Supporting information

2-pyridylmethyl-N-palmitoylglycine micelles guided synthesis of recyclable $CuO@SiO_2$ nanocatalyst for hydride transfer nitro reduction in water

Aleena Pious[a], Ragavi S[a], Ravi Kanth Kamlekar[b], Mariappan Mariappan[c], Veerappan Anbazhagan[a]

[a]Department of Chemistry, School of Chemical and Biotechnology, SASTRA Deemed University, Thanjavur - 613 401, Tamil Nadu, India.

[b]Department of Chemistry, School of Advanced Sciences, VIT, Vellore, Tamil Nadu, India

[c]Department of Chemistry, SRM Insitute of Science & Technology, Kattankulathur, Tamil Nadu 603203

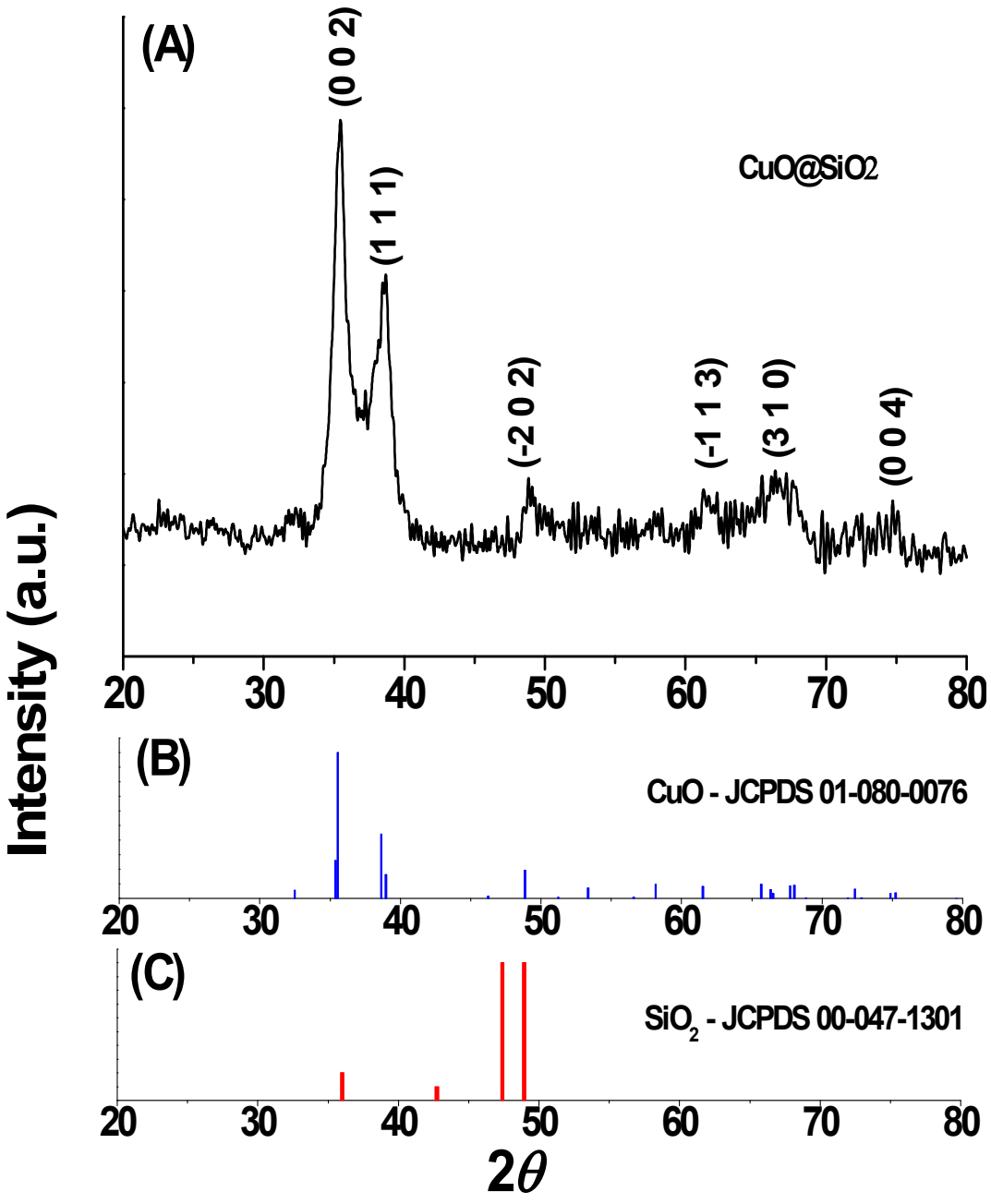
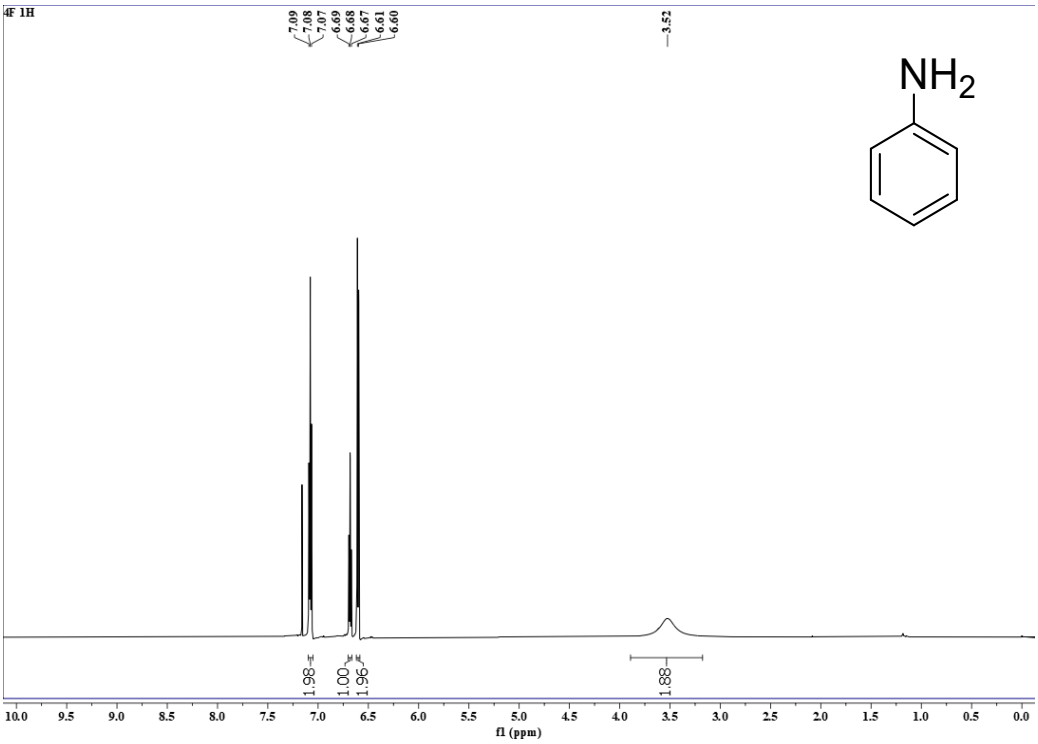
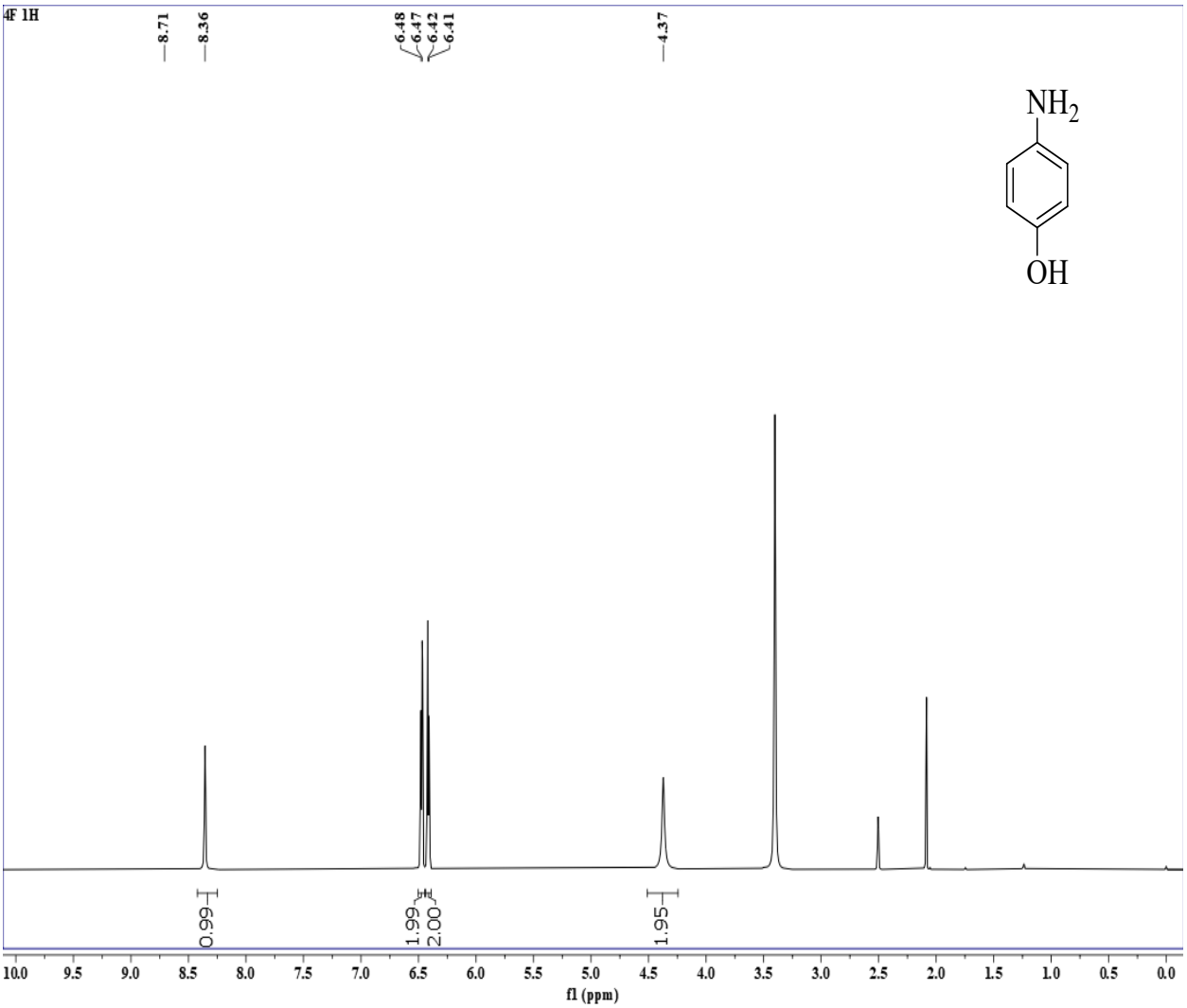


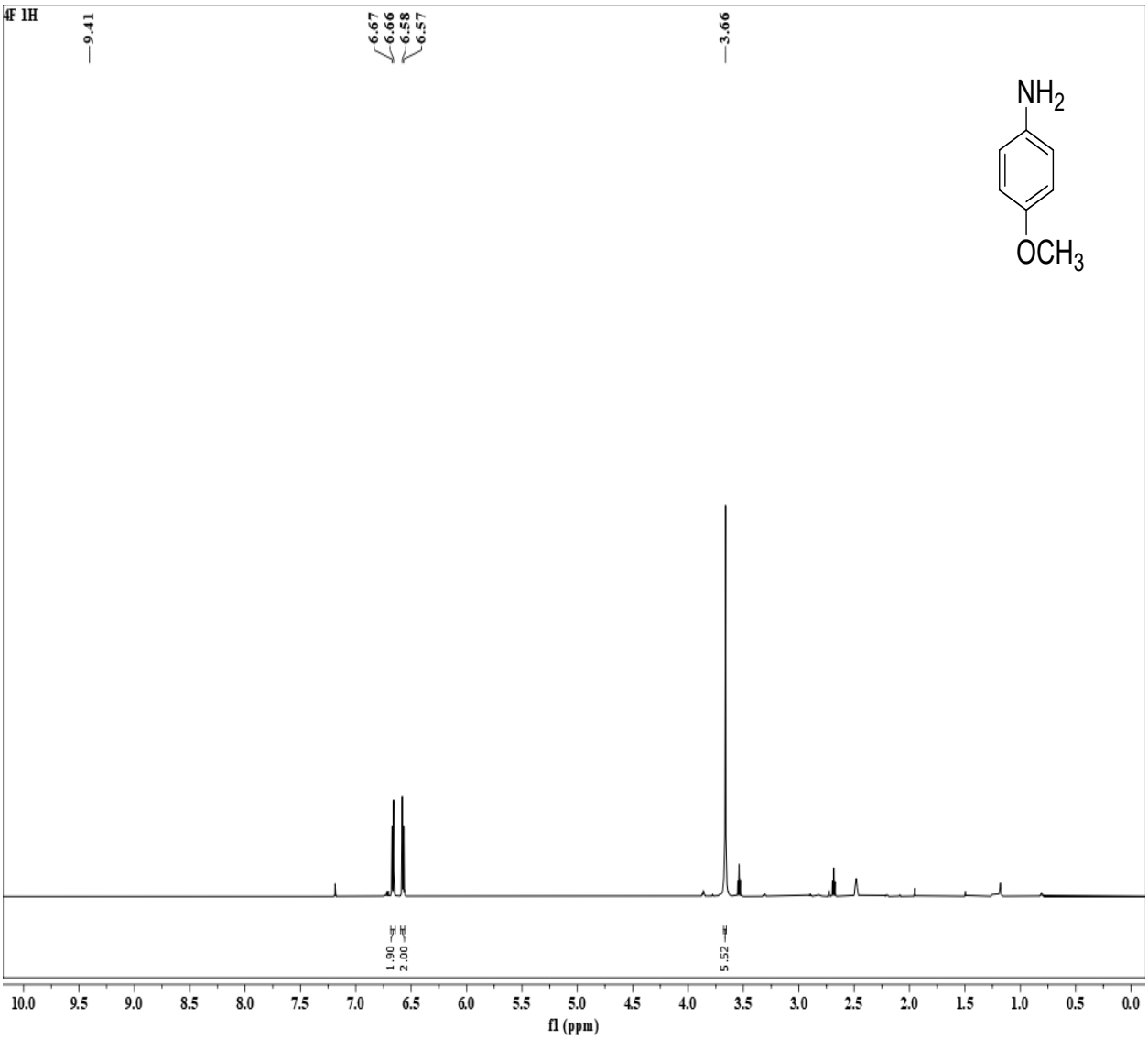
Fig. S1: XRD results of CuO@SiO2. The peaks are matching to the monoclinic crystallites of CuO.



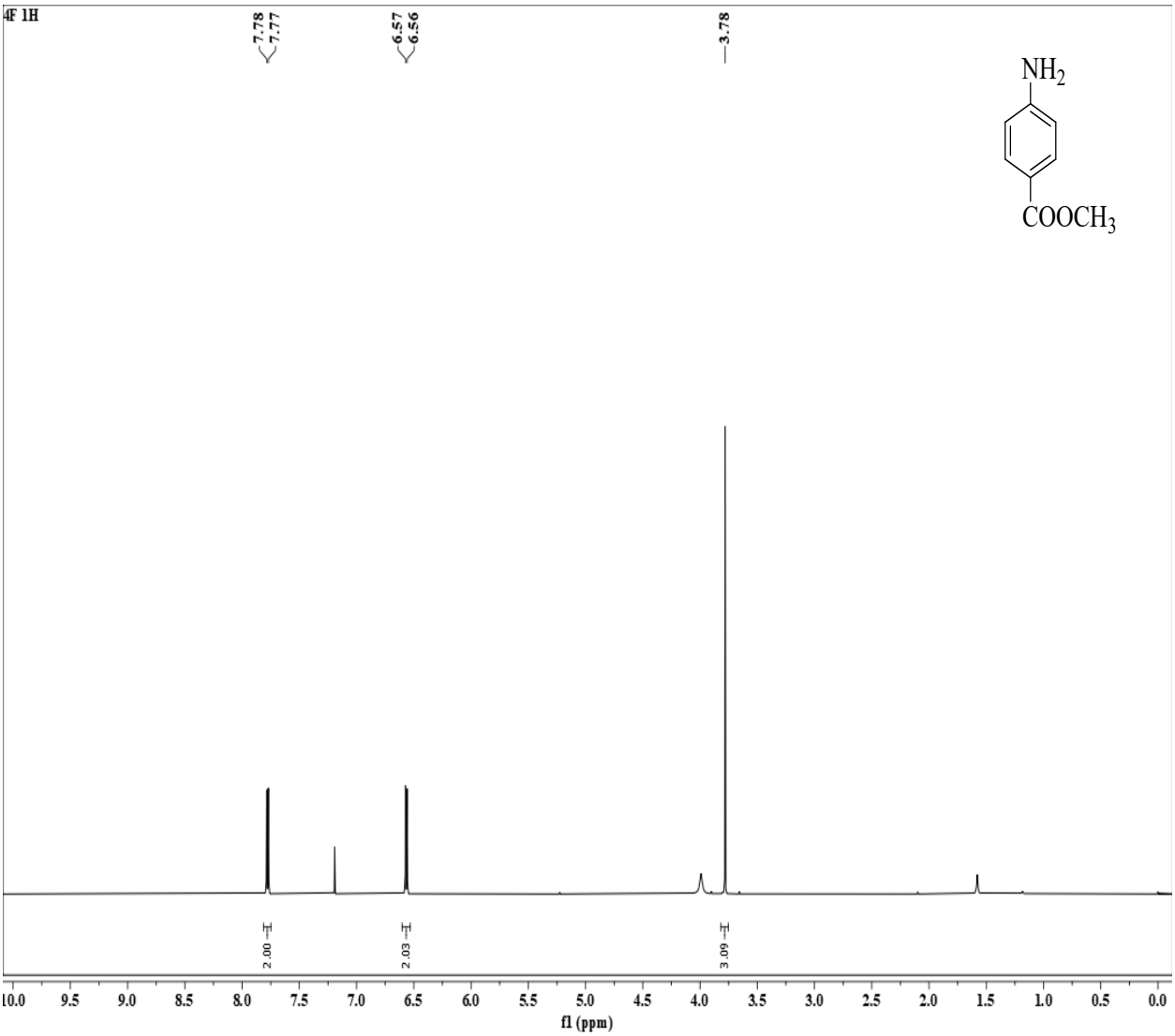
Entry 1. Aniline- (300 MHz,$CDCl_3$) δ 7.08 (2H,t, *J* = 4.0 Hz), 6.68 (1H,t, *J* = 3.9 Hz), 6.60 (2H,d, *J* = 3.7 Hz), 3.52(2H,s).



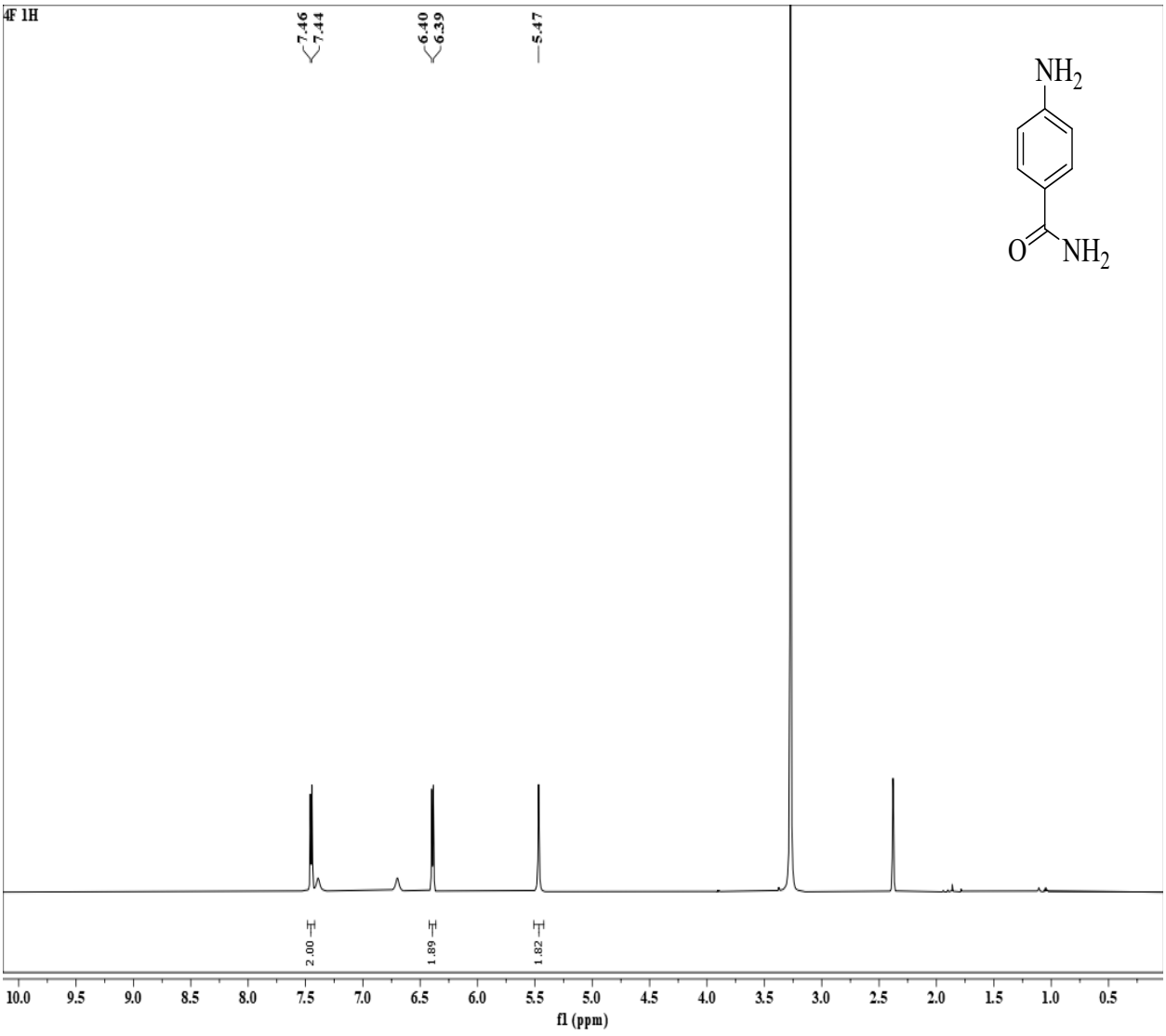
Entry 2. 4-aminophenol – (300 MHz, DMSO-D6) δ 8.36(1H,s), 6.47 (2H,d, *J* = 3.2 Hz), 6.41 (2H,d, *J* = 3.2 Hz), 4.37(1H,s).



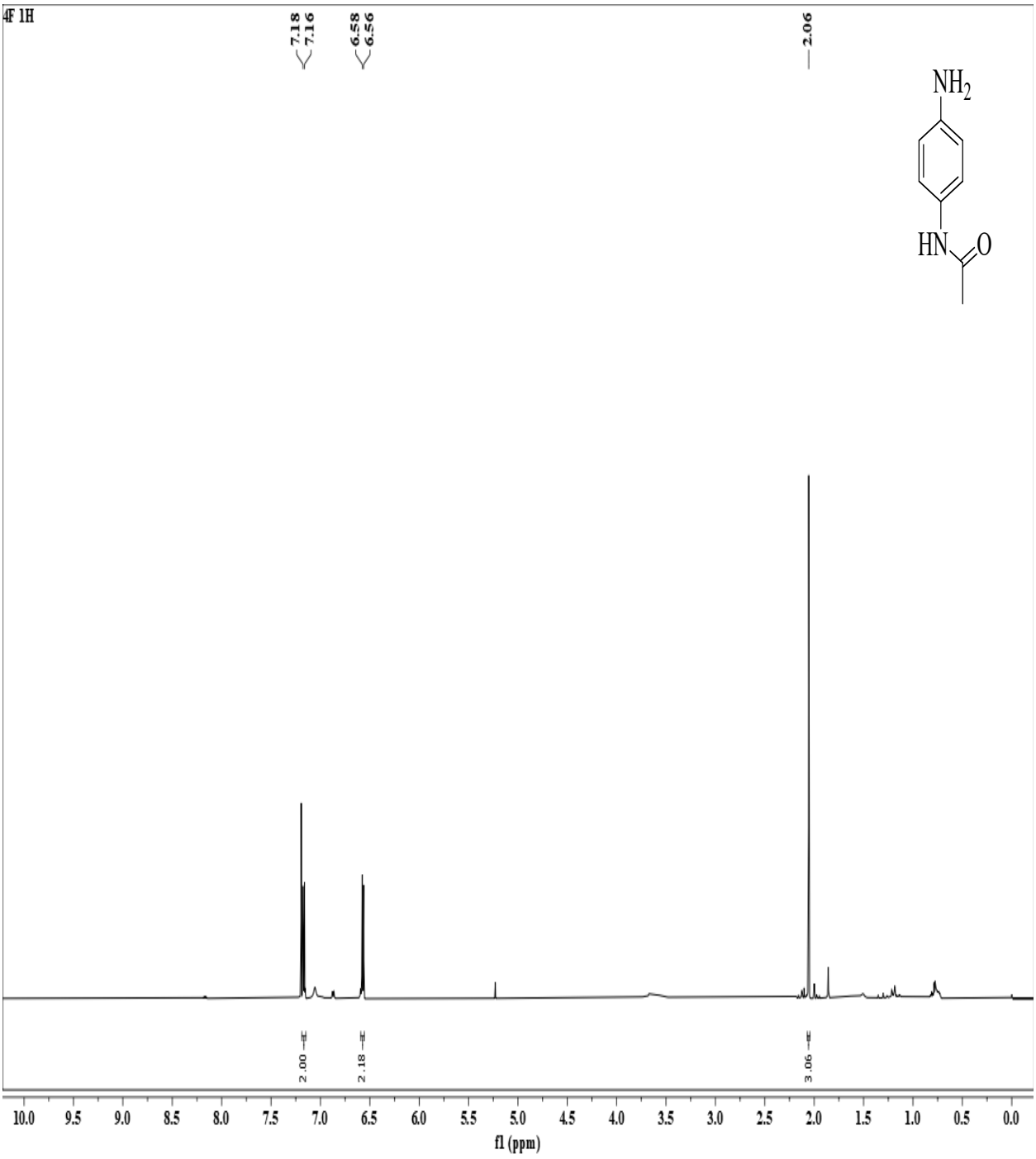
Entry 3. 4-methoxyaniline (300 MHz, $CDCl_3$) δ 6.67 (2H, d, J = 4.4 Hz), 6.57 (2H, d, J = 4.4 Hz), 3.66 (5H, s).



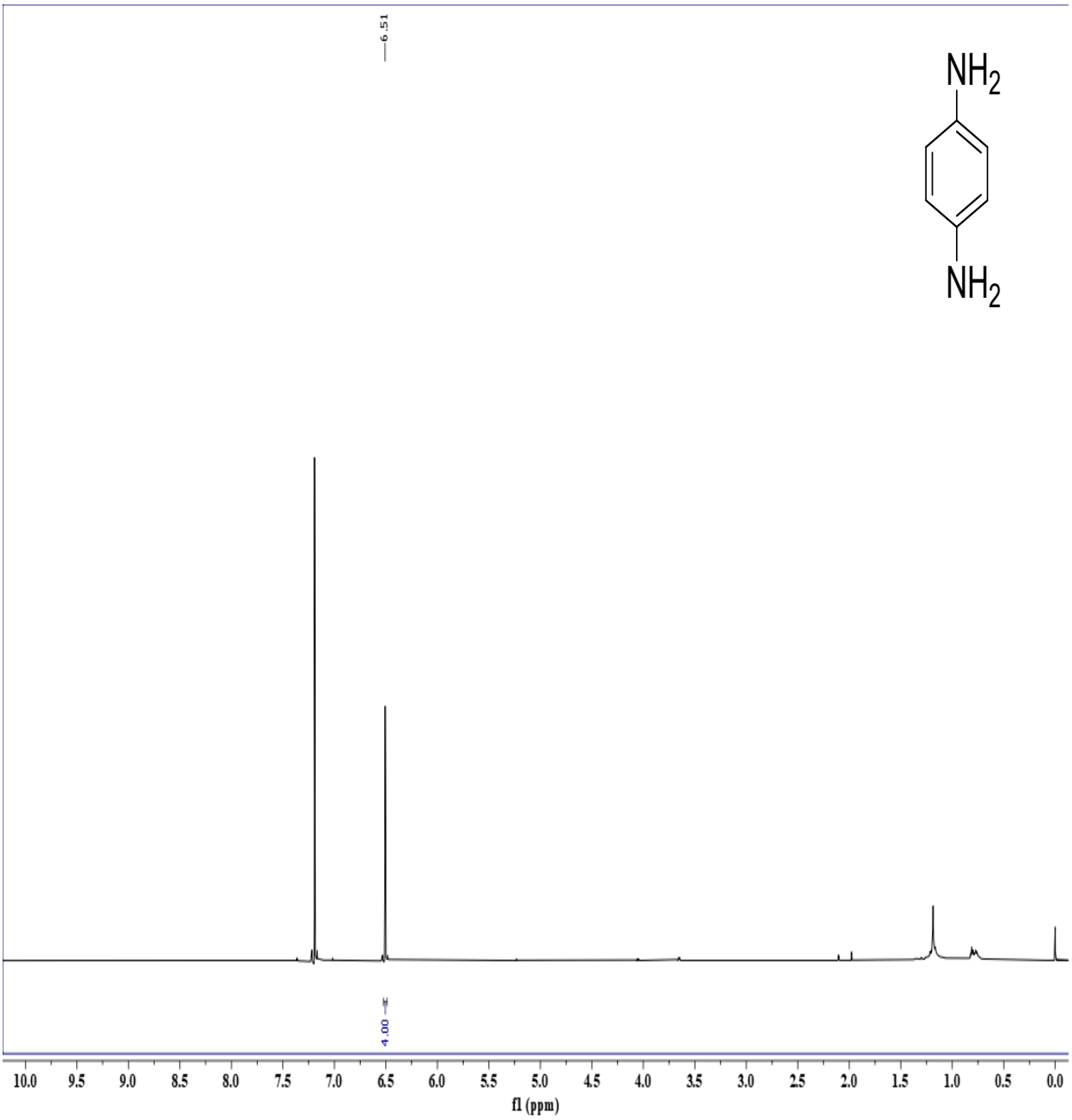
Entry 4. Methyl-4-aminobenzoate (300 MHz, $CDCl_3$) δ 7.78 (2H, d, J = 4.3 Hz), 6.57 (2H, d, J = 4.3 Hz), 3.78 (3H,S).



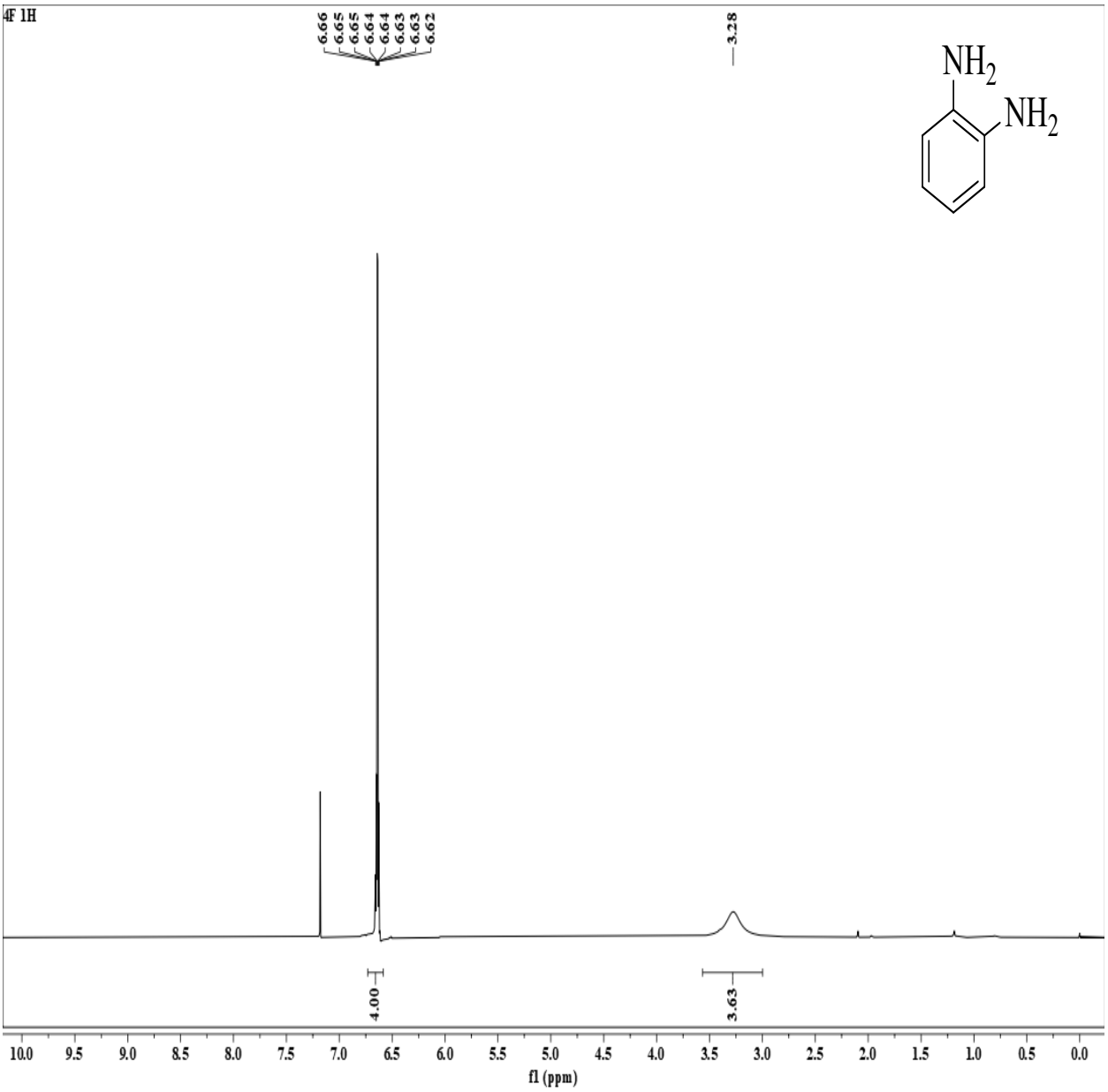
Entry 5. 4-aminobenzamide NMR (300 MHz, -DMSO-D6) δ 7.45 (2H,d, *J* = 4.3 Hz), 6.39 (2H,d, *J* = 4.4 Hz), 5.47 (2H,s).



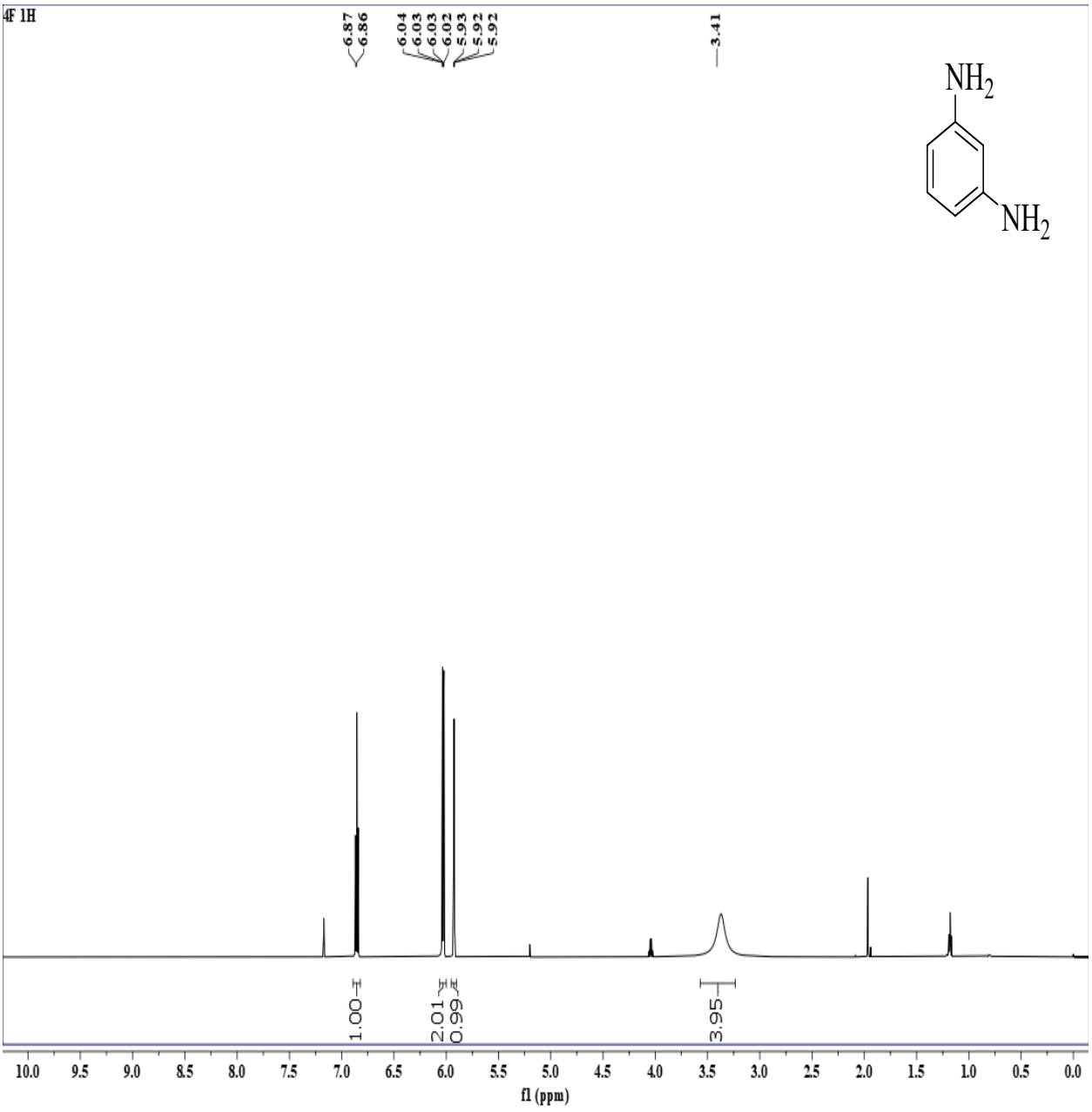
Entry 6. N-(4-aminophenyl)acetamide (300 MHz, CDCl3) δ 7.17 (2H,d, *J* = 4.4 Hz), 6.57 (2H, d, *J* = 4.4 Hz)(3H,s).



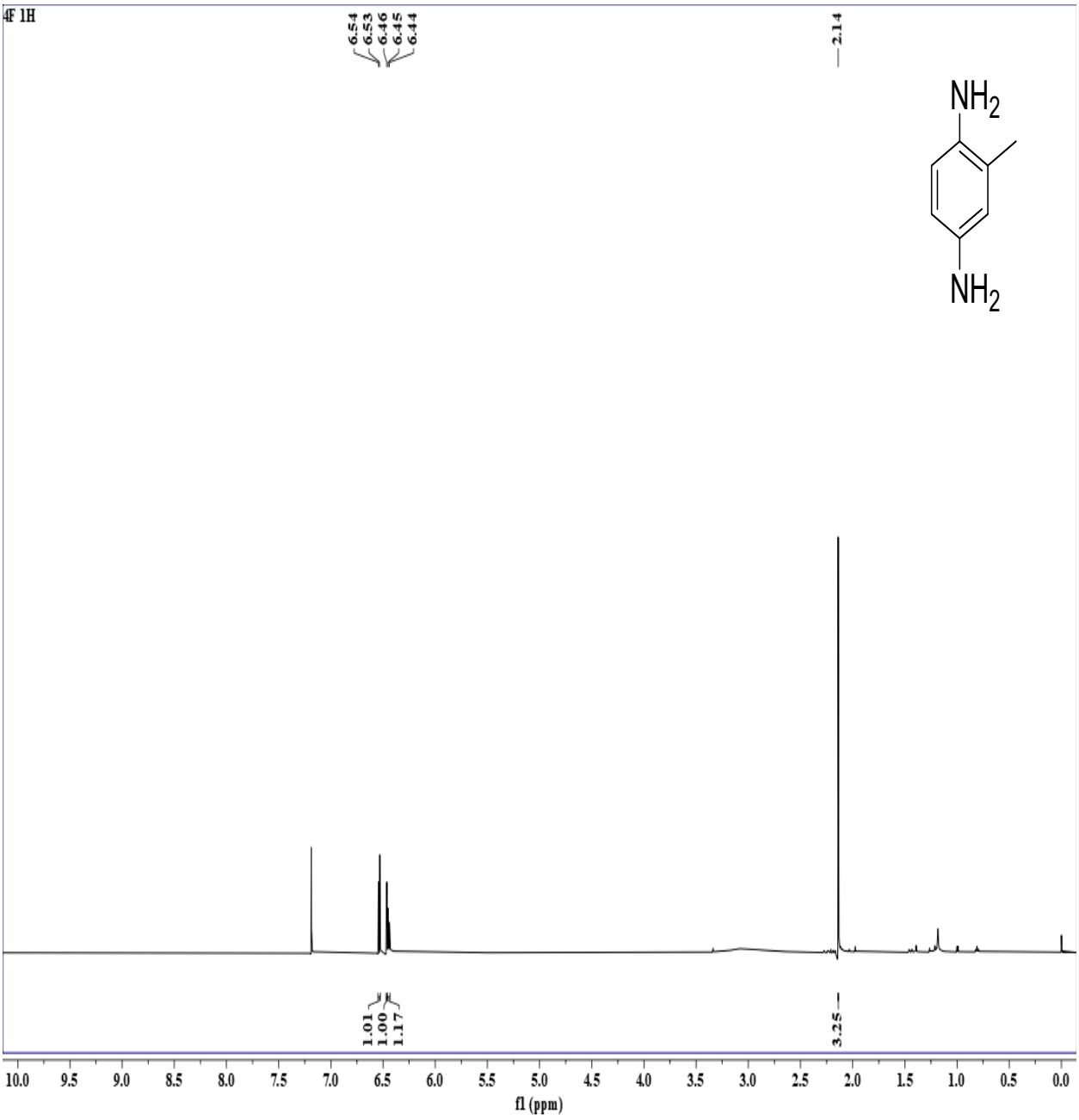
Entry 7. Benzene-1,4-diamine (300MHz, CDCl3)- 6.5(4H,s).



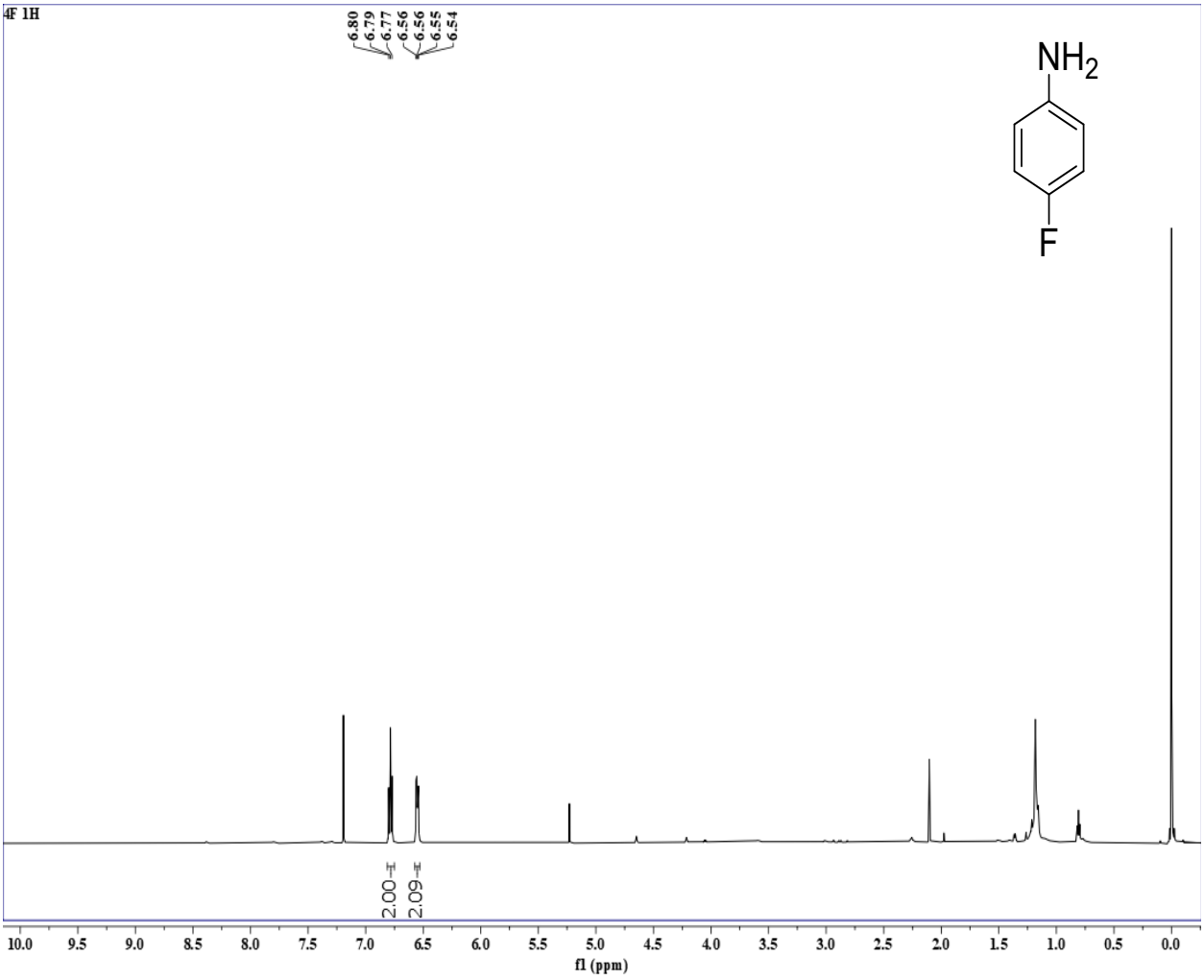
Entry 8. Benzene-1,2-diamine- (300MHz, $CDCl_3$)- 6.64(4H,m), 3.28(4H,s).



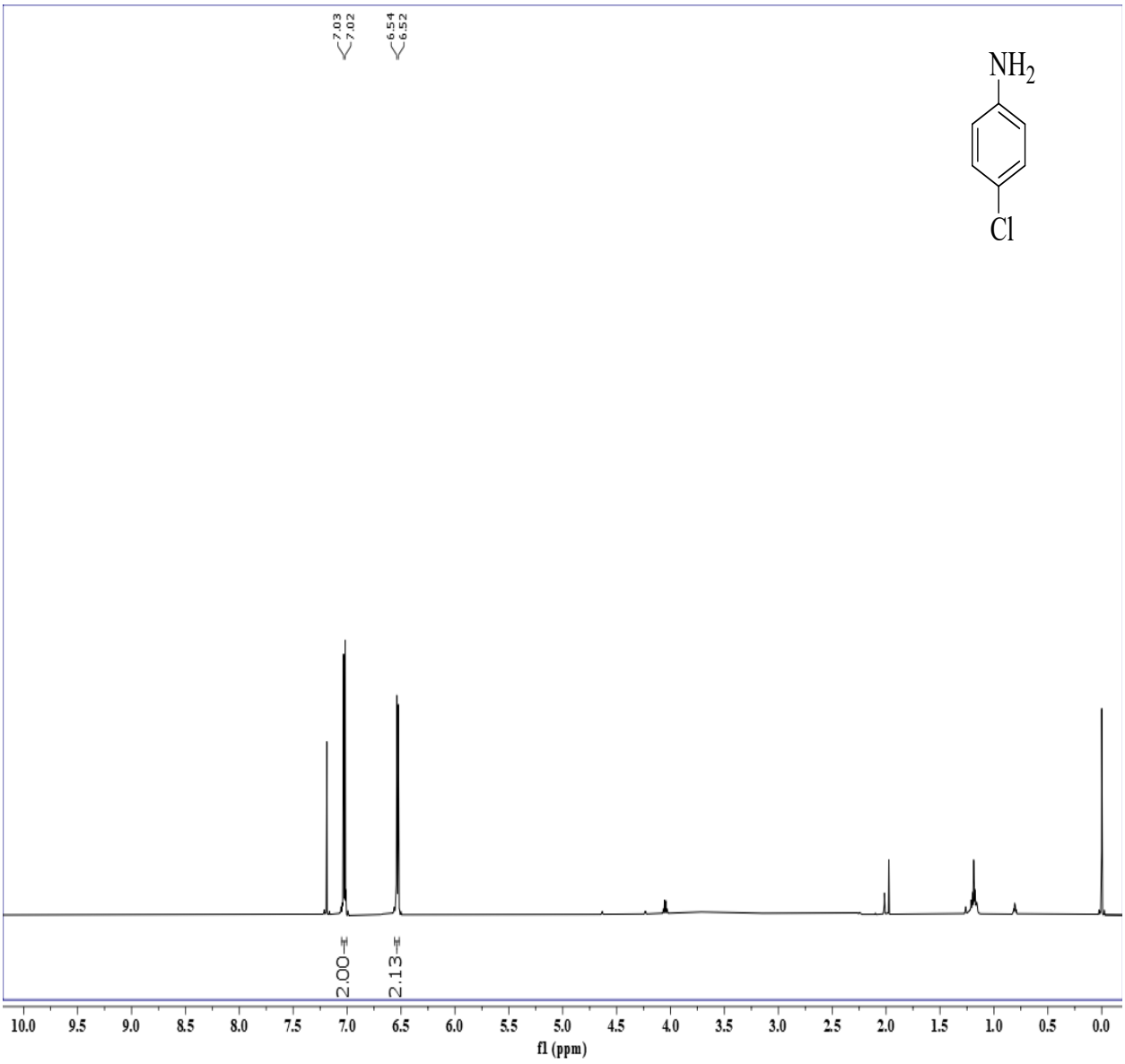
Entry 9. Benzene-1,3-diamine (300 MHz, $CDCl_3$) δ 6.86 (1H,d, *J* = 3.9 Hz), 6.03 (2H,dd, *J* = 3.9, 1.1 Hz), 5.92 (1H,t, *J* = 1.1 Hz), 3.41(4H,s).



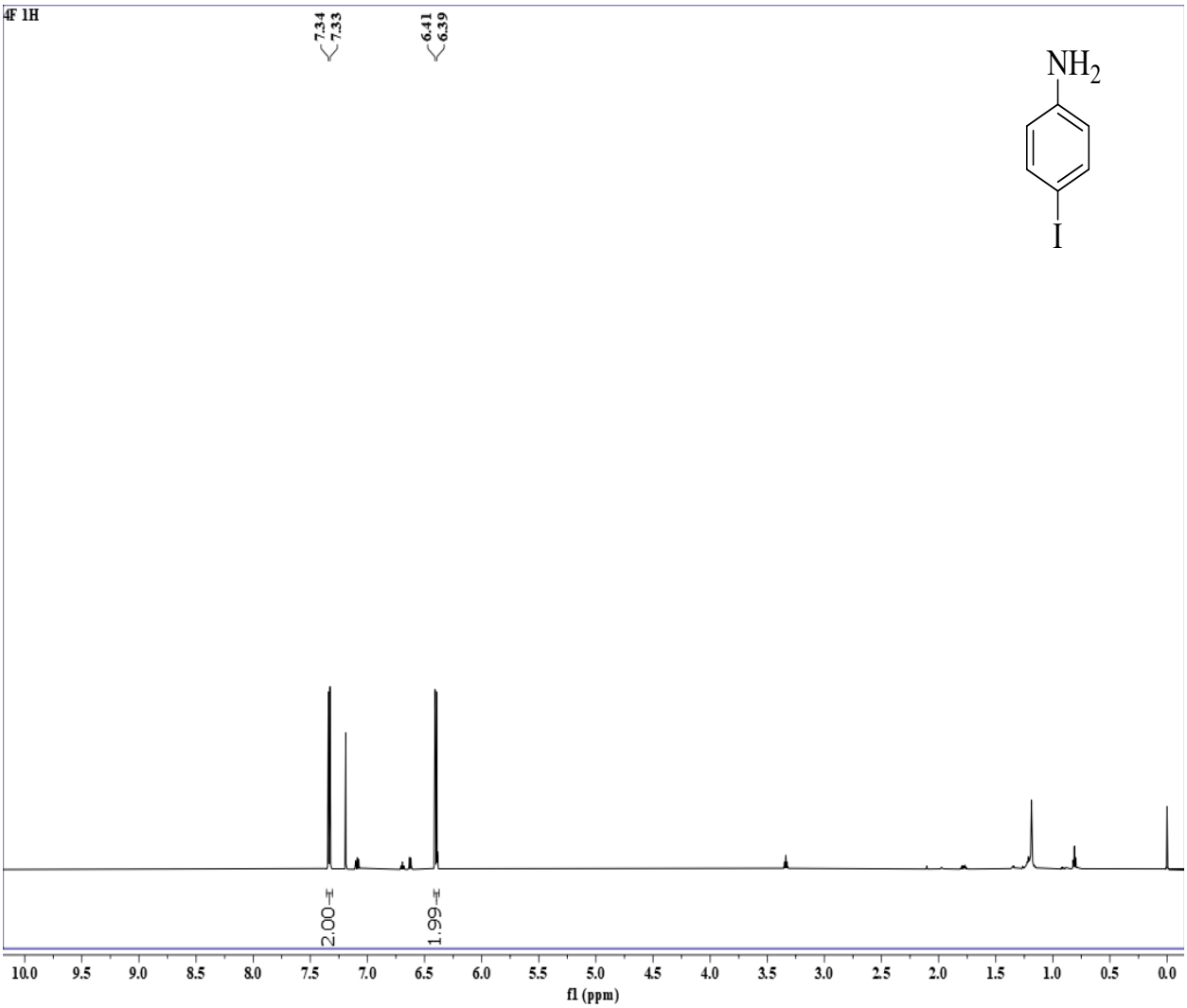
Entry 10. 2-methylbenzene-1,4-diamine- (300 MHz, $CDCl_3$) δ 6.54 (1H,d, *J* = 3.8 Hz), 6.46(1H,s), 6.45 (1H,d, *J* = 4.0 Hz), 2.14(3H,s).



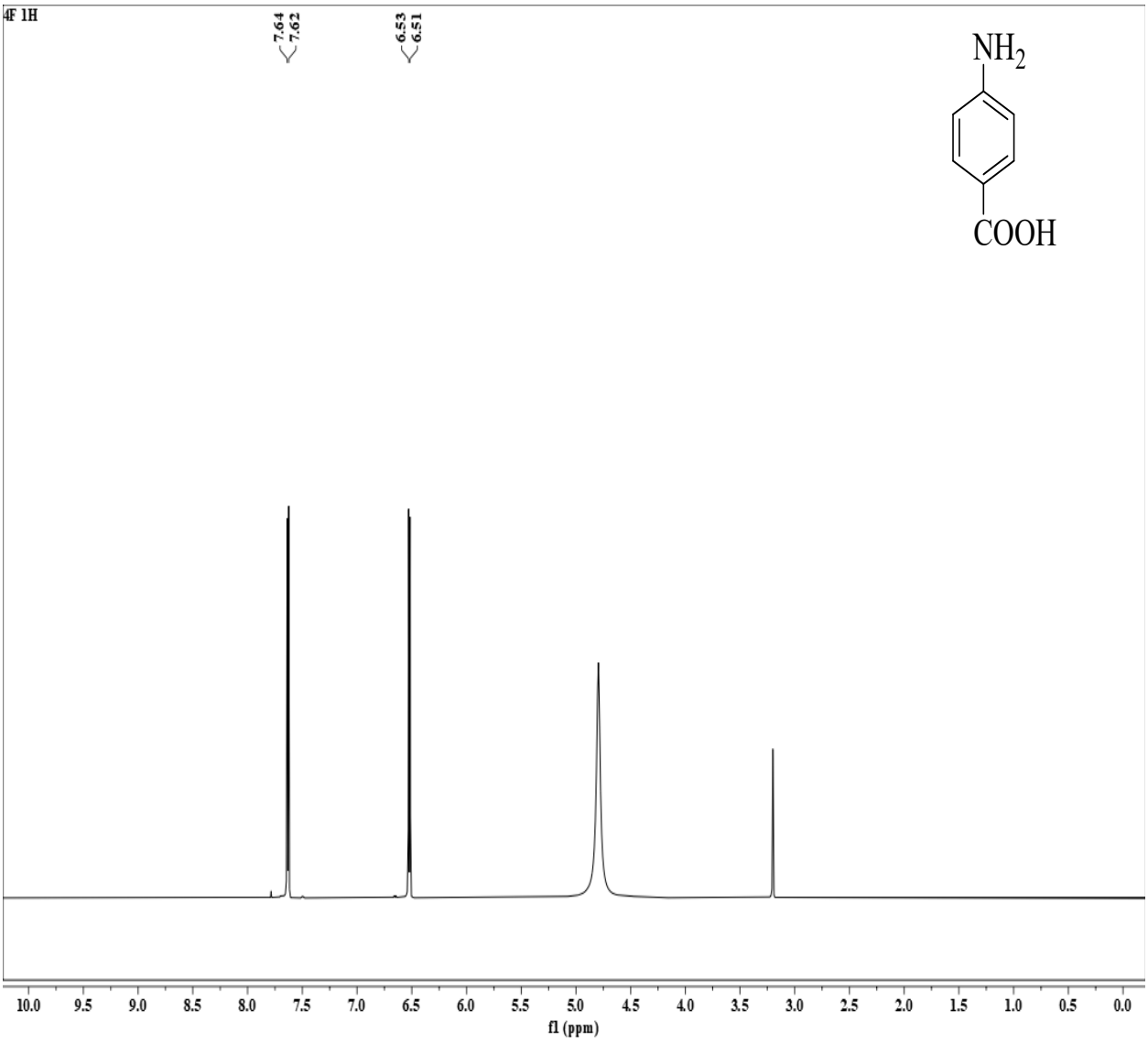
Entry 11. 4-fluoroaniline- (300 MHz, $CDCl_3$) δ 6.79 (2H, t, J = 4.4 Hz), 6.55 (2H,dd, J = 4.5, 2.2 Hz).



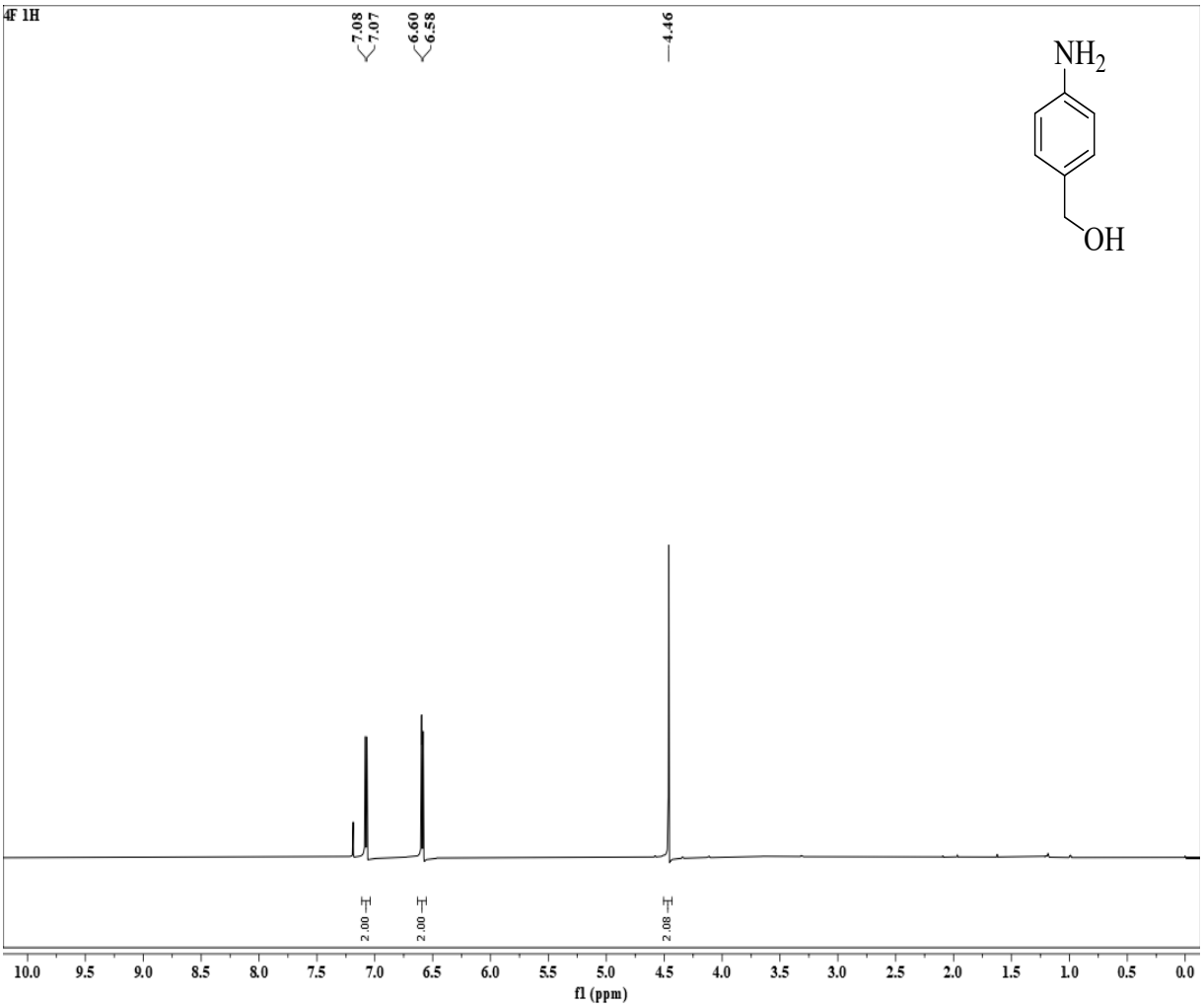
Entry 12. 4-Chloroaniline- (300 MHz, $CDCl_3$) δ 7.03 (2H, d, J = 4.5 Hz), 6.53 (2H,d, J = 4.3 Hz).



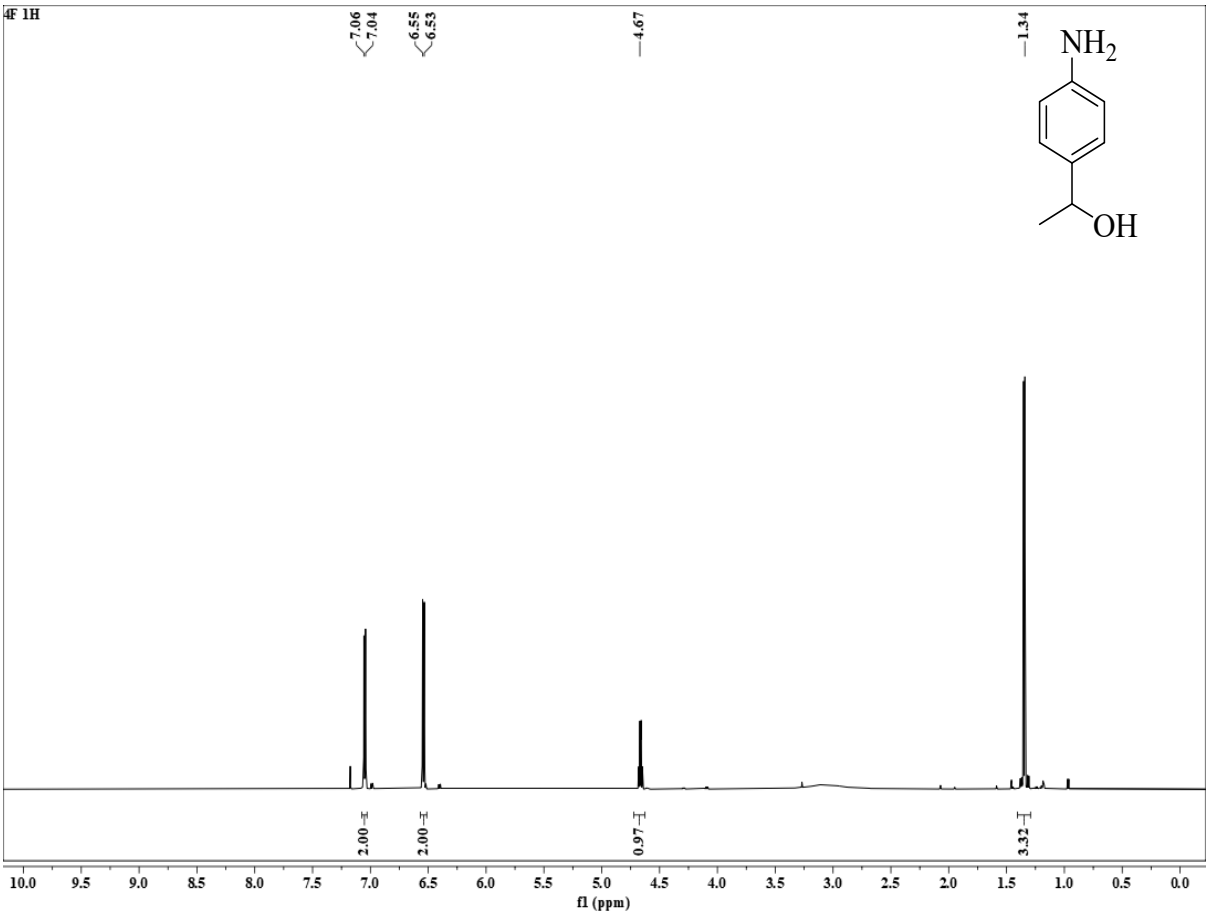
Entry 13. 4-iodoaniline- (300 MHz,) δ 7.33 (2H,d, *J* = 4.4 Hz), 6.40 (2H,d, *J* = 4.4 Hz).



Entry 14. 4-aminobenzoic acid (300 MHz, CH_3OH-D4) δ 7.63 (2H, d, J = 4.2 Hz), 6.52 (2H, d, J = 4.2 Hz).



Entry 15. (4-aminophenyl)methanol (300 MHz, $CDCl_3$) δ 7.07 (2H, d, J = 4.1 Hz), 6.59 (2H, d, J = 4.1 Hz), 4.46 (2H, s).



Entry 16. 1-(4-aminophenyl)ethan-1-ol (300 MHz, $CDCl_3$) δ 7.05 (2H, d, *J* = 4.6 Hz), 6.54 (2H, d, *J* = 4.3 Hz), 4.66 (1H. q, *J* = 3.2 Hz), 1.35 (3H, d, *J* = 3.3 Hz).