

Supplemental information

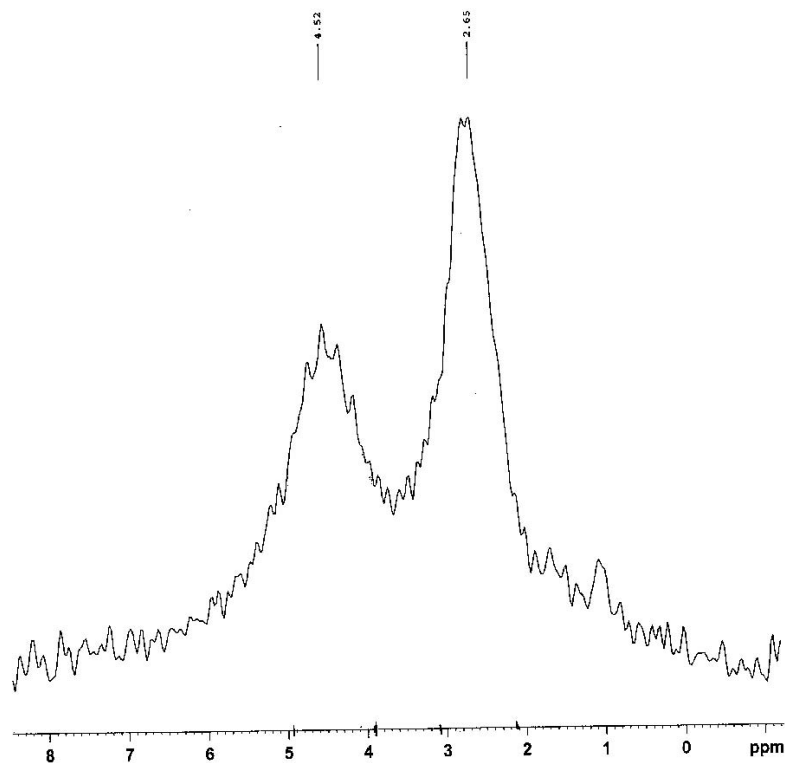
Experimental

A: 2-hydroxyisophthalic acid was synthesized from 2-methoxyisophthalic acid (Aldrich) by demethylation with one eq. BBr_3 in CH_2Cl_2 and stirred for 24 hours. Solution was quenched with 0.1 N NaOH and neutralized with 0.1 N HCl. Product was extracted from water with ether. The solvent was removed to leave 2-hydroxyisophthalic acid. 2,3-dihydroxybenzoic acid was purchased from Acros.

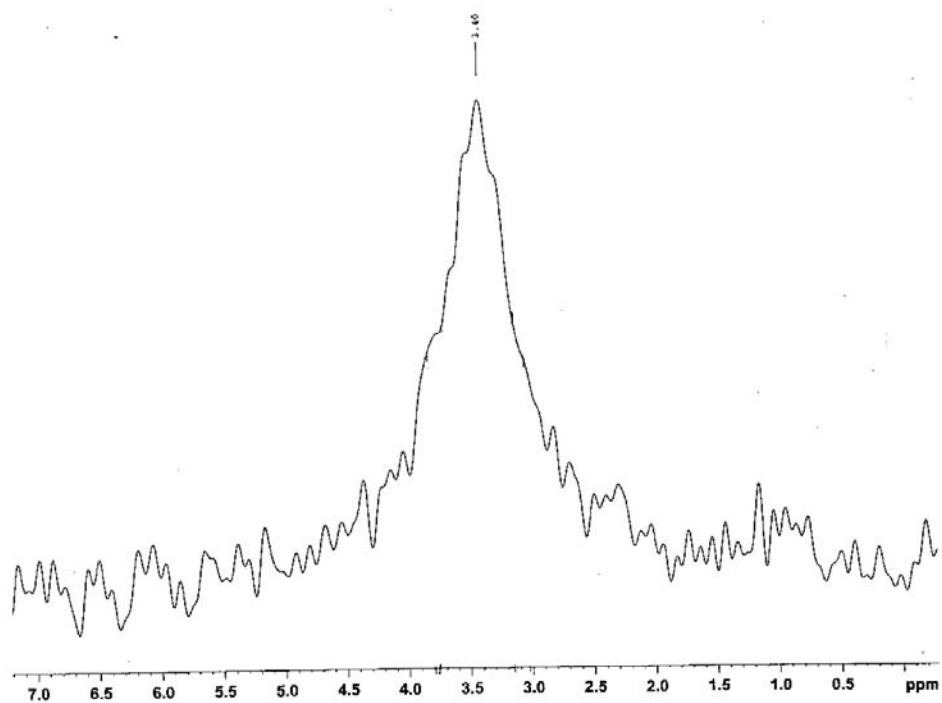
B: Solutions (0.1-0.3 M) of ligand:Be were prepared in ratios(ligand:Be) of 2:1 HIPA: (1), 1:1 (2), 1:2 (3), and 1:3 (4) and DHBA: (5), 1:1 (6), 1:2 (7), and 1:3 (8). The pH was adjusted with KOH in the range from 4 – 9. All Be compounds were soluble except 4 and 8 which $(\text{Be}(\text{OH})_2)$ precipitate was present in solution above pH 5.8. Raman data for the HIPA:Be species was similar to that of free HIPA.

(3) ^9Be NMR (pH 7.0): δ 3.40 ($w_{1/2} = 42.2$ hz): ^9Be NMR were similar in 1 and 2.

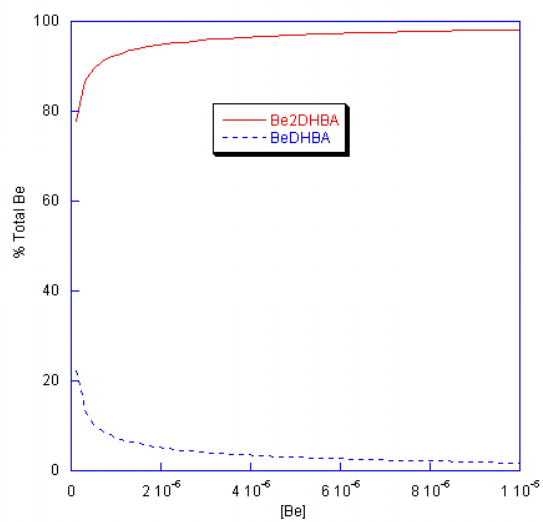
(7) ^9Be NMR (pH 7.0): δ 2.65 ($w_{1/2} = 55.1$ hz) and 4.52 ($w_{1/2} = 59.0$ hz): ^9Be NMR were similar in 5 and 6.



^9Be NMR of DHBA:Be 1:2 at pH = 7



^9Be NMR of HIPA:Be 1:2 at pH = 6.6



Speciation of DHBA with beryllium at low concentrations