

Spinel Ferrites as Efficient Magnetically Reusable Nanocatalysts in the Solvent-free Synthesis of Substituted Trisphenols

Negar Zekri, Reza Fareghi-Alamdari*

College of Chemistry and Chemical Engineering, Malek-Ashtar University of

Technology, Tehran, 16765-3454, I. R. Iran

¹H NMR and ¹³C NMR Spectra of the Synthesized Trisphenols

(solvent: DMSO)

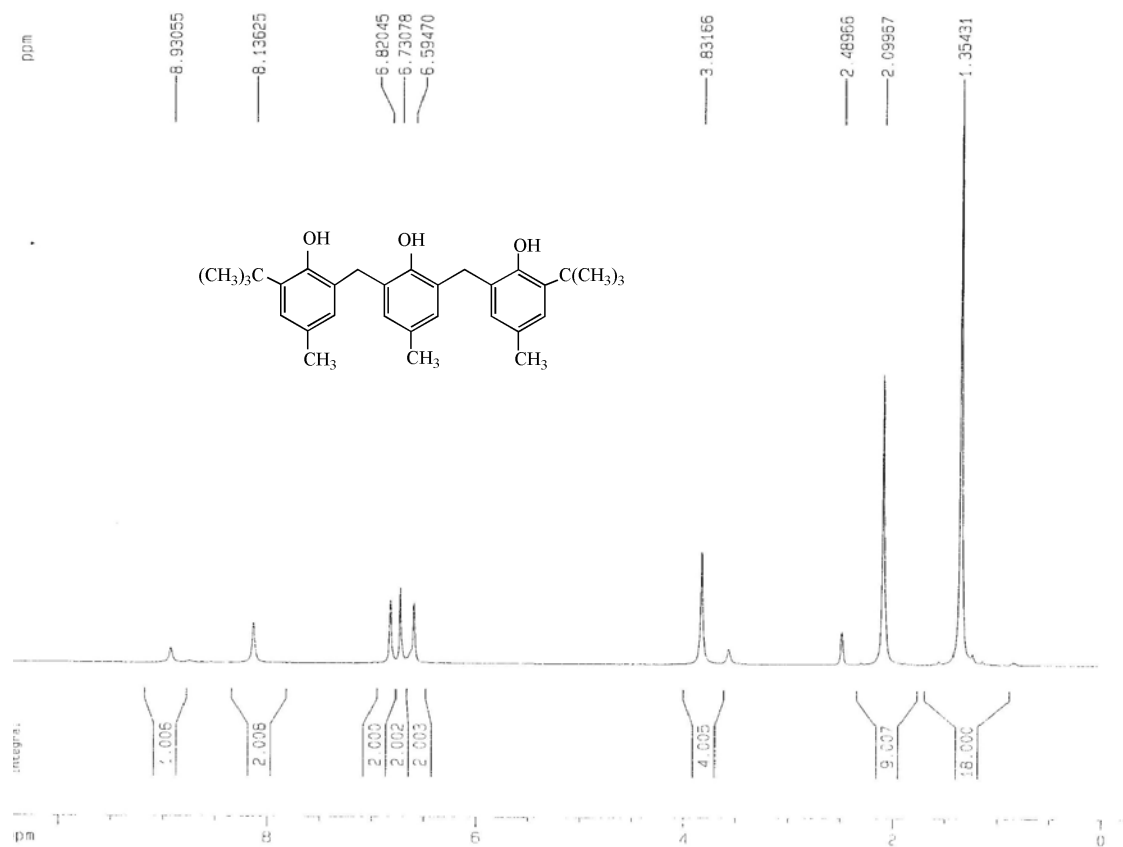


Figure S1. ¹H NMR spectrum of 2,6-bis-(2-hydroxy-5-methyl-3-tert-butyl-benzyl)-4-methylphenol (**1c**).

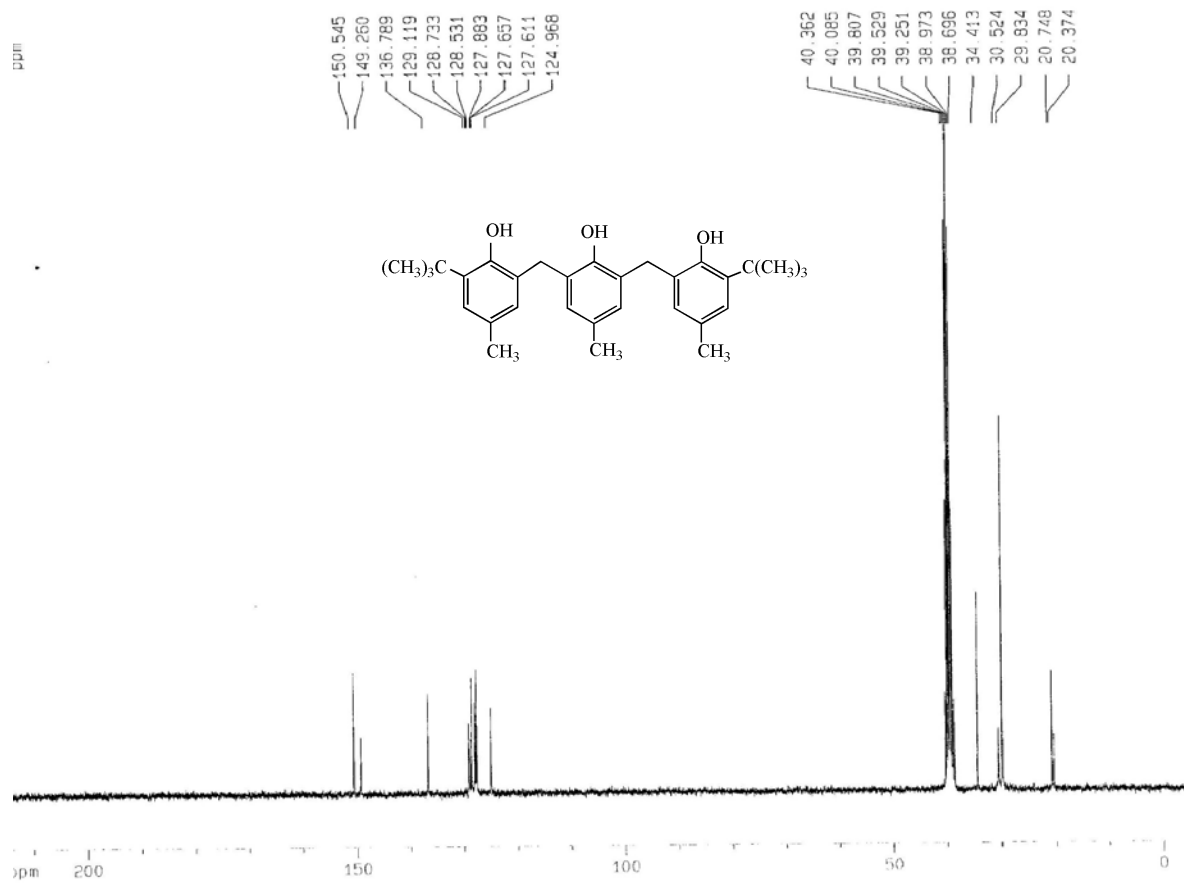


Figure S2. ¹³C NMR spectrum of 2,6-Bis-(2-hydroxy-5-methyl-3-tert-butyl-benzyl)-4-methylphenol (**1c**).

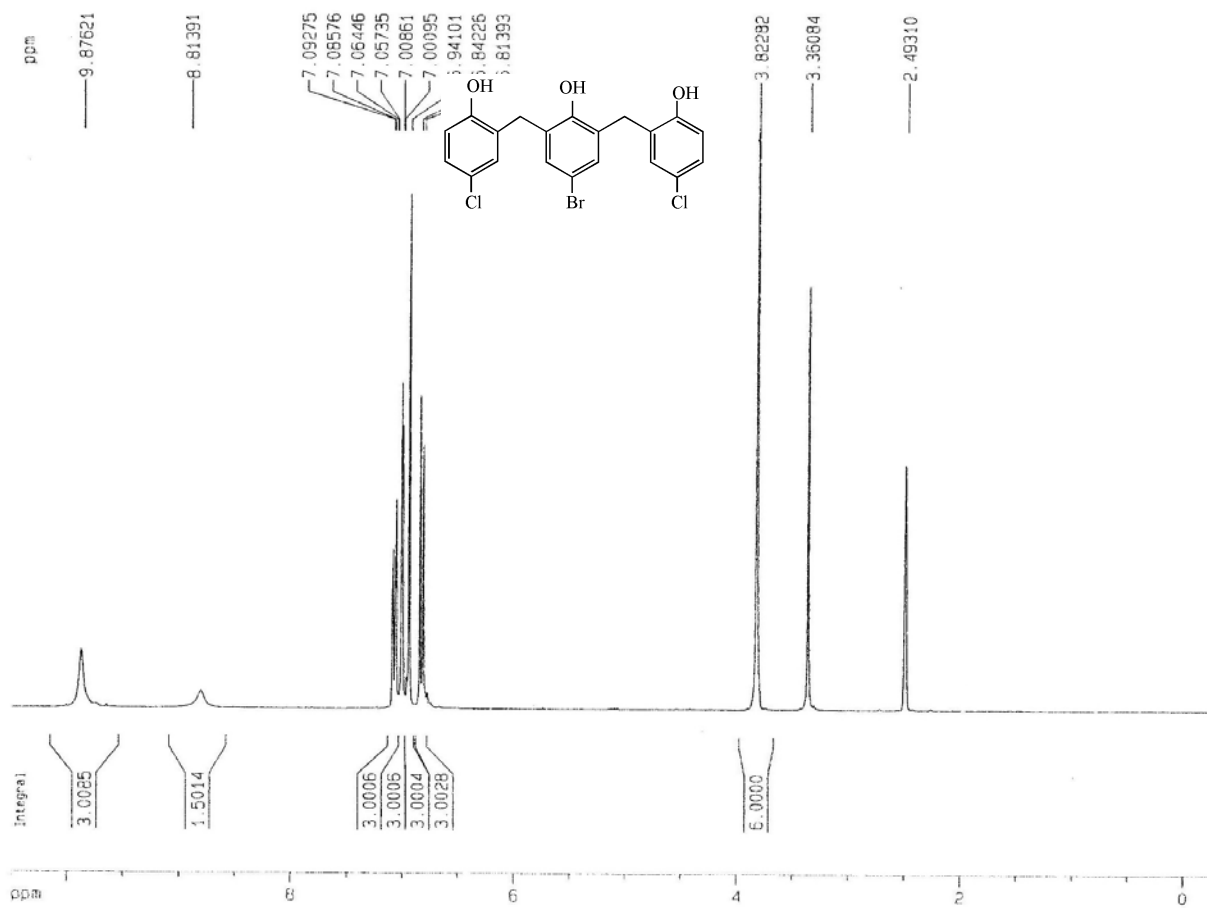


Figure S3. ¹H NMR spectrum of 4-Bromo-2,6-bis-(5-chloro-2-hydroxy-benzyl)-phenol (**3c**).

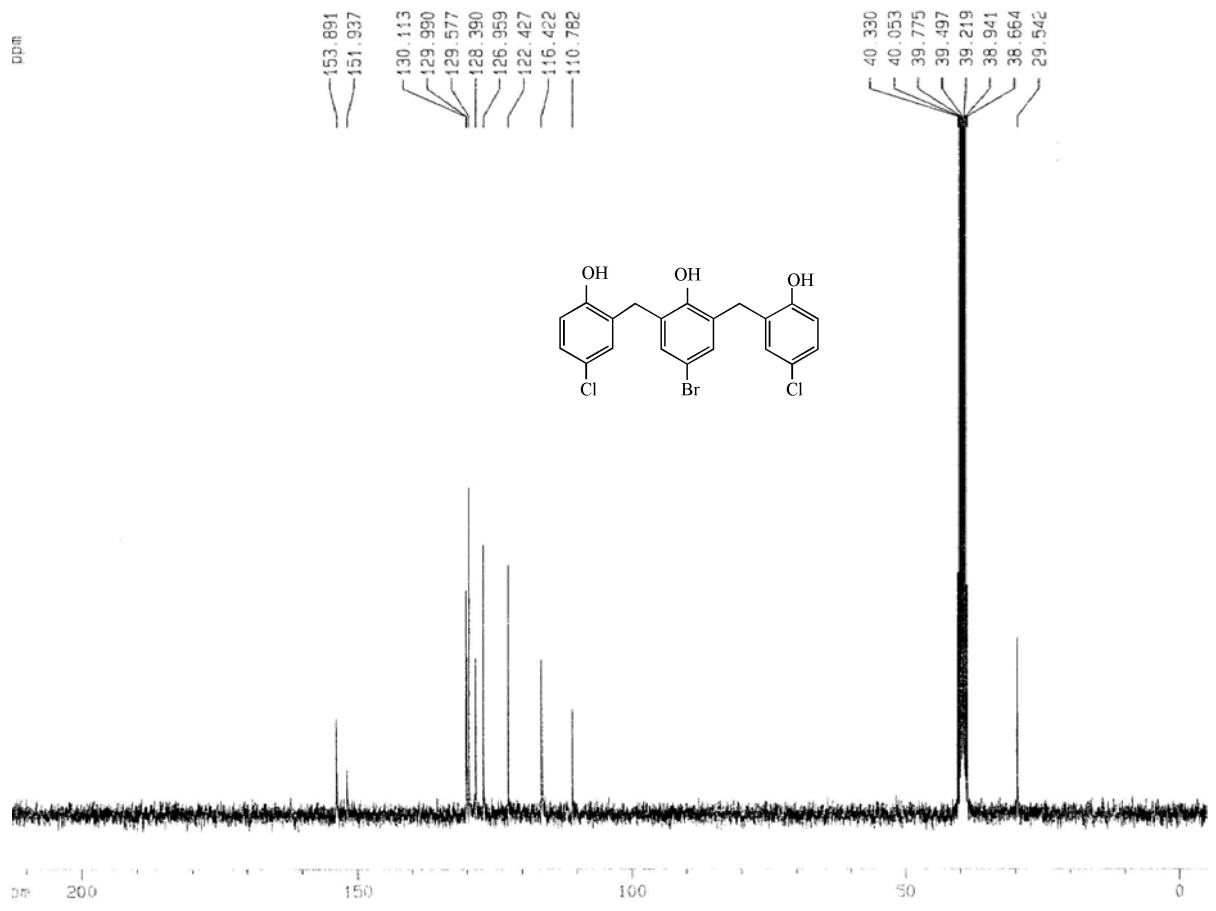


Figure S4. ^{13}C NMR spectrum of 4-Bromo-2,6-bis-(5-chloro-2-hydroxy-benzyl)-phenol (**3c**).

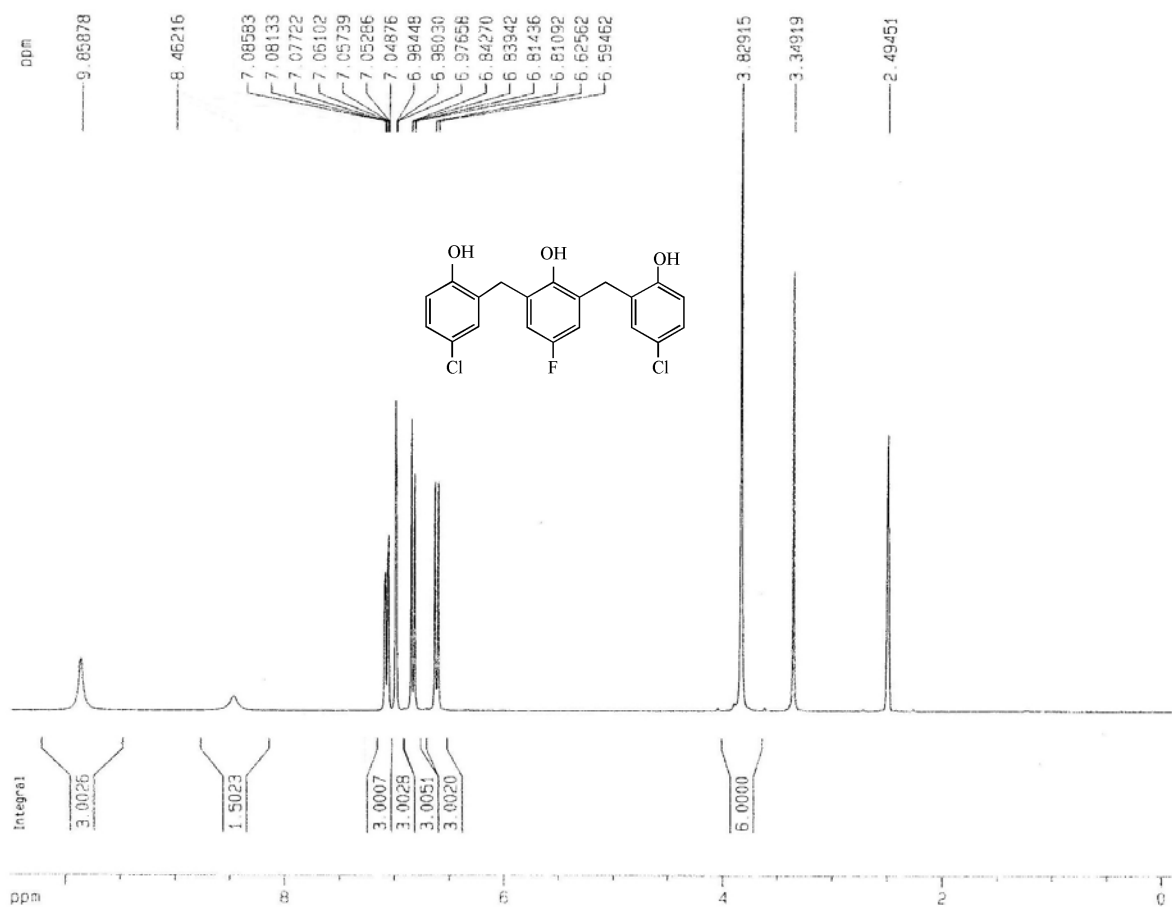


Figure S5. ¹H NMR spectrum of 2,6-bis(5-chloro-2-hydroxybenzyl)-4-fluorophenol (**4c**).

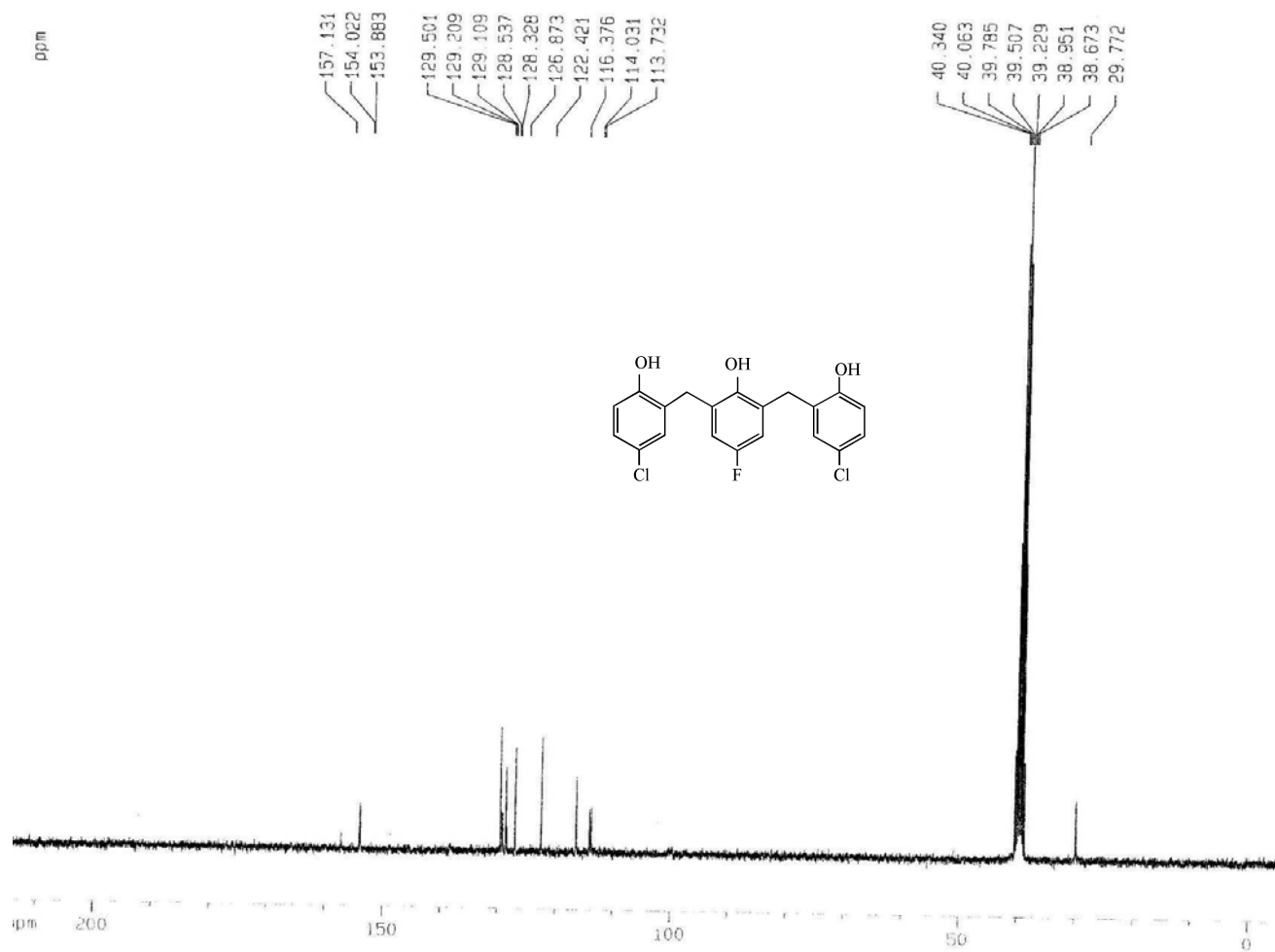


Figure S6. ^{13}C NMR spectrum of 2,6-Bis-(5-chloro-2-hydroxy-benzyl)- 4-fluoro- phenol (**4c**).

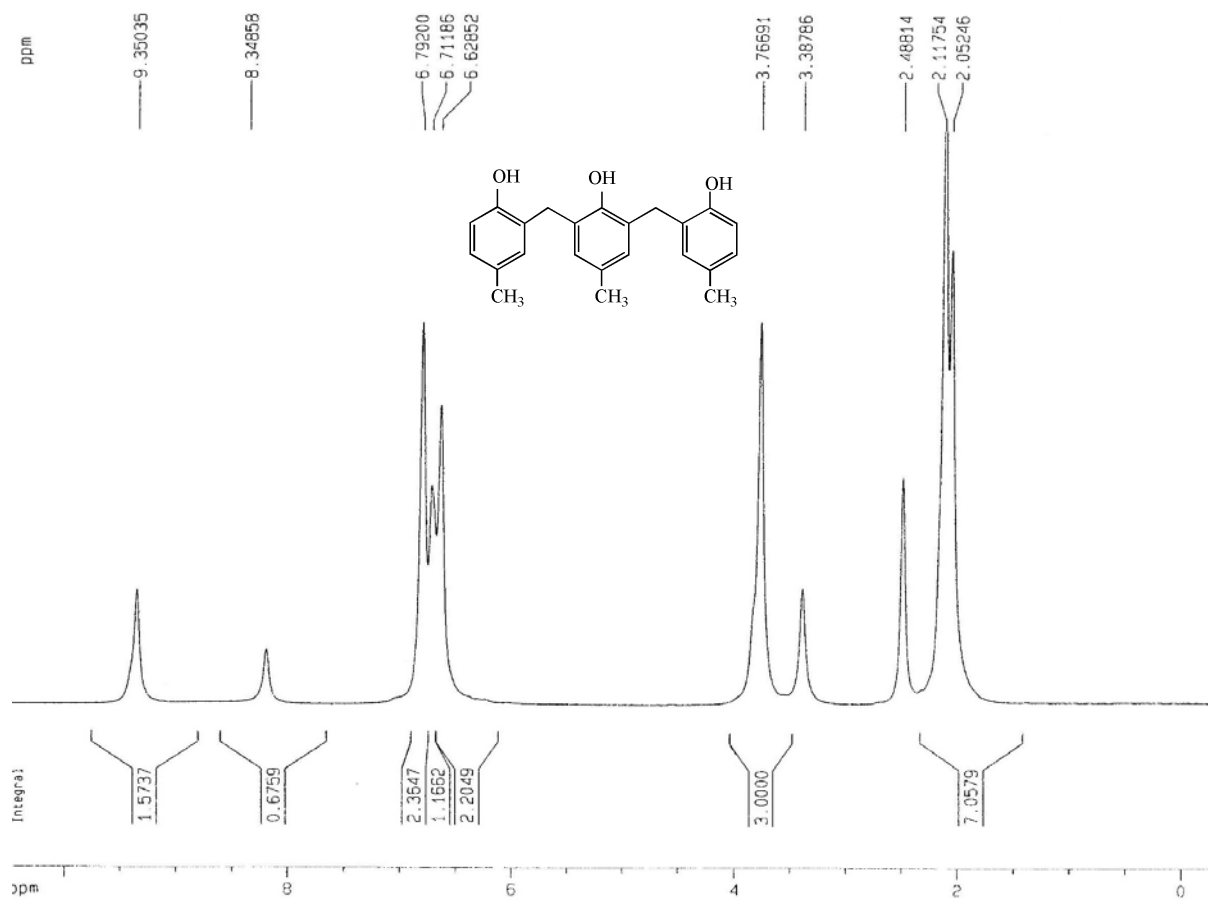


Figure S7. ¹H NMR spectrum of 2,6-bis-(2-hydroxy-5-methyl-benzyl)-4-methyl-phenol (**7c**).

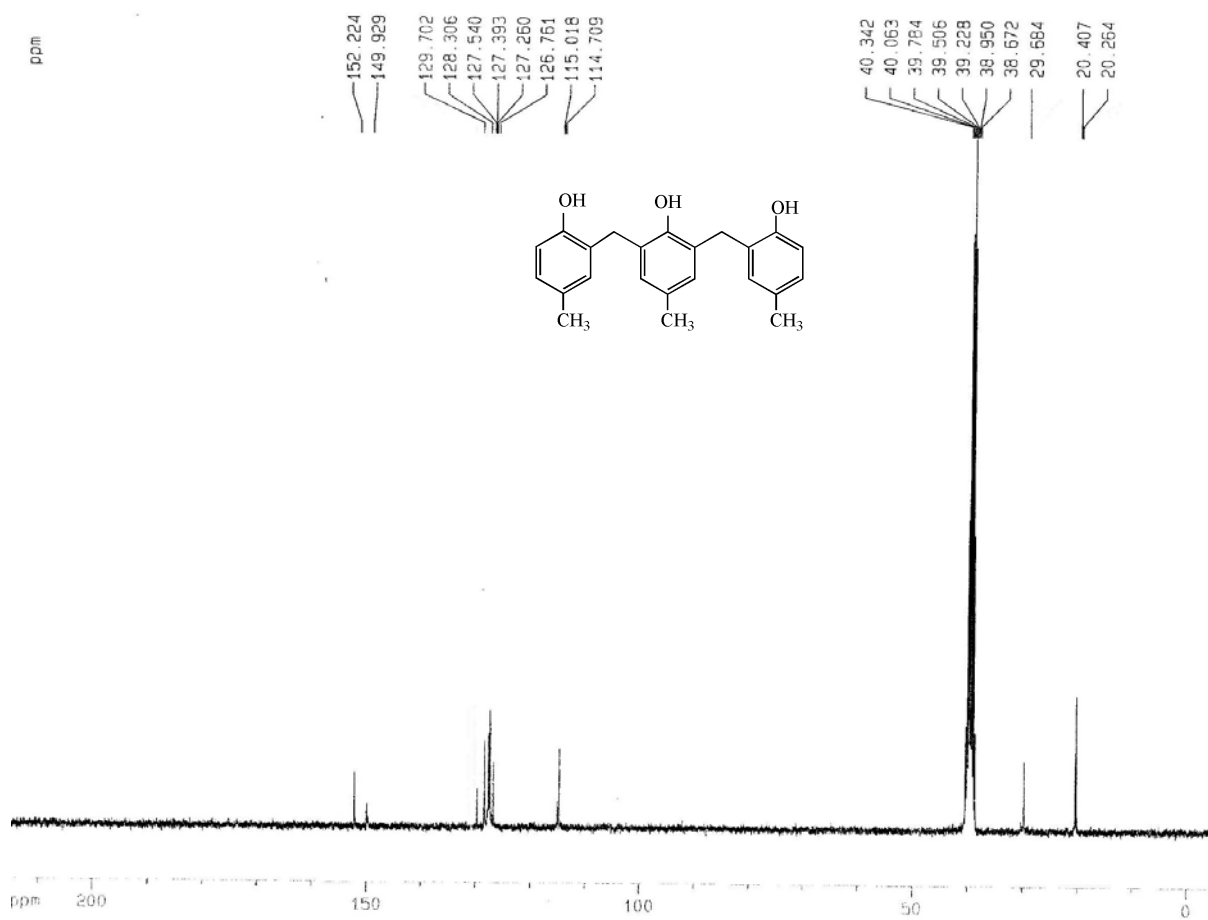


Figure S8. ^{13}C NMR spectrum of 2,6-Bis-(2-hydroxy-5-methyl-benzyl)-4-methyl-phenol (**7c**).

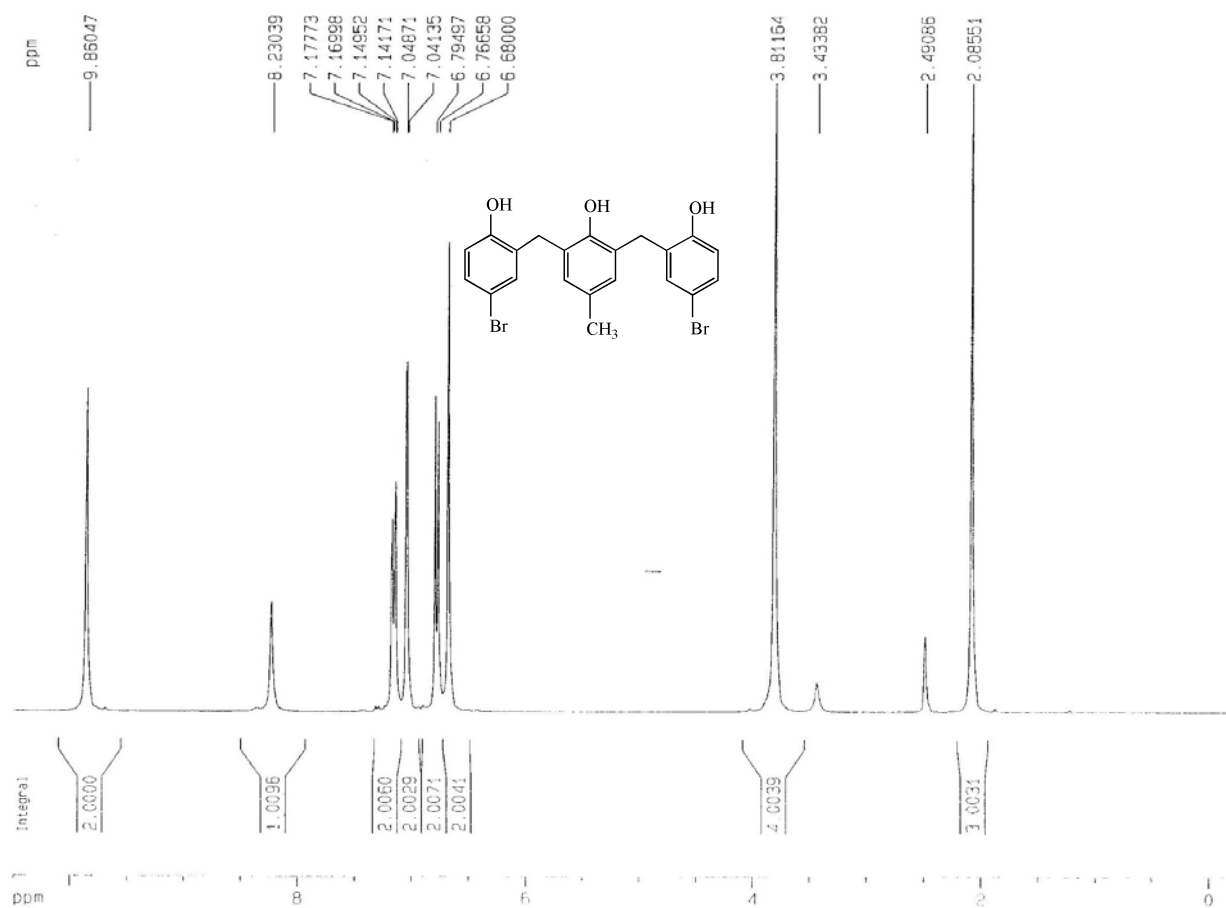


Figure S9. ¹H NMR spectrum of 2,6-bis-(5-Bromo-2-hydroxy -benzyl)-4-methyl-phenol (**9c**).

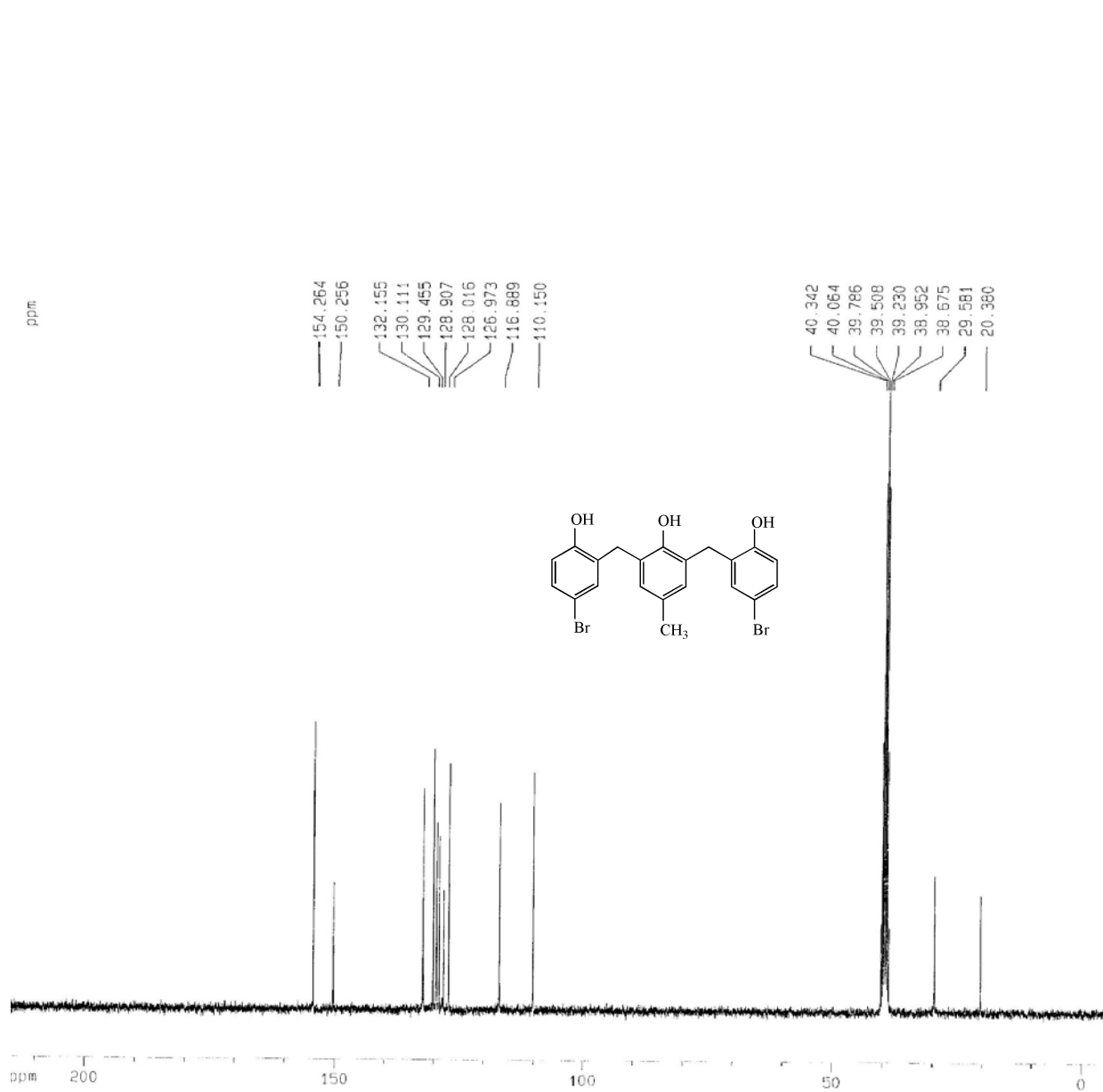


Figure S10. ¹³CNMR spectrum of 2,6-Bis-(5-Bromo-2-hydroxy -benzyl)-4-methyl-phenol (**9c**).

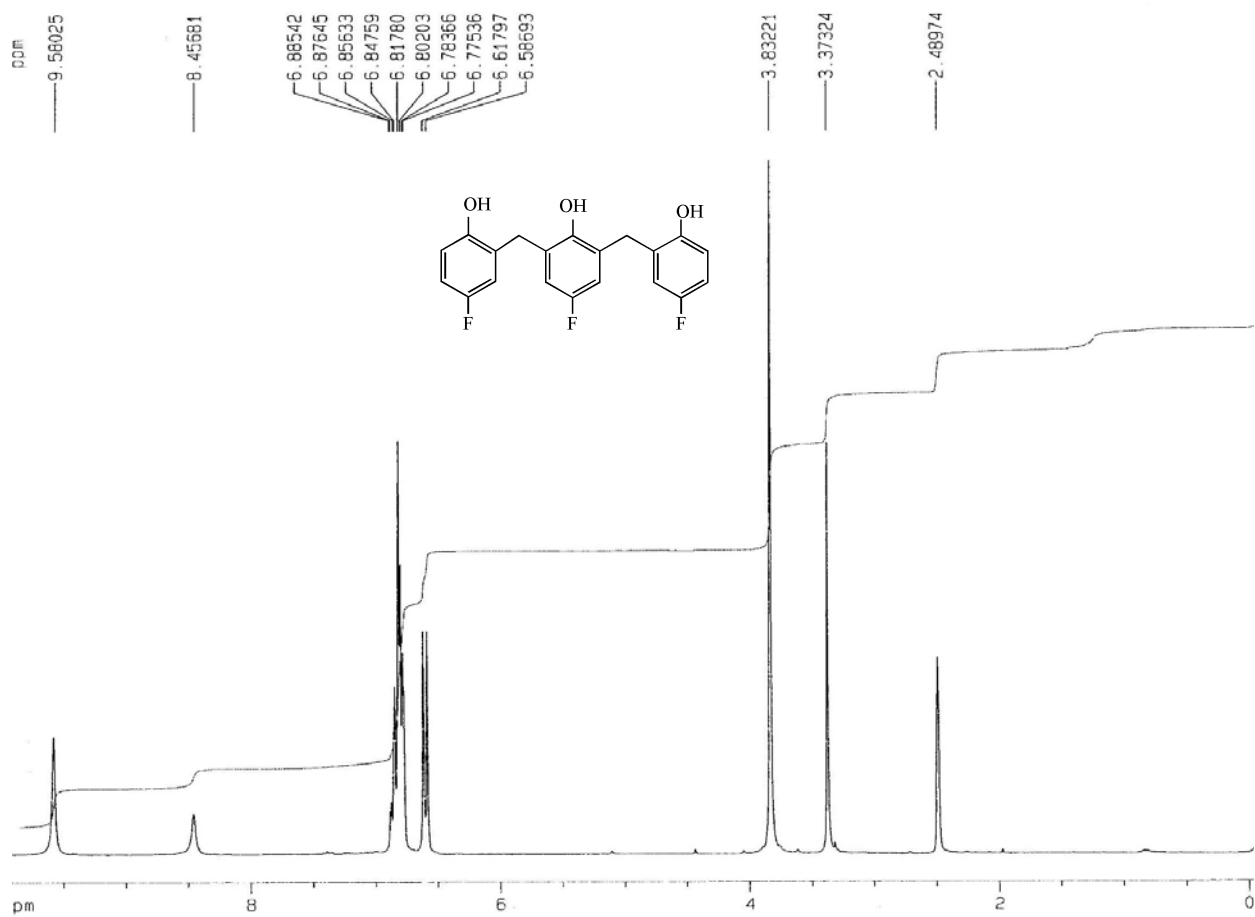


Figure S11. ¹H NMR spectrum of 4-Fluoro-2,6-bis-(5-fluoro-2-hydroxy-benzyl)-phenol (**10c**).

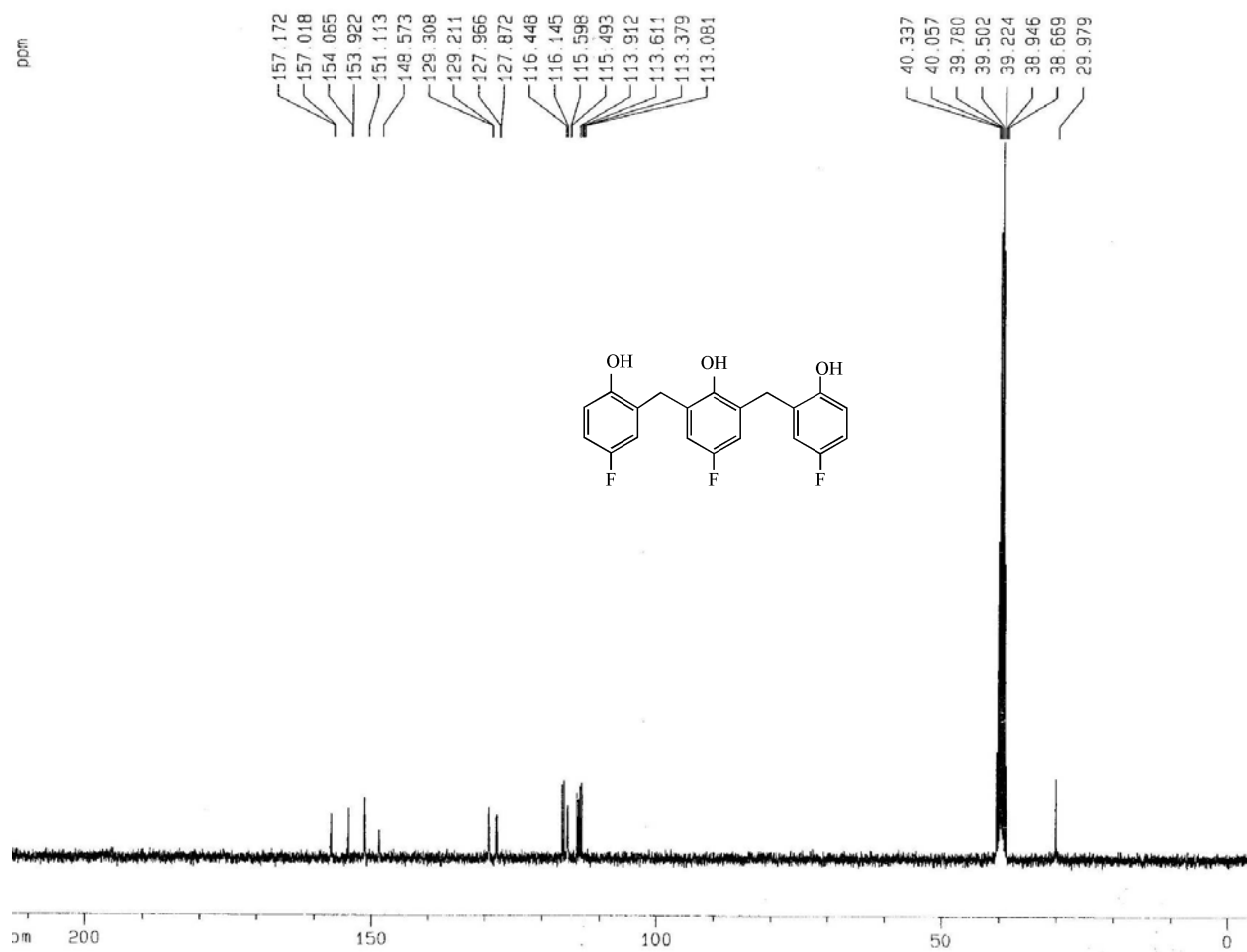


Figure S12. ¹³CNMR spectrum of 4-Fluoro-2,6-bis-(5-fluoro-2-hydroxy-benzyl)-phenol (**10c**).

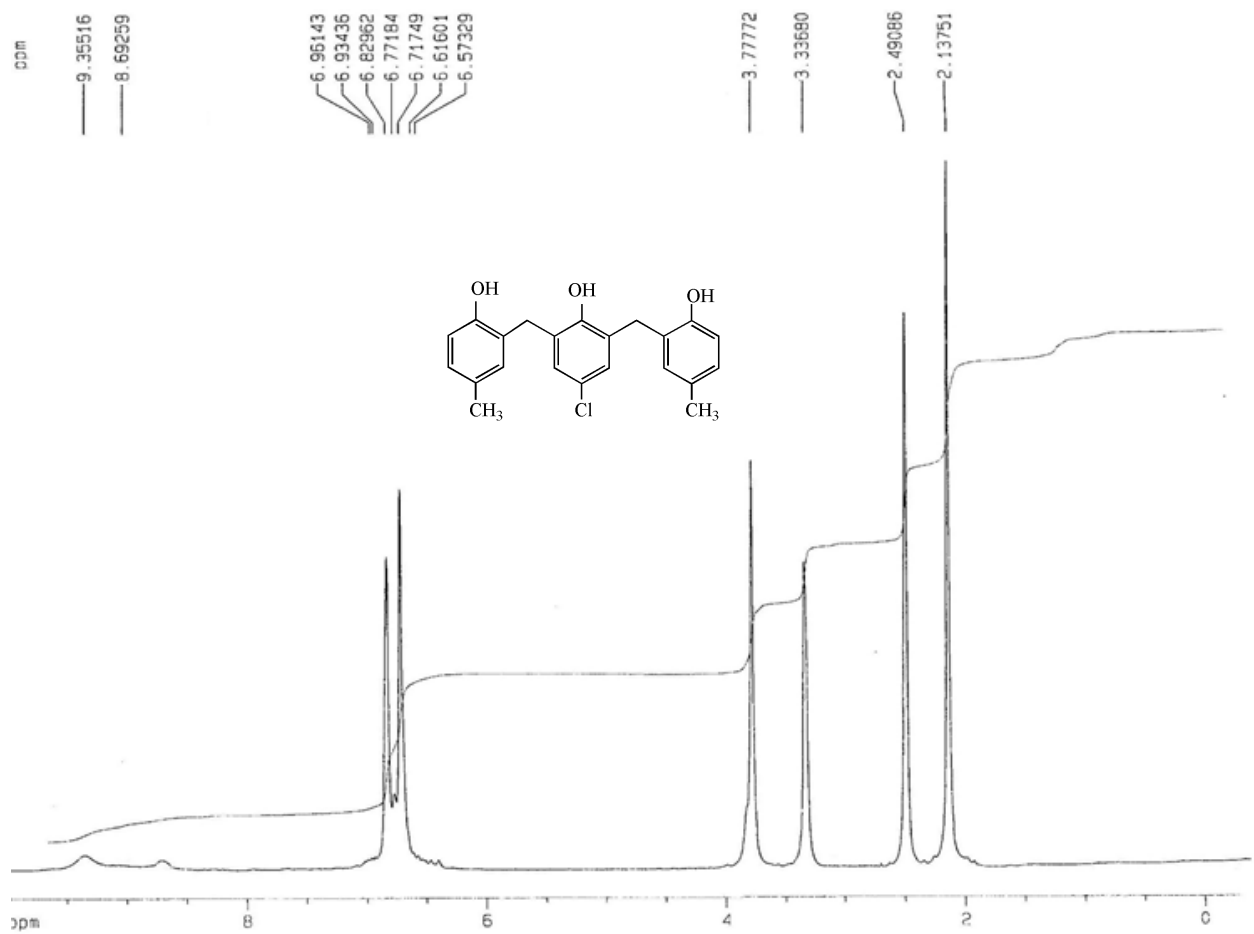


Figure S13. ¹H NMR spectrum of 4-Chloro-2,6-bis-(2-hydroxy-5-methyl-benzyl)-phenol (**12c**).

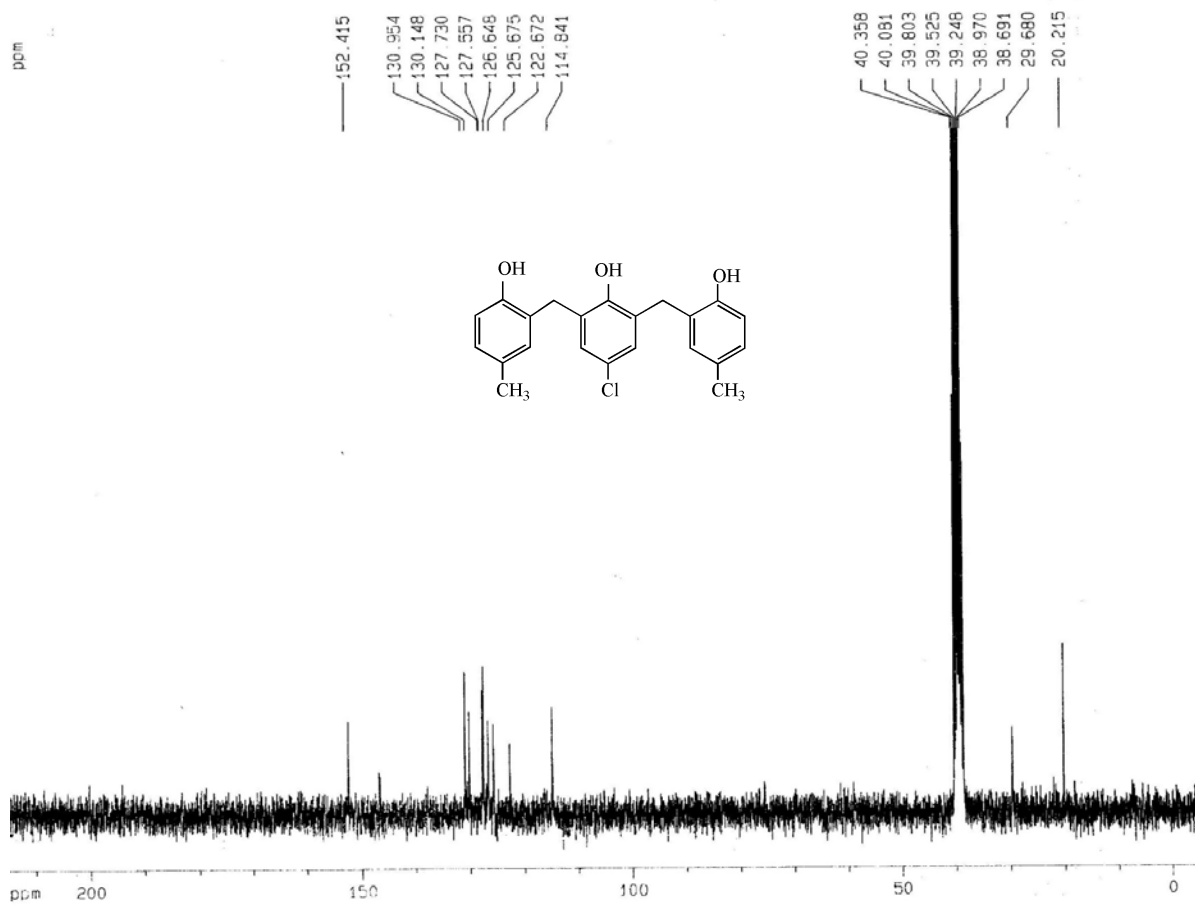


Figure S14. ^{13}C NMR spectrum of 4-Chloro-2,6-bis-(2-hydroxy-5-methyl-benzyl)-phenol (12c).

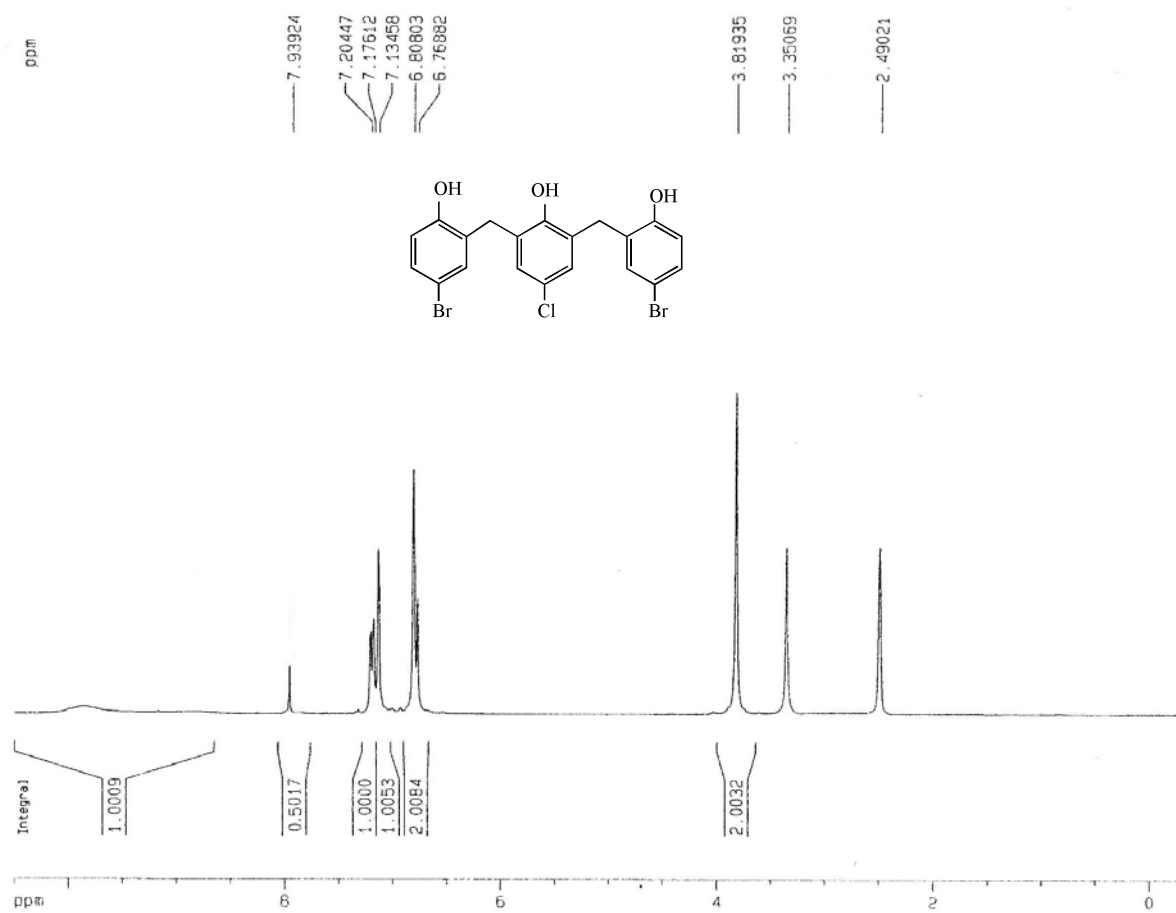


Figure S15. ¹H NMR spectrum of 2,6-bis-(5-bromo-2-hydroxy-benzyl)-4-chloro-phenol (**15c**).

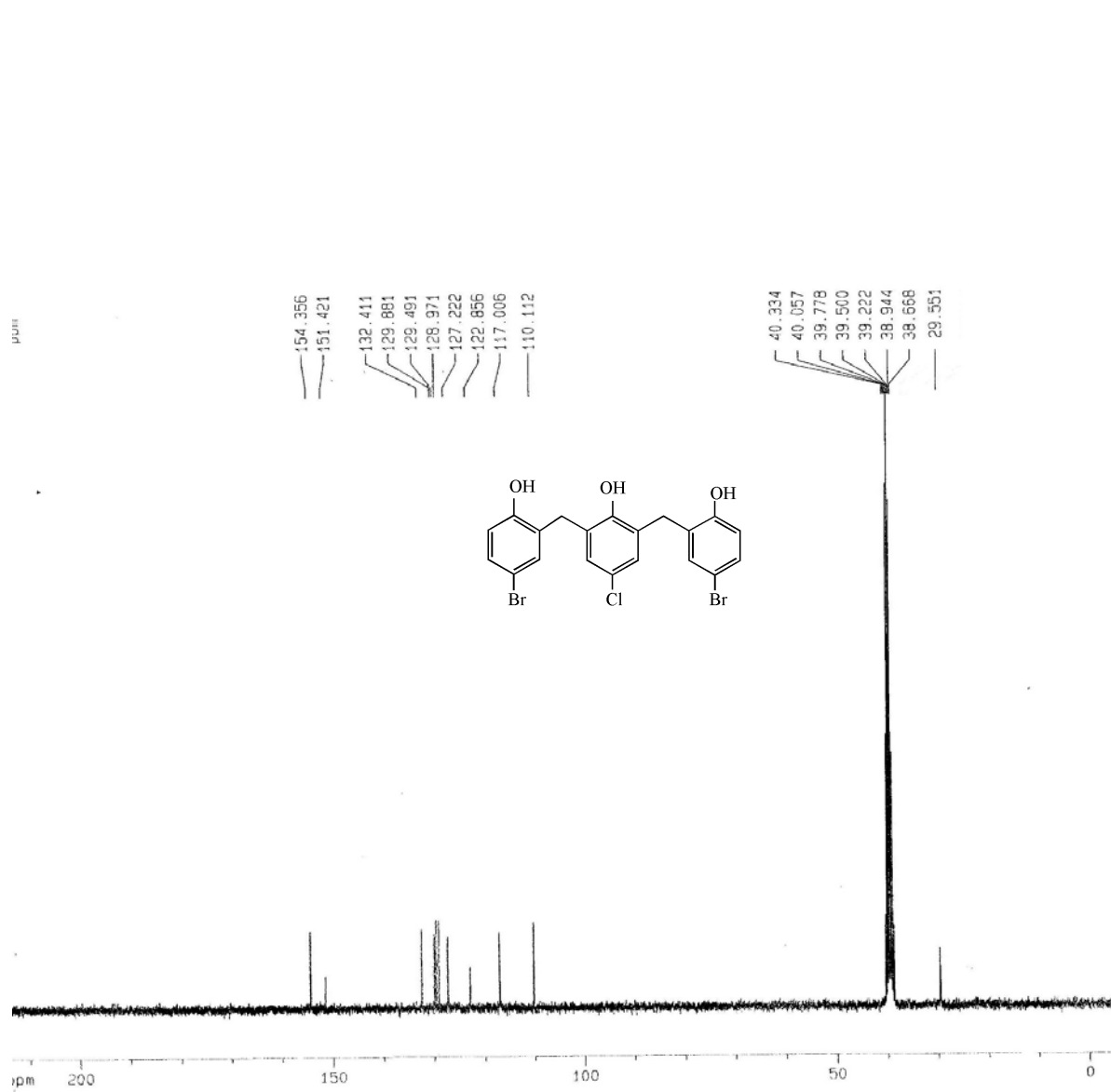


Figure S16. ^{13}C NMR spectrum of 2,6-Bis-(5-bromo-2-hydroxy-benzyl)-4-chloro-phenol (**15c**).