

An efficient catalysis for the synthesis of pyrimido[1,2-*a*]benzimidazoles and 1-(benzothiazolylamino) methyl-2-naphthols using ZnO@SO₃H@Tropine.

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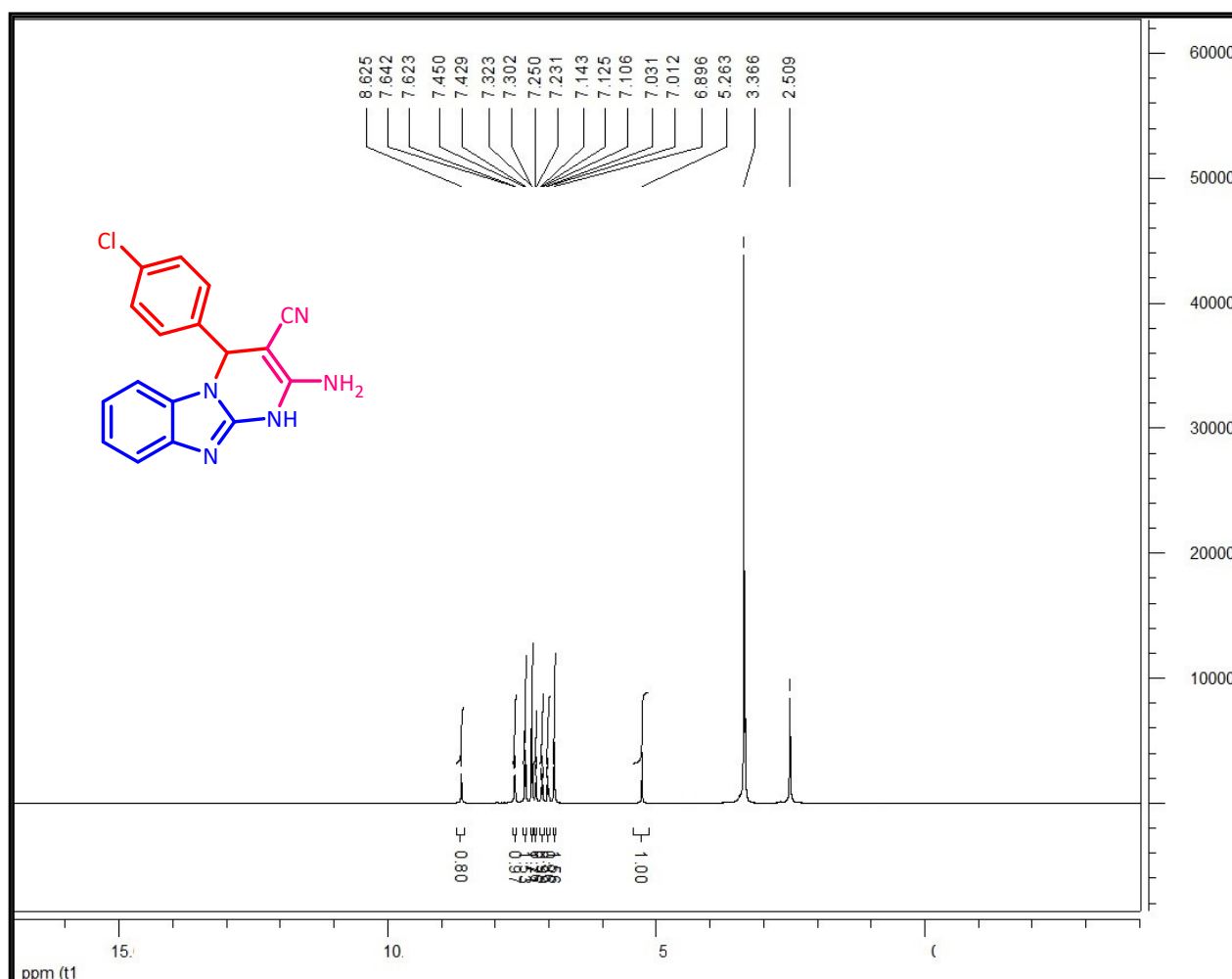


Figure 1: The ¹H NMR spectrum of 2-amino-4-(4-chlorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-*a*]pyrimidine-3-carbonitrile.

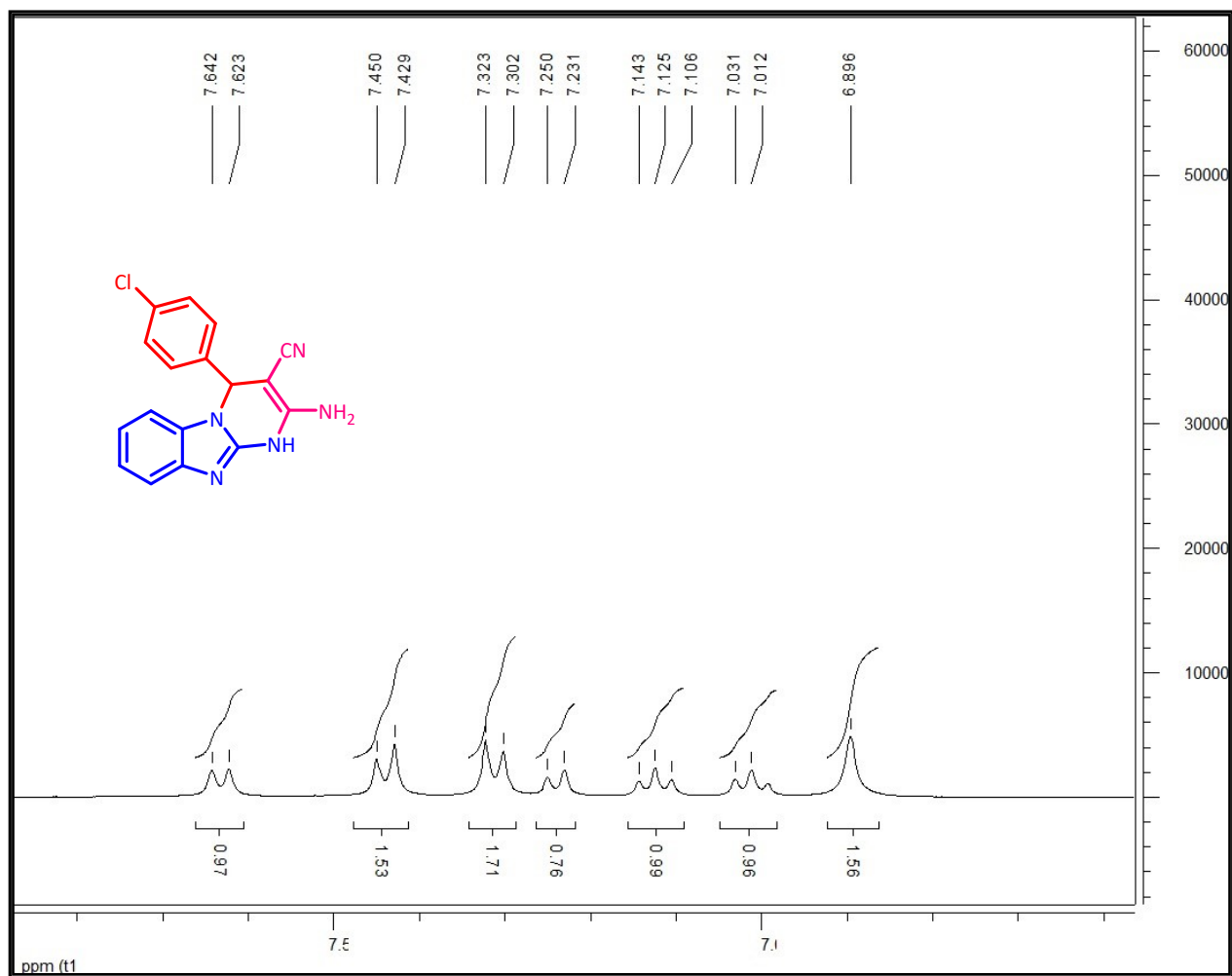


Figure 2: The ¹H NMR spectrum of 2-amino-4-(4-chlorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

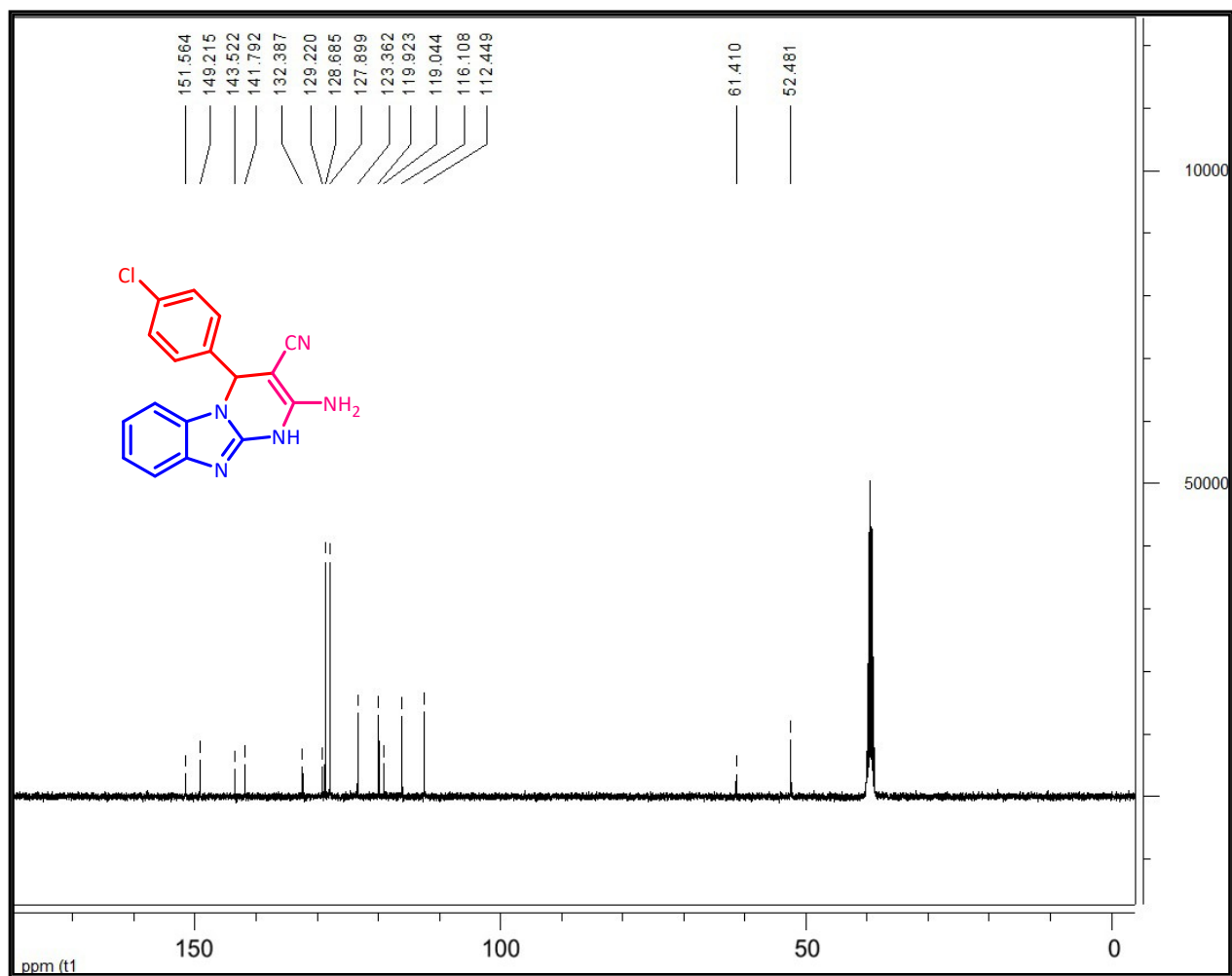


Figure 3: The ^{13}C NMR spectrum of 2-amino-4-(4-chlorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

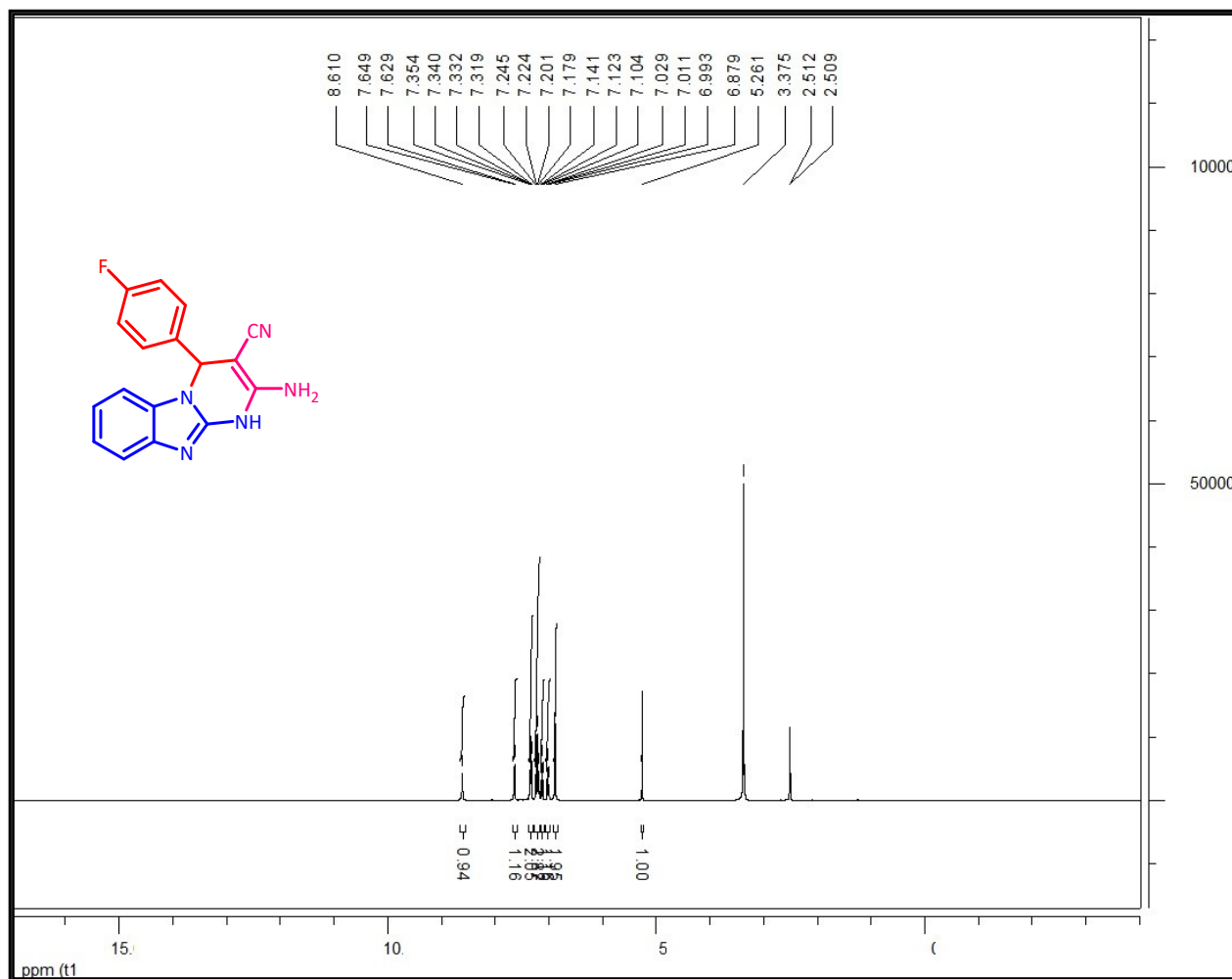


Figure 4: The ^1H NMR spectrum of 2-amino-4-(4-fluorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

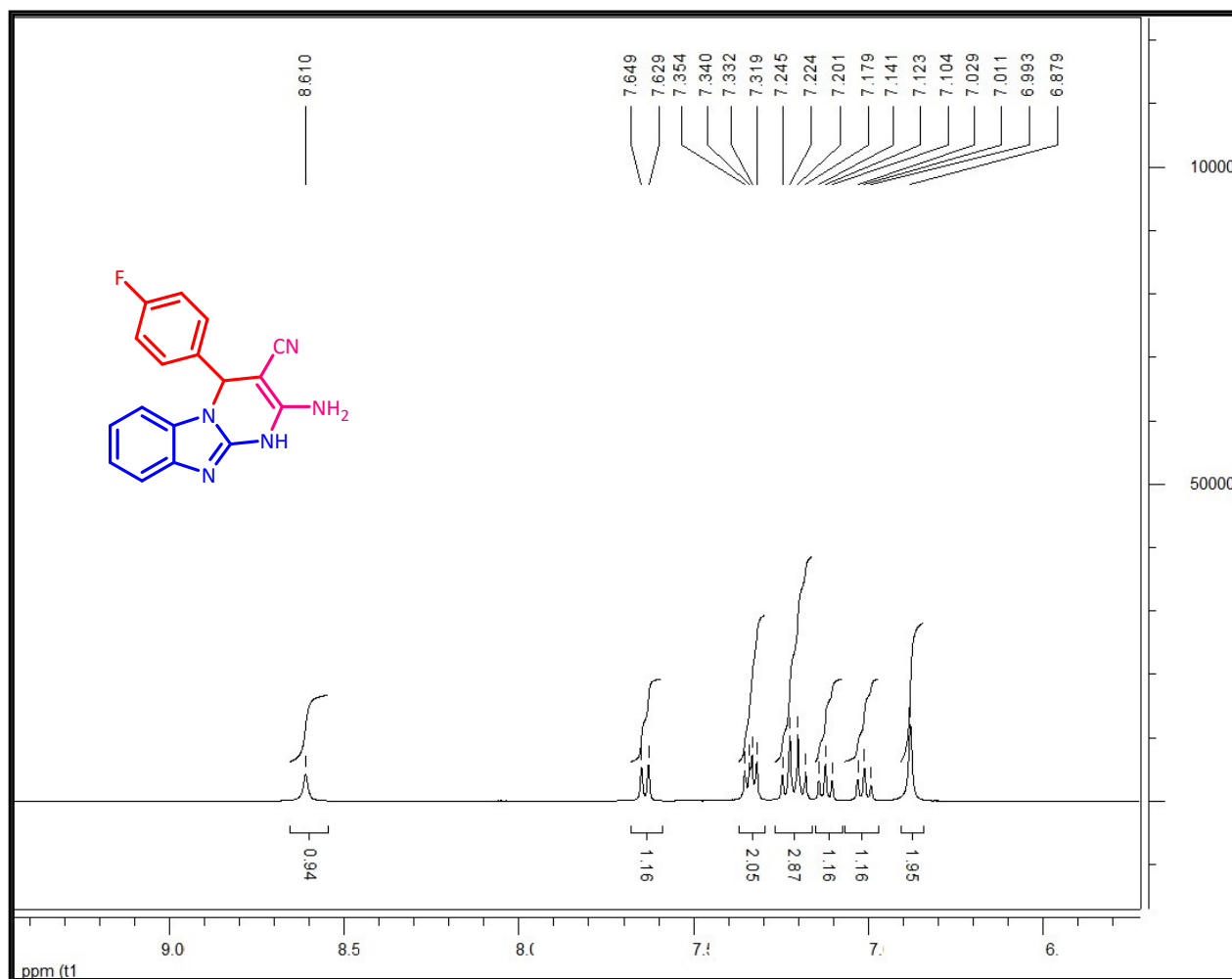


Figure 5: The ¹H NMR spectrum of 2-amino-4-(4-fluorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

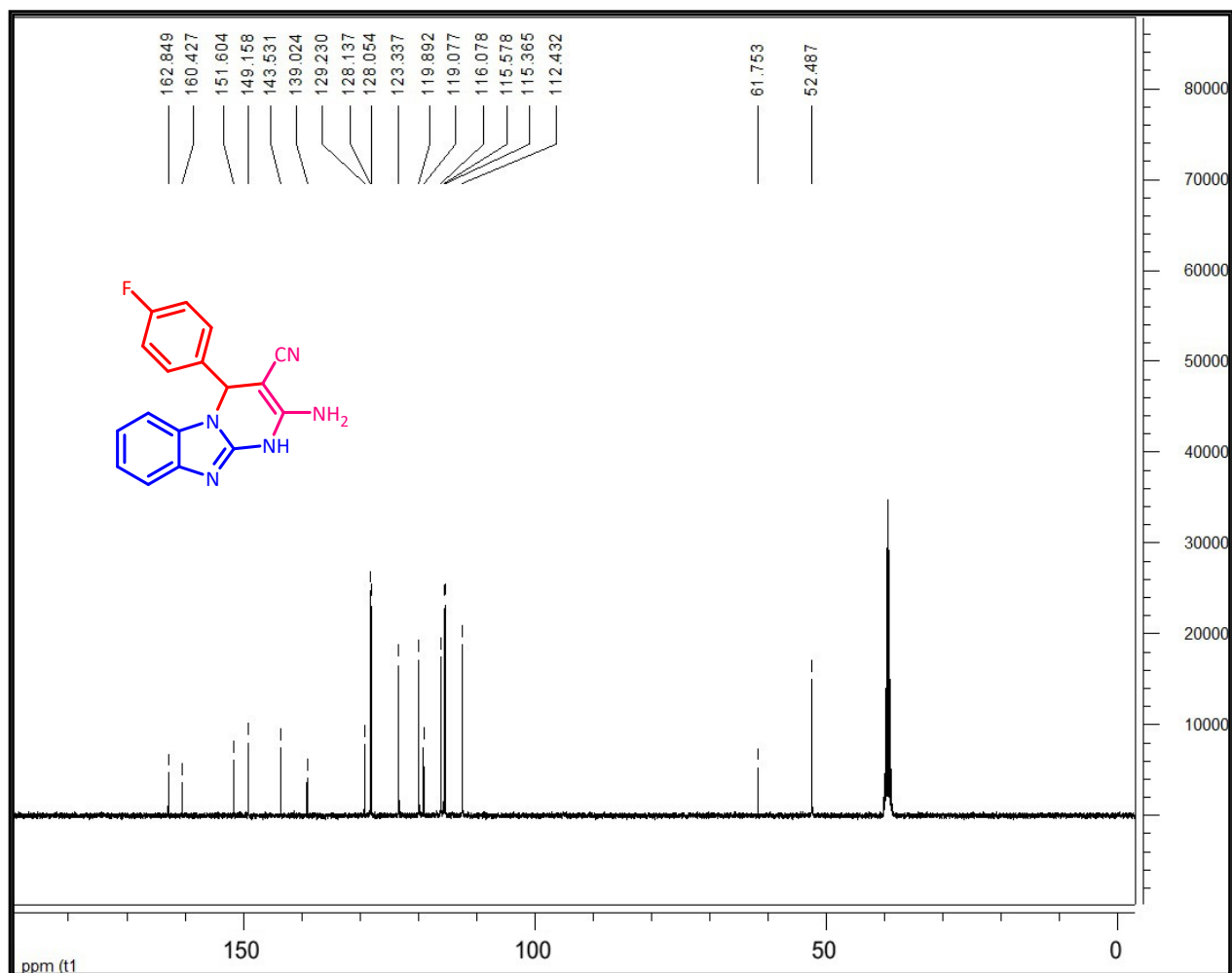


Figure 6: The ¹³C NMR spectrum of 2-amino-4-(4-fluorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

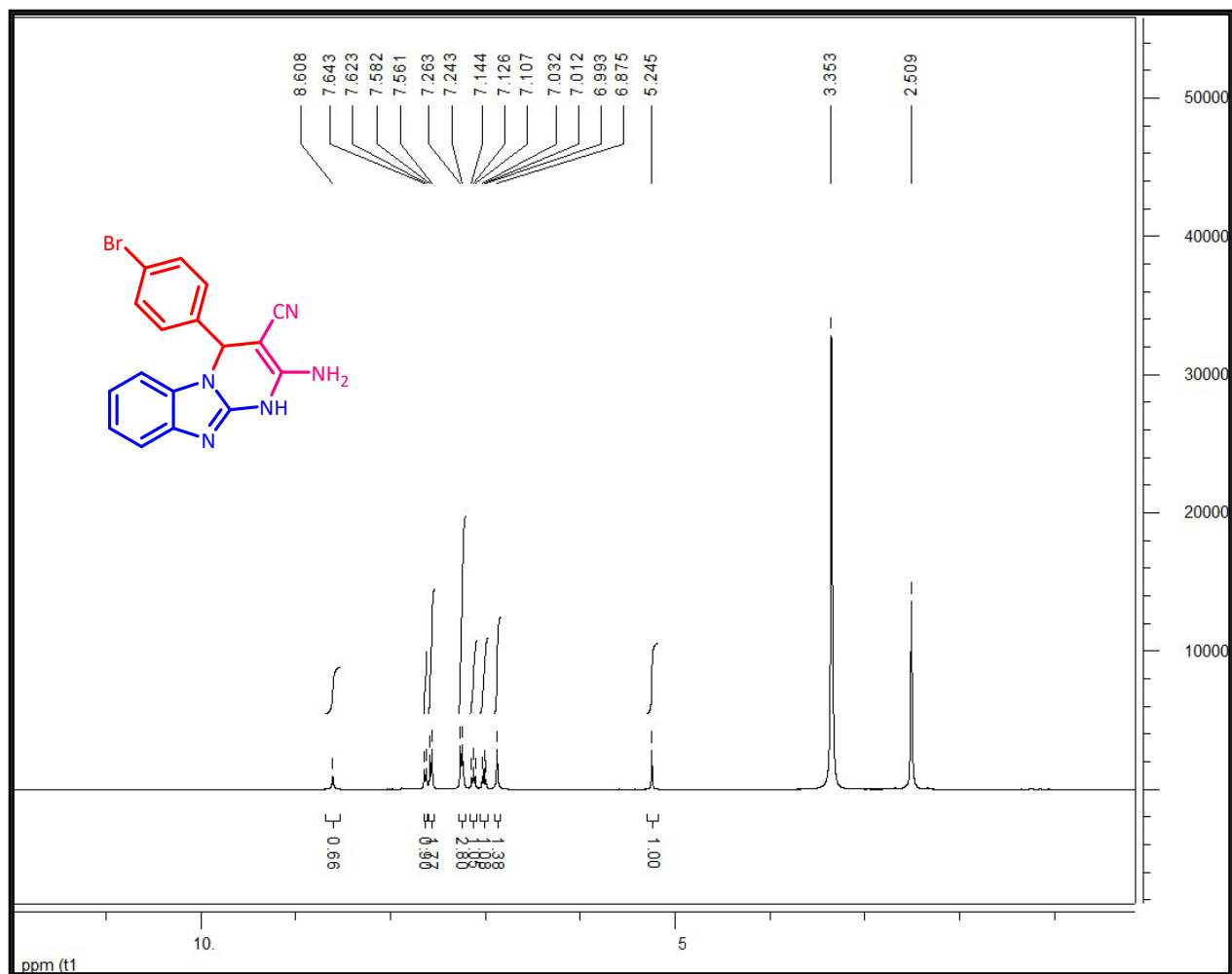


Figure 7: The ^1H NMR spectrum of 2-amino-4-(4-bromophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

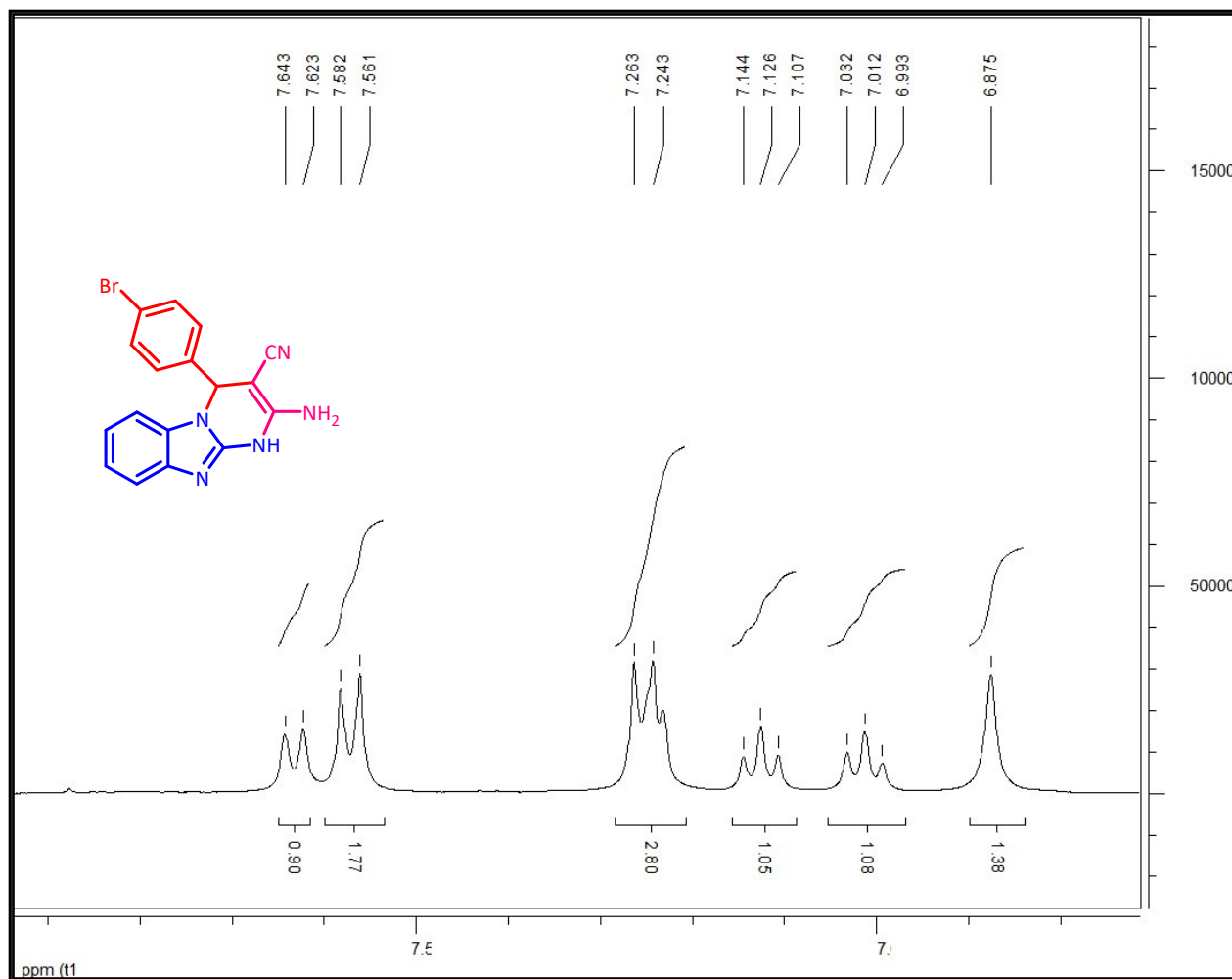


Figure 8: The ¹H NMR spectrum of 2-amino-4-(4-bromophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

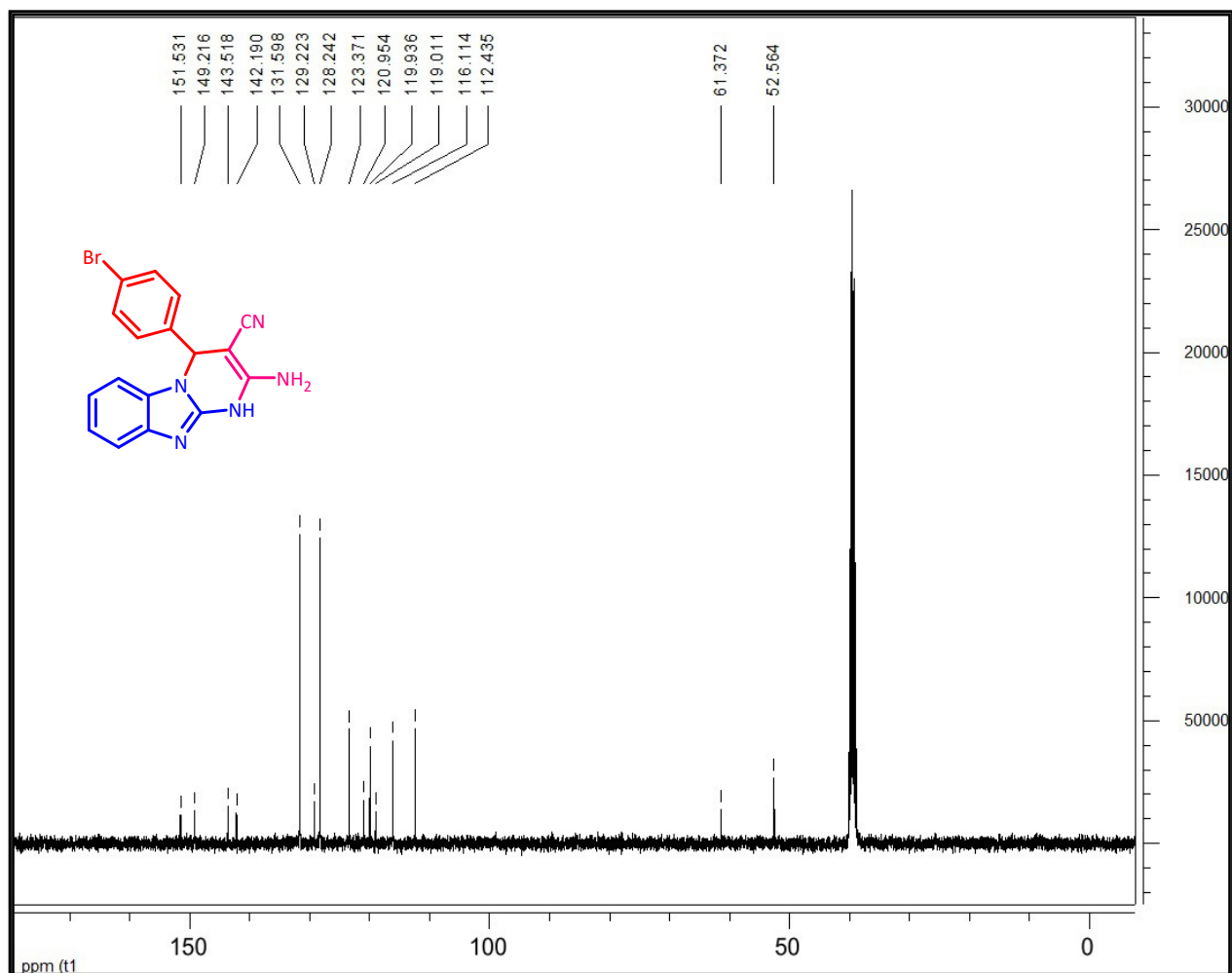


Figure 9: The ^{13}C NMR spectrum of 2-amino-4-(4-bromophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

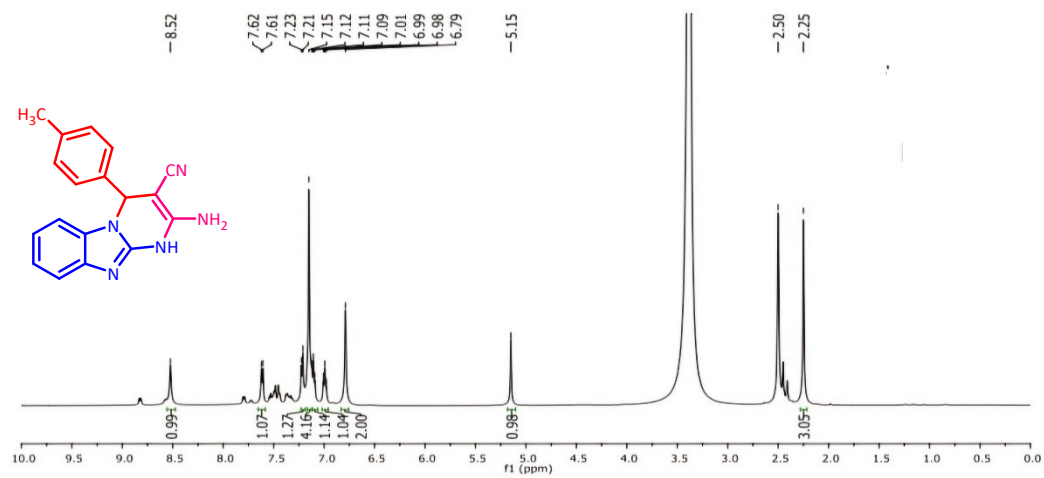


Figure 10: The ¹H NMR spectrum of 2-amino-4-(*p*-tolyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-*a*]pyrimidine-3-carbonitrile.

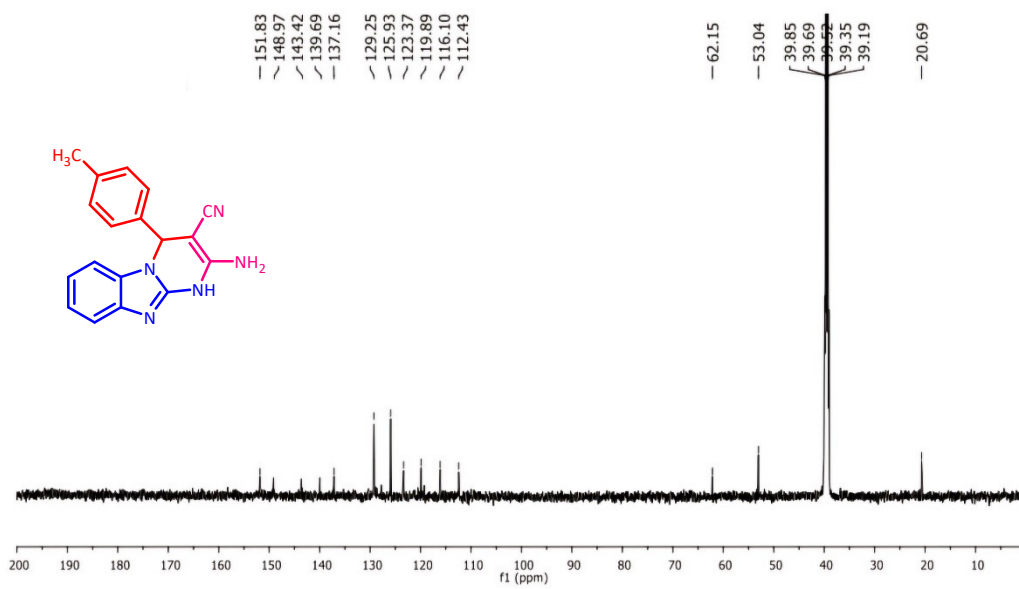


Figure 11: The ^{13}C NMR spectrum of 2-amino-4-(*p*-tolyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-*a*]pyrimidine-3-carbonitrile.

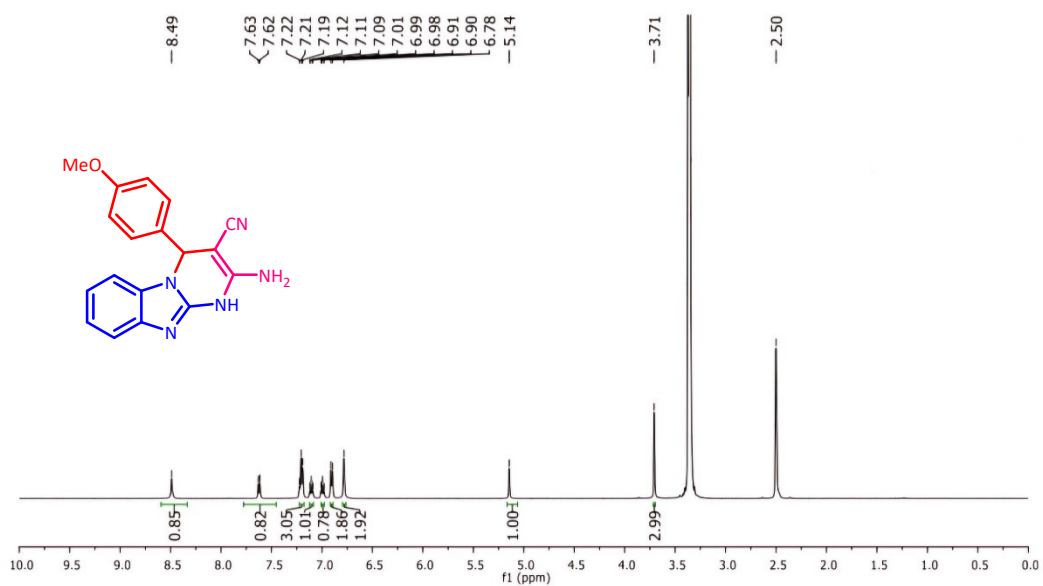


Figure 12: The ^1H NMR spectrum of 2-amino-4-(4-methoxyphenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

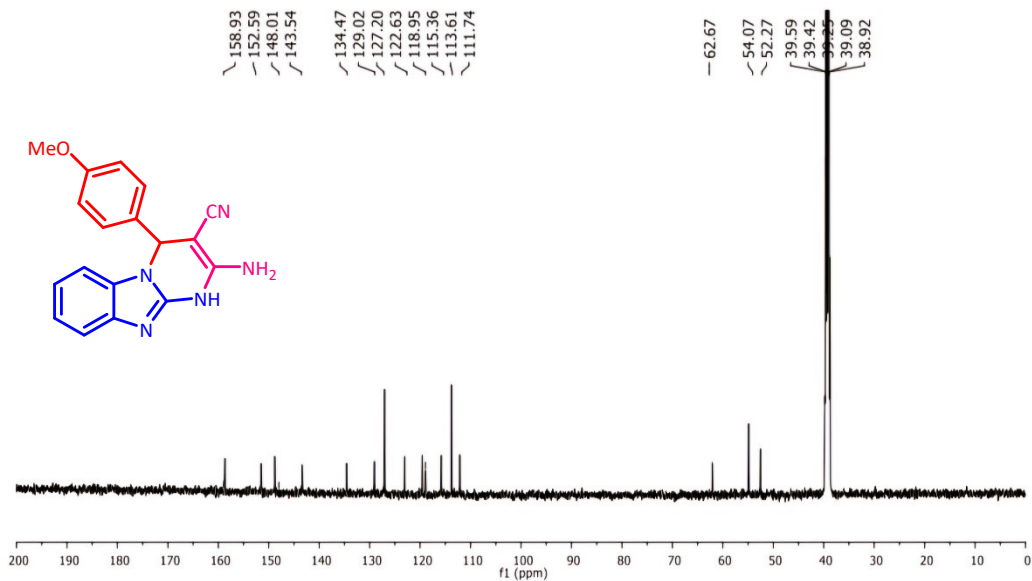


Figure 13: The ¹³C NMR spectrum of 2-amino-4-(4-methoxyphenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

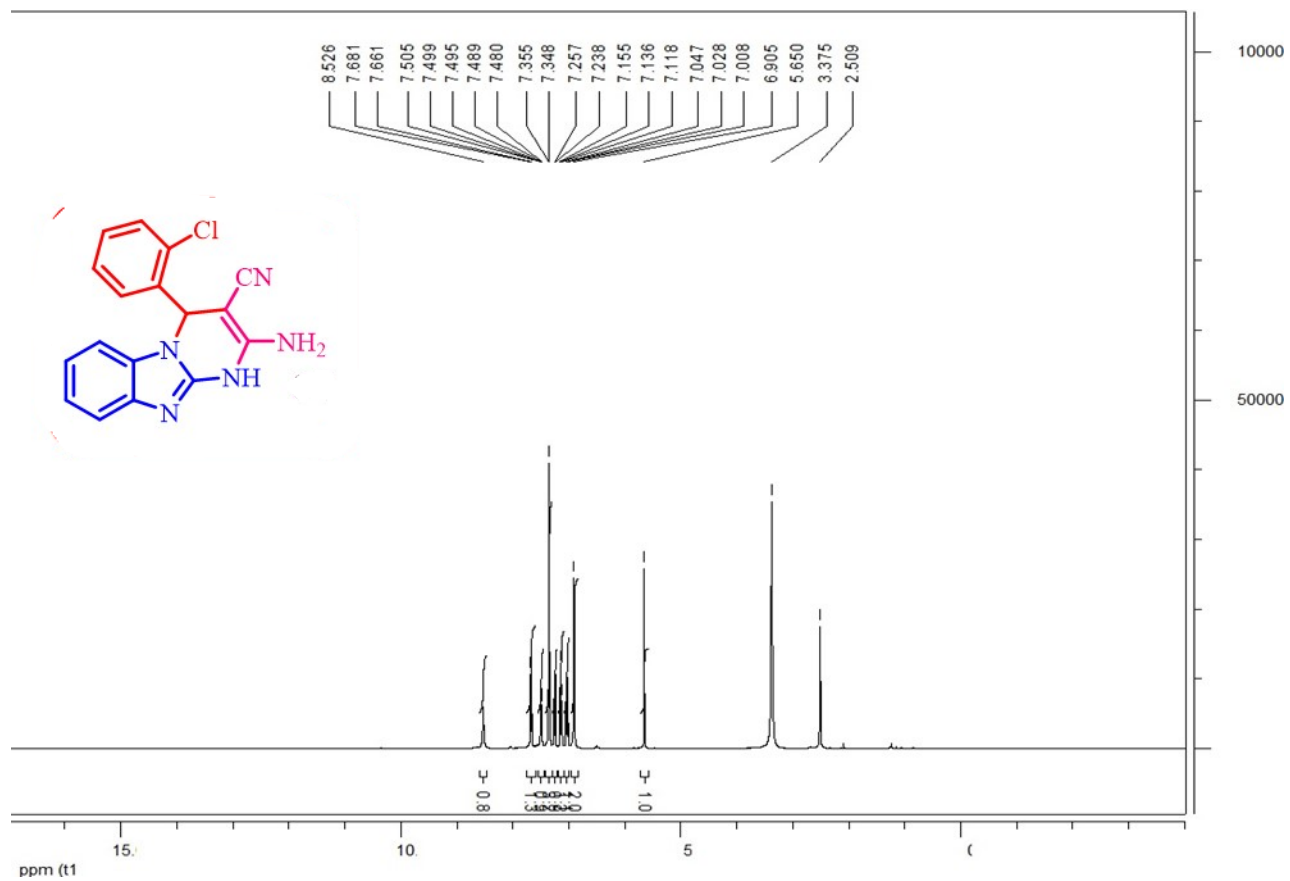


Figure 14: The ¹H NMR spectrum of 2-amino-4-(2-chlorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

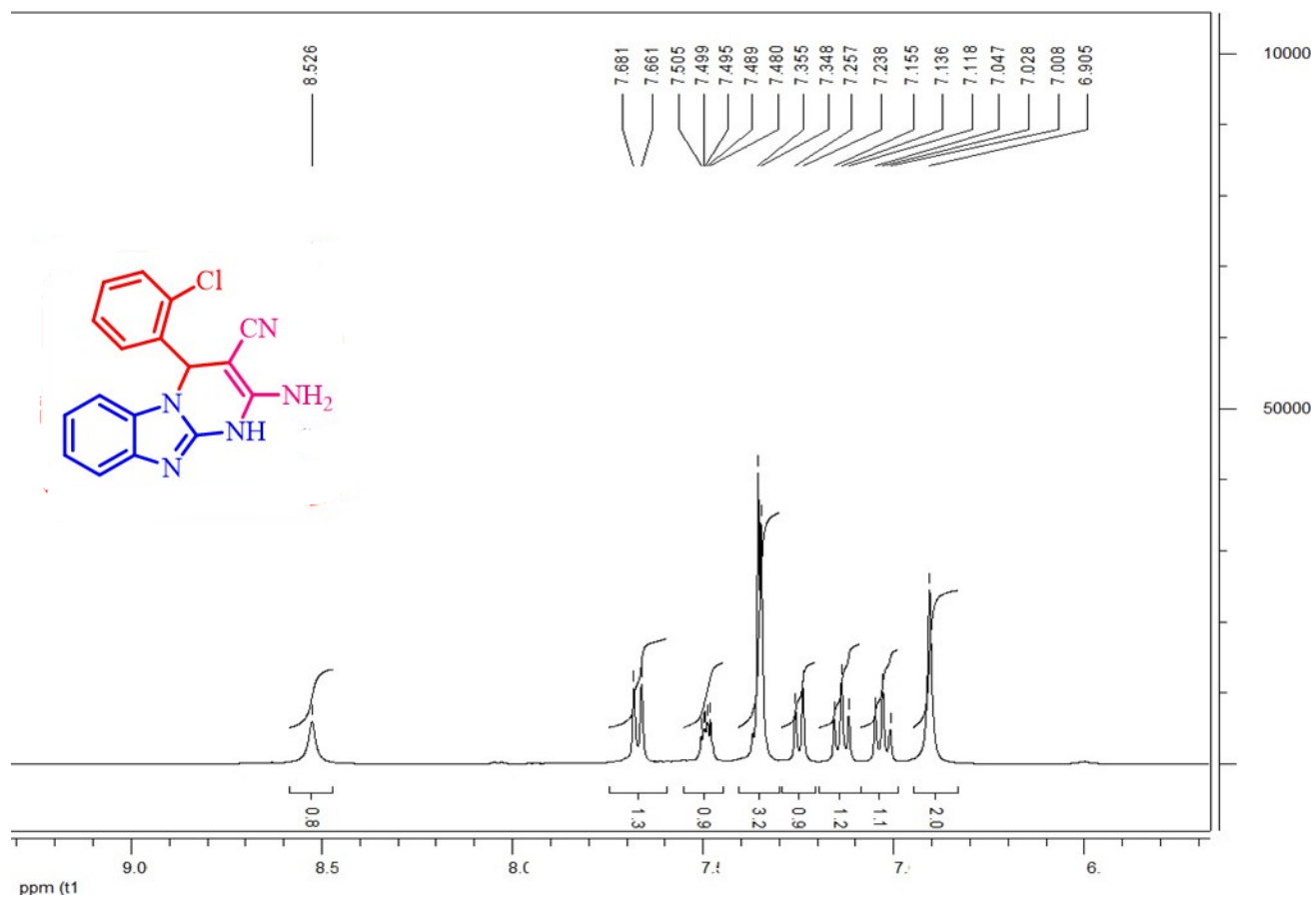


Figure 15: The ¹H NMR spectrum of 2-amino-4-(2-chlorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

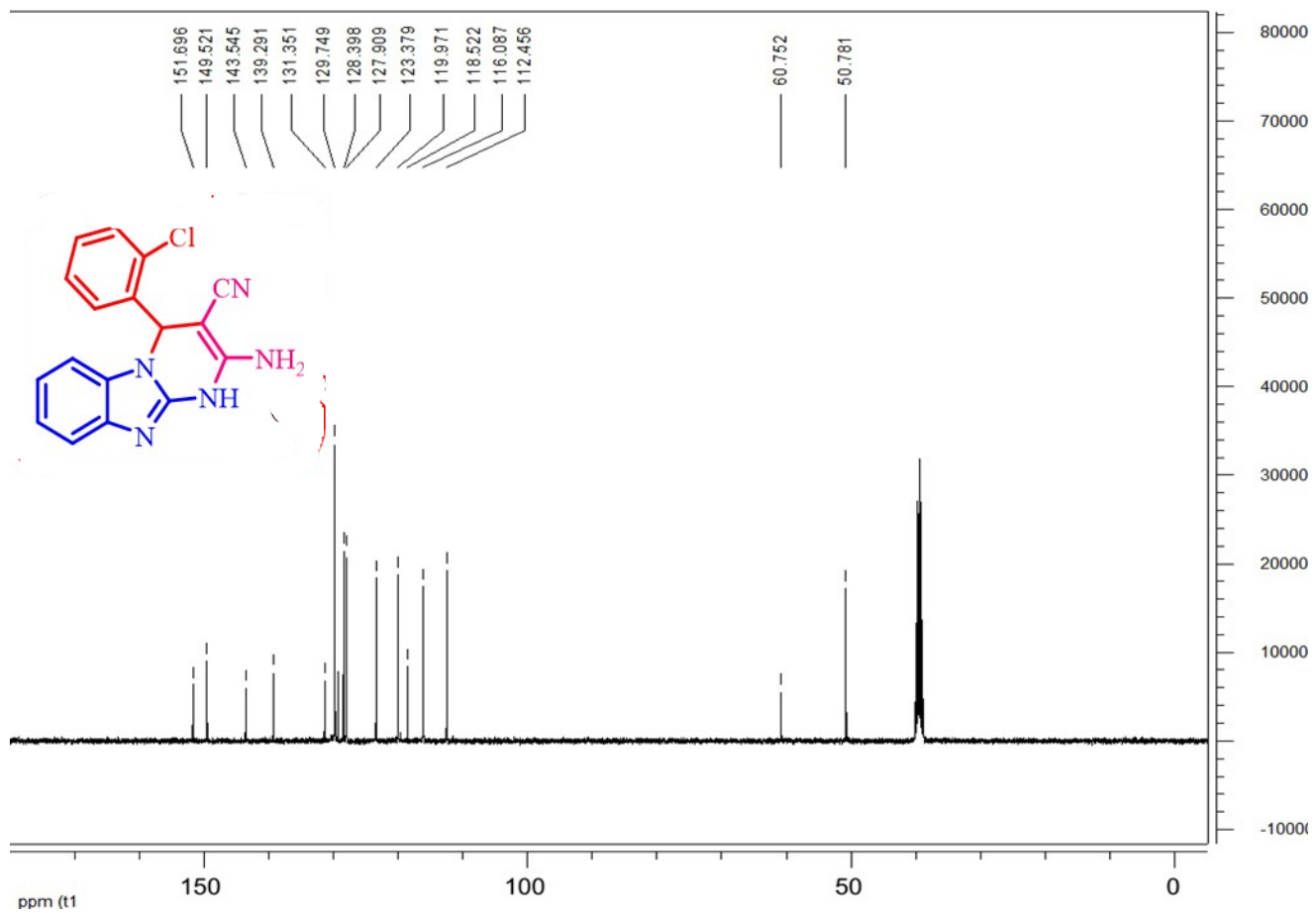


Figure 16: The ¹³C NMR spectrum of 2-amino-4-(2-chlorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

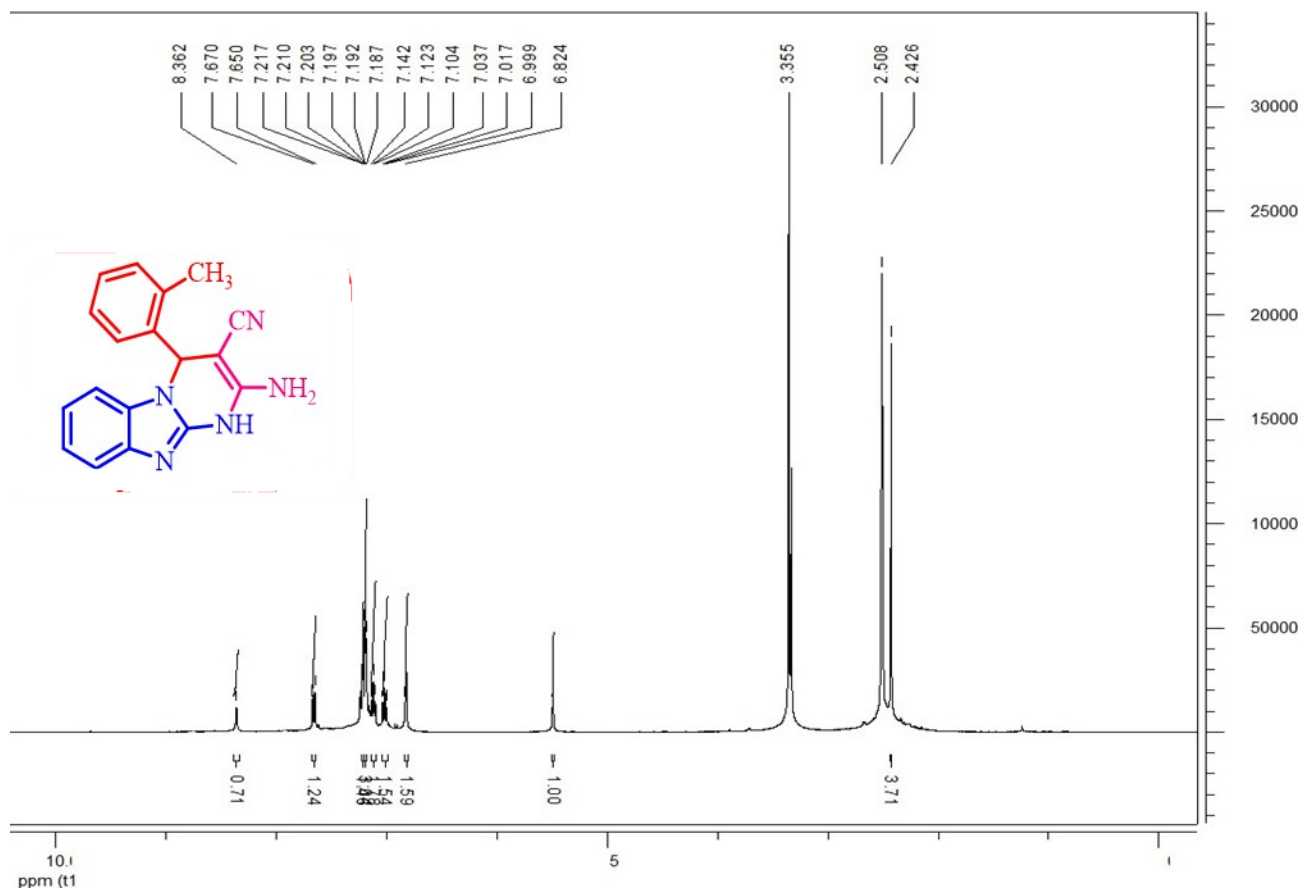


Figure 17: The ¹H NMR spectrum of 2-amino-4-(o-tolyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

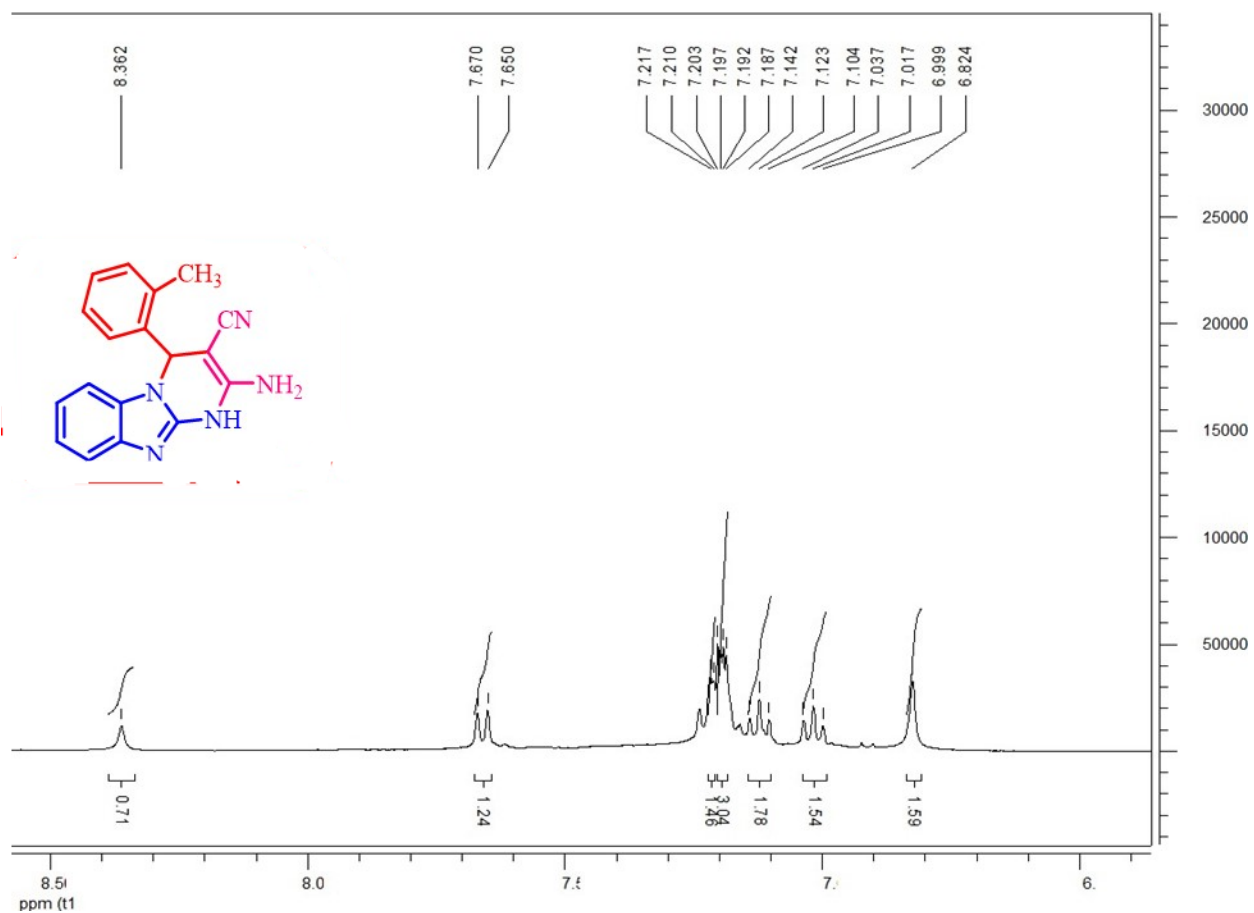


Figure 18: The ^1H NMR spectrum of 2-amino-4-(o-tolyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

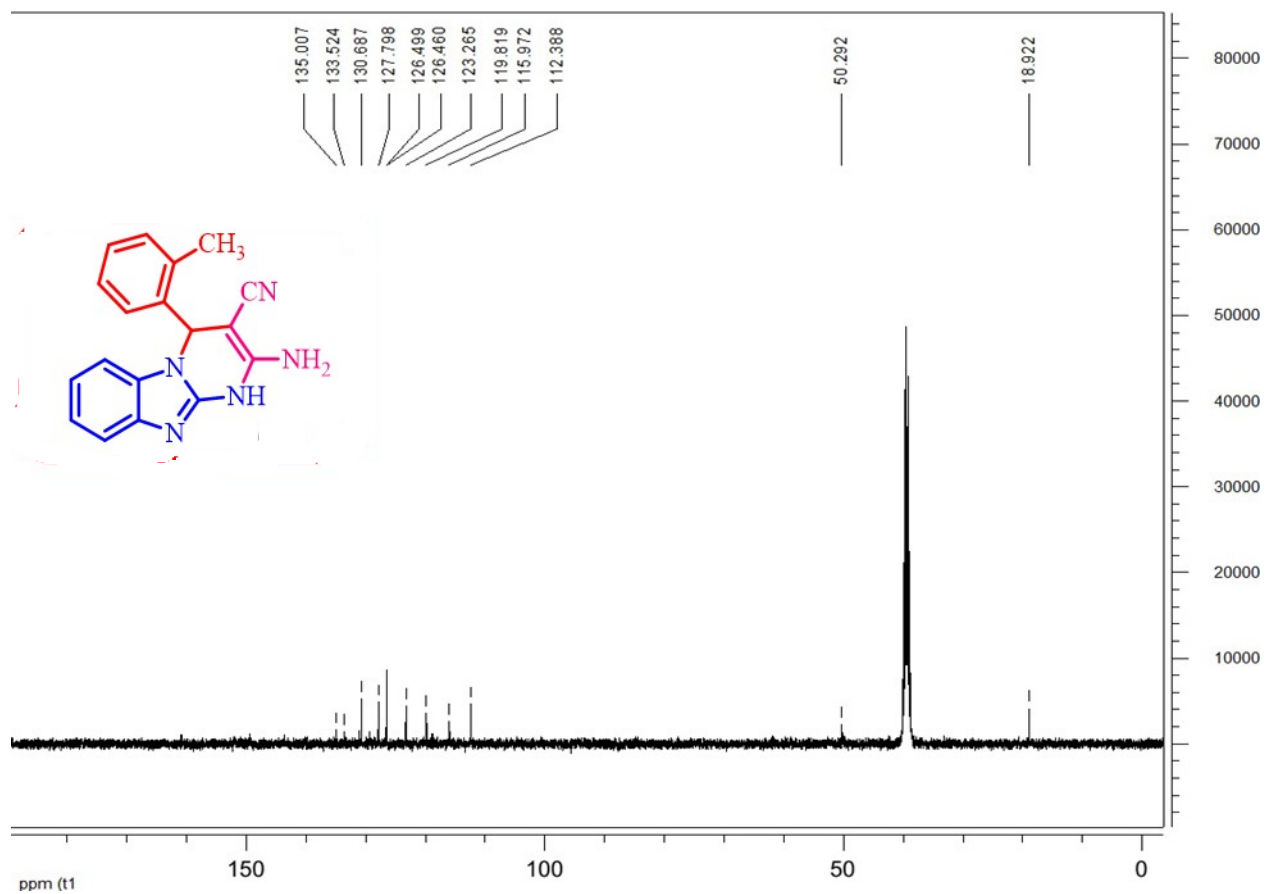


Figure 19: The ^{13}C NMR spectrum of 2-amino-4-(o-tolyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

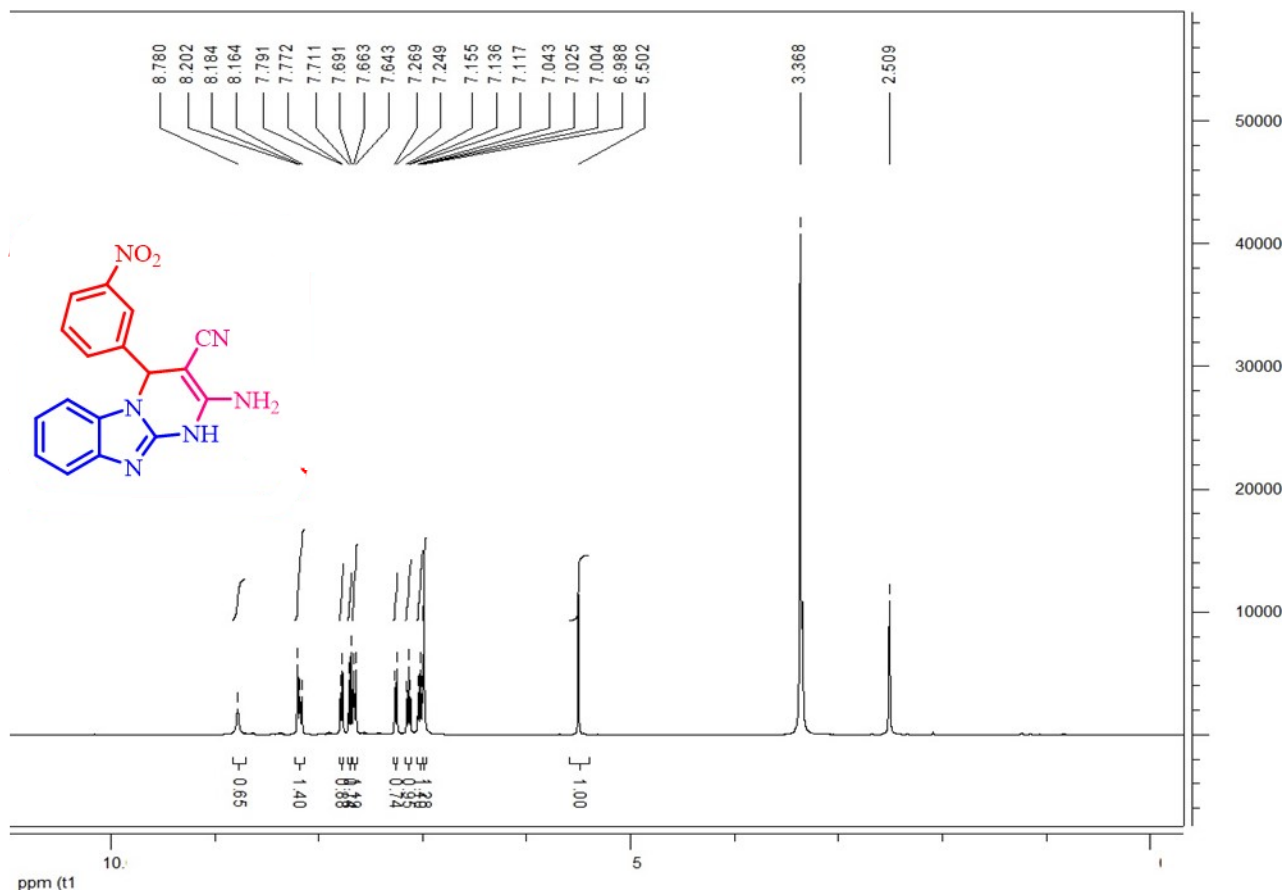


Figure 20: The ¹H NMR spectrum of 2-amino-4-(3-nitrophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

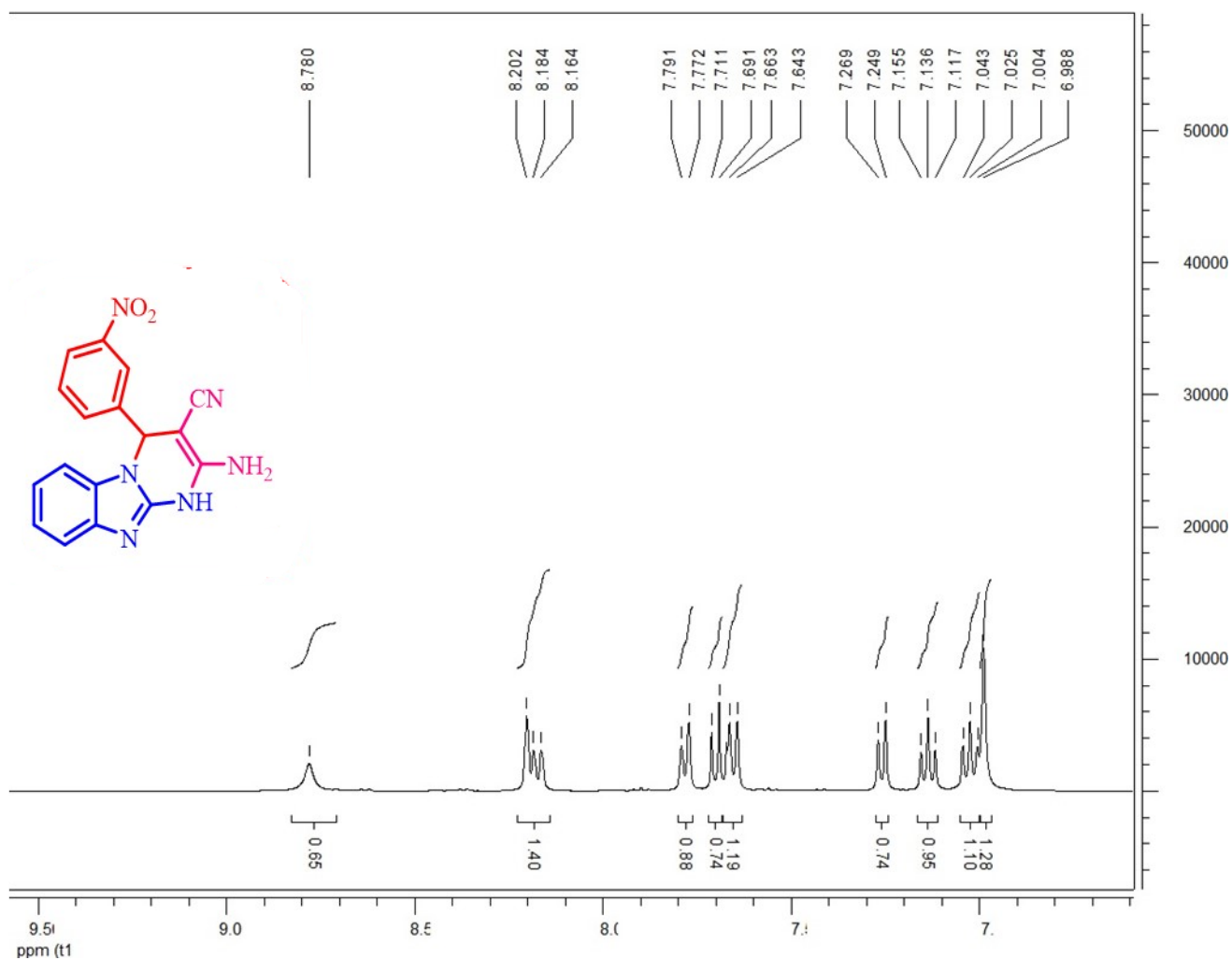


Figure 21: The ¹H NMR spectrum of 2-amino-4-(3-nitrophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

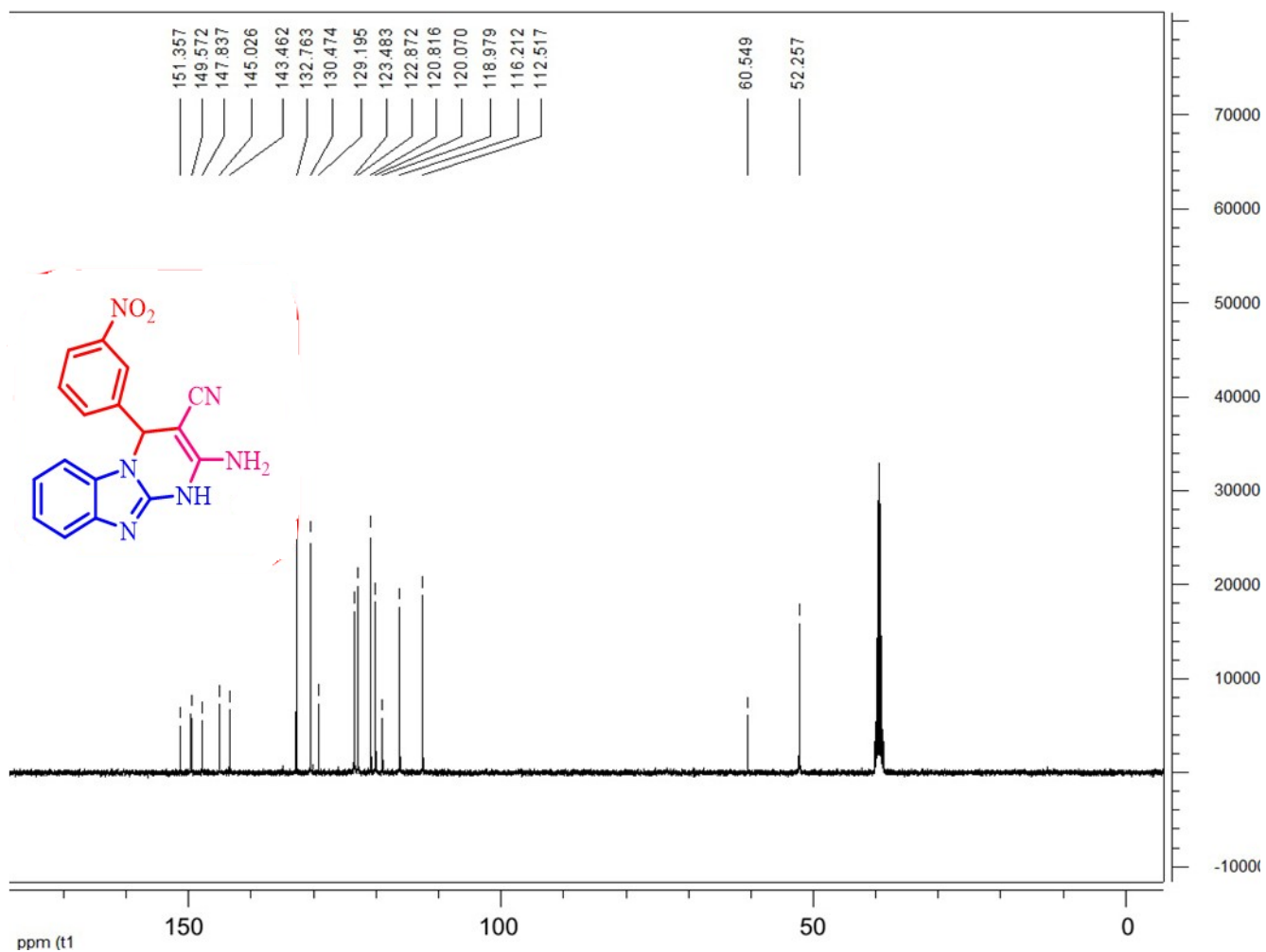


Figure 22: The ^{13}C NMR spectrum of 2-amino-4-(3-nitrophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

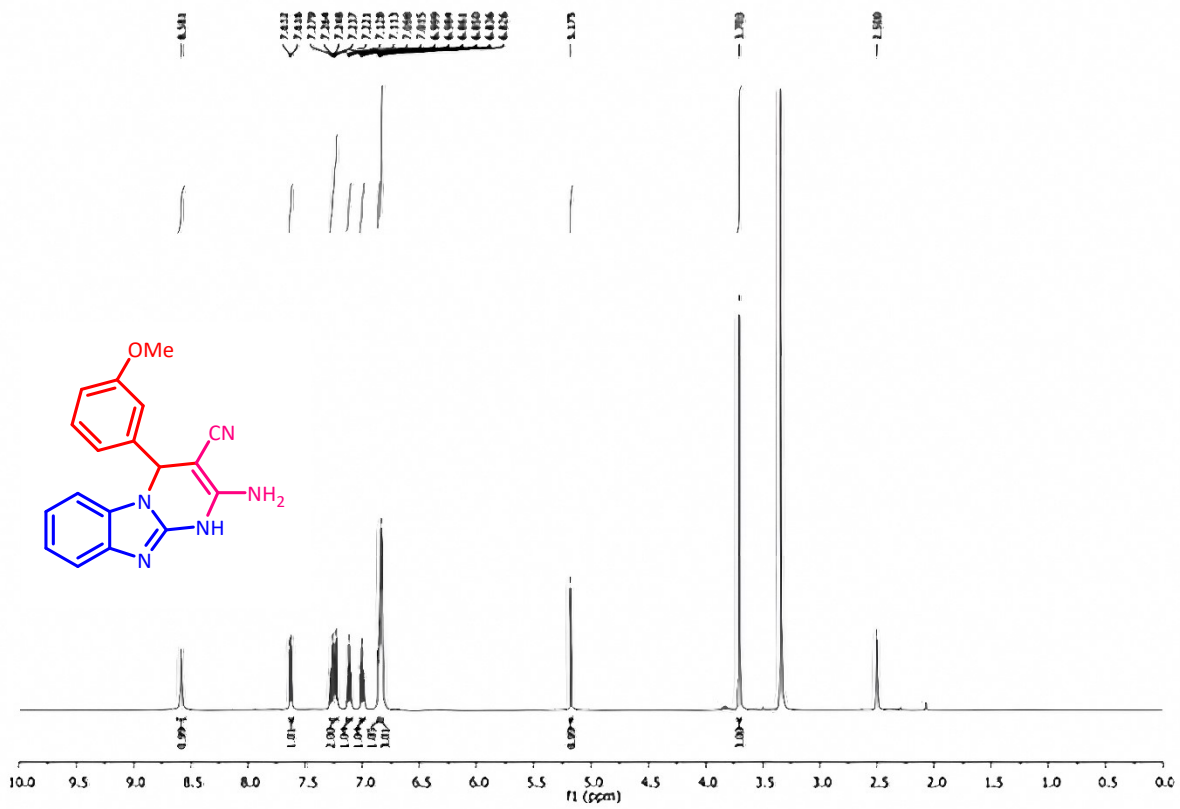


Figure 23: The ¹H NMR spectrum of 2-amino-4-(3-methoxyphenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

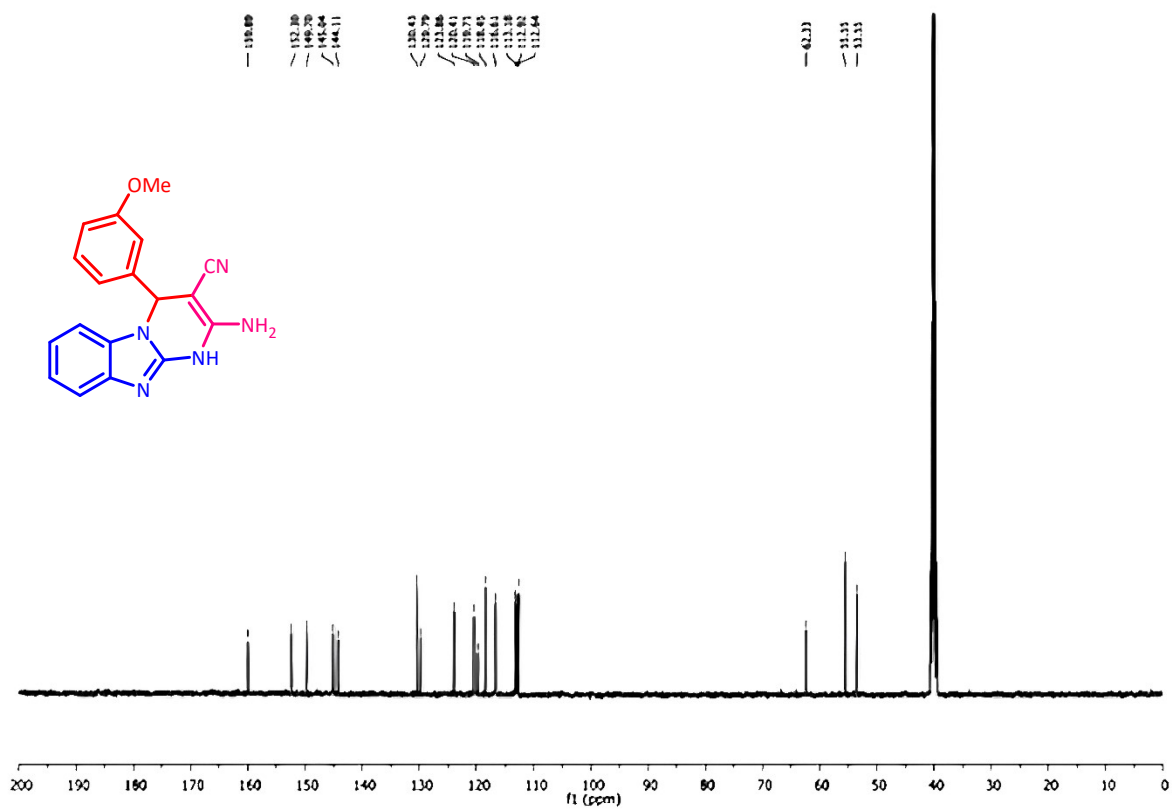


Figure 24: The ^1H NMR spectrum of 2-amino-4-(3-methoxyphenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-*a*]pyrimidine-3-carbonitrile.

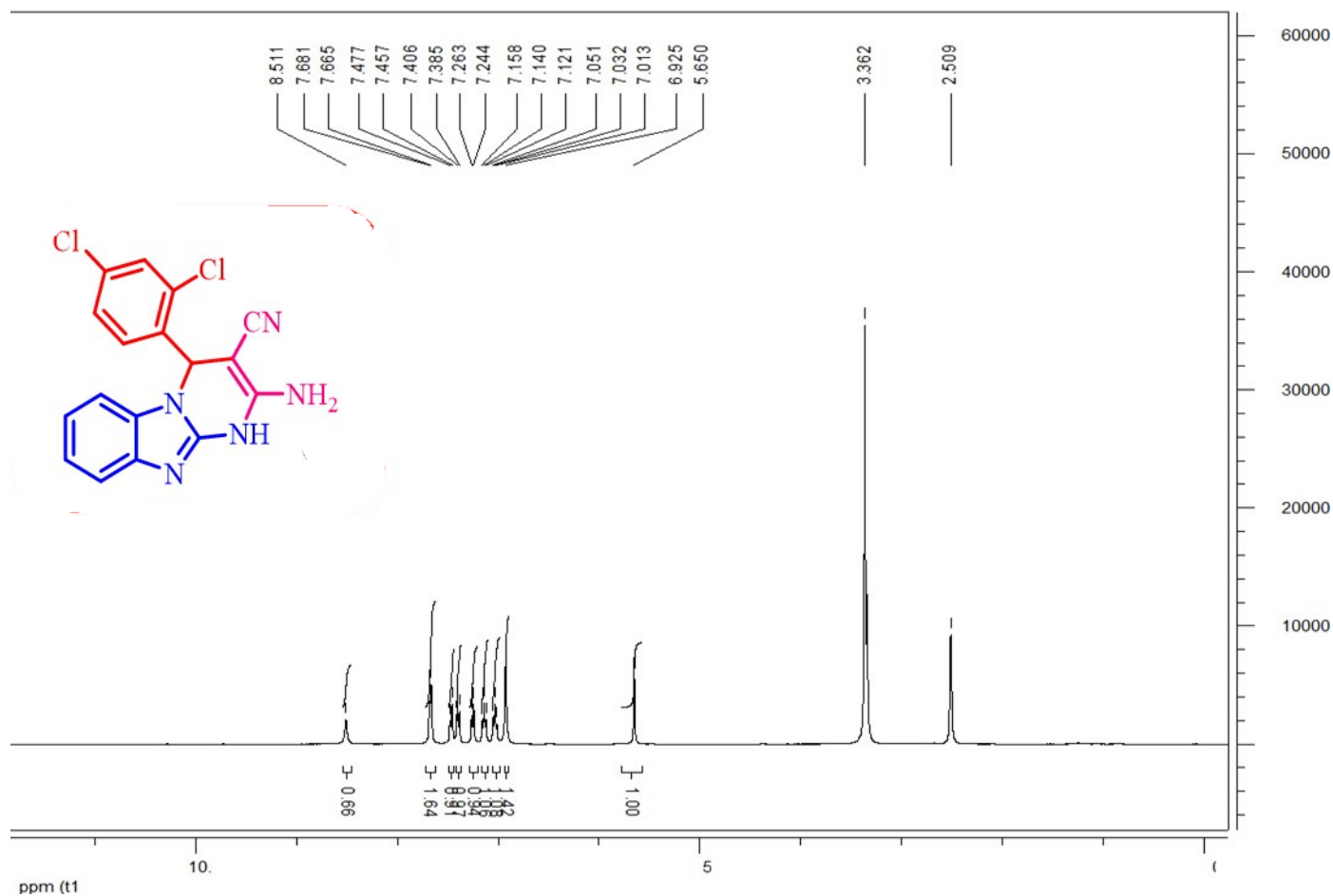


Figure 25: The ^1H NMR spectrum of 2-amino-4-(2,4-dichlorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

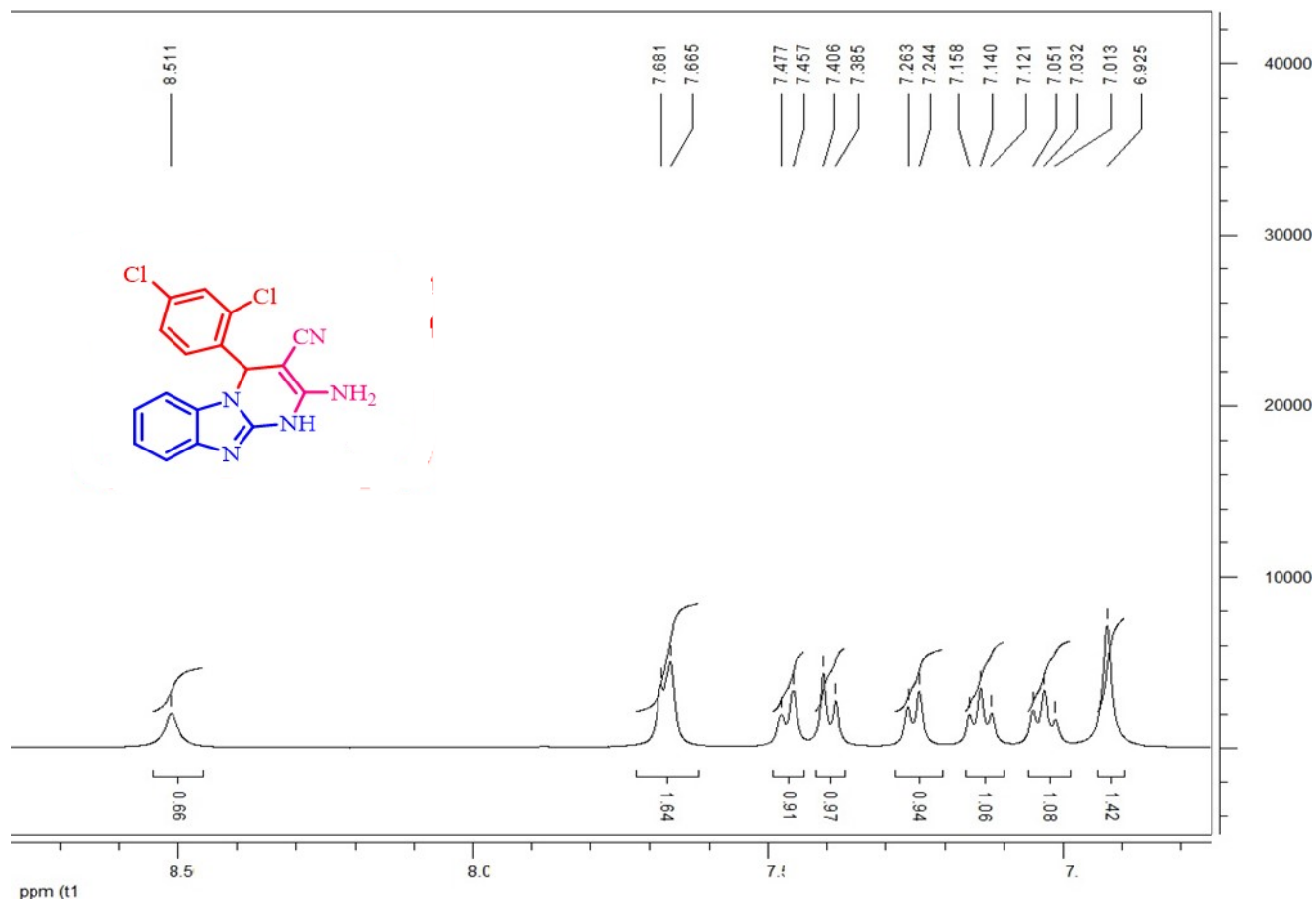


Figure 26: The ¹H NMR spectrum of 2-amino-4-(2,4-dichlorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

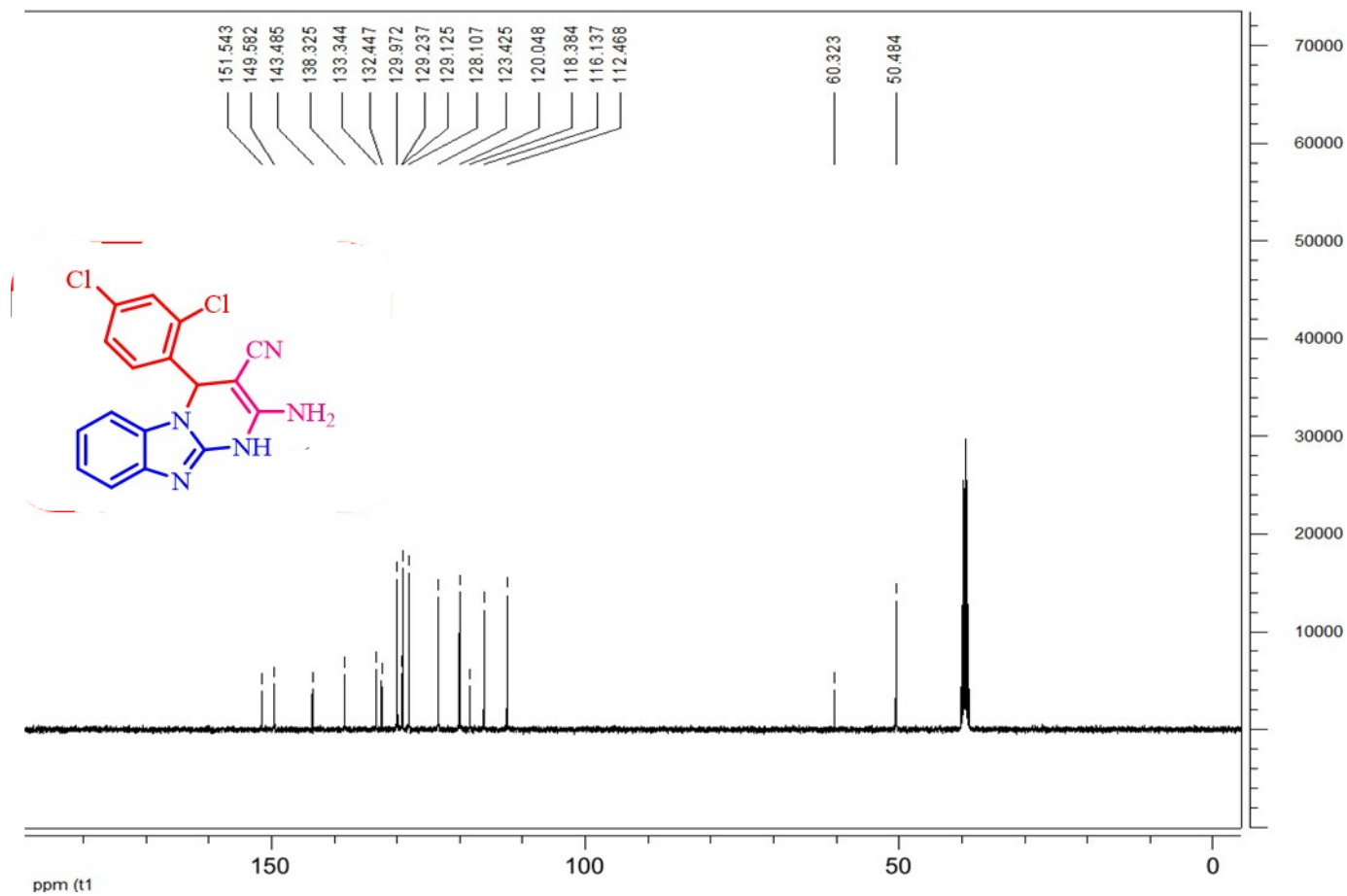


Figure 27: The ^{13}C NMR spectrum of 2-amino-4-(2,4-dichlorophenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile

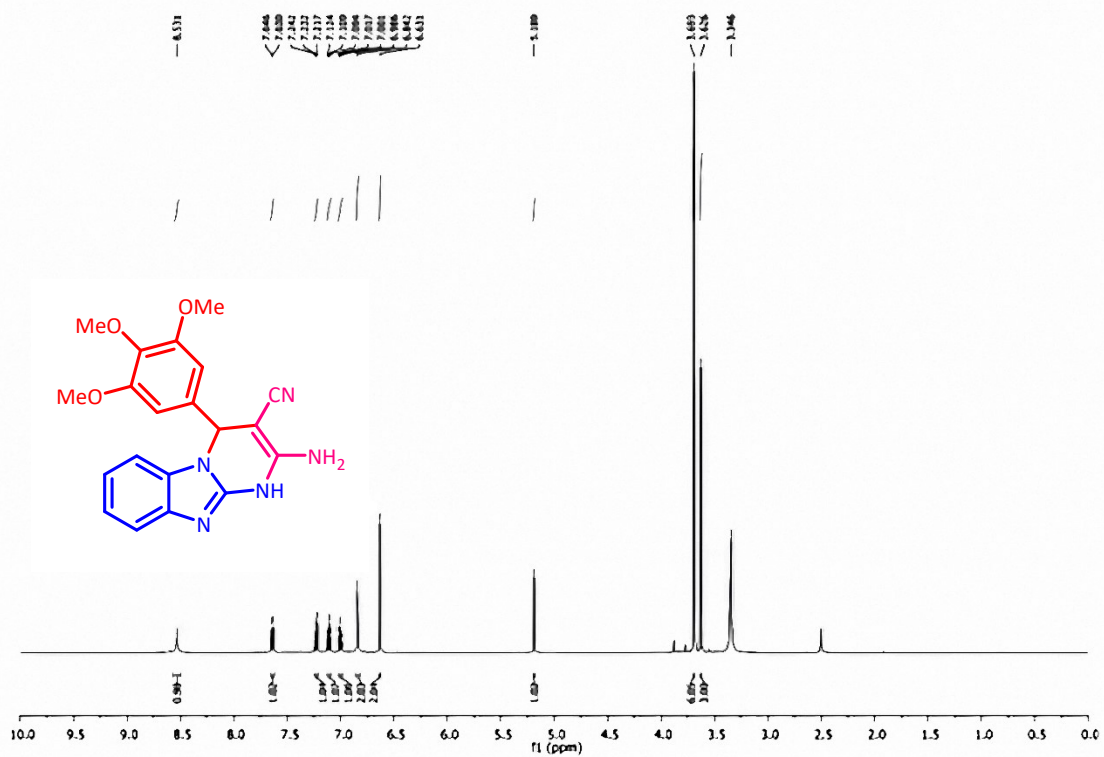


Figure 28: The ^1H NMR spectrum of 2-amino-4-(3,4,5-trimethoxyphenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

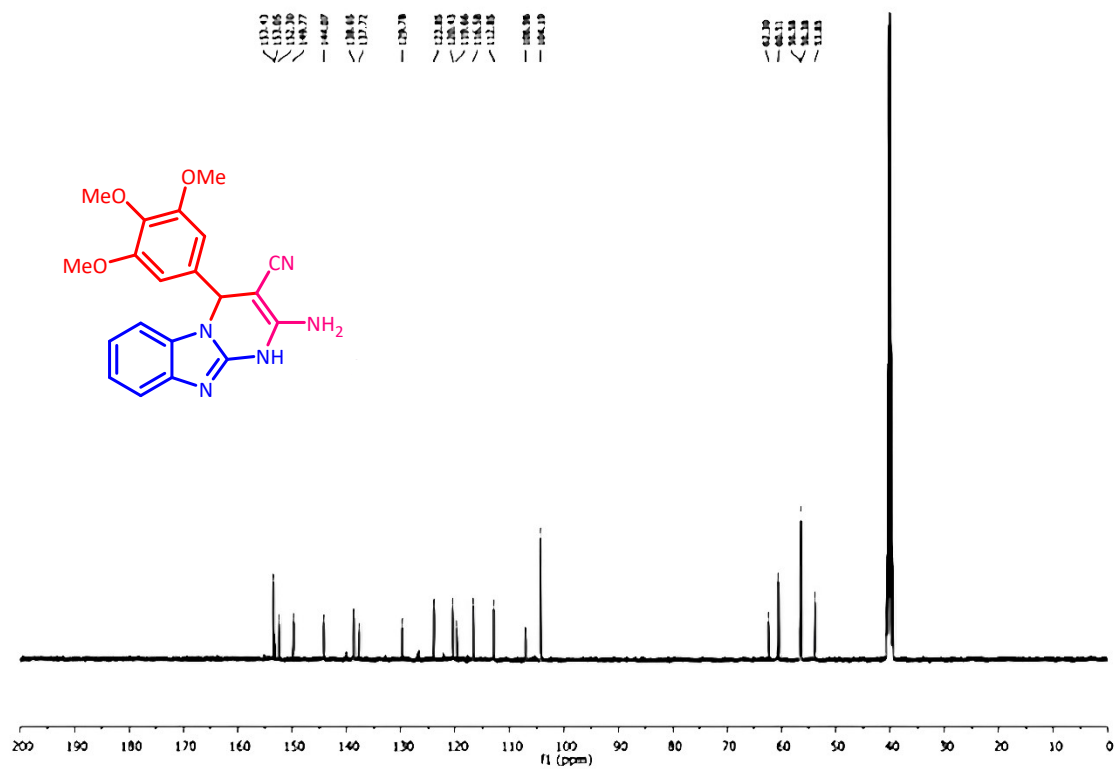


Figure 29: The ¹³C NMR spectrum of 2-amino-4-(3,4,5-trimethoxyphenyl)-1,4-dihydrobenzo[4,5]imidazo[1,2-a]pyrimidine-3-carbonitrile.

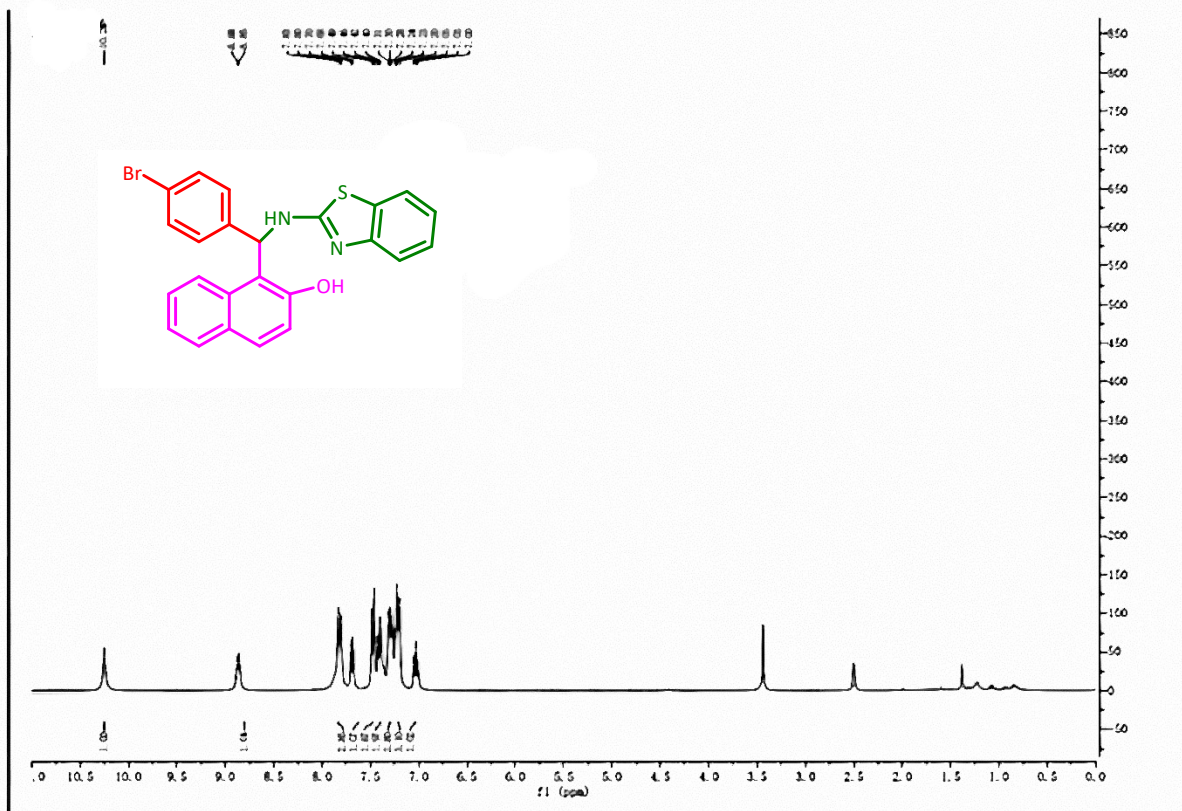


Figure 30: The ¹H NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(4-bromophenyl)methyl) naphthalen-2-ol.

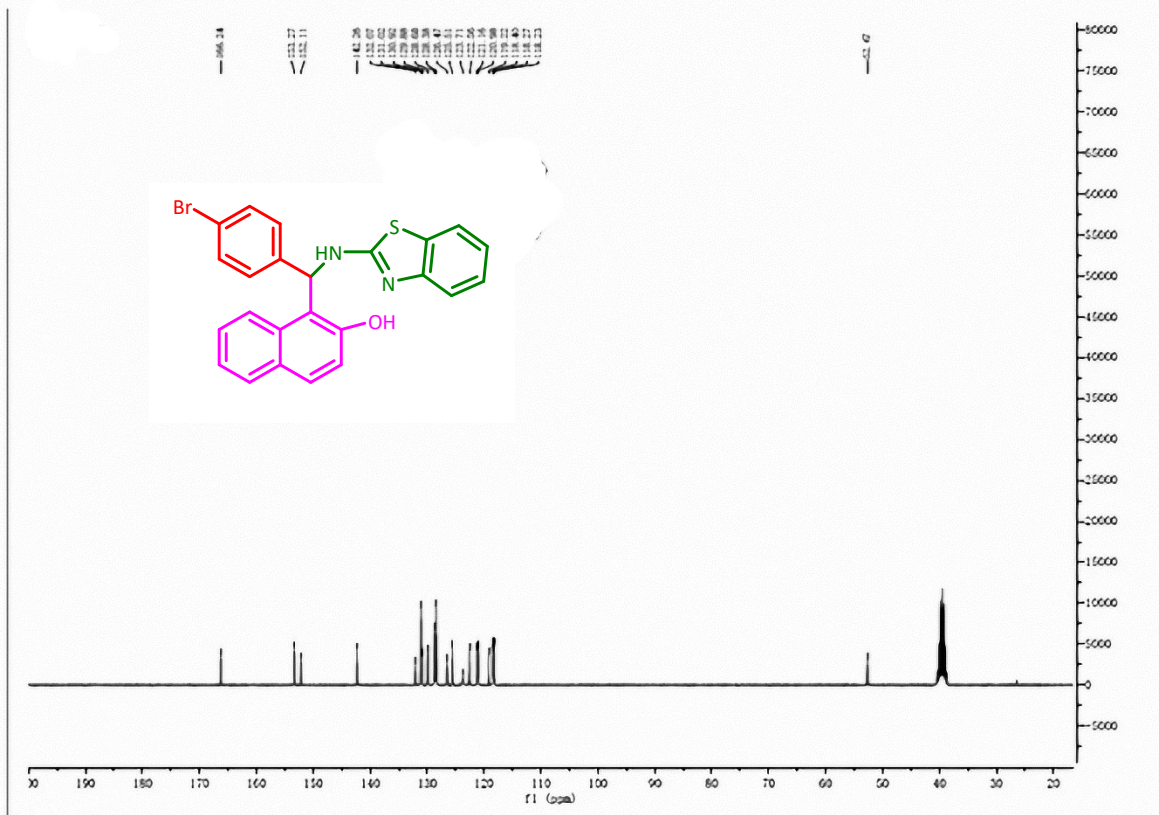


Figure 31: The ^{13}C NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(4-bromophenyl)methyl)naphthalen-2-ol.

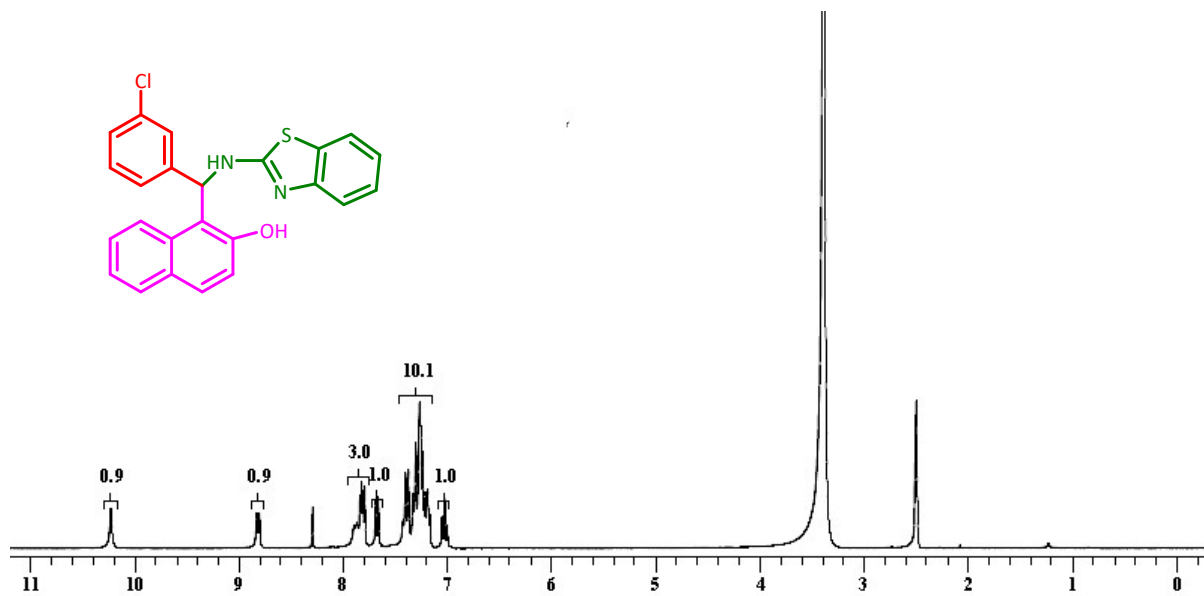


Figure 32: The ¹H NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(3-chlorophenyl)methyl)naphthalen-2-ol.

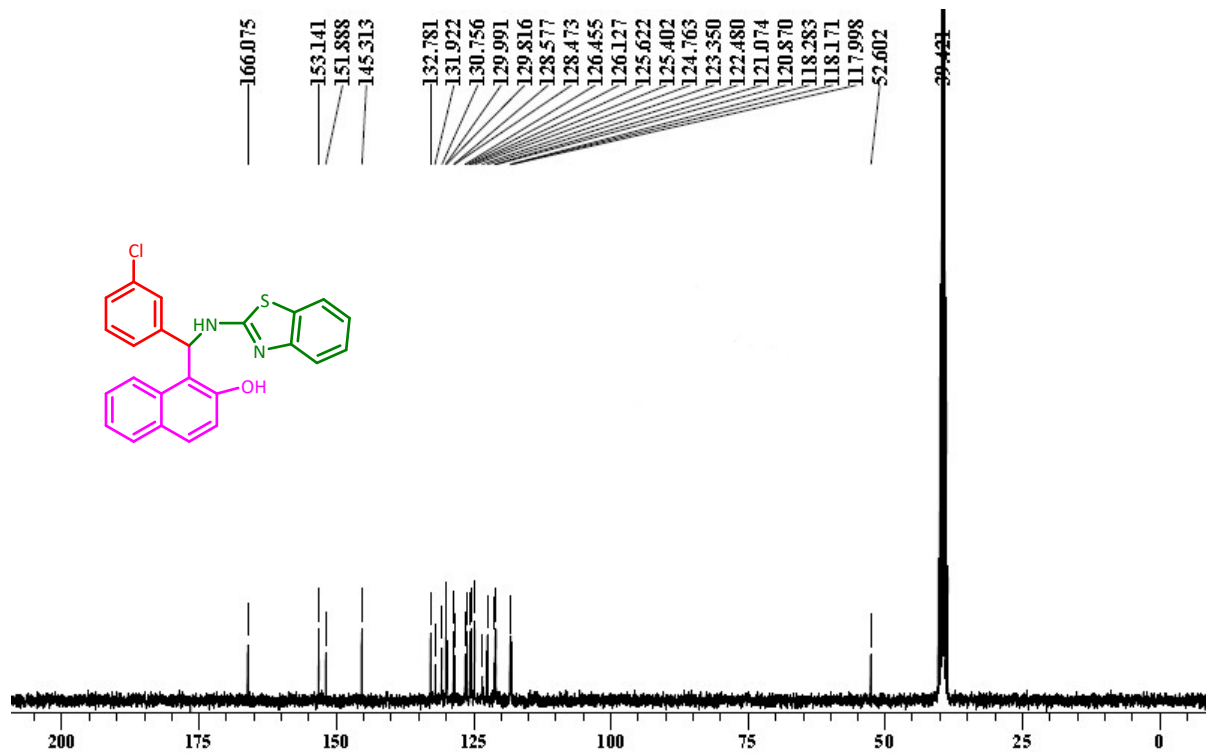


Figure 33: The ^{13}C NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(3-chlorophenyl)methyl)naphthalen-2-ol.

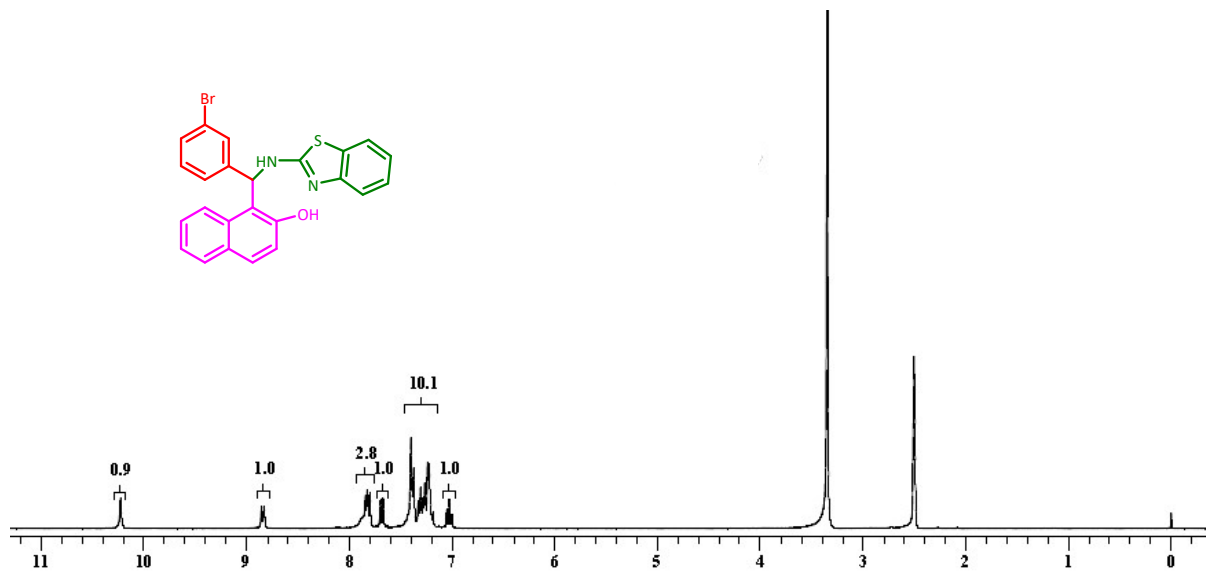


Figure 34: The ¹H NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(3-bromophenyl)naphthalen-2-ol.

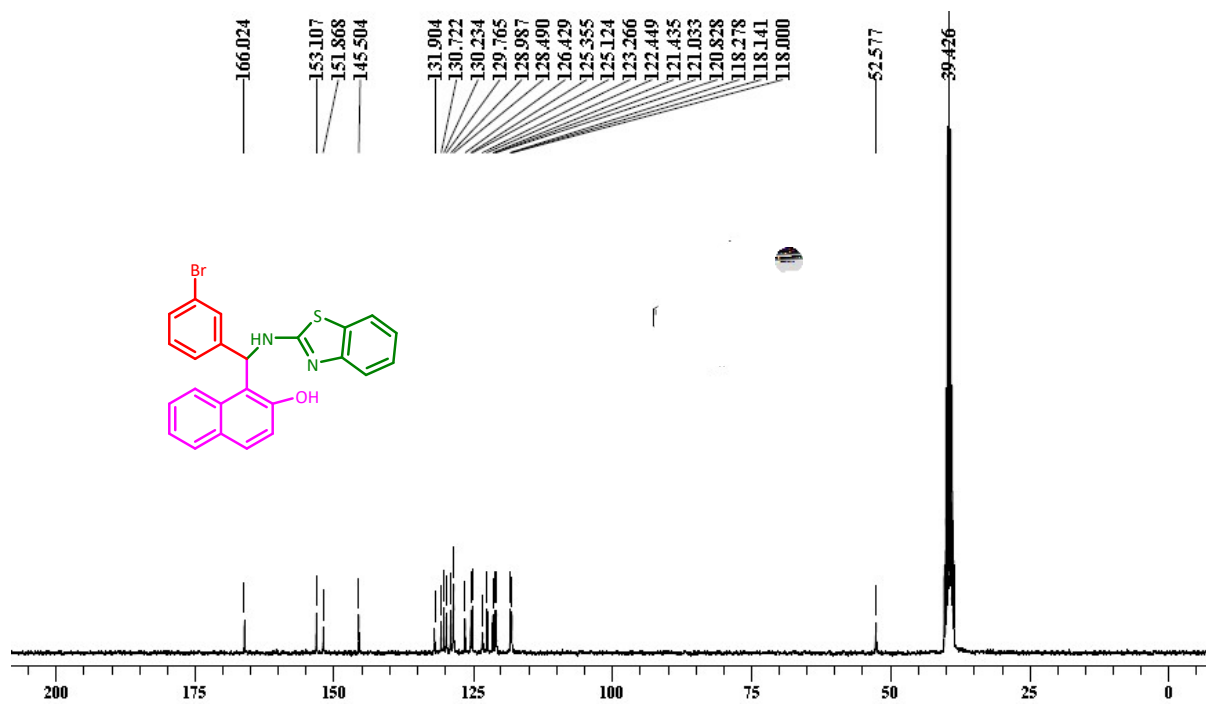


Figure 35: The ¹³C NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(3-bromophenyl)naphthalen-2-ol.

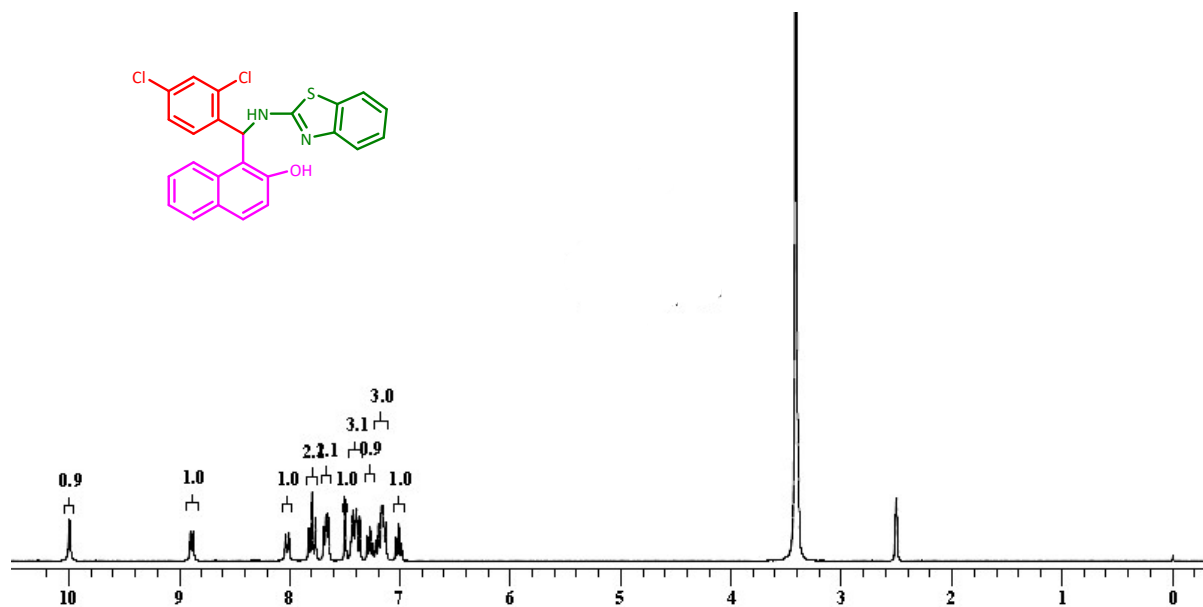


Figure 36: The ¹H NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(2,4-dichlorophenyl)methyl) naphthalen-2-ol.

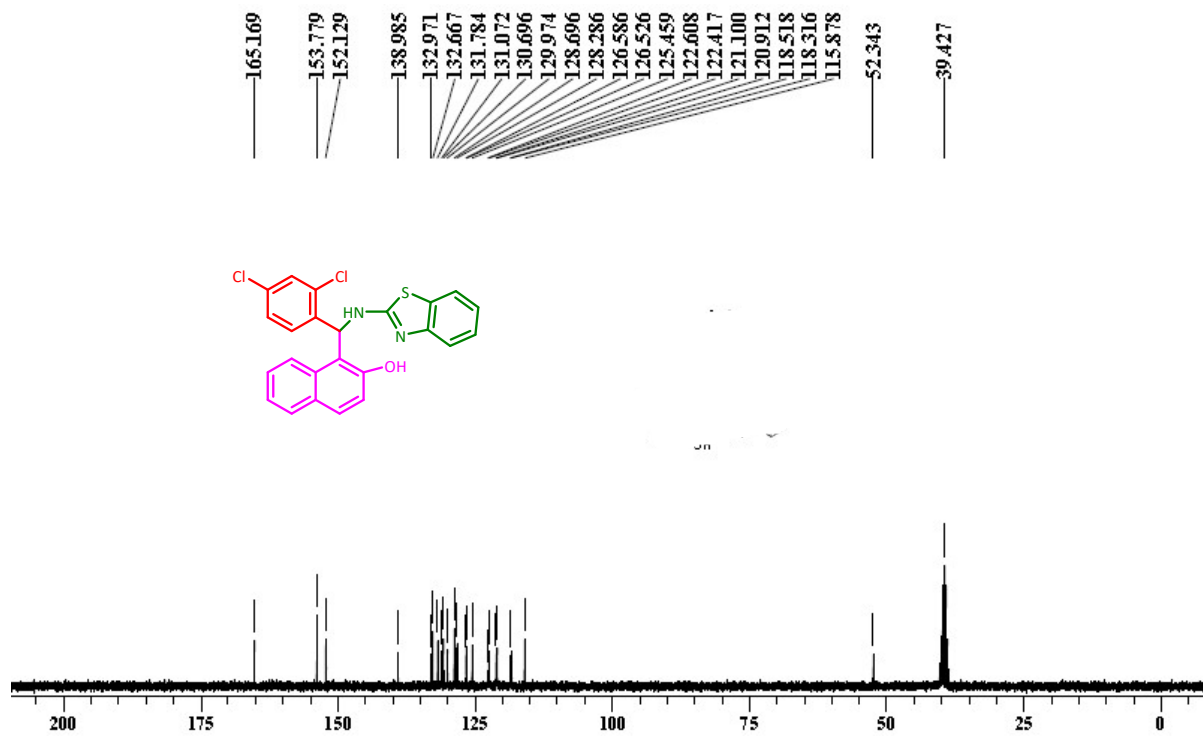


Figure 37: The ¹³C NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(2,4-dichlorophenyl)methyl) naphthalen-2-ol.

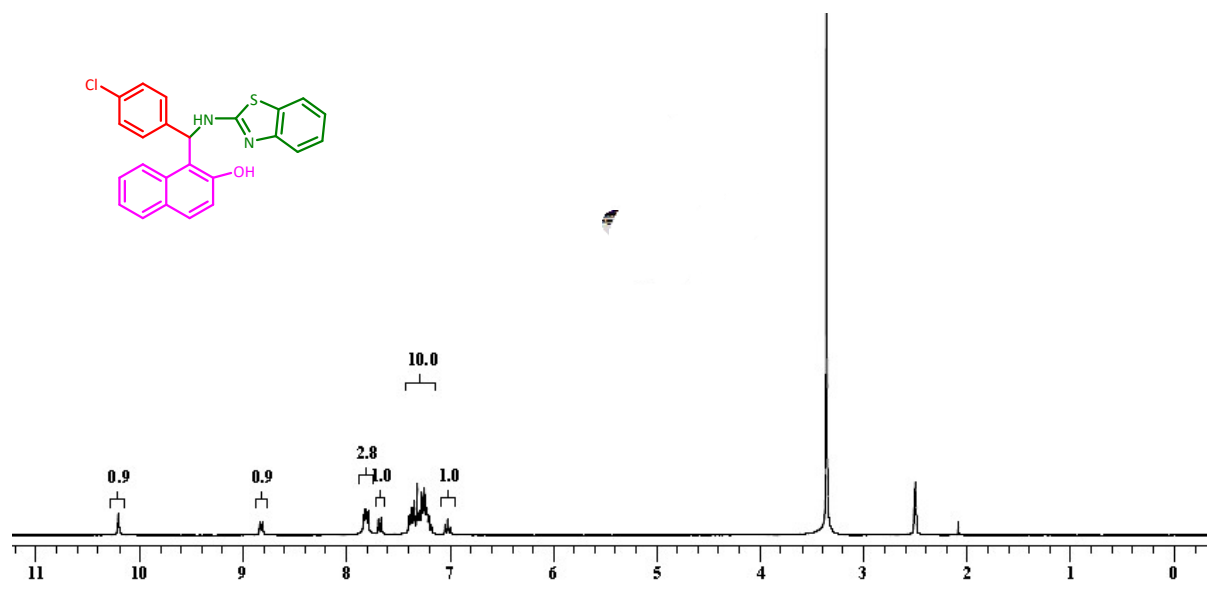


Figure 38: The ¹H NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(4-chlorophenyl)methyl)naphthalen-2-ol.

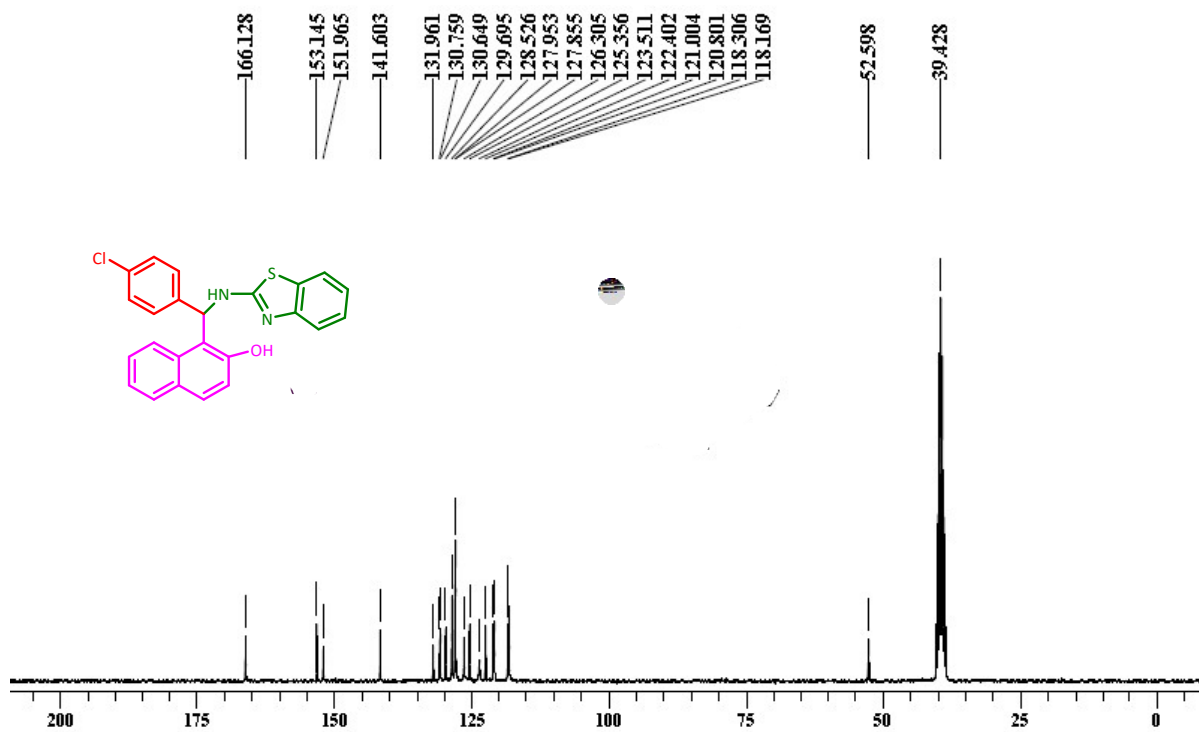


Figure 39: The ¹³C NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(4-chlorophenyl)methyl)naphthalen-2-ol.

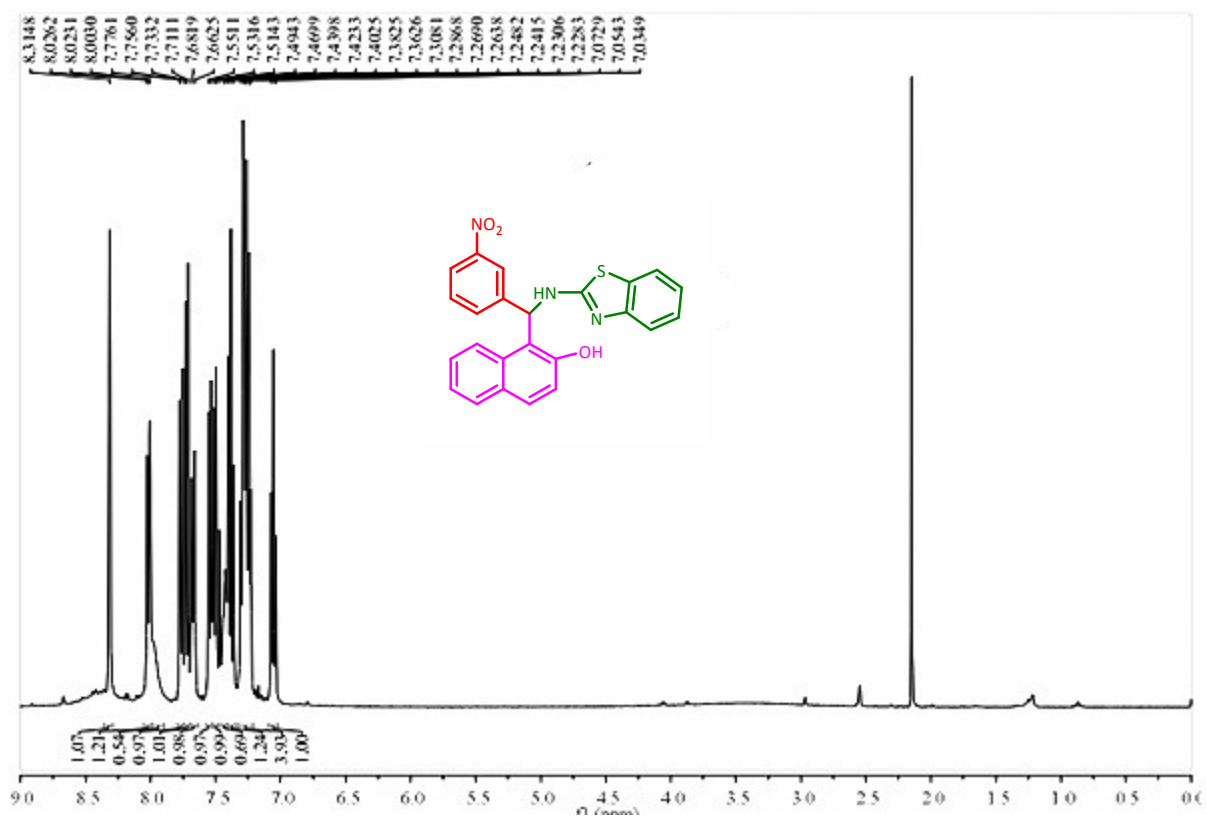


Figure 40: The ¹H NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(3-nitrophenyl)methyl)naphthalen-2-ol.

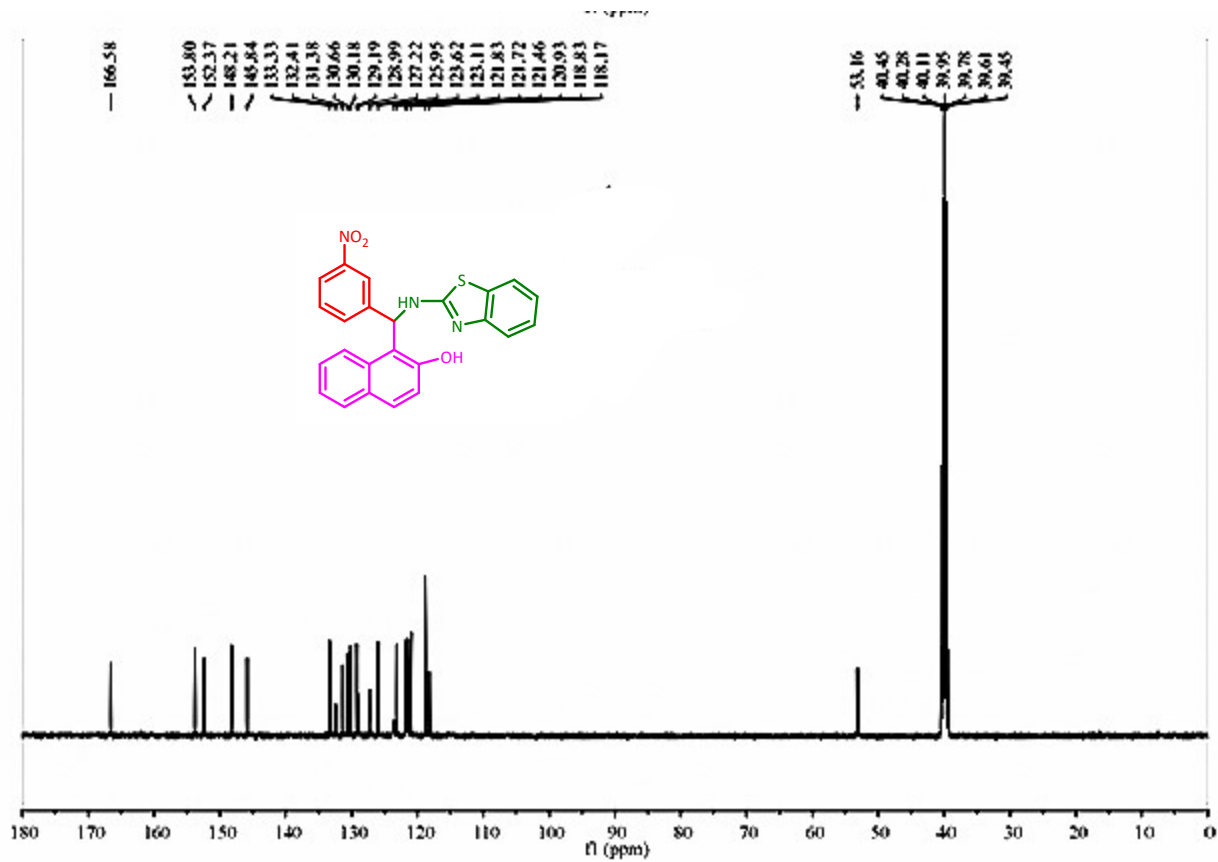


Figure 41: The ^{13}C NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(3-nitrophenyl)methyl)naphthalen-2-ol.

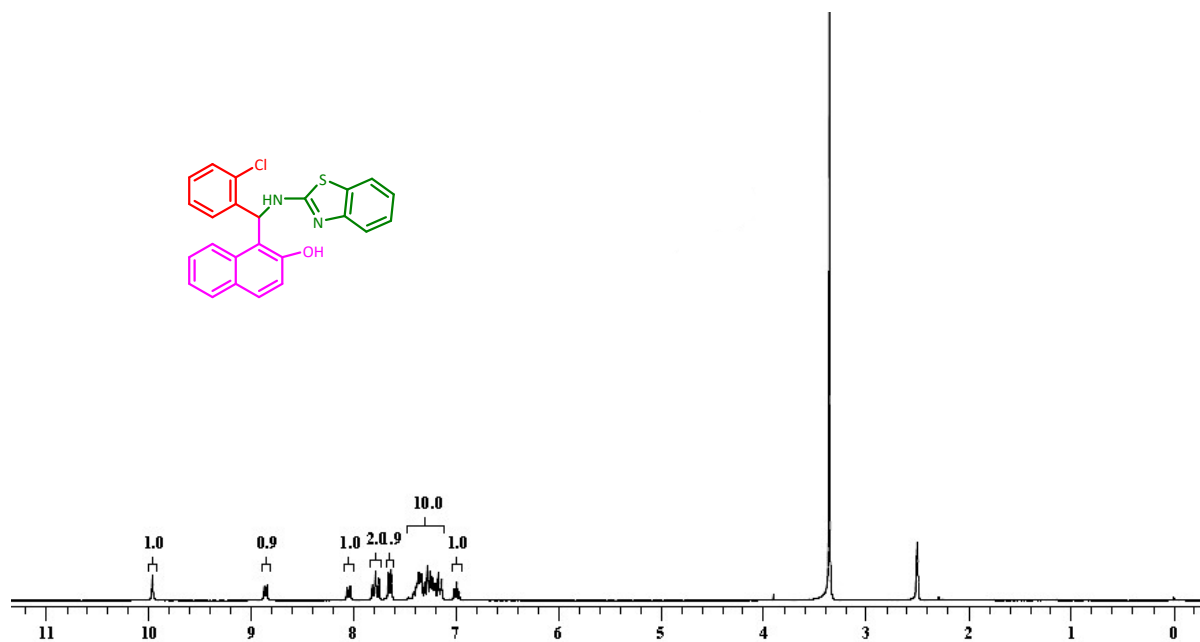


Figure 42: The ¹H NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(2-chlorophenyl)methyl)naphthalen-2-ol.

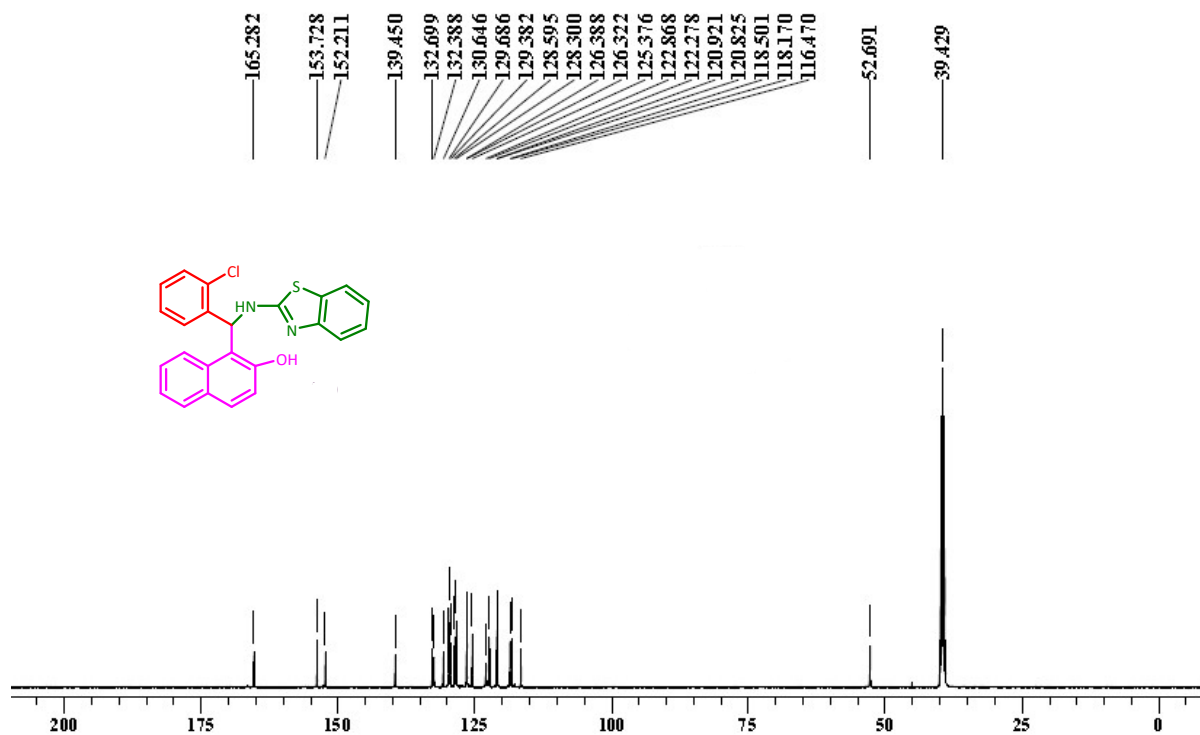


Figure 43: The ¹³C NMR spectrum of 1-((benzo[d]thiazol-2-ylamino)(2-chlorophenyl)methyl)naphthalen-2-ol.