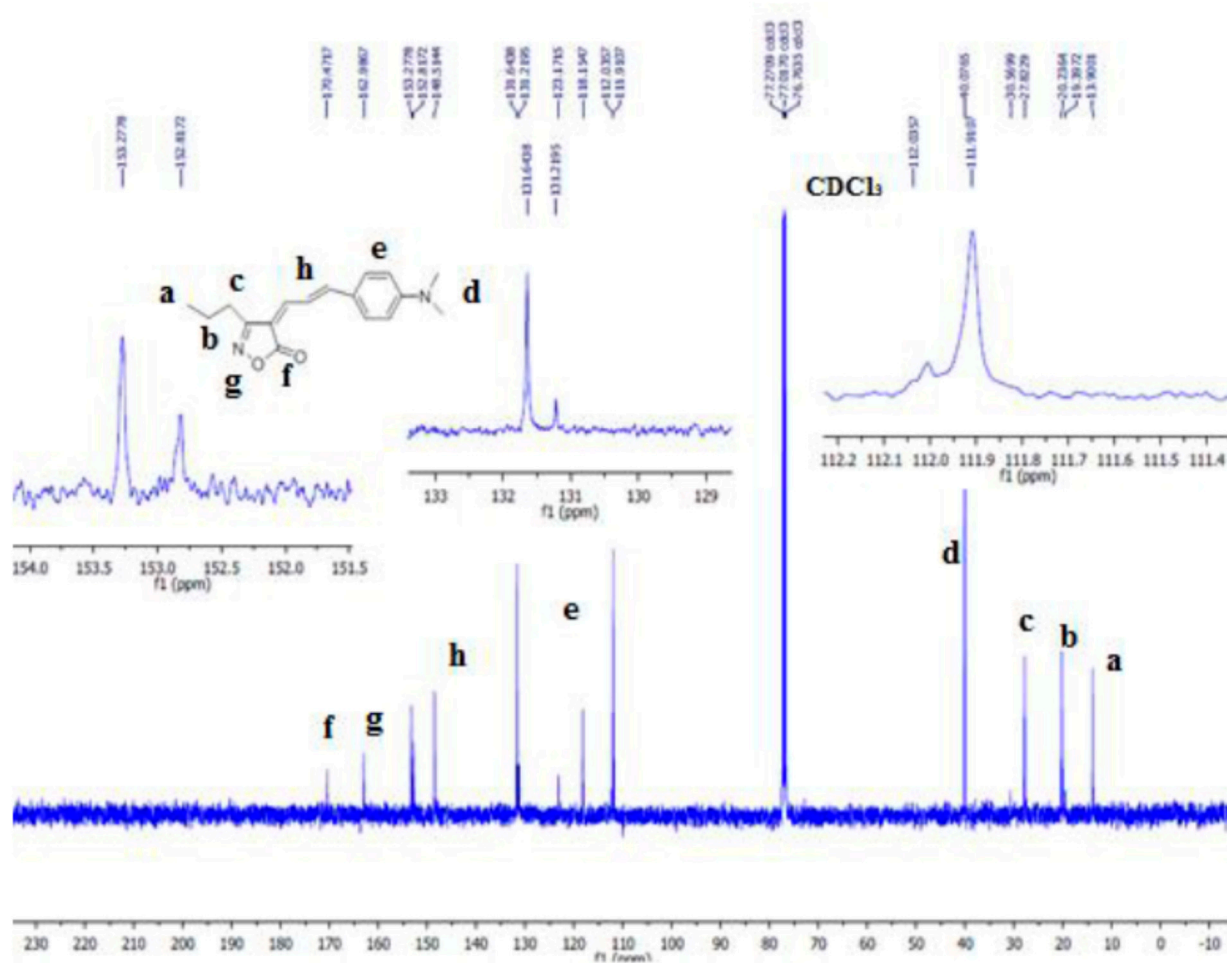
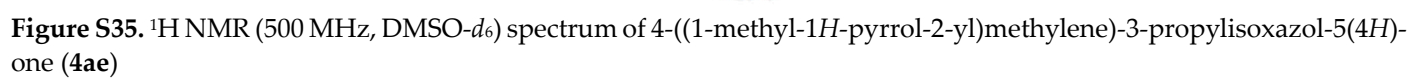


Figure S34. ^{13}C NMR (125 MHz, CDCl_3) spectrum of (4-(dimethylamino)phenyl)allylidene-3-propylisoxazol-5(4H)-one (4ad)



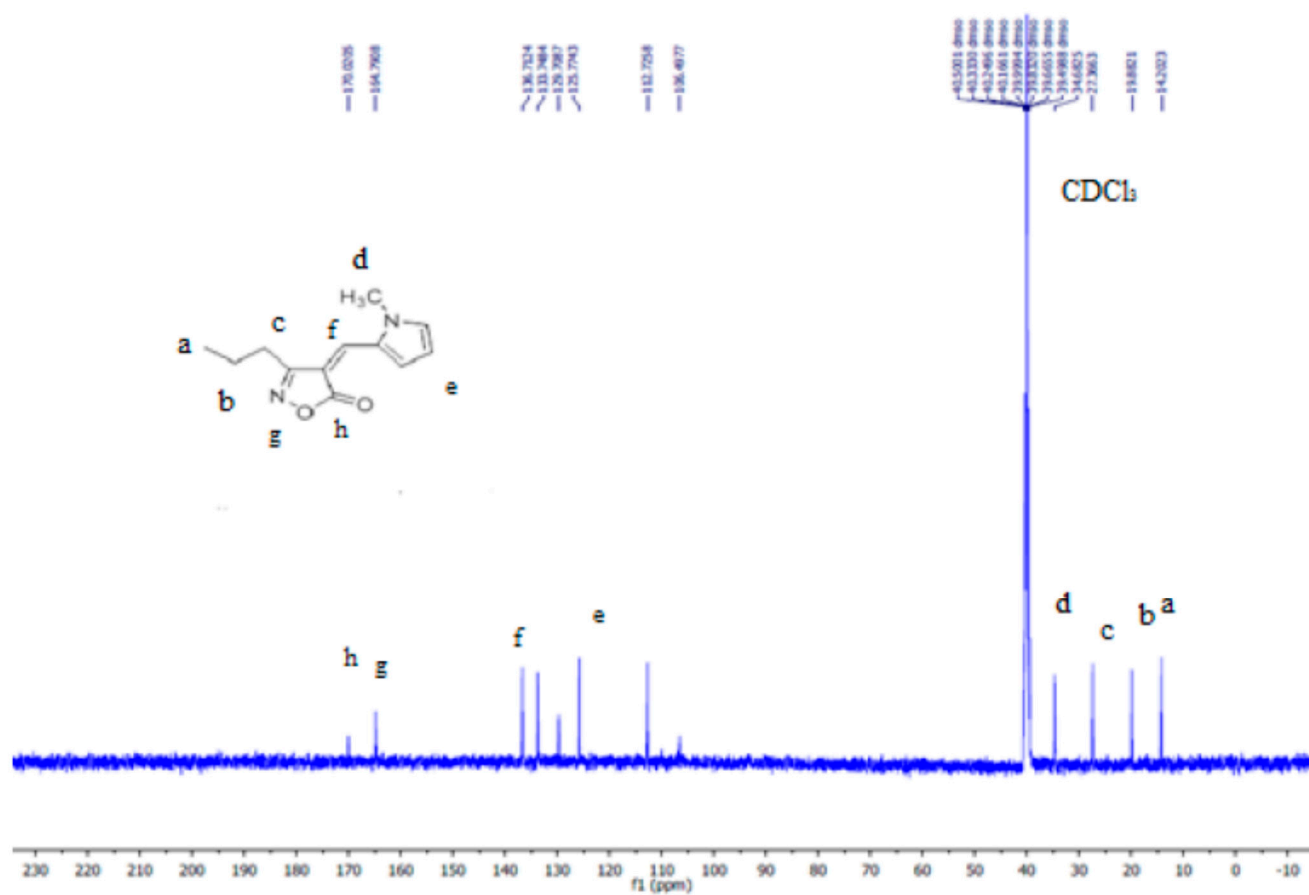


Figure S36. ¹³C NMR (125 MHz, DMSO-*d*₆) spectrum of 4-((1-methyl-1*H*-pyrrol-2-yl)methylene)-3-propylisoxazol-5(4*H*)-one (4ae)